

**LAND DISTRIBUTION CHARACTERISTICS
ACROSS ECONOMIC AND SOCIAL GROUPS:
A MICRO LEVEL ANALYSIS**

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By

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CERTIFICATE

I, MD. FAIZ ALAM ASHRAFI, certify that the dissertation entitled "LAND DISTRIBUTION CHARACTERISTICS ACROSS ECONOMIC AND SOCIAL GROUPS: A MICRO LEVEL ANALYSIS" for the degree of MASTER OF PHILOSOPHY is my bonafide work and may be placed before the examiners for evaluation.

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Dedicated to

My Parents

Late Md. Muzaffar Alam Ashrafi
&
Bibi Mushtari

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Chapter I

CHAPTER — I

INTRODUCTION

"The equitable distribution of productive capital such as land is not only economically important but also essential to ensure peace and stability."

-- Kofi Annan, Ex. Secretary-General, UN

Land distribution in India, which is primarily an agrarian society, is a strong determinant in the process of her development. With time, India experienced many changes in the land distribution pattern. There exists plurality of land holding structure from the large farmers owing big holdings to the community owned lands. Since long, there existed both the *Zamindars* and the tribals (with common property). So it becomes important to look into the present day scenario of the land distribution and the factors, which affects this distribution of land. The future of land ownership and cultivation constitutes perhaps the most fundamental issue in national development. To a large extent the pattern of economic and social organisation depends upon the manner in which the land problem is resolved. Nevertheless, sooner or later, the principles and objectives of policy for land may influence policy in other sectors as well. The growth of population and repeated fragmentation has led to a system of distribution in land in which large estates are an exception and the vast majority of holdings are relatively small in size. Legislation for the abolition of Zamindari and for the protection of tenants has already reduced to some extent the degree of disparity which existed in the distribution of land. Hence the study aims to present a micro level analysis of the significant aspects of land distribution system, the factors responsible for it, and also its influence on society, specifically on social and economic section. I have taken up Machipur, a village in Bhagalpur district of Bihar as my study area.

Land distribution in Bihar is in consonance with the national scenario and it is determined by various sociological, economic, political and geographical factors. After the restructuring of Bihar, the economy of present Bihar has become purely agriculture based. Land is distributed very unevenly and the vast pool of landless agricultural labours exists throughout the state. According to Hanumantha Rao, the distribution of land is perhaps nowhere as unequal in the country as in Bihar.¹

Land distribution becomes more important if looked from the operational landholding view point because merely looking at the ownership holding does not give the appropriate information about the access to land. In this regard, tenancy is an important aspect to look into. The land distribution is influenced by a number of factors including the social, economic, political, legislative and the geographical factors. All of these factors combined together cause the overall scenario of land distribution in India. Ownership holding gives the information about the legal right over the piece of land while operational holding is indicative of the access to land. In operational holding, though mortgaged-in and mortgaged-out are also included, but in case of present day India, it is insignificant because of the fact that it is rarely employed. Leasing of land, however, is prominent in most part of this agriculture-based country. Tenancy holds key to the land distribution. It is particularly important to look at tenancy as ownership holding patterns are more difficult to change compared to the lease patterns which to some extent has got the potential to correct the land distribution inequalities in the country.

In India, however, land distribution is not only uneven on the basis of ownership holding, it is highly erratic in terms of access to land also. The total number of landless people and marginal farmers vis-à-vis total number of medium and large farmers are in geometric proportion to each other. Needless to say that earlier one outnumbers the latter one. Therefore it is imperative to analyse the factors operating within the entire system of land distribution.

¹ Hanumantha Rao (1979), Growth, Poverty and Tax Effort: An Inter-State Comparison with Special Reference to Bihar, Institute of Economic Growth, New Delhi

As already noted in the present study, a micro level analysis of village Machipur has been carried out. The idea behind taking one village as a case study is that recent comprehensive data on national or regional/state level is not available. Apart from, a large number of factors affecting land distribution can be understood only at the micro level. The characteristics of a rural society and its hierarchies get expressed through the nature of land distribution and some of this dynamics can only be captured at a micro level. While literature provides us a lot both at the micro and macro level, there is a gap in terms of what it has to offer in terms of spatial and geographical factors affecting land distribution patterns. It is keeping this gap in mind that this study is being undertaken.

1.1 STATEMENT OF THE PROBLEM

Traditionally land is owned by handful of powerful section of the society and it acts as major link between the 'haves' and 'have-nots'. The development in the primary sector is crucial for all the other sectors and the economy in general. The fruits of development get back in various forms to individuals in the society and it has been observed that access to land is crucial in determining the socio-economic status of a rural area. Agriculture forms the basis of reserve capital which gets diverted and utilized in the other sectors for further development. Apart from land, agriculture depends heavily on the geographical factors like, rainfall, temperature, humidity, soil type, relief and landform etc. The pattern of agriculture development is heavily dependent on categorisation of land in terms of location, access, productivity etc. Thus, it can be said that geographical and locational factors play important role in land distribution system.

Land distribution is affected by the following factors:

Social factors: Normally speaking, more and better land is owned by the powerful social groups. Indian society is characterized by the strong '*jati pratha*' (caste system). In India, upper caste holds most of the better land while majority of landless hails from the lower caste. The long history of caste system has facilitated the erratic distribution of land among the social classes.

Economic factors: Better land and economic status are complimentary to each other. So economically well off section of the society owns more and better land. In the distressed economy like India, where most of the peasants are hand to mouth, it is obvious that land market is monopolised by the wealthy.

Political and Legislative factors: these includes the measures adopted by the government side to regulate the land distribution system and the will shown to correct the flaws e.g. different land reforms act.

Geographical factors: Land distribution is affected by the geographical factors to a very large extent. Categorisation of land on the basis of its productivity and market value is dependent on the geographical factors like, rainfall, relief, soil type, distance from the homestead and road network etc.

1.2 LITERATURE REVIEW

Numerous studies have been done on land distribution in India some of which have looked into the various factors affecting the land distribution and access to land. A large proportion of the studies, however, deal primarily with the land lease arrangements.

Ojha² divided his work in two parts, first dealing with land tenure problem and second with the impacts of land reforms on agriculture performance for two time periods of 1960-61 & 1970-71. His study shows that i) land reform measures in Bihar failed to achieve their basic objectives because though the intermediaries were abolished but the rent receiving class and share-croppers could not. ii) The introduction of Land Reforms Act in 1950 and Ceiling on Land Holding Act, 1961 could not bring any fruitful result. iii) Leasing-out is common phenomenon in most of the areas of Bihar due to large size of holdings. iv) The condition of small owners and tenants has further deteriorated and they are forced to mortgage-out

² Ojha, Gyaneshwar (1978), "*Land Problems and Land Reforms: A Study with Reference to Bihar*", New Delhi: Sultan Chand & Sons.

their land. Jannuzzi³ studied the land tenure system in Bihar in different time periods. He found out the inequality in land distribution as the main problem of Bihar and its backwardness. According to him, majority of households in rural Bihar cultivate wholly owned land accounting for nearly 68%. Land holdings of 5 acres or less account comprise 71.6 percent and out of it 21.5 percent are of one acre or less.

Sinha⁴ on the basis of his findings from the NSS reports of 8th, 16th, 17th and 26th rounds found that i) the percentage share of landless household decreased from 16.56 in 1953-54 to 8.63 in 1961-62 and further to 4.34 in 1970-71.

Sirohi, Ram and Singh⁵ in their study for three time periods of 1953-54, 1960-61 and 1970-71 from NSS data gave the propositions that i) All over the country the number of the holdings and operated area increased in all size classes except the large holdings. ii) Net area leased-in increased in marginal and small size groups with marginal class topped with 50 percent of their land going for lease. iii) Gini's ratio shows that there exists a high degree of inequality in distribution of both owned and operated area over the entire period of study whereas disparities in the owned area declined since 1960-61 mainly due to land reforms measures during the sixties.

Appu⁶ in his study found that in most of the cases tenants were removed from the tenancy in the absence of any legal rights to the tenants. According to him, Bihar had the highest percent of area under ownership cultivation in 1960-61 but absentee land-ownership and wide spread incidence of share cropping has been a common feature in most part of the state.

³ Jannuzzi, F.T. (1958), "*Agrarian Problem in Bihar*", London: London University.

⁴ Sinha, S.K. (1976), "Land Reforms and Emerging Agrarian Structure in Bihar", *Indian Journal of Agricultural Economics*, Vol. XXXI, July-September, No. 3.

⁵ Sirohi, A.S., Ram, G.S. and Singh, C.B. (1973), "Inter-State Disparities in the Structural Distribution of Land Holding in Rural India", *Indian Journal of Agricultural Economics*, Vol. XXXI, January-March, No.1.

⁶ Appu, A.S. (1975), "Tenancy Reform in India", *Economic and Political Weekly*, vol. X.

Sinha⁷ observed that the land reform measures could not achieve their objective due to loopholes in its provisions. He found that instead of releasing land for landless, big landlords went on grabbing all types of land like government land, wasteland, forest land, bhoodan land etc. Khusro⁸ says that socio-political factors play important role in formulation of various land legislations and implementation of tenancy legislation is a function of the degree of consciousness among the tenants.

In his study Beteille⁹ found that political and economic power are important factor in land distribution pattern. He found that power has shifted from the traditional elite to new popular leaders and small and marginal farmers by virtue of being structurally weak, fail to raise their voice in achieving rights.

Some of the major studies on the theory of land lease are as follows: According to Smith¹⁰, agriculture land leased arrangements have been analysed in the framework of several alternative paradigms. While beginning with classical models, which examine alternative land lease arrangements under assumption of output certainty and symmetric information between landlord and tenants. Their general implication is that share contracts are inefficient as compared to rent and wage contracts because a share tenant, who receives only a portion of output, will apply less- than-efficient input quantities in equating his share of the value of the marginal product with the marginal factor cost. Reid's¹¹ model introduces output uncertainty but maintains the symmetric information assumption. This model leads to the conclusion that choice among contract types is determined by the relative risk aversion of contracting parties, with less risk-averse party bearing all risk. Hence, wage contracts are chosen if the landlord is more risk- averse, rent contracts are chosen if the landlord is more risk- averse, and share contracts are induced only if

⁷ Sinha, Indradeep (1970), "Land Liberation Movement in Bihar", *Mainstream*, 10 October.

⁸ Khusro, A.M. (1958), "*Economic and Soccial Effect of Jagirdari Abolition and Land Reforms in Hyderabad*", Hyderabad: Osmania University.

⁹ Beteille, A. (1969), "*Caste, Class and Power Changing Patterns of Stratification in Tanjore Village*", Bombay: Oxford.

¹⁰ Smith A. (1776), "*The Wealth of Nations*", New York: Modern Library Edition, 1937.

¹¹ Reid, J.D. (1976), "Sharecropping and Agricultural Uncertainty", *Economic Development and Cultural Change*, April 1976.

risk preferences of the contracting parties are identical. In contrast to Reid's analysis, however, few models lead to the conclusion that if both parties risk-averse, risk will be shared, either through share contracts or through negotiation of a combination of rent and wage contracts.

In interlinked contracts, control over credit and other imperfect markets is used to induce the tenant to apply input quantities desired by the landlord. Smith¹² considered share contracts to be economical by inefficient. He states that share contracts hinder land improvement and encourage inefficient resource use. Comparing the eighteenth century English system of rent contracts and the French system of metayage (sharecropping), Smith, argues that the latter can be regarded as an ad valorem tax on the tenant. He reasons that the inherent "tax" in share contracting result in efficient resource utilization and predicts that share contracts will be replaced by "farmers...who cultivated the land with their own stock, paying a certain rent to the landlord [i.e., cash rent contracts]". Mill¹³ and Marshall¹⁴ took help of Smith's idea to give significant conclusion. Marshall argues that the tenant's receiving only a share contract fosters insufficient input use. This conclusion is widely known in the literature as Marshallian inefficiencies.

Cheung¹⁵ argues that the tax- equivalent approach is flawed in several respects. First, in the tax- equivalent approach share contract terms are not competitively determined in the market. Second transaction cost, such as costs of contracts negotiation, monitoring the tenant's actions, and enforcement of contract terms, that can significantly influence the type and the terms of the contracts are ignored. Third, the tax- equivalent analysis of share contracts derives from a "tax collection" situation where the government does not behave as a wealth or utility maximizer as does landlord. Reid argues that the tax- equivalent analysis inappropriately ignores the influences of the landlord on the tenant's labor input

¹² Smith A. (1776), "*The Wealth of Nations*", New York: Modern Library Edition, 1937.

¹³ Mill, J.S. (1848), "*Principles of Political Economy*", Ashley Edition, London: Longmans, 1926.

¹⁴ Marshall, A. (1890), "*Principles of Economics*", 8th Edition, London: Macmillan, 1956.

¹⁵ Cheung, S.N.S. (1969), "*The Theory of Share tenancy*", Chicago: University of Chicago Press.

decisions. Further more, the Marshallian model ignores any effects of production uncertainty on the contract type and terms selections process.

In contrast to Marshall, Cheung¹⁶ argues that share contracts must be effective because of their long term coexistence with rent and wages contract under competition from both landlord and tenants. Cheung's model assumes that the landlord designs a contract to induce the tenant supply labor at a level that maximizes the landlord's objectives, subjects to the condition that the tenant receives his opportunity income.

Reid incorporates production uncertainty into his model through introduction of a multiplicative random variable. As a consequence, both land and labor are treated as risk-increasing inputs.

The second conclusion of Reid's model is that, if the tenant is more risk-averse than landlord, the sum of the landlord and tenant's net VMP share-contracted land is lower than the landlord' net VMP for wage-contracted land, provided labor intensity in a wage contract is at least the labor intensity in a share contract.

Having rejected risk sharing as an adequate explanation for share contracting, Reid argues that the impetus instead lies in the flexibility of share contracts to intraseasonal regeneration of specific contract provision relating to resources use intensities. Specially, he argues that when unexpectedly favorable or unfavorable production conditions are encountered, deviations from planned (contracted) activities may be economically efficient. He observed that renegotiation of such deviations, for example more intensive use of the land resource when potential benefits are large, may be less contentious under share contracts since "[tenants and landlord] have already solved the division of the spoils, and both have immediate incentive to note any change in circumstances and profitability alter their plans."

¹⁶ Cheung, S.N.S. (1968), "Private Property Rights and Share-Cropping", *Journal of Political Economics*, vol. 76.

Stiglitz¹⁷ says if both parties are risk-averse, their incomes are depended on the risk yield. In other words, neither party receives a certain income if risks are efficiently shared. Also, when one party is risk-neutral and other is risk-averse, optimal risk sharing cause the risk-neutral party to bear the entire income risk, leaving the risk-averse party with a certain income. If risk aversion of a party increases (decreases), his income becomes less (more) dependent on the total uncertain income; that is, he bears less. If the variance of output increases, the more risk-averse party will have a lower reliance on the riskier yield. He maintains that share contracts do not appear necessary for optimal risk sharing. However, in the real world they are observed to coexist with the other two contract types and are often the prevailing contract types (Cheung 1969).

The landlord's inability to observe the tenant's actions is assumed a prior (asymmetric information). Second, besides satisfying the tenants incentive problem into account. Kreps¹⁸ demonstrates through a simple numerical example that, in an incentive contract, both party's incomes are risky (i.e., output is shared), even if one party is risk-neutral and the other is risk-averse. Holmstrom¹⁹ compares a first-best risk-averse contract with a second-best incentive contract design. The "efficiency" loss of the second-best contract is captured through the difference in distribution of wealth at the margin in the two contract types.

Of the three contract type—share, rent, and wages—market interlinkage is most relevant to share contracts. The basic structure of contract with market interlinkage follows the principal- agent paradigm (Braverman and Stiglitz 1982²⁰, 1986²¹; Braverman and Srinivasan²²). Braverman and Stiglitz (1982, 1986),

¹⁷ Stiglitz, J.E. (1974), "Incentives and Risk Sharing in Sharecropping", *Review of Economic Studies*, vol. 61.

¹⁸ Kreps, D.M. (1990), "A Course in Microeconomic Theory", Princeton New Jersey: Princeton University Press.

¹⁹ Holmstrom, B. (1979), "Moral Hazard and Observability", *Bell Journal of Economics*, vol. 10.

²⁰ Braverman, A. and Stiglitz, J.E. (1982), "sharecropping and the Interlinking of the Agrarian Market", *Journal of Development Economics*, vol. 9.

²¹ Braverman, A. and Stiglitz, J.E. (1986), "Landlords, Tenants and Technological Innovations", *Journal of Development Economics*, vol. 23.

²² Braverman, A. and Srinivasan, T.N. (1981), "Credit and Sharecropping in Agrarian Societies", *Journal of Development Economics*, vol. 9.

Braverma and Srinivasan, and Bardhan²³ divided the production period, which coincides with the contracting period, into preharvest and harvest / postharvest phases. According to Otsuka, Chuma, and Hayami²⁴, the tenant has incentive to borrow from his landlord because, due to uncertainty, the tenant's production-dependent future income may not be acceptable collateral to alternative credit sources. Braverman and Stiglitz (1986) discuss the effect of credit terms on the tenant's supply of effort.

Empirical evidence of risk sharing and incentive contracts is largely based on a search for real world validity of the principal-agent paradigm in land lease contracts. The principal-agent paradigm posits the existence of two decentralized decision maker's a principal who behaves as a stackelberg in remunerating an agent on the basis of observed consequences of the agent's actions and an agent who takes actions that are not directly observable by the principal (Kreps²⁵). Allen and Lueck²⁶ challenge the applicability of the principal-agent paradigm to land lease controls in North America. They argue that share contracts are only negotiated under output uncertainty and risk aversion. Hence, if tenants are risk-averse, their output should be a decreasing function of yield variance. Furthermore, assuming decreasing absolute risk aversion, wealthy tenants would tend to accept greater income risk by negotiating contracts with larger tenant share of the output. They argue that the above implications of the principal-agent paradigm are generally not supported. However in their empirical analysis, they discover evidence that landlords except tenant moral hazard in use of landlord-supplied inputs such as buildings and farm machinery.

²³ Bardhan, Pradhdan K. (1980), "Interlocking Factor Markets and Agrarian Development: A Review of Issues", *Oxford Economic Paper*, Vol. 32.

²⁴ Otsuka, K., Chuma, H. and Hayami, Y. (1992), "Land and Labor Contracts in Agrarian Economies: Theories and Facts", *Journal of Economics Literature*, vol. 30.

²⁵ Kreps, D.M. (1990), "*A Course in Microeconomic Theory*", Princeton New Jersey: Princeton University Press.

²⁶ Allen, D. and Lueck, D. (1992), "Contract Choice in Modern Agriculture: Cash Rent Versus Cropshare", *Journal of Law and Economics*, Vol. 35.

Empirical evidence of interlinked contracts exists in Bardhan and Rudra's²⁷ study of land lease contracts in 275 northern Indian villages. Evidence supporting Braverman and Srinivasan's conclusion of a landlord's incentive to lower interest rates is found in West Bengal, where 45% of sampled tenants obtained interest-free loans from their landlords. Bardhan and Rudra's results indicate that in west Bengal, 44% of study participants were cases where landlords extended loans farm expenses, 23% of which were interest-free. Corresponding figures in Bihar are 41% and 15%, respectively. The data do not support the prevalence of contracts with bounded labor clauses. Of landless (landed) tenants in West Bengal that reported giving obligation services to the landlord, 58% (92%) reported being properly paid for their service. In West Bengal, only 2.4% of surveyed tenants reported involvement in bounded labor whereas similar figure for Bihar and Eastern Uttar Pradesh were 14% and 3.8% respectively. In this light, Bhaduri's²⁸ claims of bonded labour and classical semi feudalism are not well supported.

Although Bardhan and Rudra's study gives evidence of interlinked contracts in India and possibly other less developed countries, the existence of such contracts is questionable in developed countries such as United States. In the United States, farmers can obtain credit from various sources. Given these alternative credit sources, borrowing from landlords does not appear crucial, particularly when such borrowing enhances the landlord's control over the tenant's welfare. This is supported by statistics on farm non-real-estate loans in the United States. Thus landlords, who could at most account for the portion of "individuals" category, are not the primary credit source of U.S. farmers. Furthermore neither social convention nor the availability of agricultural insurance supports the existence of interlinked contracts in the United States and other developed countries.

Evidence of cooperative and non cooperative behavior in leased contracts is studied in an empirical study of land lease among Texas cotton producers surveyed

²⁷ Bardhan, Pradhnan K. and Rudra, A. (1978), "Interlinkage of Land, Labour and Credit Relations: An Analysis of Village Survey Data in East India" *Economic and Political Weekly*, vol. 13.

²⁸ Bhaduri, A. (1973), "Agricultural Backwardness under Semi-Feudalism", *Economic Journal*, vol. 83.

by Dasgupta, Knight, and Love²⁹. Results from this study indicate that private information sharing between landlords and tenants exists in repeated contracts (i.e. contracts that are unchanged for more than a single time period). However, in contracts that are not repeated, there is no evidence of private information sharing. Because theoretical analysis shows that sharing of information is associated with cooperative behavior, the result gives evidence of cooperation in repeated contracts and cooperation in single-period contracts. Further analysis indicates that private information sharing occurs only when the landlord does not monitor the tenant. This supports the notion that cooperation exists only in equilibrium; that is, cooperating parties act in their best interest, eliminating the need for monitoring.

Johnson³⁰ and Cheung³¹ questioned the empirical validity of the traditional thesis of inefficient share tenancy. They considered it more appropriate to assume that the landlord can observe the tenant's labor, and, therefore, the share tenancy contract can be enforceable. If enforceable, hazard problem does not arise. In that case the landlord and the tenant can mutually seek for a contract that achieves optimum risk sharing and the first-best resource allocations.

The hypothesis of Rao³² proposes that share tenancy is adopted where contracts' enforcement requires relatively low cost. It is also supported by the fact that the share contract traditionally used to apply mainly to subsistence crops such as rice and wheat in India, for which technology was simple and more stable. Hence, for cash crops, such as cotton and tobacco, to which the fixed-rent contract was applied despite the higher risk involved.

²⁹ Dasgupta, S. Knight, T.O. and Love, H.A. (1997), "*Decision Making Process and Precedence Between Landlord and Tenants: An Empirical Study Land Tenure in Texas*", Department of Agricultural Economics, Texas: Texas A&M University.

³⁰ Johnson, D.G. (1950), "Resource Allocation Under Share Contracts", *Journal of Political Economics*, vol. 58.

³¹ Cheung, S.N.S. (1969), "*The Theory of Share tenancy*", Chicago: University of Chicago Press.

³² Rao, C.H.H. (1971), "Uncertainty, Entrepreneurship and Sharecropping in India", *Journal of Political Economy*, vol. 79.

1.3 ABOUT THE STUDY AREA

Machipur, a village in Bhagalpur district of Bihar is investigated in this study. Bhagalpur is a city and municipal corporation in Bihar state in eastern India. It is the administrative headquarters of Bhagalpur District. Bhagalpur district covers an area of 2569.50 sq. km. It lies between 25°07'–25°30'N latitude and 86°37'–87°30'E longitude. Machipur, a village panchayat, is located at a distance of around 10 km south-east of Bhagalpur city.

1.4 OBJECTIVE

This study is aimed at understanding the impact of the geographical factors on the land distribution system. The main objectives of this study are:

1. To examine the nature of land distribution system in terms of ownership holding and operational holdings with respect to social and economic groups.
2. To look into the terms of tenancy and study the selected socio-economic characteristics of lessors and lessees.
3. To analyse the impact of geographical factors, such as, soil type, irrigation, homestead, and transport route etc. on land distribution characteristics across socio-economic groups.

1.5 HYPOTHESIS

The broad hypotheses of study are:

1. Better-off social and economic groups cultivate on prime locations either on owned or on leased-in land.
2. Fixed money is taking lead over share cropping as preferred term of tenancy.
3. Pattern of land distribution is a function of distance from homestead, soil type, irrigation facilities, productivity & cropping intensity and distance from transport network.

1.6 DATABASE

The present research work is necessarily an empirical one and is based on field survey data at the primary level. Household survey of 197 cultivators from the entire study area is carried out. The questions pertaining to the number and area of operational holdings, ownership holding, socio-economic and geographical aspects of the land distribution are carefully asked to get the data. Information of geographical location and altitude of study area is taken by GPS Map76CS. Village map is obtained from Bihar State Government Press, Gulzarbagh, Patna. However, the analytical background of the study (primarily the third and fourth chapters) is done with the help of secondary data.

Major sources for secondary data are:

- Various rounds of NSS Report on land distribution and tenancy.
- District Handbook of Bhagalpur, 2001.
- Agricultural Statistics of Bihar, 2005.
- Bulletin on Land Distribution issued by Ministries of Agriculture and Revenue & Land Reforms, Government of Bihar, Patna.

1.7 METHODOLOGY

In the present study, an analysis of land distribution and its characteristics at village level is attempted. Village Machipur is chosen as the study area as this village has a mixed population of two bigger religious communities and all the major characteristics of land distribution of rural India coexist in this village. Total population of the study area is divided in economic and social groups. On the basis of area of land owned, population is divided into three classes, viz. large, medium and small. Similarly, population of Machipur is divided into two social groups on the basis of their caste. In this categorisation, all the forward caste and two dominant backward castes, namely, Yadav and Bania, are grouped into higher social group while rest of the backward caste and scheduled castes are kept in lower social group. Yadav and Bania are socially powerful in the region and hence it

would have not served our purpose to study the characteristics of land distribution had they been kept along with scheduled caste in lower social class. Since, there no scheduled tribe population in the entire study area, they are not considered for analysis. In field survey, only those households were surveyed, who either owned or possessed land. Thus a total of 197 households were questioned. Study area is mapped with the help of GPS. The readings are plotted with the help of GIS softwares, viz. Erdas Imagine 8.7 and Arc GIS 9. Buffer zones along main road and village are plotted over the map.

In order to fulfill the first objective, share of land of each economic and social group to the total land in ownership and operational holdings is taken out. Number of households from all the economic and social group owning and possessing land is taken out to see the share of each group. Gini's coefficient is worked out to see the inequality in land distribution among economic and social group.

For second objective, study was attempted to find the share of small, medium and large economic group as well as higher and lower social group in total leased-in and leased-out area. Percentage of number of households from each social and economic group leasing-in and leasing-out land is also calculated to see the characteristics of lessors and lessees. For terms of tenancy, prevalence of each term is calculated.

To see the impact of different factors on land distribution, land distribution across the groups with reference to each factor is looked. Finally for last objective land is classified on the basis of factors chosen and then the distribution of land among economic and social group is studied.

Statistical Techniques: Appropriate statistical tools have been used at different stages of analysis in this study. For showing the distribution across the selected groups, share of groups in percent is taken.

Gini's coefficient is used to measure inequality in land distribution among the economic and social groups for ownership and operational holdings. It helps in measuring the concentration of land holding. In case of uniform distribution, the value of Gini's coefficient is zero and it is one in case of maximum concentration. As the objective was to bring out the pattern of land distribution in ownership and operational holding, this tool helped in bringing out the concentration of land in each case. It is calculated as

$$G = \left| \frac{\{(\sum X_i Y_{i+1}) - (\sum X_{i+1} Y_i)\}}{100 \times 100} \right|$$

Where X_i is cumulative frequency of the percentage number of holding in i^{th} class and Y_i is cumulative frequency of the percentage of area in i^{th} class.

Cartographic techniques used for the visual representation of the data are bar diagrams and pie charts.

1.8 ORGANISATION OF THE STUDY

Second chapter gives the overview of the study area. In this chapter, description of demography, literacy, infrastructural facilities, health services, educational institutions, soils, and climate of Machipur is looked upon.

The third chapter has been devoted to analyse the land distribution in terms of both the ownership and operational holdings in the different social groups, viz. higher and lower castes and in the different economic groups, viz. large, medium and small farmers/landowners.

In the fourth chapter, tenancy and land reforms in Machipur is studied. It also incorporates the analysis on the terms of tenancy and characteristics of tenants and landlords.

Fifth chapter deals with the patterns and characteristics of the land distribution of the study area. In this chapter, land distribution across the socio-

economic groups is studied from the stand point of land classification on the basis of chosen parameters.

The last chapter has been devoted to sum up the major results of the entire study and to come up with suggestive measures.

Chapter II

CHAPTER — II

PERSONALITY OF THE STUDY AREA

Machipur, a village in Bhagalpur district of Bihar, is situated at a distance of 10 km South-East of city. It is situated between 25°10'40"–25°12'55"N latitude and 87°01'22"–87°03'26"E longitude. Bhagalpur is a district and divisional town of historical importance situated on the southern bank of the Ganga river. It is situated 220 km east of state capital Patna and 410 km north-west of Kolkata.

Table 2.1

District Profile of Bhagalpur

Area	2569 sq. km
Height from Sea level	43 meter (141 ft.)
Normal Rainfall	1166.2 mm
Lowest Temperature	8.0°C
Highest Temperature	46.0°C
Population as per 2001 census	24,30,331
Rural Population	19,92,872 (82%)
Urban Population	4,37,459 (18%)
Density of Population (per sq. KM)	946
Literacy Rate	45.08%
No. of S.C Population	1,88,234
No. of S.T Population	44,884
No. of Subdivision	3
No. of Police Station	48
No. of Panchayat	242
No. of Village	1536
No. of Household	2,57,260

Source: Bhagalpur Municipal Corporation Sep. 2006

References to Bhagalpur can be found in Indian epics like the Ramayana and the Mahabharata where Bhagalpur has been described as the kingdom of Anga. Mandar Hill, situated 52 km south of Bhagalpur, is believed to have been used as Churner during Samudra-Manthan by God and Danav according to Hindu mythology. Ancient cave sculptures of Emperor Ashoka's regime (274 BC-232 BC) are found in the neighbourhood and at Sultangunj, 20 km west of Bhagalpur, a temple of the Gupta period (320AD-500AD) still exists. The tomb of Shuja, brother of Mughal emperor Aurangzeb, in the heart of the town is reminiscent of the city's association with the Mughal period.

Ruins of ancient Vikramshila University are located 44 km east of Bhagalpur. It was the medieval centre to the conservation and propagation of Buddhist education, established by King Dharampal of Bengal (783-820 AD) at the end of the 8th century. "Vish-hari Puja" or the worship of the snake queen traces its roots to hundreds of years and is still celebrated every year with thousands of believers and snake charmers offering milk to the Nag (the snake King) and Nagin (The snake Queen). In later times it was included in the powerful Hindu kingdom of Magadha or Behar, and in the 7th century A.D. it was an independent state, with the city of Champa as its capital. It afterwards, formed a part of the Mohammedan kingdom of Gaur, and was subsequently subjugated by Akbar the great, who declared it to be a part of the Delhi Empire. Bhagalpur passed to the East India Company by the grant of the emperor Shah Alam in 1765.

Angika is the main language of Bhagalpur. Angika is one of the oldest languages of the world, which was known as Aangi during ancient time. Angika is spoken by more than 30 million of Indian and around 50 million populations worldwide. Among others Hindi and English are the main languages.

Bhagalpur stretches across both banks of the Ganges. In 1901 the population was 2,088,953, showing an increase of 3% in the decade. Bhagalpur is a long and narrow district, divided into two unequal parts by the river Ganges. In the southern portion of the district the scenery in parts of the hill-ranges and the highlands which

connect them is very beautiful. The hills are of primary formation, with fine masses of contorted gneiss. The ground is broken up into picturesque gorges and deep ravines, and the whole is covered with fine forest trees and rich undergrowth. Within this portion also lie the lowlands of Bhagalpur, fertile, well planted, well watered, and highly cultivated. The country north of the Ganges is level, but beautifully diversified with trees and verdure. Three fine rivers flow through the district - the Ganges, the Kusi and the Ghagri. The Ganges runs a course of 96 km. through Bhagalpur, is navigable all the year round, and has an average width of 4.8 km. The Kusi rises in the Himalayas and falls into the Ganges near Colgong within Bhagalpur. It is a fine stream, navigable up to the foot of the hills, and receives the Ghagri 12.8 km. above its debouchure.

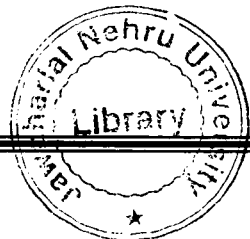
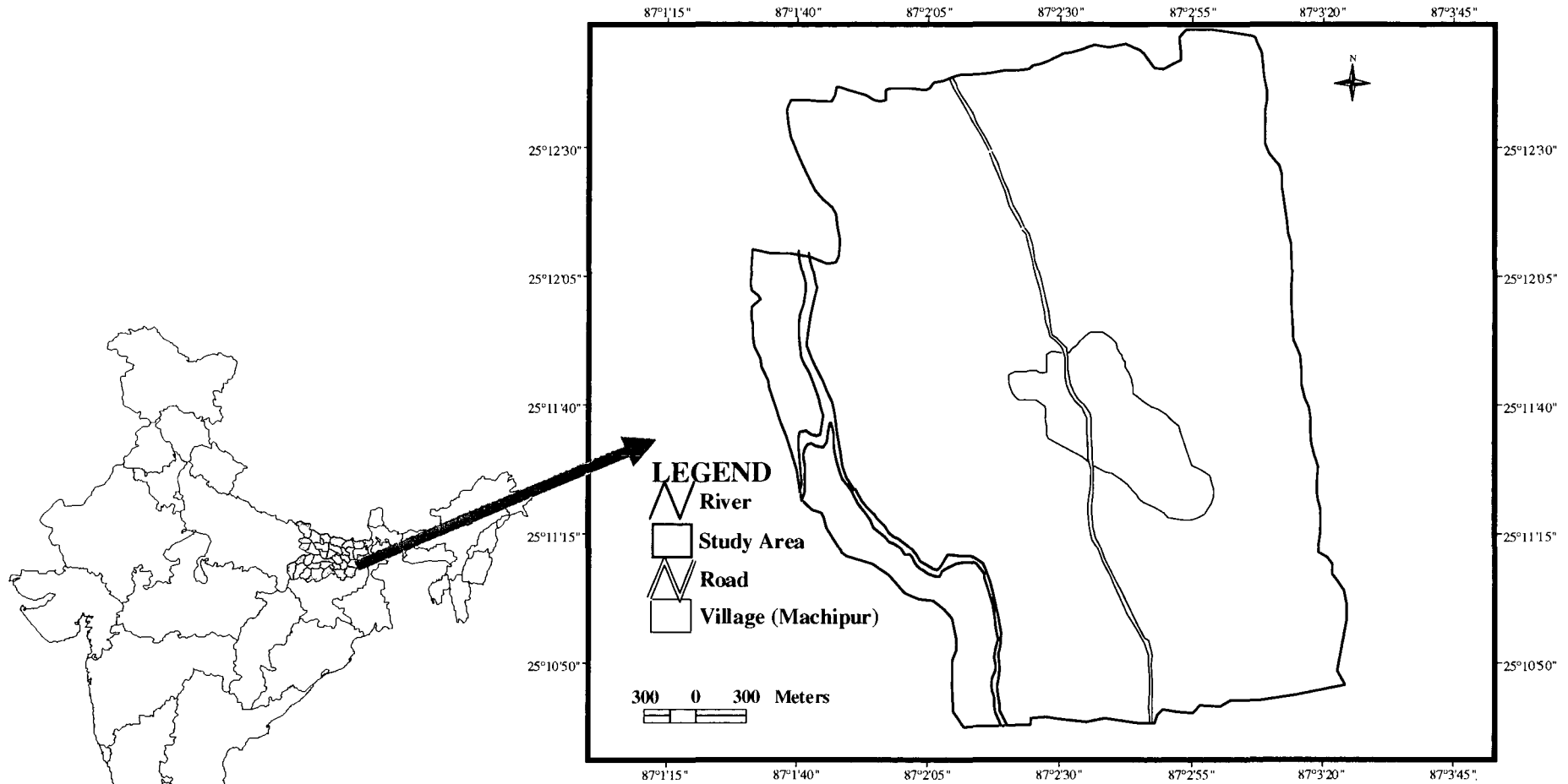
Rice, wheat, barley, oats, Indian corn, various kinds of millet, pulses, oil-seeds, tobacco, cotton, indigo, flax and hemp and sugar-cane, are the principal agricultural products of Bhagalpur district. The jungles afford good pasturage in the hot weather, and abound in lac, silk cocoons, catechu, resin and the mahud fruit, which is both used as fruit and for the manufacture of spirits. Lead ores (chiefly argentiferous galena) and building stone are found, and iron ore is distributed over the hilly country. Attempts made to work the galena in 1878-79 and 1900 were abandoned, and the iron ore is little worked. Gold is washed from the river sand in small particles.

The climate of Bhagalpur partakes of the character both of the deltaic districts of Bengal and of the districts of Bihar, between which it is situated. The hot season sets in about the end of March, and continues till the beginning of June, the temperature at this time rising as high as 46°C. The rains usually begin from May and last till the middle of September. The average annual rainfall is 120 cm. The cold season commences at the beginning of November and lasts till March. During December and January the temperature falls as low as 8°C. The average annual temperature is 26°C.

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LOCATION MAP

VILLAGE MACHIPUR (BHAGALPUR, BIHAR)



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Figure: 2.1

The village Machipur is located at a distance of around 10 km south-east of Bhagalpur city. It is a village panchayat spread over an area of 2663.7 acres. Most common unit of Land in the village is *Katha*. One *Katha* is equal to 2.5 decimal of land. This village is situated closer to the outer margin of city. Machipur is surrounded by open land which is used for agriculture purpose. During British times, the village was an important centre of administration. A *Kachhehri* (revenue court) was established by British to keep the track of land records. It is called as *Kothi Dighi*. Social and economic identity of the villagers is well defined. The setting of village is characterized with existence of distinct “tolas” on the basis of social and economic classes which represents the general trend of rural India. This village has a mix population of the two major religious community viz. Hindu and Muslim. Further, it houses both the ‘upper’ and ‘lower’ caste people. Thus it makes an interesting area to study the characteristics of land distribution. Machipur, owing to its nearness to the city has been experiencing a touch of urbanisation. Still it displays the basic features of a typical Indian village. The village is divided into ‘Tolas’ of different caste and its core is occupied by the dominant social group. Each tola houses the people from particular social caste and named accordingly. People from different caste are clustered in these tolas. Most affluent castes occupy their house in the centre of village and it is surrounded by tolas of lower caste. Rajputs and Shaikhs live in the core area. Apart from these two dominant castes, Machipur houses families from castes like Yadav, Kurmi, Kumhar, Bania, Ansari, Pathan, Thakur, Mistri, and Scheduled Castes, namely, Pasi, Gorhi Dusadh, Dhobi, and Chamar.

Total population of village is 2768; out of which, 1327 or 48 percent are women while 1441 are male. If we divide the population on the basis of religious communities, Muslims are more than Hindus in number. Population of Muslims is 1523, which comes about 55 percent of the total population. Sex ratio of village is 921, which is less than the national average. There was a high in-migration in the village in 1989-90 after the Bhagalpur riots. Muslims from other village migrated to Machipur and settled at the eastern periphery of village. They are mostly low caste

Muslims. These people are landless and constitute the labour force of Machipur. Few of them operate on land as tenants. People of the village are peace-loving and it has not witnessed any major clash either between social or between economic classes. Though there are some apprehensions in lower caste people towards the Rajputs. Lower caste people are mostly labour and they are engaged in variety of services like, rickshaw pulling, agricultural labourers, masons and rack picking etc. On an average, labours of the village work for about 135 days in a year. The wage rate in the village is 60 Rs. per day for a labour. There are very few people in government jobs and hence the population of salaried class is low.

Literacy in Machipur is at a very sorry state where only 31.6 percent of the total population is literate. If we look further into it, it is found that female literacy is as low as 22.03 percent and male literacy is comparatively better at 41.8 percent. Education in study area is at a low because of the rural nature of village and dependence of economy on agriculture. People prefer working on their field rather than studying. There are two schools, one primary and one middle school, and a madarasa in the village. Primary school is state run while middle school is private. To study in high school, students have to go to Sabour, a near-by Block Head-quarter. Madarasa of Machipur has been famous for its quality education in the entire district. But due to losing importance of studying Madarasa curriculum, it is losing its charm and number of students is decreasing year after year. Over the years, the literacy rate of village is increasing, mainly due to increase in female literacy. School drop-out is very high in the village and most of the students stop studying after the primary level only. The drop-out is more in Muslims. There is growing trend of education among the landless scheduled caste families.

Machipur lacks the basic infrastructural facilities like good transport network, electricity, educational institutions and health care centres. Although village is connected with the city through a metalled road, the condition of road is not very good and it is badly damaged at number of places. Despite being close to city, transport system is not good and only few buses and autos ply between the village and city. This is mainly due to bad road. The road is not maintained and it is

damaged by flood every year. Closeness to NTPC, Kahalgaon does not help village in getting electricity and supply of power is a major concern. There is not even a single government health centre in the village. Medical services are taken from untrained private medical practitioners. For all the major medical help, villagers run to Bhagalpur.

Most of the houses in village are made up of mud and 75 percent houses are *Kuchha* houses. There are very few *Pucca* house in the village. Houses of economically well-off and socially higher group are also not cemented.

The primary occupation of the villagers is agriculture and the economy of the village is largely dependent on the agricultural production. As per the general trend of India, here also higher social classes are economically sound and they own most of the land. The economy of region is agriculture-based and cultivation is the main source of livelihood for the inhabitants of this village. Despite being close to district head quarter of Bhagalpur, which is one of the biggest commercial cities of Bihar, cash crops are less favoured in the region and the main crops are rice and wheat. Farmers sell their produce in local market of village and the difference in the rate given to producers is less by 100 Rs. per quintal to the rate of retail market. Due to high risk of inundation small farmers chose not to sow their land in the eastern part of the village during kharif season. And hence, gross sown area is not very higher than total sown area in Machipur. Most of the fields are sown either once or twice in one year. Zaid crops are not sown at all. Bhagalpur, in general, and Machipur, in particular is famous for its high quality mangoes. Demand of mango from Machipur is high in local market and it is transported to Kolkata also, where *Malda* and *Zardalu* varieties of mango is hot cake. Mango orchards are increasing in number due to ease in maintaining it and the kind of return it gives. These orchards are located at the outskirts of village. Size of orchards is normally big.

The physiology of the village is as follows:

Relief: This village falls in the lower Ganga plains. Its relief features is not marked in a well defined stage of evolution. The general relief feature is a monotonous rolling plain surface.

Drainage: The study area is drained by Ganga river system, which passes nearby and two small tributaries of Ganga, namely, Joli and Chanan passes through the study area.

Soils: Four kinds of soil are found in the study area. These soils are locally named as Balua, Domat, Karaar and Bheet.

Balua: This kind of soil is found both in the 'Paschim Chaur' and 'Purab Chaur' i.e western and eastern parts respectively of the study area. This is sandy in character and hence is less fertile.

Domat: This kind of soil is found in the 'Paschim Chaur' i.e the western part of the study area. This soil is fertile and rich in nutrients. It has good water holding capacity. This kind of soil lacks iron and it contains loamy character.

Karaar: This soil is found in the 'Purab Chaur' i.e the eastern part of the study area. It is poor in organic matters like nitrogen, phosphorus and calcium and it has a low water holding capacity.

Bheet: This soil is found around the village and is the best soil in terms of productivity. It supports almost all kind of crops and vegetables. Of-late this kind of land is being more and more getting converted into mango orchards.

Climate: Climate of Machipur is typical Monsson. It falls in above 120 cm annual rainfall region. Summers are hot and humid while winters are cold. The Annual range of temperature is as high as 38°C which is 12°C higher than the average annual temperature of 26°C in the region. Due to high annual rainfall and proximity to river Ganga, water table of village is high. Potable water is available at the depth of 30 feet. Monsoon shower starts in the May and it lasts till early October. Number of rainy days in a year is nearly 115.

GPS WAYPOINTS

VILLAGE MACHIPUR (BHAGALPUR, BIHAR)

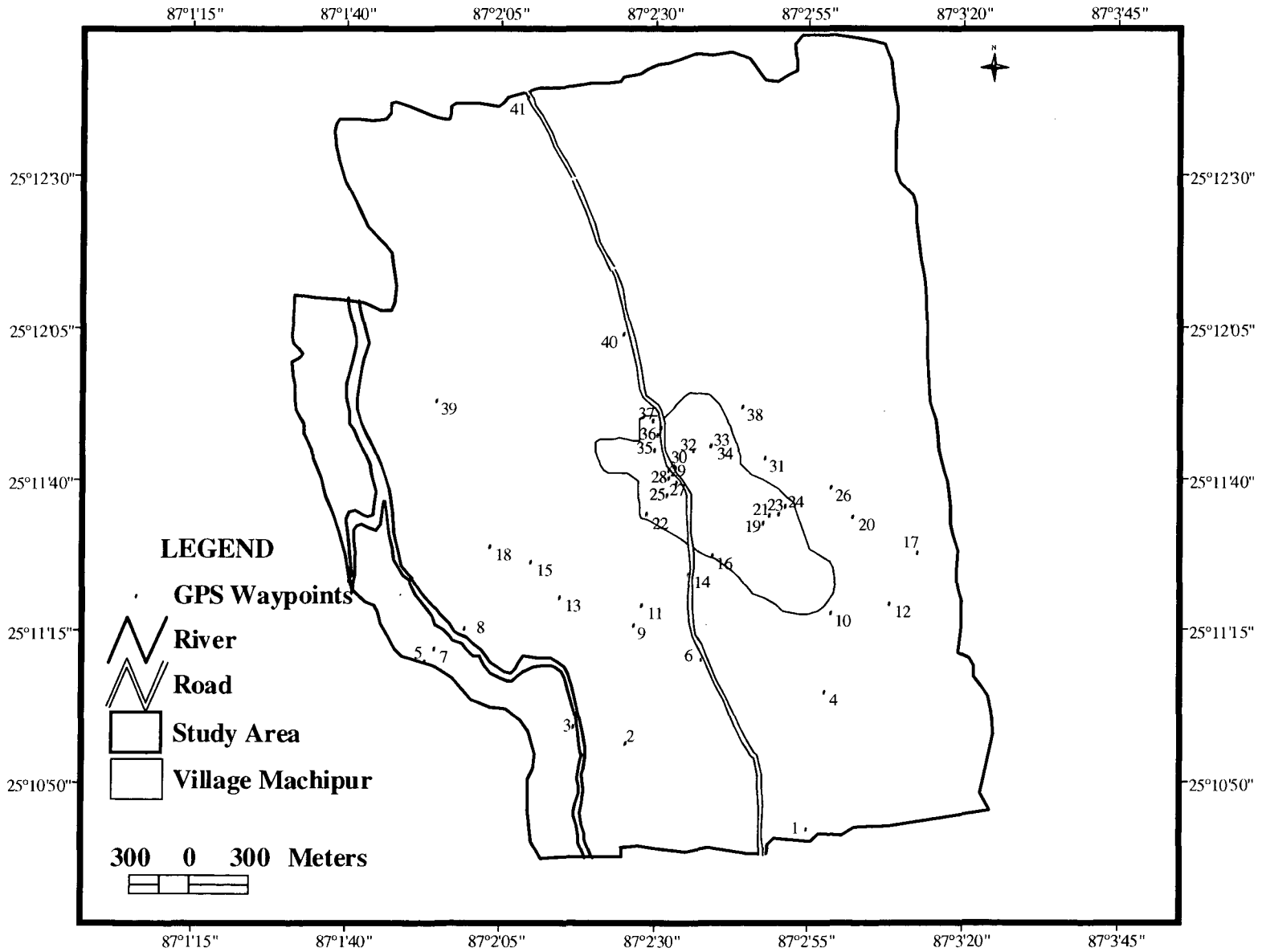


Figure: 2.2

LOCATION OF GPS WAYPOINTS ON STUDY AREA

Reference Figure No. 2.2

Waypoints No.	Location	Waypoints No.	Location
1	BOUNDARY OF SHEETS 4&3	21	PLOT OF ARMY MAJOR
2	SUJMAHAL	22	GRAVEYARD 3
3	PLOT OF AMEEN	23	HOME OF MAULANA SB.
4	KOTHIPEER	24	MOSQUE 2
5	CHURIWALA BAGH	25	MACHIPUR HAAT
6	10BIGHIA BAGH	26	MANNAWALI BAGH
7	PLOT OF AMEEN	27	MADRASA
8	NAALA	28	KAMRU SHOPKEEPER
9	GOHARION TOLA	29	ONLY MARKET COMPLEX
10	GANGTABAGH	30	HOUSE OF POSTMASTER
11	DIGHI POND	31	IMLI
12	12BIGHIYA BAGH	32	HOUSE OF AMINSAAB
13	PLOT 3 OF AMEEN	33	HOUSE OF HAFIZ SB.
14	GRAVEYARD 2	34	HOUSE OF EX DC
15	FIELD OF MADARASA	35	MASJID 1
16	PASIWALA BAGH	36	HOUSE OF BIGGEST FARMER
17	PLOT IN 2 SHEETS	37	HOUSE OF PEER SB.
18	PLOT OF DISTRICT COLLECTOR	38	GRAVEYARD 1
19	PUL OF AGARPUR TOLA	39	LAKKADWALI BAGH
20	POGALIA	40	MAGHOWALI BAGH
		41	PADAMPUR BOUNDARY OF SHEETS 1&3

Chapter III

CHAPTER — III

TRENDS IN LAND DISTRIBUTION

India is characterized by inequalities in land distribution with respect to both areas and numbers amongst different sizes of holdings across the socio-economic groups. A small number of holdings have large areas while a large number of holdings have small areas. Similarly small portion of population possess large area whereas large chunk of population possess small area. The prevalence of this system in Bihar is not only evident but it reaches its zenith in the state. Bihar, primarily an agrarian society depends heavily on the primary sector both for sustenance of economy as well as for the employment. Economy of Bihar is determined and directed by the performance in agriculture in the absence of industries and the services sector.

Land as a natural resource has more importance for agriculture than any other activity. Therefore the land distribution pattern in a primarily agrarian society such as, Bihar has a strong bearing on the economic conditions of the cultivators. Our country, with this large agriculture-dependant population, has seen many changes in its land distribution structure along time. There exists plurality of land holding structure from the large farmers owing big holdings to the community owned land. During British times, Zamindars had access to large shares of land were prominent and the land was very unevenly distributed. After the independence, this situation improved a bit mainly due to various land reform legislations. But these measures were inadequate to wipe-out the vast inequality.

The study area Machipur is a village in Bhagalpur district. This village has a mix population of the two major religious community viz. Hindus and Muslims. Further, it houses both the 'upper' and 'lower' caste people. The population of village consists of Muslims, Rajput, Yadav, Bania and Scheduled Castes. Machipur, owing to its nearness to the city has been experiencing same of urbanisation. Still it

possesses the basic features of a typical Indian village. The main occupation of the villagers is agriculture and the economy of the village is largely dependent on the agricultural production.

In order to look into the pattern of land distribution across the social and economic groups, ownership holding and operational holding are the key indicators.

3.1 OWNERSHIP HOLDING

According to the 8th round of NSS ownership holding is the land owned by the person with the right of permanent heritable possession of it, with or without the right to transfer the title of land. Time to time the definition of ownership holding has changed. In the subsequent rounds this concept was broadened. In the 17th round, it included: i) land held from government under grant of lease of assignment with the right of permanent heritable and transferable possession and such land even without transferable possession. ii) land held from individuals with or without permanent heritable and transferable possession. This definition has by far remained unchanged.

3.2 OPERATIONAL HOLDING

Roughly speaking, ownership holding is total land owned plus total land leased-in plus total land mortgaged-in minus total land leased-out minus total land mortgaged-out.

Till 17th it did not take into account the fact whether the land is cultivable or not but then onwards it includes only the land either fully or partially put to agriculture uses and thus pasture land, land put to livestock raising or pisciculture or production of livestock was excluded from it, only to re-included in 37th round of NSS.

Taking into account the ownership and operational holding for analysing the general distribution of landholdings, this study proposes to classify the total population of village in the following manner:

For social groups, population is classified into two groups of higher caste and lower caste. This classification is not in line with the social classification of caste in India where it is classified into three groups, namely, upper caste, backward caste and the scheduled caste & schedule tribes. In the study, higher caste includes the upper caste of both the Hindu and Muslim population as well as the prominent and strong backward caste like Yadavs and Banias. The lower caste includes the rest of the backward caste and the scheduled caste. The village does not have tribal population.

On the economic lines, this study classifies the population in three categories viz. small, medium and large farmers. Biggest

Size Category	Area (in acre)
Small	Upto 2
Medium	2-10
Large	10 & above

Farmer of village owns 165 acres of land. Distant second 80 acres of land. Total number of farmers with more than 60 acres is 9.

3.3 TRENDS IN OWNERSHIP HOLDING

Access to land influences the incidence of poverty and ownership of land gives social and economic status. In India, from ancient times, the society is divided into jatis or varnas on the basis of functions performed. But it can be said that it had a strong influence of land held by a group also. As we see that most of the socially strong classes own most of the land and as we go down in

Table 3.1

Distribution of Households by Size-class of
Land Owned and Land Possessed, 1999-2000

In percent

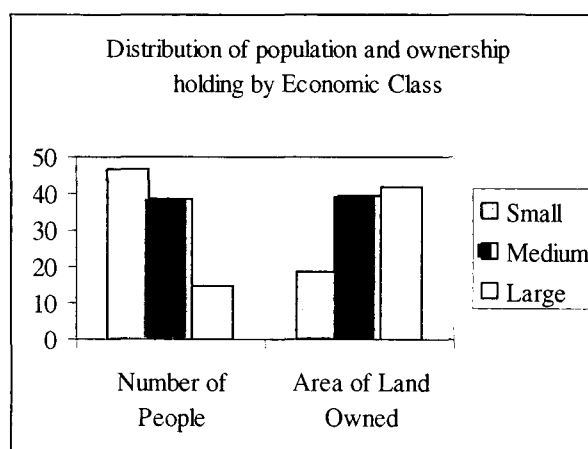
Size class (in acre)	Land owned households	Land possessed households
0.00	10.20	7.2
0.01-0.40	48.7	51.0
0.41-1.00	18.8	19.1
1.01-2.00	11.2	11.5
2.01-4.00	7.1	7.3
>4.00	3.9	3.9

Source: Report on Employment and Unemployment situation in India, 1999-2000, 55th Round, NSS Report No. 458.

Courtesy: State of the Indian Farmers: A Millennium Study, G.K.Chadha et al

this classification we find that the lower social group own less land than the upper class and the dawn of 20th century, most of the scheduled caste population in India virtually had no land ownership although they were and main tillers of land. So, it can be argued that in general strong social groups own most of the cultivable and non-cultivable land. From the study of G.K.Chadha et al, it is found that the decline in the concentration of land at top level is accompanied by a significant increase in the concentration of land at middle level.

Figure 3.1



Source: Primary Field Survey, Jan. 2007.

From Table 3.2, of the total population of 197 households, medium holdings have emerged strongly as compared to other groups in the recent past. However, still the large farmers are very less in number but they own disproportionately large amount of area. Small farmers still are in large numbers and they have very small area in their ownership.

Table 3.2

Distribution of Population and Area
of land owned by Economic Classes

In Percent

Size Category	Number of People	Area of Land Owned
Small	46.6	18.5
Medium	38.5	39.4
Large	14.9	42.1

Source: Primary Field Survey, Jan. 2007.

From table 3.3, we see that in the study area, 68.8 percent of the total household owns less than two acres of the land whereas 9.6 percent of the household owns more than 10 acres. This figure tells about the inequality in the land distribution where total number of households owning small and medium holdings is more than 90 percent. Ownership of land is concentrated in few hands and the large farmers own close to half (42.1 percent) of the total land. About two-fifth of the land is owned by medium class whereas the plight of small farmers can be gauged from the figures which show the share of small farmers is as low as 18 percent (table 3.2). If we compare these two tables, it is evident that still after 60 years of independence and adoption of land reforms, land is concentrated and the access to land is very limited. The society is clearly divided on the economic lines. The large farmers have evaded the legislation to protect their interest and land.

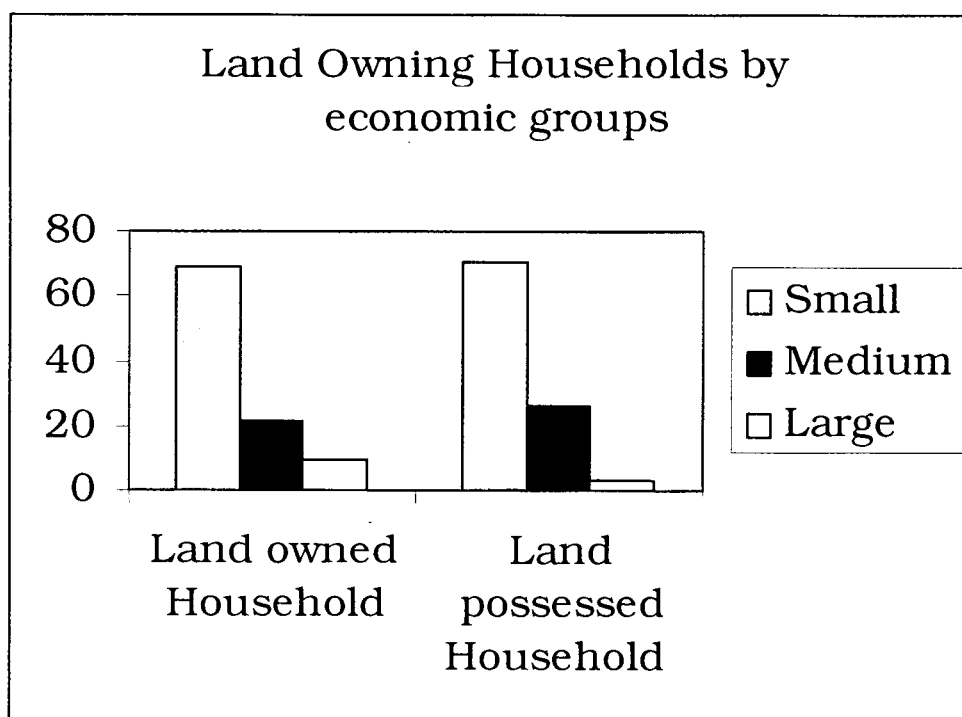
Table 3.3
 Distribution of Households by Size-class of
 Land Owned and Land Possessed in Machipur

In percent

Category	Land owned Household	Land possessed Household
Small	68.8	70.5
Medium	21.6	26.1
Large	9.6	3.4

Source: Primary Field Survey, Jan. 2007.

Figure 3.2



Source: Primary Field Survey, Jan. 2007.

The high percentage of area owned by medium category is more a manifestation of population growth than anything else. Most of these households hail from the common family tree and thus instead of redistribution of land, land fragmentation is main cause of comparatively high number of households in the medium category. If we cross verify this fact with the area owned by the medium

class, it is seen that 21.6 percent of the total household owns 39.4 percent of the total area (from tables 3.2 & 3.3).

In the category of household owning less than two acres of land, the total number of household is as high as 72.8 and the area owned by them as low as 18.5. This tells us that most of the villagers have very small holdings. This also manifests the fragmentation of the land and explains the failure of the reforms measures under taken.

If we study the social factors of the land distribution, it is found that socially higher groups are the big land owners and that socially deprived sections have little or no land to own.

Table 3.4

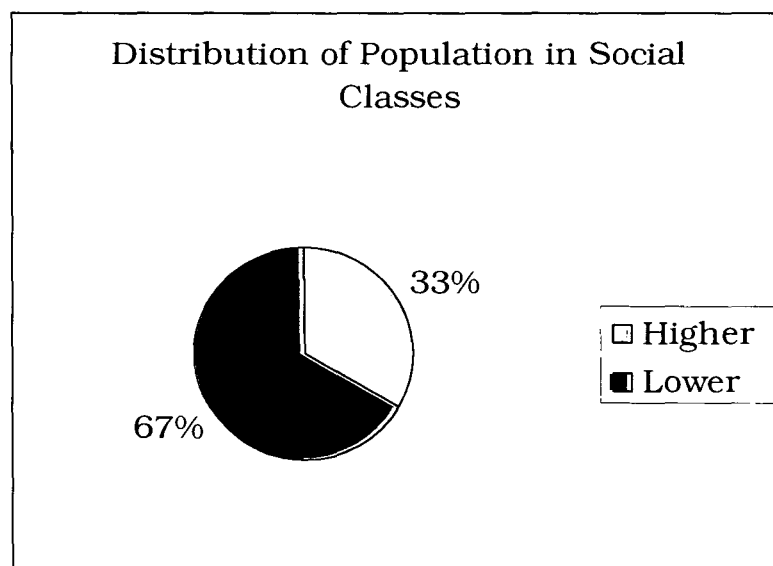
Distribution of Population and Area owned by Social Classes

In Percent

Category	Area of Land Owned	Number of People
Higher	77.9	33.2
Lower	22..1	66.8

Source: Primary Field Survey, Jan. 2007.

Figure 3.3

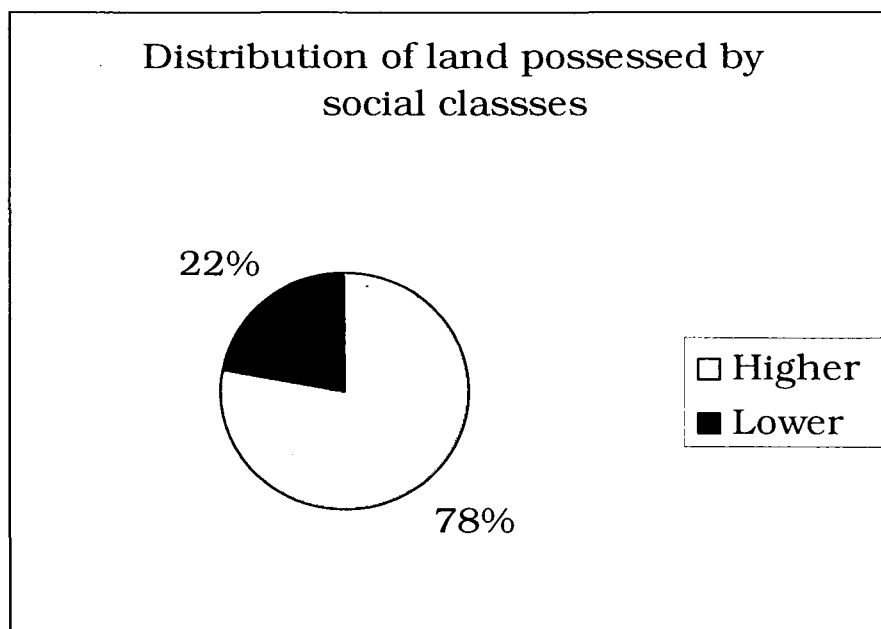


Source: Primary Field Survey, Jan. 2007.

Of the total population of village, 33.2 percent of population belongs to higher social group whereas rest 66.8 percent people are from the lower group.

From the above table, it can be viewed that though the percentage of socially higher group in terms of population is lesser, the area owned by them is very high. Nearly 78 percent of the total land is under ownership of higher group. If we further look into the details, it is found that even within this category more land is owned

Figure 3.4



Source: Primary Field Survey, Jan. 2007.

by the higher caste mainly by the 'Rajputs' and 'Shaikhs'. In the lower group, which primarily consists of Scheduled Castes and Most Backward Caste, area owned is low and that too is distributed among high number of households. Land owned by lower social group is less but it is distributed in a large number of households. This implies that holding size of lower social group is generally small and distribution is even.

From table 3.4, it is clear that land owned by higher social class is very high as compared to their proportion in the total population of the village. This is a clear reflection of them being dominant in the economic terms because of the fact that economy of the village is dependent on the agriculture, which in turn depends on the arable land. Lower category's share in the household owning land is higher than higher one (from Table 3.5) but if it is seen along with area-wise distribution, it demonstrates the fact that lower group has very small holdings. Thus, it can be said that strong

Table 3.5
Distribution of Households by social-class of
Land Owned and Land Possessed in Machipur

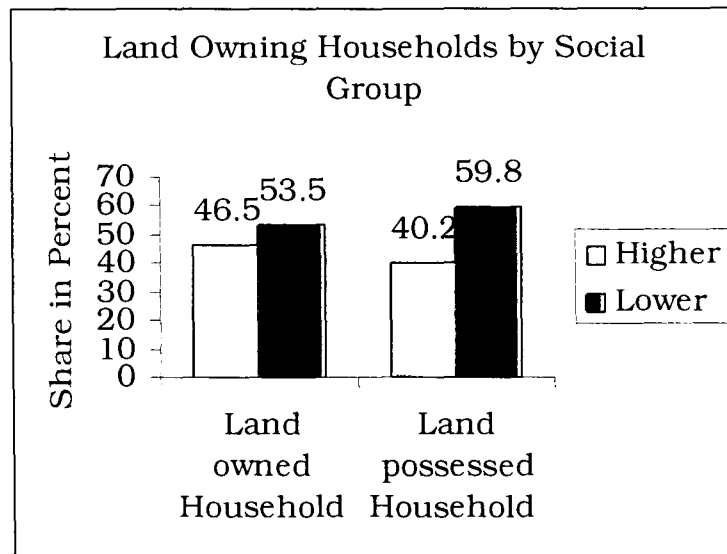
In percent

Category	Land owned Household	Land possessed Household
Higher	46.5	40.2
Lower	53.5	59.8

Source: Primary Field Survey, Jan. 2007.

economic group hails mainly from the higher social group and vice-versa. Similarly, we can say that most of the poor people in Machipur are from the lower caste. Although few of the socially lower group households got into the economically higher class, but it is mainly due to them getting involved into other profession and then buying lands. There are few households who got employed into government jobs or business and they used their saving to increase their ownership holdings.

Figure 3.5



Source: Primary Field Survey, Jan. 2007.

Therefore, from the above findings, it is evident that the scenario for ownership holding in this village presents the picture identical to the over-all picture at the meso level (national level). Ownership of land is concentrated in the hands of few hands. These landowners are from socially dominant group and they control the economy of the region by virtue of being the richer lot of the population. Condition of poor people is pathetic in sense of ownership. Not only that they own small holdings but also that they are faced with the harshness of being the socially deprived group also. Although the region does not have social tension and the people are generally peace-loving, the segregation in the settlement is visible. Discrimination on the ground of caste or religion is not reported and there is appreciable mutual inter-personal relationship existing between the different social and economic groups.

3.4 TRENDS IN OPERATIONAL HOLDING

Ownership holding does not give clear picture of the prevalent land distribution. Since, what matters more is not the fact that who owns the land rather

important fact is who has the access to land. In order to look into the access to land, operational holding is more genuine. Operational holding gives the idea of the fact that who uses the land. So instead of owners, it takes into account the tillers of the lands. This can be a better aspect to look upon. It is found from the study of various scholars that operational holding gives the idea that despite more inequality in the terms of ownership holding, the access to land is somewhat improving by the virtue of comparative little better distribution in terms of operational holding. According to Chadha et al, from table 3.1, we can see that the top class i.e. having more than 4 acres land have the same percentage both in land owned and land possessed households, whereas middle classes (from 0.41 to 4.0 acre) have possessed more land than they actually owned. Major changes are observed in poorest class where 3 percent of those having no land do possess some land. This is basically due to them leasing-in land from other category. It shows that the proportion of large holding and area operated accounted for by them declined markedly over the period of 1970-71 to 1990-91. The proportion of sub-marginal proliferated. Thus, a typical Indian farmer was confronted with ever shrinking and extremely limited land base making it difficult to derive livelihood from land.

If we take into account the operational holding in various groups in Machipur, we see that around 97 percent of the households possessing land belong to the lower or medium size-class (from table 3.3). This shows that there is a better situation with regard to access to land if viewed from the operational holding than ownership holding. There is an increase in the proportion of households from both small and medium size-class. Area possessed

Table 3.6

Distribution of Possessed Land by Economic Class

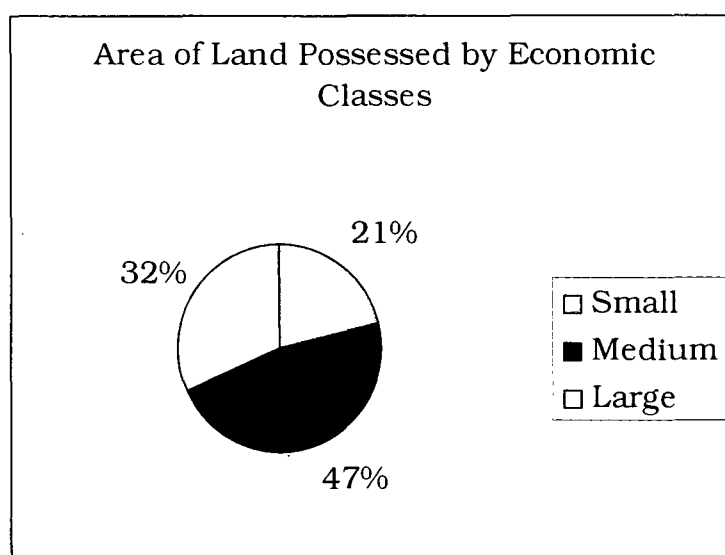
in percent

Category	Area of Land Possessed
Small	21.3
Medium	46.7
Large	32.0

Source: Primary Field Survey, Jan. 2007.

by large landowners is less than the land owned by them. Large farmers possess 32 percent of total area of land in comparison to 42.1 percent of area owned by them. This implies that they tend to lease-out their land which is being leased – in either by small or

Figure 3.6



Source: Primary Field Survey, Jan. 2007.

marginal class. The ownership holding shows there are households with very less or no land possessing some land by entering into tenancy. Here we find that major benefit in terms of possession is acquired by medium group which experiences a gain of 7.3 percentage point in land possession than land owned. Small group also gains 2.3 percentage points in this term but this is not as enthusiastic because still landless and small land owners do not get the benefit.

Table 3.7

Distribution of Possessed Land by Social Class

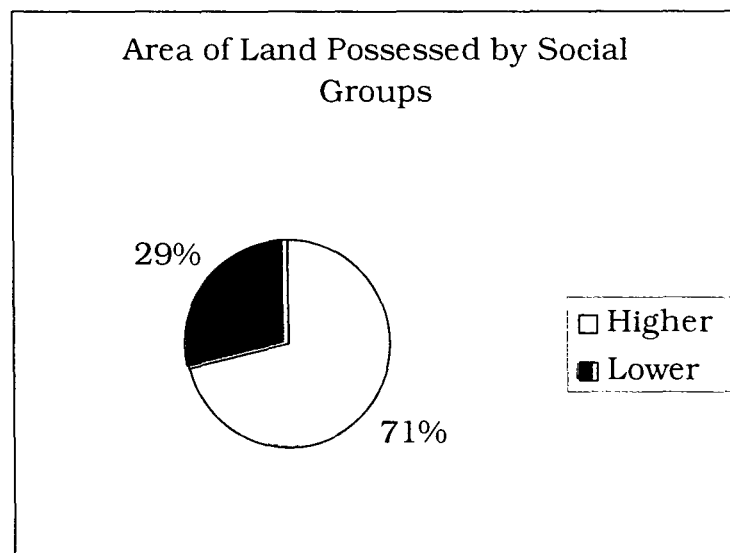
in percent

Category	Area of Land Possessed
Higher	71.2
Lower	28.8

Source: Primary Field Survey, Jan. 2007.

Table 3.7 gives information about the distribution of land in terms of operational holding. Despite the decrease in area of land possessed than land owned by higher social group, it is still high than the area possessed by the lower caste. This symbolizes the authority of higher class over the land. They are the dominant class in terms of land possession and although the land possessed by higher class is 6.7 percentage points less than their share in land owned, this can not be desired situation. The difference in land owned and land possessed by the higher class in comparison to the difference of the same in different economic groups implies that medium size class of higher social group benefits the most in operational holding.

Figure 3.7



Source: Primary Field Survey, Jan. 2007.

The trends from table 3.5 show that the percentage of households possessing land has increased in the lower social group and it has got down in higher social group. But this information is not absolute as the decrease in higher group's share is mainly due to the increase in the total number of households from lower group. Many households from this group possessed land who actually do not own any land at all. But they possess it by virtue of leasing-in land from higher group. Also, during the field study it is noticed that though percentage of land possessed by higher class is much lower than their share in land owned, still none of the land owned households from this category got deprived of the land. The increase in

lower category's share is more in terms of households and the same is not found in their share in area possessed by them. Most of the households from lower class leased-in land, which are small holdings. In this case, point to be noted is that higher category households leased-out the land which is either away from the settlement or is less productive or for that matter small plot. The huge proportion of tiny holdings thus continues to be a major agrarian handicap. In other words, economic viability of an overwhelming majority of cultivating households, most markedly judged on the basis of farm income alone, is a big question.

3.5 TRENDS IN INEQUALITY

Bihar is characterized by inequality of land distribution with respect to area amongst different sizes of holdings. In the last ten years the number of operational holdings in the state increased by 45.5 percent from 7,576,700 to 11,029,600. At the same time, the area of operational holdings decreased from 11,479,600 to 11,067,600 hectares showing a decline of 3.5 percent. As a result the average size of holding in the state declined.

The value of Gini's coefficient for social class in terms of land owned is 0.447 and in terms of land possessed is 0.38. Thus the above value shows that more concentration of land is found in case of ownership holding than the operational holding. The glaring inequality in the land distribution continues to loom large. Although it is said that in a poor economy like India or for that matter the study area where tenancy is more pronounced, the distribution of ownership holdings only tells the *de jure* position and the distribution of operational holdings indicate the *de facto* position in a better way. The value of Gini's coefficient shows that land is distributed in a way where households with more than 10 acre of land share 42 percent of the land. The area of operational holdings is also not distributed equally but rather it registered variation. Amongst all the groups, larger groups have most of the area.

Gini's coefficient for the economic groups shows comparatively better picture than the pattern of distribution of land being shown in case of social classes. In this the value for the ownership holding is 0.384. This shows that the concentration level is moderately high than the operational holdings, the value for which is considerably satisfactory in comparison to the state as well as national level of land concentration with the Gini's coefficient being at moderate 0.306. The land distribution in the study reflects the division of society on the lines of upper and lower social classes as well as the different economic classes. In the survey it is found that the land is mostly owned by the major communities, viz. Shaikhs, Rajputs and the Yadavas. Their holdings are mostly concentrated and their land is least fragmented. The size of their holdings is normally big. Most of the other community own small holdings and the land is vastly fragmented. In terms of productivity, most of the fertile land is under the occupation of the strong social classes. This advantageous position helps them dominate the economy of the region. So, over the time these powerful groups have maintained their position of being the major players in land distribution.

3.6 SUMMARY OF FINDINGS

The area is divided into two halves by the metalled road connecting the Bhagalpur city with the Block head quarter of Goradih. This road runs North-South in its entire stretch. Orientation of the gradient in the region is North-East. Hence, eastern side of the road is prone to getting flooded much more than the western part of the village. Therefore, the land on western side of the road is considered to be better, whereas eastern *chaur* gets inundated every year. More land fragmentation is found in eastern part of the village where the holding size is small as compared to western part of the village. The two sides are characteristically different not only in terms of their market value but in their ownership as well as operational distribution too. Strong groups from both the bases, viz. social and economic, have most of their land in the western part. Very few holdings and that too very small in area are owned by the weaker sections in the *Paschim Chaur* of Machipur. The normal holding size in this area is generally big and the land is more protected from

flooding. This part has a great advantage in the form of a perennial rivulet passing through the region. This rivulet is a small tributary of Ganga and is named as *Joli*. This provides the necessary water needed for irrigation or any other purpose.

The *Purab Chaur* is far less prized both in terms of its market value as well as its productivity. This is highly fragmented and most of the holdings are small in size. This part remains inundated for around four to five month in a year. Therefore, it sustains only one crop in a year. The soil of this *Chaur* is less fertile and it needs high manuring, chemicals and fertilizers to obtain a better crop. Locally the soil of *Purab Chaur* is called as *Kaiwal* or *Karar*. This portion of the study area has problems of insect, frost and inundation. *Chanan* river, a small tributary floods the entire land every year and the water-logging remains for almost 4-5 months. Therefore, only one crop per year is being produced in this region. Wheat as a Rabi product is the chief crop and most of the farmers cultivate it in the *Purab Chaur* because of the reason that land owners in this region are mostly small and medium farmers, who are less risk-taking. In *Purab Chaur* also the land close to the settlement is mostly owned by big and medium farmers and as we go eastwards from the settlement towards the land, locally known as *Nasi*, the ownership pattern displays a clear change. Most of the land of *Nasi*, the least preferred and least fertile land is owned mostly by the small farmers. The socially and economically weaker section has preponderance in ownership of land in the *Nasi* region. Scheduled Caste, Backward Caste and the small farmers from even higher social group own land in this region. This region has both small and big holding wherein former is owned by weaker section and latter big players. Nonetheless this section of the land witnesses most of the leasing practice also. Since the land is devoid of most of the infrastructural and other facilities, large farmers tend to lease-out their land of *Nasi*. The long standing problem of irrigation in this region has paved way for a well established network of bore tube-wells in the entire stretch of *Purab Chaur*. The quality of land is far more inferior than its western counterpart which can be understood by the difference in the price of land. Land of western field is priced at Rs. 60 thousand per *Bigha* whereas the price in eastern side is close to Rs. 45

thousand per *Bigha*. No land consolidation is undertaken in Machipur and hence the land is fragmented. *Purab Chaur* is less fertile area of the region. The productivity in this part of the area is 4 to 5 quintal per bigha. This requires a lot of investment to be done. In the absence of canal or government boring, farmers have to use personal boring or to enter into water market to cater to their need of irrigating the fields. So the price paid for irrigating fields goes up. This region is faced with the problem of insects also. As per the experience of the local farmers, insects attack the field thrice during the harvest season and hence, cost of insecticides is high making the cultivation more costly. So even though the land is not very bad in terms of productivity, still return is not as high due to high cost of cultivation. Due to continued problem of inundation year after year, eastern part of the study area is also marred with the problem of salinity.

The western part of Machipur is considered to be the best land. Land of this portion is more fertile and the facilities are better in comparison to eastern part. Electricity is not available to the entire area of Machipur despite being less than 35 km away from NTPC, Kahalgaon. *Paschim Chaur* as is called by the local people is mostly owned by the large and medium farmers from the upper caste. This is most fertile part of the region and it is cultivated twice a year. Both major crops of rice and wheat are produced. The river *Joli*, which passes through it, is lifeline of this part as it caters to the need of irrigation. Although *joli* goes dry during summer but it provides the irrigation facility specially during the winter crop and also at the time of sowing of kharif crop. This part has big holdings and the land is more concentrated in this part. Very little land in this portion is being held by lower sections. Most of the land is self cultivated as access to this place is easier and the returns are greater. Cultivation is more remunerable due to assured water supply, better soil, viz. *Bheet, Domat and Baluahi*, and better network. The area under operational holding is less in this portion.

Apart from the above mentioned two fields, one more type of land is available to the residents of the village Machipur. This kind of land is termed locally as *Baso-bas*. This land is most fertile and is most sought after due to its

close proximity to the main settlement. *Baso-bas* is the land where either vegetables are grown or is put under mango orchard. Pulses are also grown in this land. This land is always on high demand and is most available for land market also. The reason behind is its high price and possibility of getting converted into living space. With the population growing at a high pace, land for extended settlement is a matter of concern for the inhabitants. With the in-flux of in-migration, after the in-famous communal riots of Bhagalpur of 1989, the demand of *Baso-bas* has gone high and thus there is more conversion of these lands from fields to settlement. Concentration of this land is least as it is owned by almost all the social and economic groups.

Chapter IV

CHAPTER — IV

TENANCY AND PATTERNS OF LEASING-IN & LEASING –OUT

In a country like India, where man-land ratio is extremely high and the fast growing population is dividing this gap further, land has become one of the most contentious resources. Not only this, as India is still in developing stage and its economy depends quite a lot on agriculture, land has become even more important. As discussed in the previous chapter that land is unevenly distributed in our country and a large part of it is concentrated in few hands, Jodha¹ rightly mentions that in India agricultural land market exists as lease market. This is effected both by economic and non-economic (e.g. social, geographical etc.) factors. Traditionally people have emotional attachment to their owned land and they take it as an asset. Ownership of land gives social and political position to the people in rural society of our country. Besides the distribution of land, factors like irrigation, market and geographical factors give rise to the existence of tenancy. These factors prompt the landowners to lease the land and thus it leads to the tenancy. Besides, there are large numbers of landless, small and medium land owning households who enter into the lease market either to have an access to land as in earlier case or to increase their operational land holdings both in number as well as in area. There are number of such farmers who depend on agriculture and thus depend upon land market for their needs. This situation is more frequent because there is less opportunity in other sectors and also because they are risk-averse lots.

4.1 DEFINITION

According to Goodall, “Tenancy is defined as a system of rights and duties associated with the occupation and use of land. In this system, the landowner retains the ownership rights while granting use and possession rights to the tenants, in

¹ Jodha, N.S. (1981), “Agricultural Tenancy: Fresh Evidence from Dry Land Areas in India”, *Economic and Political Weekly*, vol. XVI, No. 52.

return for which the tenant agrees to a schedule of periodic payments (in the form of a cash rent, a share of the produce or even a pledge of labour services to the landowner).”²

In other words, tenancy may be defined as a system in which lessors and lessees enter into a kind of agreement where the ownership rights remain with the land owner but the operational rights are given to the tenant on certain pre-defined conditions.

4.2 TERMS OF TENANCY

Tenancy is classified into three major types as follows:

1. Share Tenancy: It is the form of tenancy where in lieu of the operational rights, tenants give a share of the total produce to the land owners. Although the ratio changes spatially and temporally but most prevalent form of ratio is 50:50 in which tenants have to give half of the total produce to the owner. Again somewhere whole of the expenditure is borne out by the lessee whereas in other instances, irrigation and few more expenditures are shared equally by the lessors and the lessees.

2. Fixed Rent: In this type of tenancy, the relation between land owner and tenant is based on the payment of a fixed amount of rent generally in the form of money by the tenant to the lessor. In this form of tenancy, irrespective of the magnitude of production a fixed amount is being paid. Thus, it is more risky from the tenant's view point whereas convenient from the lessor's point of view. This type of tenancy encourages more intensive use of the agricultural land by the tenant in order to increase the production so as to increase their savings.

3. Fixed Crop: This kind of tenancy is similar to fixed rent type. In this, instead of rent a fixed amount of crop is assured to the land owner against the operational rights on the land. This is again more beneficial for

² Goodall, Brian (1987), “*The Penguin Dictionary of Human Geography*”, London: Penguin Books.

the lessors, as risk of crop failure does not make any impact on the returns received by the land owners.

Apart from above mentioned forms of tenancy, there exists several other less prevalent forms which are practiced locally. One of these is a system in which lessee pledges of labour services to the landowner. Among the various terms of tenancy, share crop tenancy has been most prevalent but 'over time, contracts under the fixed term had tended to become more important in comparison to share crop tenancy. In some states, tenancy contracts under other terms had also assumed very high importance.'³

4.3 CHRONOLOGICAL DEVELOPMENT OF TENANCY

In India, Inequality in land distribution has not developed all of a sudden but has gradually evolved over time owing to socio-economic processes. Initially land rights went to the hand of those people who first occupied the land. They enjoyed all the benefits and owned the land and its produce without paying any tax or land revenue. During the feudal era of kingship, kings and their nobles acquired most of the land due to the agrarian structure and importance of land. Thus land became a symbol of status in the society. Land was cultivated by the *Raiyats* and they had to pay a fixed amount of rent to the king. With the change in political situation wherein the emperors empowered their lieutenants to collect the revenue and help in administering the far flung areas of the empire, intermediary relationship came into existence. These officials exploited the land holders by increasing the rent arbitrarily and also by changing the ownership rights year after year. None of the kings of Pre-British times remodeled it and hence this system prevailed till the dawn of British rule in India.

Introduction of Permanent Settlement in Bengal in 1793 was a major change in the land tenure system of India. Before this law, there were discrepancies in the

³ Chadha, G.K, Sharma, H.R. and Sen, Sucharita (2005), "*State of Indian farmers: A Millennium Study*", New Delhi.

actual revenue collected and the assessed amount of revenue. British wanted to fix the rent to meet their administrative expenses. So they introduced the Permanent Settlement and the rent was fixed on the basis of actual collection of revenue in the year 1790-91, which was put at Rs. 2.68 lakh.⁴

The act made the ownership rights inheritable and thus the right to property passed to successors provided they continue to pay the fixed rent to the then British Government. Zamindars did not cultivate the land and instead they gave the operational rights to the tenants from whom they collected the rent of which 89 percent went to the government and rest 11 percent was left with zamindars. This system persisted till the British rule lasted in India and when India got independence, the policies were aimed to break the monopoly of the zamindars. It included the abolition of zamindari system and redistribution of land. Therefore, various land reform measures were adopted by the state governments.

Bihar was the first state in independent India to implement the land reform measures. In 1950, Bihar Land reform Act was passed, which abolished the zamindari system and right of property were given to the tillers of the land. This is a major breakthrough in the land tenure system in Bihar. Apart from the above mentioned act, other laws were also enacted to enforce the social justice and to protect the rights of tenants.

The Zamindari Abolition Act of 1948 failed in Bihar to bring structural change in land distribution. Despite bringing number of land reform measures, the concentration of land and monopoly of large land owners could not be broken in Bihar due to loopholes in the law and the lack of political will of the successive governments.

Batai has been the common feature of agriculture in Bihar. The land owners used to give their land to the tenants called *Bataidars* and shared the crop or took a fixed amount of cash or kind. To check the exploitation of *Bataidars*, Bihar tenancy Act was passed in 1967. This law provided the shield to tenants where no tenant could be evicted without the court's order. This law had the provision of tenant

⁴ Grover, B.L. and Grover, S. (1986), "*Modern Indian History*", New Delhi: S. Chand & Company Limited.

acquiring the ownership rights of the land, if he has continuously possessed and tilled the land for 12 years.

Even after all these efforts from government, still the monopoly of few people in controlling most of the land could not be broken and the land is highly concentrated. The primary reason being the lack of political will in enforcing these laws.

4.4 TRENDS IN TENANCY: ALL INDIA

Table 4.1 presents the percentage of tenant holdings in total operational holdings for the three NSS rounds of 26th, 37th and 48th rounds.

Table 4.1
Percentage of Tenant Holding by Size
Of Operational Holding at National Level

NSS Round	Small	Medium	Large	All Classes
26 th Round	54.86	39.56	15.84	25.68
37 th Round	33.64	31.67	12.82	15.85
48 th Round	24.26	25.32	16.68	10.99

Sources: NSS 26th Round, Report No. 215.

NSS 37th Round, Report No. 331.

NSS 48th Round, Report No. 407.

At the all India level in 1971-72 (26th round), tenant holding accounts for nearly one-fourth of the total operational holdings. On the contrary, during the period of 1971 to 1992 (48th round) the level of tenancy has declined by 14.69 percentage from 25.68 to 10.99 percent. This trend has been all through the above mentioned period except in the case of large class between 37th round and 48th round. This implies that lower percentage of small and medium sized holdings now take land on lease. In case of large class, it is opposite which means that reverse tenancy is increasing. This also indicates that with time, access of smaller sized

holdings to the land in land lease market has got reduced. Also during this period, it is observed that the percentage of area leased-in has declined at the national level among the small and medium classes whereas the percentage of area leased-in by large sized holdings has experienced increase.

Table 4.2
Percentage of Households Leasing-in by
Size of Ownership Holding at National Level

NSS Round	Small	Medium	Large	All Classes
26 th Round	49.67	26.81	8.39	25.29
37 th Round	36.16	18.92	4.62	18.53
48 th Round	20.51	13.09	3.76	9.52

Source: As in Table 4.1

From the above table, we find that leasing-in land was around one-fourth of all ownership holdings in 26th round, which went on decreasing to less than one-fifth and one tenth in 37th and 48th rounds respectively. This implies that the proportion of households depending on lease market has declined sharply during the period. The percentage of tenant holding was relatively high among smaller size as compared to medium and large holdings. From the table, it can be verified that there exists an inverse relationship between size of the holding and percentage of tenant holding indicating higher proportion of holding among the smaller households and vice-versa.

From Table 4.3, it is evident that percentage of area leased-in at all India level is found to be little more than one-tenth of the total owned area. This went down in the next decade only to regain slightly. In this case, again the percentage of area leased-in by small size class is highest and large size class has very low percentage.

Table 4.3
 Percentage of Area Leased-in to Total Area Owned
 by Size of Ownership Holding at National Level

NSS Round	Small	Medium	Large	All Classes
26 th Round	68.86	11.27	1.87	11.59
37 th Round	36.23	7.18	1.15	7.46
48 th Round	36.81	9.74	0.83	8.94

Source: As in Table 4.1

If we look into the leasing-out pattern, from Table 4.4, it can be said that at national level 9.87 percent of total ownership household leased-out the land in year

Table 4.4
 Percentage of Households Leasing-out by
 Size of Ownership Holding at National Level

NSS Round	Small	Medium	Large	All Classes
26 th Round	20.16	25.67	10.62	9.87
37 th Round	12.12	16.75	8.81	5.53
48 th Round	10.81	18.32	7.38	4.85

Source: As in Table 4.1

1971-72. Between the 26th and 48th rounds, decrease in households leasing-out land was 5.02 percent. The trend of decrease is found in all the classes except the medium class in which an increase of 1.57 percent was registered between 37th and 48th rounds. Maximum decline was registered in small size class.

Table 4.5
Percentage of Area Leased-out to Total Area Owned
by Size of Ownership Holding at National Level

NSS Round	Small	Medium	Large	All Classes
26 th Round	14.83	11.85	4.01	5.77
37 th Round	9.34	8.41	4.19	4.29
48 th Round	9.31	12.14	2.96	4.96

Source: As in Table 4.1

As in the case of households, the percentage of area leased-out has also declined in the small and large classes whereas it remained nearly constant in medium class if compared between 36th and 48th rounds. The decline is more in small class. Medium class witnessed turbulence that in first decade it went low and then regained in the next to the tune of almost 3.5 percent in both the cases.

4.5 TRENDS IN TENANCY: STUDY AREA

Machipur is characterised with well developed land lease market. Tenancy in the village is an important factor to study the access to land. As we have seen that there exists the difference in ownership holding and operational holding in the village. This difference is mainly because of well developed tenancy in Machipur. Tenancy is a factor which determines the relationship between the different socio-economic groups. To look into the magnitude of tenancy in the village, percentage of tenant holding reporting leased-in area as a percentage of total operational holding and as a percentage of total operated area is estimated.

From table 4.6, it can be seen that most of the households in tenancy are from small size class. Out of total 109 households engaged, small size class households are more into the land lease market. Here nearly 6 percent of the households are from large group. This is indicative of the fact that even large class

Table 4.6

Share of Households in Leasing-in and
Area leased-in by Size Class

in percent

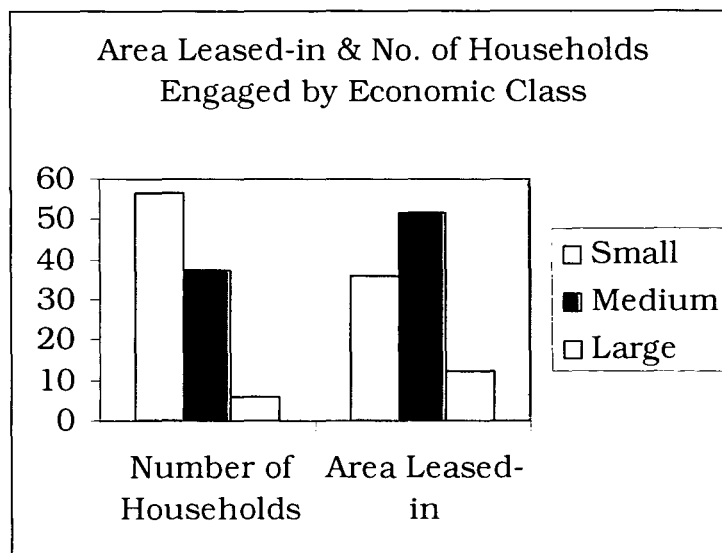
Category	Number of Households	Area Leased-in
Small	56.7	36.1
Medium	37.4	51.8
Large	5.9	12.1

Source: Primary Field Survey, Jan. 2007

farmers are not averse of getting into the list of lessees. This is a trend which of late has come into existence and is indicative of reverse tenancy. But in case of this village, since the share of large group in the tenancy is so less that it can not be termed as a case of well established reverse tenancy. Nonetheless number of households tells only the half of the story, therefore, there is the need to see in terms of area also to reach a conclusion about the situation of land lease market. From this table, it is found that medium class households are having a share more than one-third of the total households entering into the tenancy. This may be a matter of concern because more medium class entering into it would ultimately help in increasing the discrepancies in land distribution and would lead to more concentration of land.

Apart from the number of households, area of the tenant holding is equally important to look into the incidence of tenancy and the trends of the land lease market of the village Machipur. This helps in extending the access to land to the weaker groups. Increasing share of smaller groups in total area of tenant holding would lead to less concentration of land. From table 4.7, we find that more than half of the tenanted holdings are in the hands of medium size class whereas little more than one-third is under the possession of small land owners. Thus the advantage of small group

Figure 4.1



Source: Primary Field Survey, Jan. 2007

in total number of households in tenancy does not put them in ideal situation where most of the tenanted holdings in terms of area would also have been under their possession. Instead medium class land owners occupy the tenanted land disproportionately. Their share in number of households vis-à-vis area of tenanted holdings indicates that although the total number of medium class land owners entering into land lease market is very less than the small land owners, they occupy more land. Similarly very few large land owners are engaged in land lease market, they lease-in more than 12 percent of the total land leased-in. Thus it can be concluded from above two tables that small land owners are more in leasing-in practice in terms of households but area leased-in by them is not as high as their number whereas medium and large land owners despite being less in numbers in terms of households, their share in area of leased-in land is high.

If we look into the leasing-out pattern, from table 4.7, it can be said that most of the 35 households leasing-out their land are the large land owners. This is quite obvious that these people own most of the land and therefore due to scores of reasons may find it inconvenient to cultivate land on their own so they tend to

lease-out. Little less than two-third of the lessors are from large group and only 8.2 percent of the small group lease-out land. Even these households from small group

Table 4.7

Percentage of households in Leasing-out and Area Leased-out by Size Class

Category	Number of Households	Area
Small	8.2	1.05
Medium	39.4	31.65
Large	52.4	67.3

Source: Primary Field Survey, Jan. 2007

do not lease-out land by their choice. Most of the medium group households, who lease-out their land, are from the upper half of the size class. They account for more than one-third of the total households opting to lease-out the land.

Following the trends of table 4.7, area leased-out is highest by the large land owners. This is obvious that land is leased-out mostly by the lot who owns most of the lands. 67.3 percent of the leased-out land is contributed by the large land owners and 31.65 percent by the medium class. Therefore these two groups account for 99 percent of the total area leased-out. The share of small size class is meager 1.05. This is so low because very few farmers from small group leases-out land and the holding size owned by them is small. Therefore the area leased-out is almost negligible in terms of share in total area of land leased-out but even this small figure shows the apathy of small group that not only they have very small land holding but at the same time they are forced by the circumstances to lease-out it also.

If we look into the tenancy on the lines of different social groups, we again find similar discrepancy. From table 4.6, it can be analysed that most of the leasing-in is among the economically weaker section of the village and rich people lease-in land rarely. Similarly from table 4.8, it is evident that almost two-third of leasing-in

Table 4.8

Share of Households in Leasing-in and
area leased-in by Social Class

in percent

Category	Number of Households	Area
Higher	34.8	52.7
Lower	65.2	47.3

Source: Primary Field Survey, Jan. 2007

done by lower social group while rest one third is carried by the higher group. Here notable thing is that most of the higher group people engaged in leasing-in are those having comparatively less of the land under ownership holdings. Therefore, they lease-in land to increase their income. Thus from above table it becomes clear that there is a clear cut division in the population among the different social and economic classes on the lines of lessors and lessees. From table 4.8, it can be seen that although higher social group is less than its lower counterpart in number of households leasing-in land but their share in total area leased-in is higher than lower group. This indicates that not only these higher group households are less in number but they are also bigger player in the land lease market. It prevents many potential small group cultivators to enter into tenancy as they cannot compete with the socially and economically strong groups. Here is the gap which is alarming that two-third of households leases only 47 percent of the total area leased-in whereas one third households of land lease market leases-in more than 50 percent of total available area.

Table 4.9

Share of Households in Leasing-out by Social Class

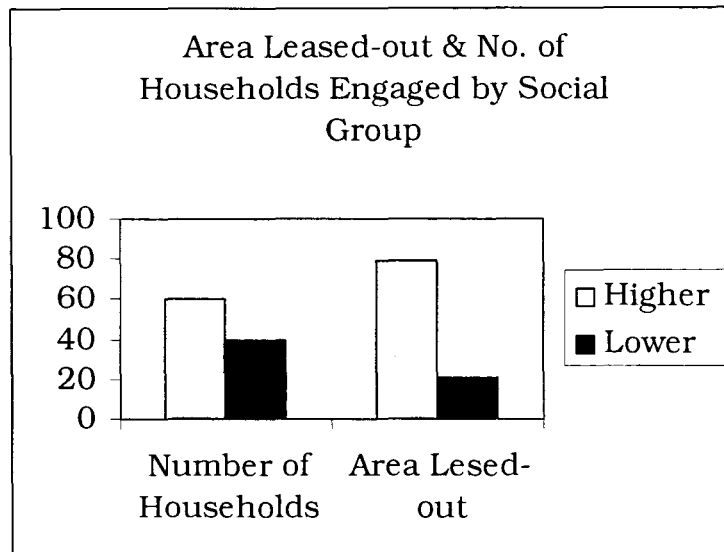
in percent

Category	Number of Households	Area
Higher	60.5	79.14
Lower	39.5	20.86

Source: Primary Field Survey, Jan. 2007

From table 4.9, households in leasing-out are more from the higher social group and it is slightly more than 60 percent of the total households in leasing-out. Thus both the economically and socially higher groups are more into the leasing-

Figure 4.2



Source: Primary Field Survey, Jan. 2007

out, while weaker group from both social and economic point of view are more into the leasing-in of land. From above table it is evident that around 80 percent of the total land leased-out goes to the credit of higher group and rest 20 percent only accounts for the weaker class. Table 4.9 reflects that although the number of households from higher group is 60 percent but the total area leased-out by them is 80 percent and similarly in case of lower group, their share in number of households engaged in leasing-out is higher but their share in area leased-out goes down because higher social class households leases-out more land.

4.6 TERMS OF LEASE IN MACHIPUR

In the study, it is found that all the three major terms of tenancy viz. share crop, fixed rent and fixes crop are prevalent in Machipur. Terms of tenancy are important factor because it helps in understanding the nature of relationship

between lessors and lessees. Share crop tenancy is oldest it is practiced from centuries whereas other terms of lease are adopted much later.

From table 4.14, it is evident that more than half of the total lessees prefer share crop, while 38 percent prefer fixed money and 10 percent prefer fixed crop as the term of lease. These are the three terms which exist and other types of term of tenancy is practically absent in the village. From above we can say that share crop is most sought after term from the perspective of lessees. It is because of the perception that it is less risky and in case of any eventuality the loss suffered would be least in this term of tenancy. The risk-averse farmers tend to go for share crop. Thus it can be said that terms of tenancy is preferred more from the view point of minimizing the risk.

Table 4.10

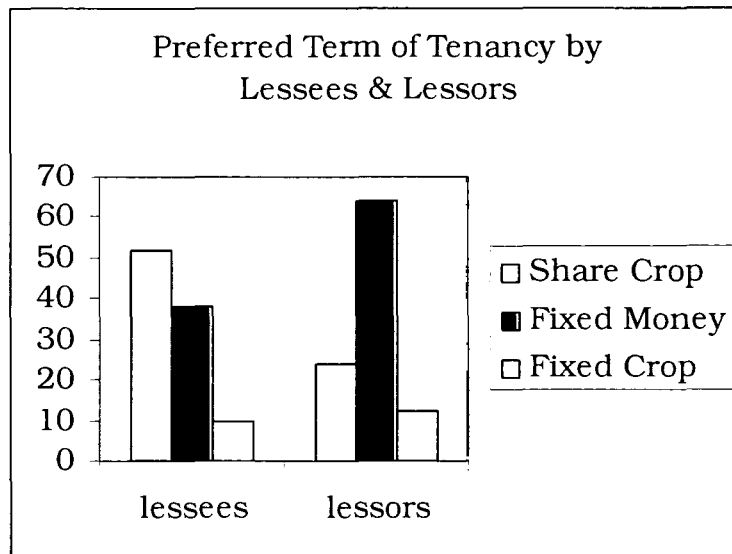
Preferred Term of Tenancy by Lessees and Lessors

Term of Tenancy	lessees	lessors
Share Crop	52	24
Fixed Money	38	64
Fixed Crop	10	12

Source: Primary Field Survey, Jan. 2007

Most of those preferring fixed money and fixed crop are from the higher socio-economic groups. They are ready to take risk and bear the loss in case of crop failure. Thus they decide from the point of view of profit maximization. They lease-in land not out of necessity but to make money out of it. So if crop is good they would benefit more only if it is fixed and not in the share crop tenancy. Since small lessees do it out of necessity, they do not take any risk as for them first thing is not the benefit but it is sustenance.

Figure 4.3



Source: Primary Field Survey, Jan. 2007

Lessors of Machipur prefer fixed money tenancy the most while leasing-out their land. Of the total lessors leasing-out land nearly two-third prefer fixed money as term of tenancy whereas just about one-fourth of the lessors prefer share crop. Fixed crop is least preferred accounting for 12 percent. Fixed money is more preferred because the land owners want a hassle free tenancy. It is obvious that return in fixed money or fixed crop is assured while in share crop, return is not assured. So those who lease-out their land due to reasons other than profit maximization opt for fixed term. Many of large size class households lease-out because they cannot manage their land well on their own.

Table 4.11

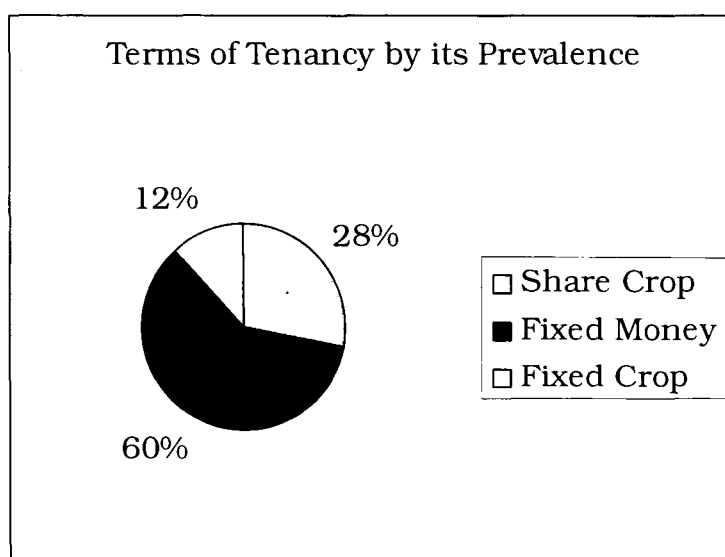
Percentage of prevalence of Terms of Tenancy in Total Tenant Holding

Term of Tenancy	Percentage
Share Crop	28
Fixed Money	60
Fixed Crop	12

Source: Primary Field Survey, Jan. 2007

Table 4.11 shows that fixed crop tenancy is most prevalent in the study area. Three-fifth of the total tenancy is fixed money and another 12 percent is fixed crop. Thus share crop is not as prevalent as preferred by the lessees. This is indicative of the overwhelming superiority of lessors in tenancy. When we compare table 4.11 with table 4.10, it is found that the prevalent terms of tenancy is guided more by the lessors and the lessees have less space to take decision. Despite the fact that lessees want share crop more as term of tenancy, it is less prevalent.

Figure 4.4



Source: Primary Field Survey, Jan. 2007

The terms of tenancy in Machipur are dominated by the wishes of lessors and they give priority to fixed money tenancy to insure the return out of their land. In this they do not bother about the wishes of lessees who want share crop tenancy to protect themselves from the risk of crop failure.

4.7 SUMMARY OF FINDINGS

“But this deplorable method of cultivation, the daughter of necessity and mother of misery has nothing in common with the good farming established in

certain districts.”⁵ Although this remark was made way back to early tracts in economic writing related to the Metayage system of tenancy as developed in France, which was considered inimical to the development of agriculture and to the interest of tenants, it is equally applicable for the study area.

In a case of subsistence tenancy, like in Machipur, where the very purpose of tenants is subsistence, the terms and conditions are unfavourable to the tenants resulting in their exploitation and the lessor-lessee relation is unhealthy and inimical to the development. Here big farmers have strong bargaining power and sound socio-economic status so they are in a position to enforce better terms and conditions for themselves. They prefer fixed money or crop in comparison to share cropping. In the study area, no security is being taken by the lessors from lessees. This may be due to the long association and the dependence of lessees on the lessors land.

Out of fear of the *Bataidari Act*, lessors generally prefer to lease out their land for shorter period and they frequently change the tenants. They take this precaution to avoid claim of occupancy right by the lessees having a long lease under the *Bataidari Act*. All of the leasing arrangements are made on an *ad hoc* basis where the terms and conditions are fixed orally and no written contract is made.

If we look into the pattern of distribution of tenanted holding, most of the land into the tenancy is found to be in the eastern part of Machipur. This is the portion which is more fragmented and the infrastructural facilities are less available. In this part holdings are small and it belongs to almost all the socio-economic groups. In this case, it makes sense to big farmers to lease-out their land in *Purab Chaur* and at the time it helps weaker group also to lease-in land in this area due to closeness to their own land. Most of the tenanted land of this part belongs to medium and large economic category and from the higher social class. In the *Paschim Chaur* where productivity is high and the land is more in the form of big holdings, land under tenancy is less and even if there is tenanted holding, it is leased-in by strong groups.

⁵ Higgs, H. (1894), “Metayage in Western France”, *Economic Journal*, Vol V.

Terms of tenancy is more in the form of fixed money or fixed crop, where the rate in entire area is 4 quintal per acre per year for fixed crop or it is Rs. 2000 to 2400 per acre per year. There is no difference in the rent for the entire study area. Thus it can be argued that despite western part being better in terms of productivity than eastern part, the rent is same more because of the monopoly of strong socio-economic groups who are the principal lessees in the western part. In the case of share cropping, which is more prevalent in the eastern part again, weak farmers feel more protected. Since nature of the tenancy in the region is more of subsistence and there is persistent fear of crop failure, small farmers tend to go in for share cropping. In share cropping, the cost of irrigation, insecticides, pesticides and fertilizers are shared by both lessors and lessees. Both of them pay half of these expenses.

Most of the leasing-in is done by small and medium farmers and in this normally they do not have any choice regarding the location of land. They lease-in land in any and all locations. Whereas big farmers lease-in only that land, which is closer to their own land.

Among the strong social groups, Rajputs do not prefer to enter into tenancy. They neither lease-in nor lease-out land. Their land is mostly located near to the village so it makes them no point to lease-out. Also most of them are big farmers so they stay away from leasing-in also. Most of the leasing-out is from high caste Shaikh community from Muslims. Their land is more fragmented. So it becomes difficult for large farmers to manage it. This causes them to lease-out land. Most of the scheduled caste population in the study area is either landless or they have very little land. Only few of them have bought the land while rest of the land owners from scheduled caste got the land from government in the process of redistribution of land. They normally are the having very small share in the total area of land leased-in. Lower castes of Hindu like Bania, Yadavas, Mandal, Pandit (local name for Kumhars), and Dhobis are dominant in the lessees. They lease-in land from others and some of these communities like Yadavas and Banias are socially well placed too.

After the question of who leases-in and who leases-out, another important aspect is that who leases-in from whom and who leases-out to whom?

In this regard, in general most of the lessors are higher groups of social and economic classes and most of the lessees are from the weaker groups. But even then the question remains unsolved that is there any preference among lessors and lessees? In this regard, it is found that dominant social and economic groups normally do not have any preference in leasing-out the land. They give the operational rights to persons from all the social groups and economic classes. As mentioned earlier, Rajputs do not engage in land lease market, but in the few cases, where they have leased-out the land, they give it without any preference. Similarly, Shaikhs also do not have any priority. But in case of leasing-in they have leased-in lands from same community or other dominant community only. Reason for it may not necessarily be any selective choice but may be because they tend to lease-in land which is either close to houses or close to their land. Since they are not only the dominant social group but also economically strong, therefore they may not want to be the tenant of weaker groups. In case of lower caste and medium sized economic groups, they are the principal lessees. They lease-in and lease-out to almost all the groups and section of the population. Similarly scheduled caste households, too, lease-in land from practically every section. But they choose not to lease-out their land to the strong socio-economic groups because of the fear of forced occupation of their piece of land. In the past, there are instances of forced occupation of land by adopting fraudulent measures. Most of the lower groups are less dependant on land now-a-days. Instead they opt for other jobs like labour or Rickshaw pulling etc.

Lastly, it can be summarized that tenancy in Machipur is helping the medium economic class and other lower caste most. The terms of tenancy are determined by strong group and the weakest section of the society are not benefiting to the desired extent.

Chapter V

CHAPTER — V

PATTERN AND CHARACTERISTICS OF OWNERSHIP & OPERATIONAL HOLDINGS

In the earlier chapters, we have seen how the land is distributed in the village Machipur and what are the trends in tenancy over there. It is found that the land is concentrated in few strong socio-economic groups. But these findings do not reflect the picture about the lands owned or possessed by the different groups. In order to understand the nature of land distribution in terms of good, average or bad land and their occupants, we need to look into the different aspects namely, the location, productivity and other factors which categorise the land. Land is considered good if it is more productive, well connected to transport and other networks, has infrastructural facilities, irrigation facility etc. Land owned by strong groups is not only highly concentrated but also most of the land owned or possessed by them is having advantageous location. At the same time weaker groups have very less of the land and the land is not very good in terms of its location or productivity or for that matter market value. In this chapter, an attempt is made to look into the factors, which categorise the land and an attempt is made to analyse the land distribution in a more comprehensive way.

“Local land classification are perhaps better based on experienced opinion influenced subjectively by the most important objective variables, but not incorporating specific ‘scientific’ or ‘objective’ methods in combining the numerous variables. Such procedure can be used to delineate local areas for administrative purposes, within which objective analyses of specific variables, such as soil, topography, or accessibility, can be used to determine the local application of agriculture programs.”¹ Therefore, it can be put in other words that within the limits of one variable, land be readily classified as to productivity, in case of land

¹ Boonstra, C.A. and Campbell, J.R. (1941), “Land Classification, Land-Use Areas, and Farm Management Research”, *Journal of Farm Economics*, vol. 23 no. 3.

being classified on the basis of soil. Hammar² outlines the following factors as important in making an appraisal classification: I) Soil II) Topography and Drainage III) Water sources and cost of obtaining IV) Physical Hazards V) Types of Farming and VI) Location Factors. Therefore as more variables are added including location, topography, economic shifts of demand, market, position vis-à-vis homestead and road network, an arbitrary procedure can be used to allocate proper weightage to each variable. These factors have their own significance in terms of utility and importance in determining the quality of land and land-use. Apart from productivity, land is classified by the geographic factors and appraisal of its physical character.

The productive value of land is expressed by the sum of the geographical and environmental conditions. These are: 1) the crop characteristics of climate; especially length of growing season, amount of sunlight and evaporation, likelihood of frost, amount and seasonal distribution as well as variability of rainfall, moisture content in different seasons etc. all of which are primarily climatic factors. 2) Soil characteristics with reference to elements of fertility, ground temperature and level & movement of underground water. 3) Surface conditions, such as slope, relief, exposure to sunlight and drainage. 4) Water supply. 5) Location in socio-economic framework as affecting problems of production and residential desirability. Since these factors are dynamic in nature so there is need of revision in classification of land. The significance of land may be changed by soil erosion, by drainage or irrigation, by improved market, and in many other ways. Therefore permanent classification is logically not possible. To reduce the readjustment of classification or grading of land, less changing parameters can be applied.

Land having more of the facilities in terms of various factors is more preferred than the land having less of the facilities. Accordingly, land can be classified into good, average or below average land.

² Hammar, C.H. (1939), "Land Classification to Aid the Appraiser," *The Journal of Land & Public Utility Economics*, vol. 15, no. 3.

In this research, which is a micro study of a village, the climatic factors are not important in grading the land. It is because the region is too small to have a difference in climatic factors such as rainfall, amount of sunshine, length of growing season etc. The topographic factors are also more or less same for the entire study area. These factors do not play important role in the grading of land in this study. Therefore, the classification of land is based on the factors like productivity of the land, nearness to the homestead, access or nearness to the transport/road network, protection from flooding, irrigation facility, quality of the soil, and inundation problem. These factors make land well or less favoured. These factors help in establishing the market value and price of the land as well as the rent for the land in the lease market. So these factors are equally important in land distribution.

5.1 PRODUCTIVITY AND CROPPING INTENSITY

Productivity is an important factor in classifying the land. More productive land is considered as better land as it increases the return and its demand is more in both the sale and lease market. Productivity is a function of land and soil, which itself is determined by number of geographical factors. Therefore, although productivity is not strictly a geographical factor, but on account of it getting influenced by the geographical factors, it may be considered as a factor highly influenced by the physical variables.

Productivity of the land is described by its yield per unit. In order to judge the land, apart from yield, we have also looked into cropping intensity. Because even if the yield of a particular land is more but if it is sown once then the return from a land with less productivity can be more if it is sown twice or more. Therefore in this study we are looking into these factors simultaneously to draw our findings.

Table 5.1

Distribution of Area of Land According to
Yield (Quintal per Acre) by Economic Classes

In percent

Size-class	Ownership Holding		Operational Holding	
	Upto 9	More than 9	Upto 9	More than 9
Small	15.3	13.6	26.8	17.2
Medium	46.6	34.2	44.5	47.3
Large	38.1	52.2	28.7	35.5

Source: Primary Field Survey, Jan. 2007

From the above table, it is clear that most of the high yield land is owned by the richer land owners. The difference between the lands owned by large group in two categories is the indication of kind of hegemony this group has in the distribution of land in the study area. More than half of total high yielding land is owned by them whereas only 38 percent of the total land with low yield is under their ownership. In case of small land owners, just above 6.6 percent of land with yield of more than 9 quintal per acre is under their ownership. Not only that they own less land, but the land owned by them is of low productivity also. In case of ownership holding so far as land with high productivity is concerned.

In distribution of land vis-à-vis yield in operational holdings, despite the fact that high class lease-out land at a high scale, they lease-out that portion of land which is less yielding. Large group possesses more than one-third of total operational holding which yield more than 9 quintal per acre and around 29 percent of low yielding land. In this condition medium class land owners are much better placed. They operate more in the high yielding land and in total operational holdings their share is comparatively much higher than rest of the economic classes. This is a clear indicative of the fact that better land is leased-in more by medium class. Most of the land operated by small land owners falls in the inferior class where yield is low. This kind of situation has a strong bearing on the structure of the economy of the village. Small group is at the receiving end and large group

enjoys the monopoly. The productivity of land is based on both the physical factors as well as its use. Since small land owners opt for intensive farming and they have less capacity to manage the field, the productivity of land owned or possessed by them goes down, whereas in case of large group or for that matter even medium group, land is cultivated with more caution to retain the productivity. This may be a reason to the fact that medium land owners get more land to operate than the smaller one.

From table 5.2, the distribution of land among social classes on the basis of yield per acre can be analysed. Most of the land is owned and possessed by higher social class. Under ownership holdings, 84.5 percent of high yielding land belongs to higher class whereas comparatively lesser land of low yield is owned by them. Lower class has less land and majority of them owns land of inferior

Table 5.2
Distribution of Area of Land According to
Yield (Quintal per Acre) by Social Classes

In percent

Social class	Ownership Holding		Operational Holding	
	Upto 9	More than 9	Upto 9	More than 9
Higher	71.6	84.5	65.1	78.3
Lower	28.4	15.5	34.9	21.7

Source: Primary Field Survey, Jan. 2007

quality in terms of yield. The difference in share of lower class in ownership of two types of land indicates that marginalized section is not deprived in terms of land owned but their land is not good in terms of productivity also. In case of operational holding, though the share of lower class is slightly better than ownership holding, the kind of land possessed by them again follows the previous trend. Around 35 percent of land with low yield as compared to nearly 22 percent high yielding land is under their possession. Thus it can be said that land with better yield are

concentrated in the hands of high caste rich land owners and low caste poor are most disadvantageous.

Cropping Intensity is a better way to look into the overall production and the returns obtained from a land. In economic terms, it is important than agricultural yield. In case of India, where intensive subsistence farming is rampant, cropping intensity is found to be high. In Machipur, Cropping intensity depends mainly on inundation. Land is being cultivated whenever it is free from water logging and is available for cultivation. In the entire region either two crops or single crop is cultivated. *Zaid* is not cultivated. Therefore farmers try to compensate it by vying for more production in one or two crops as the case may be.

Distribution of land in Machipur on the basis of cropping intensity among the economic groups is given in table 5.3. This gives an idea about percentage of land being owned and possessed by different size class. From the ownership holding, it is evident that

Table 5.3
Distribution of Area of Land According to
Cropping Intensity by Economic Classes

In percent

Size-class	Ownership Holding		Operational Holding	
	1 Crop	2 Crop	1 Crop	2 Crop
Small	21.9	11.4	25.9	18.1
Medium	37.7	41.4	46.7	43.2
Large	40.4	47.2	27.4	38.7

Source: Primary Field Survey, Jan. 2007

land having two crops a year is more under the ownership of large group. Nearly half of such land is owned by large farmers and another 41.4 percent is held by medium class farmers. This accounts for 88.6 percent. Thereby leaving a meager 11.4 percent in the share of small farmers. In contrast to it, more of the land owned by small farmers is cropped only once a year. In operational holdings, the situation

is more or less same, where large group continue to hold more twice cropped land than their share in total land possessed. Thus it can be safely said that land with high cropping intensity is under the control of bigger player of the economy.

If we see the pattern of land distribution in social classes, it is found that twice cropped land of the region is held overwhelmingly by the higher caste and their share is high in both the ownership and operational holdings. In both of these holdings, their share in twice cropped land is more than in total land owned and possessed by them. Similarly, very low share of lower caste in ownership holding of twice cropped land reflects the common Indian scenario of plight of lower social class. They do gain some ground in operational holding but it is insufficient to be termed as satisfactory.

Table 5.4
Distribution of Area of Land According
to Cropping Intensity by Social Classes

In percent

Social class	Ownership Holding		Operational Holding	
	1 Crop	2 Crop	1 Crop	2 Crop
Higher	73.3	85.3	66.2	79.4
Lower	26.7	14.7	33.8	20.6

Source: Primary Field Survey, Jan. 2007

Therefore, it can be summarized that the high productive land is held predominantly by upper section of the social and economic strata. The concentration of better land is in the hands of handful of people and majority of the population is deprived of more productive land.

5.2 SOIL

Reference of soil is necessary in studying the quality of land and agriculture. It is an essential material upon which all agriculture and farming is based. It

SOIL TYPE

VILLAGE MACHIPUR (BHAGALPUR, BIHAR)

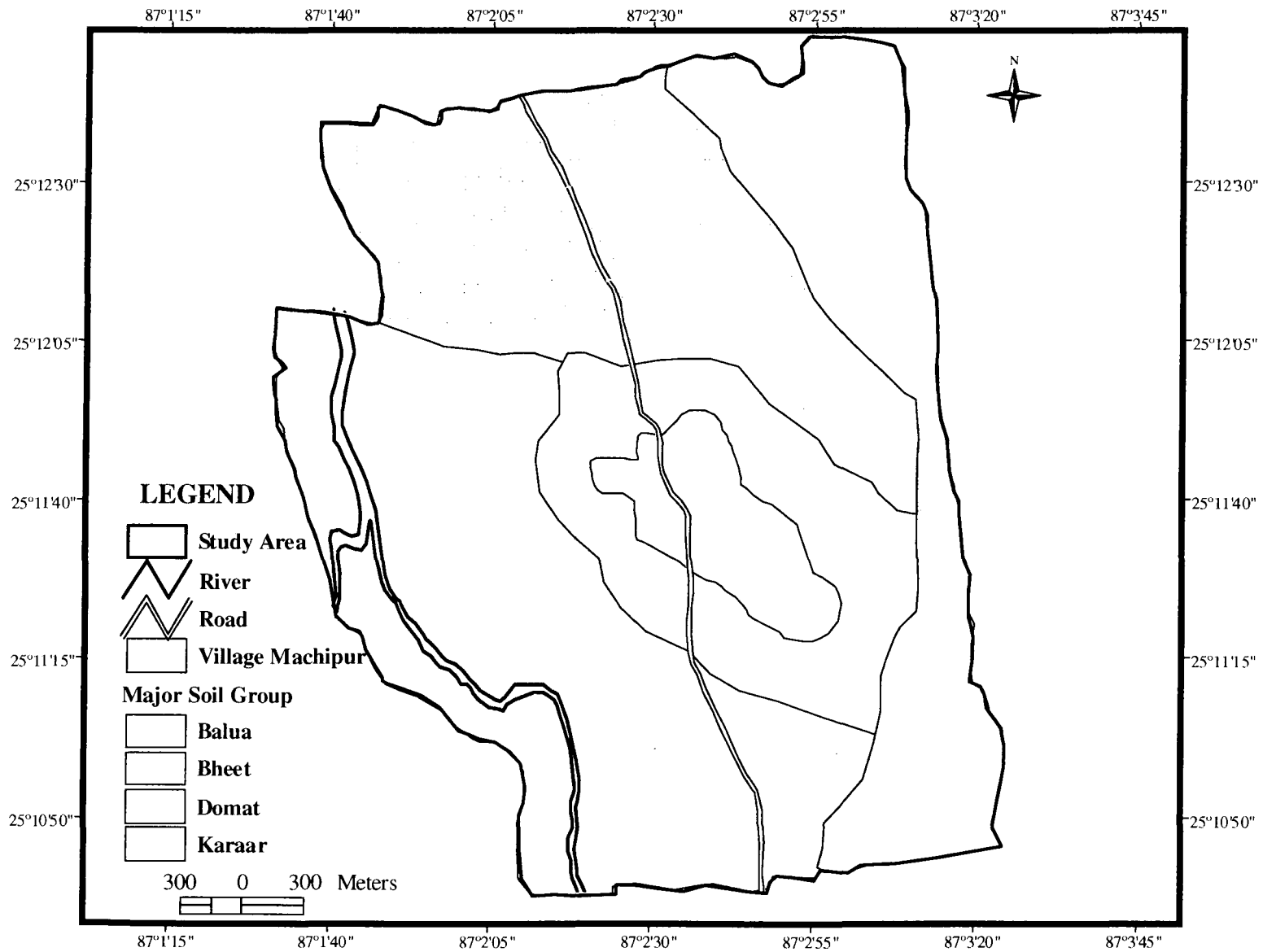


Figure: 5.1

contains the vital minerals such as, nitrogen, phosphorus, sulphur, iron etc. which are necessary for growth of plants. It retains water which is used by plants to fulfill their need through root system. Therefore, it is important to look into land distribution in context of soil. The suitability of soil for agriculture depends on its composition, texture, depth. Different soils are better for different kind of crops like black soil is best for cotton. Soil also determines the productivity of land. In order to evaluate land, soil is used as an important parameter.

In village Machipur, based on different characteristics, four kind of soil is found (Figure 5.1). They are locally named as 1) *Bheet* 2) *Domat* 3) *kaiwal* or *Karaar* 4) *Balua*. The fertility of these soils decreases in the following order from *Bheet* to *Balua*. *Bheet* is situated around the village. This is considered as best soil of the region as it produces a wide range of agricultural produce from food grains to vegetables to mangoes. The rate of land is highest. *Domat* is found in *Paschim Chaur*, the western part of the region. It is second only to *Bheet* in terms of productivity. It is cultivated twice a year. High quality rice and wheat are produced on this soil and hence it is most sought after portion of land both in sale and lease-market of land. *Karaar* is principally found in the eastern portion of the study area. This soil is not very good in productivity and its cropping intensity is also low because of the inundation problem.

Table 5.5

Distribution of Area of Land under
Soil Types by Economic Classes

In percent

Size class	Ownership Holding				Operational Holding			
	Bheet	Domat	Kaiwal	Balua	Bheet	Domat	Kaiwal	Balua
Small	11.6	18.8	19.3	21.7	16.9	21.8	23.7	26.6
Medium	29.5	38.6	44.2	47.1	35.4	41.4	52.4	58.5
Large	58.9	42.6	36.5	31.2	47.7	36.8	23.9	14.9

Source: Primary Field Survey, Jan. 2007

From table 5.5, the distribution of land under different soil held and possessed by different economic groups is presented. Under ownership holdings, *Bheet* considered as best soil type is mostly owned by large farmers and they constitute around 59 percent of total land under this soil type. They own maximum coverage under *Domat* also. In land under *Kaiwal* and *Balua* soil types, maximum land is held by medium farmers. In both of these soil types, medium farmers own nearly 45 percent of the total land. One interesting feature of land distribution on the basis of soil types is that there is gradual decrease both in ownership and operational holdings in the share of large and medium farmers as we go down the order in terms of soil productivity. In case of small farmers, a gradual increase is experienced. This gives a clear indication of class based distribution of land on economic lines, with better off of the population having better land under their ownership.

Table 5.6

Distribution of Households among Economic Class of
Land Owned and Land Possessed by Soil Type

In percent

Size class	Ownership Holding				Operational Holding			
	Bheet	Domat	Kaiwal	Balua	Bheet	Domat	Kaiwal	Balua
Small	58.9	75.3	72.4	78.5	64.7	72.6	66.8	71.1
Medium	28.7	19.6	22.2	18.3	26.4	24.3	31.4	28.0
Large	12.4	5.1	5.4	3.2	8.9	3.1	1.8	0.9

Source: Primary Field Survey, Jan. 2007

From above table, households owning and possessing land on the basis of soil type is presented. The share of large farmers in each of the soil type is low and share of small farmers is high. In both ownership and operational holdings, number of households from large farmers is high in *Bheet* because of less number of households owning and possessing land in this soil type. In all other soils, number of households is high and the share of each size class reflects the situation of

economic classes. The vast difference between area owned or possessed and percentage of households from size classes reflects the dichotomy in land distribution. Large number of households from smaller group owns or possesses small area and vice-versa.

Similarly, among social classes, the land is unevenly distributed both in terms of ownership and operational holdings. Land with better soil held by higher class is exceptionally high.

Table 5.7
Distribution of Area of Land
Under Soil Types by Social Classes

In percent

Size class	Ownership Holding				Operational Holding			
	Bheet	Domat	Kaiwa	Balua	Bheet	Domat	Kaiwa	Balua
Higher	89.4	84.5	72.1	73.1	81.2	71.1	67.4	73.3
Lower	10.6	15.5	27.9	26.9	18.8	28.9	32.6	26.7

Source: Primary Field Survey, Jan. 2007

Land under the ownership and possession of higher social class is as high as 90 percent in *Bheet* and nearly 85 percent in *Domat* soil region. These two are the best soils of the village. Share of lower social group is more in inferior soil. The pattern shows the dominance of particular social caste over the better land in terms of soil. Table 5.8 informs about the share of households from each social groups on the basis of soil type. Although overall number of households from two groups owning and possessing land is in ratio of 2:3, the trends from above table show the disparity on terms of land under different soil type when seen together with table 5.7. Land with better soil is mostly owned and possessed by fewer numbers of households of upper caste and more households of lower caste have the access of less land under better soil. Most of the land owning households from upper caste owns land with better soil and they operate mostly on better soils. So the increase in the share of lower social class in operational holdings in terms of area and households both is on the land with inferior soil.

Table 5.8

Distribution of Households among Social Class
in Owned and Possessed Land by Soil Type

In percent

Size class	Ownership Holding				Operational Holding			
	Bheet	Domat	Kaiwa	Balua	Bheet	Domat	Kaiwa	Balua
Higher	38.4	52.9	41.3	44.5	35.7	48.2	34.4	39.0
Lower	61.6	47.1	58.7	55.5	64.3	51.8	65.6	61.0

Source: Primary Field Survey, Jan. 2007

5.3 IRRIGATION

Irrigation is an important factor determining the performance of agriculture production. All plants need water for survival, but their requirements vary. They derive bulk of their water requirements through their root system. So availability of water is essential for high land productivity. In India, most of the farmers depend upon monsoon for irrigation and other irrigation facilities are less developed. Canal system or tank irrigation or for that matter tube well irrigation is not developed well so location of land with respect to the irrigation facilities becomes important in the distribution of land. If we look into the performance of Indian states, it can be found that the states with well developed irrigation system have done exceptionally good in agriculture. These states have high agricultural productivity and in states, where irrigation is not developed, agriculture development has suffered. So it is worth to see pattern of land distribution with respect to irrigation facilities.

Being situated in the lower Ganga Plain, Machipur has advantage of having high water table and there is not much scarcity of water. But irrigation facility is altogether different from availability of water. What matters more is not the availability of water but it is the assured supply at the time of need. Therefore, despite all advantages of water availability, due to absence of proper infrastructural facilities, assured supply of water for irrigation is a factor in classifying land. Land with assured water is more desired by the farmers and thus the importance of such land goes high. Machipur lies in the high rainfall region of 120 cm per year. In the

MODE OF IRRIGATION

VILLAGE MACHIPUR (BHAGALPUR, BIHAR)

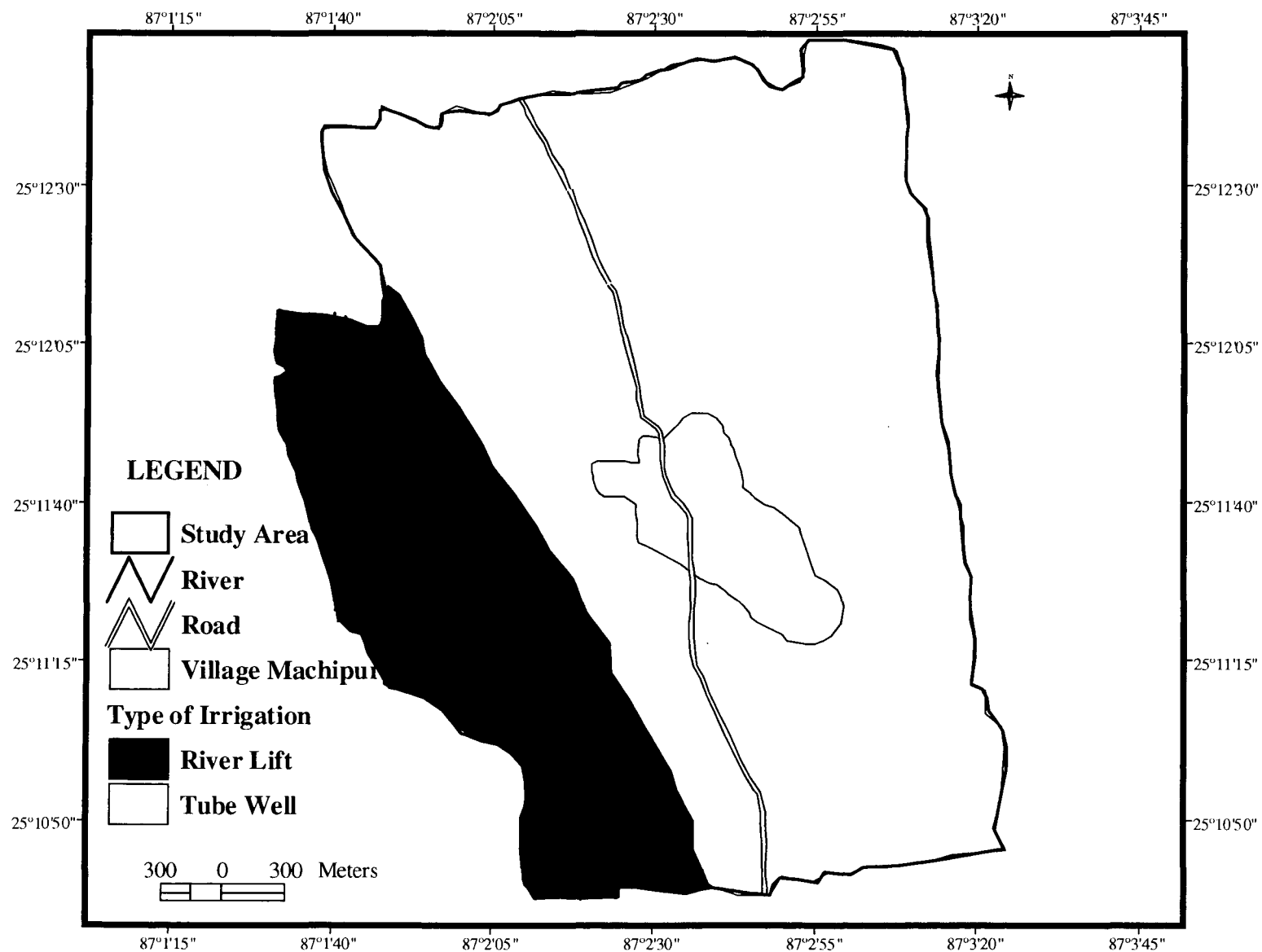


Figure: 5.2

study area apart from monsoon, two major source of irrigation are private bore tube wells and river lift (figure 5.2). Entire region is covered by either of these sources. Since water table is high in the region so the cost incurred in boring is low and hence in the area where the irrigation cannot be provided through river lift, private tube wells are dug by individuals and hence a water market exists. There does not exist even a single functioning public boring or a canal system in the entire study area and hence, private players dominate the water market. Earlier there were few state owned borings some 30 years back, but none of it is functional due to negligence of irrigation department and all of those borings are now useless.

Extent of irrigation in case of both net area sown and gross area sown is quite high. It is found that irrigation is available to entire region all through the cultivation period. If we look into the pattern of distribution of land among the different economic and social classes vis-à-vis irrigation facility, a certain kind of trend emerges. In the table 5.9, distribution of land on the basis of irrigation facilities among the three economic size classes is shown. From the table, it can be argued that most of the lands of large farmers are situated in close proximity to natural source of irrigation i.e *Joli*. Since these lands are irrigated by river lift process, the cost incurred in irrigating the agricultural land is less than the cost incurred by tube well irrigation. Due to the widespread network of tube well, although the need of water for irrigation is met easily by

Table 5.9
Distribution of Land of Economic
Classes on the Basis of Irrigation

In percent

Size-class	Ownership Holding		Operational Holding	
	Tube well	River Lift	Tube well	River Lift
Small	80.4	19.6	73.2	26.8
Medium	60.6	39.4	54.9	45.1
Large	41.4	58.6	31.8	68.2

Source: Primary Field Survey, Jan. 2007

every tiller, but they have to pay the rent to the owner of borings and pumping sets. Land in the study area is fragmented and normally owners have land at different locations especially in case of large farmers and farmers from the upper half of medium size class. Therefore even the large farmers do not have their own boring at all the locations. So, almost every farmer of the region is the buyer in water market. If we look into the ownership holdings of different size classes, it is clear that except large farmers, both medium and small farmers have more of their land under the tube well irrigation. Nearly four-fifth of total land belonging to small class is irrigated by tube well and the land irrigated by river under their ownership is less than 20 percent of their total land. Similarly more than 60 percent of land of medium size class is under tube well irrigation. Although the percentage of land irrigated by river under the possession of smaller group increases but even then it is just one-fourth in case of small farmers and 45 percent in case of medium farmers. Share of land possessed by large group under irrigation through river increases in comparison to its share in ownership holding. This is due to the fact that they lease-out those lands more, which are irrigated by tube well. The increase is as high as 10 percent. Thus it is obvious that land irrigated by tube well is leased-out more and land of weaker section lies more under tube well irrigated land.

Table 5.10
Distribution of Area of Land of Social
Classes on the Basis of Irrigation

In percent

Social class	Ownership Holding		Operational Holding	
	Tube well	River Lift	Tube well	River Lift
Higher	44.0	56.0	41.1	58.9
Lower	68.2	31.8	60.3	39.7

Source: Primary Field Survey, Jan. 2007

Table 5.10 gives the share of land of social classes under the two kind of irrigation practice. In this, ownership holdings of higher caste falls more under river

irrigated category, which numerically speaking is 56 percent, whereas land of lower social class is irrigated more by tube wells. Land of lower social class irrigated by tube well is more than double to land irrigated by river under their ownership. Land possessed by lower social group under river and tube well is in the ratio of 2:3. This is comparatively better situation but it is far less than the desired extent in the given context of judicious distribution of land. By now, it is clear by the discussion that land irrigated by river is considered better in terms of rent and since in this case also water is assured, following the trends of economically higher group, socially higher class also leases-out land more from the tube well irrigated land. The total land irrigated by river is much less than the total land irrigated by tube well in Machipur. The interesting part of this study is that although tube well irrigation is considered as most assured form of irrigation, farmers of Machipur give importance to river lift irrigation because it is easily available and cheaper.

5.4 INUNDATION

Inundation is a regular feature of flood plains. Land in the low lying rolling plains with flat areas and very gentle slope are mostly few metres above the sea-level. Plains normally become undulating due to erosion. Most of the plains are originated due to upliftment or emergence of submerged landmasses or due to filling of depressions with sediments during the process of orogenesis. The great North Indian plains are the product of filling of Tethys sea during the Himalayan orogeny. Study area is a part of this plain. The plain is later on provided with the sediments brought by the Ganges river system. Therefore the entire area is part of same depositional plain. Owing to being a part of flood plain, the region faces the problem of inundation during the monsoon and post-monsoon season. Entire region gets inundated during this time. Residence period of water in different part of region is different. For some part, water recedes quickly while other part remains inundated for quite longer period. The village Machipur can be divided into two parts on the basis of water logging viz. western and eastern part. In this regard, western part of the study area is better than eastern part where water recedes

quickly from the previous part while it stagnates for around 4 months in the eastern part.

Inundation has a devastating effect on the health of land and agriculture development. Productivity goes down due to ill-effects of water logging on the soil as well as due to unavailability of land for cultivation during the inundation period. As in the case of eastern part of Machipur, where water remains stagnated for around 4 months, sowing is not possible during this period and hence only one or at the best two crops is cultivated. Western part of Machipur is better in the sense, water recedes faster and land becomes available for cultivation to the farmers for longer period of time. Land near to the village is most protected in terms of flooding and remains virtually inundated throughout the year. This land is put for maximum sowing and the problem of salinity, insects and other problems arising out of inundation in other land is not found on this land. The land of Machipur can be classified into three types on the basis of period of inundation.

Table 5.11
Distribution of Area of Land of Economic
Classes on the Basis of Period of Inundation

In percent

Size-class	Ownership Holding			Operational Holding		
	No Inundation	Less than 2 months	More than 2 months	No Inundation	Less than 2 months	More than 2 months
Small	19.3	31.8	48.9	11.3	35.5	53.2
Medium	12.5	51.7	35.8	10.1	56.3	33.6
Large	10.1	58.5	31.4	20.4	52.7	26.9

Source: Primary Field Survey, Jan. 2007

From table 5.11, percentage of land of each of the three economic classes in land under the various categories according to inundation is given. Of the total ownership holding of small farmers, around two-fifth lies in no inundation area

whereas nearly half of their total land remains flooded for more than two months in a year. Rest 31.8 percent remains flooded for two months or less than it. In case of medium and large farmers, more than half of their land is flooded for less than two months and around one-third lies in zone where water remains stagnated for more than two months. Since very small portion of land in Machipur is free from flooding so the share of each of the classes is low in this zone. In case of operational holdings, condition is even worse. Share of land under inundation for more than two months increases in case of small farmers and it reaches as high as 53.2 percent. Share of land under inundation for less than two months owned by small farmers also goes up while the percentage of uninundated land comes further down. For medium and large farmers, the share of land under more flooding to total land possessed by them decreases than its share in owned land. The high increase in uninundated area possessed by large farmers can be attributed to more of leasing-out of land under flooding by them.

Table 5.12
Distribution of Land Under/Without
Inundation by Households of Economic Classes

In percent

Size-class	Ownership Holding			Operational Holding		
	No Inundation	Less than 2 months	More than 2 months	No Inundation	Less than 2 months	More than 2 months
Small	46.2	70.3	77.5	49.2	79.1	83.6
Medium	32.4	21.6	16.3	34.3	17.1	15.1
Large	21.4	8.1	6.2	16.5	3.8	1.3

Source: Primary Field Survey, Jan. 2007

Above table illustrates the number of households owning and operating under different categories by inundation. Since the overall number of households from small farmers is very high, their percent is higher in all the cases. But if we see the difference in terms of percentage of each class in different cases, the

disparity is visible. Most of the households either owning or operating in land under inundation are from small group while large farmers' share in these cases is very low especially in land under water for more than two months. This table shows that most of the land leased-out by large farmers is from the land under inundation for more than two months. The share of the three groups in the table is a prominent characteristic of land distribution in Machipur.

In the distribution of land by social classes, the picture is somewhat same as in case of economic groups, with higher caste having more land in no or less inundated region in ownership and

Table 5.13

Distribution of Area of Land of Social
Groups on the Basis of Period of Inundation

In percent

Size-class	Ownership Holding			Operational Holding		
	No Inundation	Less than 2 months	More than 2 months	No Inundation	Less than 2 months	More than 2 months
Higher	14.2	53.6	32.2	22.0	49.4	28.6
Lower	14.7	36.7	48.6	9.2	40.1	50.7

Source: Primary Field Survey, Jan. 2007

operational holdings both. Table 5.13 reflects that nearly 68 percent of total land of higher caste remains inundated for less than two months while nearly half of the total land of lower caste people remains water logged for more than two months in case of ownership holding. This situation deteriorates further in operational holding in which lower caste group is more deprived of better land in terms of inundation. More than 90 percent of their land is faced with the problem of inundation while for higher group this is comparatively low despite them possessing most of the land in terms of area.

Table 5.14
Distribution of Land Under/Without
Inundation by Households of Social Groups

In percent

Size-class	Ownership Holding			Operational Holding		
	No Inundation	Less than 2 months	More than 2 months	No Inundation	Less than 2 months	More than 2 months
Higher	43.5	21.0	14.2	38.1	15.4	9.8
Lower	56.5	79.0	85.8	61.9	84.6	90.2

Source: Primary Field Survey, Jan. 2007

Ownership and operational holdings of households of two groups in different categories based on inundation is shown in table 5.14. It demonstrates the preponderance of lower social classes' share in inundated area in both the cases. The scenario for lower caste worsens in operational holdings than ownership holdings. This is a reflection of more land being leased-in by this group falling under inundated area. The number of households in different categories by two social classes is badly distributed. Most of the higher class households own and possess land of better location in terms of flooding. More than 84 and 90 percent of households operating on less than and more than two months inundated land respectively are from lower group.

5.5 DISTANCE FROM HOMESTEAD

This is an important characteristic of land distribution. Land close to the settlement or homestead has undoubtedly advantage in many terms. As we go away from the homestead, management of land becomes tougher. It is normally found every where in rural setting that in case of land being situated in far flung location than the homestead, land owners are forced to keep someone especially to look after the land whereas, in case of land being situated in close proximity to settlement, it can be looked after easily. In the present study of Machipur, the land is classified

BUFFER ZONE
VILLAGE MACHIPUR (BHAGALPUR, BIHAR)

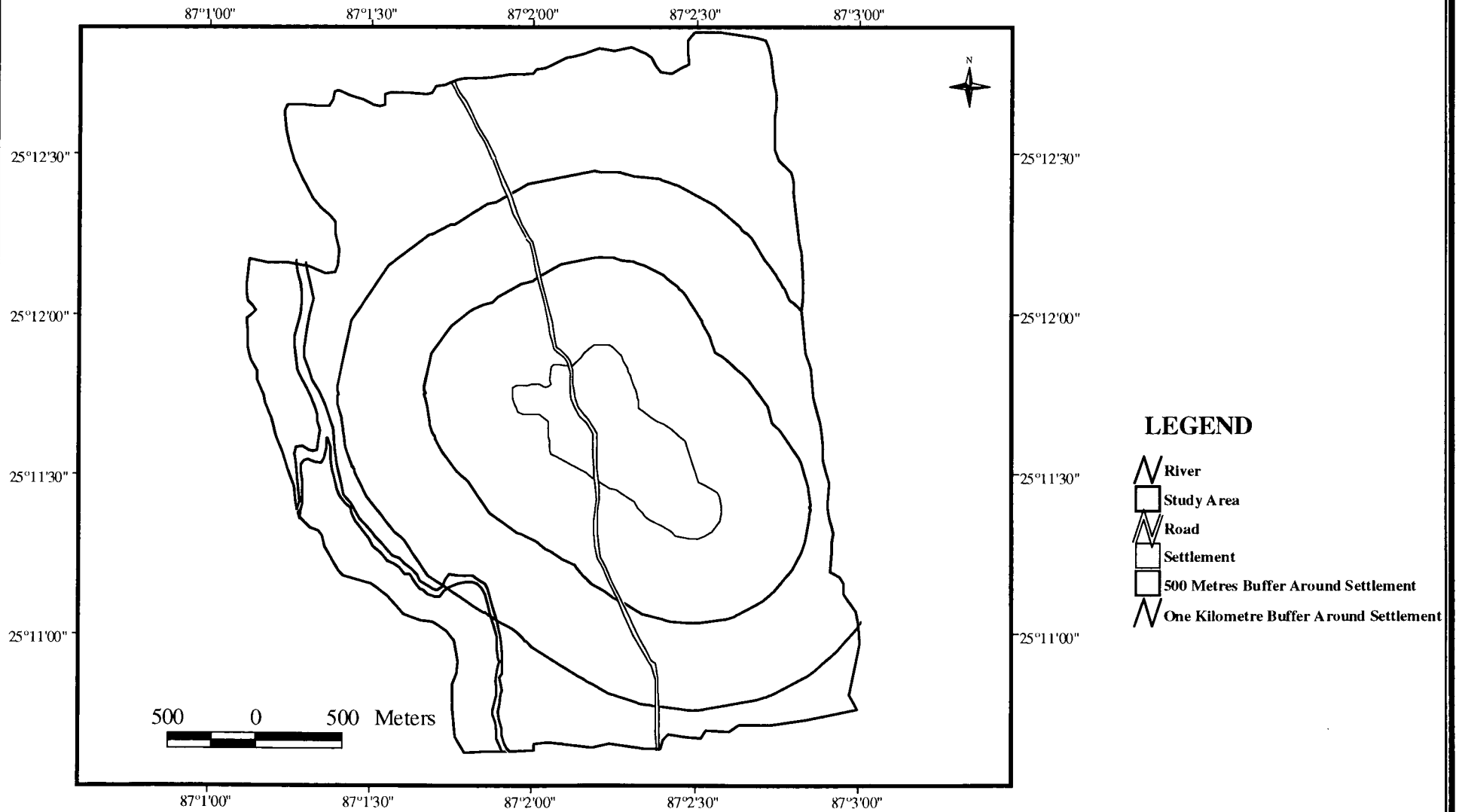


Figure: 5.3

into three categories, viz. i) land located below half kilometer, ii) between half and one kilometer iii) and above one kilometer (figure 5.3). With this categorization, we have looked into the pattern of land distribution across economic and social groups.

Table 5.15
Distribution of Area of Land of Economic
Classes by Distance from Homestead

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Small	9.1	15.3	24.4	15.6	21.4	26.7
Medium	34.2	43.8	38.7	41.6	49.0	44.8
Large	56.7	40.9	36.9	42.8	29.6	28.5

Source: Primary Field Survey, Jan. 2007

From the above table, ownership holding of land within half kilometer of homestead is concentrated in the hands of large farmers and they contribute to 56.7 percent of the total land. Only 9.1 percent is owned by small farmers. In the category of half to one kilometer distance, more land is owned by medium farmers closely followed by large farmers with 43.8 and 40.9 percent respectively. Only in farthest of the land, the share of small farmers exceeds their share in total ownership holdings. In operational holdings, however the share of large farmers in land at the distance within one kilometer to homestead goes down comprehensively. This is more replaced by the increasing share of medium farmers. Although share of small farmers also increases in comparison to ownership holding but it is much lesser than that of medium farmers.

Table 5.16

Distribution of Land in terms of Distance
from Homestead among Economic Classes

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Small	18.2	35.8	46.0	12.4	37.7	49.9
Medium	26.4	42.7	30.9	22.5	48.2	29.3
Large	32.7	38.5	28.8	42.1	34.8	23.1

Source: Primary Field Survey, Jan. 2007

Of the total land of economic groups, from table 5.16, it is clear that land of large farmers are more distributive in nature and their share, despite being very high, is quite high in less than half and one kilometer from homestead. Maximum land of medium class is situated between half and one kilometer from homestead and small farmers have maximum land more than one kilometer away from homestead in ownership holding. Similarly in operational holdings, the above mentioned trend continues, rather it shows more unevenness in terms of distribution across economic groups.

Table 5.17

Distribution of Area of Land of Social
Groups by Distance from Homestead

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Higher	84.6	79.3	70.8	78.1	71.6	67.7
Lower	15.4	20.7	29.2	21.9	28.4	32.3

Source: Primary Field Survey, Jan. 2007

Land distribution across social groups on the basis of distance from homestead is even more concentrated. Land closer to homestead is owned by higher caste and only around 15 percent is under the ownership of lower caste whereas it is nearly 30 percent in case of land situated beyond one kilometer from the village. As the distance from homestead increases, share of lower social group in both the ownership and operational holdings increases. Of the total land of the two groups, higher social group, despite having more land, has nearly same land in close proximity to village and at a distance more than one kilometer from homestead in ownership holding. But in case of operational holding, the share of land possessed by them closer to village is highest. This indicates that they lease-out this land least and the land away from homestead is leased-out more. In case of lower caste, although they also usually

Table 5.18

Distribution of Land in terms of Distance
from Homestead among Social Groups

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Higher	30.5	39.8	29.7	43.2	32.8	24.0
Lower	15.8	34.4	49.8	11.3	41.5	47.2

Source: Primary Field Survey, Jan. 2007

do not lease-out land closer to village, its share comes down because they lease-in land which are mostly away from homestead. Nearly half of their land both in ownership and operational holdings lies more than one kilometer away from homestead.

5.6 DISTANCE FROM MAIN ROAD

As the distance from homestead is important in terms of classification of land, so is the distance from transport line. Therefore, position of land vis-à-vis main road is significant characteristic of land distribution. Land closer to road has many advantages in terms of connectivity and cost in bringing agriculture produce to market and stores. Closeness to road also means ease in bringing the technical support to cultivation. Machipur is cut linearly by the main road connecting Bhagalpur with the block head-quarter of Goradih (figure 5.4).

The land distribution of Machipur on the basis of distance from main road is shown in table 5.19. This table gives information on the share of land owned and possessed by each economic class

Table 5.19
Distribution of Area of Land of Economic
Classes by Distance from Main Road

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Small	13.5	19.9	22.4	16.3	22.7	26.1
Medium	31.4	44.8	41.2	38.8	49.1	48.7
Large	55.1	35.3	36.4	44.9	28.2	25.2

Source: Primary Field Survey, Jan. 2007

in three selected positions i.e. less than half kilometer, half to one kilometer and more than one kilometer away from the main road. From this table, it is evident that more than half (55.1) percent of land within half kilometer from main road is owned

BUFFER ALONG MAIN ROAD
VILLAGE MACHIPUR (BHAGALPUR, BIHAR)

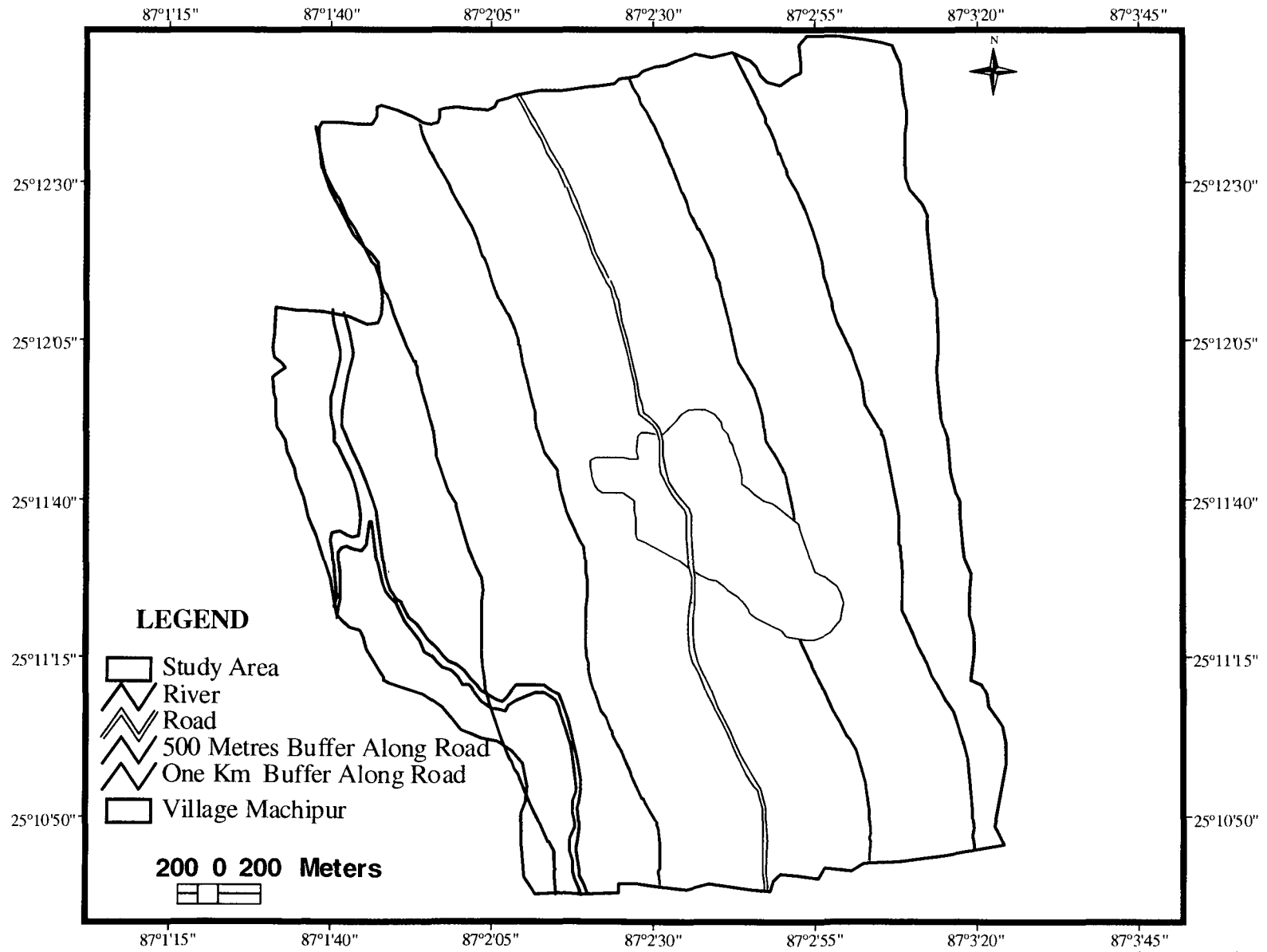


Figure: 5.4

by large farmers and nearly one-third of it is under the ownership of medium farmers. Most of the lands of large farmers are closer to road and their share in land 0.5 to 1 kilometer and above 1 kilometer is slightly more than one-third of total land in that category. In case of medium farmers, their share is more in land more than half kilometer away from main road. Small farmers have maximum share of 22.4 percent in land more than 1 kilometer away from road. In the remaining two categories their share is a paltry 13.5 and 19.9 percent. In operational holding, the share of large farmers comes down but still their share is highest among three economic classes in land less than half kilometer from road. In rest of the categories, medium farmers have highest share and it is close to half of the total land. Small farmers' share is more than one-fourth i.e. 26.1 percent only in farthest land.

Table 5.20

Distribution of Land according to Distance from
Main Road by Households of Economic Classes

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Small	64.4	69.5	74.3	66.3	76.1	80.3
Medium	20.1	24.7	21.2	28.3	22.7	18.9
Large	15.5	5.8	4.5	5.4	1.2	0.8

Source: Primary Field Survey, Jan. 2007

Table 5.20 gives information about the number of households from three economic classes owning and possessing land in different category based on distance from main road. It is found that closer a land to main road, more is the percentage of land owned and possessed by large and medium classes while less is the share of small class households. In ownership holding, highest percentage of small households to total households owning land is in land more than 1 kilometer

away from the main road while it is lowest in case of land adjacent to road. If we cross examine tables 5.19 and 5.20, it is found that the land as well as households owning and possessing land from large class is higher in location nearer to road while small class has high area of land and more households owning and possessing land in the farthest land from road. Households owning and possessing land and land owned and possessed by medium class is also located mostly away from the road.

Land distribution of social class in terms of percentage of land owned and possessed in each of the category based on distance from main road is illustrated in table 5.21. Land owned by higher group in locations less than within half kilometer from main road is 85.8 percent, which is higher than their share in total ownership holding. In rest of the categories, their share is 79.3 and 72.6 percent respectively. Only in case of land located at a distance more than one kilometer, share of large farmers is less than their average. Similarly the share of lower group is other way

Table 5.21
Distribution of Area of Land of Social
Groups by Distance from Main Road

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Higher	85.8	79.3	72.6	78.5	70.2	64.4
Lower	14.2	20.7	27.4	21.5	29.8	35.6

Source: Primary Field Survey, Jan. 2007

round in terms of ownership of land closer to main road. Their share increases as the distance from main road increases. In operational holding too, more of land closer to road is possessed by the strong social group. Land possessed by lower social group, in terms of percentage to total land under that category, is maximum (slight more than one-third) in land located at a distance more than one kilometer

from road. Table 5.22 tells about the number of households from each social group owning or operating on the land under different categories on the basis of its distance from main road. 52.8 percent of the households owning land within half kilometer from road are from higher group whereas their share is only 38.1 percent

Table 5.22
Distribution of Land according to Distance from
Main Road by Households of Social Groups

In percent

Size-class	Ownership Holding			Operational Holding		
	Below 0.5 km	0.5-1 km	Above 1 km	Below 0.5 km	0.5-1 km	Above 1 km
Higher	52.8	49.4	38.1	44.5	39.2	31.7
Lower	47.2	50.6	61.9	55.5	60.8	68.3

Source: Primary Field Survey, Jan. 2007

in land situated above one kilometer away from road. Even their share is nearly equal to lower class in half to one kilometer category. Lower social group households own more land away and their share increases along with the distance. In operational holding, although the share of lower households increases in all categories and it is more than 55 percent in land closer to road also but when we examine it with area of land possessed in this region, it is found that the two does not corroborate each other positively and hence even though the number of households from lower group increases swiftly, it is not followed by similar increase in the land ownership and operational rights in terms of area.

5.7 SUMMARY OF FINDINGS

Distribution of land in Machipur is affected by productivity and location of land. Location vis-à-vis factors like main road, settlement, soil type, productivity and cropping intensity, irrigation facility and mode of irrigation plays important

role in determining the quality of land. From this chapter it can be concluded that most of these factors have characterised the distribution pattern. Only exception to the positive relation between location with land distribution is distribution with respect to mode of irrigation. Tube well irrigation is considered to be the most assured mode of irrigation. In Machipur, tube well irrigated land is more evenly distributed among the economic and social classes. Portion of land endowed with river lift irrigation is more concentrated in the hands of powerful economic and social group. Most affluent persons of the village have land in this region. In rest of the factors, land with favourable location shows more inequality in distribution as compared to less favourable locations with respect to the factors discussed in this chapter.

Chapter VI

CHAPTER — VI

SUMMARY AND CONCLUSION

The pattern of land distribution in India has a long history of concentration in few hands. Social, economic, political, legislative and geographical factors play important role in determining the land distribution pattern. From the findings of this study, it can be said about Machipur that dominant economic and social groups have upper hand in land distribution system. Most of the land is owned by economically higher group.

Machipur is spread over a vast area. Area covered in this study is 1078 hectares. Most of the inhabitants of village are small farmers and they own less than 2 hectares of land. Due to failure of land reform measures, land consolidation and land redistribution has not properly been done. Land is highly fragmented and most of the holdings are small. A total of 197 households operate on the land. Most of them are landowners and few are landless tenants operating on leased-in land. Out of 197, 135 households are small farmers, 44 are medium and 18 are large farmers. Land is highly concentrated in terms of ownership holdings in the hands of these 18 households. They own 454 hectares of land. Medium farmers own 425 hectares and small farmers have the ownership right on 199 hectares. In case of operational holdings, the concentration of land is little less than ownership holdings. Medium farmers gain the ground in operational holdings. Total area operated by them is 503.4 hectares. It is 50 hectares more than area of land owned by this class. Land possessed by small farmers is 229.6 hectares. The increase in their share of total land is just 2.8 percent but if we see the increase to the percentage of land owned by them, it is 15 percent. Large farmers have the tendency to lease-out land. This is mainly because land is not consolidated and each of the large farmers' land is distributed in different locations. Population of two social groups namely, higher and lower social group in village is in ratio of around 1:2. The ratio of land owned

by them is 3.5:1. Total number of households of higher social group is 92 and of the lower group is 105. Land is concentrated in higher caste. All but 4 large farmers are from higher caste. Most of the households from lower social group have small and fragmented land holdings. In operational holdings, the increase in share of lower caste people is substantial. It accounts for 28.8 percent, meaning thereby an increase of 35.5 percent from their total owned land. This increase however, is not enthusiastic because the total land owned by them is not high. Thus it can be summarized from this study that land in Machipur is unevenly distributed across the economic and social groups. High caste big farmers have control on land. It is closely followed by medium class farmers. Most of them are again from high social group. Value of Gini's coefficient for both the economic and social groups in ownership holding is higher than its value in operational holdings.

Leasing is practiced at a high scale in the village. Most of the large farmers lease-out land while both medium and small farmers lease-in land. Small farmers and few landless tenants lease-in land for their sustenance while medium farmers lease-in land to increase their income. Although number of households from medium class is much less than small farmers, area leased-in by them is much more than the area leased-in by small farmers. More than half of total leased land is taken by medium class. There are few instances of large farmers leasing-in land. This is a new trend in the village giving rise to new turn to land distribution system. Large farmers lease-in land close to their holdings. They become tenants of other large farmers only. Holding size of leased-in land by large farmers is very big. Large farmers are the principal land owners of village and hence it is normal that share in leasing-out is highest. Medium farmers are distant second. Few small farmers also lease-out land. Higher caste people of village are more into land lease market. They lease-in more land than lower group. Those high caste farmers, who have lesser owned land, tend to lease-in more land. They are mostly from the medium economic class. Since most of the large farmers are higher caste, their share in leasing-out is more. In lower caste leasing-out is mostly carried out by medium class farmers.

Fixed Money is most prevalent term of tenancy in Machipur. Term of tenancy is decided by lessors. Although most of the lessees prefer share cropping, they are forced to go for fixed money. Lessors impose their choice in deciding term of tenancy. Share cropping is less favoured by lessors because in this arrangement, if crop fails, both lessors and lessees bear loss. In fixed money, there is no risk of loss to lessors. Fixed money arrangement is less favoured by lessees. It is because they are not ready to take risk. Many of risk-taking lessees opt for this term of tenancy. Since they are ready to take risk, they have an opportunity to reap the benefit of a higher output as the rent to be paid is a fixed amount and not the share of the produce. From this research, it is found that while agricultural labourers and small farmers are numerically dominant in tenant farming, large and medium farmers as well as non-farmers, especially in case of leasing-in the mango orchards, also show interest in lease market. Despite the growth in agriculture production and usage of technological inputs in farming, repressive and subsistence tenancy is prominent in this village.

Productivity and locational aspect of land is very important in land distribution of Machipur. Land under the ownership of large farmers and high caste are more productive than land owned by other economic and social groups. Most of the high productivity land is owned by large farmers. In operational holding, most of high productivity land is leased-in by medium farmers. It can be concluded that land leased-in by small farmers are more from less productive areas. Similarly, more productive land is owned and operated by higher caste farmers and lower caste farmers are marginalised. Land with high cropping intensity is also owned and operated mostly by high caste rich farmers.

Land closer to homestead and road has advantage over distant land in terms of reach and maintenance. So, these lands are considered as better land. Similarly land with fertile soil and land free of inundation and flooding is better. On the basis of above classification of land, in this study it is found that better land is concentrated in the hands of high caste big farmers. Large farmers from lower caste also are deprived of better land in terms of distance from homestead. Large farmers of lower social group have more land at the periphery of the village. Very small

patch of land in Machipur is totally free from inundation. Rest land gets flooded every year. The difference in residence period of water in field gains importance. Land under flooding for least number of days is more favourable for agriculture purposes. Land with least inundation is owned more by powerful socio-economic group of the study area. Fertility of land is determined by soil to a large extent. Soil type is an important factor of land distribution. Land under fertile soil is better land and most of such land in Machipur is owned and operated by high caste and class. Weaker groups have limited access to better land on the basis of above mentioned factors.

Land reform measures in Bihar have failed miserably. Uneven distribution of land is rampant and land is concentrated in the hands of few socially and economically strong people. High economic status coincides with high caste. Therefore, there is an urgent need to look into it. Land redistribution must be high in the agenda of policy and decision bodies. Land fragmentation coupled with high population density makes situation even more vulnerable. After the restructuring of Bihar, dependence of state's economy on land and agriculture has increased. So it is needless to say that disparity in land distribution must be minimized. Condition of tenants needs immediate and proper attention. Small farmers more particularly from lower caste must be encouraged by the way of concession and amenities from government. Agriculture should be promoted and information regarding sustainable land practice should be given to them. Small farmers should be encouraged to take risk and adopt the new technologies in agriculture. They should be supported with the provision of minimum support price and agricultural subsidies. Finally, government should take initiative for distributing land to landless agricultural labours. Keeping the benefits of tenancy in mind, government should formulate the policies to promote the small scale lease farming. Such a framework will be helpful in ensuring the fixity of tenure and the lessors' right over the tenanted land. By fixing the tenure, large farmers can be discouraged in entering the lease market. Most of the tenancy in Machipur is unrecorded. There should be focus on keeping records of tenancy. This will enable the tenants to claim ownership rights if a portion of land is cultivated by one tenant for a particular period of time.

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Appendix

Questionnaire

(The respondent should be the one who takes decisions regarding farming).

1. Name of the Respondent:
2. Age:
3. Sex:
4. Address:
5. Religion:
6. Caste/Sub-Caste:
7. Occupation:
 - a. Primary:
 - b. Subsidiary:
8. Income from Non-Cultivation Sources:
 - a. Salaried:
 - b. Casual Labour (Agricultural)
 - i. Wage Rate:
 - ii. No. of Days Worked:
 - c. Casual Labour (Non-Agriculture)
 - i. Wage Rate:
 - ii. No. of Days Worked:

9. Who do you prefer to:

	Social Group	Economic Group (small, medium large farmers)	No Choice
Lease-in			
Lease-out			

10. What is the term of tenancy:

	Fixed Money	Fixed Crop	Share Crop	Any other term (specify)
Lease-in				
Lease-out				

11. Area in bighas

Plot/Khata-Khasra No, Khatauni No.	Area owned	Area leased-in	Area leased-out	Area mortgaged-in	Area mortgaged-out	Expected current price per bigha if sold	Cropping Pattern			
							Kharif	Rabi	Zaid	Annual
1										
2										
3										
4										
5										
6										
7										
8										
Area (Total)										

12. Quality of land owned

Plot/Khata-Khasra No, Khatauni No.	Irrigation		Distance from main road			Distance from homestead				Inundation problem (Y/N)	Soil quality (local code)
	IR/ source	UIR	Below 0.5km	0.5-1km	Above 1km	Below 0.5km	0.5-1km	1-2 km	Above 2 km		
1											
2											
3											
4											
5											
6											
7											
8											

13. Quality of land leased in

Plot/Khata-Khasra No, Khatauni No.	Irrigation		Distance from main road			Distance from homestead				Inundation problem (Y/N)	Soil quality (local code)	Rent
	IR/ source	UIR	Below 0.5km	0.5-1km	Above 1km	Below 0.5km	0.5-1km	1-2 km	Above 2 km			



14. Quality of land leased out

Plot/Khata-Khasra No, Khatauni No.	Irrigation		Distance from main road			Distance from homestead				Inundation problem (Y/N)	Soil quality (local code)	Rent
	IR/ source	UIR	Below 0.5km	0.5-1km	Above 1km	Below 0.5km	0.5-1km	1-2 km	Above 2 km			