

Title of Doctoral Thesis

**Contexts and Contracts: An Anthropological Study on
Agricultural Resource Sharing among the Small and Marginal
Farmers of Nizamsagar Mandal, Telangana State.**

Submitted by

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DECLARATION

I, Sama Arun Kumar Reddy, hereby, declare that this thesis entitled **“Contexts and Contracts: An Anthropological Study on Agricultural Resource Sharing among the Small and Marginal Farmers of Nizamsagar Mandal, Telangana State”** submitted by me under the guidance and supervision of Prof. P. Venkata Rao is original research work.

I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma.

Date: 14.09.2020

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CERTIFICATE

This is to certify that Mr. Sama Arun Kumar Reddy (Regd.No.16SAPH06) has carried out the work embodied in the present dissertation entitled “*Contexts and Contracts: An Anthropological Study on Agricultural Resource Sharing among the Small and Marginal Farmers of Nizamsagar Mandal, Telangana State*” under the supervision of Prof. P. Venkata Rao, Department of Anthropology, University of Hyderabad. The dissertation represents his independent work and has not been submitted for any research degree of this University or any other University.

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Acronyms

APMCs	Agricultural Produce Market Committees
APC	Agricultural Price Commission
ART	Anti-Retroviral Therapy
B.Ed.	Bachelor of Education
CACP	Commission for Agricultural Costs and Prices
DCCBs	District Co-operative Central Banks
DoF	Department of Fertilizers.
DTH	Direct to Home
DWCRA	Development of Women and Children in Rural Areas
FCI	Food Corporation of India
FM-NSP	Farm Mechanization component of Normal State Plan
FM-RKVY	Farm Mechanization component of Rashtriya Krishi Vikas Yojana
HACA	Hyderabad Agriculture Co-Operate Association Ltd
HYVs	High Yield Variety
ICRISAT	International Crop Research Institute for Semi-arid Tropics.
ITI	Industrial Training Institute
KGBV	Kasturba Gandhi Balika Vidyalaya
LMB	Land Mortgage Bank
M.Ed.	Master of Education
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee) Act.
MSP	Minimum Support Price
MRP	Maximum Retail Price
NCEUS	National Commission for Enterprises in the Unorganised Sectors.
NDSL	Nizam Deccan Sugars Limited.

NFSM	National Food Security Mission
NMOOP	National Mission on Oilseeds and Oil Palm Programme
NSP	Normal State Plan
NBS	Nutrient Based Subsidy
NSC	National Seeds Corporation Ltd.
NSSO	National Sample Survey office
OBCs	Other Backward Classes
PACs	Primary Agriculture Co-operative Credit Societies
PDS	Public Distribution System
PG	Post-Graduation
RKVY	Rashtriya Krishi Vignan Yojana
SCs	Scheduled Castes
SCBs	Scheduled Commercial Banks
SHGs	Self Help Groups
SMAM	Sub-Mission on Agricultural Mechanization
STs	Scheduled Tribes
TSCAB	Telangana State Co-operative Apex Bank Limited
TSOILFED	Telangana State Co-operative Oilseeds Growers Federation Ltd
TSMARKFED	Telangana State Co-operative Marketing Federation
TSSGDCF	Telangana State Sheep and Goat Development Cooperative Federation
TSSSDC	Telangana State Seeds Development Corporation Limited
TSRTC	Telangana State Road Transportation Corporation
TRS	Telangana Rashtra Samithi
TV	Television
ZPS	Zillah Parishad School

Chapter 1¹

Introduction

It is a fact that since the introduction of the 'Green Revolution' to traditional Indian agriculture, there had been a tremendous increase in the output of agricultural produce. This increase in output had helped the Indian economy to attain self-sufficiency in terms of food grains to feed its growing population. On one hand, Indian agriculture is exhibiting continuous 'growth' in terms of agricultural output, on the other hand, National Commission for Enterprises in the Unorganised Sectors (NCEUS), 2008 report titled "*A Special Programme for Marginal and small farmer*" mentions that there is persistence of 'agrarian crisis' among the marginal, small and medium landholding farmers. This paradox is due to confusion in understanding what exactly is 'growth' and 'development'. Norman T Uphoff and Warren F Ilchman (1972) provides a better understanding of two terms as they identify 'growth' with 'production' and 'development' with 'productivity'. Going by this exposition growth is just a quantitative term whereas development is a much broader concept involving structural changes leading to increased productivity. The available literature on Indian agriculture points to the unsuccessful implementation of land reforms, which are intended to bring in structural changes in traditional Indian agriculture. However, Indian farmers could achieve a significant increase in production due to the efficient utilization of available resources using various alternative farming mechanisms; one such mechanism is tenancy (formal/informal). It is in this context my study aims to understand the evolving nature of tenancy in agriculture, which is rapidly changing owing to increased capitalistic tendencies among farmers irrespective of the size of landholdings. The persistence of various forms of tenancy through periods of socio-cultural, political, economic, and technological changes is a potential area requiring the attention of the discipline of anthropology (A.F. Robertson, 1980: 411). The following sections would have a selected review of literature on land reforms including tenancy reforms followed by contextualizing the current study with precise objectives and methodology to conduct research.

1.0. Land Reforms:

Indian agrarian system with great scarcity and unequal distribution of land, having a large rural population below the poverty line, there are compelling social, economic and political arguments for land reforms and appropriately it received top priority on the policy agenda immediately after attaining political independence in 1947 (Maitreesh Ghatak and

¹ This chapter has been published as a research paper titled "*On Agricultural Resources Sharing among the Small and Medium Scale Farmers in India*" in *South Asian Anthropologist*, Vol.19, pg. 67-75, March, 2019.

Sanchari Roy, 2007). Land reforms had two main objectives; the first one is to increase the production of agricultural produce and the second is to eliminate all forms of exploitation and social injustice existing within the Indian agrarian structure. In fact, the first amendment made to the Indian constitution in 1951 was to remove the legal impediments arising in the form of fundamental rights for the implementation of land reform measures by states and the abolition of zamindari rights. The rationale for the equitable land distribution was further augmented after the publication of a paper titled “*An Aspect of Indian Agriculture*” by Amartya Sen on the inverse relationship between farm size and productivity in 1962. This proposition had profound implications on the land reform policy advocating that any reform which reduces the inequality in landholdings will have a positive effect on productivity (Singh et al., 2002). The introduction of the ‘green revolution’ in Indian agriculture had intensified the arguments for and against the inverse relationship of farm size and productivity hypothesis. The research findings supportive of Amartya Sen’s include Banerjee (1985), Ghose (1979), Chaddha (1978), Bharadwaj (1974). A relatively recent study conducted by Tadesse and Krishnamoorthy (1997) in Tamil Nadu to examine the level of technical efficiency among the small, marginal and large landholding farmers had found out that small and medium farmers cultivating paddy had achieved a higher level of technical efficiency when compared with large landholding farmers. While opponents of the inverse relationship hypothesis had argued that with the increased cost of capital inputs and access to the market in favour of large landholding farmers had made the inverse relationship redundant. Hanumantha Rao (1975) argues that increased application of fertilizers, capital intensive inputs and further technological change had tilted the productivity in favour of the large landholding. In a moderate vein, Deolalikar's (1981) findings suggest that at the traditional level of Indian agriculture the inverse relationship holds but when it comes to a higher level of technological inputs the relation between farm size and productivity turns positive. Insights from the above mentioned empirical studies help identify multiple factors that affect the relationship between farm size and productivity such as the intensity of cultivation, the efficient use of available land resources, scale neutral technological inputs, soil fertility (Carter, 1984, Bhalla and Roy, 1988, Newell et al., 1997), Managerial factors involving hired labour (Rao and Chotigeat, 1981), access to irrigation facilities (Sampath, 1992). The scholarly debate on the inverse relationship between farm size and productivity had occupied much of the intellectual space between 1962 till the end of the 1990s although no consensus had been achieved. However, in many ways, the scholarly debate on farm size and productivity had brought out various issues concerning agrarian relations thus providing timely inputs for course corrections in the implementation of agrarian policies.

1.1. Review of Literature on Tenancy:

With the ineffective implementation of land distribution and ever-increasing demand for land coupled with limited availability of land, the focus of policymaker was shifted on to the practice of tenancy. The tenancy is one of the oldest ‘institutional devices’ (N.S.Jodha, 1981: A118) evolved for the purpose of temporary transfer of resources (Land, Labour, Capital) for the utilization between contracting partners. In other words, tenancy involves two or more individuals combining their privately owned resources for some mutually agreed productive purpose, the outputs being shared in mutually agreed proportions (A.F. Robertson, 1980: 411). In the pre-independence epoch of Indian agriculture, the tenancy is looked like an extreme form of exploitation due to the unequal position of resources between the contracting parties. As a result, the regulation of various forms of tenancy had become imperative for legislators to address equity issues in the agricultural production processes immediately after Independence. Some states had completely made the practice of tenancy illegal under the law while other states choose to regulate it in a manner that suits their existing socio-economic and political settings. For example; the erstwhile state of Andhra Pradesh had two separate laws, Andhra Pradesh Land Licensed Cultivators Act, 2011, which was enacted to provide institutional credit to tenants on par with landowners through loan eligibility cards whereas, Andhra Pradesh (Telangana Area) Tenancy and Agricultural Lands Act, 1950 is very specific to the Telangana region, which had different terms for tenants and landowners. The regulatory measures coupled with changing agrarian practices had altered the circumstances in which tenancy now thrive (N.S.Jodha, 1981: A118). The majority of the earlier studies on tenancy by research scholars and policymakers had a common understanding that tenant is a small, ill-equipped and often exploited by the landowners. This notion holds true during the existence of a traditional and stagnant agrarian system (V.S.Vyas, 1970). Understanding of tenancy on these lines had emphasized the regulation of various forms tenancy. However, considering the much acclaimed ‘land to tiller’ policy of Kerala in the 1970s, C.S. Murty observes that the ‘land to tiller’ policy made no distinction between those who only supervised the cultivation of land and those who contributed their own and their family members’ labour in cultivation while identifying true ‘tiller of the land’ and as a result, the right of purchase of land was conferred to all² (2004: 3270). Even in the case of West Bengal, under the ‘Operation of Barga campaign’ in 1978, the ‘middle peasants’ were reported to have got disproportionate benefits (Ghose, 1984). Any measures which intended to regulate or abolition of tenancy had pushed the practice of tenancy

² see Herring 1983: 183, Raj and Tarakan 1984: 46 and Haque and Sirohi, 1986:55

underground and further nullified recourse to legal remedy which was available earlier in the case of exploitation. Before any further policy recommendations, researchers as well policymakers need to understand the underlying rationality (not restricted to economic theory) for the persistence of tenancy in the Indian agrarian system. A good number of macro-aggregate surveys and limited empirical studies have been conducted on the tenancy from the economic and political-economic perspective.

Generally, the decision on the part of the tenant to get into any tenancy contract is driven by two types of motives. In the first case objective of the tenant may be to earn subsistence as no alternative livelihood opportunities exist. In the second case, leasing-in land may be undertaken to increase the scale of operation with the help of various factors of production to earn a commercial profit. Mamata Swain, calls the first motive as compulsive and involuntary participation in the tenancy contract as a 'survival strategy', whereas the second motive is termed as voluntary and promotes 'commercial tenancy' (1999: 2662). These two motives among the tenants had led to the different forms of tenancy in different social, economic, political and geographical settings. Common types of tenancy as observed in many studies are³; sharecropping, fixed sharecropping, fixed wage, fixed rent in kind, fixed rent in cash and Wage-homestead tenancy (popular among the plantations). However, broadly on the basis of rent payment tenancy contracts can be categorized as fixed rent and crop sharing contracts (Singh, 1989: A88).

Crop sharing or sharecropping is considered to be one of the earliest forms of tenancy. From the Marxist point of view, sharecropping is an inequitable and inefficient form of tenancy that prevails in the 'pre-capitalist' or 'quasi' or 'semi-feudalistic' agrarian systems. It is often seen as a stage of transition, which disappears with modernization (Bell, 1977: 317). There is no ambiguity in accepting this point of view as the documented historical experiences reflect the extreme form of exploitation present in feudalistic societies. However, the persistence of sharecropping even after achieving modernization has prompted economists to reinterpret and remodel the established theories. The increased evidence-based studies suggest that sharecropping may be the rational, progressive arrangement for agrarian development (Reid, 1973). The macro and micro-surveys; such as the study in Gujarat by Vyas (1970), or that of Bandyopadhyay (1975) in West Bengal suggest that there exist regional variations in the forms of sharecropping. Significant variations are observed in terms and conditions of tenancy

³ The list is non-exhaustive as terms conditions under each type of tenancy depends on the contracting parties.

contracts based primarily on the input cost-sharing and share of produce between tenant and owner. From the studies conducted by (N.S. Jodha, 1981; B.N. Verma and R. R. Mishra, 1984), it is observed that among the agriculturally backward regions, sharecropping is the most preferred option among different types of tenancy. There is a wider consensus among the researchers that due to the high levels of risk and uncertainty associated with the outcome, tenants and landowners belonging to semi-arid and agriculturally backward regions prefer sharecropping to fixed share tenancy (Singh, 1989: A88). Findings from the study conducted by Huffman suggests that landowners in developing countries lease out land in small plots under the sharecropping contract to more than one tenant in order to spread the risk evenly among the tenants (2004: 634). Whereas in agriculturally progressive areas with well-developed factor markets and irrigation facilities, tenants prefer fixed rent type of tenancy over sharecropping. In developed regions tenancy is driven by the motive of maximization of the output with intense use of inputs.

There is a plethora of evidence-based literature on the comparative efficiency of the tenancy. From a Marxist perspective any form of tenancy, specifically sharecropping tenancy is considered as the most inefficient, due to disparity in the possession of the resources between the contracting parties. Much of the comparison studies focussed on efficiency implications for the organisation of agriculture while comparing fixed cash/rent versus crop share contracts between small tenants and large landowners and also among the agriculturally backward and progressive regions. Cheung (1969)⁴ with his studies based on China's agrarian system argues that if the tenant's work effort can be observed without incurring any transactional costs by the landowner, resource allocation under share tenancy can be as efficient as with an owner-operator or fixed cash/rent leasing. Among the early attempts to assess productive performances of different categories of farmers, a study conducted by Vyas in four villages of Gujarat in the 1960s needs a mention. Vyas, (1970) found out that resource use efficiency of the tenant cultivated farms are higher than owner cultivated farms. He came to this conclusion based on resource use indicated by the high average input-output ratio among the small and medium owner and tenant farmers. A similar type of study was conducted by Rao (1971) using farm management survey data in a rice zone of Andhra Pradesh during 1957-58 and 1958-59 and his study suggests that there are not significant inefficiencies in the use of land resource under sharecropping. Rudra and Chakravarty (1973) using farm-level data collected from five districts in three states of West Bengal, Andhra Pradesh, and Punjab concluded that tenant

⁴ See Robertson (1980).

farmers are more efficient than owner cultivators on small and marginal sized farms, but not so better when medium and large size holdings are considered for comparison. Bharadwaj (1973) comparing costs and returns among different tenancy levels in the region of Maharashtra observes that with increasing levels of tenancy efficiency in cultivation declined, suggesting that efficiency is the same in both cases of a large tenant and large owner cultivator. Bell (1977) conducted an interesting study comparing the performance of farmers belonging to 'pure tenants' and 'owner-cum-tenant' categories. The results from Bell's study suggests that 'owner-cum-tenant' cultivators are more efficient on their own plot of land irrespective of the crops they cultivated, whereas pure tenants are less efficient on the land they leased in. The subsequent studies conducted by Chattopadhyay (1979) and Pant (1980) suggest that owner cultivated lands are more productive than tenant cultivated lands when the comparison is restricted to small and marginal landholdings and not much difference in efficiency is observed among the large tenant and owner cultivators. Tripathy (1985) using the data for crops such as paddy, wheat and maize covering several agro-climatic zones and two cropping years from 1979 and 1980 concludes that productivity is higher on the owner cultivated farms in comparison to tenants for all crops, years and zones. Shaban (1987) examining a fairly large data collected by International Crop Research Institute for Semi-arid Tropics (ICRISAT) during the end of the 1970s and early 1980s had found that the effect of irrigation, plot size, and soil quality plays a major role in determining the efficiency of the tenant and owner cum tenant cultivated farms. Shaban also observes that tenant sharecroppers operating in similar conditions as that of owner cum fixed rent tenants, the efficiency is higher among the latter. However, for Bhaumik (1993) different crops cultivated under three types of farmers; owners, sharecropper and fixed-rent tenants, only paddy cultivating sharecropping tenants are more efficient than owner cultivators.

In contrast to findings of the above-mentioned studies, Chattopadhyay and Sengupta (2001) find that the medium sized farms belonging to both owner and tenant categories are efficient. In addition, this study suggests that irrigation facilities are best utilized by the medium sized farmers as small farmers cannot bear such costs while large scale farmers are plagued by scale diseconomies⁵. From most of the above studies mentioned, the inputs in cultivation are of traditional nature such as family labour, bullocks and indigenous variety of seeds and organic manure but when dynamism is introduced in terms of technology and mechanization and high

⁵ Diseconomies of scale is an economic concept referring to a situation in which economies of scale no longer functions for an economic activity. The output remains stagnant or decline as the input costs increases.

yield variety of seeds coupled with vibrant markets and policy changes at national level, certainly there would be changes in the structure and form of tenancy.

Iqbal Singh (1989: A86) mentions that ‘technological transformation’ in the agricultural practices is bound to have a significant impact on the tenancy structure of the region or state. Among the scholars, there are two different views regarding the “interaction of technology and tenancy structure” (Ibid). Supporters of one view argue that considering the unequal share in the resources and consequent relations between tenants and landlords, the latter tries to obstruct any ‘productive investment’ that improves the economic conditions of the resource constrained tenants. Landowners consciously withhold innovations to perpetuate agricultural backwardness and tries to retain a major share in the produce through higher rents and usury (Ibid). The above argument was strengthened by Bhaduri (1973), wherein he opines that interlinked credit and sharecropping contracts provide incentives for landlords to discourage tenant innovations since greater productivity could reduce tenants’ demand for credit, taking away the profits accrued through high-interest rate credit from the landlord. Supporters of other view observe that when the ‘new technology’ enhances the productivity of agriculture substantially, with the same share in the produce going to the tenant, the landowners gaining more than what he/she accrues under traditional agriculture practices tends to encourage intense use of ‘new technology’ inputs (Ibid). Newbery (1975) argues that if the landlord had so much power to obstruct the introduction of technology, he/she would instead choose to appropriate the surplus accruing to innovation. In contrast to both the above-mentioned views, other researchers such as Bhalla (1997), Byres (1981) opines that with the introduction of modern technology and mechanization of agricultural operations will eventually lead to the elimination of tenancy. Pearce (1983), based on his study visualizes that sharecropping as a transitory phenomenon that will become obsolete with the advent of capitalist farmers, who revolutionizes the labour operations and productivity with the help of ‘new technology’. For Pearce, the underlying assumption was that share tenancy is synonymous with small scale farming hence, sharecropping is incompatible with capitalist agriculture (Singh, 1989: A86). In contrast to Pearce’s prediction, earlier studies of Vyas (1970) and Nadkarni (1978) mentions about the rise of ‘entrepreneurial tenants’ who are themselves a product of technological development. These contrasting views on the existence of sharecropping strengthen arguments suggesting the dynamic nature of tenancy, thus as opined by Robertson understanding of sharecropping tenancy must proceed from a recognition

that it is subject to historical change and its functions in the social and economic process mean that it is never 'static' and 'inflexible' (1980: 426).

The practice of tenancy in underdeveloped agricultural economies involves complex linkages associated with land, labour and credit transactions, these linkages to a great extent determine the terms and conditions of tenancy contracts. Broadly, research on interlinkages of factor markets is conducted from two perspectives; Neoclassical and Marxist perspective (Mamata Swain, 1999: 2657). For Marxists, interlinked transactions are innovative devices developed by landlords to subjugate the small tenants, who are poor and resource constrained and to increase their 'political-economic power in the village community' (Ibid: 2657). With imperfect factors markets, interlinkages are viewed as the means for perpetuation of backwardness in agriculture practices and surplus appropriation. Whereas, for Neoclassicals rural factor markets are considered to be imperfect and are often characterized by 'risks', 'uncertainty', 'indivisibility', 'information asymmetry' and 'moral hazard problems' (Ibid: 2657). For Neoclassicals Imperfect factor markets and interlinkages associated with it are used as the means for ensuring efficient use of landowner's resources leased out to tenants resulting in 'higher social welfare'. The major drawback in the perspective of neoclassical is that they look at the tenant and landowner as belonging to a homogeneous group of mass peasants who can be categorized as 'lessor' and 'lessee' in a taxonomic sense. But the reality is that in developing countries like India, most often landlords are dominant groups playing a major role in the decision making process of the tenants. However, as Mamata Swain (1999: 2658) observes that both Marxist and Neoclassical perspectives have not included the effects of macroeconomy features like increasing 'unemployment', 'slow pace of industrialization' and 'regional inequality in development' and 'consequent migration' thus fail to explain reasons for the variety of tenancy existing simultaneously in one village or a region.

The introduction of technology in the traditional agrarian system without rectifying the tenancy laws had resulted in the rise of owner-tenants, who have greater access to capital inputs and subsidies from the government programs. Iqbal Singh (1989) conducted a study on the impact of technological change in Punjab, one of the agriculturally progressive states. He observed that with increased technological inputs there is an increase in the number of owner tenants. Some other significant findings he made include that big farmers who have capital assets like tractors had leased-in land, even among the tenants having tractors had increased component of rented land and shifted from sharecropping to fixed-rent tenancy with increased dependency on hired labour for cultivation. The study also mentions that most of the tenants in

the agriculturally developed regions became tenants only after the introduction of new technological inputs. There is a clear cut tendency that with the introduction of new technology, 'old' landless and small owner tenants are giving way to the relatively better placed 'new' tenants (Iqbal Singh, 1989:A88). In addition, new technology had reduced 'risk' and 'uncertainty' associated with the output of agricultural produce, as a result, tenants preferred fixed rent type of tenancy over sharecropping to increase their profits. A majority of the studies⁶ which focussed on the impact of new technology on the tenancy had come up with the conclusion that large tenants have emerged in the lease markets, especially in regions of agricultural progress, commercialization of agriculture, and farm mechanization by replacing smaller tenant cultivators (Murty, 2004:3270).

In agriculturally backward regions such as semi-arid⁷ or hilly areas, the majority of the tenants are of small and landless labours leasing in lands for the purpose of subsistence production using family labour. Sharecropping is the widely practiced form of a tenancy as the risk and uncertainty are evenly shared with landowners. Tenants preferred to cultivate food crops as it provides cattle feed for sustaining animal husbandry and overall livestock management. With the change in the cropping pattern, corresponding changes are observed in the terms and conditions of tenancy contracts. Crop sharing is predominant in paddy and wheat areas (if new technology inputs are used then there can be the preference for fixed rent type tenancy), cash rent is popular with the oilseeds, cotton, and other cash crops (Laxminarayan and Tyagi, 1977).

1.2. Contextualizing the Objectives of the study:

The last decade witnessed an intense debate among the political economists on the relevance of 'agrarian question' in the neoliberal era. Renowned scholars like H. Bernstein (2010), Akram-Lodhi et al., (2010), and T. J. Byres (2006) had commented on the rise of capitalism and its consequences on already 'differentiated peasantry'. There is an evident shift in the state policies from the earlier days of the 1960s, which emphasized the domestic demand-driven agricultural growth (which was expected to increase capital accumulation among the rural households and reduce poverty) to an export-led strategy as the principal means of enhancing the rural capital accumulation. In other words, state policies are working towards the rapid integration of domestic agricultural markets with global markets through the process

⁶ See also laxminarayana and Tyagi (1977:A77); Vyas (1970); Bandopadhyay (1975); Gill (1989: A79-85); Rao (1992); Haque and Parthasarathy (1992).

⁷ See N.S.Jodha (1981); Singh (1989).

of globalization. It is in this context Bernstein (2010) questions the relevance of ‘agrarian question’, where the transnational transfer of capital is diminishing the role of agriculture in capital accumulation for the national economy. In contrast Akram-Lodhi et al., (2010) argues that with continued global subsistence crisis since the implementation of neoliberal policies and a large number of a small and marginal farmer having livelihoods in agriculture, the ‘agrarian question’ needs to be looked at from multidimensional approach rather than as a ‘linear process’. From the elaborate debates on the ‘agrarian question’, one can infer that transnational capital with greater technical efficiency is transforming the social, economic and political relations in a predominately agrarian economy like India. The commodification of natural resources and social relations provides a potential area for micro-level research on agricultural resources sharing contracts between tenants and landowners. The dynamic role that tenancy can play is to serve as a vehicle for the accumulation of assets and skills by those who are historically alienated from the means of production. Tenancy institution had evolved as a response to the interlinkages in the factor markets, and over a long period of time, it provides for ‘individual mobility’ (Bell, 1990:143) for the small, marginal and landless labour.

The existence of various types of tenancy simultaneously in a single village or a region speaks of its diversity in satisfying the needs and aspirations of the farmers having different skills and resources. The recent encouragement by states for contract farming derives its inspiration from the efficiency levels of tenancy cultivators. As suggested by many scholars, instead of regulating or abolishing tenancy, the government should consider tenants on par with owner cultivators while distributing the benefits under various productivity enhancing programs. It would be interesting to understand the impact of various developmental programs (such as MGNREGA, SHGs, Institutional credit services, fertilizers, pesticides, etc.,) by states on the institution of the tenancy. The rise of a new group of ‘entrepreneurial tenants’ with the introduction of new technology and subsequent neoliberal policies of the state invites an anthropological understanding of the diversity of the contexts and consequent contracts in practice in the study area. In addition to the diversity of contexts, motives, and rationale of economic contracts provide an important field of inquiry for agrarian anthropologists.

It is in this context my study in the selected village(s) of the Kamareddy district of Telangana state with the following objectives seeks to understand the dynamic nature of tenancy.

1. To identify various types of tenancy, the pattern of terms and conditions of tenancy and selection criteria of tenant and resource owner in the sharing of agricultural resources among the farmers in the study area.
2. To examine the dynamics of agricultural resource sharing and relations due to State/Government interventions at various stages in agricultural production in the study area.
3. To analyse the diversity in contexts and consequent contracts in agricultural resource sharing among the small, marginal, and medium sized landholding farmers in the study area.

1.3. A brief note on the Study Region⁸ and Rationale for Selection of villages:

The study was conducted among the villages in close proximity to Nizamsagar Project in Kamareddy district, Telangana. According to the planning department, Government of Telangana, the geographical area of the Kamareddy district is 3652sq.kms. Consisting of 328 Gram Panchayats and 478 revenue villages. As per the Samagra Kutumba Survey, the total population of the Kamareddy District is 1.1 million with 15%, 8.8%, 54%, and 9% of the total population as SCs, STs, OBCs, and Minorities respectively. The majority of the population is involved in agriculture. Among the farmers, Marginal (0 to 1 hectare), Small (1 to 2 hectares) and Medium (2 to 4 hectares) landholding size cultivators account for 98% of total farmers. The total gross cropped area of the district is 1,81,047 hectares with 44% of the total gross cropped area under the gross irrigated area. Rice, Maize, Cotton, and Sugarcane are major crops grown in this district. With nearly 2,000 minor irrigation tanks, 2 major and 3 medium irrigation projects this district has reasonable irrigation infrastructure for agricultural purposes. Among all the districts in Telangana State, Kamareddy district happens to have a greater difference in the net sown area and gross sown area. This indicates that there exists a greater seasonality in the cropping intensity in the study region. Thus, making it logical to carry out intense fieldwork to understand the various factors responsible for such a large difference in net sown and gross sown area.

Historically, the Study region is known for the cultivation of sugarcane due to the presence of Asia's biggest sugar factory (Nizam Deccan Sugars Limited). According to one of the respondents during my pilot study in this region "for every 10kms there use to be one sugar

⁸ For all figures on Kamareddy district See Planning Department, Government of Telangana website address; (http://www.tsdpd.telangana.gov.in/district_plan.html).

factory”. However, after the closure of these factories, farmers have diversified their cropping patterns to paddy, maize, and cotton. In this context of change in cropping pattern from cash crops to food crops and consequent changes in tenancy contracts, using the historical approach and in-depth interview method data will be collected to understand the relationship between cropping pattern and tenancy contracts.

The Study Area consists of five villages located in a 7 to 13km radius with one of the five villages being at the centre of the study area. Out of five villages, four villages are dependent on the leakage water from the flood gates of the Nizamsagar Project. The water flows in the flood canal only when the water level touches the flood gates and, in some cases, water also gets into the canal through seepage. The majority of the households belonging to these villages own small-sized landholdings adjacent to the flood canal. In addition to this, there is the Nallavagu canal, which flows adjacent to one of the four villages only and very few households are dependent on the Nallavagu canal for irrigation purposes. In addition to these, borewells have become a reliable source of irrigation for the majority of the cultivators in the study area. However, an increased number of borewells and deepening of the groundwater table have made cultivation in the study area dependent on the seasonal monsoon rains and water flows to the Nizamsagar Project. The dependency and consequent vulnerability or risks involved in cultivation make the study area an ideal field to carry out the anthropological study in resource sharing mechanisms that have evolved over a period of time. A detailed profile of the study area is provided in the third chapter.

1.4. Methodology:

The current research is predominantly qualitative as the study deals with relations between people involved in agricultural resources sharing under different contexts and contracts in the study area. Qualitative studies seek to “capture the meaning of events including their unique time, place, and distinct historical moment” (Yin, 2015:61). However, as per the requirements of the study, quantitative data was collected to substantiate the qualitative findings of the study and vice versa.

Since the majority of the farmers belong to the marginal, small and medium category in the study area, my sample villages would include a proportional representation from each above-mentioned groups while collecting data. Fieldwork was conducted for two cropping seasons among the selected villages in one year. For the first 45 days, the focus was more on identifying tenants from the selected villages. After conducting a pilot study in this region, five

potential villages are identified for an intensive study on the above-stated objectives. As the study focuses on the relations between resource owners and resource tenants, a single village may not be an ideal representation of the study region. Moreover, the tenant and resource owners were not always from the same village.

This study was conducted from an anthropological perspective relying on the well-tested and established tools, techniques of the discipline of anthropology such as:

1. Schedule for Quantitative data collection⁹.
2. Interview Method.
3. Case Study method.
4. Observation method.
5. Secondary Sources.

In order to collect quantitative data of households and individuals, a household schedule consisting of two sections was administered among the tenants and landowners. The Schedule consists of a set of pre-determined questions in an order to elicit responses from the respondents. To fine-tune the schedule and its contents, all the sections in it has been tested and validated during the pilot study. The standardization of questions in Schedule was achieved to bring in uniformity in the meaning of the questions as understood by each respondent in the field. The questions in the first section of the schedule focus at a household level, such as landholding size, land under cultivation, land under the tenancy, crops cultivated, sources of irrigation and capital assets in possession, etc. Questions in section two focus at the individual level, such as age, sex, education levels and occupation (other than agriculture), etc. Prior to addressing the Schedule to the respondents, each respondent was explained about the objectives of the study to avoid misgivings and unwarranted thoughts and fears. The Schedule as a tool of quantitative data collection provides reliable information about the respondents. In addition, the open-ended questions in the Schedule enable the researcher to earmark the respondent for further study. The quantitative data collected using the Schedule had enabled the researcher to segregate the households involved in the resource sharing mechanism in the study area to carry out the next stage of qualitative data collection.

Qualitative data related to the Objectives of the study was collected using Interview and the Case Study methods. Interview method can be defined as “a face-to-face verbal exchange,

⁹ See the Schedule placed at Annexure-1.

in which one person, the interviewer, attempts to elicit information or expressions of opinion or belief from another person or persons” (Maccoby & Maccoby, 1954: 449). Out of different types of Interview Methods: Structured, Semi-Structured and Unstructured interviews, depending on the context and desirability, the current research had employed Unstructured and Semi-structured type of interviews. Unstructured interviews are used to understand “the most important influences, experiences, circumstances, issues, themes, and lessons of a lifetime” (Atkinson, 2002:125) while the Semi-structured interviews are employed with a “purpose of obtaining descriptions of the life world of the interviewees in order to interpret the meaning of the described phenomena” (Kvale & Brinkmann, 2008: 3). Unstructured interviews were conducted to identify the types of tenancy practices and tenants were asked to elicit their reasons underlying the type of tenancy contract they are in. The same technique was employed for landowners to know their version of the rationale. As the literature review suggests that most of the tenancy contracts are oral, informal and unrecorded, keeping this in mind I had depended on an In-depth Interview Technique for collecting information regarding the understanding of terms and conditions of each tenancy contract.

The focus was on knowing the motives, contexts, and economic rationale for each tenant and resource owner under the contract. As the literature on tenancy suggests, apart from socio-economic reasons there can be many other reasons involved in criteria for selecting a tenant or resource owner. Thus, to understand the criteria for the selection/rejection of tenant/owner, the Case Study method was employed.

The Case Study method is a strategy that “involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence” (Robson, 1993: 146). In other words, the Case Study method is “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context especially when the boundaries between the phenomenon and context are not clearly evident” (Merriam, 1998). Case Study method details the phenomenon in its context and can be used in explanatory, explorative and descriptive research. In the current research, the experiences of tenants/landlords are the Case rather than the tenant or resource owner as Case. To put it in simple words focus is on the ‘experiences’ of individual tenants and resource owners.

Similarly, in the case of the understanding impact of developmental and farmer welfare programs by the State as well Central government, especially since 2004¹⁰ on tenancy, the Case Study method was used to elicit information from the beneficiaries of developmental and welfare programs. Based on the levels of technological inputs and innovations in agricultural operations and productivity achieved, ‘entrepreneurial tenants’ are identified, and the Case Study method was used to arrive at common factors responsible for making them unique in the given context. As observed by Clive Bell (1990:161) that tenancy provides opportunities for ‘individual mobility’, my study would seek to collect data using the Case Study method to verify the observation made by Bell.

For all the in-depth Interviews and Case studies, the voice recorder was used with prior oral consent from the respondent. These audio recordings are analyzed on a daily basis and supplementary questions are asked on the following interactions. Every effort was made to make all the interactions in an informal context as the nature of tenancy in the study region is itself an informal practice. Due to the informal nature of resource sharing contracts, the Observation Method was used to get the nuanced and subtle details about the various dimensions of contracts. It’s relatively difficult to get a complete understanding of the resource contract between owner and tenant as negotiations do not end with a conclusion note in one meeting. Negotiation meetings do not occur in a planned manner or at a predetermined place and time. There are instances, where a trivial conversation may end up in the conclusion of a resource sharing contract between a tenant and owner. The Observation method provides initial insights on the resource sharing contract and the contracting partners involved in execution of the contract. In addition, the Observation method had enabled me in the triangulation of qualitative and quantitative data collected.

Secondary sources such as reports submitted by the Government-appointed expert committees, Annual Survey Documents, Commission Reports, Agricultural Statistical Reports, and other published articles and journals are referred to draw certain reflections related to the current research.

1.5. Chapterisation:

The Current Study is organised into seven (7) Chapters.

¹⁰ Union finance minister in his annual budget speech for the financial year 2004-05 had stated to increase the institutional credit to farmers along with one time loan waiver for majority of the debt ridden small and marginal farmers.

1.5.1. Chapter 1: Introduction

The crux of this Chapter is about contextualizing the current research objectives with the help of extensive literature review on the tenancy or agricultural resource contracts. The evolution of various forms of tenancy contracts under diverse contexts is detailed. In addition, a historical account of the Tenancy contracts vis-à-vis socio-economic and political setting is provided. The current debate on the persistence of various forms of tenancy contracts in capitalistic agrarian economies such as in India is critically examined. The insights from the existing literature and the pilot study carried out in the identified villages led to fine-tuning of the objectives for the current research. This chapter also details the Methodology employed for each objective in detail with a brief introduction to each method of data collection. A brief note on the study region coupled with the rationale for the selection of specific villages for the current research is provided. In the end, Chapterization of the entire research work is mentioned lucidly.

1.5.2. Chapter 2: Agrarian History of Hyderabad State

This Chapter Provides the Historical background of the Land tenure and land revenue system in the Hyderabad State from 1853 until its merger with the Indian Union in the year 1948. This historical account is based on the literature and government reports produced during the years 1920s to 1950s. The chapter aims to understand the changing agrarian relations vis-à-vis land tenure and land revenue system with an emphasis on various agricultural resource sharing contracts in the Hyderabad State.

1.5.3. Chapter 3: Profile of The Study Area

This Chapter contains a brief description of the youngest state of India: Telangana followed by the newly carved out Kamareddy district from the former Nizamabad district. A detailed profile of the Study Area consisting of five (5) villages located in a radius of 7 to 13kms in Nizamsagar mandal is provided. The profile consists of Demographic, Landholding Pattern, Caste Composition, Education, Health, Transport and communication, Irrigation Infrastructure and Migration status in the Study Area.

1.5.4. Chapter 4: Agricultural Resources and Changing Relations

This Chapter starts with recognizing the prominence of Land, Labour, and Capital as basic resources in contracts between resource owners and tenants. In addition, various other

agricultural resources that are being shared in the study area are detailed. The types of tenancy in the study area along with the relations between the resource owner and tenant are detailed. The underlying factors influencing the sharing of resource processes under different contracts along with the terms and conditions for each type of tenancy practiced in the study area is critically examined. The emphasis was on understanding the criteria employed by a resource owner as well as a tenant in entering a contract.

1.5.5. Chapter 5: Contexts and Contracts in Agricultural Resources Sharing

As the title of the Chapter suggests, It provides for the diversity in the contexts that shape the resource sharing contracts between a resource owner and tenant in the study area. The diversity in contexts and contracts is explained using the In-depth Interview and Case Study Methods. Broadly the respondents are categorized based on the type of contract they are involved in and followed by the contexts under which they had to enter into such a contract. The emphasis was on bringing out the complex and intricate relations between contracting resource owners and tenants in a given resource sharing process.

1.5.6. Chapter 6: State Interventions and Dynamics of Resource Sharing Relations in Agricultural Production

In this chapter, the influence of State interventions at different stages of agricultural production are critically examined. Each intervention and its direct or indirect influence on the resource sharing process is detailed. The impact of the interventions such as land reforms, Green revolution, mechanization, input subsidies, irrigation infrastructure, credit support and market access on the interlinked factors of agricultural production and dynamics of resource sharing relations is elaborately discussed in this chapter.

1.5.7. Chapter 7: Summary and Conclusion

This Chapter provides a summary of the research findings in relation to each objective mentioned in the introduction chapter. Research findings are elaborately discussed in relation to the current debates on the persistence of various forms of resource sharing practices in agriculture. In the end, appropriate policy interventions at different stages of agricultural production are recommended. These recommendations are drawn from the opinions and experiences of the farmers from the respondents in the study area.

Chapter 2

Agrarian History of The Hyderabad State

This chapter provides a historical account of the land tenure and land revenue system that prevailed in the Hyderabad state during the years 1853 to 1948 with an emphasis on the institution of the tenancy. This historical account is based on the literature and government reports produced during the years 1920s to 1950s. The chapter aims to understand the changing agrarian relations vis-à-vis land tenure and land revenue system implemented in the Hyderabad State from the year 1853 till its merger in the Indian Union in the year 1948.

2. 1. Brief Political History of Hyderabad State

The Hyderabad State had been ruled predominantly by two dynasties: the Qutub Shahi dynasty and Asaf Jhahi dynasty for four centuries. Qutub Shahi Dynasty ruled from the year 1518 AD to 1687 AD and Mohammad Quli-Qutub Shah, who ruled from 1580 AD to 1612 AD had laid the foundation for the Hyderabad city in the year 1591. The Last ruler Abdul Hassan Tanasha of the Qutub Shahi dynasty was defeated by Moghul emperor Aurangzeb in the year 1687 AD. For about 37 years Moghul viceroys had ruled the Hyderabad State and after the death of Aurangzeb in 1707 AD, one of the viceroys named Nizam-ul-Mulk had declared independence from the Moghul emperor and established Asaf Jhahi dynasty (also called as Nizam) to rule the Hyderabad state from the year 1724 to 1948. Under Nizam's rule, Hyderabad State comprised of 17 districts divided broadly into three groups based on languages spoken: Telugu speaking Telangana region consisting of nine (9) districts, Marathi speaking Marathwada region with five (5) districts and three (3) districts of Kannada speaking people (Dhanagare, 1983).

2. 2. Land Tenure and Land Revenue System

The Hyderabad state since its inception had remained essentially an agrarian economy with a high dependency on the revenue from agricultural land. Therefore understanding the land revenue system and various land tenures vis-à-vis landowners and cultivators is necessary to explain the intricate relationship between the stakeholders involved in agriculture. The land revenue system of Nizams can be perceived as a continuation of Qutub Shahi's and Moghul's land revenue system incorporated with minor amendments according to the prevailing circumstances in the state. Broadly, the lands in the Hyderabad state can be divided into two

categories: 1. Lands under the direct administrative control of the State and 2. Lands, where the revenue is assigned partially or wholly for some specific purpose (The Report of the Agrarian Reforms Committee, 1949). The first category lands are called as *Diwani* lands as they are in direct management of offices of the Prime Minister (*Diwani*) of the Hyderabad State. *Diwani* lands are also called as *Khalsa* lands. About 54.8% of the total land area of Hyderabad State¹¹ (82,698 Sq. Miles) comes under *Khalsa* Land. The lands in the second category can be further classified into various land tenures as mentioned in the below Table¹²:

Table 2.1: Types of Land Tenures in the State of Hyderabad

<i>Diwani or Khalsa</i> Lands	<i>Other Tenures of Khalsa</i> Lands	<i>Non-Khalsa Lands</i>
Ryotwari Tenure	<i>Pan-Maqta</i>	<i>Sarf-i-Khas</i>
Cultivating Tenures	<i>Tahud or Sarbasta</i>	<i>Samasthan or Peshkash</i>
<i>Pattedari</i>	<i>Ijara</i>	<i>Jagir</i>
<i>Pot-Pattedari</i>	<i>Agrahar</i>	<i>Paigah or Jamiat</i>
<i>Shikmidari</i>		<i>Jagirs</i>
<i>Asami-Shikmi</i>		<i>Al-Tamgha Jagirs</i>
		<i>Zat Jagirs</i>
		<i>Tankha Jagirs</i>
		<i>Mashrooti Jagirs</i>
		<i>Madad Mash Jagirs</i>
		<i>Inam</i>

The revenue from *Sarf-i-Khas* lands is meant to meet the expenses of the H.H. the Nizam and is directly deposited in the privy purse of the ruler. The *Non-Khalsa* lands are the government land grants extended to an individual or group of individuals and the revenue from these lands is wholly or partially assigned to individuals for some specific purpose and sometimes without any specific service in return. Out of 22,457 villages in the Hyderabad State, *Diwani* and *Sarf-I-Khas* Lands combinedly make up 15,922 villages, whereas the remaining 6,535 villages are managed as *Non-Khalsa* Lands. The table below, from Iyengar's Rural Economic Enquiries in the Hyderabad State, 1949-51, details the number of villages and extent

¹¹ See Chapter 20 (p. 391) of the Telangana History-Culture, Telugu Akademi, Hyderabad.

¹² See Chapter 20 (p. 392) of the Telangana History-Culture, Telugu Akademi, Hyderabad.

of the lands under different jurisdictions (Report of Agrarian Reforms Committee, 1949; Iyenger, 1951; Sundarayya, 1972).

Table 2.2: The extent of lands under each land revenue system

Sl.No.	Jurisdiction	Number of villages	Area in Sq.miles	Percentage of Area to the Hyderabad State area.
1	<i>Diwani/Khalsa/State government</i>	13,961	48,969	59.2
2	<i>Paigahs, Sansthan, and Jagirs</i>	6,535	25,620	31.0
3	<i>Sarf-i-Khas or Crown Lands</i>	1,961	8,109	9.8
	Total	22,457	82, 698	100.00

2.2.1. Diwani or Khalsa Lands

In all the *Diwani* or *Khalsa* villages, the Ryotwari land tenure system similar to that of Bombay Presidency was followed. Cultivators of lands in these villages pay the revenue assessment to the government authorities on a timely basis. The survey and assessment are made by the state officials periodically and as long as the cultivator pays the land revenue, rights on the land remain with the *Pattedar*. Theoretically, the Ryotwari system does not recognize middlemen between the *Pattedar* and the State. However, due to reasons like old age, sick/illness, lack of heirs, large landholdings and engaging in other occupations, etc., the *Pattedars* lease out the land to other farmers in the village on a predetermined set of terms and conditions. As a result, various forms of landholdings have come into existence in the Ryotwari land tenure system and are classified under the following heads:

Pattedari

The landowner/*Pattedar* cultivates the land himself or with the help of hired labour.

Pot-Pattedari

Two or more cultivators come together as partners in cultivating a specific piece of land jointly with a proportionate share in costs of cultivation and in final agricultural produce. All the partners hold a joint *Patta* and neither one can sell or transfer the land alone.

Shikmidari

These are called protected tenants with rights on the land as long as they fulfill the terms and conditions agreed upon with the actual *Pattedar*. Landowners can't sell or transfer the rights on the land to the third person without the prior consent of the *Shikmidari*.

Asami-Shikmidar

These are called tenants-at-will. The landowner can evict or terminate the contract with the tenants with short notice. The terms and conditions are most often are in favour of the *Pattedar*.

2.2.2. Other Tenures of *Khalsa* Land

In addition to the above-mentioned land tenure for *Khalsa* lands, there exist four (4) other tenures associated with *Khalsa* lands as indicated in table 1.

Pan-Maqta Tenure

Pan-Maqta or *Maqta* is a *Kowl* (these are landlords or officials of considerable wealth and power) or tenant, who was given a set of villages or large tracts of lands by the State government on a fixed quit-rent without liability to enhancement. The lands are granted to *Kowls* on a permanent basis and in some cases, no quit-rent is levied. Generally, the quit-rents are far less than the actual assessment and the *Kowl* get lion share in the revenue on these lands after paying the quit-rent.

Tahud or Sarbasta or Watandari Tenure

Prior to the introduction of the Ryotwari Land tenure system in the Hyderabad State, Persons of eminence are appointed as managers in the collection of taxes on land, *Abkari* (excise) and *Mohtarfa* (Tax on Profession), etc. This system of tax collection is called *Tahud*. In the case of the Telangana region, Zamindars were appointed as tax collectors at the district level and this type of tax collection is called *Sarbasta*. The difference between *Pan-Maqta* and *Tahud* or *Sarbasta* tenure system is that the contract for tax collection is fixed for a specific period of time (for example 5 years, 7 years, etc.) along with the amount of tax to be collected. At the end of the contract period, a new *Kowlnama* (contract) is written for a specific period of time. Another difference is that *Maqtedar* becomes the proprietor of the land whereas the *Tahuddar* remains as a contractor/manager for the government.

The Ijara Tenure

The *Ijara* tenure was introduced in the year 1878 AD., with a specific purpose of bringing large tracts of uncultivated land under cultivation. Under this tenure system, the land was leased by the State for development at very low rates for a period ranging from 5 years to

40 years to *Kowldar*. After the expiry of the *Kowl* period, if the *Kowldar* fulfills the set terms and conditions, then the land is assessed and permanently given as *Bil-Maqta* or at a fixed annual quit-rent (which is half of land assessment value) to the *Kowldar*. The *Ijara* tenure system had been in practice till 1909 and was later abolished as land became a scarce resource in the Hyderabad State.

Agraharas

Agraharas' tenure is like that of *Maqtas*. The assignee has to pay an annual fixed quit-rent to the government. Large tracts of lands, sometimes a group of villages is granted under *Agraharas* to support the Hindu and Muslim places of worship in the State.

2.2.3. Non-Khalsa Tenures

The revenue from the Non-*Khalsa* lands is shared in a predetermined ratio between the assignee and the State government. *Jagirs*, *Inams* and *Samasthan* or *Peshkash* form a major part of the Non-*Khalsa* land tenure system. They constitute about 30% of the total land of the Hyderabad State.

Jagirs

The rulers of Hyderabad State had continued the practice of Moghul rulers in extending *Jagirs* (Large tracts of lands) in recognition of the services rendered by individuals. In the course of time, large parcels of land in different contexts were granted to nobles, military personals, and administrators under a variety of land tenures. The below provides the list of different types of *Jagirs* in the Hyderabad State.

Paigahs or Jamiat Jagirs

'*Paigah*' is a Persian word which means stable or cavalry was also known as *Jamiat Jagir*. It was first granted by H.H. The Nawab Nizam Ali Khan (1761-1803) to counter the growing power of one of his ministers by separately maintaining a military force. The grantees had enjoyed enormous powers in the administration of *Paigahs* and even had their own departments of education, health, public works and survey, and settlement, etc. The revenue generated from these lands is completely retained by the grantee.

Al-tamgha Jagirs

These were revenue-free grants, which were made hereditary and permanent in the course of time. However, all the *Jagirdars* had to pay a kind of royalty called *Haq-e-Malikana*.

Zat jagirs

Large tracts of lands are granted to the grantee without specifying the services to be rendered to the State of Hyderabad. The grant is unconditional and its for maintenance of the grantee.

Mashrooti Jagirs

Grants under *Mashrooti Jagir* system are made for the performance of specific services such as religious, civil, and military, etc. The grants are made as long as the grantee fulfills the conditions.

Madad mash Jagirs

These are granted as a gratuity to meet the livelihood needs of the grantee.

Tankha Jagirs

These grants were made prior to 1853 when the state finances are in bad shape which could not even pay the salaries of the soldiers and civil administrators. Lands are granted under *Tankha Jagirs'* tenure system to the grantee instead of salaries. However, with the reforms undertaken in 1853, all the *Tankha Jagirs* are resumed by the State government.

Inams

The word '*Inam*' is an Arabic word, which means a reward or favour. Land grants are made as *Inams* to an individual or an institution in recognition of services rendered. These grants are hereditary and permanent in nature. Sometimes, land grants are made to individuals in recognition of their services rendered to the village community or public officials.

Samasthan or Peshkash

It was customary practice prevalent among the medieval rulers to levy on the rulers of conquered territories a fixed amount annually as a tribute and leaving the rulers of conquered territories to govern their territories without interference from the conqueror. The annual payment made as tribute is called *Peshkash* and the ruler who pays *Peshkash* is called '*Peshkash Guzars*'. In the Hyderabad State, there were only three *Peshkash Guzars*¹³: namely The Rajas of Gadwal, Gurugunta, and Anagundi who paid *Peshkash* of Rs.86,540, Rs.7,050 and Rs.10,000 respectively. Unlike land grants made under the *jagir* tenure system (lands are highly spread across different districts), the *Samasthan* remained as one single unit territory comprising of a number of villages. All the *Samasthans* maintained their own administrative machinery for revenue collection, law and order, and the judiciary.

¹³ Source: H.E.H., the Nizam's Government Revenue Administration Report, 1324 *Fasli* (1914-15 A.D.), 1915. Page number.75. See also Chapter 20 (p. 406) of the Telangana History-Culture, Telugu Akademi, Hyderabad

In addition to the above-mentioned land tenure systems, which formed a major source of revenue for the state exchequer, the other mechanisms like Survey and Settlement, assessments and their incidence, rents, and remission had played a vital role in keeping the state finances in surplus.

2.3. Survey and Settlement

In order to fix the amount of tax to be levied on each unit of landholding under cultivation, a dedicated Survey and Settlement department was established in the year 1875 by Salar Jung I, the then Prime Minister of Hyderabad State. The Survey and Settlement department was set up on the similar lines of the Bombay system, which was being implemented successfully for 30 years. The chief function of the department is to conduct a land survey in both the *Khalsa* and Non-*Khalsa* villages and also to renew the settlements for the lands which had expired the sanctioned period. Initially, the period of settlement was fixed to be 30 years and after the expiry of the 30 years period, a revision settlement is supposed to be carried out. However, when the Survey and Settlement was extended to the Telangana region, the period of settlement is reduced to 15 years. Even this 15 year period was long as many farmers had bought new parcels of land under cultivation and these new lands which do not have *Pattas* had to pay high rates of assessment under *Siwai-Jamabandi*. Cultivators are at the mercy of the staff involved in the Survey and Settlement department and frequent complaints are made to higher officials about the deliberate mistakes committed by the staff. It's a herculean task for a cultivator to get their *Pattas* corrected once finalized by the Survey and Settlement Department. In order to set things straight, The Record and Rights Department was established in the year 1936 to protect the interests of the actual landholders, who are cultivating the lands for many years. However, the Record of Rights Department instead of recognizing actual landholder had favoured old *Pattedars* (absentee landlord). In the year 1949, the Record of Rights Act was enacted giving a fair deal to the actual cultivators and recognizing them as *Pattedars*.

The Survey and Settlement department submits the maximum rates to the government for sanction and once it is sanctioned by the government, assessment for individual fields is calculated and then announced to the cultivators, this process is called as *Jamabandi* (Bobbili, 1988). Land revenue assessment was made separately for wetland (lands having irrigation facility) and dry land. The rates of land revenue assessment for wetland was much higher than dryland. The difference in land revenue rates can also be observed between the regions; The

drylands in the Marathwada region are charged higher rates than drylands in the Telangana region, whereas the wetlands in the Telangana are accorded higher rates compared to Marathwada region. Further, the lands under Tank irrigation (irrespective of supply of water) are levied an additional 50% tehsil on two crops in the year. The Agriculturalists' Association of Hyderabad had given a representation to the Agrarian Reform Committee stating that the basis of land assessment by the State government officials was unscientific and irrational¹⁴. It was also observed by Mr. O'Connor, Director-General of Statistics, Nizam's Government that the land assessment rate for drylands and wetlands was much higher when compared to the British Indian territories. His recommendation for a 25% to 30% reduction in land assessment rate was not implemented by the Government.

2.3.1. Remissions on Land Revenue

The grant of remission on land revenue was accorded in the events of unforeseen crop losses due to various reasons like deficit rainfall, flooding, submergence of crops, and breach of irrigation sources, etc.

Table 2.3: Comparison of remissions made in the Marathwada region with Telangana Region in 1914-15 A.D.

Sl. No.	Remission Heads	Percentages		
		Marathwada	Telangana	Total
1	Remission owing to excess or deficit of water.	0.80	35.50	36.30
2	Remission owing to breach of irrigation sources	1.20	20.20	21.40
3	Remission owing to submergence of land prior to cultivation	0.10	5.80	5.90
4	<i>Talaf Maf</i> or Failure of crop	0.00	0.80	0.80
5	Remission owing change of crop or irrigation source etc.	0.20	19.30	19.50
6	Cash remission for double crop cultivation	0.50	8.80	9.30
7	Other remissions	0.70	6.10	6.80
	Total	3.50	96.50	100.00

Source: H.E.H., the Nizam's Government, Revenue Administration Report, 1324 *Fasli* (1914-15 A.D.), Hyderabad, p. 110.

¹⁴ See Chapter titled 'Land Tenures and Land Revenue Systems during Asafjahi Rule' in the book Telangana History-Culture published by Telugu Akademi, P. 411.

Table-2.3 above details the amount of remission accorded in Marathwada and Telangana regions. Comparing the grant of remission in both regions, it can be inferred that, dry and black soils in the Marathwada region having no irrigation facility are accorded least or no remission on the land revenue, whereas in the case of Telangana region due to presence of fertile and irrigated lands the remission in the land revenue was significant. However, in both regions, there was no significant or sometimes no remission for crop losses in drylands.

2.4. Tenancy and Land Tenures

Under the Ryotwari Land tenure system, *Pattedar* was conferred heritable, transferable and transmissible rights on the landholding. These rights have over a period of time resulted in the emergence of the non-cultivating owner class or *Pattedars* leasing their lands to tenants. This emerging phenomenon was reflected in the report of Famine commission of 1879¹⁵. The report of the Famine Commission 1879 had observed that:

“In consequence of the tendency on the part of those who are recorded as raiyats to sublet their lands or part of them and to live on the difference between the rent they receive and the revenue they pay to the government, a considerable class of subordinate tenants is growing up, who have no permanent interest in the land, and who pay such high rents that they must always be in a state of poverty”. (Paragraph 32 of the report of the Famine Commission 1879).

Land in addition to its economic value had always possessed social and political values of its own and possession of the land was a symbol of prestige and status in society (Report of Agrarian Reforms Committee, 1949, p.12). As a consequence, in the course of time land had acquired the properties of a tradable commodity and had swiftly drifted from owner-cultivators to the moneylenders and a non-cultivating class of individuals, who lived away from the lands with interest only in rents they receive from leasing to tenants.

In the case of Non-*Khalsa* lands or *Jagirs*, where the revenue from the lands was shared wholly or partially with the state government, the tenancy had emerged in three different ways: *Jagirdars* though had only revenue collection rights on specified land units, used their authority to claim rights on the soil and treated cultivators as mere tenants. *Seri* Lands, which are registered and cultivated by the *Jagirdar* and are given for cultivation by the tenants.

¹⁵ See The Report of Agrarian Reforms Committee, 1949, p.11.

The actual cultivators having rights on the land had leased out their lands for cultivation under the tenancy (The Report of Agrarian Reforms Committee, 1949: 13). In the Non-*Diwani* lands, the land rights are held by cultivators on similar terms and conditions as that of *Diwani* lands anywhere in the state. Whereas the *Jagirdars* were given right of revenue collection only. However, *Jagirdars* had often used their power and authority to evict the landowners from their lands on various frivolous pretexts. Sometimes, *Jagirdars* had used the services of the cultivators for years in return for granting land *Pattas* to the actual landowner. Tenancy Committee in its report of 1940 observes that;

“There were cases where when the survey settlement could no longer be postponed, the complaint was that *Jagirdars* and *Makhtedars* had manipulated their *Wasulbaki* and *Jamabandi* papers so that many actual and old cultivators were entered in the settlement papers as tenants of the holder of the alienated village or his relatives” (cited in the Report of Agrarian Reforms Committee, 1949: 14).

As mentioned in the Tenancy Committee report of 1940, there are some *Jagirdars* who had obstructed the sale and transfer of land by the actual cultivator and demanded *Nazarana* to lift the objection. The state government had to frequently intervene to protect the rights of the actual cultivators in the Non-*Diwani* lands. The government had made Survey and Settlement compulsory on all the villages in *Jagirs* to set right the claims of *Jagirdars* on village lands. Finally, the government had made amendments to the Land Revenue Act No. VIII of 1317 F. which categorically delineated the rights of *Jagirdars* and cultivators in *Jagirs*. In addition to amendments made to the Land Revenue Act, the rules framed under the legislation had further strengthened the cause of the actual cultivators in the Non-*Diwani* lands. For example, Rule 2 says that “ all persons who hold *Jagir* lands and pay revenue direct to *Jagirdars*, shall in all *Jagirs*, whether settled or unsettled, for all purposes shall be deemed to be *Pattedar* of the land held by them, notwithstanding any oral or written agreement between the *Jagirdar* or such persons and their rights and liabilities shall be the same as those of *Pattedars* of *Khalsa* lands”. Rule 4 and 6 further clarifies that the name of *Jagirdar* or his relation shall not be entered in the village records as *Pattedar* of lands other than *Seri* lands and if any *Pattedar* in a *Jagir* paying direct revenue to the *Jagirdar* dies, his lawful heir shall be recognized as *Pattedar* respectively. In all cases of land transfer and sale shall be done in accordance with the procedure followed in the *Khalsa* Land tenure system.

The other kind of tenancy prevailing in Non-*Diwani* lands was in *Seri* Lands, which are under complete ownership of *Jagirdar* are leased out to tenants on a contractual basis. The

tenants working in *Seri* lands are also expected to render household services to the *Jagirdar*. There were *Pattedars*, who acquired large tracts of lands through various means like moneylending, trade and other services had leased out their lands for cultivation by tenants. It was observed that most of the actual cultivators in *Jagirs* are working as tenants and labourers in their own lands.

Prior to the enactment of the *Asami Shikmis* Act of 1358 F., there were two types of tenants namely: *Shikimidari* and *Asami Shikmi* popular in the Hyderabad State. Under the Land Revenue Act 1317F., a *Shikimidari* was defined as “The person, who like a ‘*Pattedar*’ possess a right to the land or who from the beginning has been jointly in possession with the *Pattedar* or who before the promulgation of this act, by virtue of any rule in force has acquired the right of *Shikmidar* or shall hereafter acquire such right under the provisions of this act”. Whereas an *Asami-Shikidar* was defined as “The person responsible to the holder for payment of *Lagan*” (rent). The word ‘*Lagan*’ was defined as “any consideration in money or kind or both, paid or payable by a *Shikimidari* to his *Pattedar* or by an *Asami Shikmi* to the landholder on the account of the use or occupation of the land held by him, but shall not include the rendering of any personal service”. The Land Revenue Act of 1317 F, had a special emphasis on the avoidance of free service rendered by the *Shikmidar* or *Asami Shikmidari* in the lands or households of the landholders. Moreover, the Act had protected the rights of a *Shikimidari* by explicitly mentioning that “a *Shakmidar* shall be liable to pay only such rent or share of produce as may be due in accordance with the agreement between him and the ‘*Pattedar*’ or ‘*Pot-Pattedar*’; and in the absence of such an agreement, he shall pay what he used to pay in the previous years in accordance with usage, and so long as he continues to pay the rent he shall not be evicted from the land in possession”.

The Act also provides the contexts under which the rent can be enhanced or reduced. For example, in the case of remission of land revenue by the government for various reasons, the same should be passed on to the *Shikmidar* or *Asami-Shikmidar*. In the case of an imposition of an additional local or central tax, *Pattedar* can increase the rent proportionately and in another case wherein after the expiry of the agreement a *Pattedar* can enhance the rent as per the terms and conditions agreed upon mutually in the new agreement. Whatever the case may be an enhancement of rent can be done in not more than once in every five (5) years. If the *Shikmidar* or *Asami-Shikmidar* fails to pay the rent as per the agreement, the landholder within three years from the date of due should approach the *Tehsildar* for remedy and the decision of

the *Tehsildar* on this matter is binding on both contracting parties and this procedure is barred from the interference from a civil court.

One of the controversial provisions in the Land Revenue Act of 1317 F., was that if an *Asami-Shikmidar* has been in continuous possession of a specific unit of land for a period of 12 years, he is deemed to be a *Shikmidar* who has a permanent right of occupancy. However, the above said provision holds true when the *Asami-Shikmidar* in possession of the land has no agreement with the landholder. Due to this clause in the law, it became very difficult for the *Asami-Shikmidar* to prove his case and no landowner had allowed an *Asami-Shikmidar* to cultivate the land for more than four (4) or five (5) years (The Report of Agrarian Reforms Committee, 1949: 19). From the above discussion, one can infer that *Shikmidar's* rights (protected tenant) have a wider connotation when compared to the *Asami-Shikmidar* (tenants-at-will) and are on par with landowners with proprietary rights on the land.

2.4.1. The Types of Rent

Under the tenancy agreements prevailing in the Hyderabad State, there are three types of rent payments made by the tenants. The popular among those is *Batai* or crop-share, where the total produce at the end of harvest was shared as per the terms and conditions mentioned in the agreement. The other forms of rent payments are Money rent and fixed grain rent (it is also called as *Galla Maqta*). In the case of a money rent, a fixed amount of money per unit of landholding is to be paid in advance by the tenant whereas, in case of fixed grain rent, a fixed quantity of grains is to be shared with the *Pattedar* at the end of the harvest season. The Report on Agrarian Reforms Committee, 1949 mentions that under the *Batai* system of rent, the sharing of expenses of cultivation, *tehsil* on land and share in the output after harvest exhibits different forms (p.21).

2.4.2. The Growth and Extent of Tenancy

The Report of Agrarian Reforms Committee, 1949 with the help of various reports such as Economic investigations conducted by Prof. S. Kesava Iyengar during the years 1928-29, Tenancy Committee Report, 1940 and Census Reports from 1901 to 1941 had examined the growth and extent of tenancy in Hyderabad State. The below table gives figures for the Occupational Sub-heads under Agriculture from the year 1901 to 1921.

Table 2.4: Figures for the Occupational Sub-heads under Agriculture from the year 1901-21

Sl. No	Occupational Sub-Heads	1901	1911	1921	% variation (1901-1911)	% variation (1911-21)
1	Rent receivers	39,581	7,31,803	7,61,614	+1748.8%	+4%
2	Cultivators	34,73,561	40,64,930	36,07,366	+17.00%	-11%
3	Agents and Managers	62,956	34,540	33,202	-45.1%	-4%
4	Farm servants and field labours	10,23,643	27,88,212	17,63,562	+172.3%	-36%

Source: The Report of Agrarian Reforms Committee, 1949, p. 30

From the figures in the above table, we can infer that the numbers of rent receivers had increased by 1748% indicating the extent of rapid growth in the number of tenant cultivators. However, it's unclear to understand whether the increase in rent receivers was due to the transfer of land from actual cultivators to absentee landowners or is it an increase in the extent of land under cultivation or is it an increase in cultivators preferring to be mere rent receivers rather than being owner-cultivators. Assuming the figures are correct for the period 1901 to 1911, one can understand the rapid transfer of land from actual cultivators to rent receivers. Comparing the 17% increase in cultivators to that of 172.3% increase in farm servants and field labours, we can infer that most of the new cultivators had employed hired labour or farm servants for the agricultural operations in their lands. While all the figures had shown a decreasing trend during the decade 1911 to 1921, only rent receivers had increased by 4% reflecting the increase in more cultivators becoming tenants.

Prof. S. Kesava Iyengar had conducted economic investigations during the year 1928-29 in six districts of Hyderabad State: Warangal, Nizamabad, and Mahboobnagar in Telangana region, Nanded and Aurangabad in Marathwada region and Raichur district in Karnataka region of Hyderabad State to understand “to what extent the holders of land cultivate their lands and on what terms, and the conditions on which they sub-let them to others and also to understand the extent to which the holders and especially those who themselves cultivate their

holdings, have been dispossessed within a definite period, say the last 25 years and what are the causes of this dispossession”. A total of 56 villages are selected to carry out the study in six districts.

The study reveals that in the districts such as Warangal and Nanded having fertile wetlands, the actual cultivators with large landholding are moving away from active agricultural operations and are leasing out their lands to tenants. In Aurangabad district by the end of the year 1929, nearly 30% of the total cultivated area had moved into the hands of rent receivers in the past 25 years and most of the cultivators are working as tenants in their own lands. In Raichur district, nearly one-third of the land had moved into the hands of moneylenders. Interestingly there was no single Case of dispossession of land in Mahboobnagar and Nizamabad districts. In Warangal district, most of the lands were transferred into the hands of *Deshmukhs* and Patels who had considerable influence in the social and political aspects of villages.

According to the Census Report of 1931, the total rent receivers are 4,40,693 and cultivating owners are 10,55,832, which means a total of 14,96,525 are landowners. Whereas cultivating tenants are 5,01,894, which constitute about 33% of the total landowners in the Hyderabad State. According to the Census Commissioner, during the decade 1931 to 1941, the rent receivers had increased by 33% while the percentage of tenant cultivators had increased to 35% of the total number of landowners. It is observed by Agrarian Reforms Committee that the figures about tenant cultivators mentioned by the Census commissioner are less compared to what's estimated by Tenancy Committee report, 1940 (estimates that total tenant cultivators are 40% of the total landowners) because by the time Tenancy Committee had its investigations begun in the year 1939, there was considerable awareness among the landowners about the government measures in protecting the rights of tenants. This awareness had pushed the tenancy into secrecy and underground and moreover, most of the tenants are evicted.

2.4.3. Condition of Tenants

Taking cognizance of the increasing indebtedness and large-scale transfer of land from owner-cultivators to rent receivers, The Hyderabad State government had appointed Tenancy Committee under the chairmanship of Mr. S.M. Bharucha, the then Revenue Secretary to the Government. The committee had selected three villages from each district under three different land tenure systems; *Khalsa*, *Jagir* and *Inam* village. The committee observes that the number of tenants in the villages as 46% of the total number of *Pattedars* alone and if both *Pattedars*

and *Shikmidars* are included under landowners then the percentage of tenants was found to be 36% of total landowners. With respect to the lease period extended to tenants, the committee observes that the minimum lease period was one year, which is generally one cropping season and it's rare to find the same tenant working on the same land for more than 5 years. Comparing the Marathwada region with the Telangana region, the committee observes that more than 35% of lands in the Marathwada region are cultivated by tenants while it's not even half of this magnitude in the Telangana region. However, the Report of Agrarian Reforms Committee contradicts the above observation as most of the *Pattedars* in the Telangana region cultivate their lands with the help of contractual or hired labourers (*Bhagelas*). The short duration tenancy contracts had made tenants averse to invest in improving the fertility of the soil, as a result, the lands had become less productive and in some cases after the investment made by the tenant by applying manure, the owner had evicted the tenant claiming that other tenant had agreed to give higher rent for the same unit of land.

It was found by the Tenancy Committee that in all the villages where the study was conducted, only 37% of tenant cultivators were having written agreement and *Pattedars* were not willing to give their lands for the same tenant for more than two years. The terms and conditions in the written agreement are always in favour of the landowner. The table below was a snippet taken from a written agreement made between a tenant and landowner in the Warangal district of the Telangana region of Hyderabad State.

Table 2.5: A part of the tenancy agreement in the Warangal district during 1929-30.

Tenancy agreement in Ammapalem, Warangal District, 1929-30.

13. "If I intend extending the period of the lease, I shall execute a new deed, three months before the expiry of the present deed. If not, I shall give you a release notice and take a receipt from you. Otherwise, I shall not only pay the tenancy dues of the next year but also quit the land.

17. If even, I go against any of the above-mentioned conditions, on the same day, I may be removed from my possession, canceling the lease. In addition, I will be liable to pay the whole amount of money and grain calculated to cover the remaining period of the lease. I shall meet all the expenses, penalty or loss, you are put to on that account".

Source: S. Kesava Iyengar; Rural Economic Enquiries, 1949-51, P. 355.

However, terms and conditions in the agreement made between tenants and landowners vary depending on factors such as type of land (wetland or dry land), type of crop (cash or food crops), irrigation (tank, canal, tubewell) and region, etc. The Committee in its report mentions that fixed cash rent was prevalent in drylands while the *Batai* system was popular in wetlands. The range of fixed cash rent for wetlands was found to be more than thrice of land revenue per unit. If the lands have proper irrigation and soils fertile, then the rent would be higher than thrice of land revenue and rents were increased periodically by evicting the tenants. The committee made a rough calculation on the income and expenses in the cultivation of land under Tenancy and had found out that nearly one-third of the net profit would go to the tenant and two-third of profit would be retained by the *Pattedar*. Out of the profit retained by the *Pattedar*, more than half of it is paid as tehsil on the land.

Another significant observation made by the Tenancy Committee was that in almost all the villages studied, the village level officers had accumulated large tracts of land as *Pattedars* either by manipulation of land records or through moneylending activities. In the case of landlords who are also moneylenders, the conditions set by the landlord would include the compulsory sale of produce at the end of harvest to him. If the tenant chooses not to do so, he/she would have to pay an interest of 24% per annum on the money taken from the landlord-moneylender¹⁶. Tenancy Committee after a thorough understanding of the prevailing conditions had come to the firm conclusion as follows.

“If early steps for giving adequate relief to this class (tenants) are not taken no improvements in land can be effected, rack-renting will not be stopped as pressure on land grows every year and the conditions of the tenantry would further deteriorate....in order, therefore...to improve the conditions (of the tenancy) who bear a proportion of nearly 40% of the number of cultivating owners,....tenancy legislation should be introduced in Hyderabad without delay.” (cited in the Report of Agrarian Reforms Committee, 1949: 26-27).

The committee with an intention to bring in harmonious relations between tenants and landowners and reduce the widening gulf had framed a draft bill upon studying all the tenancy legislation in implementation across various states in India. The draft bill was framed on similar lines as that of the Bombay Tenancy Act of 1939 with minor variations to make it more suitable to the Hyderabad state. The government had accepted all the recommendations of the committee and had enacted Hyderabad *Asami-Shikmis* Act in *Fasli* 1354 (approx. in 1944).

¹⁶ As cited in the Report of Agrarian Reforms Committee, 1949, p. 26.

2.4.4. Hyderabad *Asami-Shikmis* Act of 1354 *Fasli*

According to the Hyderabad *Asami-Shikmis* Act of *Fasli* 1354 *Asami-Shikmis* are divided into two groups; 1. Protected *Asami-Shikmis* and unprotected *Asami-Shikmis*. Protected *Asami-Shikmis* are defined as those tenants who have held the land for agricultural purposes continuously for a period of not less than six (6) years between the years 1342 *Fasli* to 1352 *Fasli* (both inclusive) and should have cultivated the lands personally for the said period (the Report of Agrarian Reforms Committee, 1949: p. 28). The above said period of six (6) years is calculated by adding a period of cultivation done by the legal heirs in case of the actual tenant fails to carry out cultivation personally. All the tenants who fulfill the above said period are declared protected *Asami-Shikmis* and cannot be evicted as long as they pay the agreed rent and do not cause any permanent injury to the land or sub-let it to others. If a landowner intends to end the tenancy contract with the protected *Asami-Shikmi*, the landowner should serve notice one year in advance citing reasons for terminating the contract and if the tenant has made any investments for the improvement of the lands, the tenant can claim the same from the landowner.

Protected *Asami-Shikmi* or unprotected *Asami-Shikmi* cannot be evicted if they pay their agreed rent payment to the landowner. In case of disputes regarding the payment of rents, either party can approach *Tehsildar* for adjudication of the dispute. In all cases, the government has the right to fix maximum rent payable by the *Asami-Shikmi* to the landowner. The government remissions in *tehsil* should be passed on to the tenant proportionately and no extra taxes should be levied on the rent. All the tenancy agreements made after the commencement of this legislation shall be for a minimum period of 10 years and in case of agreements signed prior to this legislation shall be extended to a period not less than 10 years and no tenant can be evicted as long the agreed terms and conditions are satisfied by the tenant.

The provisions in the Hyderabad *Asami-Shikmi* Act instead of empowering tenants had, in fact, made the tenancy agreements unwritten and informal. The evictions had continued unabated since the commencement of the working of the Tenancy Committee and continued even after the implementation of the *Asami-Shikmi* Act in 1354 *Fasli*.

2.5. Agricultural Conditions in Hyderabad State

In an agrarian economy, various factors such as the size of landholding, land distribution, irrigation facilities, credit institutions and availability of seeds and manure, etc,

determine the agricultural production. The table below provides details on the average size of landholdings in Hyderabad State.

Table 2.6 : The Hyderabad State-Average Size of Landholding (in Acres).

Sl. No	Year	Wet/Dry	Telangana	Marathwada	Karnataka	Total State
1.	1914-15	Wet	01.86	00.65	-	01.28
		Dry	14.80	25.60	-	20.04
2.	1933-34	Wet	01.58	00.50	-	01.80
		Dry	12.51	21.85	-	16.88
3.	1939-40	Wet	01.56	00.46	-	01.01
		Dry	11.85	10.19	-	16.02
4.	1944-45	Wet	01.26	00.36	00.35	00.65
		Dry	09.19	15.57	14.85	13.20

Source: Narayan (1960), p.81.

We can infer that there was a gradual decline in the average size in landholding with respect to drylands (except in the Marathwada region for the period 1939 to 1945) but the wetlands remained unchanged for three decades starting from the year 1914 to 1944. The reduction in the size of landholding was due to the break-up of joint families, division of lands for legal heirs and transfer of parcels of land for credit, etc. Kesava Iyengar (1929-30) observes that 15 acres of dryland or five (5) acres of wetland would be a viable economic holding for a household in Hyderabad State. The Agrarian Reforms Committee after a detailed study during 1949-50 opines that eight (8) or 10 acres of wetland and 50 acres of dryland would constitute an economic holding. However, from the table above we can say that the average landholding size was far less than suggested by studies mentioned to be a viable economic holding.

The land distribution was always skewed in favour of the few individuals who had amassed large tracts of lands under various land tenure systems over a period of time. For example in the three districts of Warangal, Karimnagar, and Adilabad of Telangana region, big *Pattedars* of landholdings more than 100 acres constitute only 4.15%, 4.45% and 4.81% of the total *Pattedars* in their respective districts. Whereas, *Pattedars* having landholdings in the range of 5 acres to 10 acres constitute about 60.21%, 58.02% and 46.9% of total *Pattedars* in the respective districts (Agricultural Statistics, 1940-41 to 1944-45: 392-393). This inequality in landholding sizes was detrimental to the growth in agriculture as it encourages absentee landlordism and exploitation of small and landless farmers. Most of these large landholdings are cultivated by tenants and contract labour, who do not possess sufficient resources to invest in land to increase productivity.

Hyderabad State has diverse agro-climatic zones and most of its territory is cultivated with the help of seasonal monsoon rains during the months of July to September in a year. When compared, the Marathwada region has large tracts of black soils suitable for dryland crops such as a variety of millets, whereas Telangana region has more fertile wetlands suitable for cultivation of paddy, maize, and vegetables. Realizing the importance of exhaustive irrigation systems, the early rulers since the 13th century had emphasized on building large tanks such as Pakhal, Ramappa, and Laknavaram tanks. The irrigation system primarily consisted of tanks, *Kuntas*, wells, and river canals.

Open Wells were the popular form of irrigation used by the farmers of the Telangana region and most of these are highly dependent on the rainfall for groundwater recharge. Karimnagar district has the highest number of wells and mostly dug with the help of household members in their private lands. the command area under one well is very small when compared to other types of irrigation facilities. *Kuntas* are second popular form irrigation and these are owned by a village or group of villages having their lands adjacent to it. Bunds for these *Kuntas* are made with the help of locally available mud and these are frequently breached during the heavy rains causing huge losses to the farmers and restoration works were not done by the village officials.

The other form of irrigation was Tanks, which are sometimes naturally formed while some are artificial. In order to regulate the flow of water in tanks through sluices, *Netris* or *Neerudu* were appointed and these individuals are granted *Balota Inam* land and tax remission annually. In order to encourage the construction and repair of private tanks, *Dastband Kowls* were granted by the government. *Dastbanddar* was given the responsibility to maintain the bunds, sluices, and bed of tank in working conditions and in return for his services, the government pays 1/10th (*Dastband*) of the total revenue collected from the lands irrigated under the tank. Failing to fulfill the responsibilities would result in the cancellation of *Dastband Kowl*. However, in the course of time as the revenue from *Dastband Kowl* became less while the cost of repair and maintenance had multiplied, as a result, *Dastband Kowl* had become less lucrative and tanks became dysfunctional. The situation of irrigation facilities in Non-*Khalsa* lands remained much worse as *Jagirdars* had the least interest in the maintenance and repairing of the irrigation facilities in their jurisdiction. The table below gives a district-wise cultivated area which was irrigated during 1911-1941.

Table 2.7: Percentage of Cultivated area which was irrigated 1911-1941.

Sl.No.	Name of the District, Area or State	Percentage of the cultivated area which was irrigated			
		In 1911	In 1921	In 1931	In 1941
1	Warangal District	12.90	14.40	5.10	4.20
2	Karimnagar District	16.50	18.60	12.40	6.60
3	Adilabad District	2.70	4.60	2.10	0.80
4	Medak District	19.90	22.70	8.10	5.40
5	Nizamabad District	18.20	20.90	18.30	7.80
6	Mahaboobnagar District	10.30	12.30	8.70	4.00
7	Nalgonda District	9.10	9.70	7.70	4.60
8	Telangana Region	13.00	14.10	8.60	4.30
9	Hyderabad State	6.20	8.20	5.30	2.8

Compiled from: Census of India, Hyderabad State, 1911, p. 16; 1921, p. 33; 1931, p. 37; 1941, p. 3.

We can observe that except for one decade (1911-1921), there was a rapid reduction in all the districts in the cultivated land under irrigation especially from 1921 to 1931. The decreasing trend in irrigated land reflects the apathy accorded to all the natural and artificial irrigation facilities by the government.

In order to increase agricultural production and productivity, quality seed is a minimum requirement. Ryots in Hyderabad State had depended on the age-old practice of preservation of better-quality seeds from the harvest every season. Some ryots use to borrow seeds from neighbors while others would borrow from a grain lender-moneylender under the *Nag-Pech*¹⁷ system of lending. Until 1929, the farmers in Hyderabad State didn't receive any support in the supply of quality seeds or manure from the State agricultural department¹⁸. Only some districts

¹⁷ Under *Nag-Pech* system of grain lending, repayments are to be paid by the borrower in grains only and its 25 to 50% more than the quantity of the grains borrowed.

¹⁸ See chapter titled 'Agricultural Conditions during Asaf Jahi Rule' in Telangana Culture-History published by Telugu Akademi, p. 427.

in the Marathwada region had received cotton seeds from the department. Even the cost of manure was so high that it was sometimes three to four times of total *tahsil* levied per unit of land. The Agrarian Reforms Committee observes that due to the high costs of manure, tenants do not apply manures in the drylands for years and as a result, the soil loses its fertility and productivity falls and increases indebtedness (1949: 25).

The credit needs of the rural Hyderabad state are met by two types of institutions: formal and informal credit institutions. Cooperative Credit Societies, Banks and Government Departments, Joint-stock Banks like Imperial Bank and Central Bank are formal institutions while professional moneylenders, cultivators who lend to other cultivators and tenants, non-cultivating and non-professional moneylenders are informal institutions of credit. Kesava Iyengar, Economic Advisor to the Hyderabad State government through his study titled 'Rural Economic Enquiries, 1949-51' had observed that out of total credit extended in the surveyed villages (one village was selected from each *taluq*) only 6.58% of total credit was extended by cooperative institutions and even less 2.35% of total credit was extended by government departments. The meager distribution of credit by the government and the cooperative institution was not evenly distributed among the districts. Of the remaining total credit extended, professional moneylenders, cultivator-moneylenders, and non-cultivating non-professional moneylenders had extended 31.39%, 38.30%, and 21.34% respectively. This reflects that more than 90% of the total credit was extended by the moneylenders. Among these, the cultivator-moneylenders have extended the highest quantum of loans that happens to be landlords and government officials at village and district levels. The common practice among the moneylenders was to buy back the produce of the debtors at 20% less than the prevailing market price had effectively made small and marginal farmers be in debt trap forever and most often turns them as tenants in their own land.

In addition to the loans extended by government departments and credit cooperatives, *Taccavi* loans are extended by the government under special circumstances for specific needs to agriculturalists such as construction and repair of embankments, wells, and irrigation canals at 6% interest rate. *Taccavi* loans are also extended as short-term loans to buy livestock, seeds, manure, and other agricultural tools. However, the extension of *Taccavi* loans was not a regular affair but only as a relief measure in times of agricultural distress in identified villages and districts.

Mr. Bharucha, in his report on agricultural indebtedness, observed that “wide-spread debt in the last century was impossible because there was practically no security to offer and there were few means of enforcing repayment of debt, although smallholders could never have been free from debt, the volume of debt had begun to rise only from the time that Survey and Settlement were introduced giving a secure tenure to raiyats” (cited in the Report of Agrarian Reforms Committee, 1949: 70). After a detailed study in 312 villages in Hyderabad State, Mr. Bharuch mentions the causes of high Indebtedness among the Raiyats as; small and marginal landholdings which could barely meet their cultivation expenses, inherited ancestral debt, extravagant expenditures on ceremonial exchanges, and litigation expenses, etc (ibid: 76). Therefore, on the recommendations of Mr.Bharucha, Hyderabad State had enacted three legislations in the year 1940; 1. Moneylenders Act of 1940, 2. Debt Conciliation Act of 1940, and 3. Prevention of Agricultural Land Alienation Act of 1940.

The Moneylenders Act of 1940 intends to control and regulate moneylending transactions in the state. The provisions in the act require the moneylender to obtain moneylending licenses in the prescribed format and moneylenders should maintain a dedicated account for each debtor declaring all the transactions in the prescribed format. The interest rates are fixed at 9% simple interest for secured loans and 12% simple interest in the case of unsecured loan and compound interest system was banned. Molestation of the debtor by moneylenders was made a punishable offense and no agriculturalist paying land revenue of 50 rupees or less should be detained in jails.

Debt Conciliation Act of 1940 provides for an amicable settlement of debts through setting up a board chaired by a judicial officer consisting of 10 members including agriculturists and moneylenders. A debtor or creditor can approach the board with an application for resolving the dispute. Board is empowered to transfer part of the debtor’s land in favour of a creditor if such action is beneficial to the debtor and if the offer extended by the board is not accepted by the creditor, then Board can issue a certificate to the debtor, which is not questionable in the court of law. Board can also declare debtors as insolvent if there exists no reasonable means for repayment of debt.

The Prevention of Agricultural Land Alienation Act of 1940 provides for regulating the transfer of land from agriculturalists classes who are paying a land assessment of 500 rupees or less per annum to non-agriculturalists. The term ‘agriculturalists class’ is to be determined by the government from time to time and the act provides for a detailed list of contexts under

which lands can be transferred to non-agriculturalists class. The sanction of *Taluqdar* was made necessary in the transfer of land under different contexts. Where a *taluqdar* is not in a position to decide on the matter of transfer of land, he can refer the same to *Subedar* for sanction. Moreover, civil courts shall not have jurisdiction on the matters settled under this law and even an agriculturalist can't be transferred in the execution of the decree of any civil or revenue court order. All the agreements made between landowner and tenant with terms and conditions in contravention of the above said laws shall become void irrespective of the context in which those are signed.

Chapter 3

Profile of the Study Area

The current chapter provides a brief profile of the youngest state in India i.e., Telangana followed by relevant details about Kamareddy district and a detailed profile of the study area, consisting of five (5) villages located in a radius of less than 7 to 13km in Nizamsagar mandal of Kamareddy district, Telangana State had come into existence with the enactment of The Andhra Pradesh Reorganization Act, 2014 and was accorded Presidential assent on 1st March 2014 with an appointed day on 2nd June 2014. Consequently, Telangana had become the youngest and 29th state in the Union of India. Initially, there were 10 districts in Telangana State and with the amendment to Presidential Order 1975 under the Section 371-D of the Indian Constitution, the new Presidential Order titled “Telangana Public Employment (Organization of Local Cadres and Regulation of Direct Recruitment) Order, 2018” had resulted in the creation of 21 new districts. Two (2) new districts are carved out on 17th February 2019 taking the tally of total districts in Telangana to 33. Telangana State in total consists of 585 revenue mandal (*Tehsil*) and 69 revenue divisions. Telangana State is about 3.5% of India’s total geographical area with 2.9% of India’s population and is ranked 12th both in geographical extent and population size among the States of India.

Telangana State is a predominantly agrarian economy with 55% of its population engaged in agriculture as their livelihood and it is bestowed with bountiful natural resources like fertile soils suited for a variety of crops and irrigated with major and medium irrigation projects fed by the two of the largest rivers in South India; the Godavari, and Krishna.

3.1. Demographic Profile of Telangana¹⁹

As per the 2011 census population of Telangana is 350.04 lakhs, which had a decadal growth rate of 13.58% which is less than decadal growth rate (17.70%) of India’s population. This indicates that the fertility rate for the state has been decreasing in the last decade. The density of the population in Telangana state is 312 persons per Sq.km, which is less than the density of population (382 persons per Sq.km) of India. The number of males and females is 176.12 lakhs and 173.92 lakhs respectively. The sex ratio²⁰ for Telangana State is 988, which is higher than the sex ratio (943) of India. 61.12% of the total population in Telangana resides

¹⁹ See Telangana State at a Glance, 2017, Directorate of Economics and Statistics, Government of Telangana, Hyderabad.

²⁰ Sex Ratio is number of females for 1000 males in a population.

in rural areas while 38.88% of the total population of Telangana resides in urban areas. The sex ratio in the rural Telangana (999) is higher than the urban Telangana (sex ratio in urban Telangana is 970). The average size of a household is four (4) persons for Telangana state while for the country it is five (5) persons per household. The literacy rate of the Telangana state is 66.54, which is below the national literacy rate (72.98). Out of the total literates in the state, 43.46% are female literates while 56.53% are male literates.

The Scheduled Castes population in Telangana state is 54.09 lakhs (which is about 15.45% of the total population of Telangana) and out of which 40.72 lakh lives in rural areas while 24.71% of the total Scheduled Castes population resides in urban areas. The sex ratio among the Scheduled Castes of Telangana is 1008, which is far higher than the Scheduled Castes population's sex ratio (945) at the national level. The Scheduled Tribes population is 31.78 lakhs, which is about 9% of the total population of Telangana. About 89% of Scheduled Tribes reside in rural areas while the remaining 11% reside in urban areas. The literacy rate among the Scheduled Tribes is 49.51. The children in the age group of 0 to 6 years of age are 11% of the total population of the State. The child sex ratio is 932 which is higher than the child sex ratio (918) of the country.

3.2. The pattern of Landuse in Telangana State²¹

About 60% of the total land area in Telangana is arable. The forest area occupies 26.98 lakh hectares and the percentage of forest area in the Telangana is higher than the percentage of the total forest area of the nation. The net sown²² area for the year 2016-17 is 42.59% of the total area of the Telangana State. The cropping intensity, which is the ratio of the total gross area sown (i.e., total cropped area) to that of net area sown for Telangana is 1.25 for the year 2016-17 and this figure reveals that there is a difference in areas of land cultivated in two different seasons in one year. There exists a considerable difference in cropping intensity among the districts and about 15 districts in the state have less cropping intensity than the state cropping intensity. The higher the cropping intensity higher the agricultural production. Nizamabad and Karimnagar districts recorded the highest cropping intensity and the primary reason for high cropping intensity in these districts was the availability of fertile soils having reliable irrigation facilities for all seasons in a year.

²¹ See Socio-Economic Outlook, Planning Department, Telangana, 2018 p.17

²² Net sown area refers to the area of the land sown once in a season, while the gross cropped area refers to the total land sown in a year (includes the area of the land sown in all seasons in one year).

The table below gives the detailed distribution of land use pattern for the year 2016-17 in the Telangana state.

Table 3.1: Landuse pattern for the State of Telangana.

Sl. No.	The pattern of Land Utilization	Area (in Lakh acres)	% Share in the total geographical area
1	Forest	66.69	24.07
2	Barren and Uncultivable Land	14.99	5.42
3	Land put to Non-Agricultural Uses	21.05	7.60
4	Culturable Waste	4.49	1.62
5	Permanent Pastures and Other Grazing Lands	7.39	2.67
6	Land under Misc. Tree crops and Groves	2.77	1.00
7	Other Fallow Lands	16.53	5.97
8	Current Fallow Lands	25.08	9.06
9	Net Area Sown (Including Fish Culture)	117.97	42.59
Total		276.96	100

Source: Socio-Economic Outlook, Planning Department, Telangana, 2018, p. 17.

3.2.2. Agro-Climatic Zones of Telangana

Telangana State can be broadly divided into three agro-climatic zones; Northern Telangana Zone, Central Telangana Zone, and Southern Telangana Zone based on the geographical characteristics like types of soils, rainfall, and temperature. Northern Agro-Climatic Zone consists of 10 districts that receive an annual rainfall in the range of 900mm to 1150mm during the south-west monsoon. These districts are dominated by red and black soils, which are suited for the cultivation of crops like, Cotton, Maize, Redgram, Soybean, Turmeric, and Paddy.

Central Agro-Climatic Zone consists of 10 districts that receive an annual rainfall in the range of 800mm to 1150mm during the south-west monsoon. The range of temperatures during the monsoon season is 21°C to 37°C and black and red soils present in this zone make it suitable for cultivation of crops like; maize, cotton, rice, greengram, chilli, etc. The table below provides the list of districts under each agro-climatic zone.

Table 3.2: Agro-climatic zones and the list of districts²³ in each zone.

Sl. No.	Name of the Zone	Districts
1	Northern Telangana Zone	Adilabad, Nirmal, Kumuram Bheem, Jagtial, Mancherial, Peddapalli, Karimnagar, Rajanna Sircilla, Nizamabad and Kamareddy.
2	Central Telangana Zone	Sangareddy, Medak, Siddipet, Jangaon, Warangal Urban and Rural, Mahabubabad, Bhadradi Kothagudem, Khammam and Jayashankar Bhupalapally.
3	Southern Telangana Zone	Vikarabad, Hyderabad, Yadadri Bhuvanagiri, Mahabubnagar, Wanaparthi, Jogulamba Gadwal, Nagarkurnool, Nalgonda, Suryapet, Medchal-Malkagiri and Rangareddy.

Source: Socio-Economic Outlook, Planning Department, Telangana, 2018, p. 27.

Southern Agro-climatic Zone consists of 11 districts that receive an annual rainfall in the range of 600mm to 780mm during the south-west monsoon. The minimum and maximum temperature range during the monsoon season are between 22⁰C to 33⁰C and the red soils in *Chalkas* make the land more suited for the cultivation of crops like rice, cotton, redgram, greengram, and maize, etc.

3.2.3. Cropping pattern in Telangana

Due to diverse agro-climatic conditions coupled with moderate temperature and irrigation facilities, different crops are grown in Telangana. Predominantly Cereals, Millets, Pulses, Fruits, Plantation Crops, and Vegetables are grown. Out of the total land cultivated, the share of food and non-food crops was 66.4% and 33.6% respectively for the year 2016-17. There was a clear trend of decline in the extent of food crop cultivation from 70.8% in 2001-02 to 53.5% in 2015-16²⁴. The reduction was mainly found in the coarse cereals.

The table below gives the extent of food and non-food crops cultivated for Kharif and Rabi season in the year 2016-17. We can observe that the share of cereals and millets was higher in Rabi season compared to the Kharif season. Among the food crops cultivated Paddy, Maize and Jowar are popular in both Kharif and Rabi season and among the non-food crops, Cotton and oilseeds were popular in Kharif and Rabi seasons.

²³ The two new districts Mulugu and Narayanapet are carved out from Jayashakar Bhupalapally and Mahabubnagar districts respectively on 17th February, 2019.

²⁴ Socio-Economic Outlook, Planning Department, Telangana, 2018, p. 19.

Table 3.3: Area under cultivation under food and non-food crops for the year 2016-17.

Sl. No.	Crops	Area (in Lakh Acres)			% Percentage Share		
		Kharif	Rabi	Total	Kharif	Rabi	Total
1	Food crops	63.70	34.27	97.97	58.8	87.4	66.4
2	Non-food crops	44.60	4.94	49.54	41.2	12.6	33.6
	Gross Area sown	108.30	39.21	147.52	100	100	100

Source: Socio-Economic Outlook, Planning Department, Telangana, 2018, p.23.

3.2.4. Size of Landholdings

The Census of Landholdings conducted every five (5) years by the Government of India to understand the changes in the size of operational landholding across different regions in India. The average size of operational landholding for the state of Telangana is 2.7 acres in 2010-11. The table below provides the list of different categories of average ‘operational landholding’²⁵ size groups in Telangana.

Table 3.4: The average size of ‘operational landholdings’ in Telangana State²⁶.

Sl. No	Size Group	Census of Landholdings 2005-06 (in Acres)	Census of Landholdings 2010-11 (in acres)	% Variation of 2010-11 over 2005-06
1	Marginal	1.23	1.23	0
2	Small	3.46	3.46	0
3	Semi-Medium	6.67	6.42	-1.51
4	Medium	14.08	13.59	-2.21
5	Large	39.28	38.54	-2.12
	All Size Groups	3.21	2.71	-14.49

Source: Socio-Economic Outlook, Planning Department, Telangana, 2018, p.26.

²⁵ ‘Operational Landholding’ is defined as “All land which is used wholly or partly for agricultural production and is operated as one technical unit by one person alone or with others without regard to title, legal form, size or location”. (As defined in Agricultural Census, Phase-1, 2010-11, p. 5)

²⁶ According to the Agricultural Census 2010-11 report, landholding sizes for Marginal (less than 1 hectare), Small (between 1 and 2 hectares), Semi-medium (between 2 and 4 hectares), Medium (between 4 and 10 hectares) and Large (10 hectares and above).

From the table above, we can infer that there is not much variation in the size of landholding for the marginal and small farmers' groups. However, there was a decline in the average size landholding of semi-medium, medium and large farmers. The average size of landholding in Telangana state reduced from 7.6 acres during 1970-71 to 5.43 acres by 1980-81 and was further reduced to 4.32 acres in 1990-91 and to 3.38 acres in 2000-01 (Socio-Economic Outlook, Planning Department, Telangana, 2018: 26).

The table below provides the landholdings by the size class from the agricultural census 2010-11 data. It can be understood from the table that about 86% of the total households belong to small and marginal landholding farmers cultivating only 55% of the total cultivated area in the state. The large and medium landholding farmers though account for less than 4% of the total households, control over 19% of the total cultivated land. This skewness in the land distribution can be attributed to the historical reasons and also reflects the failure of the land reforms carried out by Independent India.

Table 3.51: Landholdings by Size Class as per Census 2010-11 for Telangana State.

Sl. No	Size class	Holdings (Lakh Nos.)	Area (Lakh Hectares)
1	Marginal	34.41 (62)	15.67 (25)
2	Small	13.27 (24)	18.69 (30)
3	Semi-Medium	6.03 (11)	15.85 (26)
4	Medium	1.67 (3)	9.27 (15)
5	Large	0.16 (N)	2.49 (4)
6	Total	55.54	61.97

Source: Telangana State at Glance 2017, Directorate of Economics and Statistics, Government of Telangana, p. 21. (figures in brackets is the percentage to totals).

3.2.5. Irrigation

Telangana State is crisscrossed by a number of tributaries of Godavari and Krishna rivers. Though there exists a huge potential for irrigation, not many initiatives are carried out to realize the potential. The major sources of irrigation are canals, tanks, tubewells, other wells, and other sources. The table below provides for source-wise gross irrigated areas for the years 2014 to 2016.

Table 3.6: Source-wise gross irrigated areas for the years 2014-15 and 2015-16.

Sl. No.	Source of Irrigation	Gross Irrigated Area (in Lakh Hectares)			
		2015-16		2014-15	
		Area	% of gross area irrigated	Area	% of gross area irrigated
1	Canals	0.61	3.01	2.43	9.61
2	Tanks	1.21	5.96	1.13	4.47
3	Tube Wells	11.93	58.83	14.19	56.11
4	Other Wells	6.12	30.18	6.97	27.56
5	Other Sources	0.41	2.02	0.57	2.25
	Total	20.28	100	25.29	100.00

Source: Socio-Economic Outlook, Planning Department, Telangana, 2017, p. 45.

It can be observed that the gross irrigated area for the year 2014-15 was 25.29 lakh hectares reduced to 20.28 lakh hectares in the year 2015-16, which is a decrease of 19.85% in one year. The net irrigated area had decreased from 17.26 lakh hectares in 2014-15 to 14.86 lakh hectares in 2015-16, which is a decrease of 13.90% in one year²⁷.

The following section deals about the profile of the Kamareddy district and followed by a detailed description of the study area consisting of five (5) villages sharing the boundaries with each other in the Nizamsagar mandal.

3.3. Brief Profile of Kamareddy District

The Kamareddy district was carved out from residual Nizamabad district on 11th October 2016. Kamareddy district derived its name from a ruler named Chinna Kamireddy, who ruled the Domakonda Fort area from 1600 to 1640 A.D. Kamareddy district consists of three (3) revenue divisions; Banswada, Yellareddy, and Kamareddy. Each revenue division is divided into Mandals and there are in total 19 Mandals and one municipality in Kamareddy district. Kamareddy district is bounded on the East by Rajanna Siricilla and Siddipet districts, on the North by Nizamabad district, on the South by Medak district and on the West by Nanded and Bidar districts of Maharastra and Karnataka respectively. Kamareddy district is located

²⁷ See Socio-Economic Outlook, Planning Department, Telangana, 2017, p. 45.

between 18-19'-07'' of latitudes and 78-20'-37'' of longitudes with a geographical area of 3652 Sq.Km.

As per *Samagra Kutumba* Survey,2014 the total population of Kamareddy district is 9,96,139. Out of which Scheduled Castes are 16.73% and Scheduled Tribes are 9.85%. OBC (Other Backward Class) constitutes 60.33% of the total population while the Minorities population is 11.04% and other Castes are 2.05% of the total population. About 87.29% of the total population of the district resides in rural areas while 12.71% of the total population are urbanites. The sex ratio of the district is 1033, however, the child sex ratio (for children in the age group of 0 to 6 years of age) is 941 indicating the increasing preference for a male child. The literacy rate is 56.51, which is less than the State's literacy rate of 66.54.

The total households in the district are 2,77,355 out of which 84.26% of households are involved in agriculture as a primary occupation. The below table provides for the distribution of households by class size for the Kamareddy district.

Table 3.7: Distribution of Agricultural households by class size for Kamareddy district.

Sl. No	Landholding Class Size	Number of Households	Percentage
1	Marginal (up to 1 Hectare)	1,56,771	67.07
2	Small (1-2 Hectares)	55,496	23.74
3	Semi-Medium (2-4 Hectares)	17,783	7.60
4	Medium (4-10 Hectares)	3,432	1.46
5	Large (above 10 Hectares)	230	0.09
	Total	23,33,712	100

Source: Know Your District-Plan your district, Kamareddy, Planning Department, Government of Telangana, 2016, p. 1-10.

From the above table, we can infer that about 91% of total households having a primary occupation as agriculture belong to marginal and small landholding farmers while a mere 0.09% belong to large landholding farmers.

The net cropped area is 1,34,091 hectares while the gross cropped area is 1,81,047 hectares. The cropping intensity for the Kamareddy district is 1.35, which indicates that there

is a seasonal variation in the cropping area with Kharif season contributing to the increased area of land under cultivation. The net irrigated area is 45,599 hectares while the gross irrigated area is 80,167 hectares indicating the high dependency of irrigation system on the seasonal rains.

Rice and Maize are two popular food crops cultivated while Cotton and Sugarcane are two cash crops cultivated to a larger extent in this district. Other crops cultivated include; Jowar, Redgram, Greengram, Black gram, Bengalgram, Groundnut, Sunflower, Soybean, and Chillie. There are 10 agricultural markets committees in the district to conduct the sale and purchase operations of the agricultural produce in this district.

With respect to educational infrastructure facilities, there are a number of private and government educational institutions to provide quality education to the residents of the district. The table below provides the number of recognized educational institutions for various levels of education.

Table 3.8: List of Educational Institutions in the Kamareddy district.

Sl. No	Educational institution	Number of Institutions	Enrolment
1	Primary Schools	732	41,841
2	Upper Primary Schools	222	26,187
3	High schools	302	85,104
4	Model Schools	6	2,704
5	KGBV Schools ²⁸	17	3295
6	Navodaya School	1	391
7	Junior Colleges	53	-----
8	Degree Colleges	23	11,504
9	B.Ed. colleges	3	300

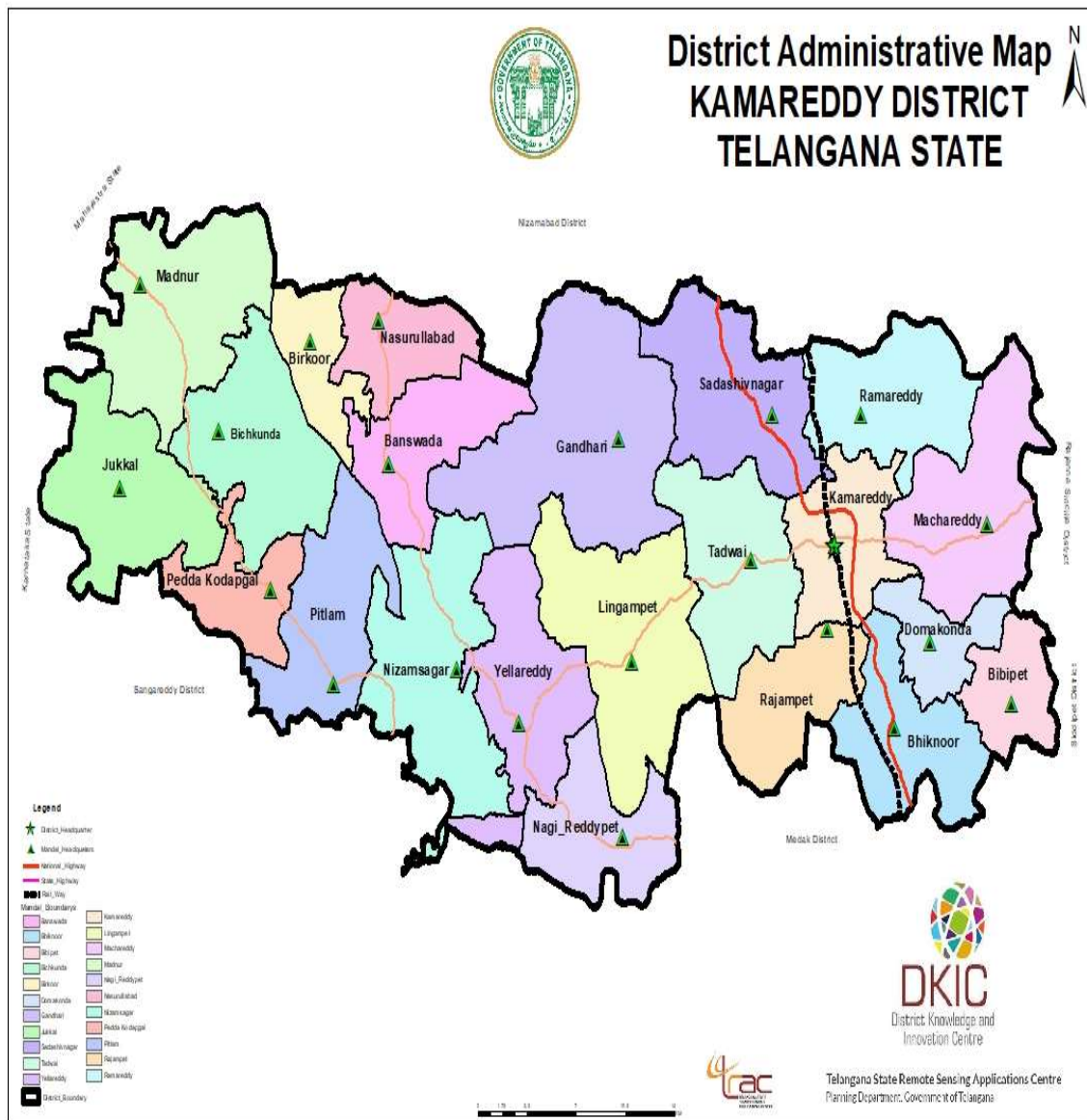
Source: Know Your District-Plan your district, Kamareddy, Planning Department, Government of Telangana, 2016, p. 1-10.

With respect to healthcare infrastructure in the Kamareddy district, there are six (6) Community Health Centres (CHCs), 19 Primary Health Centres (PHCs) and 201 Health sub-

²⁸ KGBV (Kasturba Gandhi Balika Vidyalaya) Schools are residential girls secondary schools completely funded by government of India for girls belonging to SCs, STs, OBCs, minority communities and below poverty line families.

centres offering Allopathic Healthcare services. In addition to these, there are eight (8) Ayurveda Hospitals, three (3) Homeopathic Hospitals, five (5) Unani Hospitals, and one Naturopathy Hospitals catering to the healthcare needs of people in Kamareddy district.

District Administrative Map-Kamareddy District, Telangana State.



3.4. Profile of the Study Area

The study area refers to five (5) villages, which are adjacent to each other and share a common border with the centrally located largest village of all the five villages. All five villages are border villages for the Kamareddy district and adjacent to the Sangareddy district. All the five villages come under the administrative jurisdiction of the Nizamsagar Mandal as revenue villages. All five villages are within a radius of Seven (7) km and are located at a distance of 12 Km from the Nizamsagar Project. All the villages are about 60 Km from the Kamareddy district headquarter. Historically, these villages are at the periphery of Domakonda Samsthan of Hyderabad State. The following section deals with the detailed description of the five (5) villages as a study area.

3.4.1. Demographic Profile of the study area

The study area consists of 252 households with a population of 1401 people with females (728) outnumbering males (673). The table below provides for the age-wise breakup of the population.

Table 3.9: The age-wise breakup of the population.

Sl. No	Population (Age-wise breakup)	Female	% of (Female to total population)	Male	% of (Male to total population)	Total
1	0 to 5 years of age	81	5.78	71	5.06	152
2	6 to 14 years of age	118	8.42	102	7.28	220
3	15 to 29 years of age	204	14.56	176	12.56	380
4	30 to 60 years	266	18.98	263	18.77	529
5	above 60 years	62	4.42	58	4.13	120
	Total	728	51.97	673	48.03	1401

Source: Field Survey, 2017-18.

The age-wise breakup of the population in the study area was carried out for a better understanding and analysis of the demographic features. The age group of (0 to 6) years is considered because the same age group is considered for the implementation of specific childcare schemes by the State and Central government. About 10.84% of the total population in the study area is in the age group of 0 to 5 years of age. There are four (4) Anganwadi Centres in five (5) villages (two villages have one common Anganwadi centre) to take care of the nutrition and nourishment of the children. Each Anganwadi centre has one teacher and helper to carry out daily activities.

The age group of 6 to 14 years is prescribed under the legislation titled ‘The Right of Children to Free and Compulsory Education Act, 2002’ for free and compulsory education. This age group forms about 15.68% of the total population of the village. There are three primary schools for five villages catering to the educational needs. However, the teacher-student ratio that is supposed to be maintained under the Right to Education Act, 2002 is not followed in the schools. As a result, schools are crowded and recently a *Vidya* volunteer was appointed due to the intervention of the school management committee of the village. The school management committee also takes an active part in overseeing the mid-day meal scheme implemented in the school. The food was cooked and served by a couple who are from the same village. They are paid 6000/- as a monthly salary and all the expenses related to vegetables and other cooking requirements are met by the government. The medium of instruction in these schools is Telugu and some villagers, especially those who had migrated to Hyderabad or nearby towns and returned to the village had sent their children to private English medium schools in the nearby town.

The age group of 15 to 29 years of age is called as ‘youth’ as per the National Youth Policy, 2014 brought out by the Ministry of Youth Affairs and Sport. Youth is defined “as a person between the age where he/she leaves compulsory education and the age at which he/she finds his/her first employment” (National Youth Policy, 2014: 9). In the study area, 27.12% of the total population belongs to the age group of 15 to 29 years. The educational details, occupational and employment details will be explained later in this chapter.

The age group of 30 to 60 years is generally considered as a working-age population and in the study area, they constitute 37.75% of the total population. They are the majority age group in the study area. Most of the members of this age group are involved in agriculture as a primary occupation. The age group of 60 years and above is considered as old age and are eligible for pension under the *ASARA*²⁹ pension scheme implemented by the Telangana Government. They constitute about 8.85% of the total population and people below 70 years in these villages are still active in agricultural activities, especially in allied activities like maintaining the livestock. Overall, the study area consists of more females than males in all age group categories and about 65% of the total population is in the age group of 15 to 60 years. The majority of the people in the age group of 15 to 60 years are involved in agricultural activities.

²⁹ The details about the *Asara* pension scheme and its beneficiaries is explained in detail in the chapter 6.

3.4.2. Caste-wise Composition of Population

The entire population in the study area can be segregated based on Caste to have an in-depth understanding of the relations between different Castes in the agricultural production process as well as other aspects of village life. The table below provides for the Caste-wise composition of the population in the study area.

Table 3.10: Caste-wise Composition of the Population in the Study Area.

Sl. No	Name of Caste	Number of Households	Male	Female	Total	% of the total population
1	Mudiraj	166	443	477	920	65.67
2	SC (Madiga and Mala)	45	109	116	225	16.06
3	ST-Yerukala	6	18	27	45	3.21
4	Patel	4	14	15	29	2.07
5	Goondla	7	23	20	43	3.07
6	Gandla	3	4	6	10	0.71
7	Chakali	2	9	11	20	1.43
8	Kuruma	4	12	14	26	1.86
9	Mangali	3	12	9	21	1.50
10	Reddy	8	19	24	43	3.07
11	Yadav	1	3	6	9	0.64
12	Bestha	1	1	1	2	0.14
13	Komati	1	3	1	4	0.29
	Muslims*	1	3	1	4	0.29
	Total	252	673	728	1401	100

Source: Field Survey, 2017-18 (*Muslims do not come under any Caste as they belong to Islam religion).

The following section details the Caste and its composition with traditional as well as current occupation.

Mudiraj: The people belonging to this Caste are traditional fishermen. In earlier days the majority of the people from this Caste are dependent on fishing in the Nizamsagar dam, which was built in the year 1923. It is evident from the above table that the majority of the people (65.67% of the total population) in the study area belong to Mudiraj Caste. In the course of time, as the population had increased and per capita availability of fish had become unviable to meet growing needs. Moreover, the fluctuating water levels and lack of sufficient water in the Nizamsagar Project had made the fishing an unreliable economic activity. Therefore, many people from this Caste had migrated to nearby towns in search of work. However, a significant number of people from the same Caste had become landowners and adopted agriculture as their primary occupation. At present, most families are involved in agriculture as their livelihood. Women from this Caste actively participate in agricultural activities especially during sowing and weeding of paddy crops. They also migrate to nearby villages as agricultural labour during peak agricultural season. In general, women work as agricultural labour in the study area.

Scheduled Castes (SCs): Scheduled Castes in the study area consist of Mala and Madiga. They are the second largest group in terms of population. Historically, these Castes; Madiga and Mala Castes are treated as ‘untouchables’. In the study area, the houses of the Scheduled Castes are separately located at one corner of the village and it is called SC-Colony. Most of them work as agricultural labour in other’s lands and while some have their own lands with no irrigation facilities and the majority of them do not own fertile lands either. Due to their numbers, they have become an important group with the ability to alter the outcome in all the elections in the study area. One of the SCs members who work for a local political leader had bought a tractor under the Yantra Laxmi Scheme by the government. He now cultivates up to six (6) acres of land under the *Kowlu* system. It is interesting to observe that, the SC-Colony had better roads and drinking water facilities compared to other wards in the villages. At present, most of SCs are engaged in agricultural activities either as agricultural labour or as tenants.

Scheduled Tribes: There are six (6) households belonging to the *Yerukula* tribe in the study area. Traditionally, they are involved in pig rearing and basket making. As the availability of raw material for basket making had decreased, they had shifted to other livelihoods. Only one of the households still practice pig rearing in the study area while others had moved away from their traditional livelihood. At present, they work as agricultural labour in another land while few households had bought lands for cultivation. Though women from the *Yerukula* tribe

have expertise in basket making, they could not get raw material as most of the lands in the study area are brought under cultivation.

Kuruma: There are four (4) households belonging to Kuruma Caste in the study area. Traditionally they are sheep and goat herders. Prior to the introduction of biochemical technology into traditional agriculture, Kuruma Caste members played an important role in agricultural activities as they had supplied manure in the form of animal feces and slurry. Landowners in the village had to request them to keep their large livestock and herds in their fields during the lean season. Landowners use to buy the manure from them in return for a fixed quantity of output. However, with the introduction of technology in agriculture operations, they lost their livelihood. Most of the grazing lands are brought under cultivation and it became unviable in economic terms to provide fodder for the large herds. In one of the villages in the study area, one household has a herd of more than 40 sheep. They purchased lands by selling sheep on an annual basis and at present, they own considerable size of landholding, which they use as grazing lands. Very few households had bought lands while remaining had moved away from their traditional occupation. Recently, these Caste group members had received 21 sheep per each household under the Sheep distribution Scheme introduced by the Government of Telangana. However, they are struggling to find new grazing lands to feed the increasing size of herds.

Goondla: There are seven (7) households in the study belonging to Goondla Caste. They are traditional fishermen. All households of this Caste hold a lifetime fishing license in the Nizamsagar Project. However, very few members engage in *Shikari* (fishing activity). Though they claim to have sole right on the fishing activity in Nizamsagar Project, they could not withstand the political power of the Mudiraj Caste and slowly they had given up their fight for their rights and found alternate livelihoods. At present, they work as agricultural labour in other's land during the agricultural season and migrate to nearby towns during lean season to work as construction labour. According to the categorization of OBCs by the State Government, they come under the BC-A category while the Mudiraj Caste is categorized in BC-D.

Gandla: There are only three (3) households in the study area. They had migrated from the Maharastra state and settled in these villages. They were traditionally called oil-pressers of Canarese people. The word Gandla is derived from the Telugu word 'Ganuga', which means an oil-mill. At present they are into agriculture and actively involve as agricultural labours

during the peak agricultural season. One of the households had become a cook in primary school for the mid-day meal scheme implementation in their village primary school. Women from Gandla Caste are very active and are hardworking and enterprising complementing the household income through the cultivation of vegetables in their small landholdings.

Chakali: There are only two (2) households belonging to this Caste. Chakali is the traditional cloth washing Caste in the study area. Earlier, they used to work for upper Castes like Patels and Reddy's households in exchange for a fixed quantity of agriculture produce after the harvest. They play a vital role in the marriage ritual of upper Castes and they get paid in kind for their services rendered. They used to wash the clothes in the streams and village tanks, but these got dried up and polluted with fertilizers and pesticides and they could not afford to build a separate washing *ghat* (Dhobi Ghat) for themselves. However, even today their place in the marriage rituals of the upper Caste households remained intact. At present, they are no more engaged in their traditional occupation and bought lands for cultivation. Women from these households actively participate as agricultural labourers in agricultural operations. They also migrate to nearby villages to work in other's fields during peak agricultural season.

Mangali: There are three (3) households and they are traditional barbers in the villages. Earlier, they were paid in kind for their services rendered to clients. At present only the elders of these households are involved in their traditional occupation at the village while the young had moved to nearby towns and had set up their own saloons. One of the members from this Caste had set up a saloon in Hyderabad and took his brother's son to train him at his saloon. They also bought lands for cultivation and women from these households work as agricultural labourers in other's fields.

Bestha: There is only one household in the study area. They are traditional fishermen having a lifetime membership for fishing in the Nizamsagar Project. Similar to the Goondla Caste, they claim to be real Gangaputra having sole rights on fishing in the Nizamsagar Project. Till 2004 there are more than five (5) households from this Caste inhabiting in these villages. However, except one household, remaining had migrated to Hyderabad to work as construction labour. The one member, who preferred to stay back in the village had bought one acre of land and is cultivating the same. However, during the lean season, he joins his Caste members in Hyderabad to work as casual labour. He also goes to *shikari* (fishing) in the Nizamsagar Project whenever he gets some time or whenever relatives visit his home. His wife joins other women

to work as an agricultural labourer during the peak agricultural season complementing the household income. The recent initiative by the government to revive village tanks and introduce fishilings had ignited hopes on their traditional livelihood.

Yadav: There is only one household belonging to Yadav Caste in the study area. Yadavs are traditional cattle herders. The Yadav in the study area runs a milk collection centre and sells them to a private milk dairy based in the Hyderabad. He maintains three (3) cows and six (6) buffalos and four (4) calf in his cattle shed. He also owns three acres of land and cultivates it during the Kharif season only. He also sells the manure to the landowners, especially to Patel of one of the villages, as Patel uses only organic manure for cultivating two acres of his land for household consumption. Though many landowners in his village ask him to cultivate their lands under *Batai* or *Kowlu* System, he politely refuses to do so as he has enough workload to look after the cattle and milk collection centre. All the able women in his household participate in agricultural operations as agricultural labourers in other's fields.

Komati: There is only one household belonging to Komati Caste in the study area. The traditional occupation of *Komati* Caste is trading and moneylending or other financial transaction business. *Komati* had come from a nearby town to set up a Kirana shop in the village and he also bought four acres of land in one of the villages in the study area. At present in the study area, there are people from other Castes who had set up Kirana shops catering to the household needs of the villagers. *Komati* had given his land for cultivation under *Kowlu* system to the same villager. His wife does not take part in any of the agricultural operations and his elder son works in a private firm in Hyderabad.

Reddy: There are eight (8) households belonging to *Reddy* Caste in the study area. They are traditional landlords, whose primary occupation is agriculture. They collectively own 168.25 acres of land in the study area with an average landholding of 20.28 acres per household. The majority of the *Reddy* Caste households are financially sound and are in possession of tractors and other agricultural machinery. To cultivate their lands, they employ agricultural labourers from within and outside villages. They, in fact, control the timing of the agricultural operations by renting their machinery to the fellow villagers. However, with the competition from other villagers having tractors the influence is in decline. Two (2) *Reddy* households had migrated to Hyderabad and have set up their businesses and they had rented their land in the village for a private seed company for a fixed period and rent. They play an active role in the socio-economic and political aspects of the study area. They are strongly contested by the

Patels in the villages in the Political sphere of influence. Though they are numerically insignificant when compared to Mudiraj and Scheduled Castes in the study area, they play a vital role in elections for Sarpanch post at the village level. Most often either they directly contest or extends support to their supporter for the post of Sarpanch. Women from *Reddy* households do not actively participate in agricultural operations in the agricultural fields of other Castes. However, they work in the fields of *Reddy* Caste. The children of the *Reddy* households are well educated and few of them are pursuing their post-graduation in western countries.

Patel: There are four (4) households belonging to the Caste of Patel in the study area. Four households are located in five villages of the study area. All Patel households are blood relatives. Earlier, there was only one Patel who was tasked by the Domakonda Samasthan ruler to assess and collect the revenue from the five villages in the study area. Most of Patel's land was submerged in the Nizamsagar Project and as a result, the landholding size of Patel had reduced to less than 300 acres. In the course of time, due to inheritance laws and marriages of sons and daughters, The collective landholding size was reduced to 82 acres with an average landholding size to 20.50 acres of land per each household. However, the current lands under the possession of Patel households are the fertile lands with reliable irrigation facilities in the entire study area. Patels cultivate their lands with the help of agricultural labours from within the village and outside the village. At present their lands are cultivated by tenants from within the village under *Batai* System. They take a keen interest in innovation in agriculture via the introduction of new crop varieties to the villages. There are tenant farmers from the same village who are cultivating Patel's land for two decades and maintain a cordial relationship with the Patels households. Few households from the Mudiraj Caste had bought the land from the Patels by working in their fields. One of the Patels had built a Hanuman temple at the border of the village and he conducts regular religious *yatras* and rituals with help of youth from his village, whereas other Patel from the adjacent village, had recently become Sarpanch for the second term. They play an active role in the decision-making process on the socio-cultural and political aspects of villagers. On various occasions, Patels had contributed financially to help improve the basic infrastructure in the villages. They had built bus shelters, set up an electronic sound system for important announcements related to the village, and donated land to the government to build a primary school in the village. Two of Patels' sons had become government teachers, while others had their businesses in Hyderabad. Women from Patel households are not involved in any of the agricultural operations.

Muslim: There is only one Muslim household in the study area. They own a poultry farm in one of the villages in the Study area. Four generations back, they had come to this village and settled. They had bought two acres of land and for about 10 years they had cultivated it but later on, they gave it for *Batai* and *Kowlu* system depending upon the availability of water in their field. At present, they had given their land for cultivation under the *Kowlu* system to the same villager. Women from this household is a popular ladies tailor in the study area and children are well educated and one of them is working for a private pharmaceutical firm in Hyderabad while the other son looks after the poultry.

3.4.3. Land and Agriculture

Total land in the study area (excluding the *Poramboku*³⁰ lands and village settlements) is 990.35 acres. Based on the type of soil, irrigation facility and its suitability for cultivation, total land can be divided into three types; Wetland, Dryland and Uncultivable land. The table below provides details about the type and area of land.

Table 3.11: Types of land and Area of land under each type.

Sl. No	Type of land	Area (in Acres)	% of the Total land
1	Wetland	286.65	28.95
2	Dryland	509.65	51.45
3	Uncultivable land	194.05	19.60
	Total	990.05	100

Source: Field Survey, 2017-18.

Lands having access to one of the irrigation facilities such as Canals, Tank, Tubewell or borewell, lift motor is considered as wetlands while the lands having no irrigation facility but cultivated using the seasonal rainfall are categorized as drylands. The uncultivable lands are wastelands owned by the villagers and are not cultivable because of its terrain and unsuitability for agriculture. These uncultivable lands require huge investments to improve the land and make it suitable for cultivation. There are few villagers who with great difficulty had brought their uncultivable lands into cultivation but later left it fallow as it became not viable for cultivation anymore.

When it comes to the size of landholding by each household, the majority of households have landholdings between the range of three (3) to four (4) acres. From the table below we can understand that about 75% of the total households are having a size of landholdings less

³⁰ *Poramboku* lands are the government waste lands under the administrative control of the revenue department.

than four (4) acres. One-fourth of total households have a size of landholding less than one acre. From the table, we can infer that most of the farmers are in subsistence mode of production with an average of 1.13 acres of wetland per each household.

Table 3.12: Size of Landholding and Households.

Sl. No	Size of Landholding (in Acres)	Number of Households	% of the Total Households
1	Landless	6	2.40
2	Less than 1	56	22.22
3	Between 1 and 2	55	21.82
4	Between 2 and 3	47	18.65
5	Between 3 and 4	30	11.90
6	Between 4 and 5	16	6.34
7	Between 5 and 6	8	3.17
8	Between 6 and 10	17	6.75
9	Between 10 and 15	5	2.00
10	Between 15 and 30	11	4.36
11	Above 30	1	0.40
	Total Households	252	100

Source: Field Survey, 2017-18.

There are 12 households in the study area having landholding size more than 10 acres and most of them either cultivate their lands with the help of agricultural labour or lease out the land under the *Batai* or *Kowlu* system. There are six (6) households who are landless and they usually migrate to nearby towns to work as casual labour. Only one out of the six households had taken land for cultivation under *Batai* System. The cropping pattern in the study area entirely depends on the water level in the Nizamsagar Project as it's the only major source of irrigation for cultivation. Paddy and Maize are two food crops grown in the Kharif and Rabi season, while Pulses, Groundnut, Millets, and other vegetables are cultivated to large extent during the Rabi season.

The table below provides the Caste-wise landholding size in the study area. About 84% of the total households belong to two Caste groups in the study area. Mudiraj and SCs together own 668.2 acres of total cultivable land, which is equivalent to 84% of total cultivable land. However, when compared in terms of the average size of landholdings they are far less than

Patel and Reddy Castes. Reddy and Patel Caste households together own 250.25 acres, which is equivalent to 31.4% of total cultivable land. In other words, 4.47% of total households own nearly one-third of the total cultivable land. Moreover, most of the fertile lands with irrigation facilities are in possession of these two Castes alone. The average size of landholding for the study area is 3.92 acres and out of all Castes, only four Castes have an average size of landholding more than the average size of landholding of the study area.

Table 3.13: Caste-wise landholding size in the Study Area.

Sl. No	Name of Caste	Total Landholding size (in acres)	Average Landholding Size (in acres)	Number of Households
1	Mudiraj	555.15	3.34	166
2	SC	113.05	2.51	45
3	ST-Yerukala	10	1.66	6
4	Patel	82	20.50	4
5	Goondla	8.75	1.25	7
6	Gandla	4.15	1.38	3
7	Chakali	3	1.50	2
8	Kuruma	28.5	7.12	4
9	Mangali	7.5	2.50	3
10	Reddy	168.25	21.03	8
11	Yadavs	3	3.00	1
12	Bestha	1	1.00	1
14	Komati	4	4.00	1
	Muslims	2	2.00	1
	Total	990.35	3.92	252

Source: Field Survey, 2017-18.

Initially, Patel and Reddy Castes had a monopoly over the possession of fertile lands in the study area, However, in the course of time, Mudiraj Caste had bought lands from Patels in their villages in return for labour services in Patel lands while some Mudiraj Caste households had paid money to buy the lands from Patels. Reddy Caste being the cultivators of land had not easily given up land in return for services rendered by other Castes. In addition, they bought lands from Patels by paying them in instalments.

Due to intense competition for land among the majority Castes, the land had always remained as a premium resource that is shared with other Castes in return for a variety of services. However, with the introduction of green revolution and intervention by the

government at various levels of cultivation, the land is gradually losing its importance and becoming just as another agricultural input³¹.

3.4.4. Education

Out of five (5) villages in the study area, there are only three (3) primary schools (one school was common for two adjacent villages). These schools are understaffed and most of the villagers send their children to these schools to avail mid-day meals (full attendance of students is found only on the days when the egg was served in the mid-day meal). Anganwadi in each village is run by government-appointed Anganwadi teachers and the same is also true as most of the kids attend to avail the mid-day meal in the school. However, the school management committee is found to be proactive in monitoring the efficiency of the school's functionaries. On every Independence Day and Republic Day, villagers and school functionaries have a meeting under the aegis of the school management committee to review the performance of the students and teachers and also infrastructural facilities in the school. School committee members make note of the issues and submit to Mandal Education Office (MEO) for necessary action. The table below provides for the educational levels in the study area.

We can understand that there is not much disparity based on gender in access to education up to the completion of secondary school education. However, high dropout cases among the girl are reported after the 10th class. One of the primary reasons being that junior colleges are located in nearby towns and there is no direct transportation from the villages to the junior colleges. Upon request from the villagers, TSRTC (Telangana State Road Transportation Corporation) had agreed to run a bus in the morning and evening connecting all four villages in the study area with the institutions in the nearby town. With the coming up of model school (residential schools) in the nearby town, many of the parents are willing to send their children to study in the model school. Parents feel proud of their children to get admission to the model school, as there is an entrance examination for admission to the school.

When asked villagers about their preference in an educational institution, about 76% of them had expressed a preference for government institutions. The primary reason for preference to government institutions as there is no tuition fee and most of the teachers in those schools are from the nearby villages and know them by their names.

³¹ See the chapter-7 for elaborate discussion on government interventions in the agriculture and its consequences on the relationships between landowners and actual cultivators

Table 3.142: Educational levels in the Study Area.

Sl. No	Education levels in the study area	Male	Female	Total
1	Pre-School	30 (4.47)	33 (4.51)	63(4.49)
2	Primary School	88 (13.13)	84 (11.49)	172 (12.27)
3	Secondary School	136 (20.29)	134 (18.33)	270 (19.27)
4	Intermediate	53 (7.91)	35 (4.78)	88 (6.28)
5	Vocational Training/ITI	3 (0.44)	0 (0.00)	3 (0.21)
6	Graduation	58 (8.65)	26 (3.55)	84 (5.99)
7	Post-graduation	7 (1.04)	6 (0.82)	13 (0.92)
8	Uneducated	295 (44.02)	413 (56.49)	708 (49.82)
	Total	670 (100)	731 (100)	1401 (100)

Source: Field Survey, 2017-18. (figures in the bracket are corresponding percentages).

For higher studies such as graduation and post-graduation, students from these villages have to go to the Kamareddy district or Banswada town. Most of the students stay in rented rooms and complete their graduation and in fact, many of the brilliant girl students could not start their graduation courses because of the non-availability of proper accommodation in the Kamareddy district and Banswada town. Interestingly, the girls who had completed post-graduation are not from these villages but are married to postgraduates in these villages (except for two women from the Patel family).

3.4.4. Migration

It is interesting to know from the villagers in the study area that most of them had worked in the construction projects in the Gachibowli and Madhapur area of Hyderabad³². The villagers had built a strong network to find a job in these construction projects as construction labour and some of the households worked as watchmen in apartments. There was large scale migration from these villages during the years 2004 to 2008 in search of work in the Hyderabad.

³² The infrastructure in Gachibowli and Madhapur areas of the Hyderabad have come up in the last 15 years catering to the growing demand for office spaces by the Multinational IT and financial services companies.

At one point in time, more than half of the households had migrated to Hyderabad. At present, 59 households are still on migration and 76 households had a history of migration at least once. Out of 252 households in the study area, only 117 households had never migrated to any place in search of alternate livelihoods. In most cases, it is the young male and female members, who had migrated to work as construction labour while the old stayed back in the villages. The table below provides for the duration of migration of households in the study area.

Table 3.15: Migration status in the Study Area.

Sl.No.	Duration of Migration	Number of households	% of the total 252 households
1	Less than Six Months	49	19.44
2	Between six months to 1 year	31	12.30
3	Between 1 and 2 years	15	5.95
4	Between 2 and 3 years	14	5.55
5	Between 3 and 4 years	5	1.98
6	Between 4 and 5 years	4	1.58
7	Above 5 years	17	6.74
	Total	135	53.57

Source: Field Survey, 2017-18.

From the above table, we can observe that 53.57% of the total households had migrated at least once. About 31.74% of the total households had migrated for a duration of less than a year indicating, the prominence of seasonal migration. There are 17 households who had migrated for more than five (5) and most of these households worked as watchmen in the construction sites. The primary reason for migration among the households was that many households do not possess sufficient size of landholdings, which are fertile and have irrigation facilities and as a result could not provide enough income to meet the household expenditures. Some households had migrated after incurring debts due to crop failures. Large scale migration in the study area can be observed when the water level in the Nizamsagar Project reaches below a certain level.

Villagers also migrate to work in the nearby towns as casual labour during the lean season. A recent trend in migration was that the newly-wed couple migrates to Armour mandal

to work as agricultural labour on an annual contract. The landowner cultivators in the Armoor mandal are known for hiring couples on an annual basis to work in their fields. They take care of the shelter and food requirements of the hired labour at the workplace and the salary for one year is paid in advance. The migrated villagers had opined that advance payment of salary by the landowner had helped them clear the debts at once and they could save money on interest.

3.4.5. Housing Type

The houses in the study area are categorized into four (4) types based on the type and form of materials used in the construction of the house. Pucca houses are houses with four (4) walls and a concrete slab as a roof while the semi-pucca houses are those having four walls but the roof is made of asbestos sheets or non-concrete temporary materials. Katch houses are those which have four walls built with mud and roof was made with the help of paddy straw. The fourth category includes all the houses which do not fall in any of the three mentioned house types.

The majority of the houses in the study area are built 30 to 40 years back with the locally available sand and mud. In the course of time, these houses are repaired and additional rooms are built adjacent to the existing structures. Most of the repairs and renovation works are done by the households who had returned to the villages after a brief period of migration to Hyderabad. Their expertise as construction labour had made them build their homes with better materials. About 58% of the total households are pucca houses. However, there is much difference in terms of number of rooms in a house of each type. The table below provides for the housing type and the number of households in the study area.

Table 3.163: Housing Types in the Study Area.

Sl. No	Housing Type	Number of Households	% of The Total Households
1	Pucca	146	57.93
2	Semi-Pucca	99	39.28
3	Katcha	4	1.58
4	Other	3	1.19
	Total	252	100

Source: Field Survey, 2017-18.

The table below provides details related to number of rooms in each type of house.

Table 3.17: Housing type and number of rooms.

Sl. No	Number of Rooms	Pucca	Semi-Pucca	Katcha	Other	Total ³³
1	1	17	33	3	1	60
2	2	40	43	1	1	85
3	3	29	17	0	1	47
4	4	32	4	0	0	36
5	5	19	2	0	0	21
6	6	5	0	0	0	5
7	7	3	0	0	0	3
8	8	1	0	0	0	1

Source: Field Study, 2017-18.

About 56% of the total houses in the study area are having less than three rooms. Houses having more than five (5) rooms are owned by the Patel and Reddy Castes.

3.4.6. Transport and Communication

Except for one village, which is separated by a small hill from the four other villages in the study area, all the villages are connected to nearby towns with blacktop roads. However, there are only two bus services, one in the morning and one in the evening connecting villages with Kamareddy district. There are 13 Autorickshaws owned by the villagers in the study area. These Autorickshaws frequently ply between these villages and connect nearby towns. In addition, there are 138 motorcycles owned by individuals for their personal transport. Most of the old aged people, who didn't learn to ride a motorcycle are still using bicycles to reach distances less than 5km. Patels of each village own a car and six (6) households of a total nine (9) Reddy Caste households owns a car each.

On average, there are 2 mobile phones per each household in the study area. It is observed that most of the mobiles are having high-speed internet/data packages. There are 184 television sets (TV) having connected with DTH (Direct to Home) service. The table below provides for the list of other assets owned by the villagers in the study area.

³³ The total houses (258) are more than total households (252) as six (6) houses are in renovation with construction work in final stages.

Table 3.18: List of other Assets owned by the Villagers.

Sl. No	Item Name	Number
1	Two Wheelers	138
2	Autorickshaw	13
3	Car/Four wheelers	9
4	Tractors	15
5	Bicycles	117
6	Television Sets	184
7	Mobile Phones	491

Source: Field Study, 2017-18.

All the landowner cultivators having more than 15 acres of land owns a tractor. The number of tractors in the village had increased in the last five (5) years as the government had provided subsidy in purchasing a tractor to the Scheduled Castes and Backward Castes. In addition, the presence of tractor showrooms in the nearby towns coupled with the marketing strategy of the tractor salesmen and auto-financing agencies had increased the number of tractor owners in the study area.

Chapter 4

Agricultural Resources and Changing Relations

In the context of agriculture, the primary resources such as Land, Labour, and Capital are shared or exchanged among the resource lessor and lessee as they are historically distributed unevenly among the stakeholders. This chapter in general deals with the agricultural resources and resource sharing mechanisms among the resource lessor and lessee in the different stages of agricultural production. The emphasis would be on the resources that are shared or exchanged and the terms and conditions for sharing or exchange of such resources between the resource lessor and lessee in the five (5) villages of the study area. Also, the criteria used by the resource lessor and lessee in selecting the lessee and resource lessor respectively in sharing or exchange of agricultural resources in the study area is also analysed in this chapter.

Historically, the agricultural resource exchange or sharing was perceived as an economic exchange by the Economists in general and Agricultural Economists in particular and this economic exchange is termed as 'Tenancy'. Especially, "Land tenancy in agriculture has been a favourite topic of economists dating back to 19th-century writings of Marshall (1890), and the mid-20th-century writings of Johnson (1950), Cheung (1969), Stiglitz (1974), and Newberry and Stiglitz (1979)" (as cited by Keita Fukunaga and Wallace E. Huffman, 2009: 237). Significant quantity and quality literature have been produced in the study of agricultural tenancy relations between the contracting partners from a variety of agricultural settings across the different geographical and political regions of the world. The embedded relations between the resource lessor and lessee are often overlooked and thus led to inaccurate generalizations on the complex and intricate relations between the lessor and lessee. The following section in this chapter would provide a brief description of various types of tenants and tenancy practices existing in the agricultural sector.

Broadly, types of Tenancy can be categorized into five (5) types based on the resources shared or exchanged between lessor and lessee in a variety of contexts in different agricultural settings; 1. Sharecropping or Cropshare, 2. Fixed Cropshare, 3. Fixed Wage, 4. Fixed Rent (Kind or Cash) and 5. Wage-Homestead. While all the cultivators involved directly or indirectly in agriculture can be categorized into five (5) different types³⁴ namely; 1. Pure owner, 2. Combined owner, 3. Combined tenant, 4. Pure tenant, and 5. Rent receiver. Pure owner is

³⁴ See B.N.Verma and R.R. Mishra (1984: 47).

the one, who cultivates his land without sharing or exchanging resources with other tenants or cultivators. The combined owner is the cultivator who cultivates a part of his land and shares part of his land with the lessee. Combined Tenant cultivates his own land as well as cultivates the land (partially or wholly) belonging to others. A Pure tenant is the one who does not own any land and cultivates on the lessor's land while the Rent receiver is a lessor who is only interested in the rent from the lessee.

4.1.0. Brief Description of the Types of Tenancy

As mentioned above there are five (5) types of tenancy practiced in agriculture and most popular among those is Sharecropping (also called Cropshare). It is one of the oldest forms of resource sharing/exchange process that continued to the 21st century. The earliest written evidence on sharecropping is found in the writings of Aristotle in ancient Greece (Byres, 1983: 8). D.D. Kosambi (1970) mentions about the evidence of Sharecropping in the Arthashastra of Kautilya written in 4th Century BC (150-152). Kosambi describes Sharecropping as³⁵:

“Unfarmed lands could be... assigned on half-shares, generally to those who had nothing to supply but their bodily labour. The seed would be deducted and the womenfolk of the assignee subject to work at milling the grain taken by the state as its portion. Apparently, the representative of the state arranged even for tools and oxen in such cases” (1970: 150).

Therefore, the persistence of such age-old practice in India reflects the ability and adaptability of the Sharecropping system. The minimal definition as given by Cheung (1969) on the Sharecropping system was “It is a land lease under which the rent paid by the tenant is a contracted percentage of the output yield per period of time. As a rule, the landowner provides land and the tenant provides labour; other inputs may be provided by either party”. The universal characteristic of Sharecropping system found in diverse agricultural settings is that the share in output is often found to be 50:50, whereas the share in inputs, is found to vary depending upon the various contexts. The practice of the Sharecropping system was often associated with agriculturally backward or semi-arid regions having high risks in agricultural production and subsistence farming in common (B.N. Verma and R.R.Mishra, 1984: 46-54).

³⁵ As cited by Terry J. Byres (1983) in Historical Perspectives on Sharecropping, The Journal of Peasant Studies (London) 10/2-3:7-41.

The Fixed-Cropshare system is a slight variation of the Sharecropping system with a specific share in the produce at the end of the harvest. When it comes to Sharecropping, it is predetermined that there is share in the inputs as well as in output, whereas in the case of Fixed-Cropshare it is often the output that is shared in fixed quantities. In other words, the landowner irrespective of the total produce takes a fixed quantity of output after every harvest season.

In the Fixed-Wage system, the landowner hires/employs labour with specific wages to carry out the various agricultural operation in his/her land. The wages are paid annually or on specific intervals during each cropping season. Unlike all the agricultural resources sharing contracts involving landowners and tenants, the Fixed-Wage system puts the complete onus on the landowners with respect to decision-making in all the agricultural operations as well as risk arising out (Joseph D. Reid Jr, 1976: 562). The Fixed-Wage system is long-term in nature and is found in economies where the agricultural tenancy is illegal (Keijiro Otsuka, Hiroyuki Chuma, and Yujiro Hayami, 1992: 1969).

In the Fixed-Rent system, the landowner receives the rent either in cash or kind for the resources shared with the tenant. Fixed-Rent system is most often associated with cash crops or capital-intensive crops (H. Laxminarayan and S. S. Tyagi, 1977: A82, Arindam Laha and Pravat Kumar Kuri, 2010:66). It is observed that in agriculturally progressive regions, rich peasants lease their lands under the Fixed-Rent system (Iqbal Singh, 1989: A88, Mamata Swain, 1999: 2662). When the risks involved in agricultural operations are fewer, tenants prefer Fixed-Rent system to Sharecropping (B.N. Verma and R. R. Mishra, 1984: 47, Iqbal Singh, 1989: A88, Keijiro Otsuka, Hiroyuki Chuma, and Yujiro Hayami, 1992:2012 and François Molle, 2002: 520).

In the Wage-Homestead system, the landowner provides a homestead and pays wages to a tenant for the services rendered to carry out the agricultural operations in his land (Andrew W. Horowitz, 1996: 370). Ashok Rudra and Bardhan's (1981) survey on agrarian contracts in West Bengal reveals that the Wage-Homestead system was common in India (Ibid, 370). Generally, the Wage-Homestead system is popular in the developing world where plantations are predominant (Beckford 1972: 277, Lowenson 1992: 73). Wage-Homestead system provides a number of choices for the landowner in terms of the number of tenants required, size of tenant household, size of the homestead, and the wages for additional labour (Andrew W. Horowitz, 1996: 373).

In general, there exists a dependency relation between lessee and lessor and the dependency is dynamic in the sense that it's not always the lessor who has upper hand in the relation. It's the context that determines the contracting equation between contracting parties.

4.1.1. Resources Shared or Exchanged in the Study Area

Historically, agricultural resources are broadly categorized into three types: Land, Labour, and Capital. However, the components under each broad category are diverse and depend on the geographical and socio-political features of the agricultural regions under study. In the current study area, the land is further classified into three types³⁶: Wetlands, Dry Lands and Uncultivable Lands based on its suitability to agriculture. Out of the total land, 28.95% is wetland having access to irrigation facilities such as Canals, Tanks, Tubewells or Borewells while 51.45% land is categorized as Dryland dependent on seasonal rains for the cultivation of crops. The remaining 19.60% of the total land is categorized as uncultivable land, which requires a huge investment to make it suitable for cultivation. We can observe that more than half of the total land is dryland reflecting the scarcity of fertile wetland for cultivation. The skewed distribution of fertile wetlands in favour of the few castes makes sharing of land under different contracts necessary.

The Labour involved in agricultural operations in the study area can be divided into three types: Exchange labour, *Guththa* labour, and daily wage labour. Exchange labour is those who work in the fields of those households, whose members had worked in their fields. In other words, it's a reciprocal exchange of labour between two or more households in the study villages. *Guththa* labour involves a group of labour who undertakes a predetermined quantity of work to be done and payment is done after the completion of work. The payment for work is negotiated prior to the commencement of work and is agreed upon by the employer and labour and shall be paid immediately after the completion of said work. In the case of daily wage labour, the employer would hire the labour on a daily basis and payments are done at the end of the day.

The Capital for agricultural operations can be categorized into agricultural tools and equipment, machinery (Tractor, Trolley, Harvesters), fertilizers, seeds, and pesticides, etc. The requirement for capital in agriculture depends primarily on factors like the type of land and crops cultivated. In addition to the above mentioned, the primary requirement for agriculture

³⁶ See Table 11 in Chapter 3 titled Profile of the Study Area.

is irrigation. In the study area, the availability of irrigation infrastructure can be understood from the below table 1.

Table 4.1: Sources of Water for Agriculture in the Study Area.

Sl. No.	Sources of Water for Agriculture	Number of Households
1	Lift Motor	60
2	Tubewells or Borewells (in total there are 225 tubewells in the study area)	130
3	Project Gate leakage Water	39
4	Tank/Cheruvu	30
5	Rainfed	68

Source: Field Survey: 2017-18.

Out of the total 252 households in the study area, 130 households had dug Tubewells for agricultural purpose and the average depth of Tubewells is found to be 204 feet. The average depth indicates the average groundwater table level in the study area. The above table reflects that the majority of the cultivators are dependent on the Tubewells for cultivation. The lift-motors are set up on the banks of the flood canals of the Nizamsagar Project. Usually, the lift motors are seven (7) and 10 HP motors connecting flood canal and fields with the help of underground pipelines. These pipelines are sometimes more than 1000 meters in length. The flood canals of the Nizamsagar Project are functional during monsoon season only. The water from the Project Gate leakage is fed into small ponds and these are used by the landowners having their lands located close to ponds for cultivation. However, as the water level recedes in the project, there won't be any water left to feed the canals and ponds and as a result, lift-motors and leakage water infrastructure become dysfunctional. There are 30 households in the study area dependent on the water from the village tanks. Due to the nature of seasonality associated with irrigation facilities in the study area water is also shared among the cultivators.

Earlier, livestock had played an important role in agriculture in the study area. With the mechanization of agricultural operations, livestock had gradually lost its importance in agriculture. In the study area, the livestock is taken care of collectively by a villager who is paid annually for his service. Due to the government-supported banking/credit institutions, there has been an increase in the size of livestock in the study area. Women members in the households play an important role in taking care of the livestock especially if the livestock is

bought with the help of a loan provided under Sri Nidhi Scheme and DWCRA SHGs government schemes³⁷.

The table below provides details about the livestock in the study area.

Table 4.2: Livestock in the Study Area.

Sl. No.	Livestock	Number
1	Bullocks	73
2	Cows	111
3	Bulls	41
4	Buffaloes	222
5	Goats	67
6	Sheep	500
7	Poultry ³⁸	435

Source: Field Survey, 2017-18.

The other agricultural inputs such as seeds, fertilizers, and pesticides are bought by the villagers from the government and private agencies alike. However, with the improvement in the timely delivery of seeds, fertilizers, and pesticides by the government agencies there is an increased tendency, especially among the small and marginal farmers to buy from these agencies.

4.1.2. Types of Tenants and Tenancy Practices in the Study Area

As mentioned in the above section, all the cultivators in the study area are categorized into five (5) types. The table below provides for different types of tenants in the study area. Of the total cultivators in the study area, about 51% of them belong to the Pure Owner category cultivating their own lands while the remaining 49% are involved in leasing in or out their lands for cultivation under different tenancy practices. Compared to combined owners, who lease-out their lands for cultivation combined tenants are higher in number. There are eight (8) tenants who are completely dependent on the leased-in lands for their survival.

³⁷ The details about the Government Schemes is provided in the Chapter 6.

³⁸ Generally, Poultry is not considered under the category of livestock. However, in the study area women members of the households take special interest in maintaining poultry as it acts as additional source of income during the lean seasons.

Table 4.3: Types of Tenants in the Study Area.

Sl. No	Types of Tenants in the Study Area	Number of Cultivators
1	Pure Owner	142
2	Combined Owner	28
3	Combined Tenant	82
4	Pure Tenant	8
5	Rent Receiver	19
	Total	279

Source: Field Survey, 2017-18.

In the study area, agricultural resources are shared or exchanged under different tenancy practices. It is found that, in addition to the Land, Labour and Capital, water or irrigation facilities and livestock are also shared among the cultivators in proportion to the output. The table below provides for the different types of tenancy practices in the study area.

Table 4.4: Types of Tenancy Practiced in the Study Area during 2017-18.

Sl. No	Type of Tenancy	Number of Households
1	<i>Batai</i>	57
2	<i>Kowlu</i>	35
3	Water sharing (or) ' <i>Neellapalu</i> '	20
4	<i>Batai</i> and ' <i>Neellapalu</i> '	23
5	<i>Kowlu</i> and ' <i>Neellapalu</i> '	2
6	<i>Batai</i> and <i>Kowlu</i>	2
7	Wage Labour ³⁹	2
	Total	141

Source: Field Survey, 2017-18.

Under *Batai* System the landowner and tenant share the costs of all agricultural inputs and also the output in 50:50 proportion. *Batai* system is synonymous with the sharecropping practice elsewhere in other parts of the world. The word '*Batai*' is a native term for sharecropping practice and it reflects the historical significance attached to the practice in Indian agriculture. Out of the total 141 households involved in different tenancy practices, 40% of them are involved in the *Batai* system alone. The next popular form of tenancy is the *Kowlu* system, under which the landowner leases out the land for a fixed amount of cash or in few cases in kind. The word *Kowlu* is an indigenous term for Fixed Cash (or Kind) type system

³⁹ Under Wage-Labour type, the owner of the land employs a labour to carry out all the agricultural operation and is paid by the owner in annual or monthly basis.

practiced in other parts of the world. In the study area, one-fourth of the total 141 households are involved in the *Kowlu* system alone.

In addition to the land being leased in or out, Water or irrigation facilities are also found to be shared among the cultivators in the four villages of the study area. As mentioned in table 1 above, there are a variety of irrigation facilities used by the cultivators in the study area for agricultural purposes. Tubewells and lift-motor irrigation facilities, which are dependent on the groundwater and seasonal rains respectively dominate the irrigation infrastructure. Water or irrigation facilities are shared under a system called '*Neellapalu*', according to which the owner of water or irrigation facility would be shared with one-third or one-fourth of the total agricultural produce at the end of harvest by the user. 14% of the total 141 households are involved in the '*Neellapalu*' system alone making it the third popular form of tenancy practice in the study area.

There are cultivators who employ a combination of more than one form of tenancy practice in the study area. About 16.3% of the total 141 households are using a combination of the *Batai* system and *Neellapalu* in the cultivation of leased-in lands. On comparing the choices in combinations used, the *Batai* system was popular in combination with *Neellapalu* than with the *Kowlu* system. There are only two households that are using the combination of the *Kowlu* system and the *Batai* system in the cultivation of leased-in lands. Only two households are using wage labour to carry out all the agricultural operations in their lands. The wages are paid annually or monthly to wage labour. In the study area, there are 16 households who had earlier leased in or leased out their lands for cultivation under the *Batai* system while one household had earlier leased out land for cultivation under the *Kowlu* system. Out of the total 252 households in the study area, 158 households are involved in the sharing of agricultural resources at one or another point of time.

In addition to the above-mentioned tenancy practices, there used to be other forms of tenancy practices involving landless labour, agricultural tools and implements, and livestock prior to the introduction of biochemical inputs and mechanization into traditional agricultural operations in the study area. Livestock waste was used as organic manure to preserve and enhance the fertility of the soils and in return for the organic manure, the cultivator has to share a predetermined proportion of the output after the harvest. Livestock also played an important role in plowing and other agricultural operations providing an additional source of income for the owners. Landless labour is hired on annual contract terms to carry out the agricultural

operations in the lands of medium and large landholding farmers and is paid in kind, which used to be a fixed number of bags of output per unit of land cultivated. Even the agricultural tools and implements such as plow, harrow, and seeder, etc., are rented out by the owners to the clients in return for the share in the output at the end of harvest. During the initial years after the introduction of biochemical inputs such as high yielding seeds, fertilizers, and pesticides, the moneylenders from outside village and landlords from within the village used to provide these inputs to the cultivators on credit and repayments were done in terms of share in the output at the end of the harvest season. The following section provides for a comprehensive understanding of the tenancy in the study area.

4.2.0. Tenancy

In general, economists consider land as the deciding factor in determining the type of tenancy in practice, but the current study looks at the tenancy from the holistic perspective taking into consideration all possible agricultural resources shared or exchanged in the cultivation of land. Tenancy as an institution is ‘dynamic’ in nature (Clive Bell, 1990: 161) and this dynamism is due to diverse factors operating in a symbiotic relationship with each other in different agricultural settings and the current section below deals with such factors.

4.2.1. Cropping Seasons

Agricultural activities in the study area are carried out predominantly in two cropping seasons namely: Kharif and Rabi Seasons. Kharif season starts in the month of June and ends by the month of October. The duration of the Kharif season is about five (5) months and usually depends on the onset and retreat of South-West monsoon rains in the Telangana State whereas the Rabi season commences from the month of October and ends by the month of March. In the study area, much of the agricultural activity is carried out in the Kharif season with the arrival of South-West monsoon rains. The table below provides for the variation in the land under cultivation in Kharif and Rabi seasons for the year 2017-18. We can observe that the total land cultivated in Rabi season is 28% less than the total land cultivated in the Kharif season. The seasonal variation in total land under cultivation can be attributed to the availability of water with irrigation facilities in the study area. On comparing each component of operational landholdings in two seasons, we can observe that there is a decrease of 18.46%, 19% and 75.42% in own land cultivated, land leased-in and land leased-out components respectively.

Table 4.5: Operational Landholdings in the Kharif and Rabi season in the Study Area.

Sl. No.	Operational Landholdings	Kharif Season	Rabi Season
		Landholding (in Acres)	Landholding in (Acres)
1	Own Land Cultivated	482	393
2	Land Leased-In*	121	98
3	Land Leased-Out*	118	29
4	Total Land Cultivated	721	520

Source: Field Survey, 2017-18.

(*) The land leased-in and land leased-out can be from the villages adjacent to the five villages in the study area. Therefore, we find that land leased-in is not equal to land leased-out. However, the own land cultivated is strictly within the study area.

It is interesting to observe that, the land leased-in component of operational landholding had not reduced significantly when compared with Kharif season and Rabi Season but the land leased-out component had reduced by 75.42%, indicating that the much of the land leased-out in Kharif is dependent on the availability of willing tenants and assured irrigation. This also reveals that there are tenants working on leased-out lands for just Kharif season alone. Interestingly, the difference in own land cultivated in two seasons is 89 acres, which is the same as the difference in the land leased-out in two seasons. In other words, in total there are can be 89 acres of land which had been leased out in Kharif season and the same is found to be left fallow in Rabi season. Land leased-in during Kharif and Rabi seasons remained as constant at 25% of the own land cultivated because majority of combined tenants had taken land for cultivation for optimum utilization of borewells in their fields while in the Rabi season, most of the owners who do not have borewells or whose borewells had dried up had no option left but to leave their lands fallow. This is exactly why we see a sharp decline in the land leased-out in the Rabi season. These observations reveal that the size of operational landholdings changes with the cropping seasons. In addition, cropping seasons have a direct and significant role to play in determining the process of agricultural resources shared among the cultivators in the study area.

4.2.2. Size of Landholding

As mentioned in table 3.12 of Chapter-3, about 75% of total households in the study area have landholdings of size below four (4) acres and about one-fourth of the total households

are having landholdings of size less than one (1) acre. These figures indicate the predominance of small and marginal farmers in the study area thereby necessitating the sharing of scarce agricultural resources among themselves to sustain their livelihoods. The below table provides for details about the size of landholdings leased-in for cultivation in Kharif and Rabi Seasons.

Table 4.6: Size of Landholdings Leased-In for cultivation in Kharif and Rabi Season.

Sl. No	Land leased-In (in Acres)	Kharif Season	Rabi Season
		Number of Households	Number of Households
1	Less than 1 Acre	29	29
2	Between 1 and 2 Acres	31	24
3	Between 2 and 3 Acres	13	13
4	Between 3 and 4 Acres	1	1
5	Between 4 and 5 Acres	6	4
6	Above 5 Acres	2	1
	Total Number of Households	82	72

Source: Field Survey, 2017-18.

In the Kharif season, there are in total 82 households involved in leasing-in land for cultivation under different tenancy types. About 90% of these households had leased-in landholdings of size less than three (3) acres. There are only nine (9) households that had leased-in landholdings of size above three (3) acres. In Rabi season, the number of households involved in leasing-in land is reduced to 72 households. Even in the Rabi season, about 91% of these households had leased-in landholdings of size less than three (3) acres. The primary reason for the decreased number of households in leasing-in land was the lack of assured irrigation facilities. However, when compared to the reduction in total land under cultivation in Kharif and Rabi season, the reduction in the number of households involved in leasing-in land is less as most of the combined tenants had leased-in land for cultivation. It is observed from the field interviews and observations that the lands leased-in are not only small and marginal in size there are even small parcels of land leased-out by medium and large landholding farmers to more than one tenant in the study area.

In the case of leasing-out land for cultivation under the different tenancy types, there are only 28 households in total for the Kharif seasons and 21 households during the Rabi season. It is evident from the table below that there exists a difference in the size of landholdings leased-out in Kharif and Rabi season.

Table 4.7: Size of Landholdings Leased-Out for cultivation in Kharif and Rabi Season.

Sl. No	Land leased-out (in acres)	Kharif season	Rabi Season
		Number of Households	Number of Households
1	Less than 1 Acre	8	8
2	Between 1 and 2 Acres	5	4
3	Between 2 and 3 Acres	4	2
4	Between 3 and 4 Acres	3	4
5	Between 5 and 6 Acres	2	1
6	Between 6 and 7 Acres	2	0
7	Above 7 Acres	4	2
	Total Number of Households	28	21

Source: Field Survey, 2017-18.

Unlike the size of landholdings leased-in, the size of landholdings leased-out was more than three (3) acres in 40% of the total households involved in leasing-out. The remaining 60% of households have leased-out landholdings of size less than three (3) acres during the Kharif season. In the Rabi season, it is evident that there is a decrease in the number of households leasing-out land, especially the decrease is found to be more among the large size landholdings. Compared to the percentage decrease (9%) in the number of households involved in leasing-in land, the percentage decrease (25%) in the number of households involved in leasing-out land is higher. In the case of moderate to surplus rains during the Kharif season, cultivators in the study area lease-in more lands for cultivation in Rabi season only after looking at the water levels in the Nizamsagar Project.

One common observation from the above two tables is that small parcels of land are leased-in and leased-out during the Kharif and Rabi season alike and the popular form of tenancy used in leasing-in or leasing-out the lands is under *Batai* System. However, as the size of the landholdings increases the number of households leasing-in or leasing-out decreases and consequently, lands are left fallow.

4.2.3. Caste and Landholdings

Emphasizing the significance of Caste in Indian agrarian structure social anthropologists and sociologists (Gail Omvedt, 1980; Rajat Subhra Mukhopadhyay, 1980; Berremen, 1983; Anand Chakravarti, 2001; Hira Singh, 2002; Alakh Sharma, 2005) argued that there exists a strong correlation between the size of landholding and Caste in Indian village. In

the study area, there are 13 Castes in total and one household belonging to other religions (Islam). As mentioned in Table-13 of Chapter 3, nearly 66% of the total households belong to only one Caste i.e., Mudiraj and they control exactly 66% of the total land in the study with an average size of landholding of 3.34 acres. However, two Castes: Patel and Reddy consisting of just 5% of total households control one-fourth of the total land with an average size of landholding above 20 acres in the study area. It can also be observed that three Castes in the study area are controlling about 91% of the total land in the study area.

In order to understand the relationship between tenant and owner in Kharif and Rabi seasons, four types of relations⁴⁰ are identified that are common in the study area. The table below provides for the details about the relationship between tenant and owner in the study area.

Table 4.8: Relation between Tenant and Owner in the Study Area.

Sl. No	Relationship between Owner and Tenant	Cropping Season	
		Kharif Season	Rabi Season
1	Blood Relation	14	6
2	Relatives	6	2
3	Same village	54	44
4	Adjacent or Other Village*	35	28

Source: Field Study, 2017-18.

(*) In addition to the five villages in the study area, there are adjacent villages from where the lands are leased-in/out by the tenants and owners respectively. However, the tenants from the villages other than five villages in the study area are not considered for this study.

It is evident from the above table that the popular relation between tenant and owner is the same village, which means a tenant or owner prefers to share the agricultural resources with the same villager than with his relatives or blood relatives. The second common relationship is sharing resources with tenants or owners in adjacent or other villages (these can be from outside the study area). The above findings run counter the observations made by Rajat Subhra Mukhopadhyay (1980) in his study of the agrarian structure of a village in West Bengal that

⁴⁰ The four Common four relations are namely: 'Blood Relation' refers to those involving brothers and Parallel cousins etc, 'Relatives' are those who are related through marriage and Caste, 'Same Village' refer those belonging to other caste and are residing in the same village as that of tenant or owner, 'Adjacent/Other Village' refers to those from the adjacent villages within and outside the study area.

there exists a Caste bias in sharing of agricultural resources under sharecropping tenancy. The change in the preferences among the tenant and owner in selection process moving away from Caste lines in sharing of resources under different tenancy practices can be attributed to various government and non-government interventions made in the course of time (State Interventions and its consequences on the tenancy are explained in Chapter 6).

The table below provides details regarding the Caste composition in leasing-in land for Kharif and Rabi seasons. Out of the 82 households, who had leased-in land during the Kharif season, 66% of them belong to Mudiraj with an average size of landholding leased-in at 1.43 acres. Out of the total land leased-in, 64% of it was cultivated by Mudiraj Caste. These figures indicate the domination of Mudiraj Caste in leasing-in land for cultivation for the Kharif season. Scheduled Castes are the next largest group cultivating 16% of total land leased-in for cultivation in the Kharif season.

Table 4.9: Caste and Leased-In Land for cultivation for Kharif and Rabi season.

Sl. No	Caste	Number of Households		The Average size of landholding (in Acres)		Total Land leased-in (in Acres)	
		Kharif Season	Rabi Season	Kharif Season	Rabi Season	Kharif Season	Rabi Season
1	Mudiraj	54	49	1.43	1.31	77.675	64.325
2	SC	13	10	1.45	1.49	18.925	14.925
3	ST (Yerukala Tribe)	4	4	1.625	1.625	6.50	6.50
5	Goondla	4	4	1	0.87	4.00	3.50
6	Gandla	1	1	0.5	0.50	0.50	0.50
7	Chakali	1	0	0.5	0	0.50	0
8	Kuruma	1	1	1	1.00	1.00	1.00
9	Mangali	2	2	4.5	3.00	9.00	6.00
10	Reddy	1	0	1.5	0	1.50	0
11	Yadavs	1	1	1.5	1.50	1.50	1.50
	Total	82	72	1.47	1.36	121	98.25

Source: Field Survey, 2017-18.

On comparing the Kharif and Rabi seasons in total there are 10 households who had not taken part in leasing-in land for two seasons consecutively and eight (8) of the 10 households belong to only two Castes; Mudiraj (5) and SC (3). The Castes namely: Goondla, Gandla, Kuruma, Mangali, Yadav and Yerukula Tribe are consistent in cultivating leased-in lands for both Kharif and Rabi seasons. Form the in-depth interviews, it is found that a number of relatively medium and large size landholding Castes are leasing-in land from marginal and

small farmers during Kharif and Rabi seasons. From the table, it is evident that Kuruma and Reddy Castes though having relatively large landholdings when compared to the landowners who had leased-out their lands are involved in ‘reverse tenancy’⁴¹. The presence of ‘reverse tenancy’ in agriculturally developed regions can be attributed to the availability of capital assets and access to credit and technological intervention at various stages of agricultural operations (Iqbal Singh, 1989: A87) but in the agriculturally backward regions such as in the current study area, there are other reasons such as small parcels of land scattered at different locations most often adjacent to a relatively large or medium landholding cultivator, The incomes from small plots of land is not even sufficient to meet the household consumption expenditure and migration of adult male and female members in households to work as contractual labour in cities.

In the case of leasing-out land in Kharif and Rabi season, only a few Castes namely: Mudiraj, Reddy, Patel, Komati, and SCs are involved. The table below provides for the details about the Castes involved in leasing-out their lands for cultivation in the study area.

Table 4.10: Caste and Land Leased-out for cultivation during Kharif and Rabi Season.

Sl. No	Caste	Number of Households		The Average size of Landholding (in Acres)		Total Land leased-Out (in Acres)	
		Kharif Season	Rabi Season	Kharif Season	Rabi Season	Kharif Season	Rabi Season
1	Mudiraj	14	10	1.79	1.09	25.15	10.9
2	Reddy	4	1	13.00	3	52.00	3
3	Patel	4	2	8.25	4	33.00	8
4	SCs	5	4	1.41	1.51	7.05	6.05
5	Komati	1	1	1.00	1	1.00	1
6	STs	0	1	0	0.5	0	0.5
	Total	28	19	4.22	1.55	118	29.45

Source: Field Survey, 2017-18.

⁴¹ See Iqbal Singh, 1989.

Out of the total 28 Households leasing-out land in Kharif season, 50% of them belong to Mudiraj Caste, however, when it comes to the area of land leased out its just 21% of the total land leased-out in the study area. 72% of the total land leased-out in Kharif season was by two Castes Reddy and Patel alone, who constitute about 28% of the total households involved in leasing out the land during Kharif season. It can be observed that very small parcels of the land with an average size of 1.41 acre leased out by Scheduled Castes while one and only one Komati Caste household had leased out one acre out of their four acres land for cultivation by Tenants. On comparing the leasing-out land pattern in Kharif and Rabi season we can observe that there is a significant reduction in the area of land leased-out in Rabi Season. The reduction is primarily by the Reddy and Patel Castes as most of these lands do not have assured irrigation during the Rabi Season. The leased-out lands belonging to SC and ST households reduced very slightly for the Rabi season as these are drylands and tenants had leased in lands for cultivation of crops which depend on the rainfall.

4.2.4. Family Size and Land Leasing

An in-depth understanding of the preferences made by Tenant and Landowner in leasing-in and leasing-out land respectively for cultivation had revealed that there exists a relation between the family size and land leasing. The table below provides for the Caste-wise composition of average family size in the study area.

Table 4.11: Caste and Average Family Size in the Study Area.

Sl. No.	Caste	Average Family Size
1	Mudiraj	5.54
2	Scheduled Castes	4.25
3	ST-Yerukala	7.50
4	Patel	7.25
5	Goondla	6.14
6	Gandla	3.33
7	Chakali	10.00
8	Kuruma	6.50
9	Mangali	7.00
10	Reddy	5.37
11	Yadavs	9.00
12	Bestha	2.00
13	Komati	4.00
14	Muslims*	4.00
	The Average Family Size in the Study Area	5.84

Source: Field Survey, 2017-18. (* Muslim is not a caste group)

The average family size (5.84) of the study area is almost the same as the Mudiraj Caste (5.54) because of its large population. The Castes Chakali, Kuruma, Goondla, Yadav, Mangali, and Patel are having an average family size above the average family size of the study area. The table below provides details regarding the family size of the households who had leased-in land for cultivation in Kharif and Rabi season.

Table 4.12: Family Size of the Households leasing-in Land for cultivation in Kharif and Rabi Season.

Sl. No.	Family size	Kharif Season	Rabi Season
		Number of Households	Number of Households
1	Two-member Family	2	2
2	Three-member Family	6	3
3	Four-member Family	14	14
4	Five-member Family	18	13
5	Six-member Family	14	13
6	Seven-member Family	9	9
7	Eight-member Family	7	8
8	Nine-member Family	5	4
9	Above Nine-member Family	7	6
10	Total number of Households	82	72
11	The Average size of the family Leasing-In land	6.07	6.12

Source: Field Survey, 2017-18.

From the above table, we can infer that the optimum size of family leasing-in land in both the seasons turned out to be in the range of four to eight-members' in the family. Out of the total 82 households involved in leasing-in land for cultivation during Kharif season, 60 households, which is 73% of total households leased-in land have family size of five (5) and above. This indicates that there exists a positive relationship between the number of members in the family to leasing-in land. During Rabi season, out of a total of 72 households involved in leasing-in land about 74% of them have a family size of five (5) and above. The average size of all families leasing-in land in Kharif and Rabi season is found to be 6.07 and 6.12 respectively. Therefore, in both seasons most of the families with five and above members had leased-in land for cultivation. The table below provides for the details about the size of families involved in leasing-out the land for cultivation in Kharif and Rabi season.

Table 4.13: Family Size of the Households leasing-out land for cultivation in Kharif and Rabi Season.

Sl. No	Family Size	Kharif Season	Rabi Season
		Number of Households	Number of Households
1	Below 4 members	5	4
2	4-member Family	6	5
3	5-member Family	6	6
4	6-member Family	2	1
5	7-member Family	5	1
6	8 and above members	4	2
7	Total	28	19
8	The average size of family leasing-out land	5.25	4.6

Source: Field Survey, 2017-18.

Out of the total 29 households involved in leasing-out land, 61% of them are having a family size of five (5) and below. The remaining 39% of households have a family size of more than five (5). In the case of Rabi season, out of the total of 19 households involved in leasing-out land, about 79% of them have a family size of five (5) and below. We can infer that there exists a negative relationship between family size and leasing-out the land for cultivation in both seasons. The households with less than five (5) members and below happen to lease-out land for cultivation during Kharif and Rabi seasons.

It can be observed from the table-11 that Castes: Goondla, Chakali, Kuruma, Yadav and Mangali, and Yerukala Tribe have family size more than 6 members and are consistently cultivating the leased-in lands in both Kharif and Rabi season alike. This clearly indicates the preference for large families in leasing-in land as there will be sufficient family labour for cultivation. In other words, we can also infer that landowners prefer leasing-out their lands to large families.

4.2.5. Cropping Pattern

Cropping Pattern refers to the area of land under different crops in a cropping season. In the study area variety of crops are grown by the cultivators depending on the suitability of the soil, access to irrigation and other favourable factors. The table below provides for details regarding extent and the variety of crops grown in Kharif and Rabi season. From the table, it is evident that a combination of crops is cultivated by the cultivators in the study area. However,

there are a large number of households who had cultivated their entire land with one crop alone. We can observe that out of the 721 acres of land cultivated in Kharif season, 59% of it is cultivated with only one crop i.e, Paddy. Similarly, only Maize and Soya crops are cultivated in the area of 7.75 acres and 7.25 acres respectively. The remaining area is cultivated by a combination of two or more crops by each household in the study area this is due to the fact that a cultivator has different types of lands under his ownership. However, the majority of households are cultivating Paddy in a certain portion of their landholding along with the different crops. A common combination of crops is listed in the table with the extent of land under cultivation for each combination. Paddy and Maize is the most common combination of crops indicating cultivators' preference of Paddy cultivation in wetland and Maize in the dryland portion of their total landholdings. Paddy and Maize's combination accounts for 16% of total land cultivated in the Kharif season. Generally, the wetland portion is cultivated with Paddy while the dryland portion is cultivated with crops like Groundnut, Blackgram, Greengram, Sorghum. There are very few cultivators who cultivate vegetables in combination with Paddy or other crops.

Table 4.14: Cropping Pattern in the Study Area.

Sl. No	Name of the Crop(s)	Kharif season	Rabi Season
		Area under cultivation (in Acres)	Area under cultivation (in Acres)
1	Paddy only	426.375	375.00
2	Paddy and Maize	116.00	50.00
3	Paddy and Greengram	22.75	9.00
4	Paddy and Groundnut	29.00	15.25
5	Paddy, Blackgram, and Greengram	25.50	0
6	Paddy and Vegetables	18.375	0
7	Paddy, Maize, Greengram, and Blackgram	19.25	0
8	Maize	7.75	16.75
9	Soya	7.25	0
10	Paddy and Blackgram	3.75	0
11	Paddy, Maize, and Sorghum	5.00	14.00
12	Private Seed Company	40.00	40.00
	Total Land under cultivation	721.00	520.00

Source: Field Survey, 2017-18.

It is found through the in-depth field interviews that though cultivators intend to cultivate a variety of high-value crops in their wetland portion, they could not do so as the neighbouring cultivator if cultivates Paddy, which requires standing water in their fields would seep into their lands and make the alternate crops other than Paddy unsuitable for cultivation. This is, in fact, one of the primary reasons why most of the cultivators do not grow vegetables in their wetland portion. The other reason being that the landowner may lease-out the land for cultivation only if paddy is cultivated in the leased-out land by the tenant. As the *Batai* system is the most popular form of tenancy in the study area, paddy cultivation had become very common as it is the most preferred and preferred crop by the landowner who leases-out the land for cultivation by tenants. However, during the Rabi season, there is a significant decrease in the cultivation of paddy crop as the availability of water in irrigation infrastructures becomes scarce.

4.2.6. Labour

Labour is another important factor determining the type of tenancy practiced in the study area. There are fundamentally three (3) types of Labour: Hired or *Guththa* labour, Exchange labour and Daily wage labour available in the study area. In Hired or *Guththa* labour type, a group of individuals is given a work to finish and the payment is made to the considering group as one entity and group members, in turn, share the total amount among themselves. Usually, this kind of labour is resorted to if the landowner needs to finish a specific task in the least possible time. The second type of labour is Exchange labour, wherein the members of one household work in exchange for the work done in their fields by the members of other households. The third type of labour is called Daily wage labour, wherein the employer pays daily wage for individual labour for the work he or she had done in his/her field. This type of labour is usually preferred in cases of small works and can be done in over a longer period. Cultivators in the study area employ a mix of more than one labour type depending on the requirement in various stages of agricultural operations.

It is evident from the below table that Exchange labour in combination with Daily wage labour is the most preferred by the cultivators in the study area. In-depth field interviews and observations had revealed that, since most of the landholdings are in the category of small and medium-size, the family labour working as exchange labour would be sufficient to complete the agricultural operations. Exchange labour type provides employment opportunities for all the able members in a household during the peak agricultural season where sowing and

weeding operations are carried out. In fact, the involvement of household members, especially women in Exchange labour balances the expenditure incurred on the labour in cultivating their own lands. This is one of the reasons why most of the landowners prefer to lease-out their lands to large families as members in these households would work in remaining lands of the landowners thereby securing the labour during peak agricultural season. The table below provides details regarding the preference of the types of labour by the cultivators in the study area.

Table 4.15: Labour Preference in the Study Area.

Sl. No	Labour Preference	Number of Households
1	<i>Guththa</i> /Hired Labour	13
2	Exchange Labour	4
3	Daily wage Labour	34
4	<i>Guththa</i> /Hired and Exchange Labour	27
5	<i>Guththa</i> /Hired and Daily wage Labour	1
6	Exchange Labour and Daily wage Labour	149

Source: Field Survey, 2017-18.

The households having less than four members and owning small to medium-sized landholdings would prefer to employ daily wage labour to carry out agricultural operations. In the case of large-sized landholdings, landowners prefer the *Guththa* labour in combination with Exchange labour to complete the agricultural works within time. The choice of labour types is also dependent on the type of crops cultivated as a different type of crop that requires different types of labour in various stages of agricultural operations. In the case of dryland crops, sowing and weeding may not require a large labour force hence, daily wage labour is preferred. Whereas in the case of Paddy cultivation large labour force is required for a small duration of time thus increases the demand for labour and this demand pushes up wages and increases the risk of agricultural operations getting delayed and consequently it impacts the yields. Therefore, the assured labour force is one of the key factors in leasing-in or leasing-out the land for cultivation under different tenancy types.

4.2.7. Credit and Market

The availability of Credit is another important factor in having a direct impact on agricultural resources sharing or tenancy relations in the study area. Broadly, sources of credit can be divided into two types: formal and informal. Detailed discussion on formal credit

sources is presented in the next chapter. The informal credit sources in the study are referred to as the local moneylenders providing the credit services to the villagers for various purposes. In the study area, there are in total 172 households out of 252 households who availed the credit from the moneylenders. The table below provides for common specific reasons for availing the credit from the moneylender. It is evident that there are about nine (9) specific purposes for which the loans are taken at an interest rate in the range of 2.5 rupees to 4 rupees per hundred rupees per month. It is found that the majority of the loans are sanctioned at the 3 rupees interest rate. However, the social relationship and the amount taken are deciding factors in fixing the interest rates by the moneylenders in the study area.

Table 4.16: Specific Purpose of Availing Loan from Moneylender or Informal sources of Credit

Sl. No.	Specific Purpose of taking loan	Number of Households
1	To Buy Livestock	14
2	Irrigation Infrastructure (Borewell and lift-motor and Pipes)	16
3	Agricultural Inputs	52
4	Marriage purpose	32
5	Health and Education related	18
6	Homebuilding and Renovation	11
7	To Buy Tractor	5
8	To Buy Land and Land Development	10
9	Household Consumption	14
	Total Number of Households	172

Source: Field Survey, 2017-18.

From the above table, we can infer that the most common specific purpose for taking a loan from a moneylender is found to be for agricultural inputs. This is primarily because the crop loans provided by the formal institutions take time and by the time the loans are sanctioned by the government agencies, it becomes late to begin agricultural operations. Therefore, most of the cultivators avail the loans from a moneylender and when the loans are sanctioned by the government, the money is paid to the moneylender. It hardly takes 48 hours to avail the loan from the moneylender, while it takes a minimum of 3 weeks to get the loan sanctioned by the banks in the study area. In addition, the related paperwork and the time spent in repeated visits to the bank branches push the cultivator to choose moneylenders. Moneylenders are confident that the cultivators would repay the debt as the government is going to sanction the loans to all farmers therefore, the risk of default is very less. However, we can observe that the interest

rates are kept very competitive (slightly higher than formal sources of credit) because of the government intervention in providing the credit to cultivators. If the interest rates are kept high by the moneylenders, cultivators may prefer to wait till the loans are sanctioned by the government, which is a better option instead of paying higher interest on the loan amount. However, there are other specific purposes such as marriage and emergency health needs for which the loans are availed from the moneylenders. The loans availed for capital investments such as irrigation infrastructure, tractor, home building, and renovation are usually charged higher interest rates.

The table below provides details about the relationship with moneylenders in the study area. The relations are broadly categorized into five (5) types: Blood relatives, Extended Family members, moneylenders from the same village and from a nearby village.

Table 4.17: Relationship with Moneylender in the Study Area.

Sl. No	Type of Relation	Number of Households
1	Blood Relative	6
2	Extended Family	30
4	Same Village	41
5	Other Village	95
	Total Number of Households	172

Source: Field Survey, 2017-18.

It is evident from the above table that the cultivators in the study area prefer moneylenders from other or nearby villages. About 55% of the total households had availed loans from the moneylenders located outside their village. The blood relative and extended family members are least preferred in case of taking loans for the reason that credit transactions between blood relatives and relatives are detrimental to the relations hence, they prefer not to take loans from them. There is another reasoning, according to which no relative would lend the money to their close relatives as they know about their repayment capacity and intentions well in advance for taking loans. About 24% of the 172 households had taken a loan from the same villagers. This specific category of loans is either extended by the landowners to tenants for the cultivation of leased-in lands or middlemen who are interested in buying the produce at the time of harvest. In-depth interviews have revealed that the majority of the small and marginal cultivators take loans from the landowners as advances to be repaid in terms of the produce or cash at the harvest. This in a way keeps the tenant attached to one landowner for all seasons at the same time the owner cannot change the tenant at will as the tenant would have

no other means to repay the debt. In this way, credit plays a dual role as a push and pull factor in sustaining the resource sharing process among the farmers in the study area.

The table below provides details regarding the quantum of loans taken by the households in the study area. About 46% of the total 172 households had taken a loan amount 50,000 and below. The majority of the households in this category had taken loans to buy the seeds, fertilizers and to some extent to pay the labour charges for initiating the agricultural operations at the beginning of cropping season. In total, about 70% of the households had taken a loan amount below one lakh rupees, which is observed to be recurrent phenomenon every year. Usually, the loan amount above two lakhs is taken for capital investments by the cultivators such as buying tractors and ancillary equipment, setting up new irrigation infrastructure or repairing the existing one and other investments that are long term in nature.

Table 4.18: The Loan amount availed from Moneylender.

Sl. No.	The Loan amount availed from Moneylenders (in rupees)	Number of Households
1	0 to 50,000	79
2	50,000 to 1,00,000	41
3	1,00,000 to 1,50,000	18
4	Between 1,50,000 to 2,00,000	17
5	Between 2,00,000 to 2,50,000	4
6	Between 2,50,000 to 3,00,000	8
7	Above 3,00,000.	5
	Total Number of Households	172

Source: Field Survey, 2017-18.

It is evident from the existing government schemes (discussed in detail in the next chapter) that there was no adequate attention paid to the long-term credit requirements of the cultivators. The short-term loans in the form of crop loans are not able to lift a small and marginal farmer from the recurrent debt trap after every harvest season.

As mentioned above about the predominance of Paddy cultivation in the study area, it is observed that only Paddy crop is procured from the farmers at Minimum Support Price (MSP) by the Primary Agriculture Cooperative Society (PACS). For other crops such as Maize, Groundnuts, Greengram, and Blackgram cultivators are dependent on the private buyers located in the nearby towns. Though MSP offered to Greengram, Groundnut, Blackgram are higher than Paddy, lack of government procurement discourages farmers in cultivating these

crops. The table below provides details about the buyer of the produce in Kharif and Rabi seasons in the study area.

Table 4.19: Agricultural Produce buyer details in the study area.

Sl. No.	Buyer Details	Number of Households	
		Kharif Season	Rabi Season
1	Government	140	114
2	Private	36	88
3	Government and Private	30	23
4	Household Consumption	46	27
	Total	252	252

Source: Field Survey, 2017-18.

In the study area for the Kharif and Rabi seasons in the year 2017-18, Primary Agriculture Cooperative Society (PACS) had procured the Paddy at the MSP⁴². About 55% of the households had sold their produce to PACS while 14% had sold their Paddy produce only to Private buyers. Compared to the price offered by PACS, the private buyers offer 100 rupees less than MSP. However, the time taken to complete the transaction of buying and selling does not exceed three days in case of Private buyers while it takes a minimum of 15 days to get the money credited to the farmer's bank account in case of PACS. Another constraint faced by the farmers is that specific date and time for procurement is given by PACS while the private buyers are flexible with their date and time in purchasing the produce. As per the instructions issued to PACS, a maximum cap on the quantity of produce is set at 30 quintals per farmer. A single farmer can't sell more than 30 quintals to the PACS. This makes the tenant cultivators sell their produce on the name of the landowner, who on receiving the amount returns the tenant's share. This cap on the maximum quantity puts the landowner at an advantage as money is credited in his account after every harvest season.

From the table, we can observe that in comparing Kharif and Rabi season, the number of households preferring to sell their produce to government had decreased while there is an increase in case of preference to Private buyers. This is because, during the Rabi season, the crops cultivated are Groundnut, Greengram, Redgram, Maize, and Blackgram, which are

⁴² MSP (Minimum Support Price) for certain crops is announced just before the sowing season on the recommendations of Commission for Agricultural Costs and Prices(CACP) to the Cabinet Committee on Economic Affairs (CCEA) chaired by the Prime Minister of India. MSP for Paddy was 1590 rupees for the year 2017-18.

purchased by the private buyers. In the majority of the cases, Paddy is either sold to PACS or retained for household consumption while other crops are sold preferably to Private agents.

The above section had in detail explained the various factors that play an important role in determining the terms and conditions for each type of tenancy practiced in the study area. The following section deals in detail about the terms and conditions in resource sharing among the farmers in each type of tenancy.

4.3.0. Terms and Conditions in each Type of Tenancy

As mentioned in Table-4 above, there are three types of tenancy namely: *Batai*, *Kowlu*, and *Neellapalu* (Water sharing) and a combination of any two of these three types are also found in the study area. Each tenancy type has its own set of terms and conditions accepted by both contracting parties. The nature of resources shared under each type of tenancy differs from each other.

4.3.1. *Batai* System

In *Batai* system, landowner shares his land with the tenant under the following broad set of terms and conditions:

1. Cost of all the biochemical inputs, seeds and pesticides shall be shared equally between the landowner and tenant.
2. Total labour costs shall be borne by the tenant.
3. Costs incurred in harvesting the crop shall be completely borne by the tenant.
4. The costs incurred in the development of land (lasting more than one year) shall be borne by the landowner.
5. The decision making in all agricultural resources allocations and operations shall be made with the prior approval of the landowner.
6. The final produce shall be shared equally between landowner and tenant.
7. In the event of crop failure due to any known or unknown reasons, neither tenant nor landowner has an obligation to compensate for the loss incurred on the investments made.
8. All the above-mentioned terms and conditions shall be in force for one cropping season only (if the landowner is satisfied with the tenant then he or she may extend the tenure for any number of cropping seasons with or without amendments to the terms and conditions agreed upon previously).

The above-mentioned set of terms and conditions are the most commonly accepted among the farmers in the study area. However, in-depth field interviews had revealed that there are variations in the broad set of terms and conditions. The variations reflect the context and other factors while agreeing for the cultivation of land by a tenant under the *Batai* system. For example, the costs of biochemical inputs, seeds and pesticides are not always shared equally. There are tenants who ask the landowner to completely bear the cost of fertilizers that are applied below (*Adugu Mandu*) the topsoil while the costs of fertilizers applied on top of the soil (*Meedi Mandu*) are borne by the tenant. In some cases, if the land is not cultivated in the previous cropping season, then the cost of plowing and levelling land is borne by the landowner. If the landowner has a tractor, then the tenant would only bear the cost of fuel in plowing the land. A closer observation of the negotiations between poor tenant and landowner has revealed that capital-rich landowners initially bear all the costs of cultivation starting from preparation of land to the harvest of the crop. Once the harvest is sold in the market, the investment made by the landowner is taken first and then the remaining amount is shared equally. In some cases, a landowner who cultivates a part of his land and leases-out the rest for cultivation under the *Batai* system makes the tenant work in his land a compulsory condition. The trend of conditional leasing-out land was predicted by M.V. Nadkarni (1976: A138). However, the labour services provided by the tenant are not free, it's only readiness to work in the landowner's land is guaranteed. Unlike Nadkarni's observation, it's not free labour that is extended as part of terms and conditions. This conditional leasing-out land has come up due to the shortage of labour in the study area.

In the *Batai* system, both the tenant and landowner intend to get maximum out of each other thereby sharing the risks evenly. In the study area, due to the presence of a large number of small and marginal cultivators, there is always huge competition among themselves to get an extra bit of land for cultivation under the *Batai* system. This competition among tenants keeps the terms and conditions in favour of the landowner. The competition is much higher for the lands which have assured irrigation facilities for two cropping seasons. It was believed that assured irrigation would be in favour of the *Kowlu* system of tenancy (Vyas, 1970; Bandyopadhyay, 1975) but in the study area, it is opposite for there are many willing tenants to cultivate the land under *Batai* system. In general, in all the four villages of the study area, fertile and well-irrigated lands are cultivated under the *Batai* system. The reasons for such preference are increased mechanization of agriculture, comparatively higher returns on the investments made, easy availability of credit and access to reliable markets.

4.3.2. *Kowlu* System

In the *Kowlu* system, a landowner leases-out land to the tenant in return for a fixed amount of cash (in some cases, a fixed quantity of produce is to be given at the end of each harvest season) for a year. The following are commonly accepted terms and conditions under the *Kowlu* system in the study area.

1. Unlike *Batai* System, the period of leasing-out land is made for one-year i.e., two cropping seasons.
2. The *Kowludar* shall pay the agreed *Kowlu* amount prior to the commencement of agricultural operations for each cropping season.
3. It's the responsibility of the landowner to handover all the irrigation facilities like tubewell, lift motors and related equipment required for the cultivation of land in working conditions to the *Kowludar*.
4. The landowner shall not interfere in the decision-making process of the *Kowludar* concerning agricultural operations.
5. *Kowludar* has to bear all the expenses related to the cultivation of leased-in land.
6. If the *Kowludar* invests in the development of land, then the same amount can be deducted in total *Kowlu* amount for the next season.
7. *Kowludar* has complete autonomy in the selection of crops and in the allocation of resources in the cultivation of leased-in land.
8. In the case of crop failure for known or unknown reasons (except for the sheer negligence of *Kowludar*), the *Kowlu* amount can be revised or reviewed.
9. At the end of the *Kowlu* period, *Kowludar* has to return the irrigation infrastructure in working conditions (just as it was handed over to him) to the landowner.

In the study area, the *Kowlu* amount is calculated per acre and at present, it hovers around 12000 rupees to 17000/- for the year 2017-18. It was found that there is not much change in the *Kowlu* amount for 6 years. The above terms and conditions are in fact favourable to the tenant and most of the tenants want to take up land for cultivation under the *Kowlu* system but landowners in the study area are reluctant to lease-out their fertile lands. The primary reason for such reluctance has its roots in the apprehension that *Kowludar* will indiscriminately use biochemical fertilizers to get maximum output thereby making the land lose its fertility in a short time. This is also one of the reasons for leasing the land for cultivation under the *Batai* system where the landowner has a say in the tenant's decision-making process. It is found that once the land is cultivated under the *Kowlu* system, it becomes difficult on the

part of the landowner to find a willing tenant to take up the land for cultivation under the *Batai* system.

Contrary to the earlier findings made on the fertile and large-sized landholding in favour of the *Kowlu* system (Iqbal Singh, 1989: A88), the current study finds that most of the large tracts of drylands are cultivated under *Kowlu* system. It is evident from the field interviews that cultivators having relatively large landholdings and tractor with ancillary equipment are involved in cultivating the large tracts of drylands under the *Kowlu* system. However, if the *Kowludar* fails to cultivate the land due to the failure of borewell or lack of water, then the landowner would not insist on paying the *Kowlu* amount for the uncultivated lands. This flexibility in terms and conditions was introduced to reduce the risk burden on the tenant. With such high levels of competition among the tenants for taking lands for cultivation, no landowner wants to keep the land fallow. It also becomes difficult for the landowner to lease-out the fallow lands in the next cropping season and even if leased-in, the *Kowlu* amount will be pegged far below the prevailing amount.

4.3.3. *Neellapalu* or Water Sharing

Neellapalu or Water Sharing system has evolved in response to the increased scarcity of water in the study area. It is a relatively new mechanism when compared to *Batai* and *Kowlu* system. With the introduction of diesel motor and tubewell technology in the irrigation system, *Neellapalu* had become a popular form of water sharing mechanism among the farmers in the study area. Prior to the introduction of tubewell technology, only large landholding farmers with the help of lift motor were able to lift water from the Nizamsagar Project flood gate leakage canals and ponds to cultivate. In addition to the cost of lift motor, the cost of pipelines and tubes requires huge investments, which could not be raised by the small and marginal farmers in the study area and these farmers had worked in the lands of big landlords. However, once the tubewell technology is introduced, relatively well-off farmers had dug borewells and increased the land under cultivation. Out of all Castes in the study area, Mudiraj Caste had benefitted immensely by the tubewell technology. They could increase the land under cultivation and some of them even bought land from the Patel and Reddy Castes. Over a period of time, the dependency on borewell technology had increased and at present, there are 225 borewells in the study area. In *Neellapalu*, the owner of the water source will give access to the water source to the tenant in return for a fixed share in the output after the harvest. The

following are the most commonly accepted terms and conditions in *Neellapalu* or Water Sharing system.

1. The tenant has to bear all the expenses related to pipelines and digging canals etc., from the source of water to his field.
2. In the case of failure of water source in supplying water till the end of the cropping season, then the tenant can't seek compensation from the water source owner and the owner of the water source can't ask for his share in the output.

It is found that the share in the output varies from the Kharif season to Rabi season depending on the availability of water. In the Kharif season, the share in the output would be one-fourth of total produce while it will be one-third of the total produce during Rabi season. In Kharif season, the water is available in all canals and groundwater gets recharged due to monsoon rains, therefore, the share in out is put at one-fourth whereas during Rabi season, due to scarcity of water in canals and borewells gets dries up, therefore, the share in the output is increased to one-third of the total produce.

There are farmers in the village who had spent a lot of money on digging borewells and failed to see success and consequently incurred huge debts. They had migrated to nearby towns to work as casual labour to clear off the debts. Then there are lucky cultivators who own small plots of lands having one very successful tubewell and these have shared the water with the neighboring farmers in return for a share in the output.

There are 45 households involved in *Neellapalu* with the other cultivators in the study area. This is, in fact, a second popular form of resource sharing mechanisms in the study area. *Neellapalu* is often associated in combination with the *Batai* system. This is because small and marginal farmers having no reliable water source in their fields leases-in land from the adjacent landowner who has a well functioning tubewell for cultivation under the *Batai* system. In this way, the tenant could get his small plot of land cultivated and share one-third or one-fourth towards *Neellapallu* and at the same time would also get 50% share under the *Batai* system from the landowner. *Neellapalu* in combination with *Kowlu* is used unless the landowner has well-functioning tubewell which can satisfy the water requirement for leased-in land and the tenant's own land. There are only two households involved in such an arrangement, where the landowners are interested in rent collection alone. There are two households that had leased-in land under *Batai* and *Kowlu* system in the study area. In one case, the owner of the land had given a small portion of his land for cultivation under *Batai* system, where the total produce is

bought by the owner for household consumption and in return for taking complete share from *Batai* land, he had leased-out another parcel of land to the same tenant under *Kowlu* system from which no *Kowlu* amount is taken. In the second case, the landowner is a government employee who resides in the nearby town and could not take an active part in agricultural operations. So, he gave a portion of his land for cultivation under the *Batai* system and other parcel of land for cultivation under the *Kowlu* system to the same tenant.

4.4.0. Criteria for choosing the tenants or landowners

The agricultural resources sharing process among the tenants and landowners is a complex process involving a variety of factors as discussed in the above sections. The *Batai* and *Kowlu* systems and relatively recent *Neellapalu* systems have their own historical reasons to evolve and sustain till this date. The embedded relations between the resource lessor and lessee are shaped by the social, economic, political and ecological contexts and thus resulting in the criterion that is followed in choosing a tenant or landowner for sharing of resources.

4.4.1. Landowner's Criterion

As mentioned above about one-fourth of the landowners have landholdings of size less than one acre and the income from cultivation is hardly sufficient for a four-member household to meet their consumption expenditure. The fact that the majority of cultivators in the study area are small and marginal in nature makes the leasing-in land for cultivation under different types of the tenancy a survival strategy. However, not every tenant is chosen by the landowners to lease-out their precious resource. Each landowner has his own criterion of choosing a tenant. For a landowner, the potential tenant has to be morally upright and should have integrity as all the terms and conditions agreed upon are informal and are legally void. In addition to this, a tenant should have proven knowledge and necessary skills in the cultivation of crops chosen by the landowner or by himself. Landowners prefer small and marginal land-owning farmers as tenants instead of medium or large landholding tenants. As medium and large landholding tenants do not consider the leasing-in additional land as a survival strategy for it is always considered as only economic interest. However, in the case of leasing-out land under the *Kowlu* system, a landowner prefers medium or large landholding farmers because they can pay the *Kowlu* amount irrespective of the loss or profit in cultivation. In both cases, a landless tenant is least preferred as he has nothing to hold on to in case of the bad agricultural season. Landowners opine that it's difficult to recover the investments made in case of violation of

terms and conditions by the landless tenant. In general, a landowner does not prefer an unmarried and landless tenant in leasing-out the land under any type of tenancy.

The tenants having large family sizes are preferred over small family size tenants because each able person in the tenant's household is looked like extra labour in the cultivation of land. Having a tenant of large family size provides assured labour for the combined landowners during peak agricultural season. In some cases, landowners insist on mandatory labour service in the owner cultivated lands to lease-out land under any type of tenancy. In some cases, a landowner prefers tenants, who have a strong network to gather the required number of labour during peak season.

Having large livestock is always considered as an asset for a tenant to be preferred by the landowner. The tenant has to stay in the village to look after the livestock and this makes the landowner more confident about the commitment of the tenant in the cultivation of the leased-in land. In addition, the tenant's livestock waste is used to reduce the costs of cultivation and improves the fertility of the land. Therefore, having large livestock increases the chances of convincing a landowner to lease-out the land.

In the case of landowners who want to lease out their lands under the *Kowlu* system, a tenant with capital assets like a tractor and its ancillary equipment are preferred. This is because in the study area large tracts of drylands are leased-out for cultivation under the *Kowlu* system and to cultivate such large lands owning a tractor is an additional desired qualification for a tenant. However, having a tractor acts as a negative aspect for leasing-in land under the *Batai* system as landowners opine that a tractor owner can't give full commitment to the leased-in land as he will be busy in extending the tractor services to his clients in the village. It is observed that most of the tractor owners have a strong networking capacity to mobilize the labour during the peak season because of his client base within and outside the village. Therefore, ideally, a landowner prefers a tenant having small or marginal size landholding with a tractor to lease-out land for cultivation under any of the tenancy types.

Another important aspect considered by the landowner is that a tenant should be from the same village or his land should be adjacent to the owner's land. Blood relatives and relatives are given the least preference in leasing-out the land for cultivation as it is believed that the sharing of agricultural resources would invite unnecessary troubles in relations during the adverse agricultural season or unfavourable conditions. Overall, a landowner prefers an honest,

resource deficit, strong networking, and non-relative villager as a tenant to lease-out his land for cultivation.

4.4.2. Tenant's Criterion

Generally, Tenants in any type of tenancy contracts are considered as weak and always at a disadvantageous position (Johnson, 1950:122, Vyas, 1970: A73). It might have been true in a traditional agriculture system where agricultural resources are cornered by a few elite and powerful landlords. With the introduction of technology and state intervention at every stage of agricultural operations, the resources have become liberated to a great extent. In the study area, we can observe that the majority of the landowners have leased-out lands at the same time have also leased-in land at some point in time in their life. This duality associated with a landowner or tenant makes each farmer develop his/her own criterion of choosing the tenant or landowner.

In-depth interviews conducted among the tenants in the study area reveal that a tenant prefers to lease-in land from a landowner who has a previous knowledge in the cultivation of land, especially in the case of the *Batai* system. Otherwise, it becomes difficult on the part of the tenant to achieve consensus in crucial stages of agricultural operations. At the same time, a landowner is expected not to depend on agriculture for his living or should have other means of income. The landowner should support the tenant and ready to take risks in case of adverse agricultural conditions. Above all, a landowner should trust and have confidence in the abilities of the tenant.

A tenant prefers the landowners who give freedom in agricultural resource allocation and operations. Landowner's interference in day to day activities of a tenant brings more friction in relations leading to trust deficit and termination of the contract. When it comes to the *Kowlu* system, a landowner is least expected to interfere in the agricultural operations carried out by the tenant. However, a tenant expects landowners to be liberal in timelines for *Kowlu* payment.

Tenants prefer landowners who maintain all the required capital assets such as a tractor with ancillary equipment, irrigation, and storage facilities. Having a tractor makes finish all the agricultural operations on time. Better irrigation facilities reduce the risk and bring in the expected output at the harvest. Usually, immediately after harvest season, the price of

commodities in the markets falls down owing to supply and demand forces and having basic storage facilities can save the tenant from distress sale in the market.

4.5.0. Changing Relations

As mentioned above, the dynamism in the resource sharing process can be attributed primarily to the diverse factors such as the size of landholding, caste, family size, cropping pattern, cropping season, labour, access to credit and markets operating in a complex web of social relations. Over a period, the complexity had resulted in a set of terms and conditions in the agricultural resource sharing process amenable to context. From the in-depth interviews conducted among the cultivators, it can be inferred that two major interventions by the State in the form of Green Revolution and Land reforms had significantly altered relations among the resource owners and tenants in the study area. Land reforms coupled with the abolition of the Patel-Patwari system in Telangana State resulted in the decline of absentee landlordism and a significant number of small and marginal tenants in the study area were given land ownership. Prior to these interventions, the relations are primarily guided by an individual's social character traits such as trustworthiness, gratitude, and subservience. The decisions on agricultural resource allocations and operations are the domain of resource owners while the execution was carried out by the tenants. Resource owners restricted themselves to supervisory roles while the tenants are involved in agricultural operations. In the study area, only two households namely. Patels and Reddys were holding large landholdings while the majority of the cultivators has small and marginal landholdings. In addition to landholding, assured irrigation infrastructure was also under the control of these households. As a result, the rest of the villagers had to depend on these households for various agricultural needs. The terms and conditions of agricultural resource sharing were always in favour of the landowners. Resources such as land, capital assets, labour, seeds, fertilizers, pesticides are shared or exchanged among the cultivators in the study area. However, the exchange or sharing is primarily in the form barter system rather than in currency. For example, seeds are shared with a condition to return double the quantity after the harvest.

Initially, the bio-chemical technology-driven interventions in the form of the Green Revolution had favoured capital-rich landowners. Its well-known fact that the Green Revolution had undoubtedly increased demand for agricultural labourers for the timely completion of agricultural operations. It was observed in the study area that this demand for labour among the landowners had increased the dependency on the small and marginal farmers.

Gradually, the dependency relations among resource owners and tenants had resulted in the sharing/exchange of resources under different terms and conditions.

Over a period, other State interventions such as loan waiver, access to credit and markets, MSP, capital subsidies, caste and gender-based credit services had significantly increased the complexity in the resource sharing relations among resource owners and small and marginal tenants in the study area. These inputs based interventions in agriculture had reduced the importance attached to land over other inputs. Currently, resource sharing relations in the study area are primarily based on an individual's character traits such as knowledge/skills in agriculture, efficiency, capital assets, commitment, accessibility, trustworthiness, etc. The current terms and conditions are not biased or tilted in favour of one specific party. Overall, the relations have become predominantly economic or commercial in nature.

It's not always landowner or the tenant who dictate the terms and condition in the process of agricultural resource sharing. The interlinked factors operating in complex social relations in diverse agricultural settings requires in-depth understanding of the contexts and consequent resource sharing contracts. It's the context that determines the nature of resource sharing process and types of tenancy practiced in any region. In fact, microscopic understanding of the terms and conditions vis-à-vis contexts in the respective study areas reflects the level of agricultural development in the region. The discourse in following chapter deals with the contexts and consequent contracts, types and nature of contracts between resource owner and tenant through case studies from the study area.

Chapter 5

Contexts and Contracts in Agricultural Resources Sharing

The current chapter provides for the diversity in the contexts that shape the agricultural resources sharing contracts in the study area. The contexts are detailed with the help of an in-depth interview method to understand the intricate and complex relations among the resource owners and resource tenants. Broadly, the respondents for in-depth interviews are categorized into three groups: Farmers involved in the *Batai* System, Farmers involved in *Kowlu* System, and Farmers involved in more than one form of resource sharing contract. In order to understand the changes in the resource sharing processes, the experiences and opinions of the large landholding farmers in the study area are also detailed in this chapter.

1.0. Farmers involved in *Batai* System

Case 1.1:

Saailu (53-years of age) and his wife Laxmi (41 years of age) belong to *mudiraj* caste. Besides this couple, the household consists of his widowed mother, married son, daughter-in-law, two grandchildren, all living in a single room Pucca house. He has 1.5 *Bigha* (one *Bigha* is equivalent to one acre) of land. Out of which half-*Bhiga* is dry land and one *Bhiga* is fertile land (*Polam*). Six years back he had cultivated Paddy in his one *Bhiga* land, for the first time in the village a new insect had attacked his Paddy crop. The insect had attacked the stem of a fully-grown Paddy plant. From outside the crop looked good and Saailu was very confident about saving some money this time. While harvesting more than half of the crop had yielded the rice husk with no rice grain inside it. This was a shock to Saailu, and he incurred a huge loss. For the next two agricultural seasons, Saailu did not cultivate his land, instead, he migrated to Hyderabad to work as watchmen in a construction project. For one-year Saailu alone was staying in Hyderabad earning about eight thousand rupees per month as salary. Next year he came back and took his wife along with him so that he and his wife can work as daily wage labourers in the same construction project. Saailu and his wife could save up to one lakh in a year and this they continued for the next two years and with the three lakhs they saved, they could clear the majority of the debts they had incurred for the marriage of their two daughters. During these three years, he gave his land for cultivation under *Batai* System to another farmer from the same village.

Saailu came back to the village three years ago to do agriculture in his one *Bhiga* fertile land. This time due to below normal rainfall instead of paddy he chose to cultivate *Makka* (Maize). Everything went well till the wild boars from the adjacent reserve forest had attacked his crop. Though he is aware of wild boars' attack on the crops, his one-night sleep had cost him one-fourth of the total crop. After eight days there was another attack by wild boars on his crop. He could not further risk and made one wire fencing and connected the wire to the electricity mainline. For about four days Wild boars could not venture inside his farm. But on the fifth day, an Ox tried to come inside the farm, it got an electric shock and fainted and fell on the same wire and got electrocuted and died on the spot. This incident had brought an additional problem to him. He disconnected the electric connection to the fencing wire after villagers had asked him to do so. Then there were two more Wild boar attacks on his farm and he lost more than half of his crop by the time of harvest. When asked about what would be optimum income from cultivating *Makka* (Maize) crop in one *Bhiga* of land? Saailu said it would fetch him nearly thirty thousand rupees. So, if we go by what he earned in the cultivating *Makka* in his one *Bhiga* land, it is a huge loss for him.

He felt that with one *Bhiga* of land (*Polam*) he won't be able to earn enough money to meet his household expenses, so he decided to lease-in land for cultivation under the *Batai* system. His entire 1.5 *Bhiga* land is not situated at one site but it was fragmented into one-half *Bhiga* and one *Bhiga* land parcels separated by his brother's land. This fragmentation of land had also made his work more difficult. This fragmentation had happened because his father had three *Bhigas Polam* and another two and a half *Bhigas* dry land when this land is divided among his three sons, every son got one *Bhiga* of *Polam* and half *Bhiga* of dry land.

Saailu and his adult family members would go for work in agricultural fields during peak season. He says that almost all households who are involved in agriculture would go for work in other's farms as labourers during peak season. During the lean season, the wages would be 150 per day for women and would reach up to a maximum of 300 rupees per day in peak season. In the case of men, the wages would be 250 and 500 rupees per day during the lean season and peak season respectively. However, most of the agricultural works are done by women and men do not usually take an active part in the cultivation as labourers in others' fields. In addition to the daily wage, all labourers would be provided with one liter of *Kallu* (Toddy) and transportation expenses.

Saailu and his family members along with other villagers also go to nearby villages to work (*Kaikulu*) as agricultural labourers. Usually, one middleman (most often these men are from the same village, who owns an auto-rickshaw or tractor) would give the information about the availability of work in nearby villages. Though he won't take the commission in the wages, all the labourers who took his help in getting work should use his auto-rickshaw as a mode of transportation. Most often the type of work they choose would be in *Guththa* terms (a fixed amount would be negotiated between employer and labourers and one-time payment would be made after finishing the work assigned). People from the study area would go as far as 60kms from their village to work as agricultural labourers during the peak season.

When asked about his criteria for selecting a tenant to cultivate his land under the *Batai* system, he mentions that “preference would be given to persons who spend most of the time in the field, who is honest and hardworking. Caste and relationship don't influence his choice of selection, as everyone in the village chooses tenants based on his ability to deliver the expected returns”. People always look for qualities such as ‘trustworthiness’ and ‘commitment to work’ in tenant farmers. If Saailu is given an option to choose between his brother and a hardworking and trusted farmer, he would choose later rather than former. He says that “*In the case of brother or relatives it would be difficult to monitor the cost of Inputs and effort and moreover any interference from landowner affect the relationships in the family*”.

When I asked about what would be his criteria for selecting a landowner in *Batai* system? he says that “*A landowner should not back off when a tenant comes and asks for money to buy inputs and should be ready to help or support if some pests or insects attack crops and should provide money to buy pesticides or insecticides on time.*” Tenant looks at the ability of the landowner to contribute his share in inputs on time or preferably in advance. If the landowner is in debt or doesn't have credibility among the villagers, many of the tenants won't prefer to do *Batai* on his land. Saailu is currently doing *Batai* for a landowner, who is aged and can't do any more active farming.

As detailed by Saailu, if fallow land is to be cultivated by a tenant then the owner of the land should bear the cost of land preparation completely. Which includes, levelling the land using cage-wheel for the tractor. The cost of fertilizers (*Adugu mandu* and *Meedi mandu*; in most cases, *Adugu mandu* is paid for by the owner whereas the *Meedi mandu* is paid for by the tenant), Pesticides, Insecticides, cost of the seeds should be borne equally (50:50) by the landowner and tenant. If the tenant wants to use his own seeds, then the owner will not pay

anything for that. Other costs such as labour, towards harvesting, are to be borne by the tenant. Once harvest is ready, the landowner and tenant would divide the total product into two half and take each half. If the total produce is sold to one buyer (It is a state government corporation that procures all the paddy in this study area) then the amount would be shared equally between landowner and tenant.

If the land is already prepared (land is not kept fallow in the previous season) and is to be cultivated under the *Batai* system, the landowner would not share the cost of cage-wheel. In very rare cases, the landowners would pay for the cost of land preparation. The cost of fertilizers, pesticides, and insecticides are shared between contracting partners in 50:50 proportion. However, the cost of labour, harvesting the final produce is completely borne by the tenant. The final produce is also shared in equal proportion.

If the landowner does not have a reliable water/irrigation source or if the existing borewell dries up owner has to bear the cost of fixing the water/irrigation facilities for the land. if any third party is involved in sharing water for crops, then the total agricultural produce should be divided into three equal parts and each one takes one share. If the tenant can provide water from his land and cultivate the landowner's land, then the tenant would take two shares out of three shares of the final produce. For example, if the total produce after harvest is 300kgs, then the tenant would take 200kgs of total agricultural produce and landowner would take 100kgs of final produce as his share. In all water sharing contracts, the water provider will not share or contribute any of the input costs, labour and harvest costs.

From the context, we can infer that crop loss due to pest attacks and wild animal attacks had pushed Saailu from farming to casual labour in the nearby town. After three years as construction labour in nearby town, he returned to farming with savings and realised that his fragmented marginal sized landholdings would not be sufficient to meet his household expenses. Consequently, leased-in land for cultivation under *Batai* system.

Case 1.2:

Pochaiah (64 years of age) belongs to *mudiraj* caste and his wife Pochavva (55 of years of age) are living in single room *Pucca* home close to that of Patel's home. Pochaiah has one elder brother and two younger brothers. As Pochaiah's father didn't have much land to be shared among his four children he had sent his third son to another village under *illarikam* (a practice in marriage, where the bridegroom is sent along with the bride to stay in the bride's

home). Since the age of 13 years, Pochaiah was working in the fields of Patel helping his father in agricultural activities. Patel's son Kishan Rao and Pochaiah were of the same age and share a cordial relationship. Pochaiah was always given first priority by the Patel to work in his field under the *Batai* system. As said by Pochaiah there was a tacit understanding between Pochaiah and Patel, that as long as Pochaiah has physical ability to cultivate Patel's land, no other farmer would be asked to do *Batai* in Patel's land. Patel used to depend on Pochaiah to arrange daily wage labour and timely completion of agricultural operations in every cropping season. Pochaiah proudly says that he could marry off three daughters without selling an inch of land that he had inherited from his father. Pochaiah had no sons who can help in agricultural operations, as a result, he reduced his cropping area under *Batai* from three acres to one acre in course of time. At present, he is not involved in doing *Batai* in Patel's land. He lives on income from daily wage labour and pension money given under the *ASARA* Pension Scheme of Telangana government. Pochaiah mentions that in earlier days there were no chemical fertilizers and instead every farmer used to apply cattle dung in their fields. They always had more than a dozen cattle in the backyard. The input costs are less, and water availability is also reliable making agriculture minimal risk enterprise. With the introduction of bio-chemical fertilizers and mechanization of agricultural operations, the cost of cultivation had multiplied and cultivating under the *Batai* system had become not profitable.

From the above case study, it can be inferred that not all resource sharing contracts are driven by commercial interests. The personal bond between resource owner and tenant also plays a pivotal role in shaping the terms and conditions under which resources are shared.

Case 1.3:

Durgaiah (56 years of age) and his wife Saiavva (42 years of age) belonging to the *Goola* caste (traditional fishing community) lives in a two-room semi-Pucca home with his son and daughter-in-law. His son had migrated to Hyderabad two years back to work as construction labour. Durgaiah was cultivating one and a half *Bhigas* (acres) land under the *Batai* system for six (6) years. He says that "*Batai* is a minimum guarantee enterprise with less scope for loss and also less scope for high profits". Durgaiah says that after calculating all costs and income from 1.5 *bhigas* *Batai* land, he is left with money equivalent to daily wage labour earning for one cropping season (which hovers around 20000 to 25000 rupees for one cropping season). Durgaiah opines that for aged people like him, it is difficult to earn 200 to 250 rupees per day for the entire cropping season. When asked about his opinion on comparing *Batai* and

Kowlu system, he vouches for the *Kowlu* system provided there is a reliable water/irrigation facility and fertile land. However, there are not many landowners who want to give their lands for cultivation under the *Kowlu* system.

He says that except for three landowners in the village no landowner was willing to give land for cultivation under the *Kowlu* system. One among the three landowners is local politicians working for a national party and thus gives entire land for cultivation under *Kowlu* System. The second landowner had migrated to a nearby town and has his business interests there and the third landowner is a government employee with Telangana State Road Transport Corporation (TSRTC). One commonality in all three landowners is that agriculture is a secondary source of income and if not last and least source of income. They visit the villages either to collect the *Kowlu* money or for annual festivals, marriages or to attend death rituals of relatives/villagers.

All the adult members (including his son) in the family would go for *Kaikulu* (daily wage) during the peak season. The participation of all family members as labour in other farmers would guarantee exchange labour (*Badulu*) to do labour in his land. In other words, if an entire family attends for work in neighboring farmer's land, the neighboring farmer's family members reciprocate it by attending for work on his farm. This is a labour exchange mechanism wherein the costs of labour get canceled on both sides, provided the number of family members participated and the size of the land are equal. In the case of unequal land size and the number of workers from each family, the remaining amount has to be paid in cash on par with the prevailing daily wages. This exchange labour mechanism provides guaranteed labour during peak season and it plays a vital role in regulating the costs of labour. This is also one of the reasons for the active participation of women in pooling labour to work in peak agricultural season.

From the above information provided by respondent, it can be understood that the tenants prefer *Kowlu* system over *Batai* system provided land is fertile with assured irrigation. However, very few landowners in the study area lease-out land under *Kowlu* system. As mentioned above, for aged people who are not preferred as construction labour in nearby towns, the cultivation of land under the *Batai* system provides an alternative opportunity to make a living. It is also understood that adult family members especially female members as exchange labour minimise the expenditure of cultivation and additional income to households in some cases.

Case 1.4:

Bhoomaiah (57 years of age) and his wife Saiavva (50 years of age) belongs to *mudiraj* caste are living in a two-room *Pucca* house along with his unmarried son (24 years old). Till last year he was cultivating his own land with the help of his son and wife. Last year his son left for Hyderabad to prepare for a competitive exam (Police constable exam) and his wife had severe back pain problem and the doctor had advised not to carry weights. So, Bhoomaiah decided to give his one and half *Bhigas Polam* to a small farmer who resides in an adjacent village. When asked about his choice of selecting a tenant from the nearby village he said that his land is closer to the adjacent village and the tenant is a newly married, young man having one *Bhiga of Polam* adjacent to his land. Bhoomaiah says that though the villages are separated the lands are in the same survey number. Moreover, Bhoomaiah has been observing the tenant from the last three years and knows his way of cultivating and commitment to farming.

When I asked Bhoomaiah as Why he didn't give his land to the tenant under *Kowlu* System? he responded by saying that, *"If I give my land under Kowlu System, I will not have any decision-making powers in farming on my own land and the tenant may harm his land by the indiscriminate use of fertilizers and insecticides leaving his land not suitable for cultivation for next season"*. Since the *Kowlu* payment is made before the start of the cropping season, the tenant will be under economic stress to recover his investment in farming. This economic pressure makes him aggressive in the overuse of fertilizers and pesticides, thus ruining the fertility of the soil. The tenant may get his money back with increased output but if the landowner wants to take back his land for cultivation for next season, it is observed that the returns upon cultivation are below the expected level due to loss of fertility of the soil. In fact, this is one of the reasons why the landowners would give *Kushki* land (dry and unfertile land) under the *Kowlu* system but not fertile and irrigated lands.

Bhoomaiah opines that under *Batai* System, the landowner can at will interfere in the decision-making process of the tenant and can suggest (and in some cases veto the decision of tenant) better alternatives in increasing the output without much damage to the land. Bhoomaiah says that *"As tenant had to depend on the landowner in purchasing seeds, fertilizers, and pesticides, the landowner will have continuous monitoring on overall agricultural operations carried out by the tenant"*. Bhoomaiah opines that there should be compatibility in thoughts and actions between the tenant and the landowner to achieve maximum output in *Batai* System.

From the above information, it can be inferred that landowners look for tenants who are in sync with their thoughts and actions. The preference to lease-out lands under *Batai* System is driven by the fact that the landowners cease to have decision making power in agricultural resource allocation and operations and over exploitation of soil under *Kowlu* system. As there is no guarantee in land tenures and also the rent payments are made in advance, the tenants try to secure or maximise the income from cultivation under *Kowlu* system.

Case 1.5:

Saailu (64 years of age) and his wife Anjavva (58 years of age) belonging to *mudiraj* caste are living in the four-room semi-*Pucca* home. Saailu has three sons; Ravinder (32 years of age), Srinivas (30 years of age) and Rajashekar (27 years of age). Saailu has two (2) *Bhigas* of land, which is tank irrigated. Saailu had quit farming six years ago as there was deficit rainfall continuously for about three years. Since then he gave his land for cultivation under *Batai* to another farmer in the same village. Elder son of Saailu, Ravinder along with his wife had migrated to Hyderabad to work as an autorickshaw driver and he currently owns his own auto rickshaw. Second son Srinivas along with his wife runs a small *Kirana* store in a nearby town. The third son is jobless and unmarried and resides in the village.

Since no son is interested in farming, Saailu had given his two (2) *Bhigas* land for cultivation under *Batai* System. The current tenant has been doing *Batai* on two (2) *Bhigas* land from the last five (5) years. When I asked Ravinder about his satisfaction on leasing out land under *Batai* System to the same farmer continuously from last five (5) years, he says that he is not satisfied but has no option to change tenant as his younger brother and father opposed his decision twice in last two years. Ravinder says that since the land is still undivided and no one in the family had the intention to divide the land into three or four parts, small parcels of land do not serve the purpose of anyone in the family. Even tenants would not prefer to cultivate such small parcels of land under *the Batai* System or *Kowlu* system.

Ravinder says that his father takes all decisions regarding farming in their land. When asked Saailu about his decision to continue with the same tenant for five (5) years continuously. He says that the tenant does not have much land of his own (less than half an acre) to cultivate and moreover he is very honest and stands by his word. In addition, after harvesting the crop he loads the produce in gunny bags and delivers them at home. Ravinder opines that a tenant has to be changed after every two crops in order to check the misgivings of a tenant. On the

other hand, his father thinks that frequent change in tenants will reduce the trust levels and would have to continuously monitor the agricultural operations carried out by the tenant. Leasing land under the *Batai* system to the same tenant would strengthen bonds of trust between landowners and tenant thereby increasing the efficiency of the tenant. It's a win-win game for both contracting partners. Saailu also mentions that "*small or landless tenants are more careful and committed to farming as they can't establish an alternative livelihood immediately*". As Saailu puts it "*small or landless farmers are always concerned about manchiperu (good impression) among the landowners*". A bad name among landowners would make the life of small or landless farmers more difficult in the village as every landowner will be suspicious about the agricultural operations carried out by him.

The above case study reveals the contrasting views on leasing-out land to same tenant. The head of the household opines that changing the tenant frequently requires extra effort for continuous and repeated supervision of the agricultural operations in the field each time tenant is changed. Having a long term association with same tenant builds trust thereby reducing the effort needed in supervision. While the elder son of the household believes that frequent change of tenant increases the efficiency of the tenants in agricultural operations. The constant fear in the mind of tenant to appease the landowner drives him to work hard and be in good terms. The small and marginal landholding tenants are preferred by the head of the household as these tenants strive to maintain a good impression among the resource owners.

Case 1.6:

Saaiavva (59 years of age) belongs to the *goola* caste lives in a two (2) room Pucca home. Her husband died about 10 years ago and she has two sons, who are married and had migrated to different places in search of livelihood. The younger son is an autorickshaw driver in the Nizamabad district, while the elder son is employed as contract labour to work in agriculture fields. Remembering her active years in farming, she mentions the variety of crops grown in the study area. Paddy is cultivated only during the Kharif season while the Rabi season is known for pulses, millets, and other vegetables. During her days the wages are paid in kind in a 4:1 (owner: labour) proportion of the produce harvested by each labour. As there is no assured irrigation facility half of the current lands in the village are left fallow (*Bheedu Bhuthalli*) and crops cultivated are a rainfed and drought-resistant variety. She remembers that rice is cooked only during festivals and marriages. Their diet consists mainly of a variety of

millets. She says that people use to have only two meals per day and yet they worked hard in the fields.

She says that her elder son takes all the decisions related to their two (2) acres of land in the village and at present, it is given for cultivation under *Batai* System to a landless farmer in the same village. The costs of inputs are borne by her sons and she has to continuously monitor the agricultural operations of the tenant. However, at least one of her sons would be present while buying the seeds, fertilizers, pesticides towards landowners share in *Batai* System. It's been four (4) years since she met with an accident and broke her left leg. Before this accident, she was cultivating the two acres of land by herself and went to work in agricultural fields as daily wage labour. Ever since the accident, she withdrew from active agricultural operations and as a result, her sons decided to give the land for cultivation under the *Batai* system. She says that she can still do the farming in their land but it would be difficult to get the labour in time as she was not attending to work on other farmer's land as exchange labour. She observes that, if one is attending work in other farmer's land, they would develop a mutual obligation on each other to work in each other's lands. In one cropping season, she usually does work in six (6) other farmer's land and all these would in turn work in her land. This exchange of labour had provided a reliable labour force to carry out farming in her two (2) acres of land without much difficulty.

She is an active member of the *Nagalaxmi* Self Help Group (DWCRA group) and took 40,000 rupees as a loan from a bank. The amount is given to her sons equally and they would send 800 rupees every month and she would add 50 rupees towards savings (total amounts to 1650 rupees) to pay a monthly instalment. Though her two daughters-in-law can avail loans by participating in SHGs of DWCRA, they didn't as they are not residing in the village. As the land *patta* is on her name, she had also availed a crop loan of 30,000 rupees from the bank and had given to her sons. Her elder son had purchased a jio phone recently and she had learned to call her two sons. Most often her younger son would visit her and takes her to his place for a week or 10 days.

It can be inferred from the above information that aged members in the household are expected to supervise the agricultural operations carried out by the tenants while the adult members migrate to other places in search of alternate livelihood. It is also understood that the loans availed under DWCRA scheme are utilised for household consumption.

Case 1.7:

Ramulu (60 years of age) belongs to *mudiraj* caste and has 13 acres of land. Out of which, eight (8) acres are dryland irrigated by one borewell and the remaining five (5) acres of land is uncultivable as the land contains a lot of pebbles and boulders. He took a loan of 1,50,000 rupees from a scheduled commercial bank by keeping eight (8) acre land as collateral. He dug one borewell and it worked for Kharif season but failed in the Rabi season, as the groundwater level dropped. Therefore, during Rabi season he reduced the area of cultivation to four (4) acres and gave two (2) acres of land for cultivation under the *Batai* system to landless farmers from nearby villages. In addition to the usual terms and conditions for the *Batai* system set in the study area, the tenant was asked for assured supply of household labour to work in landowner's land at the prevailing wages. Ramulu says that the tenant had agreed for all the terms and conditions but after one month into cultivation, he went back on his words and didn't work in the landowner's land. Whereas the tenant argues that the borewell had failed and as there is no assured irrigation, he had to quit the cultivation of *Batai* land. Consequently, the landowner chose to revoke the *Batai* agreement. Ramulu opines that giving land to landless farmers is not advisable as a tenant can quit anytime to pursue other livelihood options. In addition, it's, even more, riskier to give land for a landless tenant from outside the village as the social control mechanisms operating within the village get weakened as the contracting partners are from two different villages.

From the above experiences of respondent, we can understand the reason behind landowners' aversion to leases-out lands for cultivation under the *Batai* system to landless tenants. As the terms and conditions for sharing of resources is informal, the only recourse landowners or tenants have is the social control mechanism. This mechanism further becomes weak if the tenant or landowner is from different villages.

Case 1.8:

Bagayya (45 years of age) and his wife Maishavva (35 years of age) lives in a single room semi-pucca home along with his mother Ramavva (80 years of age). His son Vigneshwar (15 years of age) studies in Nizam Sagar Model School (Residential). Bagayya owns two (2) acres of land near to Nizam Sagar flood canal but has no direct access to it. He depends on one bore well for his two (2) acres of land. To cultivate his 2 acres of land he takes water from the adjacent landowner by sharing one-third of the total produce every cropping season under the *Neellapalu* system.

In order to overcome the difficulty in accessing water every season, he bought half-acre land from the adjacent landowner for 4 lakh rupees. To buy the land he borrowed 2 lakhs from a local moneylender at a 3% interest rate per month. The remaining two lakh rupees is borrowed from a relative at a 2.5% interest rate per month. He asked his wife to avail 50,000 rupees from the SHGs under the DWCRA scheme, in addition to this his mother had given 20,000 rupees. From the current Kharif season, he has direct access to the Nizam Sagar Flood canal and he hopes to clear the debts early. He says that land has no value if it does not have access to irrigation and opine that he can go to Hyderabad leaving behind his wife and mother to look after standing crop and work as construction labour during the lean season. He also mentions that to give land for cultivation under *Batai* or *Kowlu* system, the landowner should show the tenant a reliable water source.

The above case study reveals the importance of assured irrigation facility for the cultivation of land. With the assured irrigation, one can either choose to cultivate the land on own or lease-out to tenant under *Batai* system. If the size of landholding is small or marginal, the landowner prefer to lease-out land under *Batai* system and proceed to nearby town in search of alternative livelihood.

Case 1.9:

Gangaram (33 years of age) and his wife Poshavva (28 years of age) belong to *mudiraj* caste living in a single room pucca home. Gangaram owns one acre of land irrigated by the Nizamsagar leakage canal. In the previous Kharif season, he had taken four (4) acres of land for cultivation under the *Batai* system from a landowner belonging to a nearby village. In total, he had cultivated five (5) acres of land during the Kharif season. He made a profit of 78,000 rupees after giving the landowner his share in the produce. During the Rabi season, as the water was not available in the Nizam Sagar leakage canal, he reduced the area of cultivation to two (2) acres (one acre under *Batai* and one acre is his own land). With the savings from two crop seasons, he had purchased two-wheeler in instalments scheme from a two-wheeler showroom located in a nearby town.

In addition to agriculture, he has a fishing license in the Nizamsagar Project. To get a fishing license one should be from *mudiraj* caste and should belong to villages surrounding the Nizamsagar Project. Gangaram during lean agricultural season goes to Nizamsagar Project to catch fish and sells to a middleman who comes in the morning and evening. With the two-wheeler he had purchased, Gangaram is now able to sell his catch in the market. With this

money, he was able to pay his two-wheeler monthly instalments. The government issues licenses for fishing for all eligible individuals after paying a lifetime membership fee of 1200 rupees. With the lifetime membership, one would also be covered under accident insurance and various subsidies.

The respondent in the above case was able to secure additional income by leasing-in land for cultivation under *Batai* system. With assured irrigation the risk associated with the *Batai* system is negligible, hence assured additional income. The additional income had enabled him to diversify his livelihoods.

Case 1.10:

Salim (50 years of age) and his wife Begum (40 years of age) lives with their two sons in a five-room pucca home. Salim owns two (2) acres of land irrigated by a 260 feet deep borewell. Two years ago he had given his one acre land for cultivation under the *Batai* system to a tenant from the same village. From last year onwards he was cultivating his one-acre land primarily for household consumption. Salim says that he buys all the inputs from a private agency, especially seeds and fertilizers though available in subsidy by the government distribution agencies. He opines that government seeds are not effective in increasing the yield and sometimes they would be spurious too. He retains the Kharif season produce for household consumption and sells Rabi season produce to the private buyer. According to Salim, Kharif season crops have better irrigation and seed grow to its full size and are tasty. Whereas the Rabi season crops grow in limited irrigation and seeds do not mature to its full potential and are not tasty either. While coming to his choice of labour he says that he employs labour on the *Guththa* system (where a group of labour is asked to finish the predetermined work and the total amount is decided before the beginning of the work). Salim says that *Guththa labour* is efficient and finish the work in minimum time. However, compared to other forms of labour it is costly.

Salim sometime back worked as a middleman in getting the harvester machines to this village. As a middleman, he pays a fixed amount for a fixed number of days as advance to the owner of the machine and brings the machine to the fields. It's the responsibility of the owner of the harvester to employ operators and to pay for any repairs during the operations. Some farmers in the village would pay the harvester charges to the middleman in advance while others pay upon completion of work and some pay after selling the produce in the market. Middleman decides which fields to be harvested and sets the order based on the payments made to him. There are two different types of harvesters, one with rubber tires and other with chain

wheels. In the case of wetlands, chain wheel harvester is used while the rubber tire harvester is used for drylands. Usually, chain wheel harvester is used in the Kharif season as paddy fields have excess moisture in the soil and make the movement of rubber tires difficult. The cost per hour for chain wheel harvester is 30% higher than rubber tire harvester (In the study area the cost per hour is 1000 rupees in case of rubber tyre harvester while the chain wheel harvester cost per hour is 1300 rupees).

Salim says that Though the middlemen pay 100 rupees less than the price offered by the government procurement agency, most of the *Kowlu* farmers prefer to sell the produce to the middleman (same as the one who brings the harvester to the fields) as the government has fixed quota (a farmer can sell only 30 quintals of produce to the society) for each farmer. At the same time, farmers believe that middlemen take due care in harvesting the crop.

Salim's wife is famous for her tailoring work in the village and she has a large customer base. His both sons had completed graduation and elder son is working in a private pharma company located in Hyderabad. Salim owns a poultry farm and his younger son helps in the poultry farm. In addition to these, Salim and his younger son are consulted by the local poultry owners in vaccination drives for the chick. Salim says that he and his son vaccinate about three to four thousand chicken in a day and earns about 2500 to 3000 rupees per day.

From the above information provided by the respondent, it can be understood that the cultivators prefer to procure agricultural inputs from private agencies though the same are provided at subsidised prices by the government agencies. It is also observed that the crops cultivated in the Kharif season are used for household consumption while the crops cultivated in Rabi season are sold in the market. *Kowlu* cultivators prefer to sell their produce to middlemen at price below the MSP because the payments are prompt and the other reason being the fixed quota of produce to be procured from each farmer. In the case of passive farming (family members are not directly involved in agricultural operations) using the labour for agricultural operations, the *Guththa* system of labour is most suited for timely completion of work. However, compared to other systems of labour, wages under the *Guththa* system are high.

Case 1.11:

Narsimhulu (24 years of age) and his wife (20 years of age) lives in a single room semi-pucca home along with his mother and mother. Narsimhulu owns one and half acre land

irrigated by a borewell, which is shared by three cousin brothers. Two years ago he had taken one acre of land for cultivation under the *Batai* system from a landowner belonging to the same village. Anjaiah prefers *guththa* labour for agricultural operations in the land taken under the *Batai* system as his wife can't work as exchange labour in other's fields.

Recently he was met with an accident and his right leg was severely injured and was amputated by the doctors. He mentions that none of his relatives had come forward to lend the money as they thought a handicapped individual will not return the money. So, he had taken a loan of 50,000 rupees from a local moneylender at a 3% interest rate towards his hospitalization expenses. He asked his wife to avail the loan under the DWCRA scheme from her SHG. Since his wife is a new entrant to the group, she was given a loan of 20,000 rupees only. After recovery Anjaiah had started a small *Kirana/retail* shop adjacent to his home. In fact, the idea of opening a retail shop was given by the local moneylender. At present his wife and mother are taking care of the cultivation of his one-and-a-half-acre land.

An accident had made the respondent physically challenged. It can be inferred that resource sharing contracts such as *Batai* or *Kowlu* system had provided an alternative mechanism of cultivating his land for subsistence. One can also observe that when relatives didn't help it's the moneylender who had provided loan and also suggested an alternative livelihood to pursue.

Case 1.12:

Ramulu (30 years old) and his wife Renuka (25 years old) belong to the *Chakali* caste (Washermen caste). Ramulu along with his parents and married younger lives in a two-room semi-pucca home. Ramulu owns one and half acre dryland irrigated by 2 borewells (80 feet and 260 feet deep). These borewells partially work during the Kharif season and in the rabi season completely becomes defunct. In the previous Kharif season, Ramulu cultivated half an acre of his own land along with half an acre of Patel's land under the *Batai* system on a condition that Patel should allow using lift motor for irrigating his half-acre land. Patel agreed to the condition provided, total the cost of cultivating the *Batai* land should be borne by Ramulu.

Patel had given another two half-acre land plots for cultivation under *Batai* to two other farmers within the same village with the condition that they can irrigate their lands with his lift motor and in return has to bear the total cost of cultivation in *Batai* lands. Ramulu says that,

instead of taking *Nella pallu*, spending on the inputs in the *Batai* system would be less costly. However, in the Rabi season, water from lift motor was not sufficient and one of the three tenants had to inform the Patel about the loss. Patel had forgone his share in the *Batai* land to help the tenant recover his investment made in cultivation. Ramulu had kept the harvest from half an acre of land during the Kharif season for household consumption and sold the produce from Patel's land to the society and gave away half the total produce to Patel.

Ramulu's wife had availed a loan amount of 50,000 rupees from her Renuka SHG (Under DWCRA) scheme and used that money for the renovation of the home. His mother had also availed the loan amount of 50,000 rupees towards the marriage expense of his younger brother. In addition to these, Ramulu had taken 30,000 rupees from a local moneylender at a 3% interest rate towards agricultural inputs.

The above information provides an interesting insight into resource sharing process wherein, the landowner had leased-out land for cultivation under the *Batai* system without contributing his share in inputs instead provided assured irrigation to tenant's land. This kind of context-specific resource sharing contracts reflects the dynamic nature of tenancy. It can also be understood that in the event of failure of irrigation facility, Patel had foregone his share in output thus relieving the tenant from the debt trap. It reflects the flexibility in terms and conditions of the resource sharing contracts in the event of unforeseen circumstances.

Case 1.13:

Hanmanthu (35 years of age) and his wife Durgavaa (30 years of age) belong to Scheduled Tribe (*Yerukla* Tribe) live in a two-room semi-pucca home. Hanmanthu owns two (2) and half an acre of land irrigated by one borewell (200 feet depth). After staying in Hyderabad for about 3 years he returned to the village in 2014. Since he had some savings he had made up his mind to start cultivating his land and had dug four (4) borewells in his land, unfortunately, all of them failed. He incurred a debt of 80,000 rupees towards the failed borewells. He cultivated a half-acre of his land by taking *Neellapalu* from the adjacent landowner at the 3:1 ratio (for sharing water for irrigation landowner would get 25% share in total produce, while the farmer who cultivated gets 75% share in the total produce).

In addition to this, he also took half an acre of land for cultivation under the *Batai* system from the landowner who shared water with him. After sharing the harvest under the *Batai* system and *Neellapalu* with the adjacent landowner, he is left with four (4) quintals of

rice, which he kept for his household consumption. He gave one acre of his land for cultivation during Rabi season under the *Batai* system to his brother and left the village with his wife to work as casual labour in Hyderabad.

The above information reveals the importance of having a reliable irrigation infrastructure for cultivation. The water-sharing arrangement under the *Neellapalu* system provides an opportunity to the needy tenants, who can share the output with the owner of the water source. However, cultivating small parcels of land under *Neellapalu* is not economically viable as the share in the output is significant. Lack of assured irrigation is one of the primary reasons for the migration of small and marginal farmers to nearby towns to work as casual labour.

Case 1.14:

Patel Jayaprakash Rao (66 years of age) and his wife Annapurna (60 years of age) lives in a six (6) room pucca home. Jayaprakash had done his graduation and is a retired government teacher. His son and daughter-in-law reside in Hyderabad and work for a private firm. Jayaprakash Rao says that he was interested in agriculture since his graduation days. Even today he actively participates in discussions related to agriculture in the village. He owns 15 acres of land, out of which three (3) acres of land is uncultivable land. In the previous Kharif season, he had cultivated eight (8) acres of land by employing wage labour with the help of one lift motor and leased out five (5) acres of land for cultivation under the *Batai* system to a small farmer from the same village. Out of eight (8) acres of land, three (3) acres are used for growing groundnut crop. In the Rabi season, he had cultivated paddy in five (5) acres of land and groundnut in one acre of land.

According to him, returns from groundnut crop is much higher than paddy and requires less labour. However, there is a risk of Wild boars' attack on the crop from the nearby reserve forest. Jayaprakash Rao says that none of the small farmers from his village had come forward to cultivate groundnut under the *Batai* system, because the cost of inputs is higher than paddy and there is no perfect market to sell the produce. Moreover, most of the small and marginal farmers cultivate paddy for household consumption. In addition, he has three (3) pairs of buffaloes which are taken care of by the farmers working on his land under the *Batai* system. Women in his household do not participate in any of the SHGs and had not availed loans under any government scheme. He gives a detailed investment estimate for groundnut cultivation per acre as below.

Table 5.1: Cost of cultivating groundnut crop in one acre.

Sl. No	Cost(s)	In Rupees
1	Cost of seeds	8,500/-
2	Cost of fertilizers	4,200/-
3	Cost of pesticides	2,000/-
4	Cost of labour and tractor	3,500/-
	Total cost	18,200/-

Source: Field Survey, 2017-18.

It can be inferred from the above information that small and marginal farmers in the study area prefer to cultivate crops that require less investment and having reliable market channels. The cultivation of Paddy is popular as it requires less investment and has a strong market infrastructure and also can be stocked for household consumption. Though landowners want to cultivate high-value crops such as groundnuts, tenants are not willing to participate as risks involved are high, especially with frequent wild boar's attack from the nearby reserve forest area. It can also be understood that large size landholding farmers with reliable irrigation infrastructure are cultivating a part of their land with the help of daily wage labourers. However, to secure the labour services during the peak agricultural season, large landholding farmers lease-out small parcels of lands to more than two tenants for cultivation under the *Batai* system in return for assured labour services.

Case 1.15:

Bheerugunda (50 years old) and his wife Devavva (40 years old) belongs to *Kuruma* caste lives with his two married sons in four-room pucca home. Bheerugunda owns 18 acres of land, out of which 3 acres of land is uncultivable. He has three borewells each 200 feet deep to irrigate 15 acres of cultivable dry land. In the previous Kharif season, he had cultivated paddy in four (4) and a half-acre of land. He also took one acre of land for cultivation under the *Batai* system from Patel of this village. In the Rabi season, he had cultivated paddy in 3 acres of land and *makka* (Maize) in two and a half acre land.

Since he belongs to *Kuruma* caste (traditionally associated with sheep/goat rearing occupation), the government of Telangana had recently given 42 sheep (21 each to his sons as they applied separately under the scheme) under sheep distribution scheme. Prior to this Bheeragunda has 30 sheep with him. In addition to these, he also has a pair of Bullocks, two (2) Buffalos, and four (4) Cows. Bheeragunda had bought a tractor by taking 5,00,000 rupees from a local moneylender at a 3% rate of interest. Adult women in this family do not participate

in any SHGs and had not availed any loans under government schemes. However, they actively take part in exchange labour during peak agricultural season. Bheeragunda opines that having a tractor and three adult women in the household help complete the agricultural operations in time.

His elder son looks after the tractor, while his younger son takes care of sheep and cattle. Bheeragunda says that it's a family tradition among their families to keep a certain number of sheep at home and as they have bought land over a period of time, they are able to sustain large livestock. Talking about the recently introduced sheep distribution scheme, he says that the sheep brought from different parts of India takes time to adjust to the local environment hence, they require proper vaccination and overall health care support. But its difficult to find a qualified veterinary doctor in the nearby government veterinary hospitals. The other problem is with lack of grazing lands, as all fertile lands are cultivated during the Kharif and Rabi season, there are no grazing lands available and it's very costly to buy the feed for such a large herd of sheep. However, every year during Kharif and Rabi seasons villagers ask Bheeragunda for accumulated sheep droppings as manure in their fields.

He says that 25 years back he didn't own any lands in this village and all they had was 20 sheep, as they multiply in two to three years, fully grown sheep are sold in the market. With that money, he bought land from the villagers. He bought three acres of land from Patel and still takes his land for cultivation under the *Batai* system.

From the above case study, it can be understood that having an undivided family committed to their caste-based occupation of sheep rearing had enabled the head of the household to acquire large tracts of land. It can be inferred from the response that cultivable drylands are bought as grazing lands for livestock. Lack of grazing lands in the study area is a major constraint for the expansion of sheep herd size. He has all the required resources in terms of capital assets such as tractor and borewells, family labour to lease-in additional lands for cultivation under the *Batai* system.

Case 1.16:

Pochaiah (70 years of age) and his wife Anjavva (60 years of age) lives in a three-room pucca home along with his married son and grandchildren. He owns two and half-acre dryland irrigated by one borewell (265 feet deep). Since he didn't have much land for cultivation, he bought 10 buffalos seven years back and looking at the size of cattle, landowners prefer to give

him land for cultivation under the *Batai* system. He did *Batai* for six (6) years for different landowners, at times he had cultivated land under the *Batai* system from four different landowners from the same village. He says that in those days when there is not much of machinery involved in agricultural operations, landowners preferred to give their lands to small farmers who have large cattle.

Even today he was asked by the landowners to cultivate their lands under the *Batai* system but due to his old age, he is not taking up farming. At present, he has 10 calves and three pairs of Buffalos which give 3 to 4 litres of milk daily and he takes care of them. He mentions that unlike the earlier days when the cattle were looked as a substitute for input costs, it is now looked like a positive factor which makes landowners believe that the tenant will work in their lands and do not leave the farm in the lean season. Having Cattle means, the farmer has to be in the village every day. Pochaiah says that its difficult to maintain large cattle in the village as there are no grazing lands and he has to buy the fodder from the farmers who cultivate Maize and Paddy. The situation gets much worse during summer as all the natural water bodies in the village dries up. So, every summer he sells about half of his cattle in the market and buys again once the Kharif season begins. He says by selling and buying he earns about one to two lakhs in a year. Currently, Pochaiah's son takes care of selling and buying cattle in the market.

From the above response, it can be inferred that the introduction of tractors and other machinery into the traditional agricultural system had reduced the role of livestock in the agriculture. Lack of grazing lands in the study area is a huge constraint on the small and marginal farmers to maintain large livestock. It is to be noted that having large livestock is a significant factor in convincing the landowners to lease-out their lands for cultivation under the *Batai* System.

Case 1.17:

Veera Reddy (33 years old) and his wife Sangeetha (29 years old) lives with elder brother and their family in a four-room pucca home. Veera Reddy's family is a joint family of three generations living under one roof. The entire family has 11 members including kids and elders. They own 23 acres of dry land irrigated by six (6) borewells each 200 feet deep. In the previous Kharif season, Veera Reddy had cultivated 16 acres of land with three different crops (Paddy was cultivated in 9 acres, Maize in 5 acres and Soya in 2 acres) and the remaining land is kept fallow. Veera Reddy maintains three pairs of Bullocks exclusively for the sowing of Maize and Soya seeds and he also rents these to fellow farmers at 1300 rupees per day. In the

Rabi season, he had reduced the extent of farming to seven acres of land and cultivated only Paddy crop with the help of borewells. It was five (5) years back when there was a severe rainfall deficit in the study region, he had taken on adjacent farmer's land for cultivation under the *Batai* system. He says, he had never leased-out their land for cultivation under any system to other farmers as they have adequate family labour available at home to do farming. Their large family is always an asset in completing agricultural operations on time. Veera Reddy had bought a tractor seven (7) years back with the financial help from the local State Bank of India branch. In fact, he was the first farmer to buy the tractor in this village. His mother and brother's wife had availed a loan of 40,000 rupees each from their respective SHGs under DWCRA scheme. He had used this money to repay the final instalments towards tractor finance.

Veera Reddy opines that only small and marginal farmers should be chosen for cultivation under *Batai* System. Whereas, for the cultivation of land under the *Kowlu* system a medium or large landholding farmer should be preferred as they have the necessary capital to invest in agricultural operations. Veera Reddy on comparing *Batai* and *Kowlu* systems opines that he would prefer to give his land for cultivation under *Kowlu* System only as it is rational and profitable for the landowner. He argues that if a landowner is capable of monitoring all the agricultural operations, then it's better to cultivate the land with wage labour provided he has a tractor and necessary capital required.

From the above opinions expressed by the respondent, we can infer that a large family size is a significant asset in agricultural operations. Having capital assets in terms of borewells and tractors provides additional capacity to lease-in lands for cultivation under *Batai* or *Kowlu* system. If one can closely monitor the agricultural operations, it is suggested that their lands can be cultivated with daily wage labourers instead of leasing-out. The below table provides consolidated considerations of tenants and landowners in resource sharing process under the *Batai* system.

Table 5.2: Consideration of Tenants and Landowners in resource sharing contracts under the *Batai* system.

Sl. No	Consideration of Landowners	Considerations of Tenants
1	Small and marginal landholding farmers are preferred as tenants	Medium and large landholding farmers with better financial resources
2	A family size of more than five (5) members is considered an asset.	Tenants do not have much consideration on the family size of the landowner but preferably the head of the family should be residing in the village.
3	Landowners expect that a tenant should have the necessary knowledge or skills related to agriculture.	Tenant expects the landowner have a basic understanding of agricultural resource allocation and operations.
4	Expects consistency in words and deeds especially agricultural resources and operations.	Expects the landowner to be understanding and helpful in accomplishing tasks and in sync with the thought process.
5	Capital assets such as tractor and ancillary equipment are additional factors for preference	Capital assets such as tractor and ancillary equipment are significant factors for preference.
6	In general, optimal use of agricultural inputs such as water, fertilizers, pesticides is another consideration to lease-out land.	Reliable irrigation infrastructure is an important factor for leasing-in land.
7	Landless individuals from neighbouring villages are strictly not preferred.	The landowner should not be entirely dependent on income from agriculture and have an additional source of income.
8	Tenants with livestock are preferred.	There is not much emphasis on livestock.
9	Assured labour service from family members of tenants during peak agricultural season.	Tenants do not have specific consideration for labour services from landowners but opine exchange labour services would be a better arrangement to reduce the costs of cultivation.
10	Expects unhindered interference in the agricultural resource allocation and operations	Expects minimum interference from agricultural resource allocation and operations.
11	Expects tenants to strictly adhere to terms and conditions informally agreed.	Expects landowners to be lenient with terms and conditions specifically during unforeseen circumstances leading to crop loss.
12	It's not always the commercial or economic aspect that's given priority in leasing-out land. More often the personal rapport or bonding plays an important role.	Tenants prefer benevolent landowners who are supportive of other aspects of social life. It's not always economic or commercial factors that decide terms and conditions in resource sharing contracts.

Source: Field Survey 2017-18.

2.0. Farmers involved in *Kowlu* System

Case 2.1:

Saailu (30 years of age) and his wife Rajitha (28 years of age) living in a two-room semi-pucca home has 2 acres of land (one acre is irrigated from the dam leakage canal and other one acre has one borewell). In 2014, he had cultivated seven (7) acres of land under *Kowlu* System in a nearby village and paid 13,000 per acre per one cropping season. After cultivating the seven (7) acres of land under *Kowlu* System for 4 cropping seasons, the landowner had increased the *Kowlu* amount to 15,000 rupees per acre per cropping season. Saailu had requested to reduce the price as it's not viable for him but the landowner didn't heed to his request. Another tenant from the same village who was willing to pay the amount had come forward and did cultivation for one season but as the groundwater fell down and two of the four borewells failed in Kharif season, the tenant did cultivate only three of the four acres of land.

For the next Rabi season, the landowner had asked Saailu to cultivate his seven (7) acres of land under the *Batai* system. Though Saailu was not interested in cultivating the land under the *Batai* system, as the landowner had come asking him and saying no to his proposal would hurt his feelings. So, he agreed to cultivate the seven (7) acres of land under the *Batai* system. He bought a preowned tractor at 5,50,000 rupees from an automobile dealer in the nearby town. He took a loan of 3,00,000 rupees from a local moneylender and also availed a loan of 2,40,000 rupees from the automobile financing agency. Since he has his own tractor, he could start the agricultural operations one or two weeks early and finding labour at reasonable wages is not difficult for him. Even the labour show interest in working in large farms as it would provide continuous work for a couple of days.

Saailu says that with assured irrigation and fertile land a tenant would always prefer to cultivate the land under the *Kowlu* system. In addition, having a tractor reduces the dependency on labour in agricultural operations. Saailu says, having a tractor keeps him in an advantageous position as he can bargain on labour wages and labourers would be willing to work in his farm in exchange for plowing, tilling, disking and harrowing, etc., in their fields.

Saailu mentions that having a tractor had increased his chances of getting land for cultivation under the *Kowlu* system. However, in his village, not many have large landholdings as fertile and well irrigated to carry out cultivation under the *Kowlu* system. It is one of the

reasons he has gone to a nearby village in search of land. However, due to increased tractor owners in the study area, many of the landowners prefer to give their land for cultivation under the *Batai* system as the income would be high and can protect the land from exploitation by the tenant.

From the above response, it can be understood that under the *Kowlu* system, whoever pays the highest *Kowlu*/rent amount they would be given preference. The change of tenants by the landowners is most often guided by the economic/commercial interest. The share from the *Batai* system is higher than the *Kowlu* system, as a result most of the landowners who has fertile lands with assured irrigation prefer to lease-out lands under the *Batai* system. Only drylands that do not have a reliable irrigation infrastructure are leased-out under the *Kowlu* system. Landowners evaluate the financial capability of the tenant to pay upfront *Kowlu* amount and also invest in cultivation before finalising the *Kowlu* period.

Case 2.2:

Pochavva (62 years of age) and her daughter Saiavva (30 years of age) belongs to *goola* caste lives in a two-room pucca home. Pochavva's husband died 20 years back in an accident. Pochavva has 10 *guntas* (40 *guntas* of land is equal to one acre) land. She married her daughter to a relative who had accepted to come and stay in their home after marriage (*illarikam*). The couple had one daughter and a son. After 3 years of marriage, her son-in-law had divorced her daughter and left the home and married another woman in another village. At present, only her daughter and grandchildren stay in the home. During her daughter's marriage, Pochavva had borrowed 50,000 rupees from a local moneylender at three rupees rate of interest. As she has no means of repaying the debt, she had left the ten *guntas* of her land to the same moneylender to cultivate under the *Kowlu* system. After every harvest season, the moneylender sends 4,000 rupees as *Kowlu* amount to Pochavva. Sometimes instead of money, he will send two quintals (one quintal is equal to 100kg) of rice bags. Pochavva says as her ten *guntas* of land are irrigated by the Nizamsagar leakage Canal, moneylender had agreed to cultivate the land under the *Kowlu* system. Pochavva and her daughter work in their land as daily wage labour and the payments are made either in kind or cash by the moneylender after the harvest.

Pochavva and her daughter go to work in other farmer's fields as daily wage labour. Their only source of income is through daily wages. Since Pochavva had crossed 60 years of age, her name is delisted from *Jhansi* Self Help Groups (DWCRA Scheme). Instead of Pochavva, her daughter (Saiavva) was added to the group. Saiavva had availed a loan of 50,000

rupees which they had spent in home renovation. she has to pay 1600 rupees as monthly instalment and another 50 rupees towards savings in the group.

From the above information, given the economic situation and priorities of the household, the moneylender had taken over the fertile land for cultivation under the *Kowlu* system. On a positive note, it is evident that resource sharing contracts help to clear the debts incurred by a household. Though it appears to be exploitative, under the given context it's the best way out for the household giving a continuous source of income.

Case 2.3:

Rajaram (40 years of age) his wife Swapna (35 years of age) and mother Durgavva (65 years of age) along with two sons lives in a single room semi-pucca home. Rajaram owns a half-acre plot of land irrigated by the Nizamsagar flood canal. He and his wife had migrated to Hyderabad for four (4) years to work as casual labour in a construction site. Rajaram's father has a health problem related to small intestines and was hospitalized for seven (7) days in a hospital. After seven (7) days doctors had done minor surgery and was discharged from hospital after three (3) days. Unfortunately, within a month his father died. They had incurred nearly 60,000 rupees towards hospitalization fees in just two months. Whatever the savings they have by working in Hyderabad have dried up and due to continued absence from the worksite, his employer had relieved him from his job. As a result, they had returned to the village with no savings.

For the 2017 Kharif season, he had taken 3/4th of an acre of land for cultivation under the *Kowlu* system. He paid 6500 rupees to the landowner towards *Kowlu* land for two cropping seasons. For the Kharif season, he could harvest eight (8) quintals from his half-acre land and another seven (7) quintals from the land taken under *Kowlu*. In total, his income was 20,880 rupees after selling the produce to government-managed society. Whereas his total investment in cultivating was 13,800 rupees (includes the amount paid towards *Kowlu* land). With a meager profit of 7,080 rupees, he could not take up cultivation for Rabi season. So, he and his wife decided to migrate to *Armoor* (it's a popular area, where landowners hire agricultural labourers for a period of one year by paying one year salary as an advance). His wife and mother are active members in Self Help Groups (SHGs) *Saraswati* and *Swati* respectively. Both had availed 20,000 rupees each as loans from their groups and are able to pay their dues on time by working as daily wage labour during peak agricultural seasons.

Rajaram says that he and his wife decided to migrate and work as agricultural labour because there is an assured income and the landowner also provides shelter and incentives to meet the expenses during festivals. Above all, one year's salary is paid in advance, which makes it all worth working in fields away from home. Rajaram says that it's not only his family that works in Narkal, but there are also four (4) families from his village working on similar terms and conditions.

Case 2.4:

Saailu (68 years of age) and his wife Ganga (60 years of age) live in a three-room pucca home. Saailu has two sons Ramesh (40 years of age) and Sudarshan (35 years of age) married and all living under one roof. His two sons and daughters-in-law had migrated to Armoor to work as agricultural labour on an annual contract basis. Saailu has one acre of land irrigated by the Nizamsagar leakage canal. When asked about his son's migration to Armoor, Saailu says that last year during the puberty ritual of her younger son's daughter, all the gold and money were stolen by some thieves. They had filed a police complaint but so far there is no response from police. Prior to this incident, his elder son with his wife had migrated to Armoor and was working there as agriculture labour. After the theft in the home, his younger son had also migrated to Armoor and both brothers are working for the same landowner. Ramesh is being paid one lakh rupees per year and whereas his brother is paid 80,000 rupees per annum. Saailu says that his elder son had cultivated one acre of land till his younger brother's marriage, after that he had migrated to Hyderabad with his wife leaving the cultivation of one-acre land to his younger brother. After three years he returned to the village only to migrate to Armoor to work as agriculture labour. Since none of his sons are in the village, he gave his one acre of land for cultivation under *Kowlu* to a farmer from the same village. The *Kowlu* amount was fixed at 13000 rupees per cropping season.

From the above response, it is understood that the adult members in the family had to migrate to nearby agriculturally developed regions to work as agricultural labour as the size of their landholding is too small for sustaining the household. It can be inferred that small and fragmented landholdings are leased-out as it is economically unviable to cultivate. The respondent had leased-out for cultivation under the *Kowlu* system as none of his sons expressed interest in cultivation under the *Batai* system.

Case 2.5:

Saailu (31 years old) and his wife Anjavva (29 years old) belong to scheduled caste-*Madiga* lives in single room pucca home. Saailu has one son and daughter both studying in model school, Nizam Sagar Mandal. Saailu owns three (3) and a half acre land irrigated by 200 feet deep borewell. Saailu had completed his graduation. He is also a ration dealer for the gram panchayath. He also owns a tractor and an autorickshaw. For two years he has taken four (4) acres of land for cultivation under the *Kowlu* system. He pays 15,000 rupees per acre for one year. During Kharif season, he cultivates Paddy crop in all the six acres of land, while in Rabi season he cultivates Paddy and Groundnut crop in 4 acres and 2 acres land respectively. He says that he only supervises the agricultural operations by employing daily wage labours from within the village. He opines that because of the tractor he could cultivate 6 acres of land. He remembers about difficulties he had to face in getting the labour to work in his fields during agricultural peak season. He mentions about the implicit expression of caste discrimination among the villagers in working in a scheduled caste farmers' land. However, after the ownership of the tractor, he barely faces any problem with the availability of labour. It was only after buying the tractor he had extended the area of cultivation to six (6) acres by taking four (4) acres of land under the *Kowlu* system.

Saailu is actively involved in politics at the village level and he is the president of the Ambedkar Association, which works for the welfare of the scheduled castes at the village level. He says that he has strong political connections that helped him in availing the tractor under a government-subsidized scheme for scheduled castes. He paid about 10% of the total cost of the tractor and the rest was paid by the government. However, he purchased an autorickshaw by taking finance from the local automobile finance agency. Every morning he takes a special interest in taking the students from SC colony to Zilla Parishad School (ZPS) located in Nizam Sagar mandal. He mentions the need for the political network to have regular access to scarce resources like institutional credit, subsidies and other benefits extended by the government. He mentions about the incident where his wife could avail 50,000 rupees though she had joined the group three months back (usually new entrants in the group are given not more than 20,000 rupees as a loan) in the *Tulasi* SHGs under DWCRA scheme.

Saailu takes pride in hoisting the national flag on Republic Day and Independence Day in the SC colony of his village. He actively participates in activities spreading the vision and ideology of Ambedkar among the masses.

From the above case study, it can be inferred that it's very difficult for small and marginal farmers belonging to Scheduled Castes to arrange labour during peak agricultural season. Education, awareness and political network had helped him to acquire additional capital assets under various government credit support schemes. Having a tractor had enabled him to lease-in additional land for cultivation under the *Kowlu* system. Also, the problem of labour availability during peak season is taken care of in exchange for tractor service provided by him. Having capital assets such as tractor widens the social network and strengthens the dependency relations with villagers. An in-depth understanding of the dependency relations reveals that discrimination in the sharing of resources under various contracts is not based on caste lines but economic status in terms of capital assets as well as capacity to pay for the services received or resources shared. Therefore, the economic empowerment of marginalised sections of society through credit support or other asset creation schemes would be a rational approach in achieving desired outcomes.

Case 2.6:

Bhumaiah (47 years old) and his wife Vittavva (55 years old) live in two-room semi-pucca home along with his two sons. Bhumaiah's elder son was married five (5) years back while his younger son is in the final year of Post-Graduation. Bhumaiah owns one and a half-acre of dry land irrigated by the village tank. For the last two years, Bhumaiah was taking 3/4th of an acre for cultivation under the *Kowlu* system from a nearby villager. The Landowner is a government employee working for a state road transport corporation and the land is far away from his village. Except for the water from the village tank, there is no other irrigation facility for this land. Bhumaiah pays 3,000 rupees per crop to landowner towards *Kowlu* land. As there is no assured irrigation facility to this land, unlike the usual practice, where the *Kowlu* amount is paid upfront, Bhumaiah pays after harvest for Kharif crop and depending upon the availability of water in the village tank, pays in advance for the Rabi crop. Bhumaiah does not sell the produce to Society instead keeps it for household consumption. His wife Vittavva had availed 50,000 rupees as a loan from her *Navajyothi* SHG under the DWCRA scheme. She had spent this money for her Grandchildren's first birthday celebration at home. She pays monthly instalments by working as farm labour for the entire peak agricultural season.

Bhumaiah's elder son works as a bus driver for a local English medium school. He earns 15,000 rupees as a monthly salary and the school does not charge school fees for its employee's children. In addition, Bhumaiah works in the village temple taking care of the

temple premises clean and growing the garden around the temple. He is paid 5,000 rupees monthly for this work. His younger son helps in the cultivation of one and a half-acre of land and *Kowlu* land.

The above mentioned context reflects the flexibility in terms and conditions of resource sharing contracts. In the majority of the cases, the *Kowlu* amount is to be paid upfront for the coming cropping season. However, in this case, the *Kowlu* amount is paid after the harvest of the crop. One of the reasons being that land has no assured irrigation and depending on the availability of water in the village tank as well as the income from the crop, the tenant can renegotiate the *Kowlu* amount (with maximum *Kowlu* amount capped as agreed). Also, the landowner has other sources of income and not entirely dependent on the *Kowlu* amount for a living. It is observed that the *Kowlu* amount varies from season to season depending on the extent of land cultivated under the *Kowlu* system.

Case 2.7:

Pratap Reddy (60 years old) and his wife Shoba Reddy (55 years old) owns 30 acres dryland irrigated by a lift motor and five borewells. Pratap Reddy's brother Narsimha Reddy and his wife also own 30 acres of dry land irrigated by one lift motor and five borewells. Pratap Reddy and his brother had migrated to Hyderabad and settled there. They had given 40 acres of their land for cultivation under the *Kowlu* system to a private seed company headquartered in Hyderabad. Pratap Reddy and his brother had earlier gave their lands for cultivation under the *Batai* system, but they are not satisfied with returns. For two years they had also given their land for cultivation under *Kowlu* System to farmers from within the village at 10,000 rupees per acre per cropping season. However, either in *Batai* or *Kowlu* system, only 10 to 12 acres of their land is taken for cultivation by the farmers. Though Pratap Reddy and his brother have agreed for investment in the cultivation of 20 acres of land under the *Batai* system, no farmer from the village had expressed interest. Except for the Kharif season, most of the land is kept fallow as there was no reliable irrigation from the Nizamsagar leakage canal.

It was in 2014 a private seed company (Pro-agro Seed Pvt Limited) had come forward to take his and his brother's land for cultivation under the *Kowlu* system for four (4) years. The company had made a written agreement with the landowners and had taken complete operational control of the land. As per the agreement, seed company had agreed to pay 12,000 per acre per cropping season to the landowners. The *Kowlu* amount is transferred to the landowner's account before the commencement of every cropping season. At present seed

company has been cultivating 40 acres of the with different varieties of millets and pulses for exporting to African countries. Seed company had brought the agricultural labours from Andhra Pradesh on an annual contract basis. These labourers are provided with accommodation and insurance coverage for the entire family. Pratap Reddy and his Brother's family visit the village during major festivals only.

From the information above, it is understood that landowners had leased-out a part of their lands for cultivation under the *Batai* system for more than two tenants from their village. They are not satisfied with returns from the *Batai* system. As they are settled in the nearby town, they had decided to lease-out land for cultivation under the *Kowlu* system. But out of the total landholding, only one fourth was leased-in for cultivation the rest was left fallow as no tenant had come forward. A Private Seed Company had come forward to lease-in 40 acres of land for cultivation under the *Kowlu* system at the price on par with the prevailing rates in the study area. Due to this decision, a number of tenants who were earlier dependent on these lands had to find other landowners to lease-in lands. The Private Seed Company cultivates the leased-in lands by employing non-local agricultural labourers on an annual contract basis. It is a conscious decision made by the management of the company to avoid locals interference in the operations of the company. The below table provides consolidated considerations of tenants and landowners in resource sharing process under the *Kowlu* system.

Table 5.3: Consideration of Tenants and Landowners in resource sharing contracts under the *Kowlu* system.

Sl.No	Considerations of Landowner	Considerations of Tenant
1	Prefer to lease-out drylands with poor fertility	Preference for fertile lands with assured irrigation.
2	Considers the economic status and capability to pay the <i>Kowlu</i> amount upfront.	Prefers minimum or no interference from the landowner in agricultural resource allocation and operations.
3	Whoever pays the highest <i>Kowlu</i> amount they are preferred.	Intends to get maximum returns from investments made in cultivation.
4	Prefers tenants with capital assets such as tractor and also able to invest in the development of land.	Prefers landowners who can lease-out lands for more than one year.
5	Not much emphasis on the skill set or knowledge on agricultural resource allocation and operations of tenants.	Expects the landowners to be considerate in case of unforeseen circumstances leading to crop failure or loss in cultivation.
6	Assured fixed income in the form of the <i>Kowlu</i> amount.	Usually, a risky undertaking with no accurate estimate of return on investment until harvest.

Source: Field Survey, 2017-18.

3.0. Farmers involved in more than one form of Resource Sharing Contract

Case 3.1:

Ramulu (37 years of age) and Sunitha (29 years of age) belonging to Scheduled caste (*madiga*) lives in a three-room semi Pucca house. Ramulu has one son (15 years of age) and a daughter (12 years of age). They had migrated to Hyderabad in the year 2002 to work as construction labour and with their savings they had cleared their debts and renovated their house in the village. When asked Ramulu about his return to the village from Hyderabad, he says that “*He had done farming for about 5 years under Kowlu System and had become indebted due to pest attack on his farm and in order to clear the debts he had migrated to Hyderabad*”. After working for about six (6) years, he realized that the amount of money earned in one year in Hyderabad is the same as the amount saved while farming on two (2) acres of land. So he returned to the village in the year 2008 to take up land under the *Batai* system. Since then Ramulu has been cultivating the land under *Batai* System on two (2) acres of land with the landowner belonging to the same village. In the year 2014, the same landowner had given an extra three (3) acres of land for cultivation under the *Kowlu* system. These two (2) parcels of land are located in different places. The two (2) acres land is irrigated by borewell while the three (3) acres land is irrigated by lift motors connected to the Nizamsagar leakage/flood canal. Ramulu agreed for *Batai* on two (2) acres of land, as it is irrigated with a borewell, given the unpredictability associated with groundwater level in the study region, it is risky to go for *Kowlu* system whereas, in the case of three (3) acres of land, which is irrigated by lift motor, he was convinced that he would earn double the *Kowlu* amount. For the three (3) acres land, there is intense competition among the farmers within and nearby villages for cultivation under the *Kowlu* system. According to Ramulu, there are instances in the village where blood relatives (brothers belonging to one family) had competed to do cultivation of land under the *Kowlu* system. This competition had made the landowner increase the *Kowlu* amount periodically.

In 2009, Ramulu had paid 9000 rupees per acre per one cropping season as *Kowlu* amount, at present he is paying 17,000 rupees per acre per one cropping season. Ramulu being landless farmer opines that by doing *Batai* on two (2) acres of land he could save the money equivalent to four (4) months of daily wage labour (which is approximately 30,000 rupees). In case if the Nizamsagar flood canal dries up, the landowners having lift motors connected to the canal would collectively not insist on *Kowlu* amount from the tenant farmers for that specific

season. Ramulu observes that if a parcel of land is fertile and have irrigation facility for all seasons, then cultivation of land under *Kowlu* would be a better strategy to increase the income from farming. In the *Batai* system, the landowner can evict the tenant for every cropping season whereas under the *Kowlu* system land is given for cultivation for two cropping seasons (one year) at a time. With one year of time in hand, a tenant will have sufficient time to plan and invest to get maximum output. Unlike the *Batai* System, where the landowner comes and asks the tenant (in most cases) to cultivate his land, in the *Kowlu* system a tenant asks the landowner for the cultivation of land at the mutually agreed price. However, in both cases it the landowner decides what's best for him.

When it comes to the *Kowlu* system, landowners do not care about the abilities or credibility of the tenant farmers in cultivating the land. As payments are done before every cropping season, there is no interest for the landowners to monitor the agricultural operations of the tenants. Similarly, tenants tend to extract maximum yield from the land with excessive use of biochemical fertilizers and pesticides. As a result, the fertility of the land gets eroded within two to three cropping seasons. Ramulu mentions about the lands at the periphery of the village which are once intensely cultivated are now left fallow because the previous tenant could not even recover the cost of cultivation and no other tenant had expressed interest in taking up those lands for cultivation.

From the above context, it can be inferred that for a migrated farmer, the savings while working as casual labour in nearby towns are found to be more or less equal to the savings made in the cultivation of land in a year. Realising this, many farmers had returned to their villages to cultivate their lands. Upon returning from towns with savings, small and marginal landholding farmers prefer to invest in lease-in lands for cultivation under the *Batai* or *Kowlu* system with an expectation to earn more. There are instances wherein due to losses incurred in cultivation, farmers had to migrate to towns leasing-out their lands for cultivation. From the experiences of a tenant who had cultivated the same landowner's land simultaneously under two different resource sharing contracts, it can be inferred that the *Kowlu* system involves higher risk compared to the *Batai* system. However, the returns from the investment would be higher in the case of *Kowlu* cultivation if the things pan out as expected. For landowners, there would be an assured income from the *Kowlu* system but in the longterm, damage to the soil's health would be too costly to recover. Therefore, the better option for landowners would be to compromise on immediate gains for sustainable returns from cultivation under the *Batai* system. From the above case, it can be inferred that landowner upon close observation of tenant

had leased out additional land for cultivation under the *Kowlu* system as he was convinced about the tenant's optimum utilisation of resources without damage to the soil.

Case 3.2:

Dharmaiah (33 years of age) belongs to *Mudiraj* caste and has four (4) acre of land irrigated by a lift motor and a borewell. The lift motor was installed with a loan from a bank. To sanction a loan of 1,50,000 rupees, bank officials had taken 10,000 rupees as a bribe. So far he had repaid 90,000 rupees towards the loan amount. In the previous Kharif season, he had taken two (2) acres of land for cultivation under *Kowlu* System at 12,000 rupees per acre per crop. However, as there was no assured water supply to the 2 acres of land taken under *Kowlu*, he had taken *Neellapalu* (water-sharing agreement) from an adjacent landowner who had left his land fallow that season. As per *Neellapalu*, the farmer who receives water has to share 1/4th of the total produce with the farmer who supplied water to his field. In the case of Dharmaiah, the adjacent landowner who has water happens to be a Muslim who is not involved in active farming.

Three years back he bought a tractor fitted with all the required ancillary equipment at 9,00,000 rupees. He took a loan of 3,00,000 from a local moneylender at a 2.5% interest rate. He also took 4,50,000 rupees finance from an automobile financing agency located in the nearby town. Dharmaiah was confident about clearing all the debts within two years. He has only 6 acres (including the land under *Kowlu* system) to cultivate in every season, remaining time he rents his tractor on an hourly basis for farmers. He has the largest clientele in availing his services as he does not insist on payment of tractor service charges immediately. Most of the farmers pay him in cash at the end of harvest. Dharmaiah says that most of the farmers do not show interest in paying the tractor service charges immediately, so he gives them an option to pay the amount after harvest. However, the amount would be 300 rupees more than the actual cost. (Generally, per hour Dharmaiah charges 1000 rupees but if a farmer wants to pay after harvest, he has to pay 1300 rupees).

It can be inferred that to recover his investment in the *Kowlu* land, he had to enter into another resource sharing contract called *Neellapalu* with the adjacent landowner. Instead of loosing entire crop and *Kowlu* amount paid to landowner he chooses to share 1/4th of total produce in *Kowlu* land to the landowner who shared his water source with him. As the tenant has capital assets such as tractor and lift motor, the landowner who had leased-out land under *Kowlu* system didn't waive off the *Kowlu* amount even when water source in the land dried up.

This specific context reflects that not all landowners are willing to forego their *Kowlu* amount, it depends on the paying capacity of the tenant as well the landowner's financial condition.

Case 3.3:

Balaraj (55 years of age) belonging to *mudiraj* caste has one (1) acre wetland irrigated by a lift motor and another two (2) acres of land irrigated by a borewell. For five (5) years Balaraj had cultivated one (1) additional acre of land under the *Batai* system. Balaraj has assured irrigation to his one acre of land but the other two (2) acres had irrigation through borewell during Kharif season only. For the previous Rabi season, he had taken water from the adjacent farmer and agreed to pay 10,000 rupees at the end of harvest. Due to the pest attack, he lost the crop and could not recover his investment made in two (2) acres of land. As he could not return the 10,000 rupees he promised to pay for taking water, he agreed to give half acre land adjacent to the land of the farmer who had given water for cultivation under the *Kowlu* system for one year.

From the above context, it can be inferred that debts can be paid by leasing-out land for cultivation under resource sharing contracts. As the *Batai* system requires investment from both contracting partners therefore for debt payments, resources are shared under the *Kowlu* system only.

Case 3.4:

Srinivas (58 years of age) and his two (2) married sons lives in the four-room pucca home. He owns four (4) acres of land (1.5 acres is wetland irrigated with the help of the Nizamsagar leakage canal and 2.5-acre land is irrigated by 2 borewells). All the adult members in the family are actively involved in agriculture. In the previous Kharif season, he had taken 1.25 acres and 3/4th of an acre land for cultivation under the *Batai* System and *Kowlu* system respectively. In total, he had cultivated six (6) acres of land during the Kharif season. He has taken 1.25 acres of land under from his brother's son (he had migrated to Hyderabad to work in a private company) while 3/4th of an acre is taken for cultivation from farmer residing in the nearby village. He agreed to pay 13,000 rupees towards *Kowlu* cultivation for two cropping seasons.

Srinivas cultivated Paddy in 4.5 acres of land and in the remaining 1.5 acres of land he cultivated a variety of crops (Tomato, Mirchi, Onion, Brinjal, and green leafy vegetables) during Kharif season. Whereas in Rabi season, he had cultivated Maize in one acre, paddy in four (4) acres of land leaving his one-acre land fallow. In addition to agriculture, he also

maintains two (2) bullocks, three (3) buffalos and two (2) cows. Recently he had purchased two more calves from the loans taken by her daughters-in-law under the DWCRA scheme. he mentions that having large cattle gives manure which reduces the input costs on fertilizers and improves the fertility of the soil. He also mentions that having a large family makes agricultural operations easy and efficient. Especially the requirement of labour during peak agricultural season is taken care of. Srinivas has very minimal labour costs as his family members are involved in exchange labour. When asked about his decision on cultivating lands under two types of systems simultaneously, he says that the *Batai* system requires a closer understanding and its more about trust between contracting partners whereas, the *Kowlu* system is about profit-making and extracting maximum benefit from each partner involved in the contract.

From the above information, large size of the family had enabled him to lease-in land for cultivation under the *Batai* and *Kowlu* system simultaneously. Compared to Paddy crop, the vegetables require less amount of water, therefore he chooses to cultivate different crops. His strategy of diversifying crops based on the resources available had paid him expected outcomes. As it is rightly pointed out that the *Batai* system is about trust between contracting partners while the *Kowlu* system is driven by the profit motive.

Table 5.4: Resources sharing mechanism under *Batai, Kowlu and Neellapalu* System

Sl. No	Items shared/exchanged		Batai system	Kowlu system	Neellapalu system
1	Costs of Inputs	Seeds	Equally shared between Landowner and Tenant	Tenant	Tenant
		Fertilizers	Below topsoil	Landowner	Tenant
			Above topsoil	Tenant	Tenant
		Pesticides	Equally shared between Landowner and Tenant	Tenant	Tenant
2	Labour expenses		Tenant	Tenant	Tenant
3	Tractor or mechanized operations expenses		Tenant	Tenant	Tenant
4	Irrigation infrastructure		Landowners shall provide unhindered access to existing infrastructure in the land leased-out.	Landowners shall provide unhindered access to existing infrastructure in the land leased-out.	Resource Owner shall provide assured irrigation to the tenant
5	Harvest expenses		Tenant	Tenant	Tenant
6	Land Development expenses	Long term	Landowner	Landowner	NA
		Short term	Tenant	Tenant	NA
7	Share in the Output (Landowner: Tenant)		50:50	A fixed rent is paid by the tenant before the commencement of each agricultural season	Rabi Season (30:70)
					Kharif Season (25:75)

Source: Field Survey, 2017-18.

4.0. Experiences and opinions of large landholding farmers in the Study Area

Case 4.1:

Patel's father was tehsildar during the 1960s and owns 50 acres of land (*Bhuthalli*). Patel discontinued his graduation course midway in 1969 during Telangana agitation for separate statehood. Though his father asked him to join in the government job, he chose to cultivate 50 acres of land. Patel reasoned that as there is no one from his family directly involved in cultivating their 50 acres of land, he made the rough calculation and found that he could earn ten thousand rupees per annum by farming. Which is much higher than what his father was earning as a government employee. The same was conveyed to his father and his father had no objection to his decision. For two to three years there were good rains. In 1972 severe drought had brought him huge losses. He was farming only 10 acres of land out of 50 acres and employed four *Harijan* families from the same village to work on the farm as well as in the home for a contractual period of one year. Out of the 50 acres, 10 acres is uncultivable land which requires a huge investment to improve the land. So he decided to improve the land and purchased an oil engine/diesel motor. Unfortunately, he incurred severe losses with the diesel motor as its oil seal broke often and oil seal and other spare parts are available only in the Nizamabad district and it costs 20 rupees to get it. He introduced Banana cultivation to his village during the 1970s. He bought banana seedlings from Zaheerbad to cultivate in one acre of his land. Returns from the banana crop are on expected lines and he sold the produce in the Nizamsagar market. Earlier farmers use to cultivate vegetables for their household consumption in small plots of land. Patel took a special interest in cultivating vegetables on large scale for sale in nearby town markets.

By this time his all brothers got married and responsibilities had increased. He decided to increase the cultivable land to 30 acres. With the help of his father's network, he could bring the electricity to the village and specifically to his farm. He also bought a 10hp motor and laid 500 feet cement pipe to bring an additional 20 acres of land under cultivation. Patel took a loan of twenty thousand rupees loans from Land Mortgage Bank (LMB) to meet the expenditure incurred (every year one thousand rupees had to be paid as an instalment to the bank by the Patel towards the loan). Seeing this expenditure his father expressed his unhappiness by saying that "*Being Patel we are supposed to give money to others but we are having a debt of twenty thousand rupees, which is not good for our family*". The huge debt had demoralized Patel's father and at the same time, he retired from the government job. He felt that debt would be on

his head and called all his sons to divide the property among themselves. The land was distributed and Patel being the eldest son he was asked to take the last share and consequently, the developed land went to his younger brothers. Patel discussed with his younger brothers, who stays away from farming to give the land for cultivation under the *Batai* system (Sharecropping). His brothers had agreed and called the interested villagers to come to his farm. The basic conditions were set as 50:50 share in the output provided the tenant share half the costs of fertilizer and total costs of labour. At that time landowners are very few and landless labourers are more, as a result, the *Batai* terms are in favour of landowners. Even the very few landowners didn't have access to irrigation or any water source. However, Patel had one 10 hp working motor which can irrigate nearly 20 acres of land easily and a certain portion of land under *Cheruvu Parkam* (tank irrigation), these facilities had made Patel's land as most suitable for *Batai* and many villagers were willing to do *Batai* in Patel's land.

Since it is a *Batai* System, landowners can decide what has to be grown in their land. Patel had introduced a variety of breeds of paddy crops. He introduced *Hamsa*, *Masoori* and *Muchulu* variety of paddy to the village farmers. The enterprising attitude of Patel had made local farmers try a different variety of paddy in their lands. In 1995, borewell technology had become very popular and landowners with one acre and above had dug a borewell in their lands. Borewell technology had drastically increased the land under cultivation in the study area. However, there is always a huge demand among the farmers to do *Batai* in Patel's land.

Ever since the Patel had started farming, there is no question of writing formal agreements between a landowner and farmer under the *Batai* system. However, during the 1940s and till 1956 there used to be formal written agreements between landowners and farmers in any contractual system of farming. The agreement document will have all the details about terms and conditions, rights and responsibilities categorically mentioned in it. The revenue tax had always been paid by the landowner irrespective of the type of contractual agreement between landowners and farmers. With the introduction and implementation of land reforms and the abolition of taxes on agricultural land, formal agreements had become informal/oral agreements.

In many instances, Patel would take initiative in introducing a new variety of crops to the village farmers. In one instance, after prolonged pursuance by Patel to introduce groundnut crop, a group of ten farmers (these farmers had earlier worked in Patel's land under *Batai* System) had come forward to cultivate the groundnut crop provided Patel should borne seeds

and fertilizers cost and the same amount can be taken by Patel from the Profits after sale of the produce in market. As expected, groundnut crops yielded expected profits and this experience had encouraged other farmers to cultivate groundnut crops.

However, as Patel and his contemporaries withdrew from active farming, we now see the monocropping (that is paddy) culture practiced in the majority of agricultural lands of the study area. Patel gives interesting reasoning for this monocropping culture (Paddy cultivation) in the study area: every crop has different stages in its growth, Paddy also has different stages in its life cycle. In the case of paddy, once the Paddy seeds (native word for paddy seeds is called *thukam*) are sprayed on a well-prepared plot of land, it takes 20 to 25 days for seeds to germinate. During this period male adult members in the families would migrate to nearby towns or cities and work as casual labour and return home with some savings. These savings they use for transplantation of the germinated seed in the already prepared land (this entire process of transplantation is called *naatlu veyadam*). Once transplantation is completed, again there would be a gap of 30 days for the paddy to mature. During these days, the elderly or children are left in villages and adults and women migrate to nearby towns to work as casual labour and they would return with some savings. These savings they use it for buying fertilizers, pesticides and to pay wages for labourers and to harvest. The periodical gaps in the rice cultivation make it convenient for the farmers to continue paddy cultivation in the study area. Most of the farmers do not have sufficient savings with them, as a result, they adopted this periodic migration to nearby towns and cities to support the investment needs of households.

In addition, the land and soils (*Chowdu Bhoomi* is local terminology for this type of land) in the study area are more suitable for Paddy cultivation than any other crop. Earlier Sugarcane is cultivated in rotation with Paddy but as the government-owned sugar factory is closed, thereby increasing the transportation costs of sugarcane produce the farmers in this region had shifted to paddy cultivation. There are lands that are suitable for other crops like Maize (*Makka*), Groundnuts (*Palli*), Mung beans (*Pesarlu*), Red gram (*Kandulu*), Jowar (*Jonnalu*) and other millets. But due to close by reserve forest and risk from wild boar and other animal attacks on fields many farmers feel it as a risk to cultivate these crops in their lands.

Patel mentions about seven families who had bought land from him. They could purchase land by selling their sheep/goat herd (it usually consists of about 20 to 30 sheep/goat). They would cultivate the land and save some money to buy a few sheep and once the herd sizes

reach 20, they would again sell it and buy some more land. At present, the same families are still farming Patel's land under the *Batai* system as purchased land is adjacent to Patel's land. Then few families had sold their land to toddy tappers (*Geetha Karmikulu*) and carpenter community households. These communities could do so by serving the landowner clients for several years and when they didn't pay the dues, their land is taken as compensation for the services rendered.

4.1.1. Experience of Patel with Tenant Farmers

Patel usually gives 10- 12 acres of his land for cultivation under the *Batai* System to more than 12 small farmers. Some of them had been cultivating the same piece of land for about 8 seasons and some would frequently change the landowner for various reasons. In one instance, one of the farmers after the harvest of the crop had asked Patel to lend some money and promised to return it after the next harvest season. Patel had agreed for that and lent money to the farmer. Till today he had not repaid the loan and Patel also didn't insist on repaying as the farmer is still cultivating the same piece of land for 5 years. Now, Patel feels as long as the farmer is cultivating his land he would not insist the farmer repay the debt, similarly farmer though having money to repay the loan would not do so because he doesn't want Patel to give the land to another farmer. In this case, in addition to other factors, the unsettled credit is acting as a strong bond perpetuating the *Batai* system between farmers and Patel.

It was in the early 1970s when chemical fertilizers were introduced under the green revolution, there was a shift in sharing contracts moving from *Batai* System to the *Kowlu* system. Patel had once given six acres of land for cultivation under *Kowlu* System at 60 rupees per acre per one cropping season. The introduction of chemical inputs such as Ammonia, Super-Phosphate and Paddy mixture had increased the yield. This increase in yield had made the small and marginal farmers bring additional land (*Bhuthalli*) under cultivation through the *Kowlu* system. Though Patel wants to give his land for cultivation under *Kowlu* System (Fixed Cash/Rent), no villager wants to take up cultivation under *Kowlu* System. Patel opines that in *Kowlu* System, an agreed advance amount had to be given to the landowner even before the start of the agricultural season. As most of the farmers in this village don't have sufficient savings to first pay the landowner and also invest the money in the cultivation of land. Investment gets doubled and if the crop yield had decreased, the loss would be manifolds higher than that of loss incurred in the *Batai* System. So, farmers in this village would always prefer *Batai* System.

In the 1960s the labour payments used to be in kind, most often the rice grains were given as payment towards daily wage. In the course of time by the 1970s, in addition to the rice grains, a bottle of *Kallu* (Toddy) was given to motivate the workers to finish the work soon. The idea of giving a bottle of *Kallu* was introduced by landowners to reduce the cost of wages by making labourers finish the work even after sunset. Over a period of time, this additional one bottle *Kallu* had become mandatory in addition to daily wage payment, though the payment at present is done in cash. Earlier, the *Kallu* is to be procured from a nearby village by the landowner and only pure *Kallu* is served to labourers, men used to consume openly whereas women consume only in their respective homes. At present, with *Kallu* becoming mandatory and both men and women consuming in open spaces, pure form of it is no more served by the landowner. Patel opines that today women are consuming more *Kallu* than men, as men had other alternatives like officer's choice and Imperial blue whiskey.

Case 4.2:

Kishan Rao (64 years of age) is referred to as *Patel* of Pedda Arepalley village, though the *Patel* post does not hold any political or administrative authority. He says that his grandfather was *Malipatel* of this village and had to surrender nearly 400 acres of land for submergence under Nizam Sagar Project constructed the year 1933. At present, he has 6 acres of fertile land (*Polam*) with round the year water facility as it is adjacent to the Nizam Sagar Project. Water from the Project would seep into his land and makes it more suitable for Paddy, Sugar Cane and Groundnut cultivation. However, for 15 years he is cultivating only Paddy as Wild boars and monkeys from nearby reserve forest had become a menace for the farmers. He has three married sons and all the sons are married and the youngest son had migrated with his wife to Hyderabad to work in a private firm. While the eldest son is a government schoolteacher posted in a nearby town. He and his second son along with his wife looks after cultivating 6 acres of land.

4.2.1. Experiences of leasing out land under *Batai* System

Earlier Kishan Rao gave three (3) to four (4) acres of his land to small, marginal and landless farmers to cultivate under *Batai* system. As the land has a reliable irrigation facility, there used to be a huge demand from the farmers within the village to take up farming under *Batai* System. Kishan Rao gave 1-acre each to three (3) small farmers from the same village. These farmers also rendered their services as daily wage labour in the remaining land of Kishan Rao. However, in course of time as mechanization had made inroads into traditional agriculture

systems, gradually labour (especially male labour) had become redundant. Under the *Yantra Laxmi* scheme of the government, he purchased a tractor at a subsidized price (50% of the cost of a tractor is borne by the state exchequer and 50% by the beneficiary) from a private dealer located in a nearby town. It cost him four lakh fifty thousand rupees excluding the costs of a cultivator, one set of cage wheels, and a trolley. Under the *Yantra Laxmi* scheme, five (5) beneficiaries from each *mandal* were to be identified and are extended 50% subsidy in buying a tractor (a cultivator, one set of cage wheels and trolley should be purchased by the beneficiary on his own). Kishan Rao belongs to BC-D category and had enough financial resources to buy a tractor at half its price, he also used his political network to get it sanctioned under *Yantra-Lakshmi* scheme. With the tractor at his disposal, he chose to cultivate all his land himself. So, he discontinued giving his land under *Batai* System. For the next two seasons, he had faced a lot of difficulty in getting the labour to work in his field. As it is six (6) acres of *Polam*, it requires nearly 40 people to finish *natlu and kalupu* (transplantation of paddy seedlings and removal of weeds respectively) operations in two to three days. During the peak season, for Kishan Rao, the effort required and cost of labour had multiplied. So, Kishan Rao had devised a strategy, according to which, he gave his tractor on the hourly-rent basis to farmers within the village for agricultural activities like plowing, tilling, harrowing and other transportation needs on a condition that they should send their women to work in his field during peak season. He used to deduct the hourly rent of the tractor while paying the daily wages of the women. This strategy worked very well for some years, but over the years, a couple of enterprising farmers had bought tractors and tractor owners from nearby villages had extended their services to these villagers. The competition among the tractor owners had reduced the influence of Kishan Rao on his village farmers.

Though Kishan Rao has an interest in taking other's land for cultivation under *Kowlu* System, he could not take the risk as there would be a severe shortage of labour during peak season. Even if labour is available, the cost would fluctuate around 250 to 300 per person per day, which he feels makes farming unviable for him. On comparing *Kowlu* System with *Batai* System, Kishan Rao posits that *Kowlu* is very risky for a tenant whereas *Batai* would evenly distribute the risk between the tenant and landowner (in his words "*munigitae iddaram munugutham, thelte iddram theltam*"). However, under *Kowlu* System, a tenant can make more money provided there are no pest or insect attacks on the crop. At present, the rate for doing *Kowlu* in this village is 12,000 rupees per acre per one cropping season. As the risk is too high in *Kowlu* System, tenants prefer to take the large plot of fertile lands (more than 5

acres) to counter the risk with economies of scale. In the case of drylands (*Kushki bhutalli*), the extent of land agreed for cultivation under *Kowlu* would be much bigger at a lower rate which would be hovering around 8,000 to 10,000 rupees per acre per one cropping season.

In the last Kharif season, Kishan Rao after cultivating six (6) acres of his land could harvest around 350 bags of paddy (each bag weighs 40kgs) which according to him is a reasonable harvest. He says that from the last two years the state government is procuring all the agricultural produce from this village immediately after the harvest and the total amount is credited in the bank account of the farmer within 15 days of the procurement. The price for 100 Kgs is fixed at 1590 rupees during the 2017 Kharif season. Kishan Rao says that earlier, middlemen (*Dalari*) had greater say on the price, quality and time of procurement and even payments are delayed. With the government taking up the job of buying all the produce, Kishan Rao feels market risks associated with paddy are almost done away with.

Table 5.5: Cost of cultivating Paddy in one acre of land.

Sl. No	Cost(s)	In Rupees
1	Cost of one seed bag (30kgs) (Kishan Rao uses 45 kgs of seeds per acre)	1050
2	Fertilizers include <i>bhees-bhees</i> (20:20), Potash (half-bag), Urea (half bag)	1600+400+150 respectively
3	Pesticides	500/-
4	Tractor (3 hours)	3000/-
5	Wage labour (15 persons required to complete transplantation of paddy seedlings(<i>natlu</i>) per day (260 rupees per person per day)	3900/-
6	Harvesting cost	3000/-
	Total	13600/-

Source: Field Survey, 2017-18.

According to Kishan Rao, the conservative estimate for cultivating one acre of paddy crop would be 13,600 rupees (as detailed in the above Table). This cost excludes the capital investments made in the form of electric pumps, pipes, and labour costs in removing weeds from the field. If all these are included, the cost of cultivation would be approximately 16,000 per acre. However, the costs could vary depending on the climatic factors and availability of labour at peak season.

Kishan Rao opines that unless one of the family members has an alternate source of income from either business or some private/government employment, farming alone won't

help the capital/saving accumulation at the household level. Kishan Rao prefers to buy seeds and fertilizers provided by the government licensed agents rather than private agents. He opines that the government provided seeds and fertilizers are available in better quality and are rationed (rationing is done as per the landholding size of the farmer) per each farmer at lower prices when compared to private seeds and fertilizers. There are instances in the village where privately procured seeds and pesticides are proved to be spurious /counterfeit and as a result, when a farmer approached agriculture department officials, no recommendation for compensation is forwarded to higher authorities.

In the case of the *Batai* System, the landowner has the obligation to provide his share of seeds and fertilizers to the tenants, as these are rationed upon verification of farmer's *land patta* (official document provided by the revenue department, Telangana Government). Before buying a tractor, there used to be two (2) pairs of an Ox, six (6) Buffalo, and two (2) Cows. The intense use of fertilizers coupled with the mechanization of agricultural activities had reduced the dependency on the draft animals and other livestock. At present Kishan Rao has only two buffalos and one of them provides half litre milk in the morning and evening. He is raising these buffalos because his grandchildren drink milk in the morning and evening.

Case 4.3:

Anand Rao (42 years of age) is currently the *Sarpanch* of Velaganur village. He is the youngest son of the erstwhile *Patel* of the village. Anand Rao has two elder brothers; Anil Kumar (54 years of age) and Sunil Kumar (44 years of age). All his elder brothers had migrated and settled in Hyderabad. Anand Rao and his brothers collectively own 58 acres of land, out of which 28 acres had been put under cultivation till the year 2005 and the remaining 30 acres of land was left uncultivated till the year 2010. Anand Rao proudly says that his father and elder brother had done large scale farming and used to employ 16 agricultural attached labours always working throughout the year in their 28 acres land. For agriculture purpose, they have dug 17 borewells (only 9 are functional now remaining 8 had become defunct) at different points of times and has three (3) 10hp lift-motors drawing water from *nallavagu* (a seasonal water stream which has flowing water for about 3 to 4 months in a year) stream. He says that by “giving *Neellapalu* (a water-sharing contract between farmers) alone their family could get a truckload of rice grains in one cropping season”. He proudly says that all his sisters (2 younger and 2 elder) were married off with the income generated from agriculture alone. His elder brother, Anil Kumar had done active farming from the year 1983 to 2000 and he was considered

as an enterprising farmer by his contemporaries in the entire study region and had taken an active role in introducing a variety of crops to this village.

Anand Rao says that they had about 40 buffalos, 6 pairs of draft animals and 6 to 8 cows as livestock in addition to all small and big agricultural implements and it was in 2010 they had purchased a tractor for agricultural operations. During the 1990s, Anand Rao's elder brother used to cultivate up to 27 acres of land with 12 attached labour and another 40 to 50 daily wage labours. They had three parcels of 9 acres of land located all around the village and close to the *nallavagu* stream. Talking about the ability of labourers during the 1990s, Anand Rao says that only 8 to 12 labour would be sufficient to complete *naatlu* (transplantation of Paddy Seedlings) in one-acre land in one day. Anand Rao comments that compared present-day labours the earlier generation labourers are hardworking and committed to farming. In the 16 acres land he had cultivated pulses using rainwater for about two (2) seasons, but later on, left it fallow as the wild animals from the nearby reserve forest had become an unbearable problem. In 2006, he planted sugar cane crop in six (6) acre land, on one single night he lost one and a half acres of crop due to wild boars attack on the crop. So he kept electric wire fencing on the forest facing side of the field and the next night around 8 wild boars have died due to electric shock. This had made his elder brother angry and the next day fencing was removed, and he had to keep labours as night guards till the harvest.

Anand Rao says, till 2005 he didn't think of leasing out land under *Batai* or *Kowlu* system. From the year 2002 to 2005, they had faced severe drought and 12 borewells had become defunct and there was no water in the *Nallavagu* stream. As a result, he had reduced the farming area to 8 acres. During this time many of the labour had migrated to Hyderabad to work as casual labour in construction works. Anand Rao opines that when the village had sufficient rainfall, water in borewells, people had returned to farming but the awareness and exposure to outside labour market had reduced their interest and commitment towards agriculture. In 2006, he gave 16 acres of newly developed land for cultivation under *Batai* System for a group of four farmers, as this land is not suitable for paddy cultivation, Anand Rao and tenant farmers had agreed to cultivate Makka (Maize), Jonnalalu (Jowar) and Soya. Though the unexpected rains during the harvest had troubled the tenant farmers, they made a profit of 1,80,000 rupees in one cropping season by cultivating under the *Batai* system.

In 2008, out of 16 acres of dry land, only 8 acres were given to two brothers from the same village for cultivation under the *Batai* system. Since the tenant brothers did not have

money to invest they asked Anand Rao to invest money initially. So, Anand Rao invested 25,000 towards seeds, fertilizers, pesticides, and tractor charges. Tenants did all the agricultural operations, but they failed to protect the crops from wild boars and monkey attacks. With great difficulty, they could recover only 8500 rupees after harvesting the crop. the tenants did not repay the agreed amount to Anand Rao and one of the tenant brothers had run away from the village for about three months. Through this experience, Anand Rao had decided never to spend his money upfront in the cultivation of land under the *Batai* System.

It was only from the last two cropping seasons Anand Rao had given 20 acres of land for cultivation under *Kowlu* System to another farmer from the same village. Under *Kowlu* system, the tenant agreed to pay 12,000 rupees per acre per each cropping season (which is 24000 per acre per year) in case of 12 acres of *Polam* (Fertile and irrigated land), whereas for the remaining eight (8) acres of dry land the amount per acre per one cropping season was fixed at 10,000 rupees. Under *Kowlu* system, the tenant can choose to cultivate his choice of crops and landowner has no right to interfere in the decision-making process. The tenant had cultivated Paddy, *Makka* (Maize), *Jonnalu* (Jowar) and Soya crop. Terms and conditions in the *Kowlu* system are landowner will give a fully functioning borewell, lift motors and would run a demo show of all the motors present in the field before handing over the land for cultivation by the tenant. Once the agricultural operations commence, the landowner is not responsible for repairs or maintenance of irrigation infrastructure. The landowner is also not responsible if the water gets dried up in the borewells.

In addition to these terms and conditions, Anand Rao made an obligation on the part of the tenant to use only his tractor for all agricultural operations. Anand Rao observes that in *Kowlu* System if the tenant conducts all the agricultural operations on time, the tenant would be able to recover the *Kowlu* amount within one cropping season and the tenant can take the complete amount from the next cropping season. Anand Rao also mentions that if a tenant has good knowledge about farming, *Kowlu* System would be a better option, provided the extent of land under *Kowlu* should be more than five (5) acres to achieve optimum results.

The total cost of cultivating *Makka* (Maize) in one-acre land would be 7,490 rupees (the cost of cultivating *Jonnalu* (Jowar) would be almost the same as that of Maize). As said by Anand Rao, If the climatic conditions are favourable and the farmer is committed to taking care of the crop, one acre of Maize crop would yield up to 1,800kgs to 2,200kgs of produce. The income would be in the range of 25,000 to 31,000 rupees which is triple the investment.

However, the risks associated with it makes the realization of expected output a difficult endeavour.

Table 5.6: Cost of cultivation of *Makka* (Maize) per acre.

Sl.No	Cost(s)	In Rupees
1	Seeds	1500/-
2	Fertilizers	2490/-
3	Pesticides	500/-
4	Tractor cost (1 hour)	800/-
5	Labour cost for sowing seeds	1200/-
6	Harvesting	1000/-
	Total	7490/-

Source: Field survey: 2017-18

When asked about his selection on who would he prefer if two farmers: one having more than five acres of land and others having less than one acre or landless farmer express interest in doing *Batai or Kowlu* in his lands? He says that he would always prefer tenants with less than one acre of land or no land, as they would be more loyal and truthful to the landowner. He also mentions that small and marginal farmers would not be disloyal to a landowner, as they have meager resources to cope up with the loss of livelihood. Small and marginal farmers tend to look at large landowners as social security apparatus.

Anand Rao takes a keen interest in cultivating a fine variety of Paddy (BPT or HMT Sona) in two (2) acres of land, with minimal usage of biochemical fertilizer and pesticides for household consumption. After every harvest, he would send four (4) bags of rice each to his elder brothers for Household consumption.

Case 4.4:

Digambar Rao (65 years of age) has given two (2) acres of land for cultivation under *Batai* System. As these two (2) acres land is too far from his home, he has given to a small farmer for cultivation under *Batai* System. According to him, a tenant should take care of the land as his own land, he should be truthful to the landowner. He remembers an instance where a tenant had taken fertilizers from the landowner and instead of applying in the *Batai* land

tenant had used it for his own land. After 20 days landowners came to know about this, but it's too late as the crop had already become weak to grow. Digambar Rao prefers to give his land to the tenants who have cattle to rear in the fields, as it increases the fertility of the soil. His family also maintains three (3) pairs of oxen, 7 (seven) buffalos, and 3 (three) cows. Three women from the family had availed a total loan of 50,000 rupees from the Srinidhi Scheme and another 25,000 rupees from SHGs under DWCRA Scheme. He opines that these schemes had become boon for each household as they give regular income.

Digambar Rao prefers tenant farmers having minimum land and living in a joint family, which means assured labour and experience in conducting agricultural operations. If the tenant farmer has more than three (3) or four (4) acres of land, he would always tend to cultivate his land first and then cultivate land under the *Batai* system. As the crops are seasonal, the delay in cultivation yields less output and brings loss to the landowner. Digambar Rao mentions about the plight of farmers whose land is surrounded by other's land and does not have a *naksha* (government approved) road to their lands, therefore had to advance their agricultural operations by 10 to 15 days because if the lands surrounding are prepared earlier than his land, then to enter his land with a tractor, he would have to pay the damage caused to the crop in surrounding lands.

In the case of the *Kowlu* system, Digambar Rao looks at the attitude of the tenant farmers towards cultivation. If the tenant has a habit of using excessive fertilizers and pesticides and does not intend to do farming for more than two cropping seasons, then he won't be a suitable tenant for the *Kowlu* system. At the same time, a tenant should be able to increase the yield compared to the previous year's yield if not should not make loss out of cultivation. This is because, if the current tenant makes a loss on land cultivated under the *Kowlu* system, then it would affect the morale of potential tenants who intends to take up cultivation on the same piece of land. Digambar Rao says in other words that a loss-making tenant brings down the *Kowlu* value of the land cultivated.

4.5. A Government Servant's views on Resource Sharing Systems in the Study Area

He is a government teacher working in nearby Zilla Parishad school. He prefers to give his land for cultivation to tenants who depend on the household labour rather than tractor and harvester in agricultural operations. He says excessive dependency on machinery increases the expenditure for a tenant, as these costs are not shared by the landowner in any of the resource sharing contracts. If a family has four to five adults and has know-how on agricultural

operations, they can cultivate two (2) acres of land with their own household labour and can participate in exchange labour to earn extra income. A large family with less than three (3) acres of land would be most suited for cultivating land under *Batai* or *Kowlu* system. He makes an approximate calculation about the income from farming and says that a farmer requires eight (8) acres of land for cultivation to earn about 20,000 per month, provided all the external factors remained favourable to farming.

When asked why he is not cultivating sugar cane in his fields, he says that about seven (7) years back he had cultivated sugar cane in six (6) acres of land. Initially, the Gayatri Sugars Limited company which is located close by had pursued these villagers to cultivate sugar cane in their fields and had promised to provide labour and other extension services. However, at the harvest time, the company didn't fulfill any of their promises and as a result, he had incurred a huge loss. He mentions that though there is a sugar factory located within 12 km from the village, as the majority of farmers have landholding size less than three (3) acres and most of the land parcels are small in size and are uneven, which makes it unviable for sugar cane cultivation. In addition to this, the Wild boar attack on the crops from the nearby reserve forest makes it a difficult endeavor to cultivate sugar cane crops in the study area. The company procures the sugar cane from *Narayankehd* mandal in large quantities, as the land is suitable and large-scale cultivation of sugar cane is possible in those villages. However, the factory gets water from the Nizamsagar Project for its boilers and other needs. He mentions the irony that though they have Nizamsagar Project on their heads, they are not able to utilize it as a resource as per their needs. He says that most of the land that belongs to three nearby villages are submerged in the project and are not given alternate land or livelihood. On the other hand, the forest department takes no interest in protecting the wildlife in the reserve forest and ultimately the adjacent village farmers have to face the menace of wildlife attacks on the crops. Farmers from the study area had migrated to Hyderabad in large numbers about 5 years ago to work as construction labour. After two years many had returned to villages as they could not adjust to living and working conditions.

Generally, if a landowner is not capable or does not have enough resources to cultivate on his own tends to give his land for cultivation under *Kowlu* or *Batai* System. A farmer who has more than five (5) to six (6) adults in his family tends to cultivate other's land under the *Batai* or *Kowlu* system instead of working in other's farms as labour. According to the respondent, a small farmer would give his land for cultivation under the *Batai* system to farmers who can take risks and willing to pay from his pocket in case of failure of the crop. He also

opines that those farmers who work in their fields without employing excessive labour would always save some money in farming.

The above experiences and opinions obtained through in-depth interviews signify the diversity in the contexts and consequent contracts in the study area. We can observe the deviations from the general terms and conditions in each type of resource sharing system as the result of the context under which it is entered into. As all the contracts are informal and oral (except the one with a private seed company), we can also observe the importance of social control mechanisms in the study area in the execution of terms and conditions in each contract. Over a period, the resource sharing contracts have evolved in response to the contexts.

State policies and interventions at various stages of agricultural production had resulted in liberating a large number of small and marginal farmers from clutches of exploitative forces. However, it also complicated the interlinkages in factors of production and also increased the interdependency relations among resource owners and tenants in rural areas. The following chapter provides a detailed description and in-depth analysis of state interventions in agricultural production and consequent dynamics in resource sharing contracts.

Chapter 6

State Interventions and Dynamics of Resource Sharing Relations in Agricultural Production

In the previous chapter, various factors influencing resource sharing relations are elaborately discussed. It is observed that State interventions in agricultural production have a major role in shaping interlinkage factors and their effect on overall resource sharing processes. State interventions either directly or indirectly in traditional agriculture can be observed at every stage of agricultural production. The current chapter deals with the State interventions at various stages of agricultural production through various programs and schemes and its impact on the resource sharing relations among the resource owners and tenants in the study area.

6.1.0. Land Reforms

The British regime had its fundamentals of land revenue administration in the land administration of Moghul emperor Akbar. The land revenue system for Moghul rulers was designed by Todar Mal, who was a finance minister during Akbar's reign and has land measurement and rent fixation as its main components (Baden Powel, 1974; Dutt, 1976; Appu, 1996). The British administration had relied on non-cultivating intermediaries for land revenue collection. The agrarian structure at the time of Independence was characterized by the absentee landlordism, large landholdings in very few hands with diverse revenue collection practices across regions in India coupled with exploitative tenancy relations (Appu, 1996). Upon analysis of the pre-independence Indian agrarian structure, Thorner and Thorner (1962) describes "It as a complex of legal, economic and social relations having a multi-layered structure that pulled down the production efficiency in the agricultural sector". A large number of Peasants had participated in the freedom movement and supported the 'Land to the Tiller policy' of the Congress Party to bring in the land reforms. Therefore, immediately after attaining political independence in 1947, land reforms had become one of the top agendas in policy-making of the elected government. A committee under the leadership of J.C.Kumarappa was constituted in 1949 for recommendations on the land reforms. As the land and administration subject falls within the legislative domain of State governments the committee had recommended for implementation of land reforms by the States and majority of the States had enacted legislation aimed at the abolition of Zamindari and Intermediaries, securing the tenancy tenures, ceilings on size of landholdings, distribution of lands to landless and marginalized sections especially Scheduled Castes and Scheduled Tribes and special rights on

the land in the scheduled areas was conferred to the Scheduled Tribes. For analytical purposes, land reforms are categorized into four (4) groups⁴³; Liberative, Distributive, Organizational and Developmental. The Liberative measures are aimed at relieving the tillers of land from the exploitative landowners and accord legal rights on the land to the actual tillers. The abolition of intermediaries and the protection of tenancy rights come under the liberative reforms. While the Distributive measures are carried out in the form of Land Ceiling legislations and then distributing the government lands as well as lands acquired under Land Ceiling legislation. Organizational measures are carried out through specific interventions in specific regions of India by the introduction of technology and extension services in the mid-1960s. Development reforms are all-encompassing measures aimed at developing the agricultural sector as a whole. The land reforms in India are carried out over a long period of time depending on the will and commitment of the political parties in the power at the State. By 1960, the abolition of intermediaries was successfully completed, in fact, this is the only legislation under land reforms that had achieved its target.

The land reforms in the Telangana region can be gauged from the perspective of corresponding legislations enacted from time to time. The Intermediaries in Land revenue administration were abolished with the enactment of the 'Hyderabad (Telangana) Jagirdari Abolition and Regulation Act, 1949, and Inamdari Abolition Act, 1955. The rights of tenants are protected under the 'Hyderabad (Telangana) Tenancy and Agricultural Lands Act, 1950. After the merger of Hyderabad State in Andhra Pradesh, Land ceilings Acts under 'The Andhra Pradesh Ceiling on Agricultural Holdings Act, 1961' and Andhra Pradesh Land Reforms (Ceiling on Landholdings) Act, 1973 are enacted to cap the size of the landholding. The land rights of the Scheduled Tribes are protected under the 'Hyderabad Notified Tribal Areas Regulation Act, 1949' and 'Andhra Pradesh (Scheduled Areas) land transfer regulation, 1973'. Besides, one of the common and popular political commitment among all political parties was to distribute the government lands to the landless especially SCs, STs and other Backward sections of the society and is an ongoing process implemented in phases even to this date.

Generally, policymakers involved in agrarian reforms had viewed the land reforms as an issue that can be solved by redistribution of land or other assets overlooking the importance of underlying social relationships (Frank Hirtz, 1998: 248). This is primarily because of a lack of knowledge on the local practices in resource sharing across diverse agricultural settings

⁴³ See Raj Krishna (1961) Chapter titled 'Land reform and development in South Asia' In W. Frochlich, (ed.) Land tenure, Industrialization and Social Stability: Experiences and Prospects in Asia.

(Ibid: 248). When it comes to tenancy reforms, the central theoretical argument assumes that a tenant having no rights on the land under cultivation can be evicted at will and is at constant pressure from the landowner to concede to his demands against the interests of the tenant. It is argued by Frank Hirtz that.

“The dependence of rural dwellers on the whims of landowners constitutes insecurity of such proportions that those involved in agricultural production shy away from making any medium- or long-term commitments which would help to improve their individual productivity and, hence, social productivity for the national economy. Insecurity and indecisiveness are thus seen as the main contributing factors which trap the majority of the rural population into poverty which might otherwise be overcome through their own initiative”. (1998:249).

Therefore, the distribution of land to the tiller is proposed as a panacea to alleviate the rural tenant from poverty. However, as Chambers (1984) observes that the interdependent factors keep the small and marginal farmers always in the state of ‘Poverty ratchet’. In the case of a crisis, whatever the little savings they had made vanishes pushing them into abject poverty. It is during this phase, they “resort to mutual assistance provisions that are long-established in the rural areas but remain dynamic and in a state of flux. These mutual assistance facilities operate at a level below that of the institutional support which is available in modern states and which may be introduced through the various program elements of agrarian reform” (Ibid, 266).

In the study area, the government lands are distributed to the Scheduled Castes and landless peasants. However, lack of capital and credit has made the cultivation of the assigned lands a difficult endeavour. It was observed in the study area, that most of the lands distributed by the government are drylands with no access to irrigation and are in the periphery of the villages. With the meagre resources at their disposal, beneficiaries of these lands could only level the land and cultivate one crop in the Kharif season. The interdependent factors like seeds, fertilizers, credit, and the market had increased dependency on the landed Castes. The dependency is mutual in nature satisfying the needs of landed and landless Castes. One of the beneficiaries says that due to investment in the newly assigned land given to him, he incurred a debt of nearly 6000 rupees after one cropping season and left the land fallow since then. According to Patel of one of the four villages, the lands given as assigned lands are the most unfertile and abandoned lands by their ancestors. Whatever the remaining fertile lands uncultivated by landed Castes, the members from the Mudiraj Caste, who are dominant in terms their population had taken over or purchased. As remarked by M.N.Srinivas (1979: 238), “One of the major results of land reform has been the transference of land from the ritually high

status castes to the *dominant peasant castes* which had a tradition of agriculture and lived in rural area”. However, with the distribution of assigned lands, it was expected that the beneficiaries would become independent and individual productivity to increase, on the contrary, the dependency had increased due to the sharing of resources. As observed by Frank Hirtz, “redistributive land reform represents a technological answer to a social issue and thus carries with it a number of pitfalls that characterize social engineering, allowing those implementing it to overlook several conditions under which interventions are applied” (1998: 266).

Generally, a comprehensive agrarian reform policy includes the following elements; affordability and accessibility to credit and insurance, agricultural input support, irrigation facilities, technological and extension services support, the introduction of high yielding variety seeds, Post-harvest support, regulation of markets, price support, agro-based industries, and allied activities.

6.1.2. Green Revolution⁴⁴

During the mid-1960s, the food crisis in the Indian economy had necessitated importing of 19 million tonnes of food grains (Mohan Rao and Strom, 1998). This food crisis has warranted the introduction of New Agrarian Strategy that emphasized a comprehensive overhaul of the State interventions in developing the agrarian sector. This New Agrarian Strategy includes the following measures.

..improving productivity by means of rapid technological modernization, based on the adoption of the new HYVs, irrigation, chemical fertilizers, and pesticides, deliberately concentrating investments crop-wise and region-wise where returns were expected to be relatively high and certain...It increased agricultural credit and fertilizer subsidies, while also making a commitment to remunerative prices. (Mohan Rao and Strom, 1998: 216).

Describing the food crisis and politically motivated withdrawal of US aid, Gough posits that “In 1965, chiefly under the influence of the US government and Ford Foundation, ‘particular areas’ or ‘package districts’ were chosen for intensive agricultural development with modern inputs and machinery” (1977: 51). All the above-mentioned measures as part of the

⁴⁴ The word ‘Green Revolution’ was coined by William Gaud at a meeting of Society for International Development in DC in 1968. Gaud while describing the philanthropic funding for fertilizers, High Yield Seed varieties, irrigation, credit support mentions that ‘these and other developments in the field of agriculture contain the making of a new revolution. It is not a violent Red Revolution like that of Soviets, nor is it a White Revolution like that of Shah of Iran. I call it the Green Revolution’ (Cited in Raj Patel, 2012:5).

'Green Revolution' are termed as 'package of practices' to supersede the 'traditional' practices and to be adopted as a whole (Farmer, 1986: 175-76). The introduction of 'packaged practices' in the chosen 'package districts' had yielded the intended result of increasing production to avert the occurrence of food crisis. However, over a period, the impact of the 'Green Revolution' on various aspects of all the stakeholders involved in agriculture are found to be not always positive. In order to achieve the immediate objective of the 'Green Revolution': "given the limitations of supply of modern inputs, these should reach those (packaged districts) areas and people who are likely to make their most optimum use" (Dasgupta, 1977:247). Therefore, the emphasis on 'social justice' as an objective to reduce the 'poverty' and 'inequalities' through agrarian reforms had taken back seat (Mohan Rao and Strom, 1998).

The selective approach in the implementation of the 'Green Revolution' had not only resulted in 'inter-regional disparities' (Farmer, 1986: 187) but also intra-regional inequalities because of the fact that the agricultural resources are historically concentrated in few sections of the society. The ensuing debates on the impact of the 'Green Revolution' from different perspectives had produced a significant number of empirical evidence reflecting the diversity in responses to the state interventions in agriculture. Prior to the introduction of the 'Green revolution', much of the scholarly debates focused on the relationship between productivity and size of landholdings. These debates had emphasized the need for distribution of land to the tiller and protection of tenant's rights (A.K. Sen, 1962; Chattopadhyay and Rudra, 1976: A-104; Dyer, 1996: 105). In the initial years after the introduction of the 'Green Revolution', studies had observed the emergence of a new group of 'capitalist farmers' or 'gentlemen farmers' in rural India (D. Thorner, 1969: A-211). Capital farmers had cultivated lands with the help of hired labour and profits from the cultivation is reinvested in the land for further intensification of cultivation (Ibid). The Urban 'middle-class households' who leased-out their lands for cultivation by tenants had started "pouring money into agricultural production" for additional income was termed as "gold rush of the 1960s" (Ibid). The rise of capitalist farmers had transformed the agricultural production relations and forms of exploitation. Subsequently, the resource sharing relations under different types of tenancy had adapted to the new technological and economic requirements (Ibid).

During the 1970s, several studies are conducted to observe the changes brought in by the introduction of the 'Green Revolution' to traditional Indian agriculture. These studies had resulted in opening new avenues for debate on the 'mode of production' in Indian agriculture. Specifically, "The Indian debate on the mode of production revolves around the questions

whether, in the last 15 to 20 years, there has been a decisive movement in Indian agriculture from a feudal mode of production to a capitalist mode of production” (Alavi, 1975: 1235). While a study conducted by Rudra (1970) labels Indian agriculture as pre-capitalist or feudal in nature, contrary to this number of empirical studies conducted by Banaji (1976), Chattopadhyay (1982), Gough (1980), Omvedt (1981), Harris (1992) and Breman (1985) posits that Indian agriculture is capitalist.

On the other hand (Bhaduri, 1973; Prasad, 1974; Chandra, 1974; Sau, 1975) calls Indian agriculture as Semi-feudal for the reasons like the persistence of sharecropping, concentration of resources in few hands, high levels of indebtedness among the small and marginal farmers and tenants, imperfect markets and other interlinked production factors. However, in course of time with the expansion of ‘Green Revolution’ in other parts of India, there is now a larger consensus among the scholars that “there would no longer appear to be any doubt that capitalism today dominates Indian agriculture....yet master-servant types of behaviour, extra-economic constraints, rack-renting, and usury have by no means disappeared” (A.Thorner, 1982 and Patnaik, 1990). The current chapter seeks to understand and analyse the impact of various State interventions either under the ‘Green Revolution’ or any other schemes or programs having a direct or indirect impact on the interlinked factors of agricultural production with an emphasis on resource sharing process.

The State interventions in agricultural production in the study area can be broadly observed at the following.

1. Seeds, Fertilizers, and Pesticides.
2. Farm Mechanization.
3. Institutional Credit Support.
4. Irrigation Infrastructure.
5. Minimum Support Price (MSP)
6. Livestock and Allied Activities.

In addition to the above-mentioned, Social development and welfare programs affecting the agricultural resource sharing mechanism are also examined.

6.2.0. Seeds, Fertilizers, and Pesticides

The Seed is the basic unit of agricultural production and it determines the efficiency and performance of all other inputs in realizing the expected output and income of the

cultivators. In order to supply quality seed to the farmers, government and private agencies have developed an elaborate process. Seed production is a continuous process involving three stages: the first stage involves identifying the high-quality genetically pure 'Breeder Seed', the second stage involves the production of 'Foundation Seed', and the third stage involves a large scale production of 'Certified Seeds'. Foundation seeds are produced from Breeder Seeds under the expert observation by government and private research institutes and labs. Once the Foundation Seeds are produced, the large scale production of quality Certified Seeds takes place, which is distributed to farmers. Each Breeder Seed variety is selected keeping in mind the factors like soil and climatic conditions favourable for the Seed to attain its full potential growth.

According to the Department of Agriculture's 'Action Plan for the year, 2017-18' government agencies are focussed on producing high volume and low-value crop seeds of notified varieties of Paddy, Jowar, Red gram, Green gram, Black gram, Bengal gram, Groundnut, Castor and Sesamum while the private agencies are involved in low-volume and high-value crop seeds of Cotton, Maize, Sunflower, Jowar, Bajra, and Paddy. The Certified Seeds of a variety of crops are subsidized and distributed to farmers under different schemes by the State government. The Government schemes for distribution of Seeds are as below:

1. National Food Security Mission (NFSM) (Paddy, Pulses, Coarse Cereals).
2. Rashtriya Krishi Vignan Yojana (RKVY).
3. National Mission on OILSEEDS and OILPALM Programme (NMOOP).
4. Normal State Plan (NSP).

At the ground-level, the subsidized seeds are distributed by the government nodal agencies such as TSSSDC (Telangana State Seeds Development Corporation Limited), TSOILFED (Telangana State Co-operative Oilseeds Growers Federation Ltd), HACA (Hyderabad Agriculture Co-Operate Association Ltd), TSMARKFED (Telangana State Co-operative Marketing Federation) and NSC (National Seeds Corporation Ltd.). In addition to these, licensed private seed distribution agencies also sell the seeds to the farmers.

It was opined by one of the farmers in the study area that, about four (4) years ago, there used to be a long queue at the Seed distribution centres located in the Nizamsagar Mandal office. Due to delays and shortage of seeds with government agencies, most of the farmers had to depend on the middlemen or Seeds produced from their own fields. This practice had led to frequent crop failure and reduced productivity owing to spurious and poor quality of seeds. It was during the year 2015, Telangana State government had solved the issue of delay in the

delivery of seeds. At present, farmers are provided appropriate information about the distribution and availability of seeds with government agencies. In addition, the private agencies have also set up their retail stores in the Nizamsagar Mandal to meet the increasing demand of the farmers. The table below details the preference of sources for Seeds and Fertilizers in the study area.

Table 6.1: Farmers Preference of Sources for Seeds and Fertilizers in the Study Area.

Sl. No	Source	Seeds	Fertilizers
		Number of Households	Number of Households
1	Government Agencies	63	33
2	Private Agencies	112	120
3	Government and Private Agencies	46	70
4	Uddera/Nagu Vaddi	10	8
	Total Number of Households	231	231

Source: Field Survey, 2017-18.

Out of the total 231 households involved in agricultural production, 27% prefer buying seeds from government agencies while 52% prefer private agencies. Then there are 19% of total farming households buying Seeds from both government and private agencies. The common reason expressed by the majority of cultivators for their preference to private agencies is the accessibility and early availability. It is observed that most of the cultivators being small and marginal require comparatively less quantity of seeds and fertilizers, so from each village six (6) to seven (7) households buy the seeds and fertilizers from a single private seller and hire a tractor for transportation to their homes. There are cases, where the tractor or auto owner decides the source for other cultivators in buying the seeds and fertilizers. The major problem associated with government agencies is that each farmer has to produce a set of documents to receive his/her quota of seeds and fertilizers. For the tenant cultivators, the quantity of seeds and fertilizers required is more than the stipulated quota as they are leasing-in land for cultivation. Therefore, most often they prefer to buy from a private agency as there are no limits or quotas set by private agencies in selling. For tenants involved in the cultivation of land under the *Batai* system, the landowner may suggest the tenant to source all the agricultural inputs from private agencies. The reason is that no landowner wants to give the documents to a tenant to avail the quotas set by the government agencies. In some cases single landowner may have given his land for more than one tenant, therefore to avoid unnecessary troubles, he suggests all his tenants to source their inputs from private agencies. In the case of *Kowlu* System, a tenant has liberty and freedom in choosing the source and the majority prefer private agencies

for the same reason of restricted quotas in the case of government agencies. The table below provides details on tenants' preference of sources in buying the seeds in the study area.

**Table 6.2: Tenants Preference of Sources in buying the Seeds in the Study Area.
(Kharif Season 2017-18)**

Sl.No	Source for Seeds	<i>Batai</i> System	<i>Kowlu</i> System	<i>Nellapalu</i> System	<i>Batai and</i> <i>Nellapalu</i> System
		Number of Households	Number of Households	Number of Households	Number of Households
1	Government Agencies	9	6	2	7
2	Private Agencies	32	17	13	10
3	Government and Private Agencies	14	8	4	2
4	<i>Uddera/Nagulu</i> <i>Vaddi</i>	2	4	1	4
	Total	57	35	20	23

Source: Field Survey, 2017-18.

From the above table, we can observe that under any tenancy type practiced in the study area, more than half of the tenants prefer to source their seeds from the private agencies. Tenants under *Batai* system, have the option of buying their share of inputs either from the government (within the quota) or private agencies but most prefer to toe the line of a landowner who in most cases prefer private source. Out of the total tenant households under the *Batai* system about one-fourth of them source their seeds combinedly from government and private agencies. The reason for such preference was the experience of getting better yield in the previous cropping season. One of the tenants posits that if they depend entirely on private seed or government seed they may have to face complete crop loss in case of spurious seed or in pest attack. Therefore, they continue the practice of mixing the seeds sourced from the private and government sources. Most of the lands under the *Kowlu* system are drylands and better quality seeds for crops cultivated in drylands are abundantly available only with private agencies. In the rest of the Tenancy types, tenants predominantly prefer sourcing seeds from private agencies.

The marginal and landless farmers who are entirely dependent on small parcels of leased-in lands for cultivation takes seeds from fellow farmers on the condition that they would return the same after harvest. Before the introduction of High Yield Variety (HYV) seeds into traditional agriculture, the farmers in the study area use to borrow seeds from middlemen or from a landlord. This practice is called '*Nagulu*' vaddi under which the receiver of the seeds should return double the quantity of the seeds taken in Kharif season and one and half times the quantity in case of Rabi season. In most cases, the farmers use to sell their produce to the middlemen or landlord who in turn cut there share of seeds from the harvest and sell the remaining in the market (also take a commission for selling in the market). At present, few farmers cultivating relatively small plots of lands for household consumption take seeds from the neighbor or the landowner who gave a small parcel of land in return for the services rendered to him. Unlike the terms and conditions in *Nagulu* vaddi, these marginal farmers return only the same quantity of seeds taken from the lender in addition to the assured labour services during the peak agricultural season.

It was observed that, just before the commencement of agricultural operations in Kharif and Rabi seasons, Private agencies agents conduct village drives explaining the advantages of sourcing seeds from them. In many instances, private agencies also provide extension services for their loyal clients in the study area. Private agencies have a special interest in moving away the farmers from cultivating Paddy alone in their fields. In pursuit of this objective, they provide exclusive extension services to the farmers who choose to cultivate crops other than paddy. The private seed company which cultivates 40 acres of leased-in land for the exclusive production of dryland crop seeds provides extension services to the farmers cultivating such crops in the study area.

When it comes to fertilizers, The Government of India provides subsidized fertilizers under the Nutrient Based Subsidy (NBS) Policy implemented by the Department of Fertilizers (DoF). Under NBS policy, the government fixes the subsidy on the fertilizers (except Urea) based on the 'Nutrient' content. The fertilizer manufacturing companies will decide the price of fertilizers based on the costs incurred as per the international market rates. The state government has no role in deciding the MRP (Maximum Retail Price) of fertilizers. For the primary nutrients N (Nitrogen), P (Phosphorous), K (Potassium), and S (Sulphur) per kg subsidy is fixed at Rs.18.989/-, Rs.11.997/-, Rs.12.395/- and S- Rs.2.240/- respectively for the

year 2017-18⁴⁵. An additional subsidy is provided for the secondary and micro-nutrients per each tonne and Metric tonne for the balanced use of fertilizers. The MRP and the subsidy amount is to be printed on the packaged fertilizer bags and selling the above the MRP is considered a punishable offense under the law.

In the study area, both government and private agencies sell the fertilizers to the cultivators at the MRP printed on the fertilizer bags. It is observed that the cost printed on the private manufacturer's fertilizers is higher than the one printed on the government manufactured fertilizer bags. From Table-5.1 we can observe that the majority of the farmers in the study area prefer to buy the fertilizers from the private agencies for the same reasons as that of seeds mentioned above. In order to cut the cost of inputs, a significant number of cultivators prefer to source fertilizers from both private and government agencies depending on availability and affordability. There is a common belief among the farmers in the study area that there is not much difference in the quality of fertilizers provided by the government and private agencies.

In the case of land being cultivated under the *Batai* system, the landowner has to completely bear the cost of Urea (non-subsidized fertilizer) also called *Adugu Mandu* while the fertilizer applied above the soil has to be borne by the tenant. It is observed that most of the landowners take a special interest in optimum utilization of fertilizers in their fields as excess application results in loss of soil fertility while the insufficient supply leads to reduced yield. In fact, landowners observe this specific quality (judicious use of fertilizers) in a tenant while choosing the tenant for the cultivation of his land under the *Batai* System. At the same time, a tenant looks for a landowner who doesn't insist on the application of excess fertilizers or who provides sufficient *Adugu Mandu* in cultivating the land under the *Batai* System. The table below provides details on the preference of tenants under different types of tenancy in sourcing fertilizers.

⁴⁵ See 'The Agricultural Action Plan for the year 2017-19', Department of Agriculture, Government of Telangana.

**Table 6.34: Tenants Preference of Sources in buying the Fertilizers in the Study Area.
(for Kharif Season 2017-18)**

Sl. No	Source for Fertilizers	<i>Batai</i> System	<i>Kowlu</i> System	<i>Nellapalu</i> System	<i>Batai and Nellapalu</i> System
		Number of Households	Number of Households	Number of Households	Number of Households
1	Government Agencies	3	4	1	4
2	Private Agencies	30	16	12	13
3	Government and Private Agencies	22	11	6	2
4	<i>Uddera</i>	2	4	1	4
	Total	57	35	20	23

Source: Field Survey, 2017-18.

It is evident from the above table that about 91% of tenant households cultivating under *Batai* system, *Kowlu* system, and *Nellapalu* system prefer to source their Fertilizers from Private agencies alone, and Government and Private agencies. Though the cost of fertilizers sold by the government agencies is approximately 10% less than Private agencies, tenants are willing to bear the additional cost in buying from the private agencies. However, each farmer would exhaust his quota of fertilizers allocated by the government and then they buy the required additional fertilizers from the private agencies.

There are few marginal and landless farmers who borrow fertilizers from the neighbours or landowners on the condition that they would repay the equal value in cash after the harvest of the crop. The neighbouring landowners share fertilizers with such farmers in exchange for labour services rendered in their lands.

In the case of pesticides, the cost of it is completely borne by the tenants in any tenancy type, therefore the obvious choice would be to source from the private agencies. Overall, the streamlining of seed and fertilizer production and distribution by government and private agencies to a great extent had relieved the tenant farmers from the clutches of middlemen in the study area. There is an increased awareness among the cultivators in the study area about the disadvantages of excess use of fertilizers in cultivation. However, with the increased number of private agencies involved in the production and distribution of seeds and fertilizers,

the decision-making process of a tenant selecting the best product without affecting the relations with landowners had become more dynamic and complicated.

6.2.1. Farm Mechanization

Mechanization of agricultural operations has been one of the thrust areas the governments at the Centre and States have been vigorously pursuing. Mechanization is believed to increase production and productivity by reducing the drudgery of farmers in agricultural operations. With the increasing land under cultivation, timely completion of agricultural operations had become a challenge to the ‘capitalist’ farmers. Indian agriculture being predominantly led by small and medium sized landholdings, the spread of farm mechanization was uneven and restricted to selected parts of India. Telangana state largely being semi-arid has not received benefits of the ‘Green Revolution’ compared to the other regions in the combined state of Andhra Pradesh. However, there has been considerable progress in the mechanization of agricultural operations through the interventions; subsidy and financial aid in procuring the farm machinery to the eligible farmers. Governments at the Union and State level are implementing the farm mechanization under three schemes⁴⁶; 1. Farm Mechanization component of Normal State Plan (FM-NSP), 2. Farm Mechanization component of Rashtriya Krishi Vikas Yojana (FM-RKVV) and 3. Sub-Mission on Agricultural Mechanization (SMAM).

In the study area, for the first time in the 1970s, one of the Patel’s of four villages had bought a diesel engine and set of pipes to lift water from the flood canal of the Nizamsagar Project. From then on landlords in the five villages had been the pioneers of mechanization of agricultural operations. In the initial days with the introduction of machines, the area under cultivation increased and consequently small and marginal farmers had worked as wage labour in the fields of the landlord. However, with the State intervention in the form of subsidies and financial aid to small and medium-scale farmers had increased the count of machines like tractors and its ancillary equipment in the study area. Under the Yantra Laxmi Scheme introduced by the Government of Telangana, eligible farmers belonging to Scheduled Caste or Scheduled Tribe can avail of the loan facility to buy tractors. 50% of the cost of the tractor is paid by the government while the rest of the amount can be availed as a loan from scheduled commercial banks. As per the scheme, only five eligible farmers per each Mandal are provided

⁴⁶ See The Agricultural Action Plan for the year 2017-19’, Department of Agriculture, Government of Telangana.

with such subsidy by the government. One of the respondents, who were eligible but could not get the loan sanctioned opines that local politicians are the decision-makers in finalizing the list of beneficiaries. One of the beneficiaries belonging to the study area got benefitted from the Scheme. The beneficiary belonging to the SC category from the village used his political network to get 50% of the cost as a loan from the government, while the remaining amount is paid by the local politician. The beneficiary uses a politician's network to get the clients from other castes while the politician in return would have assured labour supply for cultivating his land and complete the agricultural operations within the time. In this case, state intervention had led to the increased dependency between a resource constraint cultivator and landowner in the cultivation of land. At present, there are 15 tractor owners extending their services to the cultivators in the study area. In addition to these, there are tractor owners from nearby villages who also extend their services to four villages in the study area.

When there are only four tractors owned by the landlords in the study area, they use to rent out their tractors selectively to few farmers in exchange for assured labour services during peak agricultural season in their fields. This strategy had worked well for the landowners to expand their land under cultivation. However, with government interventions under different subsidy schemes, some of the medium sized landholding farmers had bought tractors. By 2007, the number of tractors had doubled in the study area and the competition among the tractor owners had resulted in the framing of informal rules and regulations among the tractor owners. Especially, the cost per hour and the tractor owner-client relations are regulated or secured through the collective decision-making process periodically.

In-depth field interviews had revealed that the cost of renting a tractor per hour⁴⁷ is fixed by the tractor owners collectively. No tractor owner can render services below the collectively agreed price by tractor owners. A landowner or tenant involved in Paddy cultivation requires tractor primarily at three stages in an agricultural season. Once at the initial ploughing of land and then after a gap of two weeks, normal tyres are replaced with cage wheels for making the land ready for transplantation of paddy saplings and finally after the harvest to shift the produce from field to market or procurement location. As per the informal or oral agreement between the tractor owner and landowners or tenants, a landowner or tenant can't hire another tractor other than the one which was first called to do initial ploughing of field. At

⁴⁷ For the Kharif Season 2017-18, the Cost per hour for initial ploughing of land is 700 rupees and for making the land ready for final transplantation of paddy saplings using Cage wheel instead of normal tyres is field at 1000/- pe hour.

the same time, a tractor owner should not rent his tractor to carry out operations at the second or third stage of agricultural operation in paddy cultivation. A landowner or tenant can change the tractor service provider only after the end of the season or if the existing tractor owner has no objection to the decision of the client. These rules and regulations to a great extent discouraged the new or potential tractors owners to buy new tractors at the same time had resulted in the optimum utilization of the existing tractors in the study area.

In order to keep the clientele intact, some of the tractor owners do not insist on hourly rent payments immediately after the completion of work. A landowner or tenant is given an option to pay the per hour rent amount after the harvest season. However, the rent amount would be 30% more than the per hour rent amount. In this way, both the client and a tractor owner are involved in mutually dependent relations in the timely completion of agricultural operations.

During peak agricultural season, tractor owners follow first come first serve basis in rendering their service therefore, each cultivator has to wait till his turn. In case of delay in the decision about the cultivation of land, it becomes costly to hire tractor as surrounding fields will be cultivated by the adjacent landowners and giving way for the tractor to the field becomes an additional financial burden. One of the respondents opines that because of the large clientele base for each tractor owner it's always advantageous for a landowner to have good relations with tractor owners. Therefore, few landowners choose to give their dryland for cultivation under the *Kowlu* system at lower rents in return for assured timely completion of agricultural operations in their wetlands.

The rules and regulations regarding the clients and per hour rent are not as rigid as it appears to be. Most of the tractor owners in order to achieve optimum utilization of resources available with them, they would swap the clients (as long as the clients do not object). In case of machine failure or non-availability of tractors during peak agricultural season, tractor owners from outside the study area are invited to complete the works in the study area.

Prior to the introduction of tractors and other machinery into agricultural operations, landowners preferred to lease-out their lands to tenants having a bullock cart and enough draft animals. At present, having a tractor has an added advantage in leasing-in lands from landowners. However, it's the large landowners who prefer to lease-out their lands to the tractor owners. This is because small and medium landowners believe that having a tractor keeps the tenant busy throughout the peak agricultural season and consequently would neglect the leased-

in land. Even among the large landholders, only drylands under the *Kowlu* system are preferably extended to the tractor owners. With the increased number of tractors in the study area, it's becoming difficult to find a skilled driver for the large landowners who own tractors as well. Therefore, they are leasing-out lands to tenants who have the skill of driving a tractor so that he can complete the agricultural operations on leased-in land as well as the remaining lands of the landowner. It is also observed in the study area that other than a tractor and ancillary equipment; no other machinery is being used in agricultural operations.

6.2.2. Institutional Credit Support.

The need for institutional credit for agriculture has been recognized even before India's independence. The Deccan riots of 1875 had led to setting up of a committee to study the indebtedness and agrarian distress in the region and recommendations of the committee resulted in the formulation of the Agriculturists Relief Act, 1879. This act had ensured that a cultivator could not be detained or arrested in case of default of loan repayment. On the recommendations of the Indian Famine Commission, 1882, legislative measures such as the Land Improvement Loans Act of 1883 and the Agriculturalists Loans Act of 1884 have been enacted to protect the interest of farmers in availing institutional and informal credit. In independent India, the introduction of the 'green revolution' to traditional agriculture had increased the demand for institutional credit by many folds. Accordingly, the government under different schemes and programs had extended the institutional credit. Pallavi Chavan observes that during the 1980s when the 'green revolution' was spreading across different regions in India, the public investment in agriculture had reached a maximum of 41.7% however, by the year 2011, it was decreased to 16% (2013). Consequently, the increasing rural indebtedness was reflected in the 70th round NSSO report, 2013 which reveals that the rural indebtedness in the country had increased from 48.6% in the year 2003 (NSSO 59th round report) to 52% in 2013.

Among the major States, "Andhra Pradesh had the highest share of indebted agricultural households in the country (92.9 percent) followed by Telangana (89.1 percent)"⁴⁸. It was in the year 2011, the government of the erstwhile combined state of Andhra Pradesh had initiated interest-free crop loans to all farmers up to one lakh rupees. In addition, *Pavala Vaddi* (0.25% interest) crop loans are extended for the principal amount in the range of one lakh to three (3)

⁴⁸ See NSSO Report No. 576 titled "Income, Expenditure, Productive Assets and Indebtedness of Agricultural Households in India", 2012-13 (Page Number: 33).

lakh rupees starting from the Rabi season of the year 2011. The table below provides details about the Credit extended by the Telangana State government with the help of the State Level Bankers' Committee of Telangana.

Table 6.5: Telangana State Credit Plan Achievements from 2015-16 to 2017-18.

Sl.No.	Segments	Disbursal for the year 2015-16 (Cr)	Disbursal for the year 2016-17 (Cr)	The target for the year 2017-18 (Cr)
1	Crops Loans	23,366	28,661	23,851
2	Agricultural Term Loans	8,746	6,143	10,715
3	Allied Agricultural Activities	1,945	2,608	3,731
4	Total Agricultural	34,057	37,413	38,298

Source: Annual Credit Plan of Telangana, 2017-18 (2nd Quarter, September 2017).

In addition to the loans extended by the scheduled commercial banks, the Telangana government with the help of Telangana State Co-operative Apex Bank Limited (TSCAB) extends timely and adequate credit to the agricultural households in the state. TSCAB plays a pivotal role in the effective functioning of DCCBs (District Co-operative Central Banks) and PACs (Primary Agriculture Co-operative Credit Societies). TSCAB's loan portfolio includes crop loans, short and long terms loans for agricultural purposes and it also provides loans against the post-harvest warehouse receipts, facilitating the farmers to sell their produce at a remunerative price. For the year 2017-18, the total disbursal made by TSCAB under Crop loans is Rs. 1,486.61 crore and Rs.1,103.90 crore under short-term (others).

From the above table, we can infer that the majority of the loans extended are short term crop loans, which has to be paid back in a year to avail fresh loans for the next cropping season. The crop loans are barely sufficient to meet the inputs expenditure and farmer is left with no financial resources to take up long terms productivity enhancement measures such as land improvement or reclamation, development activities in his field. As per the Annual Credit Plan for the year 2017-18, the loans extended for paddy cultivation are highest and Paddy and Cotton crops combinedly take more than 50% of the annual credit. The table below provides for major crop-wise loans extended under the annual credit plan for the year 2017-18.

Table 6.5: Major Crop wise loans under the Annual Credit Plan for the Year 2017-18.

Sl. No.	Crops	Amount Target		Beneficiary Target	
		Amount in (Crores)	% Share	Number of Loanees	% share
1	Paddy	16,690	42.0	19,18,424	38.8
2.	Maize	2,312	5.8	5,50,466	11.1
3	Groundnut	1,457	3.7	2,91,483	5.9
4	Pulses	1,770	4.5	2,10,764	4.3
5	Vegetable cultivation	1,381	3.5	2,12,441	4.3
6	Jower/Bajra	2,053	5.2	3,53,961	7.2
7	Soya/Ragi	378	1.0	89,948	1.8
8	Cotton	6,810	17.1	7,48,294	15.2
9	Sugarcane	989	2.5	69,182	1.4

Source: Annual Credit Plan of Telangana, 2017-18.

The crop-wise loans have a direct impact on the diversity of the crops cultivated by the farmers. Generally, the disbursal of institutional credit is carried out for about two to three weeks in each cropping season in a financial year, especially the timing of the disbursal of the loans is tuned with the Paddy and Cotton cultivation. It is observed that, though the farmer wants to cultivate vegetables, pulses and other drought-resistant crops the non-availability of timely institutional credit makes difficult for the cultivation of farmer's choice of crops. Non-availability of timely institutional credit support for crops other than Paddy, Cotton, and Maize discourages the farmers to take up different crops for cultivation.

Among the five villages of the study area, 188 households of the total 252 had availed institutional credit from Scheduled Commercial banks and TSCABs. Crop loans are extended to land-owning farmers only. Land *Pattas* or Title deeds are surrendered as collateral with the lending agencies to avail the loan. Loan amounts are determined by the size of landholding each farmer owns. This system had effectively alienated all the tenant cultivators from the institutional credit support. However, tenant farmers owning dry and unfertile lands avail the crop loans to cultivate fertile leased in lands. Since the loans are extended based on the size of

landholding, the majority of the farmers irrespective of the need avails the crop loan. The primary reason is that all the political parties had promised to waive off the crop loans below one lakh, this promise had emboldened the land-owing farmers to avail the loan. In the study area, it has been common practice to avail the crop loans one year prior to the general elections. Observing the trend of agricultural credit cycle Shawn Coel mentions as below:

“I find evidence of political lending cycles. Moreover, credit is targeted toward districts in which the majority party just won or just lost the election. This targeting is observed only in election years. Finally, a separate pattern of targeting is observed for loan write-offs than for lending. Write-offs are greatest in the districts in which the winning party enjoyed the most electoral success. This pattern is observed only following an election, not prior to it” (Shawn Coel, 2009: 248).

The TRS (Telangana Rashtra Samithi) Party which came to power in the year 2014 had waived off the outstanding debt of each farmer in the form of crop loans up to one lakh rupees as on 31st March 2014. The Debt Waiver Scheme 2014-15 was implemented in four equal instalments (2014-15, 2015-16, 2016-17, 2017-18). This scheme had also waived off gold loans availed for the purpose of agriculture. In-depth interviews with the beneficiaries under this scheme revealed that the interest on the crop loan is paid by the farmers while the total principal amount is being paid by the government in four equal instalments. Banks had insisted on payment of interest to renew the crop loans for every season. This condition set by the banks had created confusion among the farmers and government as promised didn't pay the instalments on time and this led to increased interest on the principal amount. In the hope that the government would pay all the dues, some of the farmers expressed their reluctance to pay the interest amount and started borrowing money from private moneylenders.

For tenant cultivators who have small or marginal sized landholdings institutional credit had helped to overcome the exploitative rates of interest charged on the short term loans by the private local moneylenders. It was observed that most of the landowning tenant cultivators had paid the crop loans availed from the bank on time for the early renewal of crop loans for each cropping season. In some cases, the delay in disbursal of institutional credit had led landowning tenant cultivators to borrow money from local moneylenders and the loan amount is paid back immediately after banks sanction the loan. Interestingly, local moneylenders are inclined to lend loans to small and marginal tenant cultivators as they would renew their institutional loans every cropping season without fail. Therefore, local moneylenders would charge a competitive rate of interest on the principal amount lent to tenant cultivators without any collateral (the loan agreement is written on a white paper mentioning the amount of money taken, rate of interest

and signature of both parties). At the same time, landowners who have not actively involved in the cultivation or leased-out their lands are the major loan defaulters in the study area. It is observed that in the study area most of the farmers either cultivating their own land or leased-in or leased-out lands avail crop loans to buy the agricultural inputs. The table below provides details about the specific purpose of availing crop loans.

Table 6.6: Specific Purpose of taking crop loan from Scheduled Commercial Banks and TSCABs.

Sl. No.	Specific Purpose of taking crop loan from Scheduled Commercial Banks and TSCABs	Number of Households
1	Agricultural Inputs	173
2	Household Consumption	3
3	Lift motor and Irrigation	4
4	To Purchase Cattle	3
5	Miscellaneous	5
	Total Number of Households	188

Source: Field Survey, 2017-18.

As mentioned above, the majority of the landowners who are cultivating their own lands had availed the crop loan and intend to not repay the loan as it is promised to be waived off by the government. However, for the majority of small and marginal landholding tenant cultivators, the timely availability of crop loan has become a basic requirement to start the agricultural operations on time.

The table below provides details about the amount of crop loan availed by the cultivators in the study area. As the majority of the landowners belong to the small and marginal category having landholdings of size in the range of one to three (3) acres, one can observe the high frequency of households availing crop loan amount in the range of ten thousand rupees to one lakh rupees. About 20% of the total 188 households availing crop loans were sanctioned more than one lakh rupees as crop loan while the remaining were sanctioned below one lakh. It is mentioned by the cultivators that the amount sanctioned is not sufficient to meet the initial costs of agricultural inputs. In order to earn the required money, they migrate to nearby towns to work as casual labour in construction works. It is observed that most of the cultivators prefer paddy cultivation as this crop gives a sufficient gap in agricultural operations during which the cultivator can migrate to nearby towns to earn the money required to pay the wages of the labour involved in agricultural operations in his field. In the case of tenant cultivators, they prefer to take credit from the landowner or local moneylender to meet the agricultural

expenditures. Some of the cultivators depend on the DWCRA or SHGs loans extended to the female members of the households to meet the agricultural expenditures.

Table 6.7: Crop loans availed from Scheduled Commercial Banks and TSCABs by the Landowners in the Study Area.

Sl.No.	Loan Amount Availed (in Rupees)	Number of Households
1	Up to 10,000	8
2	Between 10,000 to 25,000	42
3	Between 25,000 to 40,000	24
4	Between 40,000 to 55,000	37
5	Between 55,000 to 70,000	14
6	Between 70,000 to 85,000	17
7	Between 85,000 to 1,00,000	8
8	Between 1,00,000 to 1,15,000	20
9	Between 1,15,000 to 1,30,000	1
10	Between 1,30,000 to 1,45,000	1
11	Between 1,45,000 to 1,60,000	4
12	Between 1,60,000 to 1,75,000	1
13	Between 1,75,000 to 1,90,000	1
14	Between 1,90,000 to 2,50,000	6
15	Above 2,50,000	4
	Total	188

Source: Field Survey, 2017-18.

Credit has been one of the important linkage factors binding a tenant and landowner to carry out the agricultural operations. In the case of the *Batai* System, the landowner often plays the role of creditor binding the tenant to cultivate his lands. Whereas the same landowner tends to shy away from the role of a creditor for the *Kowludar* of his land. However, in both cases, if the tenant cultivator has more landholding than that of the landowner, the tenant cultivator would provide the credit as advances towards payment of *Kowlu* or *Batai* Share. With the state intervention in providing the timely institutional credit, one can observe the linkages between landowners and tenants have become feeble. The relations in agricultural resource sharing had become dynamic with the tenants acquiring the bargaining power in leasing-in lands from the landowners. At the same time, small and medium-scale farmers who earlier struggled for adequate credit had become more aggressive in the cultivation of their lands. Formal credit supply had created a level playing field for landowners and a resource deficit tenant. In-depth interviews with the beneficiaries of formal credit reveal that with the timely availability of credit, the risk associated with agriculture operations had reduced and most of the landowners are preferring to lease-out their lands for cultivation under the *Batai* system. In some cases,

landowners cultivate their lands with the help of daily wage labour. Moreover, the menace of exploitative local moneylenders has been controlled and to a certain extent, the rate of interest on the principal amount lent by the moneylenders has come down on par with the institutional credit. However, the only disadvantage associated with the institutional credit is the time required and paperwork associated with sanctioning the credit. It's here most of the cultivators choose to avail informal credit only to be paid back after availing the institutional credit.

6.2.3. Irrigation Facilities

The Rainfall pattern and Topography of the Telangana region demands diverse irrigation infrastructure facilities. Broadly, the irrigation infrastructure in Telangana consists of Canals, Tanks, and Tube wells or Borewells. Historically, The irrigation in Telangana region was dominated by Tanks. There was a strong emphasis on tank irrigation infrastructure since the dawn of the Pre-Satavahana era. Some of the popular Tanks built by the Kakatiya rulers are Ghanapuram, Laknavaram, Pakhala, Ramappa, and Bayyaram. The subsequent rulers of the Qutubshahi and Asafjahi dynasty had depended on the extensive tank irrigation for the cultivation of lands and revenue generation. However, in course of time with the introduction of new irrigation technologies, the dependency on tanks for cultivation had reduced dramatically and as of the year 2015-16, the gross irrigated area under Tanks had come down to 5.96%⁴⁹. At present, there are 46,531 tanks spread across 33 districts of the state. Under the Mission Kakatiya program (also called as *Mana Ooru - Mana Cheruvu*) with the primary objective of enhancing the income from the agriculture for the small and marginal farmers through the strengthening of micro-irrigation with the help of community participation, all the tanks are being repaired in a phased manner to realize their full potential. The three Tanks in the study area are repaired by rebuilding the bunds and removing the silt from the tanks under the Mission Kakatiya program. The majority of the farmers having dry lands had taken interest in transporting the silt from the Tanks to their fields. It was mentioned by one of the respondents that as the silt from the village Tank was fertile, he reduced the quantity of fertilizer sprayed on his field and yet achieve bumper yield during the previous season.

Primarily Irrigation infrastructure in Telangana State caters to three basic requirements: Farming purposes, Drinking water purpose and Industrial purposes. Based on the command area, the irrigation projects are categorized as Major, Medium, and Micro projects. Irrigation projects having a command area of more than 10,000 hectares area is considered as a Major

⁴⁹ See The Socio-Economic Outlook, Planning Department, Telangana, 2017, p. 45.

project while command area in the range of 2,000 to 10,000 hectares is considered as Medium irrigation project and Micro Irrigation projects cater to the command areas of less than 2,000 hectares. In the study area, there are two notable irrigation projects: 1. Nizamsagar Major Irrigation Project and 2. Nallavagu Medium Irrigation Project. Farmers in the study area have access to these two projects for the cultivation of their lands. In addition to these, farmers in the region are dependent on the Tube wells or Borewells.

Prior to the introduction of Lift-Motors to these villages, farming was carried out by drawing water from Tanks and flood canals of the Nizamsagar Project. It was in the 1970s, the Patels of the five villages had introduced seven (7) HP motors to draw water from the flood canals of the Nizamsagar Project and Nallavagu Projects. With these, the area under cultivation had increased and some of the small and medium sized landholding farmers had started cultivation of their lands by taking water from Patel's Lift-motors under *Nellapalu* System.

With the introduction of Tube well or Borewell technology in the study area, most of the small and marginal farmers had started cultivation without taking water from the Patels and other large landholding farmers. The table below reflects that the majority of households dependent on Lift-motors followed by Tube wells or Borewells for the cultivation of their lands. It was observed that the majority of the Lift-motors are more than seven (7) years old and setting up Lift-motors and pipelines to fields requires huge investments, which was very difficult for a small and marginal farmer to get. Most of the Lift-motors are set up by two or more farmers sharing the investments in proportion to their size of landholding. However, over the years as the water levels in the Nizamsagar Project and Nallavagu had become unreliable, farmers in the study area have been resorting to Tube wells or Borewells for the cultivation of their fields. In the Kharif season, the water in the Nizamsagar flood canal and Nallavagu are drawn using lift-motors while for cultivation during Rabi season, the Borewells are used. With the increase in land under cultivation, farmers started using multiple sources of irrigation. From the below table, we can observe that about 27% of the total of 217 households are using more than one source of irrigation. Though Lift-motor is used by the majority of the households, the area under cultivation of lift-motor is far less when compared to the area of land cultivated under Tube well. The Tank and Canal irrigation are used predominantly by those farmers whose lands are located in close proximity to these sources of irrigation. The table below provides for the details of sources of irrigation employed by the farmers in the study area.

Table 6.8: Sources of Irrigation in the Study Area.

Sl.No.	Source of Irrigation for Cultivation	Number of Households
1	Lift-Motor	54
2	Tube well/Borewell	41
3	Canal	36
4	Tank	28
5	Tube well and Liftmotor	19
6	Tube well and Canal	18
7	Tube well and Tank	7
8	Tank and Lift motor	5
9	Canal and Tank	4
10	Canal and Lift motor	3
11	Canal, Tank, and Tube well	1
12	Canal, Tank, and Liftmotor	1

Source: Field Survey, 2017-18.

The table below provides details about the level of dependency on the Tube wells for the cultivation of lands by the farmers in the study area. From the table below, we can infer that out of the total 217 households having access to irrigation facility about 60% have Tube well in their fields. It was said by one of the Tube well owners that, in the beginning, the depth of the Borewells use to be in the range of 160 feet to 180 feet. However, with the increased dependency on the Tube wells, the availability of the groundwater had further deepened to above 200 feet. About 38% of the total Tube well owners have more than one Tube well in their fields. In the study area, there are 45 households that have Tube well in their fields along with access to one or more than one source of irrigation such as Canal, Tank, and Lift-motor.

Table 6.9: Tube wells or Borewells used in the Study Area by the Farmers.

Sl.No.	Tube well or Borewell Irrigation	Number of Households	Average Depth of Borewell (in Feet)
1	One Borewell	80	197
2	Two Borewells	36	213
3	Three Borewells	4	197
4	Four Borewells	5	242
5	Five Borewells	2	300
6	Six Borewells	1	200
7	Seven and Above Borewells	2	110

Source: Field Survey, 2017-18.

The In-depth interviews among the landowners who have Tube well in their fields had revealed that having a functional Tube well in one's own field enhances landowner's bargaining power while leasing out their lands to the tenants. It was observed that having a functional Tube well reduces the risks associated with agricultural productivity and the cultivator of land can achieve the expected level of yield from the field. The majority of the landowners who have functional Tube well in their fields tend to lease-out their lands for cultivation under *Batai* System rather than the *Kowlu* system. This specific inclination for *Batai* System is due to the fact that the risks associated with farming are reduced to a great extent and a landowner can supervise all the agricultural operations carried out by the Tenant. The risk and effort is minimum for a landowner while the output is always up to the expected level. In addition, a landowner owning a functional Tube well can share the water from Tube well under *Nellapalu* System, which gives an additional income. As mentioned in the previous Chapter, there are farmers who own marginal landholding but have a functional Tube well in their lands are able to earn extra income by sharing the water from Tube well with the adjacent landowners under *Nellapalu* System. Then there are farmers in the study area, who have invested heavily in installing a functional Tube well in their fields but failed. As a result, they have incurred huge debts and had migrated to nearby towns to work as casual labour to clear off their debts.

Since 1st January 2018, the Government of Telangana was providing 24 hours quality power free of cost to the agriculture sector in the state. About 23 lakh agricultural pump sets are provided with uninterrupted power supply in the state. This intervention was intended to do away with irregular power cuts to the agriculture sector and help farmers for timely completion of agricultural operations. This specific intervention had increased the demand for installation of Tube wells among the landowners. As mentioned by one of the landowners, who had a functional Tube well in his field the 24-hour power supply had increased the over-extraction of groundwater and it had drastically reduced the groundwater levels in the study area. Earlier the groundwater was available at 160 to 180 feet but with an increased number of Tube wells and unregulated drawing of groundwater the groundwater level had reduced, and some Tube wells had even dried up. Many of the farmers who had earlier dug Tube wells in their fields are now further deepening their Tube wells in search of a continuous supply of groundwater. One of the primary reasons for over-exploitation of groundwater was the use of automatic starters for the pump sets in their fields. These automatic starters are set up by the farmers in order to overcome the difficulty of every time switching on the agricultural pump

sets in the case of fluctuations in power supply. However, with the power supply streamlined these automatic starters have become a problem for the Tube well owners. As the Pumpsets are running continuously and more and more water is being extracted from the groundwater, the majority of the Tube wells have dried up or worked only when all the other nearby pump sets are turned off.

Irrigation infrastructure is one of the important factors in deciding the terms and conditions while leasing in/out the land for cultivation under different systems prevailing in the study area. Land having assured irrigation facilities has higher demand among the tenant cultivators. As mentioned above, assured irrigation means higher bargaining power for the landowner and better returns for both the tenant and landowner. It is observed in the study area, small and marginal farmers having assured irrigation are able to expand their area of cultivation by leasing-in lands from the adjacent landowners (who do not have a functional Tube well or any other source of irrigation). In other words, the Tube well technology had made the majority of the small and marginal farmers independent in the cultivation of their lands. Domination of Patel's and other large landholding farmers controlling the irrigation infrastructure in the study area has reduced to a great extent. Though Tube well technology had reduced the dependency relations between the large landholding Patels and small and marginal farmers, it had increased the complexity of agricultural relations between small, marginal, medium sized landholding farmers and Tenants cultivators.

In the case of old aged farmers, having a functional Tube well in their land provides an additional source of income by sharing it with the other cultivators under the *Nellapalu* system. The recent Government interventions in the form of 24 hours power supply, Mission Kakatiya, Modernization of the main canal and distributary system of the Nizamsagar project and Modernization of Nallavagu project would strengthen the existing irrigation infrastructure in the study area. Since these interventions are relatively new, the impact of these on the agricultural resources sharing relations cannot be understood immediately.

6.2.4. Minimum Support Price (MSP)

During the mid-1960s with the introduction of the green revolution to traditional Indian agriculture, production and productivity had increased but the food crisis continued to be a problem. Food grains procurement and distribution systems at that time failed to meet the producer and consumer requirements. This has made the government set up a committee under the Chairmanship of Shri L.K.Jha to advise the government on price policy for agricultural

commodities (Government of India, 1965). The committee had submitted its report in the year 1965 and recommended for the policy initiatives to safeguard the interests of both consumers and producers. The committee as well recommended for market intervention in the form of extensive procurement of food grains and distribution at a specific price level to protect the producers and consumers from the vagaries of markets. As per the recommendations of the committee, Agricultural Price Commission (APC) was established in 1965 to guide the Government in fixing the price of popular crops like Paddy and Wheat. In March 1985, the Agricultural Price Commission was renamed as Commission for Agricultural Costs and Prices (CACP). Every year before the start of agricultural seasons: Kharif and Rabi season on the recommendations of CACP the union cabinet declares the Minimum Support Price (MSP) for a selected list of Crops grown in different regions of India. The primary objective of declaring the MSP for a selected list of crops is to help the farmers make an informed decision about the selection of crops for cultivation. In addition, the MSP protects the interests of the farmers against the price fluctuation in the open market and prohibits the retail or wholesale traders in the market from trading the agricultural produce below the declared MSP.

In addition, the Government of India with the help of the Food Corporation of India (FCI) procures the crops listed at the MSP from the farmers. The procurement is carried out primarily to meet the requirement of the Public Distribution System (PDS). State Governments are also involved in the procurement of the agricultural produce from the farmers at the MSP to meet the requirements of their respective Social Welfare schemes. In the case of Telangana State, the Procurement of specific crops is carried out by Telangana State Co-operative Apex Bank (TSCAB) with the help of the Primary Agricultural Credit Society (PACs). Out of the total 798 PACs in the State, 470 PACs have carried out the procurement process of Paddy crop as an agent of Civil Supplies Corporation Ltd., Government of Telangana⁵⁰.

⁵⁰ See The Socio-Economic Outlook, Planning Department, Telangana, 2018, p. 32.

Table 6.10: Per quintal cost for major crops in Telangana and Minimum Support Price (MSP) determined by the Government of India.

Sl. No	Year	Crop Name ⁵¹					
		Paddy			Maize		
		Cost of Cultivation (in Rupees)	MSP (in Rupees)	% Difference	Cost of Cultivation (in Rupees)	MSP (in Rupees)	% Difference
1	2008-09	1229	900	-36%	1302	840	-55%
2	2009-10	1313	1000	-31%	1419	840	-69%
3	2010-11	1237	1000	-24%	1129	880	-29%
4	2011-12	1854	1080	-71%	1560	980	-59%
5	2012-13	1474	1250	-18%	1435	1175	-22%
6	2013-14	1531	1310	-17%	1377	1310	-5%
7	2014-15	2083	1360	-53%	1550	1310	-18%

Source: Socio-economic outlook 2017-18 for Per quintal cost of cultivation and MSP is compiled from the official website of Food Corporation of India (FCI).

In the study area, two crops Paddy and Maize are popular and cultivated a relatively too large extent. The table above provides details about the cost of cultivation of Paddy and Maize crops in the Telangana State and compared with the MSP declared by the Union Government. It can be observed from the above table that from the year 2008-09 to 2014-15 the cost of cultivation of Paddy and Maize in Telangana State is higher than the Minimum Support Price (MSP) declared by the Government of India. The cost of cultivation for Paddy and Maize crops in Telangana state has been increasing from the year 2008-09 to 2014-15. This increase can be attributed to the intensive use of modern inputs such as fertilizers, pesticides, mechanization of agricultural operations and high dependency on the Tube well and other capital-intensive irrigation facilities. In addition to these, the cost of labour and the

⁵¹ The data relating to Telangana State is obtained from the “Comprehensive Scheme for studying the Cost of Cultivation of Principle Crops in India – Andhra Pradesh and Telangana, Prof. Jayashankar Telangana State Agricultural University, Hyderabad. The study was done for the Ministry of Agriculture, Government of India for estimating cost of cultivation and Minimum Support Price.

amount for leasing-in land for cultivation had increased manifolds during the years 2008-09 to 2014-15.

The Patel of one of the four (4) villages talking about MSP mentions that *‘forget about the profits, the MSP is not even sufficient to meet the expenditures incurred in the cultivation of Paddy crop’*. It is argued that for a country like India with significant variations in soil types, irrigation facilities, climatic conditions it is unpragmatic to arrive at a standard price for each crop. For example, in irrigated regions of India like Punjab and Haryana, the cost of cultivation of quintal paddy is substantially lesser than MSP declared by the Government of India. While the cost of cultivation is very high in the unirrigated and rainfed regions of Telangana⁵². In addition to this, only Paddy was procured at MSP in the study area, whereas Maize and all other crops are bought by the local traders at 100 rupees less than the MRP.

The majority of the farmers in the study area have no prior information about the MSP for Paddy and Maize or for that matter any crop cultivated by them. However, the decision about the cultivation of a specific crop is made based on the MSP declared for crops in the previous season. Most often, if the MSP remained unchanged for more than three seasons, then a farmer thinks about changing the crop (only if the land is suitable for other crops). In the study area, it was observed that Paddy and Maize are cultivated in wetlands and drylands respectively in Kharif season whereas, in Rabi season, preference is given to Maize cultivation in the wetland as well as drylands. It was observed that the majority of small and marginal farmers in the study area cultivate a specific variety of Paddy in the Rabi season for household consumption while the Kharif season Paddy crop variety is sold to the procurement agencies. Even in the case of Tenant cultivators in Rabi season their share of produce is retained for household consumption while the owners share is sold or retained depending on the preference of the landowner. The specific reason behind such a decision was that the Paddy variety cultivated in the Kharif season was considered to be of low-grade quality and its price in the open markets falls below the MSP if not sold immediately after the harvest. Therefore, farmers prefer to sell the complete produce at MSP to the government procurement agencies. In the case of Rabi season, in addition to the better quality of Paddy, the prices in the markets are higher than the MSP even after the completion of the procurement process by government agencies.

⁵² See The Socio-Economic Outlook, Planning Department, Telangana, 2017, p. 48-50.

In the study area, after the harvest season, functionaries of procurement agencies (PACs) in coordination with the elected head (*Sarpanch*) of the village finalizes the date and place of procurement in the village. Accordingly, the public announcement is made in the early morning and evening hours informing the farmers about the MSP and procurement details. In the case of delay in harvesting by a farmer, then he/she should take the produce to the nearest agricultural market to be procured by the government agencies. It is observed that tractors and bullock carts are used for transporting the harvest from the field to the site of procurement. In the case of the *Batai* system, the owner of the land and tenant would divide the total produce into two equal halves and load the same on to tractors or bullock cart. As the procurement agency in the study area has kept a limit of 30 quintals of paddy to be procured per acre most of the tenants seek the help of their landowners in selling their share of produce from leased-in land. The landowner would submit his bank account details to receive the payments from the procurement agency. Once the amount is credited landowner pays the due amount to the tenant. However, if a tenant owns medium sized landholdings and lease-in additional land for cultivation then he would submit his account details as in the majority of the cases the total produce would not cross the maximum limit set. This cap on maximum produce to be procured makes the tenant depend on his landowner to get his share. For landowners, this limit set by the procurement agencies acts as collateral in case of an advance made to a tenant for timely completion of agricultural operations.

The immediate benefit of this institutional intervention has been the decline of the influence of middlemen and moneylenders in the agricultural operations and agricultural income. However, in the case of middlemen and moneylenders, the payments to the farmers are done instantaneously whereas, government agencies take a minimum of two weeks to complete the payments. Tenant cultivators, small and marginal farmers who had taken a loan from informal sources would prefer to sell their produce to local middlemen or moneylenders to reduce the burden of interest amount on the loans.

As there is an extensive paddy procurement process in place in the study area, the majority of the farmers prefer to cultivate it. Even in the case of leased in lands tenants prefer to cultivate paddy as it is shielded from the price fluctuations of the market. With no procurement mechanism in place for crops other than Paddy, the majority of the tenant farmers and landowners have become risk-averse though the land and other factors are favourable for the cultivation of high-value crops. Because of MSP and procurement of select few crops, the farmers in the study area show little or no interest in diversification of the crops cultivated.

However, the majority of farmers in the study had suggested for the continuation and expansion of MSP for the native variety of crops to reduce the risk and increase the income from agriculture.

6.2.5. Livestock and Non-Farm Interventions

Prior to the introduction of the ‘green revolution’ and subsequent mechanization of agricultural operations, livestock had played an important role in traditional Indian agriculture. Livestock in the study area⁵³ consists of Bullocks, Cows, Bulls, Buffaloes, Goats, and Sheep. It was mentioned by one of the respondents, who still maintain livestock that there was a significant decline in the number of draft animals in the study area. This reduction was primarily due to the mechanization of agricultural operations coupled with the increased cost of draft animals in the markets.

In addition, the expansion of cultivation had reduced the grazing lands for the livestock and further restrictions imposed by the Forest department on the movement of cattle in the bordering reserve forest had made managing a livestock difficult endeavor. In the study area except for Sheep and Goats, remaining livestock is taken for grazing in the morning by an individual who is paid annually by the owners of the livestock. This collective livestock grazing arrangement is due to a lack of grazing lands with the owners of livestock. All the livestock is taken for grazing on the periphery of the village adjoining the reserve forest area.

During the Rabi season, some landowners would lease-out their uncultivated lands exclusively for grazing. Leasing-out land for grazing has two major benefits for the landowner: 1. The Livestock waste (organic manure) generated would be of great value in increasing the fertility of the soil and reduces the expenditure on chemical fertilizers for the next cropping season, 2. The landowner would also get the lease amount without much damage to his land.

Each farmer who owns livestock has a specific purpose in maintaining it and the table below provides details about the same. From the below table, it can be observed that there are predominantly four reasons for raising livestock by the farmers in the study area. About 40% of the livestock owning households have a specific purpose of household consumption while 33% of the households sell the milk to a private dairy company located in the village. It was observed that households having kids prefer to raise one or more Buffalos or Cows for a child’s nourishment. About 22% of the livestock owning households use their livestock exclusively

⁵³ For the composition of Livestock in the study area see Table-2 in Chapter 4.

for agricultural operations. It's common to find draft animals with the small and marginal farmers whose lands are either too small or scattered parcels of lands. The small-sized and scattered land parcels make mechanization of agricultural operations an unviable option. Therefore, we find a majority of 22% of the livestock owning households have a pair of draft animals. The other reason for raising livestock is to sell at the appropriate time in the local weekly market. Usually, farmers would buy young livestock and grow them for about six to 24 months and then sell in the nearby weekly market. This strategy is popular among farmers who own 20 to 30 sheep or Goats.

Table 6.11: Specific Purpose of Raising Livestock in the Study Area.

Sl. No	The Specific Purpose of Raising Livestock	Number of Households
1	Agriculture	48
2	To Sell Milk/Dairy	71
3	For the Sale in the Local Market	8
4	Household Consumption	86
	Total Number of Households	213

Source: Field Survey, 2017-18.

In one of the case studies mentioned in Chapter-5, a farmer by selling a large number of sheep/Goat in the market is able to buy small parcels of land from the villagers. Telangana Government had launched a 'Sheep distribution Scheme' with an allocation of 5000 crore rupees in the year 2017-18 with an objective to extend financial support to the skilled sheep rearing families belonging to *Kuruma* and *Golla* caste groups. This intervention is intended to not only enhance non-farm income to beneficiaries but also to help meet the growing demand for meat and wool in the state. This scheme is being implemented by Telangana State Sheep and Goat Development Cooperative Federation (TSSGDCF). Each beneficiary under this scheme is provided a 75% subsidy in purchasing a sheep unit comprising of 20 Ewes and one Ram (male sheep) and the remaining 25% of the total cost shall be borne by the beneficiary. In the study area, there are only two households who had availed the benefit under this scheme. As benefited by the beneficiary, due to lack of grazing lands it's becoming a difficult task to get fodder for the Sheep. So after availing the Sheep under the scheme, beneficiaries are transporting the sheep to the nearby relative's villages (which have sufficient grazing lands). One of the beneficiaries argues that the number of sheep doesn't matter whether 21 or 100 sheep, it's the same effort one has to keep in grazing the sheep, therefore, he had sent his unit of sheep to relative's village and he chooses to be engaged in the cultivation of land.

In the case of the second beneficiary, who happens to have a joint family and has been actively involved in sheep rearing, he maintains a sheepfold adjacent to his backyard. He opines that having a joint family makes easy for him to do cultivation and sheep rearing at the same time. As mentioned by him, having a large number of sheep made him the most sought-after tenant farmer by the landowners in his village. Landowners prefer tenants who have large cattle or livestock for two reasons; 1. The Livestock provides sufficient organic manure that can be used by the tenant for cultivation in the leased-in lands thereby reducing the costs of cultivation and improving the fertility of the soil 2. Having livestock reflects the commitment of the tenant towards farming and allied activities. Thus, tenants with a large family and livestock are most preferred by the landowners to lease-out their lands for cultivation especially under the *Batai* system.

In the study area majority of the farmers belong to Mudiraj caste which has been historically associated with fishing as a primary livelihood. In addition, there are other castes in the study area who are still dependent on fishing activity for their survival. The members from these caste groups possess lifetime membership to carry out the fishing activity in the Nizamsagar Project. According to the eldest Patel of all the villages in the study area, most of the cultivable lands owned by the villagers in the study area were submerged under the Nizamsagar Project. The then regime of Hyderabad State had acquired 400 acres of cultivable from Patel's father alone for the project. As the water flows to the project reduced and subsequent governments' apathy in repair and maintenance activities the water level had reduced drastically. Prolonged low levels of water in the Nizamsagar project coupled with an increased number of fishermen claiming rights on the fishing activity had pushed away from the majority of the fisherman cast members from relying on the fishing activity. However, with the improvement in irrigation infrastructure and other interventions made by the governments over a period, members from fishing castes had shifted their primary occupation to agriculture. Initially, they worked as agricultural labour in the lands of Patels of the study area. As they acquired knowledge on various techniques on the cultivation of different crops they started cultivating their own lands while few families bought lands from Patel and other large landholding families in the study area.

Government of Telangana in order to revive the fisheries sector areas had proposed to utilize the inland water bodies such as reservoirs, ponds, and tanks every year by seeding at free of cost in addition to the conservancy initiatives to regulate and maintain the stock. for targeted delivery of benefits, the government had conducted membership drive among

fishermen and women for enrolment into fisheries cooperatives. There are 2.8 lakh members organised into about 3980 fishermen societies in the state⁵⁴. Dedicated fishmarkets are being set up in the towns and cities to provide high-profit margin to the fisherman and best prices to the consumers. In the study area, this specific intervention had provided an alternative livelihood for the fisherman who carryout '*shikari*' in the Nizamsagar Project during the lean agricultural season. There are very few households reported to have complete dependence on the fishing activity. Whereas majority of the households belonging to fisherman caste though having fishing licenses would prefer to go for '*shikari*' only when not involved in agricultural operations or lean agriculture season. In some instances when a non-fisherman has some special guests to their home, they would request the fisherman caste members to get some fresh fish from the reservoir. With the recent government interventions in reviving the fisheries sector, the consequences on the other livelihood alternatives among the fishermen in the study area are yet to be explored.

It was observed that there is a renewed interest among the farmers in the study area about the raising of livestock. Especially there has been a considerable increase in the number of milch animals. As the risks involved in agriculture have been increasing, raising livestock had become an alternative strategy to offset the losses in an unfavourable agricultural season. In-depth interviews with the owners of the livestock reveal that there are two primary reasons for raising livestock in the study area; 1. The milch animals provide a regular income of about 800 to 1200 rupees per week, which is a substantial amount given the efforts put in, 2. The size of livestock determines the chances of a tenant farmer leasing-in lands from landowners for cultivation under different systems. Few households in the study area have been involved in raising the livestock from three decades while the majority of the households had recently purchased the livestock. The table below provides details about the source of money for purchasing the livestock.

Table 6.12: Source of Money for Households to buy livestock in the Study Area.

Sl.No.	Source of Money to Buy Livestock	Number of Households
1	Household Savings	141
2	On credit from informal sources	24
3	SHGs loan	16

Source: Field Survey, 2017-18.

⁵⁴ See The Socio-Economic Outlook, Planning Department, Telangana, 2018, p.48.

From the above table, we can infer that the majority of the households relied on the household savings followed by on credit from the informal sources to purchase livestock. It is also observed that most often the women members of the households take responsibility for raising the livestock in the study area. In-depth field interviews with women members of the households reveal that the household savings are nothing, but the money borrowed from their parents or in-laws at no interest or nominal interest rate. In some cases, as part of the dowry, the bride's parents would gift a pair of draft animals or milch animals while in some cases, the bride's parents promise to gift a pair of draft animals or milch animals after the birth of the first child to the married couple. One of the oldest women members of the family mentions that prior to the introduction of tractors in agricultural operations in the study area livestock had played important role in marriage alliances and often dowry is paid in terms of pair of the draft and milch animals. It can be inferred that due to the importance attached to livestock in a matrimonial exchange that comes along with the bride, raising of the livestock is usually looked at as the responsibility of women members in the family. With the government interventions in terms of providing the institutional credit to the women in the study area, the size of livestock had improved significantly in recent times.

State interventions in the form of extension of microfinance or institutional credit to unbanked households in the rural areas had helped marginalized sections to formulate alternative livelihood strategies. The institutional credit is extended to registered Self Help Groups (SHGs) under DWCRA and Stree Nidhi Schemes among the women of the study area. There are 36 active SHGs with a minimum of 10 members in each group. In total there are 196 households in the study area whose member(s) are part of SHGs while 56 households are found to have none of their members in any SHGs. In Telangana State, the SHG-Bank linkage program has been enabling rural women to actively engage in alternative livelihoods. In the study area, loans extended under Stree Nidhi Scheme are exclusively used for buying milch animals. In fact, the loans extended under the Stree Nidhi Scheme is termed as '*Barre Loan*' (*Barre* refers to Buffalo). In the year 2017-18, 14 members belonging to different SHGs bought milch animals with the help of Stree Nidhi loans. According to one of the beneficiaries, the weekly earnings from the sale of milk would be sufficient to clear the debt in 12 to 18 months. At the end of 18 months, one would be left with a net savings of about 60000 to 80000 rupees depending on the market price of a milch animal. There are beneficiaries who buy two or more calf and grow them for about two to three years and then sell in the market. The table below provides a list of registered SHGs in the study area.

Table 6.13: The Details about SHGs in the Study Area.

Sl. No	SHG's Name	Group Size	Loan extended for each member (in Rupees)
1	Ambedkar	10	50,000
2	Arundathi	10	45,000
3	Bapuji	10	50,000
4	Bathukamma	10	50,000
5	Bhavani	10	50,000
6	Dhanalaxmi	13	35,000
7	Durga	14	30,000
8	Ganapathi	10	25,000
9	Gandhi	10	40,000
10	Gangaputra	13	35,000
11	Indira (Broken group)	10	Defaulted
12	Jai Bhavani	10	30,000
13	Jai Hanuman	10	50,000
14	Jhansi	10	40,000
15	Manikprabhu	10	20,000
16	Nagalaxmi	13	20,000
17	Navadurga	10	50,000
18	Navajyothi	12	50,000
19	Netaji	10	30,000
20	Padmavathi	10	30,000
21	Radhika	10	40,000
22	Rajeshwari	13	40,000
23	Renuka	10	50,000
24	Sairam	10	40,000
25	Santhoshimata	10	50,000
26	Saraswati	12	25,000
27	Shabari	10	50,000
28	Shiva	10	20,000
29	Sree Anjaneyam	12	20,000
30	Sree Rama	12	40,000
31	Swathi	17	30,000
32	Telangana	10	30,000
33	Tulasi	10	50,000
34	Varalaxmi	10	50,000
35	Venkateshwara	10	50,000
36	Yashoda Dev	10	50,000
37	Yellamma	10	20,000

Source: Field Survey, 2017-18.

The table below provides for the details about the specific purpose of availing loans from the SHGs.

Table 6.14: Specific Purpose of Loan Availed under SHGs in the Study Area.

Sl.No.	Specific Purpose of Loan Availed under SHGs	Number of Households
1	Agriculture and Irrigation	78
2	To buy Buffaloes	32
3	Household Consumption	26
4	To clear debts	20
5	Marriages	13
6	House renovation	06
7	Health-related and Education	05
8	To lend to others	04

Source: Field Survey, 2017-18.

The stated purpose of providing loans for members of SHGs is to enable them to undertake alternate livelihood activities. However, from the above table, we can understand that the loans availed are utilized for multiple purposes depending on the needs of the beneficiaries. In the study area, the majority of the loans availed under the SHGs Scheme is being utilized for Agriculture and Irrigation purposes. In-depth interviews with the beneficiaries had revealed that the institutional credit availed by women members of the households were often utilized to meet the expenditures incurred in the cultivation of leased-in lands. In fact, the timely availability of the institutional credit had intensified the competition among the tenant farmers to lease-in more lands in the study area. It was also observed that the institutional credit services are used to clear-off the high-interest rate debts taken from local moneylenders.

The recent popular trend is availing the loans to buy the milch animals, which had proved to be a successful livelihood strategy for many of the farmers in the study area. Prior to the introduction of institutional credit services, a large part of debts are incurred in conducting marriage rituals. As mentioned by one of the respondents as the livestock numbers increases, the dependence on the credit to conduct marriage rituals or any other household festivals had reduced. There are only 13 households in the study area, who had availed loans under the SHG scheme for the purpose of conducting marriage or other household rituals. As the rate of interest on the institutional credit is minimal when compared to market rates, few members had availed credit to lend the same at market rates. However, the lender and borrower in most of these cases

would be from the same SHG. For example, in one instance a member of SHG could not raise the required amount to buy a milch animal (Buffalo) so, she had borrowed the money from a fellow member at the market rate of interest to buy a Buffalo. In the case of two women members from the same household, both would avail the loan and collectively invest in agriculture or utilize it for any other purpose. These interventions by the state had strengthened the role of women in the economic decision-making processes at the household level. There are 30 women-headed households (27 are widowed women, while three (3) are married) in the study area, who are immensely benefitted from these schemes. The majority of the women-headed landowning households lease out their lands for cultivation under *Batai* or *Kowlu* system. The credit availed under these schemes is utilized for the timely procurement of the agricultural inputs. Tenants would prefer to lease-in lands from women-headed households as there would be a higher degree of freedom and minimum interference in carrying out agricultural operations. It was assumed that most of the women-headed households would lease-out their lands to their blood linked relatives or relatives. However, affordable and timely availability of institutional credit had enabled women to make an informed and economically rational decision while leasing-out their lands. In the case of landless women-headed households, the institutional credit enables to lease-in small parcels of land for cultivation under the *Batai* system. It was observed that small parcels of land are leased-out to landless women-headed households for cultivation in return for assured labour services during the peak agricultural season in the landowner's lands.

A review of the performance of each SHG in the study area is carried out periodically in the presence of a village-level coordinator. Monthly contributions and interest payments are collected and deposited by a representative from each SHG. In the case of Stree Nidhi Scheme, a village-level coordinator organises periodical meetings with all the beneficiaries of the scheme. The village-level coordinator works as a bridge between the beneficiaries and lending agencies.

6.2.6. Other Interventions by the State:

The MGNREG (Mahatma Gandhi National Rural Employment Guarantee) Act, 2005 is another intervention by the state observed to be having a direct influence on the agricultural resources sharing in the study area. As per Section 3(1) of the MGNREG Act, 2005 “State Government shall, in such rural areas in the State as may be notified by the Central Government, provide to every household whose adult members volunteer to do unskilled

manual work not less than one hundred days of such work in a financial year in accordance with scheme made under this Act”. However, the details from the table below reflect the blatant violation of provisions of the act.

Table 6.15: Average days of employment per household and Average wage rate per day per person for the years 2015 to 2019.

Sl. No	Status	2015-16	2016-17	2017-18	2018-19
1	Average days of employment provided per household	48.85	46	45.69	50.48
2	Average wage rate per day per person (In rupees)	154.08	161.65	169.44	179.3
3	Average Income per household (In rupees)	7527	7436	7742	9051

Source: https://nrega.nic.in/netnrega/mgnrega_new/Nrega_home.aspx.

The average days of employment for the years 2015 to 2019 were between 45 to 50 days which is half of the number of days of employment provided in the MGNREG Act, 2005.

In the study area, there are 225 households out of the total 252 households involved in unskilled wage employment under the MGNREG Act, 2005. The table below provides the range of income per household from wage employment under the MGNREG Act, 2005. About 83% of the households involved earn about 2000 to 4000 rupees per annum. When compared to the national figures provided above with the figures obtained from the field, it can be understood that the income generated per household in the study area is about half of the average income per household at the national level.

Table 6.16: Range of Income from MGNREG Scheme per household in the Study Area.

Sl. No	Range of Income (in Rupees)	Number of Households
1	Below 1000	1
2	Between 1000 to 2000	7
3	Between 2000 to 3000	123
4	Between 3000 to 4000	63
5	Between 4000 to 5000	21
6	Between 5000 to 6000	8
7	Above 6000	2
	Total Number of Households	225

Source: Field Survey, 2017-18.

Majority of the respondents in the study area had opined that the number of wage-employment (*Karuvu Pani* is the local's terminology for wage-employment) days is in the

range of 45 to 50 days with daily wage payment in the range of 80 to 130 rupees per person during the lean agricultural season. It was observed that due to the absence of government lands or community-owned lands in the study area, Field Technical officers responsible for identifying the worksite could not provide a mandated number of wage employment days to the beneficiaries under the Act.

As mentioned by the majority of the landowners, due to the MGNREG Act, 2005 the minimum wage per day per person during the agricultural lean season had reached 150 to 200 rupees while during the peak season it touches 300 to 350 rupees. The increase in daily wages had increased the cost of agricultural operations in the study area. In addition to the increase in daily wages, the scarcity of labour during peak agricultural season aggravates the risk of delayed agricultural operations. This is one of the many reasons for the landowner's preference to lease-out part of their lands to tenants who provide assured labour services during the peak agricultural season in the landowner's fields. In fact, the MGNREG Scheme had set a benchmark daily wage-price in the study area affecting the small and marginal landowning farmers the most. However, households with family size more than five (5) adult members could overcome with the help of the exchange labour system practiced in the study area.

Another notable State intervention was ASARA Pension Scheme and it was introduced with a view to ensure a dignified and secure life for all the socio-economically weaker and poor sections of the society. Under this Scheme, individuals who are "old and infirm, widows, disabled persons, toddy tappers, incapacitated weavers, beedi workers and Anti-Retroviral Therapy(ART) Patients who have lost their means of livelihood with growing age are provided with monthly financial assistance⁵⁵. In the study area, the eligible beneficiaries are given monthly pension on a specific day with prior information by branch postmaster. In-depth interviews with the beneficiaries had revealed that the majority of the beneficiaries instead of spending financial assistance for themselves hands it to head of the household. With the assured monthly financial assistance, some of the able elder men and women in the study area had moved away from the active agricultural operations. It was observed that elder people from large undivided families still holding joint rights on the landholdings are actively involved in agricultural operations. There are few individuals, who are still actively involved in agricultural operations and are also cultivating lands under *Batai* System. In the study area, landowners take cognizance of the credentials of the elders in a tenant's household prior to extending

⁵⁵ See The Socio-Economic Outlook, Planning Department, Telangana, 2018, p.5.

his/her land for cultivation under any system. Elders in households act as credibility-link between an old landowner and a young prospective tenant. With financial assistance from the ASARA Scheme, the elders in the study area are able to contribute their share of investment in agricultural inputs. There are also elders who save the pension money and lend the same at the rate of 2-3% to the individuals preferably from within the village. In the case of single mother, widowed and physically challenged individuals, the financial assistance under ASARA Pension Scheme helps in maintaining a basic level of living standards. Especially for the elder women who are suffering from Arthritis and other age-related ailments, the pension amount is of great help in meeting their consumption expenditures.

In addition to the above State interventions, recently the Government of Telangana had introduced Rythu Bandhu Scheme (also called as Farmers' Investment Support Scheme) on 10th May 2018 to provide 4000 rupees per acre per cropping season to all the landowners. The landowners, irrespective of the size of landholding would be provided investment support of 4000 rupees per acre per cropping season. Prior to the introduction of the Rythu Bandhu Scheme, a comprehensive Land Record Purification Programme was carried out to identify the genuine owners of lands and high security enabled e-pattadar passbooks are issued to landowners. Based on one-pattadar books, the first payment of investment support for the Kharif season of 2018 disbursed in the study area. As the investment support is provided to landowners alone, the delicate balance in terms and conditions of resources sharing had tilted in the favour of landowners. The landowners with reduced investment burden demand the same levels of investment from a tenant in the case of the *Batai* System. As the Rythu Bandhu Scheme is a relatively recent intervention by the State government, an in-depth understanding of the impact of the Scheme on the dynamics of agricultural sharing practices requires further research in the study area.

From the above-mentioned interventions by the State at various stages in agricultural production in the study area, we can understand that each intervention has a direct or indirect effect on the dynamics of agricultural resource sharing relations. For each intervention made by the State, the dynamics of resource sharing practices had responded in a manner facilitating the persistence of informal agreements between the resource owners and resource tenants. The above discussion reflects the dominance of capitalistic relations between resource owners and tenants in resource sharing practices.

Chapter 7

Summary and Conclusion

The current research is about the agricultural resource sharing among the small, marginal and medium sized landholding farmers of the Kamareddy district, Telangana. Most of the earlier studies conducted on the Tenancy practices across different global agricultural settings were primarily driven by the economic variables, overlooking the intricate and complex socio-cultural aspects involved. Even among those studies conducted from the socio-cultural perspectives, many have not been conducted based on long fieldwork at the micro-level. The current research is an attempt to understand the diversity of the contexts and consequent contracts in agricultural resource sharing processes from an anthropological perspective.

Dawn of the 21st century marks the beginning of reduced importance on the 'land' as the basic and fundamental to the Indian agrarian system. Herring argued, more provocatively, that 'In a modernizing agricultural sector, land control becomes less determinative of both political and economic power' (1984: 203). Land as a major means of production had been reduced to one of the inputs in agricultural production which was also earlier a determinant of the agrarian structure. These arguments form the basis for the current study in the context of what has been happening more recently in Indian agriculture and rural India.

In the case of India, it is observed that on one hand there is a surplus production of food grains while on the other hand there exists a persistent agrarian crisis, especially among the marginal, small, medium sized landholdings farmers. Since India's Independence, several studies are conducted from diverse perspectives to identify the causes of the persistent agrarian crisis. Significant interventions at the agricultural policy level as well as the agricultural production level are introduced by the Governments. Some of the noteworthy interventions are: Land reforms, 'green revolution', irrigation infrastructure, APMCs, MSP, etc, these interventions have positively contributed to multiplying the agricultural production at an aggregate level. However, at the micro-level with increased production, it was observed that the indebtedness among the rural households had increased many folds. The current study dwells deep into understanding agricultural resource sharing contracts among the farmers with an emphasis on the process as well as on dynamics involved in such processes at the micro-level.

I

In general, discourses on the practice of Tenancy in agriculture are often guided by factors such as risk-sharing, incentivization, measurement costs, market and credit interlinkages, subsistence, survival, and livelihoods, etc. However, for every factor mentioned, the context and the processes involved form the basis for each type of tenancy in practice. The existing literature on the institution of tenancy points to its historical significance, persistence, and adaptability transcending the diverse geographical, socio-cultural, political settings of the world. Often the term ‘Tenancy’ in agriculture is referred to as leasing in or leasing out the ‘land’ in return for a share (fixed or in proportion to the output) either in the form of a kind or cash. However, for the current research, all the agricultural resources in addition to ‘land’ shared or exchanged in agricultural production are considered for the definition of the term ‘Tenancy’.

As defined by N.S.Jodha, Tenancy is one of the oldest ‘institutional devices’ evolved for the temporary purpose of transfer of resources such as land, labour, and capital for utilization between contracting partners (1981: A118). The earliest written evidence on the practice of sharecropping (a form of Tenancy) can be found in the writings of Aristotle in ancient Greece (Byres, 1983: 8). In the Indian context, D.D. Kosambi (1970:150) mentions evidence of sharecropping in Kautilya’s Arthashastra written in 4th Century BC. It signifies the persistence and evolution of ‘Tenancy’ for centuries in different regions of the world to the present day. Tenancy reforms were one of the major components of land reforms implemented in India immediately after independence. Due to the informal nature of Tenancy practiced in rural India, almost all the tenancy reforms either in the form of regulation or abolition had failed to achieve intended results.

According to Mamata Swain (1999: 2662), the resources sharing under tenancy involves two motives; the first motive is to earn a subsistence which is often associated with semi-arid or dry land cultivation while the second motive is to enhance the land under cultivation for optimum utilization of resources which is observed in agriculturally progressive regions. These two motives in combination with diverse geographical, socio-cultural and political settings result in diverse forms of the tenancy such as sharecropping, fixed sharecropping, fixed wage, fixed rent in kind/cash and Wage-Homestead tenancy (popular among the plantation farmers).

The Marxists argue that the earliest form of tenancy i.e., Sharecropping as 'inequitable' and 'inefficient' form of tenancy that prevails in the 'pre-capitalist' or 'quasi' or 'semi-feudalistic' agrarian systems whereas Neo-classical economists argue that the imperfect factor markets and interlinkages associated therewith ensured efficient use of resources by the tenants resulting in 'higher social welfare'. Both the perspectives had failed to accommodate the effects of macro-economic factors such as 'unemployment', 'slow pace of industrialization' and 'regional inequality in development' and 'consequent migration' (Mamata Swain, 1999: 2658) in explaining the diversity in tenancy practices within one region.

Comparing the resource use efficiency of tenants involved in different forms of tenancy, it is argued that fixed rent/cash tenancy is more efficient than sharecropping while the tenants are considered more efficient than landowners in cultivation. However, these arguments are found to be non-universal as empirical evidence obtained across diverse agricultural settings in the world proved otherwise. It was observed that there could not be a universal pattern about efficiency in one form of tenancy or among the tenants or owner cultivators as contexts and consequent contracts do not warrant such comparisons.

It was believed that the introduction of technology into traditional agriculture shall bring about change in the structure of tenancy (Iqbal Singh, 1986). Scholars are divided on the outcome of technological transformation in traditional agriculture practices. One group argues that resource-rich landowners would not encourage technological innovations in agricultural practices as it is believed to improve the economic condition of the tenant (Bhaduri, 1973). The other group argues that innovations in agricultural practices are proactively supported as it enhances production and productivity for the landowner (Newbery, 1975). Then there is another group of scholars who argued that the introduction of technology would eliminate the entire institution of tenancy in rural India (Byres, 1981, Pearce, 1983, Bhalla, 1997). In contrast, a new class of 'entrepreneurial tenants' had emerged in Indian agriculture as observed by Vyas (1970) and Nadkarni (1978). The observations made above strengthen the argument that the nature of Tenancy is dynamic and adaptive. In the current research, greater emphasis was laid on the in-depth understanding of the nature of intervention at every stage of agricultural production. Broadly, technological interventions can be observed in agricultural inputs such as seeds, fertilizers, pesticides, and in general agricultural operations. The Bio-Chemical innovations had resulted in intensive farming, increase in production and productivity. The mechanizations of agricultural operations had resulted in the reclamation and development of large tracts of land for cultivation. Especially the borewell technology has

revolutionized the process of resource allocation and operations. The current research reveals that the technological interventions had strengthened interlinkages of factors of production and increased the dependency relations through scarce resources sharing contracts among the farmers in the study area.

The opening of the Indian economy in 1991 and neoliberal policies thereafter introduced had led to rapid commercialization of national natural resources in general and social relations in specific. Besides, the changes in the policies of the state and subsequent interventions at various stages of agricultural production had led to diversity in agricultural resource sharing mechanisms. The persistence of various forms of tenancy through periods of socio-cultural, political, economic, and technological changes is a potential area requiring the attention of the discipline of anthropology (A.F. Robertson, 1980). Therefore, the current study seeks to understand and analyse the types of resource sharing contracts, the pattern of term and conditions, criteria of selecting resource owners and tenants, and also to understand the diverse contexts and consequent resource sharing mechanisms at the micro-level among the small, marginal and medium sized landholding farmers.

II

The current study is carried out among the five (5) villages of Kamareddy district, Telangana State. The secondary sources of information related to the agrarian history of the Hyderabad State reveal that various forms of Tenancy are in practice in the region. The land tenure system and land revenue system of the erstwhile Hyderabad State was a combination of the Zamindari and Ryotwari system similar to the one followed in other provinces of British India. Large tracts of lands are held by a few families in a village while no rights on land are bestowed on the majority of actual cultivators. Broadly the entire land area of the Hyderabad State can be divided into three categories of jurisdiction: 1. *Diwani/Khalsa/State Government Lands*, 2. *Paighas, Sansthan/Jagir Lands* and 3. *Sarf-i-Khas* or Crown Lands. About 59.2% of the total land belong to the first category while 31% and 9.8% of the total lands belong to the second and third category respectively. In the case of the first category Rytowari System of Land revenue was followed wherein theoretically middlemen between Pattedars and the State are not recognized. However, due to reasons like old age, sick/illness, lack of heirs, large landholdings and engaging in other occupations, etc., the *Pattedars* lease out the land to other farmers in the village on a predetermined set of terms and conditions. This led to the evolution of different forms of land tenure systems: 1. *Pattedari*, 2. *Pot-Pattedari*, 3. *Shikmidari*, and 4.

Asami Shikmidar. In addition, the *Khalsa* Lands are also cultivated under land tenure systems such as *Pan-Maqta* Tenure, *Tahud or Sarbasta or Watandari* Tenure, *Ijara* Tenure, and *Agraharas*. In the case of Non-Khalsa lands such as Jagirs, Inam Lands, *Samasthan/Peshkash*, the revenue is collected in a predetermined ratio between the State and assignee.

For systematic taxation and revenue collection on each piece of land cultivated a Survey and Settlement Department was established in the year 1875 with one of the chief functions being the conducting of the land survey in both Khalsa and Non-Khalsa lands and renew the settlements for the lands which had expired the sanction period. The actual cultivators are found to be at the mercy of the staff of the Survey and Settlement Department and large scale corruption in Survey and Settlement department had made the government amend the Land Revenue Act No. VIII of 1317 F and subsequent rules had strengthened the rights of the actual cultivators in both Khalsa and Non-Khalsa Lands. In addition, the interests of *Shikmidari* and *Asami Shikmidar* are protected in different contexts of agricultural production. The free and personal services rendered by the tenants for the landowners were made illegal.

The popular form of Tenancy was *Batai* System or crop-share followed by fixed cash and fixed quantity of grain. The amendment made to the Land Revenue Act No. VIII of 1317 F and subsequent protections conferred to the tenants had resulted in large scale eviction of tenants and pushed the formal tenancy practice into informal nature. The Report of Agrarian Reforms Committee, 1949 observed that the rent the receivers had increased exponentially (1748%) within two decades (1901-21). In addition, it was also observed that there was a significant increase in the number of actual cultivators becoming tenants during the years 1911-1921.

The increasing indebtedness and large-scale land transfers from actual cultivators to rent receivers had necessitated the Hyderabad State government to appoint Tenancy Committee under the chairmanship of Mr. S.M. Bharucha. The committee observed that the percentage of tenants was found to be 36% of the total landowners and the minimum lease period was one year and its rear to find a cultivator leasing out the land to the same tenant for more than five (5) years among the study villages. In addition, the Committee observed that out of the total tenant cultivators in the study villages, only 37% had written agreements and *Pattedars* were not willing to give the written agreements for more than two years while the terms and conditions are always in favour of the *Pattedar*. Another significant observation made by the Tenancy Committee was about the practices of landlord-moneylenders lending the money to

the tenants on the condition that the total produce shall be sold to the landowner or pay an interest of 24% per annum on the money borrowed. After examining the ground reality, the Tenancy Committee, in conclusion, had recommended for Tenancy Legislation to protect the rights and interests of tenants in the Hyderabad State. The government of Hyderabad State had agreed to all the recommendations of the Tenancy Committee and had enacted Hyderabad Asami-Shikmis Act in Fasli 1354 (approx. in 1944).

According to the Hyderabad Asami-Shikmis Act in Fasli 1354, The tenants are categorized into two groups namely: Protected *Asami-Shikmi* and Unprotected *Asami-Shikmi*. Both protected and unprotected *Asami-Shikmi* cannot be evicted from the leased-in lands as long as they continue to pay the lease amount. If the landowner intends to terminate the tenancy contract, he/she should serve a notice detailing the reasons therein one year in advance to the tenant. In case of disputes regarding rent payments, either party to tenancy agreement can approach the *Tehsildar* for adjudication of the dispute. It was expected that the legislation would empower the tenant and balance the relations between the tenants and landowners. But in reality, tenant evictions increased, and tenancy agreements became informal and oral.

In addition, Mr.Bharucha upon thorough perusal of the widespread agricultural indebtedness among the small, marginal farmers recommended for enactment of three (3) legislations in the year 1940 namely: Moneylenders Act of 1940, Debt Conciliation Act of 1940, and Prevention of Agricultural Land Alienation Act of 1940. The reports and recommendations by various committees leading to the enactment of various legislations protecting the rights and interests of the tenants could not achieve the desired results. Even after the merger of the Hyderabad State with the Indian Union and subsequent reorganization of the State boundaries in 1956 and 2014, the issues arising out of the informal nature of tenancy practices are not addressed.

III

About 60% of the total land area in Telangana is arable with the net sown area at 42.59% of the total land area. The Cropping Intensity stands at 1.25 indicating the seasonal fluctuation in the extent of cultivated lands. Out of the total 33 districts, 15 districts have reported Cropping Intensity less than the State's Cropping Intensity. Based on the geographical characteristics like types of soils, rainfall, and temperature, Telangana State can be divided into three Agro-Climatic regions: 1. Northern Telangana Zone, 2. Central Telangana Zone and 3. Southern Telangana Zone. The current study area falls in the Northern Telangana Zone with

annual rainfall in the range of 900mm to 1150mm. The districts in the Northern Telangana Zone are dominated by red and black soils, which are suited for the cultivation of crops like, Cotton, Maize, Redgram, Soybean, Turmeric, and Paddy. Due to the diverse agro-climatic conditions coupled with a variety of irrigation facilities different crops are cultivated in Telangana. Cropping pattern is dominated by Cereals, Millets, Pulses, Fruits, Plantation Crops, and Vegetables. For the year 2016-17, the share of the food crops and non-food crops was 66.4% and 33.6% of the total land cultivated respectively. However, one can observe a clear decline in the extent of food Crops cultivation (70.8% in 2001 to 33.6% in 2016-17). Among the food crops, Paddy, Maize, and Jowar are cultivated in both Kharif and Rabi seasons alike whereas, among the non-food crops, Cotton and Oilseeds were popular in Kharif and Rabi seasons.

According to the Government of India's Census of Landholdings conducted every five years, the average size of operational land holdings for the State of Telangana is 2.7 acres in 2010-11. It was observed that there was not much variation in the average size of landholdings among the marginal and small farmers group but there was a considerable decline in the average size of landholdings among the medium and large landholding farmers in the Telangana State. As per the Socio-Economic Outlook prepared by the Department of Planning, Government of Telangana, the average size of landholding has declined from 7.6 acres in 1970-71 to 3.38 acres in 2000-01 (2018:26). About 86% of the total households in Telangana State belong to marginal and small categories, cultivating only 55% of the total land cultivated whereas 4% of the total households cultivate about 19% of the total land under cultivation. These figures reflect the extent of skewness in the distribution of lands.

Agriculture production in Telangana State is predominantly dependent on irrigation projects and seasonal South-West monsoon rainfall. Two major rivers of South India: Krishna and Godavari rivers and their tributaries criss-cross the State. The sources of irrigation include Canals, Tanks, Tubewells, other wells, and other sources. According to Socio-Economic Outlook the gross irrigated area for the year, 2014-15 was 25.29 lakh hectares which got reduced to 20.28 lakh hectares in one year (a decrease of 19.85% in just one year). while the net irrigated area was reduced by 13.90% within the same period (2017:45).

The current study is conducted in the five (5) villages of the Nizamsagar Mandal, Kamareddy District, Telangana State. Kamareddy District was carved out from erstwhile Nizamabad district on 11th October 2016. The cropping intensity of the Kamareddy district is

1.35 reflecting the variation in the extent of cultivation for Kharif and Rabi seasons. The Gross irrigated area was 80,167 hectares while the Net irrigated area was 45,599 hectares, these figures indicate the high dependency on the seasonal South-West monsoon rains. Rice and Maize are popular food crops whereas Cotton and Sugarcane are popular cash crops cultivated in the district. Jowar, Redgram, Greengram, Blackgram, Bengalgram, Groundnut, Sunflower, Soybean, and Mirchi are the other crops cultivated.

For the current research, five (5) villages that are adjacent to each other and share a common border with the largest village of all located 12 Km from the Nizamsagar Project are selected. Historically, these villages are at the periphery of Domakonda Samsthan of Hyderabad State and at present are the border villages of the Kamareddy district. The total number of households is 252 with Male and Female population of 673 and 728 respectively. The majority of the population belongs to the age group of 30-60 years, which is considered as working-age population followed by the age group of 15-29 years.

The total land area in the study area excluding the *Poramboku*/government lands is 990.35 acres. Based on the type of soil, access to irrigation the lands can be broadly divided into wetlands, drylands, and uncultivable lands. It was observed that 75% of the total households in the study area have landholdings of the size of less than four (4) acres. The average size of landholding in the study area was found to 3.92 acres (per household) and there are only four (4) Caste groups that have an average size of landholdings more than the Study area. There are only 12 households that have landholdings of size more than 10 acres while six (6) households are landless. Reddy and Patel Caste groups alone own 31.4% of the total cultivable lands in the study area and which was found to be a typical characteristic feature of Telangana State. About three to four decades back, Patel and Reddy Caste groups had controlled large tracts of fertile lands while the majority of the other Caste group members worked as agricultural labourers. Over time, few Caste groups like Mudiraj and Scheduled Castes had acquired the land from Patels in exchange for labour services in their fields. There was intense competition among the farmers in the village to acquire land due to its scarcity, this has made land as a premium resource and consequently, owners of the land further strengthened control over fertile lands. The cropping pattern in the study villages is determined by the water levels in the Nizamsagar Project as it is the major source of irrigation. Paddy and Maize are two popular food crops grown alike in both the seasons while Groundnut, Millets, Pulses, and Vegetables are cultivated preferably in Rabi season.

It was observed that, whenever the water levels in the Nizamsagar Project are low, there was a significant migration of able men and women alike to nearby towns to work as casual labour. About 54% of the total households in the study villages had at least once migrated and nearly 32% of the total households had migrated for less than one year indicating the prevalence of short term and seasonal migration in the study villages. Also, other reasons like the small and marginal size of landholdings, debts, meagre income from agriculture, and a strong network of labour with assured daily wage employment in nearby towns, etc had increased migration.

IV

Historically the agricultural resources such as Land, Capital, and Labour were distributed and controlled unequally. Only a few groups of society have access to harness scarce agricultural resources. This inequality associated with control and access to resources had led to the evolution of various resource sharing mechanisms to carry out agricultural production and one such mechanism is called 'Tenancy'. Broadly, 'Tenancy' can be categorized into five (5) types namely, Sharecropping or Cropshare, Fixed Cropshare, Fixed wage, Fixed rent (Kind or Cash), and Wage-Homestead. Out of the five types, Sharecropping or Cropsharing is relatively older and popular among the agrarian societies of the world. For the persistence and adaptability of 'Tenancy', it had invoked interest from the scholars of different disciplines alike.

In the study villages, access to basic agricultural resources like Land, Capital and Labour were historically controlled by few Caste groups. Depending on the access to and control over resources, various sharing mechanisms are practiced among the farmers in the study villages. Besides, it was observed that farmers are also involved in the sharing of other resources like Water (*Nellapalu*), Cattle, Labour services, and other inputs required for agricultural production. Each type of resource sharing mechanism has a set of terms and conditions to be adhered to by either of the resource lessor and lessee for the successful execution of the oral/informal Tenancy agreements. *Batai* System and *Kowlu* System are the two popular forms of Tenancy practiced in the study villages. Out of the total 141 households involved in the Sharing of agricultural resources, 57 households are exclusively involved in *Batai* System while 35 households and 20 households are involved exclusively in the *Kowlu* system and *Nellapalu* system respectively. Also, 27 households are involved in more than one type of resource sharing contracts in the study area.

It was argued in the majority of the studies that 'Land' is the determining factor in shaping the 'Tenancy' contracts. However, the current study considers all the other resources on equal footing in understanding the oral/informal contracts in agricultural resource sharing. In addition to the agricultural resources, several factors such as cropping season, size of landholdings, Caste and landholdings, Family size, Cropping pattern, Labour services, access to credit and markets found to determine the terms and conditions and selection criterion of tenant/owner under each type of resource sharing contracts.

It is observed in the study area that the extent of land leased-in and leased-out varies for Kharif and Rabi seasons and the size of landholdings leased-in and leased-out found to be less than three (3) acres in the majority of the cases. Also, it was observed that the lands leased-in are not only small and marginal in size there are even small parcels of land leased-out by medium and large landholding farmers to more than one tenant. During the Kharif season, due to assured irrigation, the extent of land cultivated under different tenancy forms was found to be high while in the Rabi season, there is a sharp decline in the cultivation of lands under Tenancy. However, in both the seasons, it's the *Batai* System that's popular among the farmers in the study area.

Similar to the observations made by social anthropologists and sociologists in earlier studies there exists a significant relationship between caste and the size of landholding in the study area too. However, the preference or bias in leasing-out or leasing-in the land to the one's own caste group members is not observed. Owing to the intense competition among the tenants/owners and accessibility to agricultural resources the preferences or the choice of owners/tenant has diversified to other caste group members within the same village or adjacent villages. Besides, the size of the family has a positive correlation with that of higher chances of leasing-in land from the landowners. Also, contrary to the observations made by Iqbal Singh (1989:A87), there exists a practice of 'Reverse Tenancy' (which is a typical characteristic of the agriculturally developed regions) in the study area which is not an agriculturally developed area.

Paddy and Maize are popular crop combinations cultivated by the farmers in the study area. In-depth interviews had revealed that though farmers are interested in cultivating vegetables and other high-value crops in their lands, but Paddy cultivation in the adjacent plot of land makes their land unsuitable for cultivation of other crops, as standing water in Paddy fields seeps into their lands. Also, in the majority of the resource sharing contracts, leased-in

lands allowed for paddy cultivation only. Thus tenant farmers have no role in the selection of crops. Generally, during the Kharif season, water-intensive crops such as Paddy and Sugarcane are cultivated while in Rabi season, depending on the availability of irrigation facilities crops such as Maize, Groundnut, Blackgram, Greengram, Sorghum are cultivated.

Labour services in the study area are provided under three categories namely: Exchange Labour, Hired or Guththa labour and Daily Wage labour. As the majority of the farmers in the study area belong to Small, Medium and Marginal categories, the practice of exchange labour service is popular. Exchange labour service also provides secured labour to the cultivators and continuous employment to all the labourers in the study area. Depending on the type of crop and stage of agricultural production, the type of labour is selected. Exchange labour is popular in Paddy cultivation while daily wage labour is deployed in the case of Maize and other Crop cultivation. In the case of large landholdings, a combination of exchange and Guththa labour type is used to complete the agricultural operation in time. It was observed that labour services play a significant role in shaping the process of agricultural resources sharing contracts under different types of Tenancy. Often, Landowners tends to lease-out their lands to tenants to secure labour services for lands under their direct cultivation. Also, large landholding farmers prefer to lease-out small parcels of land to more than three to four tenants in return for secured labour service during peak agricultural season.

Access to credit has been one of the most crucial factors determining the agricultural resources sharing process in the study area. Broadly, credit sources can be categorized into two types; formal and informal sources. Formal sources of credit include scheduled commercial banks and cooperative societies while informal sources of credit include moneylenders, private individuals or relatives. In the study area, it was observed that there are nine (9) specific and common reasons for availing loans from moneylenders with the loan for agricultural inputs being the most common purpose. Also, farmers in the study villages prefer moneylenders over formal sources of credit for reasons such as no paperwork, no collateral, quick and instant approval with a reasonable rate of interest (which was found to be in the range of two to four rupees per hundred per month) on the principal amount. An in-depth analysis of informal sources of credit had revealed that there exists a tacit linkage between formal and informal credit institutions. The advantages associated with informal sources of credit are found to be derivatives of formal sources of credit. The moneylenders lend the loan to the loanees with a condition to repay immediately after availing the loan from formal sources of credit. However, the rate of interest charged depends on the individual's credibility among the peers, the

capability to repay and also the duration of the loan. Also, the rate of interest is kept at a moderate level due to affordable and accessible formal credit sources. Majority of the tenants' avail loans from landowners on the condition that the loan amount is deducted from the agreed share in the output. Majority of the loans extended by the formal sources of credit are found to be short term loans. As a result, the farmers are found to be in a recurrent debt trap after every harvest. Hence, there is a need for long term loans at a minimum rate of interest for the creation and development of sustainable and strategic assets among the farming communities.

The other factor which plays a key role in the selection of specific crop for cultivation is access to markets. Among all the crops cultivated in the study area, only Paddy is procured at Minimum Support Price (MSP) by the State agencies. In the study area, about 55% of the total households had sold their Paddy harvest to the Primary Agriculture Cooperative Credit Society (PACS). A significant number of tenant farmers who had leased-in lands of considerable size prefer private buyers who procure at a price of rupees 100/- less than MSP. This is because the entire transaction of selling, lifting of the harvest from fields and final payments take a maximum of three days. whereas in the case of Government procurement agencies, limitations such as fixed quota per each farmer and prolonged process of procurement and final payments take about a minimum of 15 days. It was observed that the majority of the marginal farmers tend to retain their harvest for household consumption while tenants who had leased-in relatively small parcels of landholdings prefer private buyers. The fixed quota system in the procurement of Paddy by the state agencies creates an undue advantage for the landowners as final payments are made to the landowner's bank account. This is also one of the reasons for landowners' insistence on the cultivation of Paddy crop in the leased-out lands. Though fixing of MSP for select crops had shielded the farmers from the volatility of the market at the same time it resulted in decreasing crop diversity and increased monocropping in the study area. Also, the procurement of Paddy crop alone by the state agencies had made Paddy cultivation a risk free alternative in the resource-sharing contract in the study area.

The combination of various factors coupled with skewness in agricultural resources ownership had increased the complexity of the resource sharing process. The following are the most common set of terms and conditions observed for *Batai* System in the study area.

1. The cost of inputs such as fertilizers, seeds, pesticides/insecticides shall be shared equally between tenant and landowner. However, in some cases, it was observed that

the costs of fertilizers that are applied below the topsoil are borne by the landowner while the tenant buys fertilizers that are sprayed on the topsoil.

2. Total labour costs shall be borne by the tenant alone.
3. The cost of harvesting and delivery of share of the output to the landowner if paid in kind shall be borne by the tenant.
4. The cost incurred due to the development of land, which lasts for more than one year for cultivation shall be borne by the landowner.
5. Decisions related to agricultural resources allocation and operations needs prior approval of the landowner.
6. The final produce after the harvest shall be shared equally between landowner and tenant.
7. In case of unforeseen circumstances leading to crop failure, neither party to the contract shall have the obligation to pay the losses to others.
8. Usually, under the *Batai* system, the above said terms and conditions shall be in force for one cropping season. However, the tenure of the contract can be extended to any number of seasons if both parties wish to do so.

It was also observed that depending on the contexts there are minor variations in the above-mentioned terms and conditions.

In the case of *Kowlu* system, following are the most common set of terms and conditions observed in the study area.

1. The tenure of the *Kowlu* system is found to be one-year or two cropping seasons. However, can be extended to any number of years if both parties wish to do so.
2. The *Kowlu* amount shall be paid in advance or before the commencement of agricultural operations for each cropping season.
3. The landowner shall handover all the irrigation facilities in working condition to the tenant and expects to receive them in the same condition before the termination of the contract.
4. The landowner has minimal or no involvement in agricultural resource allocation and operations by the *Kowludar*.
5. *Kowludar* shall bear all the expenses incurred in the cultivation of the crop.
6. The cost incurred due to the development of land, which lasts for more than one year shall be borne by the landowner.

7. In case of unforeseen circumstances leading to crop failure, neither party to the contract shall have the obligation to pay the losses to others. However, if the crop failure is due to failure of the irrigation facilities then the *Kowlu* amount can be renegotiated for the current cropping season.

In-depth analysis of above terms and conditions reveals that the costs of improvements made to lands such as the application of fertilisers below topsoil and other developmental initiatives, which have long term influence on the fertility and productivity of the land shall be borne by the landowner. This is primarily because of the lack of land tenure security. As the landowner retains the right to evict the tenant after every cropping season, the insecurity in tenure is reflected in the above terms and conditions. Also, the advantages associated with the *Batai* system is about sharing the risk evenly between landowner and tenant. Contrary to earlier observations made by scholars such as N.S.Jodha, 1981, B.N. Verma and R.R.Mishra, 1984, Singh, 1989, and Huffman, 2004, the risks associated with the *Batai* cultivation in the study villages were found to be least and hence preferred by both tenants and landowners alike. The *Batai* system is often associated with semi-arid and agriculturally backward regions. However, in the current study area, the landowners with assured irrigation to their lands prefer to lease-out their lands for cultivation under *Batai* system. This shift in preference is due to technological interventions at every stage of production and consequent increase in demand for labour services during peak agricultural season and thus reducing the importance attached to the land as determining factor in resource sharing contracts. From the current study, it is understood that the 'land' had lost its *numero uno* status and had become another input on par with irrigation, fertilisers, labour, and capital, etc.

On comparing the terms and conditions for *Batai* and *Kowlu* system, it is evident that the *Kowlu* system is favourable to tenants while the *Batai* system in most cases favours landowners. In the study area, it was observed that the majority of the landowners are reluctant to lease-out their fertile lands for cultivation under the *Kowlu* system while the tenants are more willing to lease-in lands for cultivation under *Kowlu* system. In the majority of the cases, it's the wealthy and resourceful tenants who are involved in the *Kowlu* system.

There are a significant number of cultivators in the study area who are involved in the *Nellapalu* system wherein the water or irrigation facilities are shared with the cultivators in return for the share in the final output. The typical share in output is one-fourth of the total output during the Kharif season while it is one third in Rabi season. The costs involved in

bringing the water from the source to the fields shall be borne by tenant and in case of any unforeseen circumstances leading to the failure of the crop neither party to the contract shall have the obligation to pay the losses to other. It was also observed that many tenants are involved in leasing-in lands or resources from different landowners/resource owners under more than one type of tenancy. In addition to all the above-mentioned terms and conditions, there is the whole set of implicit obligations on the part of the tenant to be in good terms with the landowners.

In addition to the above-mentioned terms and conditions for each type of resource sharing process, cultivators and resource owners in the study area over a period of time had evolved selection criteria in choosing the tenant or resource owner. For a landowner, the potential tenant should be morally upright and possess a high level of integrity as a resource sharing contract are informal and legally void. In addition, landowners prefer tenants with large family size with marginal or small landholdings having sufficient knowledge or skills on the cultivation of crops while the unmarried, landless individuals are least preferred. Tenants with livestock and other capital assets like the tractor and ancillary equipment are preferred by the resource owners. Also, landowners prefer cultivators from different Caste and residing within the same village or having lands adjacent to their lands. Similarly, Tenants prefer to lease-in land from the landowners who have the knowledge or previous experience of cultivation, alternate sources of income, enough capital assets or financial resources to meet the contingency requirements. Besides, Tenants prefer to lease-in fertile lands with reliable irrigation facilities to reduce the risks associated with cultivation. From the above discourse, it can be inferred that several interlinked factors, terms, and conditions, as well as the criteria employed by the resource lessor and lessee, are found to be based on the ecology of contexts.

V

With the help of in-depth interviews and Case Study method, the current research had identified a variety of contexts under which the farmers in the study area execute the agricultural resource sharing contracts. Broadly, the Contexts can be categorized into three groups namely: Contexts under which a tenant/owner enters into the *Batai* system, *Kowlu* system, and combination of more than one resource sharing contract.

***Batai* System and common context(s):**

As mentioned above, about 3/4th of total households in the study area have landholdings of size less than four acres and also, these lands are scattered as small parcels of land. The primary reason for such a scenario is due to the fragmentation of landholdings based on hereditary transfers of lands over the generations. The size of cultivable landholdings has become too small to sustain a family of four in the study area. As a consequence, small and marginal farmers had to lease-in lands from the landowners or to lease-out lands to tenants. The majority of the small and marginal farmers in the study villages prefer to either leased-in or leased-out lands for cultivation under the *Batai* system.

As the agricultural activities in the region depend on vagaries of seasonal rainfall coupled with inadequate irrigation facilities results in seasonal as well as long-term migration of cultivators. Though Tubewell technological intervention had mitigated the severity of the crisis but still a large number of small and marginal farmers are dependent on the water from the Nizam Sagar flood gate leakage canal. A large number of middle-aged and adult members from the study villages had migrated to work as construction labour in the capital city of Telangana. As a result, the old aged parents had to lease-out lands to tenants for cultivation under the *Batai* system. They prefer *Batai* over the *Kowlu* system as they can closely monitor and interfere in the agricultural operations by the tenant. The research reveals that there exists a causal relationship between the water level in the Nizam Sagar Project with migration. Since 2014, it was observed that a significant number of migrated cultivators had returned to the villages to take up cultivation due to consistent improvement in the water level Nizam Sagar Project and as well as groundwater table in the study area. The majority of the migrants who returned to villages had opined that with a huge influx of cheap labour from Bihar, Jharkhand, Odisha, and Uttar Pradesh, finding work with decent daily wage had become difficult. Also, they have realized that they can earn and save more money from cultivating their lands as well as leasing-in land for cultivation under *Batai* System.

Indebtedness among the small and marginal farmers due to crop failure, spurious seeds, failure of irrigation facilities, health emergencies, marriage, and other ritual expenses and several other reasons also pushes the cultivators to lease-in lands from the landowner-moneylenders or creditors for cultivation under *Batai* system. In some cases, the landowners bear all the input costs in the cultivation of their lands and the same amount is deducted from the final output before giving away the tenant's share after the harvest. In few cases, due to

road accidents and physical disability, the landowners had to lease-out their lands to tenants under the *Batai* system.

***Kowlu* system and common context(s):**

As the *Kowlu* system requires advance payment of *Kowlu* amount to the landowner it is often associated with resource-rich cultivators such as medium to large-sized landholding villagers. It was observed that the majority of the *Kowlu* lands leased-in are drylands and the average size of leased-in lands under the *Kowlu* system is found to larger than *Batai* lands. Cultivators with access to credit and capital assets such as tractor and ancillary equipment are involved in the cultivation of lands under the *Kowlu* system. However, in some cases, fertile lands are leased-out for cultivation under the *Kowlu* system as the landowners happen to completely be settled in nearby towns or cities.

In case of small and marginal farmers who had to migrate to a faraway place for more than a year, he/she has no better option than leasing-out their lands under the *Kowlu* system. Long-term migration of small and marginal farmers had resulted in the occurrence of ‘reverse tenancy’ in the study area. As the *Batai* system entitles continuous monitoring and involvement of landowners in agricultural resource allocation and operations of the tenant, landowners involved in other professions prefer to lease-out their lands under the *Kowlu* system.

Combination of more than one resource sharing contract and common context(s):

As mentioned earlier, the majority of the cultivators in the study area are dependent on Tubewells dug in their fields. A situation wherein a cultivator having fertile land with no access to reliable irrigation facilities prefer to engage in a water-sharing (*Neellapalu*) contract with the adjacent landholder. In some cases, landowners with a considerable size of landholdings having access to reliable irrigation facilities share the same with adjacent tenants in return for assured labour services and also share in output. In some cases, water is shared in return for half the share in output with no contribution towards input costs under the *Batai* system. It was also observed that the same tenant is engaged in *Batai* and *Kowlu* system simultaneously with the same landowner wherein the fertile land is cultivated under the *Batai* system while the dryland is cultivated under the *Kowlu* system. In a few cases, landowners leases-out their entire fertile land and dryland for cultivation under the *Batai* and *Kowlu* system respectively without contributing towards input costs of *Batai* lands while waiving the *Kowlu* amount.

The above mentioned are the most common contexts under which a tenant or landowner enters into a resource sharing contract. However, there exists a variety of contexts, nuances of which are reflected in the terms and conditions, criterion employed by tenant or owner in the resource sharing contracts.

VI

India after attaining political Independence in the year 1947 had taken up 'Land Reforms' as a comprehensive strategy to reduce socio-economic inequalities and increase agricultural production and productivity through means of several legislations and amendments to the constitution of India. However, the top-down approach in enacting and enforcing such reforms had failed to attain desired results. Subsequently, during mid of the 1960s with the impending agrarian crisis, and dwindling agrarian production, a 'New Agrarian Strategy' emphasizing comprehensive overhaul of the State interventions in the agricultural production was introduced. The targeted approach in executing the 'New Agrarian Strategy' popularly known as 'Green Revolution' in select pockets of rural India achieved the immediate target of sufficient food grains production. However, in the long-term, the 'New Agrarian Strategy' had increased inter and intra-regional socio-economic disparities across rural India. Subsequent empirical studies on Indian agrarian sector opined that a comprehensive agrarian reform policy should include provisions of irrigation facilities, input support, technological and extension services, high yielding seeds, Post-harvest support, price support, affordability and accessibility to credit and insurance, regulation of markets, food processing industries, and allied activities through state interventions.

The current research finds that the State interventions at various stages of agricultural production have a significant influence on the resource sharing process under each type of tenancy contract in the study area. State intervention in terms of providing fertilizers, seeds, and pesticides had increased the dependency of small and marginal landholding farmers on the resource-rich landowners. With the Government and Private involvement in sourcing almost all the agricultural inputs alike complicated the decision-making process of tenants with additional interference or involvement from the landowners.

Partial mechanization of agricultural operations, for example, the use of tractor in preparation of lands for cultivation had increased land under cultivation in the study area. However, for transplantation of Paddy saplings and *Kalupu* removal/Weeding, farmers are largely dependent on manual labour. Securing the labour services at peak agricultural season

is the biggest challenge faced by the small and marginal tenant farmers in the study area. Therefore, tenants and landowners had to devise alternate strategies by incorporating mandatory labour services in the resource sharing process. Also, with the mechanization of agricultural operations, dependency on the draft animals had reduced and consequently, livestock and animal husbandry gradually disappeared in the study area. During the deficit seasonal rainfall and lean season, with lack of livestock and allied activities, the farmers in the study area had to look for alternate source of income. However, relatively recent credit support for female members under different Self-Help Group (SHG) Schemes to buy livestock had contributed to the increase of livestock in the study area. This has increased the income levels of women members of households, which is found to have positive effect on the health and educational standards of the households.

Tubewell irrigation is another technological intervention which is capital intensive and often found to be unfavourable to small and marginal farmers had increased the risk levels in cultivation. With no further improvements in the common irrigation infrastructure and over-exploitation of groundwater resources, the dependency of small and marginal farmers on the resource-rich landowners had increased in the study area.

Accessibility and affordability of credit to the cultivators have been one of the important State interventions. It was observed in the study area that institutional credit support is determined based on the size of landholding thus effectively depriving the small and marginal farmers and the majority of it is extended as short term or for one cropping season alone. In addition to the delay in sanctioning of loans, the quantum of the loan amount sanctioned was found to be insufficient. The resource sharing contracts in the study area are found to have accommodated the credit needs of the tenants with landowners extending the advance loans for timely completion of agricultural operations. However, crop-specific credit support by landowners had led to extensive and intensive cultivation of Paddy in the study area.

The declaration of Minimum Support Price (MSP) for a set of select crops by the Commission for Agricultural Costs and Prices (CACP) had shielded the farmers from vagaries of markets and protected interests of consumers to great extent. However, declaring a uniform price for one specific crop cultivated in different agro-climatic conditions had put a large number of cultivators at disadvantage. It was observed in the study area that only Paddy crop is procured by the procurement agencies of State at MSP. The Crop specific procurement had deprived many small and marginal farmers of their choice in the selection of crops for

cultivation. Also, as the procurement for Paddy crop is assured, the risks involved in cultivating Paddy decreased, resulting in intensive cultivation of Paddy crop or monocropping in the study area. From the above-mentioned State interventions at various stages of agricultural production in the study area, it can be understood that each intervention has resulted in an appropriate response reflecting the dynamic nature of resource sharing contracts.

As far as the data collection, triangulation and analysis of data is concerned, meticulous planning and execution has been done. However, due to secretive and informal nature of resource sharing contracts, there could always be some scope for errors. The current research had greater emphasis on embeddedness of social-economic relations in scarce resource sharing contracts in the study area. The area under study had received normal rainfall for the year 2018-19 and fieldwork was carried out from February 2018 to January 2019. Therefore, an extensive as well as intensive study should be conducted under all possible scenarios such as abundant rainfall and drought like situation to understand the dynamic nature of resource sharing contracts in the study area. Also, the interventions by the state are found to have significant influence on mechanism of resource sharing contracts. Therefore, each intervention and its implications on resource sharing contracts needs a holistic perspective for in-depth understanding.

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GLOSSARY

<i>Adugu Mandu</i>	Adugu Mandu refers to the fertilizers applied below the topsoil. The cost for which are usually borne by the landowner under <i>Batai</i> System of resource sharing.
<i>Agrahar</i>	Agraharas' tenure is like that of Maqtas. The assignee has to pay an annual fixed quit-rent to the government. Large tracts of lands, sometimes a group of villages is granted under Agraharas to support the Hindu and Muslim places of worship in the State.
<i>Al-Tamgha Jagirs</i>	These were revenue-free grants, which were made hereditary and permanent in the course of time. However, all the Jagirdars had to pay a kind of royalty called Haq-e-Malikana.
<i>Asami-Shikmi</i>	These are called tenants-at-will. The landowner can evict or terminate the contract with the tenants with short notice
<i>Badulu</i>	Common term used to denote 'Exchange'. Often used with respect to exchange of labour services in the study area.
<i>Balota Inam</i>	These are lands given to officials (Netris or Neerudu) responsible for regulating the flow of water in tanks through sluices for agriculture.
<i>Batai System</i>	It's a resource sharing arrangement wherein the resource owner and tenant share the inputs and output in equal share. Its also called as Cropshare or sharecropping.
<i>Bhagelas</i>	Hired labour or contract labour employed by a Pattedar in cultivation of land.
<i>Bheedu Bhuthalli</i>	Land which are left fallow are called Bheedu Bhuthalli
<i>Bhiga</i>	One Bhiga is equivalent to One acre of land
<i>Bhuthalli</i>	Local term for 'Land'
<i>Chalkas</i>	The red-soil lands are called as Chalkas. Suitable for cultivation of Paddy and Maize.
<i>Cheruvu Parkam</i>	The land under Tank irrigation is referred as Cheruvu Parkam. The word Cheruvu is local name for a Tank while the word parkam refers to irrigation.

<i>Dalari</i>	Refers to the middlemen involved in sale and purchase of agricultural produce in the study area.
<i>Dastband Kowls</i>	In order to encourage the construction and repair of private tanks, Dastband Kowls were granted by the government. However, in the course of time as the revenue from Dastband Kowl became less while the cost of repair and maintenance had multiplied, as a result, Dastband Kowl had become less lucrative and tanks became dysfunctional.
<i>Dastbanddar</i>	Dastbanddar was given the responsibility to maintain the bunds, sluices, and bed of tank in working conditions and in return for his services, the government pays 1/10th (Dastband) of the total revenue collected from the lands irrigated under the tank.
<i>Deshmukhs</i>	Its title given to persons in the state of Hyderabad who are responsible for land revenue collection for large tracts of land and are also entitled for a share in the total revenue collected.
<i>Dhukki kottadam</i>	The first step in paddy cultivation is to level the land (<i>Dhukki kottadam</i>) using the tractor with a cultivator (specialized equipment attached at the back of the tractor and pulled.
<i>Diwani lands</i>	Diwani Lands are in direct management of offices of the Prime Minister (Diwani) of the Hyderabad State. Diwani lands are also called as Khalsa lands.
<i>Galla Maqta</i>	The rent payments in the form of Money or fixed quantity of grains at the end of harvest is called as Galla Maqta.
<i>Gattlu</i>	Raised narrow platforms separating two levelled plots of lands for paddy cultivation
<i>Geetha Karmikulu</i>	The local generic term for Toddy Tappers.
<i>Guththa Labour</i>	A group of individuals/labour is given a work to finish and the payment is made to the considering group as one entity and group members, in turn, share the total amount among themselves. Usually, this form of labour is resorted to if the landowner needs to finish a specific task in the least possible time.
<i>Ijara</i>	Under this tenure system, the land was leased by the State for development at very low rates for a period ranging from 5 years to 40 years to Kowldar. After the expiry of the Kowl period, if the Kowldar fulfills the set terms and conditions, then the land is

	assessed and permanently given as Bil-Maqta or at a fixed annual quit-rent (which is half of land assessment value) to the Kowldar.
<i>Illarikam</i>	A practice in marriage, where the bridegroom is sent along with the bride to stay in the bride's home.
<i>Inam</i>	The word 'Inam' is an Arabic word, which means a reward or favour. Land grants are made as Inams to an individual or an institution in recognition of services rendered. These grants are hereditary and permanent in nature.
<i>Jamabandi</i>	The Survey and Settlement department submits the maximum rates to the government for sanction and once it is sanctioned by the government, assessment for individual fields is calculated and then announced to the cultivators, this process is called as Jamabandi
<i>Jonnalu</i>	Jowar
<i>Kaikulu</i>	Native term for daily wage.
<i>Kallu</i>	Local term for Toddy.
<i>Kalupu</i>	Weeds or unwanted plant saplings grown in paddy fields are referred as Kalupu.
<i>Kandulu</i>	Redgram
<i>Karuvupani</i>	It is referred as the works carried out under MGNREG Scheme in the Study area.
<i>Kharif Season</i>	Kharif season starts in the month of June and ends by the month of October. The duration of the Kharif season is about five months and usually depends on the onset and retreat of South-West monsoon rains.
<i>Kowlu system</i>	It is a resource sharing arrangement between resource owner and tenant wherein the tenant pays the predetermined fixed rent in cash or kind for the resource/land leased-in prior.
<i>Kowludar</i>	The tenants under the Kowlu system of resource sharing are called <i>Kowludar</i> .
<i>Kuntas</i>	Small water bodies which get seasonally replenished and are major water sources for cultivation of lands in Telangana.

<i>Kushki lands</i>	Usually referred to Dry lands or unfertile lands
<i>Lagan</i>	The word 'Lagan' was defined as "any consideration in money or kind or both, paid or payable by a Shikmidari to his Pattedar or by an Asami Shikmi to the landholder on the account of the use or occupation of the land held by him, but shall not include the rendering of any personal service
<i>Madad Mash Jagirs</i>	These are granted as a gratuity to meet the livelihoods needs of the grantee.
<i>Makka</i>	Local name for Maize
<i>Mashrooti Jagirs</i>	Grants under Mashrooti Jagir system are made for the performance of specific services such as religious, civil, and military, etc. The grants are made as long as the grantee fulfills the conditions.
<i>Meedi Mandu</i>	Meedi Mandu refers to the fertilizers applied on the topsoil. The cost of which is usually borne by the tenant under Batai System of resource sharing.
<i>Nag-Pech system</i>	Under Nag-Pech system of grain lending, repayments are to be paid by the borrower in grains only and its 25 to 50% more than the quantity of the grains borrowed.
<i>Naksha</i>	Refers to the connecting road to the fields as approved in the land survey records.
<i>Natlu</i>	Crucial stage in the cultivation of Paddy crop in which the paddy seedlings are transplanted. The process of transplantation of Paddy seedlings is called Natlu.
<i>Nellapalu System</i>	Water or irrigation facilities are shared under a system called 'Neellapalu', according to which the owner of water or irrigation facility would be shared with one-third or one-fourth of the total agricultural produce at the end of harvest by the user.
<i>Netris or Neerudu</i>	In order to regulate the flow of water in tanks through sluices, Netris or Neerudu were appointed and these individuals are granted Balota Inam land and tax remission annually.
<i>Paigha or Jamiat Jagirs</i>	These are lands granted by Nawab Nizam Ali Khan (1761-1803) to grantees to maintain a cavalry in order to counter the growing power of one of the ministers. The grantees had enjoyed enormous

powers in the administration of Paigahs and the revenue generated from these lands is completely retained by the grantee.

<i>Palli</i>	Groundnuts
<i>Pan-Maqta</i>	Pan-Maqta or Maqta is a Kowl (these are landlords or officials of considerable wealth and power) or tenant, who was given a set of villages or large tracts of lands by the State government on a fixed quit-rent without liability to enhancement.
<i>Pattedar</i>	Pattedar is the owner of the land who may cultivate by himself or with the help of hired labour.
<i>Pesarlu</i>	Mungbeans
<i>Polam</i>	Land with fertile soil and most suitable for cultivation of Paddy Crop.
<i>Poramboku lands</i>	<i>Poramboku</i> lands are the government waste lands under the administrative control of the revenue department.
<i>Pot-Pattedar</i>	Pot-Pattedar are the joint holders of the land who proportionately share the cost of cultivation and final agricultural produce. All the partners hold a joint Patta and neither one can sell or transfer the land alone.
<i>Rabi Season</i>	Rabi season commences from the month of October and ends by the months of March.
<i>Samasthan or Peshkash</i>	It was customary practice prevalent among the medieval rulers to levy on the rulers of conquered territories a fixed amount annually as a tribute and leaving the rulers of conquered territories to govern their territories without interference from the conqueror. The annual payment made as tribute is called Peshkash and the ruler who pays Peshkash is called 'Peshkash Guzars'.
<i>Sarbasta</i>	This a tax system wherein, Zamindars were appointed as tax collectors at the district level.
<i>Sarf-i-Khas lands</i>	These are also called Crown Lands. The revenue from these lands is exclusively used to meet the expenses of Nizam, the ruler of Hyderabad State.
<i>Seri Lands</i>	These are registered and cultivated by the Jagirdar and are given for cultivation by the tenants. The tenants working in Seri lands are also expected to render household services to the Jagirdar.

<i>Sherai</i>	A separate tax for growing cattle, a herd of sheep/goat, etc., called <i>Sherai</i> .
<i>Shikmidari</i>	These are called protected tenants with rights on the land as long as they fulfill the terms and conditions agreed upon with the actual Pattedar. Landowners can't sell or transfer the rights on the land to the third person without the prior consent of the Shikmidari.
<i>Taccavi loans</i>	In addition to the loans extended by government departments and credit cooperatives, Taccavi loans are extended by the government under special circumstances for specific needs to agriculturalists such as construction and repair of embankments, wells, and irrigation canals, livestock, seeds, manure, and other agricultural tools at 6% interest rate.
<i>Tahsil</i>	It is a revenue sub-division also called as Mandals demarcated for land revenue collection by a government officer called Tehsiladar.
<i>Tahud</i>	This is a tax system wherein, the Persons of eminence are appointed as managers in the collection of taxes on land, Abkari (excise) and Mohtarfa (Tax on Profession), etc.
<i>Tankha Jagirs</i>	Lands are granted under Tankha Jagirs' tenure system to the grantee instead of salaries. However, with the reforms undertaken in 1853, all the Tankha Jagirs are resumed by the State government.
<i>Thukam</i>	A small portion of the plot is selected for <i>thukam</i> (to grow paddy seeds into Paddy seedlings for translocation into large paddy fields).
<i>Thummedu</i>	A measuring bowl used by the locals to measure the agricultural produce.
<i>Uddera</i>	Uddera refers to an exchange process wherein few marginal and landless farmers borrow fertilizers from the neighbors or landowners on the condition that they would repay the equal value in cash after the harvest of the crop. The neighboring landowners share fertilizers with such farmers in exchange for labour services in their lands.
<i>Zat Jagirs</i>	Large tracts of lands are granted to the grantee without specifying the services to be rendered to the State of Hyderabad. The grant is unconditional and its for maintenance of the grantee.

Annexure-1

Household Schedule

Respondents Name (Male/Female):

Household Head (HH):

H. No/Street name:

Caste/Tribe:

Religion:

S.No	Name	Relation with HH	Age & Gender	Marital Status	Education	Primary occupation	Secondary occupation

Space for notes:

Housing:

Type	No. of Rooms	Remarks

Pucca –P, Semi Pucca-SP, Katcha-K, Other Housing –OH

Land ownership: (Inside and outside village included)

Land	Acres	Source of water (Tube well-TW/Tank-T/Rain fed-R)
Wet		
Dry		
Uncultivated		

Space for notes:

Kharif Season:

Operational Landholding:

(Acres)	Wet land	Dry land	Uncultivated
Own Land Cultivated			
Land Leased In			
Land Leased Out			
Total Land Cultivated			

Space for notes:

Period of Lease In/Out:

Crops grown in leased in/out land:

Relation between Owner and Tenant:

Rabi Season:

Operational Landholding:

(Acres)	Wet land	Dry land	Uncultivated
Own Land Cultivated			
Land Leased In			
Land Leased Out			
Total Land Cultivated			

Space for notes:

Period of Lease In/Out:

Crops grown in leased in/out land:

Relation between Owner and Tenant:

Kharif Season Cropping Pattern and income:

S.No	Name of Crop/local terminology	Area under cultivation	Produce (Local measurement) No. of Bags*Kgs	Income	Buyer details (Distance from the field)

Space for notes:

Rabi Season Cropping Pattern and Income:

S.No	Name of Crop/local terminology	Area under cultivation	Produce (Local measurement) No. of Bags*Kgs	Income	Buyer details (Distance from the field)

Space for notes:

Inputs for agriculture:

Seeds	Fertilisers	Pesticides
No. of Bags*Kgs: Cost of each bag: Total cost:	No. of Bags*Kgs: Cost of each bag: Total cost:	No. of Bags*Kgs: Cost of each bag: Total cost:
Seller details:	Seller details:	Seller details:

Labour:

S.No	Type	Nature of payment (Cash/Kind)	No. of People Involved	Human Hours	Amount in Rs.	Season
	Hired (Guththa)					
	Exchanged					
	Wage (Daily)					

Livestock (LS):

LS	No	Purpose of Raising	Source of Food	Income	Purchased/ Sold(Rate)	Source of money to buy them

Bullocks (BU), Cows(C), He- Buffalo (HB), She- Buffalo (SB), Goats(G), Sheep (S), Pigs(P), Poultry (PO), other – OA.

Space for notes:

Migration:

S.No	Name of Person who migrates(M/F)	No. of days	Reason	Month/season	Place of migration	Average Earnings

Space or notes:

MNREGA:

S.No	Person Involved(M/F)	Nature of work	Months/ season	Average income

Space for Notes:

Access to educational institutions:

Access to health facilities:

Financial institutions:

Bank:

S.No	Purpose of loan	Property Mortgaged	Time taken to sanction	Time take to repay	Amount paid so far.

Space for notes:

SHGs:**Group Name:****No. of people:**

Name of person(s)	Purpose of loan	Loan Amount received	Time taken to sanction	Amount paid so far.	Time take to repay

Space for notes:

Private Money Lenders:

S. No	Loan Amount	Purpose of loan	Property Mortgaged	Time taken to sanction loan	Amount paid so far	Time taken to repay

Relationship with Money lender:

Agricultural Assets:**Other Assets:**

Vehicles: Two wheelers, Auto (Three Wheeler), Four Wheeler, Tractor, Cycle

Television-TV:

Inverter-I or Generator-G:

Mobile/Phone:

Observations by the investigator:

Photographs



Figure 1: Village Tank



Figure 2: Village Tank Bund and adjacent fields.



Figure 3: Abandoned Traditional agricultural equipment.



Figure 4: Cattle Shed



Figure 5: Stubble burning by a farmer



Figure 6: A view of Lift motor connected to leakage canal.



Figure 7: Preparing the land for Paddy cultivation using bullocks.



Figure 8: Preparing the land for cultivation of paddy crop using tractor.



Figure 9:a plot of land with Paddy Seedlings



Figure 10: Innovative tool being used for Maize cultivation.



Figure 11 A farmer managing the water flow to his field.



Figure 12: Canal traversing the fields



Figure 13: Flood Gate Canal entering the fields



Figure 14: Fragmented land parcels under cultivation



Figure 15: Farmers waiting for their turn to divert the water to their fields.



Figure 16: Process of separating grains from Chaff.



Figure 17: Procurement of Paddy harvest from the village.



Figure 18: Gathering of Villagers.



Figure 19: Independence Day Celebrations in Primary School



Figure 20: Vaccination Program underway in village.



Figure 21: DWCRA/SHG meeting in Progress

. “Context and Contracts: An
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Farmers of Nizamsagar Mandal,
Telangana State.”

by Sama Arunkumar Reddy

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