# STATE POLICY IN AGRICULTURE AND THE DEVELOPMENT OF AGRARIAN CAPITALISM IN INDIA

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## DECLARATION

Certified that the dissertation entitled "STATE POLICY IN AGRICULTURE AND THE DEVELOPMENT OF AGRARIAN CAPITALISM IN INDIA" submitted by T. Rabisankar is for the award of the Degree of Master of Philosophy of this University. This dissertation has not been previously submitted for any other degree of this or any other University, and is his own work.

We recommend that this dissertation may be placed before the examiners for evaluation.

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T. Rabi Sankar

(T.RABI SANKAR)

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# INTRODUCTION

There has been a prolonged debate on the mode of production in Indian agriculture involving an impressive list of economists in India. Starting in the second half of the 1960's, this debate continued well into the 1970's. This debate, though it failed to resolve various issues involved, materialised in involving a near-consensus among the participants on one important aspect, namely ,that capitalistic mode of production is emerging as the dominant mode in Indian agriculture. Though statistics was taken resort to, to prove or disprove differing points of view , this debate was essentially theoretically oriented. Furthermore, as regards the moving force behind the transformation, the role of the state got little attention in this debate. This is the motivation of the present study. The objective of this study is therefore to undertake systematic analysing of how the policies of the state have given rise to the forces that initiated and strengthened the features of agrarian capitalism in India.

However, such a study of the role of the state requires an understanding of the nature and function of the state in specific socio-economic contexts. Predictably, opinions regarding this differ widely in accordance with the

ideological framework within which one operates. Therefore it is necessary to note the positions of the major schools of thought regarding the nature of the state. This is undertaken in the first chapter entitled 'The Nature and Role of the State in India and its Policies in Agriculture'. This chapter further tries to situate the Indian State in perspective Finally, an attempt is also made to study, given the nature of the Indian state, the nature of its policies (in fairly broad terms) in agriculture. Two broad policy strands are taken into consideration, the first being land reforms and the second being the introduction of the new technology, and an attempt is made to show that such policies are the obvious outcome of the specific nature of the Indian state.

As far as the emergence of capitalism in Indian agriculture is concerned, we have taken the 'debate' as our bench-mark for further analysis. Therefore, it was thought to be necessary to review this debate. This is undertaken in chapter II entitled, 'Emergence of Agrarian capitalism in India - A Review of the Mode of Production Debate'. In addition, this chapter also tries to trace the historical development of classes in Indian agriculture, again based primarily on existing studies in this regard.

Basing on this 'debate', we have taken for granted that agrarian capitalism is an emerging feature in India. The rest of this work proceeds from this point. Therefore instead of showing whether capitalism exists, and if so, what are its features and to what extent is the growth of these features attributable to the state, the scope of this study restricts itself only to the latter half of this causal chain. What we have done is to take the major state policies and then study their impact on the agrarian setup. And the study is limited only to the extent of showing whether and how the emerging features of Indian agriculture are compatible with capitalism.

In chapter III we have taken for analysis the land reforms introduced by the state. Towards this objective, an evaluation of the land reform measures at the level of their formulation as well as implementation is carried forth. Conclusions regarding the consequences of land reforms on the agricultural set-up are thereby tentatively drawn. In the next stage, using mainly data from official sources, such consequences as are drawn above are sought to be corrborated.

Having noted the emerging agrarian structure prior to the Green Revolution at around the mid-60$^{s}$, the study

proceeds to examine the adoption of the different components of the new technology among various size classes. It is sought to be shown that the adoption rate of these inputs have tended to be concentrated among the large and middle farmers. Especially, the expenditures on different inputs are shown to be increasing with size class, indicating higher levels of investment on large farms. This above analysis is the subject matter of chapter IV.

Finally, the pricing policy followed by the state (price incentives to producers was said to be an integral part of the new technology) plays a crucial role in determining the levels of profits accruing to farmers, and therefore on investment and output. The point of interest here is to show that, the state pricing policy, by making farm prices inflexible downwards, had managed to prop up returns to agriculture despite fluctuations in output. Further since the large farmers supply a significantly larger part of the total marketed surphus (or, at least, the impact of their market operations being decisive on prices) such a price policy has favoured the rich and better off section of the farming community, to the detriment of small and marginal farmers, as well as agricultural labourers. This has been dealt with in chapter V.

It is thought appropriate to mention some of the prominent limitations of this work at this juncture. The first limitation has been unavailability of comprehensive data statemise at different time points. This limitation is particularly felt in chapter IV. In the absence of adequate data for a systematic comparison over time, we had to turn to isolated works by other economists, or farm management data and compare it to the official sources (That is mainly those published by the Ministry of Agriculture, Government of India). In some cases we were forced to be restricted to the use of single year data, though even in such cases to test their validity we compare these results with other works.

Another point that needs be stressed here is that this study by its very nature could not be undertaken within a given time period. We basically start with independence and proceed as far as the availability of data would allow.

Having observed the aims of this work and the major constraints therein this work has to progress, we now turn to a study of the nature of the Indian state in Chapter I.

# CHAPTER - I

# THE NATURE AND ROLE OF THE INDIAN STATE AND ITS POLICIES IN AGRICULTURE

## I.I STATE AND ITS ROLE: A THEORETICAL PERSPECTIVE

There is a very wide and varied literature on the nature and role of the state in any given socio-politico-economical set-up. It is not tenable on our part to deal with this literature comprehensively, not only because of its vastness, but also because much of this discipline falls under the realm of political science. In this section , we would therefore attempt a sketch of the general views, if only to make this concept of 'state' amenable to comprehension for the sake of our study.

The official ideology of the capitalist democracies, many would say, is pluralist democracy. In this framework state is seen as a neutral arena of debate where competing interest groups and public at large define public policy. The cornerstone of this ideology is the tenet of individual liberty. This liberty, which is shown to exist in the competitive market, is extended to the field of political power. In fact the above relation is assumed away.

The above ideology bases itself on the 'Classical'

theories of the state, whose essence is that the liberal state acts in the interest of the 'common good'. In a society the material wants of individual men come into conflict with one another. The role of the state is to moderate these wants and ensure the smooth operation of a free market. Thomas Hobbes,[1] for instance, considers the state as a sovereign power to which men delegate all their power so that this all powerful state could satisfy their 'appetites and aversions' which determine a man's voluntary actions. Why should a man who loves his individual liberty, give it up to an external force is something Hobbes fails to explain clearly. In the late seventeenth century, Locke[2] propagated the view that individuals delegate their 'natural' political power to someone else-state or any other group of individuals or even a single individual-to enable the latter to safeguard their persons and property. However, Locke refers to individuals as only those who own property. This propertied class gives power to the state but at the same time reserves the right to dissolve it.

Rousseau[3] formulates a more realistic conception of the state, by posing it as a creation of the rich to maintain their dominant status in society. In an unequal society, it is to the advantage of the rich to found order to control and thereby exploit the poor.

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1. Martin Carnoy, The State and Political Theory, pp 15-17.
2. Martin Carnoy, ibid., pp 18-20.
3. Martin Carnoy, ibid., pp 20-23.

The common point of all the above theories lies in the concept of what in political science parlance is called 'social contract'. Individuals in a society (or a 'civil society' as opposed to the 'state of nature') transfer their power to a state which in turn acts for the 'common good'. State is the'general will' of the people. And how does a state act? It acts, in terms of the 'social contract' theory, with a view to ensuring a certain degree of equality.

In the liberal tradition, the state is given a very limited role; to ensure the defence and law and order in a society. Adam Smith is the pioneer of this doctrine. His advocacy of laissez-faire,meaning a minimal state interference, owed its conception to the existence of a 'invisible hand' which ensures social good out of individual pursuits of maximisation of material gains.

The power of the state, however arises from that of the electorate or citizenry. This electorate does not encompass the entire society but a section of it. For, this doctrine assumes inequality in political power.

The twentieth century extension of this liberal doctrine is what we referred to earlier as 'pluralism'. We will discuss just one view of it, that of Joseph A.Schumpeter[4]. His conception

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4. ibid., pp 23-24.

of the state differed radically from that of the liberal thinkers. State is a body elected by the peopl to decide issues for them. Thus state gains a degree of power in this theory. The populace has the power of only to elect a particular set of politicians to some other set(s). But is has no power on the state itself. However, Schumpeter recognises that individual liberty is sacrificed (or consumer sovereignty is not universal, to use his own terminology) in so much as elites influence the decisions of the state and these decisions decide the fates of people, not the other way round. Thus, there is an underlying assumption of a stratified society in his analysis. Schumpeter did decipher a disunity of purpose among individuals in a society. But neither Schumpeter nor any other exponent of a 'pluralist' state ever attempted to analyse or conceive of the state in the framework of conflicts among classes, a natural outflow of capitalism.

Till the end of the second world war, the marxist conception of the state was limited to the views of Lenin and Stalin as they interpreted Marx. It was only in the 1950's that debates on this issue gained wide currency, particularly among western marxists. All of these theories that emerged subsequently have their roots in the original writings of Marx, Engels and Lenin[5]. Since Marx never gave a comprehensive theory of the

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5. Some of the relevant works are: Karl Marx (1867) Capital, Vol,I, Moscow, Progress Publishers. Karl Marx and F.Engels, (1848), The Communist Manifesto, Moscow, Progress Publishers. F.Engels, (1884), The Origin of the Family, Private Property, and the State, New York, International Publishers, 1968.

state as such, it has to be derived from his other writings, or from the writings of Engels and Lenin. This gave scope to the emergence of variant schools of thoughts within the marxist stratum according as individual interpretations.

Marx first dealt with the state in his critique of Hegel. To grasp Marx's conception of the state, a knowledge of his characterisation of society is essential. For this, we will not go beyond a quotation.

"In the social production of their life, men enter into definite relations that are indispensable and independent of their will, relations of production which correspond to a definite state of development of their material production forces. The sum-total of these relations of production constitutes the economic structure of a society..... on which rises a legal and political superstructure....."[6]

Thus for Marx society shapes the state. In doing this, he gave a historical and material conception of the state. This was directly opposed to the 'rational' and 'eternal' state of Hegel, which was an idealised collectivity transcending society.

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5. (Contd) V.I. Lenin (1917), The State and Revolution, Peking, Foreign Language Press, 1965.
6. Marx as quoted in Robert C.Tucker, ed., The Marx-Engels Reader, New York, W.W,Norton, 1978.

A second feature of Marx's formulation of the state was that, it does not represent the common good. Since he viewed the capitalist society as a class-ridden one, interests of various groups necessarily conflicted. In this set-up, state is the political expression of the dominant class(the class of capitalists, under capitalism). The state perpetuates this class domination.

In a subsequent work Engles[7] developed on this formulation. The role of the state was to mediate conflicts between classes and maintain 'order' which ensures the economic domination of the capitalist class.

The third feature of Marx's theory is that the state is the repressive arm of the dominant class. This basically means that for the state to control class conflicts and maintain capitalist domination, it has to take resort to various coercive institutions like the police, prisions, etc. Explicitly or implicitly, this fact is acknowledged by most of the liberal or classical theorists, although they differ on the point that this repressive apparatus is to serve the interests of the capitalists class.

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7. F.Engels op.cit.,

But Marx was not overt on the degree to which the capitalist class exerts its influence on the state. Based on this moot point, different schools of thought have emerged. The structuralists or instrumentalist considered the state personnel as the direct instrument of the major propertied class. On the other hand, Miliband[8] asserts that the state has a relative autonomy of its own and it acts on behalf of, not at the behest of, the dominating class. Miliband's interpretation arises out of Marx's works on the 1848 revolution in France. At this historical juncture, no class had enough power to rule through the state. This is what Louis Bonaparte did when he took control of the state power by playing one class against the other. However, Bonaparte, even when he drew support from the peasants, served the interests of the dominating class by allowing them to accumulate vast amounts of capital. Subsequently, he had to yield power to them.

Another interpretation owes its conception to Joachim Hirsh[9] who based himself on Marx's Capital and contended that the state is an apparatus abstracted from individual capital conflicts and capable of creating infrastructure for private capital, which the latter fail

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8. Miliband, Marxism and Politics, London, 1977, Oxford University Press. pp 68-74.

9. Joachim Hirsh, The state Apparatus and Social Reproduction : Elements of a Theory of the Bourgeoise State, In State and Capital : A Marxist Debate. See Holloway and Picciotto 1978.

to do owing to their limited profit aspirations.

One more variant of the marxist conception is that of Antonio Gramsci.[10] His theory mainly is an answer to the question of why subordinate classes accept this domination. Not 'false-consciousness', as Marx and others opined. To him, this acceptance is the result of the 'hegemony' of the norms and values that the dominating class establishes and perpetuates over the rest of the society. The state helps in maintaining this hegemonic relationship through various legitimation functions. In the next section we will deal with the nature of the state in a post-colonial context.

## 1.2 THE INDIAN STATE

Having examined the various theoretical position with regard to the nature and role of state, we now proceed to study the nature or the Indian state during colonial period and post-independent period.

To understand clearly the nature of the Indian State, a brief summary of the dominant class forces at work just prior to independence and their realignment after that is essential,

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10. Antonio Gramsci, Selections from Poison note books New York, 1971, International publishers.

## A. DOMINANT CLASSES IN THE INDIAN SOCIETY

The class configuration of the Indian Society before independence was somewhat typical of a colony.[11] There was a nascent but politically quite powerful indigenous capitalist class. Its political power derived essentially from its active participation in the freedom struggle from within the Congress Party. And understandably so, since their growth, both economically and politically, was contingent upon the elimination of metropolitan competition.

In the rural sector, the land lord class held sway. Their active loyalty to the British, put them in counterpose to the freedom movement. Though a numerical minority, they yielded actual power in the rural sector through their ownership or effective control of land, thanks to the British.[12]

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11. For a Theoretical discussion of the specific nature of the state in a post colonial context see Hamza Alari, The State in Post Colonial Societies-Pakisthan and Bengladesh, in K. Gough and H.P. Sharma, eds. Imperialism and Revolution in South Asia. The bare essentials of this theory are as follows. The context for analysing the state is different in a post colonial situation because (i) The State apparatus is overdeveloped because its base his in the metropolitan structure and (ii) Since no one class is strong enough, it is a coalition of dominant classes that the State works to promote. A corollary of the second aspect is that the state retains a relative autonomy.

12. A maintenance and stregthening of the pre-capitalist elements in agriculture was in the interests of the British in so far as agricultural surplus was to be siphoned off for capital accumulation in the metropolis (i.e. Great Britain).

The third, and considerably more powerful than the other two was the metropolitan capitalist class. Its power derived from its control of the State apparatus in Britain and consequently of the Indian State. In the industrial sector, this class dominated the indigenous capitalist class through its control of the market. In the agricultural sector , the penetration of foreign capital was limited to a small subsector of plantations, operating on a capitalist basis and employing around one million people.[13]

In the immediate post-independence period the state, controlled by the leadership of the Congress Party (arising mainly out of the ranks of the professional middle class) worked actively for the development of the Indian industrial capitalist class. Such a policy was necessary and inevitable for obvious reason, that there would exist an antagonistic relationship between a national capital barely out of it teens and a well developed International capital Therefore for the former to develop economically in a Country like India with massive potential market of its own it is imperative that the latter be almost banished from the economy. Indian industries were given almost total protection from foreign capital, massive public

13. D.H. Bucharan, "Development of capitalist enterprises in India" as quoted in Utsa Patnaik, "Development of Capitalism in Agriculture". I, Social Scientist Sept., 1972.

nvestment particularly in heavy capital goods sector was undertaken to allow private capitalists to flourish. As a consequence, the influence of metropolitan capital on the Indian state became almost negligible. It is amply clear from the observation of Pranab Bardhan.

" ..... a remarkable feature of Indian development is the relative unimportance of foreign capital and foreign firms,..... in 1981-82 only about 10 percent of total value added in the factory sector of manufacturing was accounted for by foreign firms".[14]

Now we come to the attitude of the Indian state towards the rural landowing class. As noted earlier, this class was aligned against the Congress in the freedom movement. Hence the Congress leadership developed an "anti-landlord rhetoricand were committed to radical policies vis-a-vis rural society",[15] This explains the enactment of the land reform measures involving the abolition of the intermediaries and the rationale 'land -to-the-tiller'. These radical solutions to the stagnating agriculture were further supported by the interests of the Indian capitalists who needed an increased agricultural produce for their market. Thus the drive for : Small

14. Pranab Bardhan, "The Political Economy of Development in India", Oxford University Press (1984).

15. Hamza Alavi, "India and the colonial mode of production" Economic and Political Weekly (Hence forth, EPW), 1975, pp. 1237.

peasant economy which was believed to be more progressive than the 'feudal' exploitative economy. These policies were however diluted at the state level firstly because of the influence the landowning class held in the state governments and secondly because of the in-difference of the bureaucracy.

However, soon it was realised that no radical reorganisation of the rural sector was possible without a total crushing of the rural oligarchy. And this line of reforms might initiate movements among the deprived sections in agriculture which were definitely not in the interests of the industrial bourgeoise. There evolved a process of reconciliation. Land reforms were in any case not a whopping success. The rural power structure was still unchanged. The only way of increasing agriculture output, that remained open to the state was to encourage landlord capitalism. "To him that hath shall be given and from him that hath not shall be taken the little that he hath (not)[16] was the rationale of the consequent new agricultural strategy.

Thus we see a realignment of class interests after independence. The industrial bourgeoisie and the rural landlord (alongwith the rich peasants who by this time

16. A.G.Frank, "Reflections on Green, Red and White Revolutions in India", EPW, (1973), Vol. VIII, pp. 119-124.

had emerged as a very powerful class in agriculture as we will explain later) entered into an 'uneasy' alliance. This is the dominant coalition which held a considerable influence on the state apparatus.

It has been advocated by some (Pranab Bardhan, for one) that the bureaucracy is the third member of this dominant coalition.[17] The buraaucracy's identification as a class emerges from its owning 'human capita as against the 'physical capital' of the landlords and the bourgeoisie. And its class interest is said to be to increase its 'scarcity rent'. We are not convinced of this for two reasons. Firstly, if this logic is extended, various social groups like the 'intelligentia. the 'technoracy' etc., would qualify as classes. Second the conflicts between the bureaucracy on the one hand and the industrial bourgeoisie and theland - lords on the other as shown by Bardhan are singularly unsatisfactory. He shows it mainly by way of individual bias towards disbursement of licenses and implementation of pol measures. Explaining conflicts between macro-categories (as classes are) through examples of individualistic actions is, in our opinion, illogical.

B. CLASS CHARACTER OF THE INDIAN STATE

Just after independence, the industrial capitalist class in India, was the only class that could influence

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17. Pranab Bardhan, op.cit, Ch. 6.

state power. This period (lasting roughly) till the mid-60s saw the state actively promoting private investment through large-scale public investments in key capital industries. A near total protection not only kept international capital out of reckoning, but also provided the shelter under which the nascent, 'inefficient' Indian industries could grow. From the mid-60s onwards, the rural landlord and rich peasant class also increased its representation in the state. The state took to promoting the interests not only due to the reasons stated in the last section, but also to appease these rural 'vote banks'. These are the two classes, whose representation in the state apparatus is most pronounced and for the benefit of whom, most of the policies are evolved. And whenever policy measures have gone against them, they either side-stepped the law or openly flouted such measures (e.g. land ceilings act or MRTP Act). The fact that the Government has either turned a blind eye or resorted to ex post regularisation of illegal actions of these classes clearly shows the class bias of the Indian state.

## 1.3. BROAD GENERALISATIONS OF STATE POLICIES IN AGRICULTURE - A CLASS BASED ANALYSIS

In this section we would analyse the class bias in the agrarian policy measures. However, since there is

an enormous corpus of policy measures, we have identified two important strands among them which played a vital role in the promotion of emergence of capitalism in India. From 1950 to roughly the mid 60s we discern a stress on institutional reorganisation of the agricultural sector. This would include all land reform measures. And from the mid-60s onward till the present date we see a radical shift in emphasis to technocratic solutions to agrarian maladies. This is the essence of the Green Revolution. In What follows, a class based analysis of the implications of these policies is attempted.

A. INSTITUTIONAL REFORM MEASURES

The reasons for the promotion of a path of 'peasant capitalism' by the State ( as implicit in the land reform measures) are already dealt with in the last section. These measures included a series of legislations : the abolition of intermediaries, tenancy abolition, ceiling on land holdings, community development and extension programmes and the like. For about a decade and a half, this was the major thrust of official policy on agriculture.

The effects of land reforms are well-documented. Admission of the limited impact of these reforms was made even in official quarters. So far as any major alleviation of the acute inequalities in land distribution

is concerned - both in land ownership and in land ownership and in land operation - the result was not heartening. The performance on the output side was neither very bright. However certain important changes - though not the 'intended' ones - did take place in the agrarian sector.

The effect of land reforms on the absentee, non-cultivating landlords is succinctly captured by Byres.

"Despite a remarkable range of delaying tactics and a host of devices to retain more land than the law allowed ... (this class of) semi-feudal landlors..., experienced, via land reforms, a below from which they could never quite recover".[18]

What was the nature and extent of this 'blow'? Land reforms severely damaged the undisputed dominance that this parasitic class had in the rural sector, particularly in the permanent settlement areas of Eastern India. The 'quasi-bourgeois' ownership of land that this class had enjoyed hitherto was eliminated. The abolition of tenancy seriously curbed their rent-appropriating capacity. Furthermore, the legal sway they held over the smaller tenants during the British rule was no longer there. To this extent the blow was severe.

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18. T.J. Byres, "The New technology, class formation and class action in the Indian Countryside", Journal of Peasant Studies, Vol.8, No.4, July 1981.

Two other points, however, emerge which qualify the universality and extent of this blow. Firstly in the ryotwari and Mahalwari regionsthe agrarian structure that evolved as a result of British policy was distinctly different from that of the Permanent Settlement areas.[19] Hence the effects land reforms had, differed overed regions. And secondly, the essential charecter of the rural power structure remained unaltered. How? But before this we deal with the first point.

In the ryotwari and Mahalwari regions, in the wake of independence there was a well developed peasant proprietory class (as in Punjab) and a class of well-developed tenants (as in Western Uttar Pradesh)[20]. Land reforms further strengthened the position of these groups. For example, tenancy abolition, by conferring ownership rights, enhanced the economic position of an already well developed class of tenants. As far as the land lord class of this region was concerned (particularly the middle to smaller ones) they either evaded the law (through 'disguised' or 'oral' tenancies) or switched over to direct cultivation on the basis of wage labour by ejecting small tenants. Thus there was a substantial potential for capitalist development in this

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19. For an analysis of the diversified impact of British Policy on Indian agriculture see Amit Bhaduri", In the next chapter, we will briefly state his position in this regard.

20. T.J. Byres, op.cit. p . 423.

region.

Why did the zamindars in the PS areas not follow this course of ejecting small tenants and switching over to self-cultivation on the basis of wage labour to an appreciable extent? One plausible anwer is that there was a very powerful class of usurers and traders (who legally were 'tenants' but in actuality substantial 'tenors' just below the zamindari class) that developed historically in this region characterised by Subinfauodation and rack-renting.[21] Tenancy abolition laws tended to strengthen this class of unproductive investors vis-a-vis the zamindar class.

Let us come to the second point now. Implicit in our analysis till now in this section is that particularly in the ryotwari region (and to a small extent in the PS areas also) the class of traditional landlords changed colour to become self-cultivating rich peasants. They also managed to retain their dominance through exploiting the loopholes in the laws. For example, one of the clauses in land reforms in every state allowed for 'resumption' of land from tenants for 'self-cultivation'.[22] Thus the landlords could retain a large part of their land for cultivation with hired

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21. In the next chapter we will explain how this came about. For literature refer to article in note 9 and 15.

22. Utsa Patnaik, op.cit. note 9

labour. In addition ' disguised' and 'oral' tenancies allowed them to bypass the tenancy abolition laws. Most landlords resorted to fragmenting their holdings over the family members as an effective hedge against the imposition of ceilings. To top it all, bribing corrupt officials was resorted to in large numbers to hide their actual holdings. Thus there was no substantial change in the concentration of ownershilp or cultivated holdings.

It is the contention of some economists,[23] that there was a quickening of the process of differentiation of the peasantry. Rich peasants were the greatest beneficiaries of the land reform. They were emerging as the new dominant force in agriculture, particularly in ryotwari and Mahalwari areas. Of the tenants, it was only the upper layers which benefited from legislations. As Vyas points out, the lease market was bifurcated into one characterised by leaser's hegemony (where big farmers were tenants) and the other characterised by the superiority of the lessors (where small farmers were

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23. [23] These economists include, T.J. Byres (note 14) ; Kalpana Burdhan, "Rural Employment, wages and labour markers in India : A Survey of Research", EPW, June 2 & July 9, 1977; V.S.Vyas, "Structural Changes in agriculture and the small farm sector", EPW, Jan 10, 1976; P.C. Joshi and D.Narain,"Magnitude of Agricultural tenancy", EPW, Review of Agriculture, Sept., 27, 1969

tenants).[24] Thus from among the tenants the upper layers developed into a class of self-cultivating rich peasants. The evidence given by Dharm Narain and P.C. Joshi[25] also points to a strengthening of the economic position of the rich peasants. While there was a substantial decline over the 50s in the proportion of households operating and leased in areas (due mainly to eviction of tenants at-will there was a large increase in the number of rural households not cultivating any land (from 6.6 mn in 1954-55 to 18.6mn in 1961-62). Moreover the proportion of leased in area with rich peasants increased over this period. These evicted tenants took to wage-labour as the only alternative source of employment.

By the same token the plight of the poor peasants worsened. Mass eviction of tenants at will forced many of them into destitution. Through 'tenant switching' tenanted land passed from poor to rich tenants. And the persistence of traditional forms of sharecropping and disguished tenancy further exacerbated their position.

The class of landless labourers, which was quite substantial even at independence, began to swell. large number of evicted small tenants and dispossessed poor peasants began looking for wage labour. Moreover,

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24. Vyas, U.S., n.19.

25. Joshi and Narain, n.19

even where small peasants cling to their land, they did resort to part-time wage labour, in the face of inadequate income from their tiny holdings. This growing proletarianisation associated with increasing tendency of wage-exploitation (in addition to rent-exploitation in PS areas particularly) indicated a potential path of capitalist development that Indian agriculture may take.

The failure of land reforms to generate sufficient agricultural surplus, made the sate review its stand. Institutional reforms were given a least priority and a direct and open appeasement of the dominant rural class was considered a 'better' option to raise agricultural production. The Green revolution was ushered in.

B. THE NEW AGRICULTURAL STRATEGY

The new agricultural strategy (Green Revolution in common parlance), dated roughly from the mid 1960s, basically involved giving stimulus to agricultural growth in relatively well developed areas, viz. Punjab (and Haryana), Western Uttar Pradesh and other areas of assured irrigation base, by breaking the technological barrier through the introduction of what came to be known as the 'new technology'. What exactly was the nature of this 'new technology'?

The 'new technology' had two components: bio-chemical technology (BCT hereafter) involving a HYV seed-fertilizer-irrigation mix and mechanical technology (referred to as MT, in short) involving tractors, threshers, drills, combine harvestors, mechanical reapers etc. These two componerts are essentially complementary in nature irrespective of a distinction that is drawn between the two by some economists (Kalpana Bardhan[26](1977) Chada (1978); Manmohan Singh (1979).[27] A basis for such a mythical 'dichotomy' has arisen from a 'desirable-undesirable' view point: BCT being scale neutral, labour-absorbing and land augmenting is 'desirable' while MT because of its scale bias and labour-replacing character is 'undesirable'. Binswanger (1978)[28] and Ahmad (1976)[29]

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26. Kalpana Bardhan, "Reading as in note 19, particularly EPW, June 25. G.K. Chadha "Farm size and productivity revisited, Some notes from Experience in Punjab; EPW, Review of Agriculture, 30th Sept., Vol. XIII, No. 39, 1978.

27. Manmohan Singh, "Population Pressure and labour absorbaility in agriculture and related artivities. Analysis and suggestions based on field studies conducted in Punjab, EPW, 1979, 17 March Vol. XIV, No. 11.

28. Hans P. Binswanger, " The Economics of Tractors in South Asia, An Analytical Review", New York & Hyderabad, 1979.

29. Iftekar Ahmad, "The Green Revolution and Tractorisation Their Mutual relations and Socio-economic effects", International Labour Review, July-Aug. 1976, Vol. 114, No. 1.

in addition to the aforementioned protagonists of such a distinction contended that the desired output rise could be attained only with BCT if proper policy measures are pursued. However, as Byres[30] argues BCT initiates strong pressures towards adoption of MT because of two factors : (i) the complementary nature of the individual components of BCT among themselves and (ii) the time-bound operations[31] necessiated by BCT. The BCT being non-resource neutral, its adoption is high among rich farmers. And since their resource position allows them, thereby accentuating inequalities among the peasantry classes. However let us elaborate on this class bias in the 'new technology'. In the words of Terry Byres - "Technology does not fall from heaven, and neither does it exist in a social and political vacuum. It is appropriated by specific classes and used to further (their) class interests."[32]

Right since the beginning, the Green Revolution has been a 'betting on the strong' policy. Various

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30. T.J. Byres, op.cit.

31. On the non-resource neutrality of BCT see, Hanumanth Rao, "Technological chan-e and distribution of gains from agriculture", 1975, Delhi. MacMillan of India.

32. T.J. Byres, op.cit. p. 416

factors inherent in the BCT led to a strengthening of the economic position of the already powerful class of rich peasants and landlords. Firstly, though scale-neutral in theory, this technology is not resource-neutral. Hence only those farmers with a comfortable resource position could take it up. A second factor is that there was considerable risk in the adoption of BCT. An optimal mix of fertiliser and timely supply of water in required quantity was essential to maximise the output of HYV seeds. The rich peasants because of their superior access to 'knowledge' could decide on this optimal fertiliser mix and what is more important, could afford it. For controlled water supply, pumpset irrigation is more effective than canal irrigation. Since the rich peasants had the resources to invest in pumpset irrigation, they could derive the fullest benefits of the BCT, by considerablyreducing the element of risk (i.e. risk of crop failure due to improper input mix). In this respect, the middle and poor peasants were constrained by resources and in so far as this increased the element of risk for them. And as Dasgupta[33] notes, to the extent the rich peasants and landlords used an increasing proportion of their resources to productive investment, their supply of credit (the poor peasant having a limited access to institutional credit) to the poor peasants was reduced.

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33. Biplab Dasgupta, "Agrarian change and the new technology in Agriculture," 1977, Geneva.

The available evidence on the adoption rate suggests a strong positive relation between size of holding and adoption, at least in the beginning. (For literature on this refer to Dasgupta, 1977; Kahlon and Singh, 1973; Lockwood Mukherjee and Shand, 1971; Schluter, 1971)[34]. This is corroborated partly by a shift in the distribution of assets other than land in favour of large holdings (Kahlon and Singh, 1973; Lakshminarayana (1973); and Bapna (1973).[35]

This however doesnot mean that the adoption rate is absent or negligible in the smaller farms. Adoption did filter through to the smaller farmers, particularly in the later stages. But since small peasants neither had the knowledge nor resources to use all inputs in adequate quantities, hence they obtained less than optimal output. And as Hanumanth Rao points out the late adopters derive decidedly less profit than the earlier ones.[36] Moreover the inequalities among the rich peasants and poor (and middle) ones remained in so far as the rich farmers had a confined access to mechanisation. And where adoption in small farms is through crop-sharing (with the tenor providing the modern inputs for a higher share of output) the small peasant may be better off obsolutely but worse of relatively. Thus the Green Revolution has accentuated the process of the differentiation of the peasantry. To the extent the new technology shot up the

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34. Biplab Dasgupta reaches this conclusion on the basis of evidence given by the others mentioned along in the brackets.
35. Using the evidence of Kahlon and Singh, Laxminarayana and Bapna, Kalpan Bardhan reaches this conclusion in her aforementioned article. (n. 19)
36. Hanumanth Rao, ibid.,

profit rates for rich peasants (and landlords) the tendency for investments in land and cultivation with wage labour on their part gained momentum.

Now let us see what is the evidence for the effects of Green Revolution on the magnitude and composition of the labour force in agriculture. Byres is of the opinion that there has been a 'partial proliterisation' consequent upon the changes in the forces of production entailed in the new agricultural strategy.[37] There are three possible sources of such a process of proletarisation. The first is through what is termed as 'depeasantisation', i.e., dispossession of land from the small peasants through direct buying by rich peasants and landlords through distress sales; or by resumption of leased outland by rich peasants for self cultivation or by leasing in from small farmers.

As far as the first possibility goes, the small Indian farmer would cling tenaciously to his small plots even though they are inefficient primarily due to the lack of alternative sources of employment. Dasgupta has offered evidence that 'the distribution of operated land has shifted in favour of the richer farmers under the new technology.[38] This evidence is reinforced by Bhalla (1977)[39]. However this partial politerisation through a significant complete dispossession of land (Byres 1981).[40] The next alternative is the resumption

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37. T.J. Byres; op.cit.
38. Biplab Dasgupta; op.cit.
39. Shiella Bhalla, "Changes in acreage and Tenure Structure of land holdings in Haryana", EPW, 1977, Rev. of Agriculture 26th March Vol.XII, no, 13.
40. T.J. Byres; op.cit.

of tenanted land. Here of course the small tenant has little choice. Hence this should account for a major portion of the increased share in operated area of the rich. Sheilla Bhalla advanced evidence where resumption of a part of the tenanted area (without dispossessing the small tenant completely) has taken place.[41] Another mechanism of land transfer could be through 'tenant-switching'. Evidence in this regard is cited by Kalpana Bardhan. She, after analysing available evidence detects a fall in leased in land of the poor peasants.[42] C.H. Hanumanth Rao (1975) cites that due to their adverse resource position, small farmers have leased out to the growing class of farmer-entrepreneures.[43] Pranab Bardhan(1976) shows that in Punjab and Haryana between 1960-61 to 1970-71, there was a fall in the proportion of households owning no land but a large rise in the proportion of those not cultivating any land.[44]

Another aspect of this process is the changing nature of share-cropping where the modern inputs are provided by the landlord in return for a bigger share (roughly 2/3rd) of the produce. With the decision-making also shifting to the landlord the condition of the tenant was no better than wage labour, in terms of remuneration. The only worth left

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41. Shiella, Bhalla; op.cit
42. Kalpana Bardhan; op.cit
43. Hanumanth Rao; op.cit
44. Pranab Bardhan, "Variation in Extent and forms of agricultural tenancy", EPW, 1976, 11th and 18th September, nos. 37-38.

with him was the cumbersome labour-management (Parthasarathy and Prasad, 1974).[45]

All these total or partial methods of depeasantisation forced the peasant to look forward to wage labour (part-time or full-time depending on the extent of depeasantisation) as an alternative mode of employment. This is borne out by the Census figures on occupation which shows a significant rise in proportion of workers working primarily as agricultural labourers between 1961 and 1971 with the wage labour component in them going up one fifth to one third (kalpana Bardhan 1977)[46].

The second source of rural proletarisation is the separation of rural artisans and craftsman from their traditional means of livelihood, through the invasion of factory goods. Manmohan Singh (1979)[47] explains that mechanisation and new industrial farm inputs, Which made the earlier locally made agricultural implements inefficient, gradually drove this class to join the ranks of agricultural labourers. To quote him 'It is quite obvious that the benefits of development have gone least to this class, and it stands almost on the verge of extinction'. (Manmohan Singh, 1974, p.594).[48]

However all the evidence cited above is till the mid 1970's. By now, due to a wider adoption of MT, this process

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45. G. Parthasarathy & D.S. Prasad, "Responses to and impact of HYV Rice according to land size and tenure in a Delta village Andhra Pradesh, India," The Developing Economics, 1974, Vol. XII. No. 2.
46. Kalpana Bardhan, n.36.
47. Manmohan Singh, op.cit (Reading 22).
48. Manmohan Singh. ibid..

must have gone further. We will study this in the main body of our work. So far as the condition of this labour force goes, the effects that the improved technology could be supposed to pass onto them in the form of higher wages, such benefits were not forthcoming. Sheilla Bhalla . . (1979)[49] shows that between 1961 and 1977 the money wage rates lagged behind prices for major operations even in Punjab. Out of Seven years after 1970, real wage rates in ploughing, sowing, seeding and harvesting have fallen in five years. As Kalpana Bardhan observes, "even in the prime green-revolution areas of Punjab/Haryana, the proportion of people below a bare minimum level of living increased".

On the other hand Byres (1974;1979)[50] argues how the rich peasants - the 'awakened rural giants' as he calls them-have increased their class power. The manifestations of which could be seen in the increasing state patronisation to them, through higher procurement prices, increased sub-sidies, almost no taxation and a favourable

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49. Sheilla Bhalla, "Real wage rates of agricultural labour in Pumjab, 1961-1977; A preliminary Analysis" EPW, 1979, Review of Agriculture June 30, Vol. XIV, no. 26.

50. T.J. Byres, "Land Reforms, industrialisation and marketed surplus in India. An Essay on the power of Rural Bias", in David Leman (ed.) "Agrarian Reformism". London, Faber & Faber, 1974.
and "On New-populist Ripe Dreams: Dasdalus in the third world and the Myth of Urban bias", JPS, January 1979, Vol. 6, No. 2.

terms-of - trade, vis-a-vis industry.

## 1.4 Conclusion

In this chapter we attempted a description of the class character of the Indian society and how this class configuration in reflects in the nature of the Indian state. In this regard we noted the various theoretical positions concerning the nature and role of the state in the first section. Though not exhaustive, this section helps in situating the theoretical basis of this study in a relative perspective. In the second section, the dominant class in the Indian society and the change in their nature and significance over time was looked into. The summary of this discussion is that there are two classes Viz. industrial capitalists and big landlords (which includes the newly emerging rich peasants) who form the dominant coalition that exerts a decisive influence in the state apparatus. We also saw how this coalition came about from a seemingly antagonistic relationship that existed between this two classes prior to independence. Such a state of affairs, it was noted, is somewhat typical of a post colonial society.

Thus the Indian state by its nature is seen as acting primarily to promote the interests of this coalition while at the same time retaining a degree of autonomy.

In the third section, the objective was to visualise the state policies in a broad nature (where we found two broad stands, viz., The land reform measures and the Green Revolution) in a framework of social classes. While by nature the first (land reforms) was egalitarian, the latter (Green Revolution) was clearly big farmer oriented. Both might succeed in raising output, but they had a regressive impact on income distribution, it was noted.

This chapter provides one aspect of the theorotical introduction to this thesis, namely, the nature of the Indian State. In the next chapter, we take up the other aspect, namely, capitalism in Indian agriculture. The attempt would be to review the existing literature on the mode of production debate in India. In subsequent chapters, we take up, in a detailed manner, the analysis of state policies as they influence a growth of capitalism in Indian agriculture.

# CHAPTER - II

## EMERGENCE OF AGRARIAN CAPITALISM IN INDIA - REVIEW OF THE MODE OF PRODUCTION DEBATE

### 2.1 HISTORICAL DEVELOPMENT OF CLASSES IN INDIAN AGRICULTURE

While analysing the class character of a society in any particular period of time, it is essential to situate such analysis in a historical context. For, given that the characteristic dimensions of a class evolve over a considerably long period of time and are determined by specific concrete situations in history, analysing them in a historical vacuum would lead to meaningless conclusions. It would be an excercise in futility. So to understand the class-character of the socio-economic structure of present day India, we go into its genesis during the British period. However, since an elaborate analysis of India's pre-independence soico-economic history falls beyond the scope of this work, we will deal with it on a very general plane, borrowing mainly from existing literature. This should serve as a background for out discussion of the Modes of production debate in India.

It stands to reason that all British economic policies in India were geared primarily to (i) finance its own capi talist industrial development and (ii) create a market in India for its own industrial products. Since the major

source of revenue for the state in pre-British India was from land, the first point would indicate that the British imperialism would obtain most of its resources from the agricultural sector. The agrarian sector being too large to be controlled by the Britishers themselves, they had to strengthen the hands of a group of indigenous revenue collectors within agriculture, whose loyalty would be strictly to the British. This, to our understanding explains the Permanent Settlement Act in Eastern India (Bengal Presidency) and the temporary settlement arrangements in north-west India.

As a consequence we have a group of non-cultivators revenue receiving landlords - the Zamindars, Jagidars etc. - at the top of the rural power structure working directly for the British. For this reason they mostly kept out of the freedom struggle and the Congress Party. Directly below this class was a huge class of Petty commodity producers - cultivating mainly with family labour forself-consumption. However, this is too simplistic a description to encompass the wide discrepancies that characterised the agrarian structure. These discrepancies could be due partly to the distinct agrarian background, treaceable to the Mughals, over regions and partly to the discriminating British policies between regions and their variable consequences. On this second aspect Amit Bhaduri[1] gives a clear exposition.

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1. Amit Bhaduri (1984), "Economic Structure of Backward Agriculture"

Without going into the details, we will give a brief sketch of his argument.

The permanent settlement in the Bengal Presidency in 1793, conferred 'quasi-bourgeois'[2] ownership rights in land to the class of Zamindars. In return these Zamindars had to pay to the British Government a permanently assessed land revenue by a fixed date. To hedge against the risk of non-payment in time, the zamindars obtained legal rights to evict a defaulting tenant. In addition, they resorted to subleasing to other family members and 'people with cash' - a category which included, in the main, traders and money lenders. Two consequences of the above 'hedgings' followed. Firstly, the actual cultivators were reduced to 'tenants-at-will' of the revenue-collecting landlords. And secondly, widescale resort to subleasing gave rise to 'sub-infeudation' and 'rack-renting'. Side by side there emerged a flourishing class of usurious money lenders and traders just below the Zamindars who, while being legally recognised as 'tenants; were in reality intermediary revenue receiving superior tenors. This tendency received further impetus when the emphasis of British agrarian policy shifted, from around 1830s, from owners' rights to tenants' rights.

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2. This is an expression borrowed from Utsa Patnaik. She explains the use of this term in her "Development of Capitalist in Indian Agriculture - I", Social Scientist, September 1972.

This class of secondary rent receivers were posed in an ambiguous relationship with the Zamindars.

In Western Uttar Pradesh (UP) and Punjab, however, the British resorted to a temporary settlement of land revenue to be revised from time to time. By strengthening the occupancy rights of the cultivating tenant or even settling peasant proprietors through legislation, the possibility of sub-infeudation or rack-renting was pre-empted here. Consequently, below the class of landed proprietors emerged a class of relatively well-off tenants (as in Western U.P.) or a class of independent peasant proprietors (as in Punjab). In Madras Presidency (present day Tamil Nadu, Andhra Pradesh, Parts of Kerala and Karnataka) The arrangements were the same as in Punjab or Western U.P..

Thus, just prior to independence, one could see a class of landlords at the top of the agrarian pyramid, though their composition was not really homogenous throughout India. Two other classes were also discernible at this point, namely the peasantry and the landless labourers.

Let us first look at the class of peasantry. Some degree of differentiation was visible in this class, the degree varying from region to region. According to Byres, the differentiation was most marked" where commercialisation

had penetrated farthest and in ryotwari and Mahalwari areas".[3] The peasantry could be divided into three more or less distinct groups - rich peasants, middle peasants and poor peasants. Part owners and part tenants, the rich peasants hired labour to a substantial extent though the labour process (the way in wyich labour combined with capital) was still pre-capitalistic. They marked a major part of their produce and did accumulate capital. The middle peasants also owned a greater proportion of the land. They cultivated and were basically family farmers employing wage labour only in peak periods, and marketing only a small part of the produce. The poor peasant rented in more land than they owned. Their market involvement was restricted to distress bying and selling. They were inevitably caught in a debt spiral unleashed by the village moneylender. Most members of this stratum indulged in supplying labour to others. An interesting fact is that the highest output per acre was produced on the tiny holdings of the poor peasant.

The Third important class within agriculture was the class of labourers. That this class was numerically extremely significant was obvious enough it one looks at the census figures as quoted by Utsa Patnaik. The proportion of labourers in total agricultural population was

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3. T.J. Byres, "The New technology, class formation and Action in the Indian Countryside", The Journal of Peasant Studies, Vol. 8, No. 4., July 1981.

26.2 percent and 38 percent in 1921 and 1931 respectively, inclusive of the class of 'unspecified labourers' (without this category the ratios fall to 21.3 percent and 31.2 percent respectively).[4]

On the face of it such a large class of agricultural labourers would seem to signify the extent of capitalist production (i.e. exploitation by wage-labour). However, this is not the case if one considers the genesis of this labour force. A majority of this class consisted of small peasants being dispossessed of their land mainly due to (i) rigid revenue enforcements of the British and (ii) fluctuating prices.[5] However there were other sources of this labour force. In South India for instance, the historically determined 'hereditary agrestic servitude' - where labourers were subject to very extreme forms of 'chattel slavery' to less severe forms of bondage - contributed to the labour force. A third source of rural proletarianisation would seem to be the village artisans and craftsman, forced into unemployment by competition from imported manufacturers.

However among this class of labourers debt bondage was very common.[6] They were not free in the typical Marxian double sense : free of the means of production and free to

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4. Utsa Patnaik, op.cit., pp. 17

5. This is corroborated by both Bhaduri and Patnaik in the aforementioned readings.

6. Deniel Thorner and Alice Thorner (1962) : "Land and Labour in India".

sell their labour power. Further as the studies on differentiation of the peasantry indicates, a good number of small peasants were not suppliers of labour and their activity as labourers was forced by the bondage of 'deadweight debt'. Thus in addition to wage exploitation, the labourers were also subject to a 'rent-and interest-exploitation', which clearly made their relationship vis-a-vis their employers, pre-capitalistic.

## 2.2 THE MODE OF PRODUCTION DEBATE IN INDIA - A REVIEW

### A. THE BACK DROP

From 1969 onwards marxists have been arguing about the existing mode of production in Indian agriculture. Various schools of thought emerge from this debate, from proponents of capitalism to those who advanced a semi-feudal mode of production. In what follows we try to follow this debate in its rough chronological order briefly.

Though the debate proper started in 1969, there was some background studies on this issue which acted as a catalyst to the debate. As far back as in 1962, Sulekh Chand Gupta'[7], offered an estimate of the extent of capitalist farming as of 1953-54. Using the Criterion of concentration of hired labour on large acreage firms he

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7. S.C. Gupta, "Some aspects of Indian Agriculture; Enquiry Delhi (1962) and 'New Trends of Growth', Seminar, Delhi (1962).

identified as capatalists the number of farmers operating 20 acres or more. Applying this to the 1953-54 census of landholding he concluded that slightly less than 6 to 7 percent of all operational holdings or one third of total areas under cultivation was under capitalist farming. Following a roughly identical procedure GG Kotovsky[8] in 1964 had estimated that 25 to 30 percent of total area was cultivated wholly or mainly with hired labour. Thus, he said, capatalist farming is the leading but not yet dominating mode in Indian agriculture. But what actually fuelled this debate was the series of 4 articles by Daniel Thorner[9] (1967) in The Statesman recalling his observations of a visit to the countryside of seven states. He was struck by the element of progress in agriculture carried on particularly by enterprising cultivators and what he coined the 'gentleman farmers'. Writing about this in 1980, Thorner says 'Now for the first time there has come into being in all parts of the countryside in India, a layer, thick in some regions, thinner in others, of agricultural capitalists, ..., the most rapidly growing group in rural India'.[10]

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8. G.G. Kotovsky, "Agrarian Reforms in India", Moscow, Progress, 1964.

9. Daniel Thorner, "Capitalist Stirrings in Rural India", The Statesman, Calcutta, Nov. 1,2,3, and 4, 1967.

10. Daniel Thorner, "The Shaping of Modern India", New Delhi, Allied Publishers,1980.

B. CAPITALISM IN INDIAN AGRICULTURE ?

The debate was initiated by Ashok Rudra[11] when in 1969, he undertook alongwith Majid and Talib, a survey of big farmers in Punjab to check out, as he announced, the reports of Capitalist farming so avidly described by Ladejinsky and Thorner. His data pertained to 261 farms of over 20 acres in size. His major findings were given below.

As far as the existence of 'gentleman farmers' was concerned, Rudra's answer was negative. 92 percent of his sample reported cultivation as the only occupation. About 1 percent was college-educated and 69 percent illiterate. In 39 percent of the cases however, family members other than the head of the family worked outside of agriculture. Seizing upon this bit of information, Thorner argued that it proved rather than negated the existence of the 'gentlemen farmers'. Their significance moreover lied not in their numbers but in the 'dynamism' they initiated in agriculture.

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11. Ashok Rudra, A. Majid, B.D. Talib, "Big Farmers of the Punjab: Some Preliminery findings of a sample survey", EPW, Vol. 4, No. 39, 1969, Review of Agriculture (pp 143-146).

    Also

    Ashok Rudra, "Big farmers of Punjab - A second instalment of Results", EPW, vol. 4, No. 52, 1969, Review of Agriculture (pp 213-219), and "In search of the capitalist farmer", EPW, vol. V, No. 26 1970, Review of Agriculture (pp 85-87).

Another conclusion by Rudra was that the land owned by these farmers increased by 9.5 percent over the last 12 years, with the percentage increase more in larger size groups. He also noted the rapid rates of capital accumulation, particularly in mechanical technology. On the question of classes among the pea santry, he held the view that classification of peasantry, as most Marxists indulge in, is false. His hypothesis was that all the important variable (percentage of leased out land, marketed, surplus, etc.) are representable as continuous functions of size (of holdings). Unless there is discontinuity in the functions, differentiation, he argued, is meaningless. Now we come to the most important conclusion of his study, regarding the presence of capitalist farmers. He hypothecates that a capitalist farmer should posses the following 5 characteristics : (i) self-cultivation i.e. minimum leasing out, (ii) proprotion of hired labour should exceed that of family labour, (iii) considerably use of farm machinery, (iv) marketing of a major share of output and (v) organise production to maximise rate of profit. For a farmer to qualify as a capitalist farmer, Rudra argued, in addition to possessing all these characteristics, one condition more should hold good. All the five variables should exhibit a strong pairwise correlation. A stringent condition indeed ! Now, using quantified surrogates of these variable he rejects the hypothesis of the existence of capitalist

farmers.

It is in the way of a critic to Rudra's second condition that Utsa Patnaik makes her entry into the debate,[12] in 1971. Accusing Rudra as indulging in an 'unhistorical' analysis, she argued that his criterion would hold good in an idealised world where capitalism has grown to its limit. In India, the capitalist farmer, she says, emerges within the non-capitalist[13] social formation and hence can not be tested as a 'pure' category. What is her position on the issue ? The next paragraph sketches it.

Ex-colonial countries are characterised by a 'limited' and 'distorted' development of capitalism. In India, employment of wage labour and production for the market did exist during the colonial period. However this does not make agriculture capitalist because each of the above two could be a 'necessary' condition, not a 'sufficient' one. Why? Wage labour, for example, arose out of 'pauperisation' and 'proletarianisation' of the peasantry under the impact of colonial policy and their employment (as an alternative to leasing out) by the landlords and rich peasants depended not on any profit considerations but on the circumstances

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12. Utsa Patnaik, "Capitalist Development in Agriculture-A note" EPW, 1971, Vol VI, No. 39, Review of Agriculture, pp. 123-130.

13. Patnaik prefers the term'non-capitalist' to 'pre-capitalist' since the formers in her opinion, implies the existence of some degree of capitalist tendency.

(i.e. the dicision was alterable contingent to the prevailing situation). Wage-exploitation and rent-exploitation, thereby, existed side by side. Her sufficient condition is the accummulation and re-investment of the surplus value appropriated by the buyers of labour power, to produce more surplus value on an ever expanding scale. The capitalist, she contended, could be indentified by 'the degree of capital intensification' which means a higher than average organic composition of capital [14] increasing over time.

Bringing out her own field survey of 66 farms spread over 10 districts in 5 states, she concludes that capitalist development has been underway in India since the mid-1950s Talking of Rudra's survey, she says contrary to his conclusions that his data clearly show the emerging tendency of capitalism. Commenting on Rudra's position on peasant classification, she argued that Marixist distinction between classes of the peasantry was based on the relation of production (i.e. the extent of use of hiredlabour ), not on any statistical discontinuities.

In his reply to these attacks, Rudra[15], while basically reiterating his stand brings in the concept of 'Pola-

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14. Organic Composition of Capital is denoted by $\frac{C}{C + V}$ where 'C' stands for constant Capital and 'V' for variable capital.

15. Rudra; the third reading in note (11)

risation'. Under a situation of Capitalist development one should be able to discern a strong polarisation among peasants (so that those undergoing transformation exhibit a 'conjointly' increasing value of the five variables he had earlier specified) since no such polarisation is visible, capitalism does not exist in agriculture.

In a hard-hitting critic, Utsa Patnaik,[16] says that Rudra has confused two independent propositions : (i) There exists within India a growing class of capitalist farmers within the non-capitalist economy and (ii) Indian agriculture is characterised by a sharp polarisation between capitalists and wage earners. Then Rudra's line of logic, alleges Utsa Patnaik, is that as proposition (ii) does not hold, propositon (i) stands nullified. This, in her opinion was absurd logic. Talking of peasant classes, she gives the opinion that 'levels of output rather than size of holdings should be a proxy for class. Because intensive capitalist cultivation is possible on a small sized land whereas a big holding may be cultivated inefficiently.

In 1972, Paresh Chattopadhyaya[17] makes his entry into

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16. Utsa Patnaik, "Capitalist development in Agriculture. A further comment", EPW, 1972, Vol. VI, No. 52, Review of Agriculture A 145-A 151.

17. Paresh Chattopadhyaya, "On the question of the mode of Production in Indian Agriculture - A Preliminary note", EPW, Vol. VII, No. 13, 1972, Review of Agriculture pp. A-39 - A 46.

the debate. While supporting Utsa Patnaik's criticisms of Ashok Rudra, he takes exception to Patnaik's definition of capitalism, denoting it as a 'new notion of capitalism'. On his part he adheres to Lenin's definition of capitalism: ...the highest stage of commodity production where labour power itself becomes a commodity',[18] contending that her 'sufficient condition' falls within this definition. While arguing that 'capital as a relation only is required', he states that the existence of 'modern inputs' only implies a 'higher level of capitalism?

In reply, Patnaik[19] sticks to her stand that just the existence of wage labour does not indicate capitalism, for surplus value thus appropriated may go to agents other than the employer (for example, to the imperialist bourgeoisi as happened in colonial India). Castigating Chattopadhyay for his simplistic definition, she wrote that extended to its logical extreme, such a definition would yield an Andre Gunder Frank type of position i.e. All colonies, since they entered the world capitalist exchange relations are therefore 'capitalist'. The fault of such a line of reasoning, she said, emanates from the incapacity to distinguish between 'ante-diluvian' froms of capital and 'capital in the sphere of production'.

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18. V.I.Lenin, "Capitalism in Agriculture" (1899).

19. Utsa Patnaik, "On the mode of Production in Indian Agriculture - A Reply", EPW, 1972, Vol. VII No.40, Review of Agricultre pp (A145-161).

At this stage, Jairus Banaji entered the debate, in support of Patnaik, emphasising on the specificity of the colonial situation. Rejecting both the position of Frank and the positon on the other extreme - where colonial economy was designated as fedual - he argues for his colonial specificity through the notion of 'colonial modes of production' characterised by a lack of the process of capital expansion. The chief historical function of the colonial modes of production is to finance primary accumulation in the metropolis, thus inhibiting any changes in the forces of production in the colony.

By way of an 'anti-kritik' Chattopadhyaya[21] retorts that the British both 'accelerated' and 'retarded' the development of capitalism in India. He quotes statistics to show how generalised commodity production was absent in India despite the existence of capitalistic tendencies; increase in capital stock (though marginal), increase in wage-labour force etc. Capitalist relations thus co-exist with the dominant pre-capitalist relations, a position.

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20. Jairus Banaji "For a theory of colonial modes of Production", EPW, 1972, Vol. VII, No. 52, pp 2498-2502.

21. Paresh Chattopadhyaya, "Mode of Production in Indian Agriculture An Anti-Kritik" EPW, 1972, Vol. VII, Review of Agriculture.

notes Alice Thorner[22] "Not so far, after all, from Utsa Patnaik".

Reacting to Utsa Patnaik's charge, Audre Gunder Frank[23] accuses herof a kind of conceptual blindness in so far as she looks for the satisfaction of both her necessary and sufficient conditions in a single farm.

C. THE SEMI-FEUDAL SCHOOL

The main protagonists of this School of thought were Amit Bhaduri,[24] Pradhan H. Prasad,[25] Nirmal Chandra[26] and Ranjit Sau.[27]

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22. Alice Thorner, "Semi-Feudalism or Capitalism? Contemporary debate on classes and modes of Production in India", EPW, 1982, Dec. 4, 11, and 18.

23. Andre Gunder Frank, "On 'Feudal' modes, Models, and Methods of Escaping capitalist Reality", EPW, 1973, Vol VIII, No.1.

24. Amit Bhaduri, "An analysis of semi-Feudalism in East India", Frontier, Vol. VI 1973.
Also, "A Study if Agricultural Backwardness under conditions of Semi-Feudalism", Economic Journal, LXXXVI, 1973, no. 329.

25. Pradhan H. Prasad, "Production Relation, Achilles heel of Indian Planning", EPW, 1973, Vol. VIII, No. 19, pp. 869-872, and "Reactionary Role of Usurer's capital in Rural India", EPW, 1974, Vol. IX, No. 32, 33, and 34.

26. Nirmal K. Chandra, "Farm Efficiency under Semi-feudalism", A Critique of Marginalist theories and some Marxist formulations", EPW, Vol. IX, 1974, No. 32,33,34.

27. Ranjit Sau, "On the Essence and Manifestation of Capitalism in Indian Agriculture", EPW, 1973, Vol. VIII No. 13, Review of Agriculture, pp. A27 A 30. and "Can capitalism Develop in Indian Agriculture", EPW, 1976, Vol. XI, No. 52, Review of Agriculture pp. A126-A136.

On the basis of a field survey in 26 villages in West Bengal in 1970, Bhaduri characterised the dominant mode of production in Bengal as Semi-Feudal, for 'they have more in common with classical feudalism of the master-serf type than with industrial capitalism'. He characterises semi-Feudalism by the existence of four features: (i) Share-cropping; (ii) Perpetually indebted mass of shall peasants. (iii) concentration of two modes of exploitation, namely usury and landownership, in the hands of the same economic class and (iv) lack of access to the market of the small peasants.

The local landlord who usually is the usurer advance consumption loans to the tenant at exorbitant interest rates (ranging from 25 per cent to 200 percent per 4 months). This continuation of 'double-exploitation' impedes technological innovations since it is in the interests of the landlords to keep the tenants share below his consumption requirements. On the basis of these observations, Bhaduri envisages one of four possibilities for the future : (i) continued stagnation(ii) technological improvement within semi-feudalism (iii) gradual transformation into a capitalist mode of production and (iv) a peasant revolt.

Interpreting data collected from over 2000 households (1970 and 1972) in three districts from Bihar, Pradhan H. Prasad reaches a conclusion which corroborates Bhaduri's

view. His characterisation of feudalism is roughly the same as that of Bhaduri. He also highlighted the retarding effect of usury on growth. In a subsequent article[28], he generalised his semi-feudal mode to the rest of India.

The third protogonist of this view, Nirmal Chandra, using official data of 250 farms over five districts of West Bengal for each of the six years from 1962-63 to 1967-68, finds no significant traces of capitalist traits in agriculture. His criteria are derived from the Kautsky-Lenin laws in the context of a national economy undergoing transformation: (i) increasing returns to scale (ii) continuous differentiation of the peasantry, (iii) decline of share-cropping and (iv) market orientation of agricultural production.[29]

So far as the causal factor for the existence of semi-feudalism goes, he goes outside agriculture to the role of imperialism. 'Colonial rule greatly strengthened the feudal and semi-feudal elements in the countryside'.[30] Indian agriculture is yet to come out of these shackles, he opines. While broadly agreeing with Bhaduri's characterisation, he takes exception to two minor aspects in his

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28. Pradhan H. Prasad, op.cit., the second reading in note 25.

29. N.J. Chandra, op.cit., pp 1324.

30. N.K. Chandra, ibid., pp 1327.

model. Alleging Bhaduri of overstating his case, he says that technological improvements have taken place in north Bengal, albeit within a semi-feudal framework. Secondly, he criticised Bhaduri for the latter's omission of ' massive underemployment in our countryside'. This, he argues, explains the persistence of -emi-feudalism. By pegging the wages at the lowest minimum (almost at the same level as a tenant's share), the landlords effectively curb the labourers' bargaining power, thereby keeping any new production possibility in their favour. The relative weakness of the industrial sector, preempted any possibility of transformation, he argued.

Broadly in conformity with Chandra, Ranjit Sau advances one more factor which impeded the technological transformation of agriculture, mamely the tenacity with which small peasants cling to their inefficient small holdings.

In 1974, after a survey in Bengal villages, Ashok Rudra's stance underwent a radical transformation.[31] He did see the emergence of a class of capitalist farmers at last. In the same breath, he issues a scathing criticism of Prasad and Chandra. In no district could he observe usury prevailing over productive in-

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31. Ashok Rudra, "Semi-Feudalism, Usury Capital, Etcetera", EPW, IX, 1974, No. 48, pp 1996-1997/

vestment in land. Both leasing-out land-lords and self-cultivators (with hired labour) were in fact indulging in capital investments. He also noted the absence of interest-exploitation.[32] While attached labourers obtained interest free loans, those borrowing from other than their landlords had to pay a not-so-high interest rate.[33] Despite the presence of surplus labour, Rudra states criticising Chandra, there was a labour shortage in peak periods, thereby enhancing their bargaining position.

D. CLASS STRUCTURE IN AGRICULTURE

Another aspect on which the debate concentrated was on the class structure in agriculture. We will give a brief summary of it. On the basis of farm size Joan Mencher gives a six-fold classification of agricultural population; (i) the landless, (ii) poor peasants, (iii) middle peasants (iv) Rich farmer, (v) Rich farmers, and capitalist farmers and traditonal landlords and (vi) an indeterminate class of large landowners. She also highlighted how caste loyalty blurred the class boundaries.

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32. In this context, it is interesting to note N.Chandra's observation that when loans are interest free, price differentials (low at time of borrowing, high at time of repaying) actually disguise them.

33. Joan Mencher, "Problems in analysing Rural Class structure" EPW, 1974, Vol. IX, No. 35, pp. 1495-1503.

Writing about Burdwan district, in Frontier, Nirmal Chandra[34] gives a two way classification of (i) Upper classes which included rich peasants, landlords, middle peasants and poor peasants and (ii) agricultural labourers. This almost equal division of the rural population, in his opinion explains the failure of peasant struggles.

Entering the debate, after a long gap, in 1976, Utsa Patnaik[35] (citing Census on landholdings) detected a high 'concentration of means of production' which, according to her gave rise to a high degree of differentiation. In the same article, she comes up with her labour-exploitation criterion of class differences - which included hiring in and hiring out, leasing in and leasing out and the extent of family labour. Consequently she comes up with a four fold division of classes (with sub-divisions among them) - (i) Landlords - Capitalist and feudal, (ii) Rich peasant-Proto bourgeois and Proto-feudal, (iii) Poor peasant-agricultural labourer operating land petty tenant and (iv) agricultural labourers. Utsa's

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34. Nirmal Chandra, "Agrarian Transition in India" in three parts, Frontier, VII, 1975, Nos. 28,29,and 30.

35. Utsa Patnaik, "Class differentiation with the Peasantry" An Approach to analysis of Indian Agriculture", EPW, 1976, Vol. XI, No. 39, Review of Agriculture.

labour exploitation criterion was designed to illustrate the necessity of different classes within the peasantry to enter into relations with each other.

Rudra[36] writing in 1978 makes a similar point. He also holds the view that classes are defined by class contradictions. Relations between classes are relations of production. But not all relations of production define classes. This is where he differs from Patnaik. Relations of productions define 'social groups' only some of which are classes. So there is no need to fit every member in agriculture into agricultural classes. He gives a two fold classification of agriculture population-big land-owners - whom he calls the ruling classes in agriculture have both capitalist and feudal features, and agricultural labourers. The rest of the agricultural population, since they do not have contradictions with either of these classes, do not constitute a class.

Rudra's approach has been criticised by Pranab Bardhan[37] on two grounds. Firstly, he disapproves of Rudra's negligence of the rural classes. According to him, this numerically vast group should be studied more carefully. Secondly, he considers that the feudal elements

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36. Ashok Rudra, "Class Relations in Indian Agriculture" EPW, 1978, Vol. XII, Nos. 22,23 and 24.

37. Pranab Bardhan, "On class Relations in Indian Agriculture", EPW, 1979, Vol. XIV, No. 19.

within big landowners have contradications with the capitalist elements within the same.

Pardhan H. Prasad[38] contributed to the debate again with a clear exposition of the relation between castes and classes in North India. His classification is - (i) Top peasantry consisting of higher castes (ii) Middle and poor peasantry consisting of backward castes other than scheduled Tribes and (iii) Agricultural labourers consisting of scheduled castes, scheduled tribs and backward castes. He postulates sharp contradictions between middle and poor peasantry, initially due to 'semi-feudal bondage' but which later would develop to capitalist contradictions.

E. COLONIAL MODE OF PRODUCTION

At this point, the debate takes a backward step into history. Hamza Alavi,[39] to explain the specificity of the colonial system (which he believed could lead to better understanding of post-colonial social formation) evolved a 'colonial mode of production". The raison d'etre, of this new conception lies in the following line of

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38. Pradhan H. Prasad, "Caste and class in Bihar", EPW, 1979, Vol. XIV, Nos 7 and 8. and "Rising Middle peasantry in North India", EPW, 1980, Vol. XV, Nos. 5,6 and 7.

39. Hamza Alavi, "India and the colonial mode of production" EPW, 1975, Vol. X, Nos. 33,34 and 35

reasoning. If feudalism and capitalism co-existed in colonial India, Marxist theory would require the existence of contradictions between them. As yet, since no evidence of any such contradictions was in evidence, he looks for a different concept. The Salient features of this mode of production are : a deformed system of expanded reproduction, since accummulation takes place in the metropolis; general commodity production created by and serving the interests of the imperial economy; creation of a large number of 'destitute small farmer's to assure a ready supply of cheap labour; no conflict of interest between the feudal and capitalist class.

In individual articles Rudra and Gail Omvedt[40] issued sharp criticism against Alavi's formulation. The attack centred round two main points, First, that there is no need to characterise Indian agriculture by either a capitalist or a feudal mode of production. One could just refer to d'etre of Alavi's 'colonial mode'. Secondly, that unlike Alavi's contention, contradictions do exist between the feudal and the capitalist elements.

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40. Ashok Rudra, "India and the colonial Mode of Production : Comment". EPW, 1975, Vol. IX, No. 48.
Gail Omvedt, "India and the colonial Mode of Production" Comment", EPW, 1975, Vol IX, No. 42.

F. CONCLUSION

The first conclusion which the debate has thrown up is that capitalism is dominating Indian agriculture. But due to its peculiar colonial past one can not characterise it as a capitalist mode of production.

Secondly, share-cropping and tenancy as well as the preponderance of family farmers do not indicate a feudal mode of production. On the other hand, just the presence of wage labour does not indicate capitalist development.

Thirdly capitalist development entails a rapid tendency towards wage-exploitation at the expense of rent-exploitation and interest-exploitation.

Fourthly, there is no consensus on the question of the class configuration of the Indian agriculture, Every participant seems to define classes on the basis of his own criterion.

There are two points, both of vital importance to this work, that should be brought forth clearly. The first is that capitalism is spreading very fast and widely in the countryside. This, as said earlier,the debate brings out clearly, Hence, in the subsequent chapters our endeavour will not be to show whether or not capitalism

exists or is catching up. We will take it as given.

Second, an obvious question that could be raised is what caused this transformation within a period of forty years after independence. It would be safe to say that very little stimuli for change arose from within agriculture. Two major transforming processes that took shape in agriculture have been (i) land reforms and (ii) Green revolution. Both of them were initiated, given shape and implemented by the state. Thus the present structure of Indian agriculture-which economists argue can more or less be characterised as capitalist mode and which we take as given thereby - owes not a little to the consequences of state action. In the subsequent chapters we endeavour to take up for study as to what extent State action contributed to a capitalist agriculture.

# CHAPTER - III

# LAND POLICY, EMERGING AGRARIAN STRUCTURE, AND THE ONSET OF CAPITALISM IN INDIAN AGRICULTURE

## 3.1 INTRODUCTION

A majority of the participants in the debate on the mode of production on Indian agriculture, that we discussed in the last chapter, conver ge onto a general agreement on one point, namely, capitalism has pervaded Indian agriculture, albeit the nature and extent of such a developmant still seems to be a mooted issue. On one more aspect also, litttle difference of opinion seems to surface . This is that the particular capitalist path taken by Indian agriculture is that of landlord capitalism,[1] somewhat akin to its close historical parallel of Junker capitalism as practiced in Prussia. This transition, by no means a minor one from a primarily backward agriculture prior to independence to a productive capitalist one in about fourty years after it needs serious interpretation as to its nature and causes. In this work, the attempt is to provide such an interpretation. The

1. Landlord capitalism essentially means capitalist production undertaken by a few big landowners, as opposed to peasant capitalism where the land on which such production is undertaken is relatively much smaller (and it involves a substantial majority of the rural population) but still sufficient to produce for profit that ensure productive investment.

basis of the interpretation derives mainly from the belief that few, if any, self-sustaining forces of change to escalate production were generated from within the agriculture sector without extraneous influences. Our interpretation is that the State, through its various policies, provided the impetus for such forces of change to gain roots and spread rapidly. As to why the State chose this particular path of capitalist development, our discussion in chapter I seeks to provide one plausible explanation, that is, the nature of the state, in the given socio-economic-political structure that prevails in a post-colonial nation like India, is such that it primarily caters to the needs of the propertied classes[2] (while, of course, maintaining a certain degree of autonomy) But such policies-for the state acts basically through its policy - have to be suitably veiled for the state (or the political party in control of state power) to preserve its vote banks. In a polity characterised by electoral democracy, this veil is even more opaque. This would make it rather difficult to show how the state policies succeeded in ushering in capitalist

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2. Capitalist farmers of the landlord type would obviously mean that the minority of big landlords stand to gain more at the expense of the majority who either hold small tracts of land untenable for profit-oriented cultivation that could ensure sufficient productive investment. However, the smaller farmers and even the labourers may gain, but such gain would be meagre when compared to that of capitalist landlords.

agriculture, a question that is of the main concern in the subsequent parts of this work.

Let us digress a little at this point. Any transition or transformation from one economic structure to another could be seen as involving two, through not distinct, phases. The first phase entails the emergence of pre-conditions that are conducive to and facilitate the development of the succeeding structure while in the second, features typical to this emerging structure are manifested overtly and develop with time. To elaborate in context, the pre-conditions for landlord-capitalism in agriculture would be (i) unequal endowment of land in adequate quantities in the hands of a few who could undertake capitalist cultivation with the labour supplied by a substantial section of population engaged in agriculture, and (ii) the big landowners should directly participate in the production process (which is usually in a managerial capacity). Once these preconditions take root, features of capitalism - The two basic features being the existence of wage labour and the prevalence of production investment in land - will have a basis to develop.

The above digression was meant to facilitate the understanding of how state policy in agriculture gave impetns for a capitalist development.[3] To be sure, in

3. Henceforth, whenever we use the term 'capitalism' or 'capitalist' we would mean it to be of the (contd...)

this chapter the objective is to show how land reforms, the first major policy package introduced by the State in agriculture, created the preconditions for a capitalist agriculture. That is, how land reforms, even though they did not create or perpetuate unequality in land holdings, were framed in such a way as to ensure that such inequality as existed was not affected significantly. As for the second precondition, land reforms ensured the substitution of the parasitic and feudal big landowners with a class of profit-motive oriented rich capitalist landowners who took to cultivation as a profit generating enterprise.

To this effect, we would, in the following section, note the loopholes in the land reform measures. Subsequently, we would undertake a statistical analysis of the emerging land holding pattern using official date in section III. Section IV would involve a summerising of the various capitalistc tendencies that emerged as a result of land reforms.

## 3.2 AN EVALUATION OF LAND REFORMS

It is a foregone conclusion that the land reforms failed in their avowed objectives. This, however is not to say that no changes occured in the agrarian

(contd.) londlord type (see note - 1) unless otherwise specified.

structure. On the contrary, the agrarian set-up underwent a qualitatively significant transformation but not in the direction envisaged. The understand how and where things went wrong, the reforms have to be studied at various levels. In the first place loopholes could be discerned in the main body of the policies, Secondly, since the constitution of India puts agriculture in the state list, considerable scope was given to the states to modify the policy measures. There are inconsistencies between the policy measures at the level of the center and at the state level. Thirdly, the policies were abysmal failure at the level of implementation. The policies are analysed in the above perspective, in what follows.

A : ABOLITION OF INTERMEDIARIES :

The first concrete demand for the abolition of intermediaries appeared in the Congress manifesto of the 1945-46 elections. This step was followed up after independence by the appointment of the Agrarian Reforms Committee, headed by the noted Gandhian Dr. J.C.Kumarappa under the aegis of the Congress, the ruling party at the center. Its report, submitted in 1949, advocated (i) abolition of all forms of feudal exploitation and (ii) ownership rights to the actual cultivator, among its important recommendations. However, in the reforms that were finally drawn up for implementation, neither

of the two recommendations gained prominence. All that the Congress Party was interested in was only a partial alienation of the Zamindar's lands and that too with compensation. Policy measures were drawn up with this limited objective in view. But even these measures had some fundamental lacunae inherent in them.

Firstly, intermediaries were defined not to include all kinds of semi-feudal land holders but only those of the Zamindari type. As a result landlord holdings in the Ryotwari regions, which accounted for 57 per cent of total cultivated land in the country, fell outside the purview of this act.[4]

Secondly, the intermediaries abolition act allowed for the 'Sir'[5] lands to be retained by the Zamindars. This gave the Zamindars latitude to resort to widespread eviction with a view to increasing the land under 'Sir'. In theystates had zero or negligible 'Sir' land, peasants holdings were appropriated to set up such

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4. India 1958; A Reference Annual, as quoted in Kotovsky p. 47.

5. The distinguishing feature of 'Sir' lands from the rest of the zamindar's estate was that the tenants on 'Sir' lands did not enjoy occupancy rights, which required continous cultivation for a period of 12 years, generally.

'Sir' lands. A case in point is Saurastra as Kotovsky shows it. Here 2.5 lakh acres were given to the girasdars (which was more that 15 per cent of their total holdings earlier) and the Barkhatidars were given 2.25 lakh acres (which was roughly 33 per-cent of their total holding earlier) ~~and the Barkhatidars were given 2.25 lakh acres (which was roughly 33 per cent of their total holdings earlier)~~. In West Bengal, the Zamindars were allowed to retain 'Khas' lands upto 25 acres. All these had legal backing and since the Acts provided for the landlords to choose their 'Sir' lands, they obviously got the best lands.

Thus rhetorics of 'abolition' of a parasitic class was watered down to mean 'weakning'. To what extent? A glance at ceilings on 'Sir' lands gives the real picture.

Thirdly, in many states (U.P., Bihar, Madras, etc) there was no limit to 'Sir' holdings, allowing 'Sir' lands to run to millions of acreas (in U.P. - 7 millions acres; in M.P.-3.9 million acres; in Bihar - 3.5million acres). In states where a ceiling was fixed on 'Sir' holdings, (like West Bengal, Assam etc.) the ceiling far exceeded the average peasant farms. In Assam the 'Sir' ceiling was 133 acres while the average peasant farm was 5.3 acres. The corresponding figures for West

Bengal and Ajmer were 25 acres, 5 acres and 40 acres, 11.5 acres respectively.

Forthly the reforms conveniently left out of its purview assets other than land.

The above loopholes in the Act ensured that the Zamindars enjoy the economic superiority by virtue of their greater ownership of land and other assets, if not to the extent they did earlier, even if the Act had been enforced strictly. Besides loosing a part of their landholdings, these intermediaries were stripped of their titles as revenue collectors for whatever it is worth.

Before coming to the defective implementation, a point is to be noted. There was a considerable time gap between the passing of legislations and implementation, to compound an already prolonged legislative phase. The legislative phase (in the states) took approximately 6 years from 1947 to 1953.[6] This is indicative of the opposition to even an enactment of the policy in the states and lends credence to the belief that the rural oligarchy was the most important pressure group at the states level. And even after the

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6. Grigory Kotovsky, Agrarian Reforms in India, Chapter. II.

Acts were passed, the legal battles (Zamindars filing litigations against the Acts on various grounds) consumed an interminably long time. Thorner, citing Bihar as an extreme case, highlights this point :

"Thus, eight years after the Bihar legislature voted its acceptance (i.e. late 1950) of the principle of Zamindari abolition, the majority of the Zamindars of Bihar were in legal possession of their land"[7].

In July 1953, the AICC stated in a resolution that "much yet remains to be done to make the actual tillers of the soil the owners of land. After one year, there was near absence of implementation in Orissa, Rajasthan, Assam, West Bengal, Mysore, Himachal Pradesh and Delhi[9].

Such a long time span prior to the enforcement of the legislation gave the intermediaries sufficient scope to successfully exploit the loopholes in the law and protect their interests, e.g. by eviction of tenants to increase Sir land etc.. Moreover up to date records of rights, that were essential for collective implementation, were in a poor state in permanently

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7. Daniel Thorner, Agrarian Prospects in India, pp.15-1

8. Resolutions on Economic Policy and Programme 1952-54 pp. 81, as cited in Kotovsky - op.cit. pp. 59.

settled areas, Jagirdari areas etc. Implementation process as a result dragged on for years. For example by 1953-54, only 18 percent of total area of estates could be taken over in a period of five years. Another, not-so-significant point, was that most of the staff of the revenue offices were previous rent collectors, whose allegience to the Zamindars should be obvious, who indulged in bribery and rent-raising.

As regards compensation to the intermediaries, the RBI originally fixed total compensation at 3500-4000 crores in 1957. According to Kotovsky, under direct political pressure this gradually increased to Rs.6700 crores in 1961. The following table gives the position in this regard as it stood in 1969.

Table 3.1 : Compensation payble and paid to Ex-intermediaries
(1969 estimates) (Amount in Rs. Crores)

| STATE | COMPENSATION PAYABLE | COMPENSATION PAID in cash | in bonds |
|---|---|---|---|
| 1. Uttar Pradesh | 198.4 | 9.5 | 106.5 |
| 2. Bihar | 151.3 | 7.4 | 14.6 |
| 3. West Bengal | 92.6 | 25.8 | 10.6 |
| 4. Rajasthan | 66.8 | 7.2 | 18.8 |
| 5. Andhra Pradesh | 22.8 | 12.1 | -- |
| 6. Madhya Pradesh | 22.1 | 16.1 | -- |
| 7. Gujarat* | 12.8 | 10.8 | -- |
| 8. Orissa | 9.0 | 5.6 | -- |
| 9. Tamil Nadu | 7.3 | 6.3 | -- |
| 10. Mysore | 6.0 | 2.8 | -- |
| 11. Assam | 5.0 | 1.4 | -- |
| 12. Maharastra | 3.0 | N.A | -- |
| 13. Kerala | 1.8 | 0.3 | -- |

*Includes Maharastra.
Source : YOJANA, Vol. XIII, No. 23,1969 pp.5.

It is true that the compensation paid to the Zamindars was less than their earlier rent income But obviously, it is not possible to appease all classes in a move for major redistribution. And to certain extent this compensation was financed by land revenue paid by the tenants to the state. Why pay compensation at all, particularly if the deprived sections have to bear a part of this expence? In Jammu and Kashmir no compensation was paid. In the first Five year plan period (Rs. 670 million) exceeded the public expenditure on community projects and National Extension Service during the same period (Rs. 570 million). This shows which section the government is inclined to appease.

B : CEILINGS ON LAND HOLDINGS :

Legislations fixing a ceiling on land holdings started in India in 1948. The economic philosophy that underscored this measure was promotion of economic performance and socio-economic equality in the rural sector. The avowed objectives were basically three in number. To provide same basic land to the maximum possible number of cultivators; to provide scope for self employment; and to strengthen the base for promotion of co-operative societies, which admitedly "thrives best in homogenous group in which there are no large in-

equalities".[10]

Though an objective evaluation of this policy measure or any for that matter - needs to rest on distinctive aspects, there are certain lacunae of the ceilings policy on a general plane too which needs atleast a passing reference.

Firstly, right since its inception the issue was treated in a vacuum in so far as no precise relationship of the positive aspects of this policy on agricultural productivity was ever shown. The resulting vegueness bbred scepticism regarding the positive aspects of this policy, contributing probably to a dilution in the conviction in acceptance of the policy and to the vigour of its implementation. Secondly, as Ladejinsky observes, the basic objective of the policy itself went against the spirit behind it. He rightly analyses that the surplus land that would accrue to the state as a result of ceilings should be used for transforming unecomonic holdings into economic ones rather than for promoting 'Co-operative joint farming'. The raison d'etre he provides that the 'Co-operative were "essentially dummy institutions created by the big owners as one of the means to evade the basic provisions of the land reforms".[11]

10. First Five Year Plan - Planning Commission, Govt. of India, pp. 129.

11. Wolf Ladejinsky,"Land Ceilings and Land Reforms". EPW, Vol. VII, 1972, Annual Number.

Moreover, developing economic holdings, besides making better economic sense is a surer way of assuring equality than by going directly for co-operatives which may be stage-managed by the land lords.

Jammu and Kashmir was the first state to implement the cielings legislation. And as it would be shown subsequently it is the only state where this policy was implemented to a satisfactory degree of success. As for the other states, it took well over a decade just to finish the enactments. In fact it was only by 1961-62 that all the states passed the ceilings act. Three aspects have to be kept in mind while evaluating this policy : what is the level of ceilings ; what are the permissible retentions The effectiveness of implementation.

Let us first look at the definitions and level of ceilings. The first aspect includes a glaring flaw. The central legislature, in consonance with the recommendations of the Planning Commission left to the discretion of the states the question of whether ceilings would apply on the basis of a family or on individual members. A bit of cynicism regarding the genuineness of the desire of the government to effect

this policy, should in this case not be frowned upon. Any way, down at the level of the states, seven states (Assam, Gufarat, J & K, Punjab, PEPSU, West Bengal and Manipur) had no allowance made for size of family thereby effectively fixing ceilings on individual basis. For those others which did impose ceilings on a family basis, the provision was a virtual sham. Andhra Pradesh, for example provided for one family holding for each member over five in a household, with no upper limit. Uttar Pradesh provided eight acres per extra member (over five) subject to an outward limit 64 acres, whereas the ceiling level in this state was 40 acres. For the other states allowance was made for extra members subject to a limit of twice the actual ceilings. The states falling in this category are Bihar, Madras, Maharastra, Mysore, Orissa, Rajasthan, Himachal Pradesh and Tripura. Only Kerala and Madhya Pradesh had the upper ceiling, after this provision at less than double the limit. This boils down to the conclusion that the big landowners could retain at least twise the level of ceilings within the confines of law.

A second definitional snag, pointed out by Dantwala, [12] dealt with the basis of 'determination

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12. M.L.Dantwala, Economic Weekly, 1956.

of ceilings as a multille of 'family holding' 'Family holding' iniitally had an income based definition. This was a plough unit or a work unit. Uniformity of the base for ceilings legislation was accorded scanty regard for policy which ostensibly aimed at reducing inequalities.

Table 3.2 gives the level of ceilings stipulated in individual states. Broadly, what column. 2 of this table contains is that the ceilings level lies between 25 to 30 acress of good quality (wet) land to very high levels of relatively inferior land, extending upto 324 acres as in the case of Andhra Pradesh. These are substantially high level of ceilings which could hardly be expected to generate any surplus land. Moreover, in the absence of upto date land records, there is bound to be a bias for the owners word with regard to the quality of land.

Another notable defect in the legislations concerns itself with the exemptions to the ceilng stipulation. Ladejinsky notes useful information in this regard. The number of exemptions were 26 for Tamil Nadu, 20 for UP, 17 for Kerala, 19 foe MP and so on.These numbers were relatively few for other states. Irrespective of how genuine the idea behind these exemptions was, such numerious exemptions provided the affected landowners with those many escape

TABLE 3.2 : CELINGS ON EXISTING HOLDINGS-LEVEL OF CEILINGS

| State | Level of Ceilings (Acres) | Date of Transfer Restriction | Remarks 1.Whether Allowance wasmade for family holdings 2.If yes, what is the outsi limit. |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| 1. Andhra Pradesh | 27 to 324 | 21.02.1961 | 1. Yes<br>2. No. outside limit |
| 2. Assam | 50 | 12.11.1955 | 1. No. |
| 3. Bihar | 24 to 72 | Date of commencement of the | 1. Yes<br>2. Twice the ceiling area |
| 4. Gujrat | 38 to 132 | Act (in 1959) | 1. No |
| 5. Jammu & Kashmir | 20.75 | 15.01.1959 | 1. No |
| 6. Kerala | 15 to 37.5 | 18.12.1957 | 1. Yes<br>2. 25 acres of double crop paddy area |
| 7. Madhya Pradesh | 25 to 75 | 2 Years after passing of bill | 1. Yes<br>2. 53 Standard Acres |
| 8. Madras | 24 to 120 | 06.04.1960 | 1. Yes<br>2. 60 Standard Acres |
| 9. Maharastra | 18 to 186 | 15.01.1959 | 1. Yes<br>2. Double the ceiling area |
| 10. Mysore | 27 to 216 | | 1. Yes<br>2. Double the ceiling area |
| 11. Orissa | 25 to 100 | | 1. Yes<br>2. Double the ceiling area |
| 12. Punjab | 30 to 60<br>50 to 100 (for displaced persons) | 04.08.1959 | 1. No |

Contd.... Tab : 3.2

| | | | |
|---|---|---|---|
| 13. Pepsu | 30 to 80<br>40 to 100 (for displaced persons) | 04.08.1959 | 1. No |
| 14. Rajasthan | 30 Standard Acres | 25.02.1959 | 1. Yes<br>2. 60 Standard Acres |
| 15. Uttar Pradesh | 40 to 80 | 20.08.1959 | 1. Yes<br>2. 64 Acres |
| 16. West Bengal | 25 | 05.05.1953 | 1. No |
| 17. Manipur | 25 | 15.01.1959 | 1. Yes<br>2. 5 Acres |
| 18. Tripura | 25 to 75 | 10.08.1957 | 1. Yes<br>2. 50 Standard Acres |

Source : 1. The Third Five Year Plan - Annexure - 1 to Chapter on land reforms

2. B.J. Kalra, IJAE, April-June 1965 ( PP 40 - 41)

3. P.K. Chowdhury, EW, March 19, 1960.

routes. No farmer should be expected to sacrifice, without exploiting all possible circumvention scopes, his land for reasons of social justice.

Talk of ceilings started in 1948. Legislations were completed in all the states not before 1961-62. 13 years is more than a long enough time to take effective countermeasures to the acts. Now, if the state Governments are aware of such countermeasures to the policy, one fails to understand the reason behind fixing the dates of transfer restriction so late as 1958 or after. (see Table 3.2). This amounts to a post-factor legtimisation of the implicit policy violations of the big landowners. Actually, even these land violations were not really necessary owing to the absence of even a single punitive clause in the entire mass of legislations excepting a weak one in Maharashtra.[13]

The above were the major loopholes in the ceiling legislations as they stood around 1961-62. Let now see how the acts have fared vis-a-vis excepectations First, the Planning Commission expected 36.7 mill. acres of surplus land (14% of total Area owned) it ceilings were fixed a 30 acres, from 18 pre-organisation states. This was to be 90% of the land required to

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13. Ladejinsky ; op.cit:

give every landless family a basic holding (which ranged between 2.5 to 10 acres over different states).[14] Ranging the ceilings from 7.5 to 30 acres, Dandekar & Rath[15] estimated an expected surplus of 42 mill. Acres.

As against such soaring expectations, the "declared surplus was only 2.4 million acres and area distributed just half of that, or 0.3 of one per cent of the total cultivated land of India"[16] Let us look at a few individual states. In Bihar, Mysore, Kerala and orisa no surplus land was appropriated. So none was distributed. In AP, 1400 acres of surplus accrued nothing distributed. Tamil Nadu had negligible surplus accruals and distribution. Even where some surplus was obtained, distribution lagged further behind. For example in W.Bengal only 40 % of declared surplus was distributed.

The only exception to this sordid scenario was Jammu and Kashmir. Here, surplus land to the tune of

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14. Raj Krishna, "Some aspects of land reforms and economic development in India." in Land Tenure, industrialisation and Social Stability Marquett University Press, 1961. pp. 236-7.

15. Dandekar & Rath, "Poverty in India", Indian School of Political economy, 1971, pp. 71.

16. Ladejinsky ; op.cit:

1,90,000 acres was obtained and all of it was distributed. To further muddle the picture, one could rationally assume that the surplus land given up would be of an inferior quality.

It took about a decade more for the policy makers to grasp that the measure was an utter failure. New guidelines were drafted in the early 70s and immediately plunged into technical controversies. However a final form did come out after the Chief Minister's conference on ceilings on Agricultural Holdings held on July 22, 1972. The new set of regulations recognised that family be made the unit for ceiling laws. This measure was an improvement on another count. It stipulated that the ceiling level will be 18 acres of perennial irrigated double cropped land or 27 acres of irrigated single crop land. Thus ceiling levels were toned down and uniformity over states was restored.

However, these measures came too late for any significant impact. The harn was done long before. However, even as talk of lower ceiling was wafting in the mind, a frantic sale or tranfer of land took place. For example in Maharashtra stamps worth Rs. 2 lakhs were sold in a period of about 6 months recording sale of gift deeds.

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18. Ladejinsky op.cit.

And ofcourse, even these reforms had their share of loopholes. Firstly, orchards were considered as'dry land' which have a ceiling of 54 acres.

Secondly, 'Major' children could hold land upto the ceiling. Thus for families with more than five members, ceilings effectively doubled.

Theirdly, 'well-managed' or 'mechanised' farms could retain an area not exceeding 100 acres for research and development,

Fourthly, only Andhra Pradesh had a punitive clause.

Fifthly, for those few that have perennially irrigated land, who is to contradict if they claim that they have insufficient water for two crops.

Contd. page78/-.....

This syndrome of recurring proclivity towards badly drafted legislations infuses a sense of despondency. Indeed, they are too systematically repeated to be omissions.

A passing word regarding compensation is in order. It is a moot point whether or not any compensation be paid for surplus land. Strong arguements regarding the moral and ethical motivations could be provided for either case. Compensation was paid as a multiple of the rent on land forgiven by long duration bounds bearing interest rates of 2.5 to 4.5 per-cent per acre. The point to make here is that given the nature of the laws and their implementation, the big land lords conceded only a small part of holdings and that too land of inferior quality. To compensate them even for this might be an indication of the 'favourite child' attitude of the state to these 'haves' of the rural sector.

Talking of the position of big land holders in state governments, Ladejinsky unearths interesting information. Fourty out of sixty Congress Members in the Punjab Assembly in 1971 happened to be big land owners. The share in Haryana was 30 out of 52. In Madhya Pradesh 90 out of 220 Congress legislators were reported to own land in excess of the ceiling limit.

C : TENANCY REFORMS :

In an earlier chapter we have noted the deleterious effect of the land policy of the British India Government - Permanent Settlement in particular - on the class of tenants. The high levels of rents that then prevailed and the insecurity of the tenure made up for a precaruious existence for them. In terms of economic status they were slightly above the class of landless labourers.

Boradly two cateogries of tenants were discernible in the immediate pre-independence India. The first was a class of protected or occupancy tenants preponderent in the Zamindari areas. The second was the class of tenants-at-will which included the bulk of tenants in the Ryotwari areas and the sub-tenants and Sri-tenants of the Zamindari areas. Since a majority of these tenants were living a miserable existence, considerations. Its objectives were two fold;(1)to secure the rights of occupancy (heritable) tenancy to the tenants as an effective counterveil to eviction and (2) to put ceilings on the rates of rents.

But, not unlike the other land reform measures, in the case of tenancy reforms also objectiveness and efficacy stops at the level of intentions, as they are explicitly manifested. This body of policy measures

had various chinks too. Let us note the more important ones.

Traditionally crop-sharing has been one of the more common methods of tenancy in India. As to the numerical preponderance of crop-sharing, the field surveys of S.C. Gupta in U.P. (1955-56) amd Baljit Singh again in U.P. (1956) provide significant evidence, among various others. With gross disregard to facts the legislations did not recognise crop-sharers as tenants, pushing a big section of the tenantry out of its purview.

For those tenants who came under the scope of this Act, in some state permanent occupancy rights were not given. For example, in Andhra Pradesh and Madras, tenants could only get temporary occupancy rights. In the other states conditions to obtain such rights were biased against the poor tenant. In Bihar and Assam for example, the tenant had to prove continuous occupancy for at least twelve years to qualify for permenent right on that land. With land records virtually non existent and a majority of the tenance arrangement informal, this provision was clearly biased against the small tenants.

Provisions for conferring occupancy rights in individual states throw further light on this bias.

In Uttar Pradesh the intermediaries were recognised as 'Bhumidars' and could retain 'sir' and 'khud-kast' land in addition to land held by a'fixed rate' tenant or a rent free grantee. There was no effective upper limit to such acquisitions. Whatever quantity or quality of land left thereafter was to be held by sirdari and asami cultivators with varying degrees of tenancy; mostly non-permanent.

In Andhra Pradesh the Madras Estates (Abolition and conversion into Ryotwari) Act, 1948, stipulated that "any land which is proved to have been in possession of the ryots..... even for a single day will remain with the ryot".[19] Whatever hopes this generates evaporates with subsequent provisions. One of these provisions allowed the Zamindars to hold land purchased or received as gift on or after 1945 and that land which they had under possession since 1896. When ultimately the question of proving possession in courts arises, the illiterate and poor tenants, or rather the very few of them who can afford to and dare to go to the court, are at the receiving end.

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19. B. Sarveswara Rao, "Economic and Social Effects of Zamindari Abolition in Andhra" Research Programmes Committee, Planning Commission, Govt., of India, Manager of Publications, New Delhi, 1963, pp.33.

Similar situation prevailed in Rajasthan, on the one hand all tenants with permanent and fully transferable tenancy status could get "Khatedari" rights-fully transferable occupancy rights, on the other intermediaries could intend a maximum of 500 acres of Khudkast land and could exchange their dry lands for irrigated lands. Moreover subtenants or tenants of Khudkast could not get Khatedari rights.

The story goes on repeating for most of the states. Another important fact of tenancy reforms, at its operative level, is the phenomenon of 'evictions'. The laws themselves contained provisions which, far from protecting tenants, armed the landlords with rights to evict tenants. A case in point is the clause which provides land-retention for self cultivation with hired labour or as is the case of Uttar Pradesh, with coop-shares. In such instances the landlords could legally evict the tenants. This led to an unprecedented degree of tenant eviction. And despite admission of the existence of this phenomenon, by the end of 1957 only 9% of the area under cultivation fell under the prohibition of eviction legislations.

In some states, a ceiling was fixed on permissible resumptions under the above clause. Firstly, these ceilings were very high (e.g., Bihar had a ceiling of 33.33 acres Orissa 99 acres).[20]

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20. Kotivsky, op. cit

And secondly, where as big landlords had to forego a minimum land to the tenants, for small land owners no such restrictions held.

The rural lords resorted to less subtler modes of eviction too. Khusro's sample survey in 1955 in Hyderabad showed 40.5% of occupancy tenents evicted by use of sheer force.[21] According to the data given by the revenue department of Government of Bombay, between 1952-55 dispossed land through surrenders-which is another euphemism for coercion-amounted to 116,905 acres.

It is to be noted that tenancy legislation in the main focussed upon the growth of the protected tenants. The states of tenants-at-will and crop-shares was in a state of limbo. Through intelligent manipulation of policy provisions, the land owners managed to convert a part of tenant holdings into land under crop-sharers through resumption, thereby pushing such area out of the orbit off tenancy reforms. Another corollary of this tenancy was what Kotovsky coing 'non-prolitarian impoverishment' of semi-feudal tenants into agriculture labours. Khusro in a subsequent article comments on the pervasive nature of evictions which has been ' the rule in almost all the states'.[22]

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21. A.M. Khursro, 'Economic and Social Effects of Jagirdari Abolition', pp. 48.

22. A.M. Khursro, 'Agriculture and Structural Change' AICC Economic Review, Vol. XI, Nos. 16-18 (16 Jan. 1960), pp.115.

Once provisions for permanent occupancy rights were formulted two possible policy options were stipulated. Firstly, the tenants could buy all or a part of their land. Secondly in the absence of the above to ameliorate semi-feudal exploitation, rents have to be pegged at a low level. Let us discuss each in turn.

Tenancy laws in most states allowed for the tenants to buy their land, wholly or in part. The compensation for such purchases was fixed either on the basis of rentals paid (as in M.P., U.P., Ajmer) or on the basis of market value (as in Punjab, Kutch, Hyderabad etc.,). However, the rates of compensation were very high. In Bombay for instance this rate was 200 times the land revenue assessment. In Punjab, it was 75% of the average market value of the previous 10 years.

Thus only the more prosperous tenants could afford to buy their tenants land. It could be remembered that in Zamindari areas, such a class of affluent 'tenants' who were actually rent receiving tenors, flourished just below the class of Zamindars. It was such tenants who reape the benefits of this provision. Khusro's survey in Hyderabad showed that only 12% of the tenants who received rights of occupancy (15% of area) in 1951 were able to pay for their lands.[23] This percentage was only 3 in Bombay.

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23. Khusro, 'Economic and Social Effects of Jagirdari Aboliti
24. V.M. Dandekar and G.J. Khudanpur, Working of the Bombay Tenancy Act.

Desai also corroborated this tendency. He also showed that the net result of purchases by tenants and resumption by land owners was a gain in land holdings by the latter.[25]

Coming to the aspect of controlling rents, the scene was equally gloomy despite legislations in most states fixing ceilings for rents at one sixth of the produce. The situation is succinctly summed up by the Planning Commission, "In several states, the normal level of rent is still about a third of the produce."[26] In some states (e.g.,Orissa) prevailing level of rents was about one half of the produce.[27]

Under the circumstances then prevailing, it is easy to see why this legislation failed. Firstly, rent is determined by demand for land on the one hand and suppl on the other. Given unequal land distribution and over-population in agriculture rents are bound to go up owing to excess demand. Uncertainity regarding tenure would further exacerabate this tendency. And secondly, since most tenancy agreements are informal, there was no way to check the actual rents paid. Illiteracy led to lack of

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25. M.B. Desai, Report on an Enquiry into the Working of the Bombay Tenancy and Agricultural Land Act, 1948; Bombay; The Indian Society of Agricultural Economics, pp.63-64.

26. Third Five Year Plan, Planning Commission, Govt. of India, p. 222.

27. B. Mishra and B. Jena, "Working of two recent tenancy laws in Orissa". IJAE, Vol. XII, Nos. 2(April-June, 1957), pp. 119.

knowledge regarding tenancy laws. The frequent changes in legislation must further confuse the bewildered tenant.

## 3.3: THE EMERGING AGRARIAN STRUCTURE:

We have endeavoured to conclude, in the course of of analysis of land reforms in the previous sections, that from the point of view of their basic objectives, namely, land to the tiller, the land reforms policy in India was way off target. We also noted the broad consequences that can be expected given the nature of these reforms and their implementation. In this section, it is aimed to note the emerging agrarian structure consequent to the land reforms as they stood at about 1970-71, using the data available from National Sample Survey. It should be stressed that, such features of this agrarian structure will be particular drawn and discussed, as are necessary to the point of view of development of capitalist agriculture.

### A. METHODOLOGY AND DATA BASE:

We aim to undertake an inter-temperal analysis involving three time points viz., 1953-54, 1960-61 and 1971-72. The time points chosen are influenced simply by t data availability. We will be analysing comparatively the following aspects (i) Ownership Holdings (ii) Operational

holdings (iii) Land leased in and Land leased out. Since the study will be basically on distributive aspects, for the sake of brevity we have grouped the available NSS size classes into five major classes. They are given as under[28].

1. Marginal - Less than 1 hectare
2. Small - 1 to 1.99 hectares
3. Semi-medium- 2 to 3.99 hectares
4. Medium - 4 to 3.99 hectares
5. Large - 10 hectares and above

Based in these five classes we would study the distribution of land ownership in section 3.3-B. The analysis will be for All-India level as well as for indivudual states. It will be undertaken at two levels. In the first, we find out the percentages of land owned for each size class and discuss the intra-class distribution in each time period. Then the broad trends noted will be compared among the three time points. In the second level, we compute the Gini-co-efficients for each state and All India for the three time points and compare the overall rends in inequality level. In section 3.3-C we will followed the same methodology for operational holdings. The formula held for the gini co-effecients is;

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28. These size classes are not compatible with the concept of class in the Marxist terminology. However, we use them to felicitate statistical analysis becuase there is no alternative basis of data availability.

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

A clarification should be made here. To get reliable estimates of Gini-coefficients, we have used all the classes given in the NSS data and not the give classed we have formulated.

The data base for this chapter is given below:

All the data on land ownership and operation, on leasing-in and leasing out and on size of holdings have been taken from various NSS records. The records and numbers taken aid of for each time period are:

(i) For 1953-54 - NSS Round - 8 Nos. 36,66

(ii) For 1960-61 - NSS Round - 16 Nos.159

(iii) For 1971-72 - NSS Round - 26 Nos. 215

The data for agricultural labourers are taken from the respective census tables.

LIMITATION OF DATA :

The most significant limitation of the data arises when we compare the data on ownership and operation holdings for some states over the three time points. This is due to the reorganisation of the states carried out in this period. Since the new states that were formed

contained areas from the nighbouring pre-organisation states, it is not possible to get comparable data by adding/subtracting the data of these parts. Such major states are Punjab, Haryana, Maharashtra,Gujarat, Andhra Pradesh, Kerala, Karnataka and Tamil Nadu. In case of Punjab and Haryana, we add up the figures for 1971-72 to make them comparable to pre-organisation Punjab, through in the process Himachal Pradesh is left out. For all the other states, we have made no adjustment.

The assumption under which we compare is that since in each of these states the change in area after Re-organisation to the prior to it, is not major, distributional aspect is not significantly influenced by adding up small areas. Thus comparability could be reliable to a reasonable degree. An alternative suggested could be to take the gross cropped area (GCA) of the newly acquired area of a state (approximable to the nearest level of a district), interpolate it to the state to which it previously belonged by assuming the present level of distribution and then add the respective figures that result to each class. However this has two important limitations - (i) The distribution in any district of a state and (ii) distribution of areas and household in a district is assumed to change in line with that of the state. Since the result by this method is just as reliable, it not less, than if one does not take into considerations

these minor changes in area, we chose to adopt this latter idea.

To study the leasing positions, which we undertake in section 3.3-D, we have calculated the percentages of holdings and leased-in for each state. The same is done for leasing-out also. As for All-India, we have taken land leased-in in a more elaborate manner by taking into consideration the types of leasings. (However, the time points chosen to study this have been reduced to only two viz, 1953-54 and 1971-72. We have ommitted 1960-61 for the reason that our aim of obtaining the percentage of capitalist features can be satisfied by using broad trends. And the analysis in sections 3.3 (A&B), have revealed, that the broad trends and discrepency between ownership and operational holdings did not experience any significant break in a continuous trend over the time period of 1953-54 to 1971-72.

## B : DISTRIBUTION OF OWNERSHIP HOLDING & AREA

### (i) ALL INDIA

Table III, in the appendix to this chapter shows the distribution of land ownership among the five size-categories in 1953-54, 1960-61 and 1971-72. In 1953-54, the small and marginal farmers accounted for roughly 73 percent of the total area. The top 4 percent of the

households, in our category, large farmers-owned about 35 percent of the area. By 1960-61, the small marginal farmers improved their area owned to about 18.4 percent, but at the same time their number in percentage had also gone up to 75.4 percent. On the other extreme, the large farmers who now constituted only 3.07 percent of the total households controlled 30.12 percent of the land. By 1970-71, the bottom 78 percent of households held 24 percent of the land and the top 2 percent held about 23 percent of the land. Thus we see that the total percentage of land controlled by the smaller size groups has registered a very small improvement, and that of the largest size group has fallen only slightly. When weighed against the fact that the smaller size groups now account for a larger percentage of households and the larger size groups for a lesser percentage, the improvement in area owned becomes further watered down. The semi-medium and medium farmers category, the overall situation has improved a shade. In 1953-54, this category which constituted 22 percent of total households owned about 49 percent of the land. The corresponding figures for 1961 are 21.4 percent and 50.2 percent and for 1971 are 18 percent and 52.6 percent respectively. Thus there seems to be a rise of the class of middle peasants. As for the overall level of inequality, we have estimated the Gini-coefficients (see

Table-33 for each year at the All India and the state level. This shows that the index of inequality has declined but only marginally from 0.722 in 1953-54 to 0.711 in 1971-72. Thus there has been no significant change in ownership concentration.

(ii) STATE LEVEL ANALYSIS

The trend of land ownership at the level of the states more or less follows the national trend. In general, it can be said that for the marginal farmers, who consistent over 60 % of the households in most states, the exceptions as the lower side being Rajasthan (39.23 percent in 1953-54 and further down to 27 percent in 1971-72) and Karnataka with 46.57 % in 1953-54 which by 1971 which by 1971-72 had gone up to 50.94 percent. The land owned has been less than 10 percent in 7 of the states and less than 25 percent in all but three states in 1971-72. The situation of course was worse in 1953-54 with, in all but one state the land held by marginal farmers exceeded 20 percent. In agriculturally prosperous states like Punjab (66 percent owning 4.5 percent), A.P. (65 percent holding 6 percent), Maharashtra (48 percent owning 3.5 percent). The position is relatively worse. J & K, Kerala and West Bengal have relatively better position with more than 25 percent of land held by marginal farmers ( In Kerala it is as high as 41 per-

cent), Though the number of marginal households also is very high in these states (Kerala very high at 89 percent ). Thus marginal farmers still hold unequally low holdings despite land reforms. That they got from worse to bad is not saying much in favour of the reforms.

What is the picture on the other end of the scale? The large farmers according to our grouping accounted for around 1 percent of the total number of households in 7 states and more than 6 percent in only one state, in 1953-54. Whereas the land they held was more than 20 percent in all but four states. In five States land above 30 percent was owned by this class. By 1971-1972, the land owned by this class decreased in all states, but significantly in J & K ( 10.11. percent to o percent ), West Bengal (11.26 percent ), and Kerala (16.16 percent to 2.96 percent ). In most other states the decrease has been to the tune of about 50 percent. But at the same time the number of households also has decreased significantly in all the states, by more than the per-centage fall in areas. Thus status quoante in terms of inequality was maintained if not over the time period. What is of significance is that in the agriculturally prosperous states of Punjab, Andhra Pradesh and Maharashtra land held by this tiny

class of big landowners was as high as 22.92 percent 25.58 percent and 34.14 percent. Taken in conjunction with the fact that these states had a very high percentage of households holding very low percentage of land in the marginal farmers class, inequality has not tended to decrease with agricultural prosperity. If at all, it has increased slightly.

The position of the semi-medium farmers has more or less remained static at the All India level. In case of the states, however some variation is evident.

There has been a general decline in the number of households in this category between 1953-54 to 1970-71 in all but one state (Rajasthan). This percentage varied mostly between 10 to 15 percent in 1953-54 (Kerala with 3.12 percent and Karnataka with 19.24 percent being the two states with a wide divergence from this trend. The land held by this class has been relatively high with more than 25 percent of land owned in 7 of the states in 1953-54. By 1971-72, while the percentage of households in this class has fallen marginally in most of the states, the area held also registered a marginal rise in most of the states. substantial rises in area owned characterise the states of Punjab and Andhra Pradesh ( in Punjab percentage of area held rising from 17.29 percent to 22.31 percent while

the same for Andhra being 13.47 to 22.19). The trend is not broken significantly for 1960-61. In case of medium class farmers the number of households has fallen from 1953-54 to 1971-72 by 2 to 3 percentage points generally, through most of this fall has been in the period of 1960-61 to 1971-72. This is the case for most of states. The percentages of area held however has shown a diverging pattern, ~~Whereas~~ for Andhra Pradesh, Karnataka.

Looking at the overall inequality levels through Gini-coefficiants (Table 3-3) we see that in all the time periods J and K had the lowest inequality level and it has also registered the sharepast decline in inequality (from 0.569 to 0.425) followedclosely by Assam (from 0.733 to 0.618). On the other extreme, the only state to have registered an increase in inequality over the period in Punjab from 0.757 in 1953-54 to 0.768 in 1971-72. The following Table (Table-3.4) lists the states in each time period according as they lie below or above the All India inequality level. This tabe brings out that Andhra Pradesh, Kerala, Punjab and Tamil Nadu have inequalities consistently above the All India level.

TABLE-33 INEQUALITIES IN LAND OWNERSHIP : 1953-54; 1960-61 AND 1971-72 - GINI COFFICIENTS

| | YEAR<br>State | 1953-54 | 1960-61 | 1971-72 |
|---|---|---|---|---|
| 1. | ANDHRA PRADESH | 0.788 | 0.767 | 0.732 |
| 2. | ASSAM | 0.733 | 0.647 | 0.618 |
| 3. | BIHAR | 0.703 | 0.709 | 0.685 |
| 4. | GUJARAT | | 0.732 | 0.692 |
| 5. | KARNATAKA | 0.673 | 0.685 | 0.663 |
| 6. | KERALA | 0.778 | 0.789 | 0.721 |
| 7. | MADHYA PRADESH | | 0.648 | 0.623 |
| 8. | MAHARASHTRA | 0.729 | 0.715 | 0.681 |
| 9. | ORISSA | 0.683 | 0.646 | 0.642 |
| 10. | PUNJAB | 0.757 | 0.766 | 0.768 |
| 11. | RAJASTHAN | 0.691 | 0.658 | 0.607 |
| 12. | TAMILNADU | 0.791 | 0.765 | 0.751 |
| 13. | UTTAR PRADESH | 0.641 | 0.643 | 0.635 |
| 14. | WEST BENGAL | 0.727 | 0.690 | 0.650 |
| 15. | JAMMU & KASHMIR | 0.589 | 0.534 | 0.425 |
| | ALL INDIA | 0.722 | 0.729 | 0.711 |

Table 3.4 - Inequality position of the states vis-a-vis-All India - Ownership holdings

| Year | Higher than all India level | Lower than All India level |
|---|---|---|
| 1953-54 | A.P., Assam, Kerala, Punjab, T.N., Maharashtra, West Bengal | Bihar, Karnataka, Orissa, U.P., J&K. |
| 1960-61 | A.P., Gujarat, Kerala, Punjab, Tamil Nadu. | Assam, Bihar, Karnataka, M.P., Maharashtra, Orissa, Rajasthan, U.P., West Bengal, J & K. |
| 1971-72 | A.P., Kerala, Punjab, Tamil Nadu. | Assam, Bihar, Gujarat, Karnataka, Kerala, M.P., Maharashtra, Orissa, Rajasthan, U.P., West Bengal. |

With the exception of Kerala, all the other three states (or in fact four, since Punjab, includes Haryana) are non-zamindari states with a relatively well-developed agriculture. All the ex-zamindari states (West Bengal, Assam, Bihar, Orissa) on the other hand have experienced declining inequalities. Uttar Pradesh was part of zamindari and part ryotwari, whereas Western U.P. is a highly prosperous region agriculturally, eastern U.P. is more characteristic of the ex-zamindari states. The balance of the two effects thus results in an almost imperuptible fall in the level of inequalities, from 0.641 to 0.635. The conclusion is that all the states which subsequently took to the green revolution in a big way had higher inequalities to the others.

C : OPERATIONAL HOLDINGS :

(i) ALL INDIA

Table 1.6, in the appendix to this chapter gives the distribution of operated area at the All India and states level between 5 size-classes. According to this table, the bottom 71 percent of the population (i.e. marginal and small farmers) operated about 16.5 percent of the land and the top 4 percent operated 35 percent of the land. The corresponding percentages in 1961 are 72 percent and 19 percent and in 1971 76 percent and 24 percent respectively. The overall inequality levels (29) have declined from 0.720 in 1953-54 to 0.680 in 1971-72. This divergence of inequality between operated and owned area would indicate that there has been a net leasing out of land from higher to lower size classes. Since we have already noted that the most significant gain has been by the middle peasant, in terms of area owned, in terms of area, operated also, this class had improved its land operated from 38 percent to 52 percent from 1953-54 to 1971-1972. At the same time, they constituted in 70-71 only 21 percent the total households which is a fall from 24.3 percent in 1953-54. Their gain seems substiantial in terms of operated area too . The conclusion that comes out is that they have leased in a greater proportion of land, basically from higher classes, relative to the lower classes. This adds strength to our conclusion that this class is a rising force in the rural areas.

(ii) STATEWISE ANALYSIS

Unlike in the case of ownership holding, the distribution of area operated shows wide disparity among the different state. The general trend has been that both the number of households and the area operated has shown some increase in the case of marginal class with a states having above 50 percent and 5 states above 60 percent) whereas the land they owned was less than 10 percent in 7 states (only two states vis J & K and Kerala holding more than 15 percent of operated area) in 1953-54. By 1971-72, the percentage of households had increased significantly for this class in all but one state (Rajasthan 29.37 percent to 25.88 percent). The percentage of area operated had however risen reasonably in about 7 states. In 1971-72 only 6 states, marginal farmers accounted for less than 10 percent while in 8 states the percentage of land they held was more than 15 percent. Thus their lot, in turns of area held had increased but a part of this improvement was countered by the corresponding rise in numbers of households. In Punjab, the situation developed in the worst manner, with the percentage rise in housholds by more than 9 percentage points being accompained by a rise in area owned to the meagre level of 0.07 percentage points. In Andhra Pradesh, West Bengal, Uttar Pradesh and Maharashtra, the rise in households

and area mostly concelled each other. Thus agricultural prosperity seems to adversely affect this class more than its absence.

In case of the small farmers, the disparity between area operated and households was overcome in the states where it existed (Andhra Pradesh, Assam, Orissa, Punjab) and in most others the area held as a percentage of total area was high relative to the percentage of households and this difference widened further (as in case of Bihar, J & K, Kerala, Tamil Nadu, Uttar Pradesh and West Bengal). Thus this class, which in most states accounted for less than 20 percent of households and more than 15 percent of area (in 8 states) in 1953-54, by 1971-72 held more than 20 percent of area (in 8 states) with little change in the percentage number of households. In Andhra Pradesh, Rajasthan, Punjab, Maharashtra and Gujarat, even in 1971-72 the area operated in percentage terms fell short of the percentage number of households.

In the class of large farmers, the situation in 1953-54 was as follows.Only in four states viz, Andhra Pradesh, Maharashtra, Punjab and Rajasthan, large farmers accounted for more tahan 5 percent of total households. In these four states the percentage of area operated was 52.1 percent _/, 41.7 percent, 34:88percent and 57.88 percentage respectively. In 6 state the percentage of households was less than 1 percent while

percentage of area owned was less than 10 percent in only two states (West Bengal and Kerala). By 1971-72, while there is a general decline in the percentage of households (the fall most prominent in J & K, Andhra Pradesh and Punjab) the percentage of area operated had also fallen in almost all the states. Even after this fall, except in Assam, West Bengal, Kerala J & K, U.P., and Orissa, all other states had unequally large shares of area operated. In A.P. 2.2 percent of households operated 25.69 percent of the land. The corresponding figures for Punjab are 2.48 percent and 20.82 percent for Rajasthan 10.22 percent and 44.78 percent and for Maharashtra, 5.91 percent and 35.54 percent respectively. All but Rajasthan of the above states are agriculturally developed. No doubt the land operated by this class has fallen, yet, the unequal shares of area they operate is blatant.

The semi-medium class has absorbed a good part of the loss of area by the large farmers in some states (Andhra Pradesh, Punjab significantly). The percentage of households in the above two states has remained more or less constant. In most of the other states the increase in area operated either remained static or varied only marginally. In the class of medium farmers the overall situation did not very much over the period.

However, in Punjab (40 to 46 percent), Andhra Pradesh (25 to 31 percent) and Rajasthan (26 to 33 percent). The area operated has increased significantly while the percentage of households has decreased in Andhra Pradesh (10 to 7 percent) and Punjab (17 to 13 percetn) fell in the same period. Exactly the opposite trend is show by J & K, Kerala and West Bengal.

The broad conclusions one can draw are as follows. There has been a transfer of land from the class of large land holders to downwards. And this has been absorbed mostly by small farmers, the rest being shared by the semi-medium and marginal class. The medium farmers [illegible] benefited from this. The states who digress includes from this trends are Andhra Pradesh, Punjab, Rajasthan, Maharashtra were whatever transfer was occured had austly been absorbed by the medium and semi medium land holders. Thus through we can expect a general decline in overall inequality. This fall could very well be only meager in Andhra Pradesh, Punjab, Rajasthan and Madhya Pradesh. This fall will be more than in case of ownership holdings because the transfer in the case of operational holdings has been mainly to the bottom three classes while the same has been to the middle three classes in the former case.

TABLE - 3.5 INEQUALITIES IN LAND OPERATED: 1953-54; 1960-61; AND 1971-1972-GINI COEFFICIENTS

| Year / State | 1953-54 | 1960-61 | 1971-72 |
|---|---|---|---|
| 1. ANDHRA PRADESH | 0.779 | 0.763 | 0.748 |
| 2. ASSAM | 0.571 | 0.622 | 0.647 |
| 3. BIHAR | 0.661 | 0.675 | 0.648 |
| 4. GUJARAT | - | 0.678 | 0.695 |
| 5. JAMMU & KASHMIR | 0.493 | 0.474 | 0.436 |
| 6. KARNATAKA | 0.632 | 0.684 | 0.668 |
| 7. KERALA | 0.714 | 0.773 | 0.690 |
| 8. MADHYA PRADESH | | o.632 | 0.609 |
| 9. MAHARASHTRA | 0.693 | 0.707 | 0.683 |
| 10. ORISSA | o.653 | 0.623 | 0.627 |
| 11. PUNJAB | o.701 | 0.697 | 0.745 |
| 12. RAJASTHAN | 0.639 | 0.645 | 0.598 |
| 13. TAMIL NADU | 0.723 | 0.732 | 0.725 |
| 14. UTTAR PRADESH | 0.614 | 0.629 | 0.613 |
| 15. WEST BENGAL | 0.649 | 0.626 | 0.647 |
| ALL INDIA | 0.720 | 0.713 | 0.680 |

TABLE - 3.6

INEQUALITY POSITION OF THE STATES VIS-A-VIS INDUSTRY — OPERATIONAL HOLDING

| Year | Higher than ALL INDIA | Lower than ALL INDIA |
|---|---|---|
| 1953-54 | Andhra Pradesh, Tamil Nadu | Assam, Bihar, Jammu and Kashmir, Karnataka, Kerala, Maharashtra, Utter Pradesh, West Bengal. |
| 1960-61 | Andhra Pradesh, Kerala, Tamil Nadu. | Assam, Bihar, Gujarat, Jammu and Kashmir, Karnataka, Maharashtra, Madhya Pradesh, Orissa, Punjab, Rajasthan, U.P. West Bengal. |
| 1971-72 | Andhra Pradesh Gujarat, Kerala. Maharashtra, Punjab, Tamil Nadu. | Assam, Bihar, Karnataka Madhya Pradesh, Orissa, Jammu and Kashmir, Rajasthan, Uttar Pradesh West Bengal. |

Let us now analyse the performance of the states in terms of Gini coefficients (see Table 3.5) over the period 1953-54 to 1970-71, the inequality levels have increased in Punjab, Assam and Karnataka. In U.P. and West Bengal, it has remained almost the same. The position of the states vis-avis the all India inequality level is given in Table 3.6. Two states. Namely Andhra Pradesh and Tamil Nadu have consistently had higher inequality level in comparision to the All India level. Punjab had by 1971-72 increased its concentration above the All India level.

Barring a rare exception or two, the difference between the inequality index between area operated and area owned has tended to increase over time, the former having declined at a faster rate so it would seem that tenancy is in the rise but is confinedto the middle peasants in its downward flow seems to be corroborated But for conclusive evidence, we have to study the data on land-leasing

## D : LEASING IN AND LEASING OUT

While discussing the ceiling legislations and tenancy reforms we came across the phenomenon of evictions, which some economists observed, took place at an unprecedented scale. We also took note that one of the prime devices incorporated in the land reforms to allow the landowners a sizeable retention was the provision for self cultivation. Taken together, it

follows logically that the importance of tenancy in general should decline. The fact that inequalities in operated area declined at a faster rate than the same for area owned would seem to violate such a postulate. But such violating could only be superfi-cial, not conclusive.[30] To get a clearer picture, a brief look at available data would be of helpful.

Tables III - 3, III -4(i) and III - 4(ii) (in this chapter) give the comparative leasing in situation between 1953-54 and 1971-72. The first aspect that strikes one is the sharp decline in both the number of operational holdings leasing in and the area leased in by all size-classes. In 1953-54, about 22 million operational holdings reported leasing in about 27.6 million hectares. The respective figures have fallen to roughly 15 million and 13 million hectares respectively. An important observation is that whereas the fall in number of holdings leasing in is higher, in absolute terms, in lower size classes, the fall in area leased in seems to become more pronounced with higher classes. The former

phenomenon seems a natural enough outcome of eviction while the latter may be indicative of a larger drive for owner cultivation on the part of big farmers.

Since tenancy laws in India basically ignored share cropping there was a switch from occupancy (heritable) to cropsharing tenancy, particularly of the informal type. A look at Column (4) and (9) of Table III-3 reveals that there has been a sharp increase both in the percentage of holdings leasing in on the basis of crop-sharing (from 27.93 in 1953-54 to 50.62 in 1971-72) and in the percentage of area leased in (from 36.56 in 1953-54 to 47.87 in 1971-72).And the increase in percentage points is sharpest, both for holdings and area, in case of marginal farmers. The explanations should by now be obvious enough. On the other side of the coin, the importance of formal and occupancy tenancy (on the basis of fixed rent in cash od kind) is on the wane. This is a result of our lop-sided tenancy laws, as we explained in the relevant section earlier.

The above situation is true for most of the individual states, with the following exceptions. In West Bengal, Uttar Pradesh, Bihar and Orissa (see Table III -4(i) in appendix to this chapter), the percentage of area leased in to total area operated has registered an increase while in the case of the first two states (West Bengal and Uttar Pradesh) even the number of opera-

tional holdings reporting land leased in has increased in percentage terms. It is not a coincidence that all these four states are ex-zamindari states. In the zamindari areas, we had noted, there was an affluent 'tenant' class (who were, in fact, receiving rents from small tenants) just below the class of intermediaries. This class was characteristic only of these areas.Subsequent tenancy legislation, by its nature, went on to strengthen their hands. Hence the flourishing of occupancy tenancy, which this class ostensibly belonged to, in this area. Unfortunately, no comparable data at the states level is available by types of tenancy, for an objective evaluaion. Distribution of the lease-in structure over size classes suggests that the area leased in as a percentage of operation. This trend has been particularly evident for all the ex-zamindari states except for U.P.(see Appendix III-4(i) and III-4 (ii). The overall conclusion that emerges is that only in Zamindari areas the land is being increasingly leased in particularly by small and marginal farmers. For large farmers, their status as leasers in has significantly fallen, though in Karnataka, Uttar Pradesh and Punjab, they still lease in 10 percent or more of their operated area. Significantly again, Punjab (which includes Haryana) and U.P. (or Western U.P., to be exact) are the prime Green revolution areas.

## 3.4 : CONCLUSION

In this section, let us summarise the consequences that arose as a result of the land reforms measures which facilitated the growth of capitalistic tendencies.

Firstly, there has been no significant decline in the pattern of land ownership. In other words,a concentration of land in the hands of a few big land-owners was maintained, a feature which, as was noted at the beginning of this chapter, was one precondition to the growth of capitalism. The little distribution that occurred hardly sufficed to make the small and marginal farmers own even land enough for subsistence. Table III-6 which gives the average area owned by different size categories in 1953-54 and 1971-72, shows that in no state the marginal farmers held more than half of a hectare of land in 1953-54. In fact in three states the land held was less than 0.4 hectares. And in 1971-72, in ten of the states, the average land owned by household has experienced a decline. For large land owners, the average land owned, even after reforms was around fifteen hectares (about 37 acres).

As far as the operational holding structure was concerned, it experienced a slightly steeper fall in inequality. But as was noted earlier, most of this fall

has been absorbed by the medium and semimedium category of operaters, particularly the former. Thus the small and marginal farmers were even worse off in terms of land operated than in terms of land owned. Thus while large farmers (i.e. all farmers with land above 25 acres) did have sufficiently large tract of land for capitalist cultivation, the medium farmers took to a larger scale operation of land, thereby creating a group just below the large farmers but still with potential for capitalist cultivation.

Secondly, there is a fall in the significance of tenancy. This could easily be explained by two reasons. First, the widespread resort to eviction by the big land-lords cut into the number of tenants directly. Secondly, provisions in land reforms ensured that to retain land the landlords had to resort to self-cultivation, tehreby curbing the practice of absentee landlordism. To the extent that less land is now available for the small and marginal farmers, land leased in by this class would also fall, as was revealed by the data is section 3.3 - D . Thus the feudal landlords were forced to give up their parasitic existence and take to self-cultivation on their large tracts of land. The second pre-condition to capitalist farming was thereby ensured. This further borne out by the fact that leasing out by big farmers has experienced a decline (see

appendix III - 5 (ii) over the period 1953-54 to 1971-72).

The third factor was that, if at all tenancy is tenable to capitalism, share-cropping tenancy would be more effective than occupancy tenancy. Primarily because tenancy laws affected only occupancy tenancy and this when taken with the drive for self-cultivation would mean that such tenancy would be in relatively smaller plots. On the other hand, share-cropping would not necessarily impose any size on land-holding and thereby would not impose any constraint on capitalist farming. Furthermore, the unequal nature of the partners in sharecropping that leaves scope for exploitation would result in the dominant partner obtaining a large part of the proceeds. This would give scope for productive investment (as a consequence of an unequal share of profits) in land. The rise of share-cropping, subsequent to the land-reforms, at the expense of occupancy tenancy, could therefore be more conducive to capitalist farming.

Fourthly, the rise of the class of middle peasants (corresponding to the medium category in our analysis) particularly in areas such as Punjab and Haryana, Andhra Pradesh and Utter Pradesh is a welcome development from the point of view of capitalist farming. Because

this class (with an average land holdings of about 15 acres) also have the potential to go in for profit-oriented production.

A word about the regional disparity is now in order. We have seen that, in areas like Punjab (which includes Haryana), Andhra Pradesh, Maharashtra etc., the inequalities both in ownership holding and operatinal holdings are among the largest in India. The fact that these are agriculturally developed regions is suggestive of the conclusion that in these states which now rank as the leading ones for advanced capitalist farming, land reforms was the least ineffective. This in turn supports our presumption that maintenance of monopoly in land holdings is in fact a pre-condition to capitalism in agriculture. Such tendencies do not come out sharply for Uttar Pradesh because only a part of it (Western Utter Pradesh) is agriculturally developed while the rest is typical of the erstwhile zamindari areas. Morever, in these agriculturally developed areas, leasing in among the large farmers was quite significant even in 1970-71, with these farmers leasing in 10 percent or more of ther operated area. Preponderance of occupancy tenancy in the ex-zamindari areas has acted as an obstacle to agricultural growth in such areas. The existence of this class of affluent tenants has already been explained earlier in Chapter II.

One more aspect that could be discussed is the impact that land reforms had on the average size of household ownership land. Table III-6, gives these figures for 1953-54 and 1971-72. The most obvious point that comes out is that over this period, there has been a general decline in the average size of land owned for all the categories. Only in case of marginal farmers in four states (Andhra Pradesh, Jammu and Kashmir, Orissa and Uttar Pradesh) some increase is evident. But these increases not withstanding, marginal farmers, as well as small farmers hardly have sufficient land to meet their own subsistence needs. To expect them to take to improved cultivation (with costiler inputs) would be rather optimistic. Thus these farmers could safely be excluded from the realm of Green Revolution which was to follow. On the other hand the large farmers (and to an extent the medium farmers) with average landholding of about sixteen hectares are left with enough land despite land reforms to adopt any technological breakthrough that would be in the offing. The average holding of large farmers was about nineteen hectares in 1953-54. Thus one could easily see how, land redistribution notwithstanding, only a small section of the agricultural population (large farmers and medium farmers) were capable of taking to the improved cultivation of land.

A word about the class of agricultural labourers is now in order . In Chapter -IIwe saw that most of the economists were unequivocal on the aspect of the growth of this class . Proletarianisation was on the cards as a consequence of various provisions in the land reforms , as we noted earlier in this chapter . Table 3.7 shows that by 1971, in almost all the states there has been a significant rise of this class. Agricultural labourers as a percentage of total cultivators plus labourers has increased in the period 1961-71 in almost all the states. This increase is most prominent in Punjab with the index at 242 in 1971 (1961=100), J&K with this index reading 286. This rise in the strength of this class is possibly because of the reasons we cited earlier in this chapter, increased self cultivation , evictions etc.

Now we will go over to an analysis of the nature and impact of the Green Revolution in Indian in the next Chapter.

TABLE 3.7

AGRICULTURAL LABOURERS AS PERCENTAGE OF TOTAL CULTIVATORS PLUS LABOURERS, 1961, 1971.

| State | 1961 | 1971 | Index 1971 (1961 = 100) |
|---|---|---|---|
| Andhra Pradesh | 41.62 | 54.07 | 130 |
| Assam | 5.30 | 14.42 | 272 |
| Bihar | 29.89 | 47.31 | 158 |
| Gujarat | 21.69 | 34.27 | 158 |
| Jammu & Kashmir | 1.57 | 4.50 | 286 |
| Karnataka | 33.27 | 40.02 | 172 |
| Kerala | 45.38 | 63.29 | 139 |
| Maharashtra | 34.04 | 45.20 | 133 |
| Madhya Pradesh | 20.96 | 33.44 | 159 |
| Orissa | 23.04 | 36.52 | 158 |
| Punjab | 11.98 | 28.96 | 242 |
| Rajasthan | 5.29 | 12.54 | 237 |
| Tamil Nadu | 30.45 | 49.35 | 162 |
| Uttar Pradesh | 15.03 | 25.78 | 172 |
| West Bengal | 28.44 | 45.28 | 159 |
| All India | 24.05 | 37.79 | 157 |

NOTE : Punjab includes Haryana

Source : Census of India 1961, 1971, Primary Census abstracts

**TABLE III-1 PERCENTAGE DISTRIBUTION OF HOUSEHOLDS AND AREA OWNED BY SIZE - CATEGORIES. STATES AND ALL-INDIA, 1953-54 , 1960-61 , 1971-72 .**

| STATES | MARGINAL | | | | | | SMALL | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1953-54 | | 1960-61 | | 1971-72 | | 1953-54 | | 1960-61 | | 1971-72 | |
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh. | 61.64 | 3.72 | 66.98 | 8.2 | 65.3 | 6.07 | 10.46 | 6.03 | 11.93 | 10.46 | 13.65 | 13.16 |
| 2. Assam | 64.58 | 7.98 | 61.85 | 12.22 | 69.58 | 22.15 | 17.01 | 21.04 | 21.73 | 29.48 | 18.20 | 30.22 |
| 3. Bihar | 67.27 | 12.66 | 68.76 | 13.66 | 71.71 | 18.20 | 14.86 | 18.04 | 14.28 | 17.93 | 15.11 | 23.43 |
| 4. Gujarat | - | - | 49.47 | 2.56 | 52.25 | 4.53 | - | - | 12.13 | 6.37 | 15.24 | 9.94 |
| 5. Jammu & Kashmir | 60.20 | 16.39 | 54.50 | 16.30 | 59.18 | 27.41 | 21.54 | 25.78 | 24.53 | 26.03 | 29.20 | 39.33 |
| 6. Karnataka | 46.57 | 4.33 | 45.89 | 3.24 | 50.94 | 5.74 | 27.75 | 10.30 | 19.90 | 11.40 | 16.27 | 11.81 |
| 7. Kerala | 89.18 | 31.58 | 88.53 | 26.27 | 88.69 | 40.88 | 5.65 | 15.59 | 6.12 | 16.13 | 7.32 | 24.32 |
| 8. Madhya Pradesh | - | - | 40.12 | 2.65 | 40.26 | 3.34 | - | - | 14.55 | 6.40 | 16.96 | 9.16 |
| 9. Maharashtra | 53.84 | 3.34 | 49.68 | 2.29 | 48.36 | 3.48 | 11.48 | 6.32 | 11.75 | 5.45 | 14.94 | 8.57 |
| 10. Orissa | 60.52 | 9.82 | 58.04 | 20.85 | 68.94 | 20.45 | 17.99 | 18.15 | 20.42 | 21.13 | 18.08 | 26.95 |
| 11. Punjab | 59.60 | 3.28 | 63.48 | 3.95 | 66.02 | 4.53 | 9.29 | 6.23 | 7.92 | 5.98 | 8.61 | 8.22 |
| 12. Rajasthan | 39.23 | 1.47 | 34.25 | 1.79 | 26.96 | 2.03 | 12.70 | 4.02 | 16.27 | 5.58 | 19.87 | 6.78 |
| 13. Tamil Nadu | 76.56 | 13.03 | 77.51 | 17.19 | 78.40 | 20.23 | 10.32 | 16.33 | 11.33 | 19.73 | 11.39 | 21.84 |
| 14. Uttar Pradesh | 60.03 | 12.48 | 60.00 | 12.80 | 65.58 | 17.49 | 18.40 | 19.35 | 19.24 | 20.22 | 18.60 | 24.65 |
| 15. West Bengal | 73.47 | 15.90 | 71.10 | 17.88 | 77.62 | 27.28 | 12.61 | 15.90 | 14.33 | 22.82 | 12.64 | 25.69 |
| 16. All India | 59.76 | 6.31 | 60.59 | 7.32 | 62.62 | 9.76 | 13.68 | 10.46 | 14.93 | 12.06 | 15.49 | 14.68 |

Contd ....

Table III-1 Contd...



| States | Semi-Medium | | | | | | Medium | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1953-54 | | 1960-61 | | 1971-72 | | 1953-54 | | 1960-61 | | 1971-72 | |
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 11.60 | 13.47 | 9.85 | 16.79 | 11.22 | 21.19 | 10.31 | 26.37 | 8.04 | 30.47 | 7.57 | 30.15 |
| 2. Assam | 12.72 | 29.99 | 12.20 | 31.81 | 9.73 | 30.79 | 4.83 | 22.98 | 3.78 | 20.08 | 2.35 | 15.20 |
| 3. Bihar | 10.99 | 26.55 | 10.12 | 24.47 | 9.65 | 28.07 | 5.95 | 29.36 | 5.76 | 29.36 | 3.66 | 23.63 |
| 4. Gujarat | - | - | 14.77 | 15.15 | 13.63 | 16.73 | - | - | 16.59 | 37.18 | 13.80 | 36.15 |
| 5. Jammu & Kashmir | 12.69 | 28.49 | 15.30 | 31.30 | 10.00 | 25.20 | 4.42 | 19.23 | 4.83 | 19.62 | 1.62 | 8.06 |
| 6. Karnataka | 19.24 | 22.47 | 15.89 | 17.56 | 18.13 | 24.84 | 12.21 | 30.40 | 13.39 | 33.38 | 11.85 | 35.19 |
| 7. Kerala | 3.12 | 16.74 | 2.77 | 14.47 | 3.00 | 19.95 | 1.73 | 19.93 | 1.99 | 21.92 | 0.91 | 11.89 |
| 8. Madhya Pradesh | - | - | 19.03 | 16.78 | 20.72 | 21.36 | - | - | 19.18 | 35.71 | 17.20 | 37.80 |
| 9. Maharashtra | 14.36 | 15.66 | 13.88 | 12.91 | 16.28 | 18.34 | 14.69 | 34.26 | 16.66 | 33.28 | 14.99 | 35.42 |
| 10. Orissa | 13.05 | 25.30 | 13.38 | 26.08 | 9.04 | 25.88 | 6.74 | 27.57 | 6.81 | 26.92 | 3.52 | 20.72 |
| 11. Punjab | 13.63 | 17.29 | 12.61 | 18.08 | 12.28 | 22.31 | 12.95 | 35.81 | 11.95 | 37.66 | 10.75 | 42.11 |
| 12. Rajasthan | 15.51 | 9.71 | 18.66 | 12.46 | 20.49 | 13.15 | 20.41 | 27.77 | 19.49 | 27.93 | 22.63 | 32.89 |
| 13. Tamil Nadu | 8.61 | 26.01 | 7.10 | 24.23 | 6.75 | 25.21 | 3.38 | 21.84 | 3.42 | 24.29 | 3.00 | 22.95 |
| 14. Uttar Pradesh | 14.25 | 29.08 | 13.61 | 27.87 | 10.84 | 27.94 | 6.21 | 26.61 | 6.13 | 26.59 | 4.49 | 23.85 |
| 15. West Bengal | 8.57 | 25.51 | 8.88 | 26.80 | 7.30 | 27.72 | 4.61 | 28.74 | 4.51 | 30.06 | 2.39 | 18.61 |
| 16. All India | 12.87 | 19.22 | 12.35 | 19.46 | 11.94 | 21.92 | 9.21 | 29.74 | 9.06 | 30.88 | 6.66 | 30.73 |

Contd .....

Table III-1 Contd ...

| States | Large | | | | | | All Sizes | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1953-54 | | 1960-61 | | 1971-72 | | 1953-54 | | 1960-61 | | 1971-72 | |
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 5.99 | 50.40 | 3.20 | 34.08 | 2.26 | 25.58 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 2. Assam | 0.86 | 18.01 | 0.44 | 6.41 | 0.11 | 1.64 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 3. Bihar | 0.93 | 13.69 | 1.08 | 14.58 | 0.37 | 6.67 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 4. Gujarat | - | - | 7.04 | 38.74 | 5.08 | 32.65 | - | - | 100.00 | 100.00 | 100.00 | 100.00 |
| 5. Jammu & Kashmir | 1.15 | 10.11 | 0.84 | 6.92 | 0.00 | 0.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 6. Karnataka | 4.23 | 32.50 | 4.93 | 34.42 | 2.81 | 22.42 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 7. Kerala | 0.32 | 16.16 | 0.59 | 21.21 | 0.08 | 2.96 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 8. Madhya Pradesh | - | - | 7.09 | 38.46 | 4.86 | 28.34 | - | - | 100.00 | 100.00 | 100.00 | 100.00 |
| 9. Maharashtra | 5.63 | 40.42 | 8.03 | 46.11 | 5.43 | 34.14 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 10. Orissa | 1.7 | 19.16 | 1.35 | 14.92 | 0.42 | 6.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 11. Punjab | 4.53 | 37.37 | 4.04 | 34.33 | 2.32 | 22.92 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 12. Rajasthan | 12.15 | 57.03 | 11.23 | 52.24 | 10.05 | 45.15 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 13. Tamil Nadu | 1.13 | 22.79 | 0.64 | 14.56 | 0.46 | 9.75 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 14. Uttar Pradesh | 1.11 | 12.48 | 1.02 | 12.41 | 0.49 | 6.07 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 15. West Bengal | 0.74 | 11.26 | 0.18 | 2.44 | 0.05 | 0.70 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 16. All India | 4.00 | 34.27 | 3.07 | 30.28 | 2.12 | 22.99 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

Note : 1) H - For Households | A - For Area Owned

2) Punjab includes Haryana .

Sources :- National Sample Survey , $8_{th}$ , $16_{th}$ and $25_{th}$ rounds .

**TABLE III-2 : PERCENTAGE DISTRIBUTION OF HOUSEHOLDS AND AREA OPERATED BY SIZE - CLASSES, STATES AND ALL INDIA , 1953-54 , 1960-61 AND 1971-72 .**

| STATES | Marginal | | | | | | Small | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1953-54 | | 1960-61 | | 1971-72 | | 1953-54 | | 1960-61 | | 1971-72 | |
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 60.29 | 3.59 | 65.60 | 7.45 | 66.35 | 9.31 | 10.26 | 5.56 | 12.56 | 11.27 | 12.22 | 11.75 |
| 2. Assam | 42.53 | 6.41 | 61.47 | 13.68 | 66.12 | 21.62 | 27.73 | 23.14 | 21.88 | 30.56 | 21.47 | 34.90 |
| 3. Bihar | 63.51 | 12.83 | 65.08 | 13.87 | 67.31 | 18.11 | 17.45 | 20.25 | 16.19 | 18.63 | 18.52 | 26.24 |
| 4. Gujarat | - | - | 46.67 | 2.09 | 52.25 | 4.20 | - | - | 12.55 | 6.50 | 14.20 | 9.19 |
| 5. Jammu & Kashmir | 53.09 | 17.07 | 47.38 | 14.89 | 57.88 | 25.04 | 25.96 | 29.16 | 28.71 | 28.37 | 28.70 | 37.36 |
| 6. Karnataka | 42.90 | 4.31 | 86.94 | 25.80 | 49.98 | 5.10 | 18.12 | 10.57 | 7.06 | 15.98 | 16.02 | 10.69 |
| 7. Kerala | 86.91 | 33.87 | 45.02 | 2.61 | 87.87 | 40.05 | 7.38 | 18.92 | 18.00 | 9.76 | 7.83 | 24.76 |
| 8. Madhya Pradesh | - | - | 38.12 | 2.42 | 38.63 | 3.41 | - | - | 15.17 | 6.86 | 16.85 | 8.86 |
| 9. Maharashtra | 47.99 | 3.09 | 47.64 | 2.13 | 47.78 | 3.05 | 12.80 | 6.22 | 11.71 | 5.09 | 14.98 | 8.44 |
| 10. Orissa | 57.07 | 9.45 | 55.43 | 10.38 | 65.94 | 18.60 | 19.16 | 18.54 | 20.60 | 20.78 | 19.39 | 27.32 |
| 11. Punjab | 51.36 | 1.94 | 60.35 | 2.60 | 60.91 | 2.01 | 10.12 | 5.79 | 7.48 | 5.43 | 8.56 | 7.09 |
| 12. Rajasthan | 29.37 | 1.39 | 32.80 | 1.76 | 25.88 | 2.02 | 14.20 | 3.85 | 16.44 | 5.56 | 18.08 | 6.00 |
| 13. Tamil Nadu | 70.23 | 13.32 | 74.01 | 16.82 | 76.73 | 21.93 | 13.72 | 18.57 | 13.72 | 23.00 | 12.45 | 22.92 |
| 14. Uttar Pradesh | 56.60 | 12.10 | 58.45 | 12.82 | 61.65 | 15.67 | 20.40 | 20.45 | 20.15 | 20.65 | 20.48 | 25.44 |
| 15. West Bengal | 65.16 | 14.39 | 61.68 | 13.40 | 73.14 | 16.78 | 17.52 | 23.27 | 20.55 | 28.15 | 15.77 | 28.94 |
| 16. All India | 56.12 | 5.90 | 57.84 | 6.95 | 59.28 | 9.25 | 15.52 | 10.65 | 16.05 | 12.50 | 16.45 | 14.91 |

Contd ...

Table III-2 Contd ...



| States | Semi - Medium | | | | | | Medium | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1953-54 | | 1960-61 | | 1971-72 | | 1953-54 | | 1960-61 | | 1971-72 | |
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 11.91 | 13.18 | 10.83 | 18.67 | 11.70 | 22.10 | 10.59 | 25.62 | 8.10 | 30.17 | 7.53 | 31.15 |
| 2. Assam | 21.03 | 31.97 | 12.53 | 32.30 | 10.23 | 30.54 | 7.95 | 24.96 | 3.92 | 20.22 | 2.09 | 12.21 |
| 3. Bihar | 12.03 | 27.23 | 11.82 | 26.15 | 10.71 | 28.84 | 6.18 | 28.80 | 5.80 | 27.06 | 3.60 | 21.02 |
| 4. Gujarat | - | - | 15.52 | 15.07 | 14.66 | 17.62 | - | - | 17.73 | 37.47 | 13.65 | 35.27 |
| 5. Jammu & Kashmir | 16.92 | 36.09 | 15.87 | 35.38 | 11.51 | 28.02 | 3.65 | 14.21 | 4.62 | 17.06 | 2.07 | 9.58 |
| 6. Karnataka | 21.48 | 25.09 | 3.47 | 15.69 | 17.86 | 22.97 | 13.51 | 33.64 | 1.91 | 18.81 | 12.36 | 34.29 |
| 7. Kerala | 3.58 | 18.00 | 16.42 | 16.95 | 3.21 | 20.08 | 1.86 | 20.67 | 14.58 | 33.18 | 1.00 | 12.26 |
| 8. Madhya Pradesh | - | - | 20.28 | 18.06 | 21.35 | 21.22 | - | - | 19.72 | 36.78 | 18.02 | 37.93 |
| 9. Maharashtra | 16.36 | 15.93 | 13.88 | 11.73 | 15.97 | 17.54 | 15.88 | 33.06 | 17.63 | 32.58 | 15.36 | 35.34 |
| 10. Orissa | 14.99 | 26.36 | 15.88 | 30.09 | 10.37 | 27.06 | 7.47 | 29.00 | 6.84 | 26.30 | 3.90 | 21.56 |
| 11. Punjab | 14.96 | 16.80 | 12.77 | 17.19 | 14.23 | 23.11 | 17.78 | 40.60 | 14.55 | 40.33 | 13.80 | 46.97 |
| 12. Rajasthan | 18.76 | 10.18 | 19.63 | 12.98 | 22.72 | 14.17 | 23.03 | 26.70 | 19.63 | 28.61 | 23.10 | 33.03 |
| 13. Tamil Nadu | 10.93 | 28.45 | 8.31 | 26.76 | 7.67 | 27.44 | 4.14 | 22.75 | 3.39 | 22.00 | 2.81 | 21.41 |
| 14. Uttar Pradesh | 15.40 | 29.46 | 14.14 | 28.08 | 2.62 | 29.85 | 6.48 | 26.47 | 6.07 | 24.97 | 4.76 | 23.41 |
| 15. West Bengal | 12.15 | 31.38 | 12.96 | 33.41 | 8.95 | 31.01 | 4.70 | 25.28 | 4.68 | 23.27 | 2.07 | 14.58 |
| 16. All India | 14.28 | 19.14 | 13.48 | 20.29 | 12.94 | 22.61 | 10.04 | 29.18 | 9.41 | 30.35 | 8.10 | 29.60 |

Contd ...

Table III-2 Contd ...



| States | Large | | | | | | All Sizes | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1953-54 | | 1960-61 | | 1971-72 | | 1953-54 | | 1960-61 | | 1971-72 | |
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 6.93 | 52.10 | 2.91 | 32.44 | 2.20 | 25.69 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 2. Assam | 0.76 | 14.02 | 0.20 | 2.97 | 0.06 | 0.72 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 3. Bihar | 0.83 | 10.89 | 1.09 | 14.29 | 0.35 | 5.74 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 4. Gujarat | - | - | 7.53 | 38.87 | 5.24 | 33.72 | - | - | 100.00 | 100.00 | 100.00 | 100.0 |
| 5. Jammu & Kashmir | 10.30 | 3.46 | 0.42 | 4.30 | 0.00 | 0.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 6. Karanataka | 3.99 | 26.39 | 0.62 | 23.72 | 3.78 | 26.95 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 7. Kerala | 0.27 | 8.54 | 5.97 | 37.80 | 0.10 | 2.85 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 8. Madhya Pradesh | - | - | 6.71 | 35.88 | 5.15 | 28.58 | - | - | 100.00 | 100.00 | 100.00 | 100.0 |
| 9. Maharashtra | 7.05 | 41.70 | 9.14 | 48.47 | 5.91 | 35.54 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 10. Orissa | 1.74 | 40.62 | 1.25 | 12.45 | 0.40 | 5.16 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 11. Punjab | 5.78 | 34.88 | 4.85 | 34.45 | 2.48 | 20.82 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 12. Rajasthan | 14.64 | 57.88 | 11.50 | 51.03 | 10.22 | 44.78 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 13. Tamil Nadu | 0.98 | 16.91 | 0.57 | 11.42 | 0.34 | 6.30 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 14. Uttar Pradesh | 1.12 | 11.52 | 1.19 | 13.48 | 0.49 | 5.63 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 15. West Bengal | 0.47 | 5.68 | 0.13 | 1.77 | 0.05 | 0.64 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |
| 16. All India | 4.00 | 35.13 | 3.22 | 30.01 | 2.24 | 22.82 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.0 |

Note : - 1) H - For Households | A - For Area Operated

2) Punjab includes Haryana

Source : National Sample Survey $8_{th}$ , $16_{th}$ and $25_{th}$ rounds .

Table III - 3 LEASING IN BY SIZE CLASSES: ALL INDIA, 1953-54 AND 1971-72

| | Holdings Reporting Area leased in ('000). | Percentage of Hosdings reporting Leased in Area for | | | | Area Leased in ('000 hr) | Percentage of leased in Area for | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Fixed Money | Fixed Produce | Share of Produce | Others | | Fixed Money | Fixed Produce | Share of Produce | Others |
| 1. MARGINAL | | | | | | | | | | |
| 1953-54 | 10964 | 25.02 | 5.54 | 13.81 | 53.60 | 2049 | 26.65 | 11.59 | 2.85 | 24.04 |
| 1971-72 | 7059 | 11.19 | 47.64 | 40.90 | 1463 | 8.34 | 8.10 | 48.63 | 34.93 | |
| 2. SMALL | | | | | | | | | | |
| 1953-54 | 3891 | 31.09 | 12.77 | 40.28 | 27.50 | 3414 | 27.95 | 12.92 | 40.50 | 13.70 |
| 1971-72 | 3555 | 11.14 | 12.22 | 55.80 | 26.66 | 2715 | 9.79 | 12.88 | 55.48 | 21.85 |
| 3. SEMI-MEDIUM | | | | | | | | | | |
| 1953-54 | 3529 | 30.18 | 11.76 | 37.44 | 30.91 | 5343 | 28.13 | 11.25 | 39.05 | 15.09 |
| 1971-72 | 2497 | 14.34 | 13.90 | 49.71 | 31.66 | 3320 | 14.36 | 14.24 | 46.24 | 25.16 |
| 4. MEDIUM | | | | | | | | | | |
| 1953-54 | 2478 | 36.56 | 7.10 | 35.27 | 35.19 | 7551 | 33.81 | 6.19 | 36.39 | 18.19 |
| 1971-72 | 1268 | 21.08 | 12.84 | 44.04 | 33.88 | 3335 | 18.96 | 13.31 | 42.42 | 25.31 |
| 5. LARGE | | | | | | | | | | |
| 1953-54 | 1057 | 40.02 | 4.74 | 37.60 | 16.47 | 92.75 | 30.334.45 | 34.56 | 18.86 | |
| 1971-72 | 279 | 33.00 | 11.09 | 40.65 | 29.77 | 1720 | 26.90 | 6.51 | 42.97 | 23.62 |
| 6. ALL SIZE | | | | | | | | | | |
| 1953-54 | 21919 | 28.96 | 7.96 | 27.93 | 42.33 | 27632 | 32.92 | 7.82 | 36.56 | 17.13 |
| 1971-72 | 14656 | 12.69 | 10.51 | 50.62 | 35.48 | 13285 | 15.42 | 1.16 | 47.87 | 25.07 |

**TABLE III-4 (i) : LEASING IN BY SIZE CLASSES - STATEWISE, 1953-54** (figures in percentages)

| | States | Marginal | | Small | | Semi Medium | | Medium | | Large | | All Sizes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. | Andhra Pradesh | 26.69 | 28.64 | 38.77 | 24.61 | 37.92 | 21.89 | 32.80 | 18.53 | 37.28 | 16.19 | 31.53 | 18.70 |
| 2. | Assam | 59.45 | 47.85 | 61.00 | 52.57 | 56.12 | 38.42 | 58.00 | 37.64 | 64.28 | 57.66 | 59.08 | 43.54 |
| 3. | Bihar | 39.35 | 23.44 | 37.71 | 20.69 | 27.96 | 11.67 | 21.99 | 5.93 | 18.46 | 4.65 | 36.12 | 12.39 |
| 4. | Jammu & Kashmir | 34.67 | 24.48 | 38.09 | 24.44 | 38.09 | 25.74 | 21.74 | 12.18 | 50.00 | 8.57 | 37.21 | 22.17 |
| 5. | Karnataka | 41.27 | 31.51 | 39.72 | 23.47 | 43.48 | 19.03 | 36.82 | 13.46 | 41.27 | 12.42 | 40.89 | 16.32 |
| 6. | Kerala | 45.71 | 27.08 | 51.82 | 17.40 | 50.94 | 26.77 | 48.14 | 53.33 | 60.00 | 18.88 | 46.54 | 23.63 |
| 7. | Maharashtra | 39.18 | 31.45 | 40.64 | 30.14 | 41.86 | 26.75 | 40.67 | 24.69 | 49.31 | 27.69 | 41.21 | 26.81 |
| 8. | Orissa | 33.16 | 22.90 | 37.41 | 17.46 | 38.09 | 14.09 | 28.33 | 9.18 | 21.31 | 6.78 | 34.10 | 12.58 |
| 9. | Punjab | 38.22 | 34.56 | 54.63 | 36.37 | 60.78 | 45.75 | 63.12 | 39.39 | 60.24 | 38.45 | 53.22 | 39.78 |
| 10. | Rajasthan | 31.74 | 28.48 | 31.55 | 22.58 | 32.39 | 22.78 | 31.36 | 20.62 | 34.17 | 20.48 | 32.17 | 20.92 |
| 11. | Tamil Nadu | 55.34 | 39.29 | 54.84 | 35.14 | 52.70 | 29.34 | 44.44 | 18.86 | 39.06 | 19.83 | 54.47 | 27.53 |
| 12. | Uttar Pradesh | 25.74 | 18.99 | 33.06 | 16.27 | 26.37 | 10.64 | 63.60 | 7.78 | 19.72 | 6.79 | 27.20 | 11.38 |
| 13. | West Bengal | 40.09 | 28.91 | 46.34 | 32.94 | 47.78 | 31.62 | 28.28 | 13.30 | 19.05 | 7.68 | 41.44 | 24.43 |

Note :- 1) H- For holdings reporting Land Leased in. A - For area leased in to total operated area .
2) The present names of the states are used for simplicity .

Source : National Sample Survey , 8 th round , number - 66 .

**TABLE III-4(ii) LEASING IN BY SIZE CLASSES, STATEWISE 1971-72.**

(in percentage)

| States | MARGINAL | | SMALL | | SEMI-MEDIUM | | MEDIUM | | LARGE | | ALL SIZE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 19.96 | 15.63 | 22.56 | 11.03 | 24.99 | 10.60 | 22.62 | 9.46 | 14.55 | 4.65 | 21.66 | 9.01 |
| 2. Assam | 26.22 | 27.07 | 20.20 | 22.82 | 28.44 | 16.20 | 26.67 | 7.68 | - | - | 24.73 | 19.59 |
| 3. Bihar | 40.70 | 22.17 | 43.98 | 20.05 | 33.36 | 10.49 | 26.57 | 6.01 | 13.54 | 2.11 | 39.78 | 14.50 |
| 4. Jammu & Kashmir | 10.28 | 4.87 | 12.94 | 6.24 | 30.01 | 11.01 | 53.84 | 14.74 | - | - | 14.22 | 8.06 |
| 5. Karnataka | 22.06 | 17.95 | 20.68 | 20.48 | 20.76 | 12.27 | 38.92 | 17.13 | 42.05 | 15.18 | 28.81 | 15.90 |
| 6. Kerala | 16.60 | 9.23 | 20.70 | 9.04 | 23.05 | 7.66 | 7.06 | 8.66 | 27.27 | 1.74 | 17.32 | 8.59 |
| 7. Maharashtra | 12.28 | 7.04 | 13.56 | 7.82 | 12.39 | 7.78 | 9.74 | 5.57 | 11.89 | 5.46 | 11.97 | 6.15 |
| 8. Orissa | 31.87 | 22.10 | 33.44 | 12.91 | 34.18 | 13.29 | 26.46 | 6.49 | 19.88 | 8.78 | 32.24 | 13.40 |
| 9. Punjab | 19.79 | 29.56 | 47.97 | 34.83 | 56.68 | 35.57 | 56.47 | 23.81 | 36.55 | 17.93 | 45.62 | 25.84 |
| 10. Tamil Nadu | 34.60 | 21.28 | 28.25 | 14.77 | 31.04 | 14.34 | 14.53 | 8.88 | 10.20 | * | 31.67 | 13.07 |
| 11. Uttar Pradesh | 28.70 | 18.80 | 28.99 | 14.85 | 26.99 | 12.78 | 19.28 | 8.96 | 14.15 | 10.94 | 27.84 | 13.01 |
| 12. West Bengal | 32.58 | 25.82 | 45.06 | 24.08 | 30.03 | 14.52 | 15.68 | 5.89 | * | * | 34.56 | 18.73 |

NOTE : H-Stands for Estimated No. of Holdings leasing in land,

A-Stands for Estimated Area leased in, as percentage to total operated area.

*-Signifies less than 1 percent.

Source : National Sample Survey, 26th round, No. 215

**TABLE III-5(i) LEASING OUT BY SIZE CLASSES-STATEWISE 1953-54**

| States | MARGINAL | | SMALL | | SEMI-MEDIUM | | MEDIUM | | LARGE | | ALL SIZE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 6.97 | 15.11 | 19.11 | 14.62 | 18.53 | 14.40 | 19.58 | 1131 | 29.47 | 22.05 | 10.78 | 15.03 |
| 2. Assam | 1.74 | 3.84 | 11.36 | 8.16 | 14.34 | 7.22 | 24.44 | 11.64 | 62.50 | 39.72 | 6.55 | 14.02 |
| 3. Bihar | 9.65 | 8.09 | 17.14 | 5.90 | 16.77 | 4.95 | 26.24 | 6.81 | 38.79 | 11.44 | 12.80 | 6.95 |
| 4. Jammu & Kashmir | 7.99 | 6.32 | 22.32 | 11.06 | 24.24 | 7.73 | 55.17 | 34.22 | - | - | 15.77 | 16.13 |
| 5. Karnataka | 9.63 | 18.31 | 15.79 | 11.43 | 16.83 | 10.29 | 21.94 | 9.35 | 47.06 | 26.96 | 15.19 | 15.89 |
| 6. Kerala | 11.11 | 9.44 | 34.12 | 10.74 | 51.06 | 15.62 | 57.69 | 20.48 | 80.00 | 1.95 | 24.68 | 15.74 |
| 7. Maharashtra | 5.08 | 11.75 | 17.84 | 12.87 | 15.64 | 9.38 | 21.87 | 11.42 | 27.62 | 18.67 | 11.95 | 14.12 |
| 8. Orissa | 8.79 | 10.00 | 13.91 | 7.19 | 18.93 | 6.58 | 14.55 | 6.61 | 29.63 | 5.94 | 11.46 | 8.02 |
| 9. Punjab | 10.25 | 25.60 | 32.86 | 20.05 | 36.20 | 22.85 | 57.82 | 26.24 | 55.68 | 41.09 | 22.87 | 30.82 |
| 10. Rajasthan | 3.35 | 8.40 | 12.36 | 7.57 | 10.59 | 3.88 | 12.88 | 3.70 | 13.81 | 6.38 | 8.83 | 6.42 |
| 11. Tamil Nadu | 8.35 | 15.01 | 27.23 | 12.17 | 31.71 | 12.70 | 33.32 | 12.52 | 54.28 | 25.02 | 13.63 | 15.37 |
| 12. Uttar Pradesh | 5.88 | 5.01 | 12.42 | 5.21 | 15.12 | 7.7 | 22.68 | 3.32 | 36.22 | 9.14 | 9.78 | 8.84 |
| 13. West Bengal | 5.95 | 9.52 | 14.66 | 10.09 | 22.68 | 12.07 | 37.06 | 18.74 | 71.88 | 31.89 | 10.41 | 15.51 |

NOTE : H-Stands for Estimated No. of Holdings leasing out land to total holdings,
A-Stands for Estimated Area leased in, as percentage to total operated area.

Source : National Sample Survey, 8th round, No. 66

**TABLE III-5(ii) LEASING OUT BY SIZE CLASSES STATEWISE 1971-7**

**TABLE III-5(ii) LEASING OUT BY SIZE CLASSES STATEWISE 1971-72.**

| States | MARGINAL | | SMALL | | SEMI-MEDIUM | | MEDIUM | | LARGE | | ALL SIZE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H | A | H | A | H | A | H | A | H | A | H | A |
| 1. Andhra Pradesh | 10.13 | 11.23 | 17.08 | 12.67 | 15.30 | 9.35 | 12.27 | 8.04 | 14.37 | 6.73 | 12.05 | 8.93 |
| 2. Assam | 7.84 | 7.38 | 14.81 | 7.84 | 22.82 | 9.13 | 29.88 | 7.70 | 17.39 | 12.41 | 12.00 | 8.18 |
| 3. Bihar | 12.71 | 8.98 | 20.13 | 5.82 | 25.10 | 6.53 | 33.18 | 6.81 | 23.33 | 5.17 | 15.80 | 6.78 |
| 4. Jammu & Kashmir | 1.85 | 1.91 | 5.33 | 4.10 | 6.37 | 1.00 | 37.36 | 4.88 | - | - | 3.73 | 3.21 |
| 5. Karnataka | 6.80 | 9.82 | 18.02 | 15.53 | 12.18 | 8.12 | 13.58 | 8.26 | 10.86 | 2.58 | 11.05 | 7.90 |
| 6. Kerala | 5.24 | 3.33 | 9.29 | 2.48 | 12.56 | 2.76 | 18.61 | 4.08 | 14.28 | - | 6.47 | 3.00 |
| 7. Maharashtra | 2.90 | 4.28 | 6.69 | 5.38 | 10.03 | 6.30 | 2.91 | 3.54 | 3.06 | 1.40 | 4.72 | 3.20 |
| 8. Orissa | 13.00 | 12.22 | 10.22 | 4.70 | 17.90 | 8.66 | 14.97 | 3.73 | 31.40 | 2.45 | 13.11 | 7.04 |
| 9. Punjab | 5.26 | 23.27 | 16.76 | 13.25 | 21.23 | 16.80 | 23.93 | 11.13 | 29.05 | 12.66 | 12.80 | 13.36 |
| 10. Rajasthan | 1.00 | 2.05 | 5.81 | 4.13 | 4.95 | 1.82 | 9.87 | 4.89 | 7.34 | 4.25 | 5.78 | 4.09 |
| 11. Tamil Nadu | 5.77 | 6.19 | 14.58 | 6.54 | 14.76 | 7.13 | 21.59 | 6.91 | 34.92 | 29.00 | 8.44 | 8.88 |
| 12. Uttar Pradesh | 8.65 | 4.00 | 10.38 | 4.58 | 12.98 | 5.88 | 17.24 | 7.22 | 27.33 | 5.10 | 10.06 | 6.41 |
| 13. West Bengal | 6.67 | 7.91 | 14.34 | 9.59 | 12.90 | 7.87 | 34.52 | 11.60 | - | - | 9.48 | 8.95 |

NOTE : H-Stands for Estimated No. of Holdings leasing out land to total holdings
A-Stands for Estimated Area leased in, as percentage to total operated area.

Source : National Sample Survey, 26th round, No. 215

## TABLE - III - 6

**AVERAGE SIZE OF AREA OWNED BY SIZE CLASS — ALL INDIA AND STATES 1953-54/971-72.**

| States | MARGINAL | | SMALL | | SEMI-MEDIUM | | MEDIUM | | LARGE | | ALL SIZE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | '53-54 | 71-72 | 53-54 | 71-72 | 53-54 | 71-72 | 53-54 | 71-72 | 53-54 | 71-72 | 53-54 | 71-72 |
| 1. Andhra Pradesh | 0.29 | 0.25 | 1.44 | 1.42 | 2.88 | 2.78 | 6.32 | 5.88 | 22.33 | 16.74 | 1.48 | 1.48 |
| 2. Assam | 0.42 | 0.41 | 1.51 | 1.47 | 2.89 | 2.80 | 5.84 | 5.63 | 16.75 | 13.18 | 1.05 | |
| 3. Bihar | 0.30 | 0.26 | 1.47 | 1.38 | 2.90 | 2.73 | 5.99 | 5.73 | 17.63 | 16.60 | 1.21 | 0.89 |
| 4. Jammu & Kashmir | 0.47 | 0.51 | 1.47 | 1.46 | 2.75 | 2.72 | 6.45 | 5.29 | - | - | 1.23 | 1.08 |
| 5. Karnataka | 0.38 | 0.31 | 1.47 | 1.49 | 2.96 | 2.81 | 6.31 | 6.09 | 19.48 | 16.42 | 2.54 | 2.05 |
| 6. Kerala | 0.32 | 0.24 | 1.45 | 1.41 | 2.81 | 2.82 | 6.05 | 5.54 | 15.54 | 14.03 | 0.52 | 0.42 |
| 7. Maharashtra | 0.41 | 0.27 | 1.51 | 1.47 | 2.98 | 2.87 | 6.38 | 6.04 | 19.65 | 16.01 | 2.74 | 2.55 |
| 8. Madhya Pradesh | 0.46 | 0.30 | 1.50 | 1.50 | 2.96 | 2.86 | 6.43 | 6.08 | 20.44 | 16.20 | 2.99 | 2.77 |
| 9. Orissa | 0.30 | 0.33 | 1.51 | 1.43 | 2.90 | 2.76 | 6.10 | 5.63 | 16.74 | 13.74 | 1.49 | 0.96 |
| 10. Punjab | 0.33 | 0.12 | 1.57 | 1.46 | 2.96 | 2.78 | 6.38 | 5.97 | 20.24 | 15.06 | 2.25 | 1.53 |
| 11. Rajasthan | 0.49 | 0.16 | 1.51 | 1.39 | 2.98 | 2.65 | 6.49 | 4.57 | 22.37 | 16.16 | 3.49 | 1.14 |
| 12. Tamil Nadu | 0.28 | 0.20 | 1.50 | 1.41 | 2.86 | 2.74 | 6.10 | 4.86 | 19.10 | 15.56 | 0.95 | 0.74 |
| 13. Uttar Pradesh | 0.32 | 0.45 | 1.48 | 1.44 | 2.87 | 2.79 | 6.43 | 5.76 | 15.80 | 13.46 | 1.41 | 1.08 |
| 14. West Bengal | 0.30 | 0.28 | 1.46 | 1.42 | 2.95 | 2.66 | 6.17 | 5.46 | 14.86 | 10.69 | 0.99 | 0.70 |
| 15. All India | 0.26 | 0.28 | 1.49 | 1.45 | 2.92 | 2.80 | 6.31 | 5.99 | 19.93 | 16.50 | 1.99 | 1.53 |

Source : National Sample Survey, 8th and 26th rounds, Nos. - 36,66 and 215

# CHAPTER - IV

# THE NEW AGRICULTURAL TECHNOLOGY AND ITS USE BY SIZE CLASSES.

## 4.1 INTRODUCTION

Let us make a brief recapitulation of our progress so far. Land reforms left the land question virtually unanswered. Inequalities in land owned and operated declined, but only a little to be of any consequence. From our point of view, however certain significant changes did occur in agriculture. The feudal stranglehold on growth was easened. This took place through the abolition of the sterile class of intermediaries. Also, the drive to self-cultivation, which the land reforms initiated, paved the way for productive investment on land. The magnitude of tenancy decreased, clearing one more hurdle for a sustained capitalist development.

Yet, till the end of the third Five Year Plan, the productivity in agriculture did not register any significant improvement. In fact for manageable supply of foodgrains, India had to lean on foreign aid. The PL-480 scheme of the U.S.A. was one such important source. At this time, renewed thoughts for a self-sustaining

growth in agriculture were set rolling. This was a turning point in the development of agriculture. Brushing aside all considerations of equity and justice, the government of India sponsored the adoption of the hybrid variety of seeds, in regions where water resources were adequate and assured irrigation already existed. This attempt to break through the technology barrier was initiated with the active backing of the Ford Foundation.

At this juncture, it must be mentioned that despite overt rhetorics of social justice, the land reforms had created a class of agriculturists at the beginning of new agricultural technology who had all the necessary infrastructural requisites for capitalist development. In fact as a result of land reforms these big farmers already had strated cultivation of land through hiring of labour. But this minority class in agriculture were yet not eager to take agricultural production as a profitable enterprise. What they lacked was the technology required to raise profit levels to a degree high enough to offset the returns from alternative channels of investment. Once again, this was provided to them by the state, in the form of the 'new technology'.

The fact that this new technology had a bias for large size farms was clear from the beginning. Firstly, it was introduced in selected large farms in selected developed regions. Secondly, in the initial stages, large farmers were given the licence to produce and market these seeds, presumably to meet the excess demand. In the bargain, these farms reaped colossal profits, particularly since, at that time these seeds were very costly. Obviously the smaller farms could not gain access to this improved variety of seeds.

What was the role of the small and marginal farmers in this agricultural revolution? They neither had adequate amount of land nor the resources to absorb the new productive inputs. Though the size of the land was not a constraint since the new technology, or rather, the bio-chemical component of it (the seed-water fertiliser package) was scale-neutral. To take care of their resource constraint, the state announced a liberal canalisation of subsidised institutional credit to them. But this credit were not enough to buy optimal amounts of this package of inputs which essentialy require higher use of working capital. It is also true that institutional credit distribution was highly skewed in favour of the large farmers.

The poorer farmers were worse off on two other accounts also. Firstly, even if some of them possessed just enough resources to purchase modern inputs, they would not go for them because of the risk inherent in it. Secondly, following Hanumanth Rao,[1] the late adapters to the technology would obtain lesser benefits because of various externalities involved in the use of this technology.

The above discussion would suggest that, after the advent of the Green Revolution,(a) the rich farmers would take to increased investment in land and (b) their productivity would grow faster than that of small farmers, since they could use an adequate and optimal combination of inputs and also because of scale economies. In fact this trend was set in immediately after the advent of new technology, as several studies on the relationship between farm size and productivity in the seventies bring out clearly.

In the second half of 1950's much discussed revealation by the Farms Management studies, was the inverse relation between farm size and productivity. Various explanations were advanced to explain this phenomenon.

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1. C.H.Hanumanth Rao, Technological change and Distribution of Grains from Agriculture. MacMillan, Delhi, 1975.

The most plausible and accepted explanation was the one which identifies the causal factor as the higher use of family labour on small farms. With the breaking of the technological barrier this phenomenon seems to be reversing its direction. By the end of the 60's, the inverse relation between farm size and productivity no longer held good. This happens to be true particularly in technologically advance regions. The evidence again comes from the farm management data. A look at table No.4.1, sheds enough light to prove this case.[2]

The table shows that whereas the coefficient showing this relationship was quite significant in all the three districts in the fifties by the late sixties, (1968-69 in case of Muzaffarpur and Ferozepur and 1969-70 in West Godavari), the significance has deteriorated in Muzaffarnagar while it was insignificant in the other two districts.

A more recent work in this context has been by Chadha.[3] His analysis was that prior to the technolo-

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2. Rao, Ibid. P. 143.

3. G.K. Chadha, Farm Size and Productivity Revisited, Some notes from Experiences in Punjab, EPW, Vol. XIII, P. A-93.

TABLE 4.1 RELATIONSHIP BETWEEN THE GROSS VALUE OF OUTPUT PER ACRE AND FARM SIZE.

| Year | 1. Muzaffarnagar (U.P.) | |
|---|---|---|
| | Slope ( ) | Coefficient of correlation |
| 1955-56 | - 0.25* | - 0.46 |
| 1956-57 | - 0.17* | - 0.33 |
| 1966-67 | - 0.14* | - 0.25 |
| 1967-68 | - 0.09** | - 0.25 |
| 1968-69 | - 0.04*** | - 0.17 |
| | 2. Fefozepur (Punjab) | |
| 1955-56 | - 0.06 | - 0.09 |
| 1956-57 | - 0.17** | - 0.28 |
| 1967-68 | - 00.03 | - 0.05 |
| 1968-69 | - 0.03 | - 0.04 |
| | 3. W. GODAVARI (A.P.) | |
| 1957-60 | | |
| Output | - 0.11*** | - 0.62 |
| Labour | - 0.13** | - 0.82 |
| Fertiliser | - 0.05 | - 0.21 |
| 1969-70 | | |
| Output | - 0.02 | - 0.15 |
| Labour | - 0.16 | - 0.86 |
| Fertiliser | - 0.10 | - 0.77 |

(contd....)

NOTE : * Significant at 0.1% level; ** Significant at 1% level,

*** Significant at 5% level.

Source : C.H.Hanumanth Rao. op. cit. p.143.

gical transformation of Indian agriculture, the labour: land ratio determined productivity and this to an extent explained the negative relation between farm size and productivity in so far as small farmers used labour more intensively on land. After Green Revolution however, productivity levels on farms are being determined by the capital:labour ratio.

Table 4.2 INDEX OF CAPITAL : LABOUR RATIO PER ACRE OF CROPPED AREA.

| Crop | Small | Medium | Large |
|---|---|---|---|
| | A. Index Excluding Bullock Labour | | |
| HYV Wheats | 1.00 | 1.24 | 1.66 |
| All Crops | 1.00 | 1.18 | 1.62 |
| | B. Index Including Bullock Labour | | |
| HYV Wheats | 1.00 | 1.11 | 1.23 |
| All Crops | 1.00 | 1.02 | 1.16 |

Note : 1) This data is for Chadha's Region II, in Punjab, with tubewell irrigation dominant in this region.

2) Small farm = 1.00.

Source : Chadha, op.cit., P. A-93.

For the same region the relation between farm size and productivity is given in the farm of regression equations.

$$\text{Log } Y = 6.191 + \underset{(1.900)}{0.056} \text{ Log } X$$

$$\text{Log } Y' = 6.933 - \underset{(-1.430)}{0.048} \text{ Log } X$$

Y implies per acre of cropped area

Y' implies gross output per acre of net operated area

X implies farm size.

The first equation shows a significant positive relation between farm size and productivities. However, taking the higher cropping intensity of small farmers into account the relation becomes negative, but it is insignificant (whereas the same is significant in the less capital - intensive regions). This prompted Chadha to argue,"the inverse relationship between farm size and productivity is tending to disappear".[4]

This dilution of the inverse relationship between farm-size and productivity implies that output was growing at a faster rate among large farmers compared to small and marginal farmers. If the causal factor for the existence of such a relationship was the one we

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4. Chadha, op.cit., P. A-95

cited above, the conclusion would be that due to a more instense use of bio-chemical and mechanical technology, the large farms have managed to offset the higher labour costs (compared to family labour in small farms per unit of output. The observation that labour input per acre shows an increasing intensity of inverse relationship over time to size of farms proves this point through showing that with increase intensity of inverse relationship over time to size of farms proves this point through showing that with increase in output, if labour input per unit of output fell, labour replacing technology has been introduced into the production function. This is to be expected, given the better access to resources that the large farmers commanded, relative to smaller farmers.

Our aim in this chapter is to corroborate this conclusion. That the components of the new technology have been adopted unequally over size classes. Given their larger command over land and resources, even if the rich farmers have a productivity level equal to the poorer farmers, they would obtain higher benefits since their marketable surplues would be higher. And since they (i) produce a higher position of the total marketed surplus for profit and (ii) they can readily take to mechanisation, they would exercise decisive

control on the level of prices. Small farmers, whatever they market, would do so less from profit considerations than to meet their other consumption expenditure. So profit-motive could characterise the production of only large size farms. The new technology by its very character would promote capitalist development among the rich farmers. Though the policymakers held no pretensions on this point, they still propagated the small farmers would benefit equally. The verson advanced was that the mechanism of 'trickle-down' would come into operation. Even if it does, 'trickle-down' implies a time-lag which necessarily means that the divergence in profit levels of the early benefiters and the later ones will, at least, be maintained. This is not to say that the small farms would not experience a rise in production level. But this is different from saying that they would also produce along capitalist lines : high proportion of output marketed and productive investment on land.

5.2

We will study the use of new technology in two sections. The first section will deal with the biochemical component and the second section with the mechanical component of it. But before that we will

see certain indicators of cultivation pattern to get an idea of the conditions within which the improved inputs are absorbed.

For an analysis of input absorption, we have chosen five states only, viz, Andhra Pradesh, Haryana, Punjab, Tamil Nadu and Uttar Pradesh. The selection is based on two considerations only. Firstly, all these states belong to the ex-ryotwari areas (or mahalwari areas, but in fundamental terms they had little differences) where, we have noted earlier, the potential for capitalist growth was substantially higher than in ex-zamindari regions. And our interest is to study how much has the policies of the state contributed to the development of capitalist production. Secondly, these are five of the most developed states agriculturally, in India, or at any rate, within the ex-ryotwari or ex-mahalwari regions.

CULTIVATION PATTERN.

The scale of operation is an import and determinant of the technology to be adopted and consequently of the profitability. In this regard, both the number of parcels as well as the average size of a parcel increase sharply with size (see Col.1 and Col.2, Table IV-1). Very low

size of a parcel, both for small and marginal farmers (less than one hectare in all states under study) restricts them to a level of production for subsistence, irrespective of what technology they adopt. For large farmers, however, the average area of a parcel ranges from 4 acres (in UP) to 15 acres ( in Punjab). Among these five states, the large farmers in Punjab and Haryana, Undoubtedly the two most agriculturally developed regions, have parcels of size conducive enough for profit-oriented production. The number of parcels per holding is also very low for these two states. Therefore, potential for profit oriented production is visible only for large, and to an extent medium, sized farmers. Even among this category, Punjab and Haryana show a distinct advantage.

A conforming feature is that the average gross cropped area also rises sharply with size (see Cols.4 and 5). As for as the cropping intensity is concerned, it has an inverse relation with farm size. Given that small and marginal farmers hold very small plots of land, for subsistence they have to indulge in a more intensive cultivation of it. Large farmers, on the contrary, will make a less intensive use of land to maintain land quality and also to ensure optimum profit levels.

## 5.3 FARM SIZE AND BIOCHEMICAL TECHNOLOGY

There are two ways of looking at the input use by farm size groups, namely, by considering the actual quantities of inputs absorbed or by taking their values. Here we have basically followed the former approach for the simple reason that statewise data, in a comparable form, is available only for amounts of inputs used. Even in this case comprehensive data is lacking in so far as the only source is the All India Report on Input Survey, 1976-77, which is the latest available, being published in 1986. The reports of the studies in the Economics of Farm Management give information mostly at district levels (in any case not for the five states we have taken into account) though this information is amenable to intertemporal comparision. Moreover, this data is available till either the late 1960's or very early 1970's. Therefore, we used single year data, well aware of the error-proneness of such a line of analysis. Therefore, wherever possible, we will compare the conclusions arrived at from the above source with those of other sources or other works by individuals.

In this section we analyse the use of bio-chemical technology. The three essential components of this technology are water, seeds and fertiliser. Therefore, in what follows we will analyse each of their use

separately by size classes.

A. IRRIGATION : -

Water is an absolute necessity for crops. Therefore all cultivated holdings have to have some source of irrigation or the other. But in the context of the new technology, irrigation, has a distinct characteristic that is, it has to be assured and controlled. Tube-well irrigation, or pumpset irrigation, unlike canal irrigation, are less subject to fluctuation induced by weather. And therefore they are more assured and better controllable. Consequently, to study the level of irrigation, it is at the level of types of irrigation that would yeild meaningful results rather than taking irrigation as a blanket category.

However, instead of totally neglecting overall irrigation figures, we will just briefly summerise the trends (see Table IV-2), because some inequality is discernible even in this case. Irrigated area as percentage of total area increases with size at the all India level. The trend is confirmed in Andhra Pradesh, Uttar Pradesh and Tamil Nadu. However, in Punjab and Haryana, percentage irrigated area not only increases with size, but does so rather steeply. A somewhat more useful index is the percentage of net area sown irrigated.

Contrary to the all India trend (where the above index shows a negative relation with size) in four of the five states we have taken for study, this relationship is positive, the exception being Andhra Pradesh. In Punjab and Haryana particularly, this positive relationship is very strong (see Col. 10, Table IV- 2). Thus in these agriculturally advanced states, inequality in percentage of area irrigated is prominent, in contrast to the rest of India. What is more, in Punjab and Haryana, the two most developed states agriculturally, this inequality is striking. Let us now go over to irrigation by types.

Table IV-3 shows the percentage distribution of different sources of irrigation in each size class. This table reveals that canal irrigation is still the most prominent source of irrigation of the total area irrigated under each source, the percentage appropriated by different classes increases with size in three of the state, viz., Haryana, Punjab and Uttar Pradesh. Tank irrigation while it accounts for between 30 to 40 percent of all sources of irrigation in Andhra Pradesh and Tamil Nadu, is conspicuous by its total absence in Pubjab and Haryana. In Uttar Pradesh it barely accounts for five per cent of total irrigation. As for its distribution over size classes, this table shows that

its use is preponderant among the smaller size classes. These however, are the traditional modes of irrigation. Tubewells on the other hand, are the appropriate source of irrigation for the modern inputs. Their distribution over size classes has two characteristics. First, their incidence is very high (between 30 to 40 per cent) in the northern regions while in the southern states of Andhra Pradesh and Tamil Nadu they hardly account for 2 percent of all sources. Second, a higher share of tubewell irrigation is accounted for by higher size classes in all the five states except Haryana. Irrigation from wells, on the other hand generally decrease with size in the three northern states while they increase with size in the two Southern states.

The picture would be more clear if we look at table IV-4, which shows the percentage area irrigated under each source by size class. This shows that for three of the states ( Tamil Nadu and Uttar Pradesh being the exceptions, in so far as the positive relations extends only up to the category of medium class farmers) there is a positive relation between tubewell irrigation levels and size class. The anomaly in the nature of a decrease in tubewell-irrigation from medium to large category could be explained by their respective shares in total net irrigated area (see Col. 6, table IV-4)

Irrigation by wells also follows the same trend. A point that needs to be mentioned in this context is that, both in case of tubewells, as well as wells, the quality of irrigation (as indicated by their controllability and assurability) depends on the power of the motors used. It can be hypothesised that large farmers would, by virtue of their larger command over resources, make use of higher powered motors, relative to smaller farmers. This is confirmed by Table. IV-5. The table shows that only middle and large farmers use motors of ten horsepowers while only large formers use motors above ten horsepowers.

Therefore, as far as quality irrigation is concerned, larger size classes hold a definite advantage over smaller ones. As a result, their capability to use modern inputs optimally would also be higher. Even in case of canal irrigation, Haryana and Punjab appropriate the lion's share. The small marginal farmers taken together account for only 9.3 percent of total canal irrigation in Haryana and 14.3 per cent of the same in Punjab. Thus in these two states the large farmers not only account for most of the modern types of irrigation, they also appropriate a major share of the traditional type of irrigation as well.

Due to their greater access to more advanced types of irrigation, one could expect that they would use irrigation more optimally and hence would incur lower per hectare costs on this head this conclusion is corroborated by a study undertaken by the Planning Commissions (See table IV-6). This study shows that both for tubewells as well as for pumpsets the average per hectare expenditure decreases sharply with size in all the five states under consideration. Utsa Patnaik's study of Haryana[5] shows the same trend though to a somewhat lesser. (See table 4.3). This tabel also shows that the rich farmers run (not hire) advanced machinery to a greater extent than the poor peasants.The expenditure on electricity and fuels, repair and maintenance accounts for 88.8 percent of total expenditure for rich peasants while the same for poor peasants is 24 per cent). Also the "rich peasants' expenditure on electricity and fuels plus hiring equipment is Rs. 276 per household, compared to only Rs. 37 per holding in the case of poor peasants. The corresponding per acre expenditures (on electricity and fuels plus hiring of equipment) are Rs 37.2 and Rs. 7.6 respectively for rich peasants compared to poor peasants."[6]

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5. Utsa Patnaik, Peasant Class Differentiation : A Study in Method with Reference to Haryana, Oxford University press, 1987.

6. Utsa Patnaik, Ibid. p. 108.

Table 4.3

Total paid-out costs on Irrigation and other charges and their percentage distribution.

| Class | Canal and other irrigation charges | Electricity fuels, repairs & Maintenance | Equipment & Livestock hire | Land review& Less | Total |
|---|---|---|---|---|---|
| Rich Peasant | 357.4 (4.2) | 7446.0 (88.8) | 120.0 (1.4) | 469.9 (5.6) | 8393.3 (6.2) |
| Middle Peasant | 1673.7 (8.0) | 1330.0 (62.7) | 4279.0 (20.6) | 1792.7 (8.6) | 20775.4 (29.3) |
| Small Peasant | 1383.9 (11.5) | 7844.0 (65.3) | 1360.5 (11.3) | 1429.9 (11.9) | 12018.3 (52.9) |
| Poor Peasant | 314.6 (23.6) | 320.0 (24.0) | 560.0 (42.0) | 137.1 (10.3) | 1331.7 (9.1) |
| All | 3936.1 (9.2) | 28693.0 (66.8) | 6426.5 (14.9) | 3896.5 (9.1) | 42952.1 (100.0) |

NOTE : 1. Figures in brackets indicate percentages

2. The classes are based on Utsa Patnaik's Labour exploitation criterion.

SOURCE : Utsa Patnaik, Peasant class Differentiation, A study in Method with Reference to Punjab. Oxford University Press, 1987 PP 106, 109.

Table

4.4 FERTILISER SUBSIDIES IN THE BUDGETS OF THE CENTRAL GOVERNMENT, 1971-2 to 1986-7

(Rs.in crores)

| Year | Imported Fertilizers | Domestic Fertilizers | Total |
|---|---|---|---|
| 1971-2 | -20 | -- | -20 |
| 1972-3 | -18 | -- | -18 |
| 1973-4 | 33 | -- | 33 |
| 1974-5 | 371 | -- | 371 |
| 1975-6 | 242 | -- | 242 |
| 1976-7 | 52 | 60 | 112 |
| 1977-8 | 159 | 107 | 266 |
| 1978-9 | 169 | 173 | 342 |
| 1979-80 | 282 | 321 | 603 |
| 1980-1 | 335 | 170 | 505 |
| 1981-2 | 100 | 275 | 375 |
| 1982-3 | 55 | 550 | 605 |
| 1983-4 | 142 | 900 | 1042 |
| 1984-5 | 632 | 1200 | 1832 |
| 1985-6 RE | 450 | 1600 | 2050 |
| 1986-7 BE | 250 | 1700 | 1950 |

NOTE : RE - Revised Estimates; BE - Budget Estimates.

SOURCE : G.H.Desai, Politics ~~for~~ of Growth in Fertiliser Consumption, The next stage EPW 1986, May 24 P.925

We therefore conclude that while rich peasants take recourse to advanced methods of irrigation, the smaller farms still rely on the traditional types. Investment on irrigation plus complementary inputs like power etc. is therefore very high for large farmers.

## B FERTILISER USE AND SIZE CLASS

Total fertiliser consumption in India per annum has increased from 74 thousands tonnes in 1951-2 to above 8 million tonnes by1984-5 (figures taken from Fertiliser Statistics, 1984-5). This impressive growth is also reflected in the five states we have taken into consideration(see table IV.8). Giver that the growth rate in area under cultivation has generally declined from the mid-sixties onwards , the per hectare consumption is also rising at a fast rate. This rise is the highest in Punjab, from a meagre 1.51 Kgs per hectare in 1961-2 to 123.7 Kgs per hectare in 1984-5 (see table IV.8).

This vast growth in fertiliser consumption is reflected in a sharp increase in fertiliser subsidies given by the Central Government. Table 4.4 reveals that fertiliser subsidies which were virtually non-existent in the early seventies have risen to above 2000 crores of rupees by 1986-7.

Having noted the striking rise in overall fertiliser consumption, we now turn to the use of fertiliser over size classes (see table IV.9). This table shows a negative relation between farm size and quantity of fertiliser used for all states ith the exception of Andhra Pradesh. Punjab shows the strongest negative relation. But a great deal of caution needs to be exercised in interpreting this information. The advantage that the small farmers show in the use of chemical fertilisers need not imply a higher level of productivity or profit per hectare for two reasons. First, the quality of fertiliser defers and therefore the large farmers may use the costlier (and more productive) varieties of fertiliser in which case the quantity they use will be less. Secondly, since they cultivate on large size farms, economies of scale might operate ensuring a more optimum use (or less wastage) of this input for the larger sized farms. To the extend that the first point is valid, the expenditure incurred by the large sized farms would be higher. Such a result is corroborated by the data for Punjab as given by the Farm Management Reports (see table 4.5).

This table shows that after the introduction of the new technology, the expenditure on fertiliser consumption has developed a positive relation with size classes.

Table 4.5 USE OF MATERIAL INPUTS PER ACRE

| Region | Period | Size group (in acres) | Per acre value of material inputs (in rupees) Seeds | Manures and fertiliser. | Total |
|---|---|---|---|---|---|
| Amritsar Ferozepur | 1954-7 | Below 5 | 7.4 | 2.5 | 9.9 |
| | | 5 - 10 | 7.2 | 2.6 | 9.8 |
| | | 10 - 20 | 6.9 | 2.2 | 9.1 |
| | | 20 - 50 | 6.4 | 3.2 | 9.6 |
| | | Above50 | 3.7 | 2.7 | 6.4 |
| | | All sizes | 6.2 | 2.8 | 9.0 |
| Punjab | 1968-70 | Below10 | 19.5 | 19.3 | 38.8 |
| | | 10-17.5 | 21.6 | 20.3 | 41.9 |
| | | 17.5-25 | 22.2 | 30.3 | 52.5 |
| | | Above25 | 23.4 | 26.9 | 50.3 |
| | | All sizes | 22.3 | 27.0 | 49.3 |

NOTE: The figures are three year averages.

SOURCE: 1. Studies in the Economics of Farm Management in Punjab (1954-7) and

2. Economics of Agricultural Production and Farm Management in Punjab (1968-70)

This relationship was positive for the two districts in Punjab during the mid-fifties. If the percentage of area treated with fertilisers is taken into consideration, a positive relationship with size is discernible at a general level ( see table IV.10), Moreover, in terms of percentage of area treated with, organic manures are relatively more important sources of soil nutrients than chemical fertilisers for the smaller size classes while for -the large size classes the relative importance is reversed.

Such a conclusion is also evident in Utsa Patnaik's analysis of Haryana.[7] According to her, both per acre and per holding expenditure on fertiliser and manures increase sharply with size classes[8] .(see table 4.6).

The expenditure on fertiliser consumption per acre for rich peasants is more than three times that of the poor peasants. In addition, for rich and middle peasants "higher monetisation reflects an increasingly capitalist involvement in purchasing capitalist inputs"[9]

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7. ibid. , p.110-12
8. The term 'class' here represent economic class based on Patnaik's Labour Exploitation Criterion.
9. Patnaik, op. cit., p.110

Table 4.6 EXPENDITURE ON MATERIAL INPUTS PER HOLDING AND PER ACRE, HARYANA (Rs)

| Class | Expenditure per holding | | | | Expenditure per acre | | | |
|---|---|---|---|---|---|---|---|---|
| | Seed | Manures | Ferti-lisers | All | Seed | Manures | Ferti-lisers | All |
| Rich Peasants | 230.13 | 189.00 | 436.00 | 855.13 | 31.02 | 25.48 | 58.79 | 115.30 |
| Middle Peasants | 201.31 | 168.84 | 160.30 | 530.45 | 31.94 | 26.79 | 25.43 | 84.26 |
| Small Peasants | 129.07 | 70.26 | 70.13 | 269.40 | 27.97 | 15.22 | 15.20 | 58.39 |
| Poor peasants | 109.13 | 58.50 | 76.00 | 243.63 | 26.64 | 14.31 | 18.59 | 59.89 |
| All | 152.16 | 104.41 | 119.96 | 375.50 | 29.95 | 20.49 | 23.34 | 48.54 |

SOURCE : Utsa Patnaik, op.cit. p.111

Let us now go over to the use of high yielding variety seeds by farm sizes.

## C. HYV SEEDS AND SIZE CLASS

High yielding variety (HYV) seeds were the flag-bearers of the technological transformation of agriculture in India. Around the mid-sixties, these seeds were introduced in large irrigated tracts of selected developed districts of Punjab, Haryana and Western Uttar Pradesh. Two aspects charaterise their distribution in the initial stages. First, they were aimed at the large farmer specifically with the small and marginal farmers being left to the graces of 'trickle-down'. And second, since these large farmers were given trading rights, they reaped colossal profits at a stage when HYV seeds were highly priced. So, by the time these prices fell, and by the time the state undertook their distribution, the rich farmers not only had a temporal advantage (which as we noted in chapter-I yields higher rates of profit) over the smaller ones, they also, due to such profits, could afford the other complementary inputs of this new technology.

As far as the actual size-wise use of HYV seeds is concerned, no inequalities is discernible if we take the proportion of area under HYV. (see table IV.7 ) This could be because of a fall in the prices of HYV seeds and due to the state indulging in their distribution (in the form of minikits). However, in terms of

expenditure on HYV seeds, the size-bias is evident. Table 4.5 shows that during 1968-70, in Punjab whereas the per acre expenditure on seeds was Rs.19.50 for small farmers, it was Rs.23.40 for large farmers. As far as Utsa Patnaik's[10] results are concerned, whereas the poor peasants spent Rs.26.69 on seeds, the rich peasant's expenditure on this head was Rs.31.02. Thus the fact of roughly having the same percentages of area under HYV seeds may not be the only indicator of equality of size classes. Patnaik, taking economic classes, however shows clear concentration of better quality of HYV seeds among the righ farmers[11].

Let us now sum up the conclusions obtained in this section. Concentration of modern inputs, in terms of quantity, in large farmers is evident for irrigation (particularly tube-well and pumpset driven well irrigation). As far as fertiliser and HYV seeds are concerned, we do not find much disparity over size classes in terms of their adoption rate per acre viz., percentage of area under HYV and per acre fertiliser use in Kgs ). However, taking per acre expenditure on these inputs, we discern a clear concentration in the higher size classes. Given that productivity no longer seems to be negatively related with size, the overall profits achieved by the large farmer will be higher. In any case, higher expenditure, in so far as it implies a rise in unit costs, also signifies

10. ibid., p.110 - 12.
11. ibid,, p.124

capitalist production and investment in land.

## 5.4 MACHANICAL TECHNOLOGY AND SIZE - CLASSES.

Unlike bio-chemical technology, mechanical technology requires substantially high levels of investment. Further, for such technology to be optimally utilised, the scale of production must be above a certain minimum. On both these aspects it may safely be presumed that the rich peasants will hold a distinct advantage in the utilisation of modern mechanical inputs (like tractors, threshers pumpsets, sprayer etc) over the small and poor peasants. Table IV - 10 gives the number of agriculture machinary owned per one thousand households, for the five states under consideration as well as for All India.

Taking traditional machinery first, it is seen that the number of ploughs per household increased sharply with size classes in 1971-2. However by 1976-7, whereas this figure decreased in all states for the larger size classes we have taken, it has increased for marginal farmers in some states (Punjab, Andhra Pradesh) (See Table IV-10). The substitution of traditional machinary could therefore be much higher for the size classes.

To the extent that the number of ploughs have generally declined in the higher size classes, the adoption of tractors could be expected to have increased, given increase in

Production levels . Table IV-10 also shows that the number of tractors owned in 1971-2 are either zero or negligible for marginal and small formers. The situation for semi-medium farms was only slightly better. For medium formers, the number of tractors owned was very low except in Punjab (69 tractors per one thousand households) and Haryana (29 tractors per one thousand households). The same figures for Punjab and Haryana in case of large farmers was 343 and 83 respectively.

The progress of tractor use by 1976-77, had not improved much for marginal, small and semi-medium farmers. The increases however is more perceptible for the large and medium farmers. Particualrly, Punjab had almost one tractor for two large households, which is a very high rate of adoption. Therefore we see that, the degree of tractor adoption is the highest for the two most agriculturally developed states of Punjab and Haryan;a. Wester U.P., should more or less confirm to this trend. And even in these regions it is the middle and large farmers who have taken to tractors most significantly.

The adoption of pumps (for draining out water) also increased with size classes in 1971-72 (Table IV-10). In 1976-77, the same trend is maintained with the qualification that the number of pumps owned per one thousand

households increased more sharply for medium and large farmers than for the other three smaller size classes. The number of pumps have however decreased by 1976-77 in Tamil Nadu for medium and large households.

## 5.5 CONCLUSION.

In this chapter we undertook a study of the concentration of new input use by size classes. As a background to this attempt, we first noted some aspects of the agrarian structure (other land distribution and tenancy that we studied in chapter III) like parcelisation and cropping intensity. While the average area per parcel had a positive relation to farm size, cropping intensity showed a negative relation with the same. We also noted that the inverse relation that existed between farm size and productivity in the mid sixties has given way to a positive relation by the mid 1970's.

Having noted the above, we proceeded to analyse the input use (specifically those pertaining to the new technology) by size class. Based on official data mostly and borrowed data of other researchers, we reached the conclusion that the larger size classes do incur higher overall expenditures per acre on inputs like irrigation

(especially modern irrigation like tubewells and pumpdriven wells), HYV seeds and fertiliser.At the same time, we noted that in case of HYV seeds (and in case of rate of fertiliser application) the above feature does not come out clearly when one takes absolute level of inpute use rather than taking expenditures on them. As far as the mechanical technology is concerned, the concentration of modern machines like tractors, pumpsets etc., larger sized farms is strikingly evident.

Another significant conclusion is that the expenditure incurred by large farmers on maintenance and repair of implements, electricity etc., is considerably larger than those for the small and poor farmers. Clearly, the levels of productive investment has been substantial in the large farms. Such high levels of investment, both in mechanical technology as well as in bio-chemical technology augurs well for the development of capitalism in agriculture.

TABLE : IV-1 : SOME INDICATORS OF CULTIVATION PATTERN BY SELECTED STATES (1976-77)

| States | Average no. of parcels per holding | Average area of &parcel per holding (ha) | %distribution of NCA once | Average C.G.A. Per op. holding irri. | Unirri | Cropping intensity | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Irrigated | Unirrigated | Total |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Andhra Pradesh | | | | | | | | |
| M | 1.51 | 0.31 | 76.9 | 0.33 | 0.25 | 1.132 | 1.041 | 1.235 |
| S | 1.74 | 0.84 | 78.8 | 0.75 | 0.91 | 1.194 | 1.058 | 1.213 |
| S - M | 3.22 | 0.87 | 82.0 | 1.12 | 1.68 | 2.224 | 1.043 | 1.185 |
| M | 3.77 | 1.64 | 87.1 | 1.82 | 3.25 | 1.162 | 1.038 | 1.130 |
| L | 5.41 | 3.13 | 89.7 | 3.53 | 8.54 | 1.201 | 1.023 | 1.106 |
| A - S | 2.26 | 1.03 | 84.0 | 0.83 | 1.30 | 1.181 | 1.039 | 1.163 |
| Haryana | | | | | | | | |
| M | 1.36 | 0.34 | 24.6 | 0.45 | 0.35 | 1.542 | 1.569 | 1.758 |
| S | 1.70 | 0.84 | 36.9 | 1.11 | 1.18 | 1.458 | 1.315 | 1.631 |
| S - M | 2.04 | 1.41 | 33.2 | 2.03 | 2.78 | 1.377 | 1.427 | 1.670 |
| M | 2.42 | 2.54 | 49.9 | 4.79 | 4.46 | 1.459 | 1.249 | 1.521 |
| L | 2.83 | 5.87 | 55.2 | 11.27 | 10.42 | 1.440 | 1.210 | 1.448 |
| A - S | 1.99 | 1.88 | 45.8 | 26.65 | 2.64 | 1.442 | 1.288 | 1.543 |
| Punjab | | | | | | | | |
| M | 1.11 | 0.50 | 17.2 | 0.77 | 0.19 | 1.826 | 1.471 | 1.842 |
| S | 1.44* | 0.92* | 16.0 | 1.86 | 0.43 | 1.809 | 1.398 | 1.851 |
| S - M | 1.61 | 1.86 | 20.3 | 4.11 | 0.53 | 1.790 | 1.296 | 1.805 |
| M | 1.74 | 3.60 | 22.0 | 7.059 | 1.25 | 1.778 | 1.279 | 1.791 |
| L | 2.39 | 6.56 | 28.8 | 17.00 | 3.21 | 1653 | 1.134 | 1.721 |
| A - S | 1.57 | 2.46 | 22.6 | 4.74 | 0.81 | 1.754 | 1.260 | 1.784 |

TABLE : IV - 1 (contd..)

| Stages | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| Tamil Nadu | | | | | | | | |
| M | 1.64 | 0.25 | 70.5 | 0.14 | 0.13 | 1.305 | 1.115 | 1.318 |
| S | 2.52 | 0.56 | 76.8 | 0.53 | 0.55 | 1.270 | 1.043 | 1.241 |
| S - M | 3.61 | 0.76 | 79.7 | 0.78 | 1.04 | 1.225 | 1.031 | 1.210 |
| M | 5.02 | 1.15 | 84.2 | 1.23 | 1.92 | 1.242 | 1.012 | 1.164 |
| L | 7.35 | 2.27 | 84.8 | 2.16 | 3.53 | 1.225 | 1.003 | 1.158 |
| L - S | 2.23 | 0.56 | 78.3 | 0.34 | 0.42 | 1.260 | 1.023 | 1.228 |
| Uttar Pradesh | | | | | | | | |
| M | 2.86 | 0.16 | 46.9 | 0.24 | 0.29 | 1.994 | 1.172 | 1.537 |
| S | 4.16 | 0.34 | 53.0 | 0.89 | 0.99 | 1.208 | 1.156 | 1.474 |
| S- M | 5.84 | 0.47 | 58.5 | 1.77 | 1.93 | 1.220 | 1.125 | 1.418 |
| M | 7.34 | 0.76 | 61.6 | 3.61 | 4.12 | 1.222 | 1.104 | 1.387 |
| L | 11.61 | 1.30 | 72.7 | 6.55 | 11.26 | 1.156 | 1.115 | 1.276 |
| A- S | 3.71 | 0.33 | 56.4 | 0.67 | 0.79 | 1.208 | 1.137 | 1.439 |

Source, All India Report on Input survey, 1976-77

TABLE : IV-2 : SOME INDICATORS OF IRRIGATION IN SLECTED STATES AND ALL INDIA (1976-77).

| States | Total No.of Holdings (in 000's) | Holdings Area (000hec.) | Wholly Irrigated Holdings | | Partly Irrigated Holdings | | Net Area Sown | Total Irrigated Holdings as % of total area | Total Irrigated area as% of total Holdings | Irrigated area as % of Net area sown |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. of Holdings (in 000's) | Area (000hec) | No. of Holdings (in 000's) | Area (000hec) | (000hec) | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Andhra Pradesh | | | | | | | | | | |
| M | 2492 | 1985 | 1273 | 469 | 317 | 171 | 976 | 63.8 | 58.9 | 65.6 |
| S | 1065 | 1533 | 290 | 360 | 312 | 414 | 1338 | 56.5 | 50.5 | 57.8 |
| S - M | 941 | 2607 | 159 | 363 | 359 | 887 | 2227 | 55.0 | 47.9 | 56.1 |
| M | 689 | 4186 | 74 | 330 | 335 | 529 | 3447 | 59.4 | 20.5 | 24.9 |
| L | 233 | 3874 | 14 | 135 | 141 | 1872 | 3028 | 66.5 | 49.4 | 63.1 |
| A - S | 5420 | 13586 | 1810 | 1658 | 1464 | 5045 | 11018 | 60.4 | 49.3 | 60.8 |
| Haryana | | | | | | | | | | |
| M | 250 | 122 | 92 | 43 | 29 | 18 | 116 | 48.4 | 50.0 | 52.6 |
| S | 173 | 249 | 51 | 69 | 58 | 82 | 238 | 63.0 | 60.6 | 63.4 |
| S - M | 205 | 586 | 47 | 127 | 100 | 279 | 560 | 71.7 | 69.3 | 72.5 |
| M | 211 | 1302 | 34 | 196 | 133 | 804 | 1251 | 79.1 | 76.8 | 79.9 |
| L | 74 | 1176 | 7 | 104 | 53 | 804 | 1104 | 81.1 | 77.2 | 82.2 |
| A - S | 913 | 3447 | 232 | 138 | 374 | 1990 | 3268 | 66.4 | 73.3 | 77.4 |
| Punjab | | | | | | | | | | |
| M | 518 | 225 | 342 | 147 | 27 | 16 | 214 | 71.2 | 72.4 | 76.2 |
| S | 260 | 372 | 169 | 231 | 42 | 60 | 350 | 81.2 | 78.2 | 83.1 |
| S - M | 281 | 795 | 172 | 361 | 71 | 195 | 742 | 86.5 | 69.9 | 74.9 |
| M | 248 | 1514 | 136 | 766 | 93 | 548 | 1401 | 92.3 | 86.8 | 93.7 |
| L | 69 | 1067 | 28 | 364 | 37 | 533 | 934 | 94.2 | 84.0 | 96.0 |
| A - S | 1375 | 3974 | 846 | 1969 | 270 | 1352 | 3641 | 81.2 | 83.5 | 91.2 |

Contd....

Table IV-2 Contd....

| States | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tamil Nadu | | | | | | | | | | | |
| | M | 3125 | 1322 | 1424 | 490 | 278 | 192 | 1112 | 54.5 | 51.6 | 61.3 |
| | S | 2209 | 1578 | 302 | 351 | 351 | 441 | 5282 | 58.9 | 50.0 | 61.8 |
| | S - M | 696 | 1914 | 137 | 288 | 317 | 744 | 1521 | 65.2 | 53.9 | 68.2 |
| | M | 325 | 1893 | 45 | 175 | 191 | 897 | 1434 | 72.6 | 56.6 | 74.8 |
| | L | 59 | 1003 | 5 | 145 | 40 | 436 | 628 | 76.2 | 47.9 | 76.3 |
| | A - S | 5314 | 7709 | 1873 | 1349 | 1277 | 2710 | 5978 | 59.3 | 52.6 | 67.9 |
| Uttar Pradesh | | | | | | | | | | | |
| | M | 10453 | 2829 | 3234 | 994 | 2451 | 1093 | 3596 | 54.4 | 84.5 | 58.1 |
| | S | 2689 | 3775 | 436 | 600 | 1298 | 1699 | 3515 | 64.5 | 60.9 | 65.4 |
| | S - M | 1652 | 4537 | 204 | 553 | 941 | 2390 | 4186 | 69.3 | 64.9 | 70.3 |
| | M | 733 | 4211 | 68 | 375 | 456 | 2376 | 3824 | 71.5 | 65.3 | 71.9 |
| | L | 112 | 1805 | 15 | 118 | 68 | 903 | 1498 | 74.1 | 56.5 | 68.1 |
| | A - S | 15639 | 18158 | 3947 | 2591 | 5195 | 8462 | 16619 | 58.4 | 60.9 | 66.5 |
| All India | | | | | | | | | | | |
| | M | 35682 | 14545 | 8770 | 3052 | 5807 | 2629 | 13002 | 40.8 | 39.0 | 43.7 |
| | S | 13432 | 19282 | 1919 | 2453 | 3719 | 4805 | 17013 | 42.0 | 37.6 | 42.7 |
| | S - M | 10681 | 29999 | 1117 | 2766 | 3472 | 8751 | 26246 | 42.9 | 38.4 | 43.9 |
| | M | 7932 | 48234 | 549 | 2733 | 2900 | 15327 | 50924 | 43.5 | 37.4 | 35.5 |
| | L | 2766 | 50064 | 91 | 1141 | 1052 | 14755 | 38637 | 41.3 | 31.7 | 41.1 |
| | A - S | 70494 | 162124 | 12145 | 12145 | 16950 | 46267 | 135822 | 41.7 | 36.0 | 43.0 |

NOTE : 1) M-for Marginal ; S-for Small ; S-M-for Semi-medium ; M-for Medium
A-S-for All Sizes, in this order

Source : All India Report on Agricultural Census, 1976-77

**TABLE IV - 3 : PERCENTAGE AREA IRRIGATED IN EACH SIZE CLASS UNDER DIFFERENT SOURCES, FOR SELECTED STATES, 1976-77**

| States/size Class | Percentage no.of holdings | Percentage area irrigated by | | | | | Total area area irrigated ('000 ha) |
|---|---|---|---|---|---|---|---|
| | | Canals | Tanks | Wells | Tube-wells | Other sources | |
| Andhra Pradesh | | | | | | | |
| M | 48.6 | 50.6 | 38.2 | 7.2 | 0.9 | 3.0 | 547 |
| S | 18.4 | 51.4 | 34.7 | 9.7 | 1.2 | 3.0 | 526 |
| S - M | 15.8 | 49.5 | 32.8 | 12.0 | 1.5 | 4.2 | 665 |
| M | 12.5 | 46.1 | 32.4 | 15.0 | 1.8 | 4.7 | 799 |
| L | 4.7 | 34.7 | 37.0 | 20.6 | 2.1 | 5.6 | 333 |
| A - S | 100.0 | 46.6 | 34.8 | 13.0 | 1.5 | 4.2 | 1070 |
| Haryana | | | | | | | |
| M | 20.1 | 57.9 | - | 9.6 | 36.5 | 2.0 | 52 |
| S | 17.8 | 53.1 | - | 9.7 | 35.4 | 1.8 | 113 |
| S - M | 24.3 | 53.8 | - | 8.3 | 35.7 | 2.2 | 277 |
| M | 27.7 | 58.7 | - | 6.4 | 33.0 | 1.9 | 624 |
| L | 10.1 | 64.8 | - | 4.1 | 29.0 | 2.1 | 511 |
| A - S | 100.0 | 59.2 | - | 6.3 | 32.5 | 2.0 | 1577 |
| Punjab | | | | | | | |
| M | 33.0 | 47.4 | - | 14.7 | 37.2 | 0.7 | 156 |
| S | 18.9 | 46.2 | - | 11.7 | 41.4 | 0.7 | 265 |
| S - M | 21.8 | 44.6 | - | 8.8 | 45.9 | 0.7 | 581 |
| M | 20.5 | 46.8 | - | 5.6 | 46.9 | 0.7 | 1127 |
| L | 5.8 | 54.4 | - | 3.6 | 41.0 | 1.0 | 718 |
| A - S | 100.0 | 48.3 | - | 6.8 | 44.1 | 0.8 | 2848 |
| Tamil Nadu | | | | | | | |
| M | 55.9 | 36.3 | 40.2 | 21.3 | 1.4 | 0.8 | 588 |
| S | 20.7 | 36.1 | 32.3 | 29.1 | 1.6 | 0.9 | 557 |
| S - M | 14.4 | 34.4 | 30.0 | 32.8 | 2.0 | 0.8 | 606 |
| M | 7.5 | 31.6 | 28.9 | 36.1 | 2.5 | 0.9 | 523 |
| L | 1.5 | 28.6 | 28.0 | 39.3 | 2.6 | 1.5 | 196 |
| A - S | 100.0 | 34.1 | 32.6 | 30.5 | 1.9 | 0.9 | 2470 |
| Uttar Pradesh | | | | | | | |
| M | 62.0 | 30.1 | 5.5 | 25.9 | 32.4 | 6.1 | 1604 |
| S | 19.0 | 33.6 | 4.7 | 23.7 | 32.9 | 5.1 | 1532 |
| S - M | 12.5 | 35.5 | 3.7 | 21.8 | 35.0 | 4.0 | 1873 |
| M | 5.7 | 38.0 | 2.5 | 18.0 | 38.1 | 3.4 | 1661 |
| L | 0.8 | 43.0 | 2.2 | 12.0 | 38.2 | 4.6 | 500 |
| A - S | 100.0 | 35.0 | 3.9 | 21.6 | 34.9 | 4.6 | 7170 |

NOTE : 1) M-for Marginal ; S-for Small ; S-M-for Semi-medium ; M-for Medium A-S-for All Sizes, in this order

Source : All India Report on Input Survey, 1976-77

**TABLE IV - 4 : PERCENTAGE AREA IRRIGATED UNDER EACH SOURCE IN DIFFERENT SIZE CLASSES, FOR SELECTED STATES, 1976-77**

| States/size | Canals | Tanks | Wells | Tubewells | Others | Total Net Irrigate Area. |
|---|---|---|---|---|---|---|
| Andhra Pradesh | | | | | | |
| M | 19.4 | 19.7 | 9.8 | 11.1 | 13.0 | 17.8 |
| S | 18.9 | 17.1 | 12.8 | 13.9 | 12.3 | 17.1 |
| S - M | 23.0 | 20.4 | 20.0 | 20.9 | 22.0 | 21.7 |
| M | 25.8 | 24.3 | 30.0 | 30.2 | 29.4 | 26.0 |
| L | 12.9 | 18.5 | 27.4 | 23.9 | 23.3 | 17.7 |
| A - S | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Haryana | | | | | | |
| M | 2.8 | - | 5.3 | 3.8 | 3.6 | 3.4 |
| S | 6.5 | - | 16.5 | 7.8 | 6.8 | 7.1 |
| S - M | 16.0 | - | 22.8 | 19.3 | 17.9 | 17.6 |
| M | 39.2 | - | 40.1 | 40.2 | 38.2 | 39.6 |
| L | 35.5 | - | 21.3 | 28.9 | 33.5 | 32.3 |
| A - S | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Punjab | | | | | | |
| M | 5.4 | - | 11.9 | 4.6 | 6.5 | 5.4 |
| S | 8.9 | - | 16.1 | 8.7 | 9.7 | 9.4 |
| S - M | 18.9 | - | 26.3 | 21.2 | 18.8 | 20.4 |
| M | 38.4 | - | 32.7 | 42.0 | 35.9 | 39.6 |
| L | 28.4 | - | 13.0 | 23.5 | 29.1 | 25.2 |
| A - S | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Tamil Nadu | | | | | | |
| M | 25.2 | 29.4 | 16.7 | 17.5 | 21.8 | 23.8 |
| S | 23.9 | 22.4 | 21.5 | 19.5 | 20.2 | 22.6 |
| S - M | 24.9 | 22.6 | 26.4 | 24.9 | 25.6 | 24.5 |
| M | 19.6 | 18.7 | 25.2 | 26.9 | 20.3 | 21.2 |
| L | 6.7 | 6.9 | 10.2 | 11.2 | 12.1 | 7.9 |
| A - S | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Uttar Pradesh | | | | | | |
| M | 19.2 | 31.5 | 26.9 | 20.7 | 29.7 | 22.3 |
| S | 20.5 | 25.4 | 23.6 | 20.1 | 23.5 | 21.4 |
| S - M | 26.6 | 24.0 | 26.4 | 26.2 | 22.9 | 26.1 |
| M | 25.1 | 15.0 | 19.2 | 25.3 | 17.2 | 23.2 |
| L | 8.6 | 4.1 | 3.9 | 7.7 | 6.7 | 7.0 |
| A - S | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

NOTE : 1) M-for Marginal ; S-for Small ; S-M-for Semi-medium ; M-for Med: A-S-for All Sizes, in this order

Source : All India Report on Input Survey, 1976-77

**TABLE IV - 5 : AREA COMMANDED BY TUBEWELLS BY SIZE OF OPERATIONAL HOLDINGS.**

(in Per centage)

| Size of Holdings | Size of Motor | | | | | |
|---|---|---|---|---|---|---|
| | 5 H.P. & Below | | 5-10 H.P. | | 10 H.P. & Above | |
| | H | A | H | A | H | A |
| Below 1 Hect. | 1.25 | 1.16 | 0.00 | 2.00 | 0.00 | 0.00 |
| 1-2 Hect. | 1.60 | 1.35 | 0.93 | 1.54 | 0.00 | 0.00 |
| 2-4 Hect. | 2.05 | 2.20 | 2.55 | 2.44 | 0.00 | 0.00 |
| 4-8 Hect. | 2.72 | 3.03 | 3.76 | 3.69 | 5.04 | 0.00 |
| 8-20 Hect. | 4.35 | 4.57 | 5.33 | 5.64 | 6.50 | 0.00 |
| 20 Hect. & above | 7.58 | 1.80 | 9.35 | 13.86 | 10.00 | 17.25 |

NOTE : H.P. - for Horsepower; H - for Holdings; A - for Area operated

Source : Study of Tubewell Irrigation and Ground Water Development Programme - Planning Commission, Govt. of India. New Delhi, 1974

**TABLE : IV - 6 : AVERAGE EXPENDITURE PER HECTARE OF COMMAND AREA BY SIZE GROUP OF CULTIVATION HOLDING IN Rs.**

| State | Tubewells-I Wells with Pumpsets-II | Less than 1 ha. | 1-2 ha. | 2-4 ha. | 4-8 ha. | 8-20 ha | 20 ha. & above | All sizes |
|---|---|---|---|---|---|---|---|---|
| 1. Andhra Pradesh | I | 2407.4 | 2883.1 | 1603.9 | 2469.5 | 1039.9 | 0 | 1918.2 |
| | II | 0 | 756.2 | 756.2 | 0 | 0 | 0 | 756.2 |
| 2. Haryana | I | 0 | 2733.3 | 2120.2 | 1470.9 | 897.1 | 0 | 1306.2 |
| | II | - | - | - | - | - | - | - |
| 3. Punjab | I | 0 | 2977.8 | 2000.0 | 1392.8 | 536.0 | 0 | 883.7 |
| | II | 1875.0 | 0 | 0 | 680.0 | 0 | 0 | 844.8 |
| 4. Tamil Nadu | I | 0 | 2209.5 | 0 | 2200.0 | 0 | 0 | 2205.0 |
| | II | - | - | - | - | - | - | - |
| 5. Uttar Pradesh | I | 0 | 0 | 1876.7 | 1337.0 | 523.1 | 342.0 | 2205.0 |
| | II | - | - | - | - | - | - | - |

NOTE : ha-for hectares, - Means not available.

Source : Study of Tubewell Irrigation and Ground Water Development Programme - Planning Commission, Govt. of India. New Delhi, 1974

**TABLE : IV - 7 : PERCENTAGE AREA UNDER HYV OF SELECTED CROPS TO TOTAL AREA UNDER THAT CROP FOR IRRIGATED AREA (1976-77).**

| Size Class | Rice | | | | | | Wheat | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A.P. | Haryana | Punjab | T.N. | U.P. | India | A.P. | Haryana | Punjab | T.N. | U.P. | India |
| Marginal | 47.9 | 91.7 | 98.9 | 54.7 | 70.7 | 52.1 | - | 84.2 | 99.8 | - | 95.1 | 88.9 |
| Small | 45.8 | 83.7 | 97.6 | 55.5 | 60.1 | 47.5 | - | 82.8 | 99.9 | - | 97.2 | 87.7 |
| S.Medium | 48.0 | 81.9 | 98.1 | 52.4 | 62.4 | 46.8 | - | 79.3 | 99.9 | - | 95.8 | 85.2 |
| Medium | 47.1 | 77.2 | 88.1 | 56.2 | 53.8 | 48.8 | - | 81.4 | 99.9 | - | 96.1 | 77.1 |
| Large | 47.1 | 83.4 | 98.6 | 65.7 | 61.3 | 51.1 | - | 83.6 | 99.9 | - | 94.6 | 75.6 |
| All Sizes | 47.4 | 81.6 | 94.1 | 53.1 | 64.3 | 49.0 | - | 82.0 | 99.9 | - | 96.0 | 82.7 |
| | Maize | | | | | | Jower | | | | | |
| Marginal | 22.8 | 20.5 | 37.9 | - | 9.9 | 38.9 | 59.3 | 0.3 | - | - | - | 49.3 |
| Small | 24.5 | 38.3 | 21.8 | - | 12.1 | 24.9 | 44.7 | 1.9 | - | - | - | 42.5 |
| S.Medium | 45.4 | 20.5 | 36.6 | - | 13.1 | 35.1 | 52.4 | 12.4 | - | - | - | 32.8 |
| Medium | 49.7 | 17.4 | 33.4 | - | 7.9 | 34.7 | 84.7 | 0.5 | - | - | - | 47.1 |
| Large | 56.5 | 22.6 | 42.5 | - | 5.7 | 41.8 | 32.8 | 8.9 | - | - | - | 22.2 |
| All Sizes | 40.7 | 22.3 | 34.3 | - | 10.7 | 34.3 | 49.3 | 5.0 | - | - | - | 37.3 |

NOTE : '-' Stands for insignificant adoption

Source: All India Report on Input Survey, 1976-77.

**TABLE : IV - 8 : FERTILISER CONSUMPTION BY TYPES AND PER HECTARE TOTAL FERTILISER CONSUMPTION FOR SELECTED STATES IN SELECTED YEARS**

(in tonnes)

| | 1961-62 | 1966-67 | 1971-72 | 1976-77 | 1981-82 | 1984-85 |
|---|---|---|---|---|---|---|
| 1. Andhra Pradesh | | | | | | |
| i) Fertiliser Cons. | | | | | | |
| N | 52467 | 175859 | 207000 | 297000 | 456000 | 645000 |
| $P_2O_5$ | 17956 | 35809 | 59000 | 83000 | 150300 | 254400 |
| $K_2O$ | - | 10553 | 17159 | 22000 | 49000 | 81000 |
| Total | 70423 | 222211 | 283159 | 402000 | 155300 | 980400 |
| ii) Per hectare cons. | 4.41 | 13.96 | 22.89 | 30.30 | 50.00 | 75.00 |
| 2. Haryana | | | | | | |
| i) Fertiliser Cons. | | | | | | |
| N | - | 14157 | 60972 | 116000 | 208700 | 272700 |
| $P_2O_5$ | - | 954 | 6860 | 16000 | 32100 | 56200 |
| $K_2O$ | - | 185 | 1228 | 6000 | 10800 | 7600 |
| Total | - | 15296 | 69060 | 138000 | 252600 | 336500 |
| ii) Per hectare cons. | - | 4.89 | 16.62 | 26.60 | 45.50 | 57.70 |
| 3. Punjab. | | | | | | |
| i) Fertiliser Cons. | | | | | | |
| N | 15428 | 68030 | 174766 | 257000 | 570600 | 758700 |
| $P_2O_5$ | 1055 | 14035 | 31362 | 94000 | 217100 | 266500 |
| $K_2O$ | - | 5702 | 7002 | 21000 | 32700 | 22400 |
| Total | 16483 | 84167 | 213130 | 372000 | 820500 | 1047600 |
| ii) Per hectare cons. | 1.51 | 8.96 | 0.69 | 61.60 | 123.70 | 151.20 |
| 4. Tamil Nadu | | | | | | |
| i) Fertiliser Cons. | | | | | | |
| N | 38379 | 95435 | 165000 | 184000 | 373400 | 393900 |
| $P_2O_5$ | 7043 | 36030 | 54000 | 42000 | 91700 | 137900 |
| $K_2O$ | - | 29224 | 40000 | 57000 | 107600 | 158800 |
| Total | 45422 | 169689 | 259000 | 277000 | 512600 | 690600 |
| ii) Per hectare cons. | 5.35 | 18.35 | 48.31 | 36.30 | 66.70 | 100.00 |
| 5. Uttar Pradesh | | | | | | |
| i) Fertiliser Cons. | | | | | | |
| N | 34482 | 97855 | 291425 | 572000 | 950600 | 1240000 |
| $P_2O_5$ | 6066 | 33341 | 74507 | 101000 | 229400 | 288400 |
| $K_2O$ | - | 10595 | 44608 | 56000 | 89600 | 84600 |
| Total | 40548 | 141791 | 410504 | 729000 | 1269600 | 1613600 |
| ii) Per hectare cons. | 1.38 | 5.51 | 20.90 | 31.70 | 52.20 | 65.10 |

NOTE : Per hectare consumption is in Kgs/hectare.

Source : Fertiliser Statistics, various issues

TABLE IV 9 : **RATE OF APPLICATION OF CHEMICAL FERTILISERS AND ORGANIC MANURES IN IRRIGATED AREAS AND UN-IRRIGATED AREAS FOR ALL SELECTED CROPS, FOR SELECTED STATES, (1976-77)**

(in Kgs/hectare)

| Size classes | | | A.P. | Haryana | Punjab | T.N. | U.P. | India |
|---|---|---|---|---|---|---|---|---|
| 1. Marginal | i) CF | I | 132 | 136 | 145 | 171 | 116 | 138 |
| | | U | 127 | 116 | 103 | 450 | 104 | 97 |
| | ii) OM | I | 96 | 73 | 14015 | 10188 | 8394 | 5104 |
| | | U | 63 | 70 | 14096 | 9364 | 1966 | 3506 |
| 2. Small | i) CF | I | 128 | 132 | 131 | 160 | 113 | 125 |
| | | U | 151 | 96 | 92 | 300 | 94 | 110 |
| | ii) OM | I | 103 | 75 | 11716 | 9231 | 7049 | 4046 |
| | | U | 60 | 57 | 22781 | 10449 | 8967 | 3259 |
| 3. S.Medium | i) CF | I | 123 | 146 | 124 | 166 | 102 | 125 |
| | | U | 116 | 85 | 138 | 113 | 90 | 91 |
| | ii) OM | I | 119 | 81 | 8840 | 6341 | 5435 | 2239 |
| | | U | 57 | 48 | 15712 | 9184 | 7684 | 2739 |
| 4. Medium | i) CF | I | 107 | 117 | 125 | 219 | 104 | 121 |
| | | U | 127 | 99 | 115 | 145 | 88 | 99 |
| | ii) OM | I | 99 | 760 | 12852 | 2759 | 7090 | 4278 |
| | | U | 37 | 52 | 5605 | 7715 | 7071 | 1923 |
| 5. Large | i) CF | I | 145 | 121 | 110 | 145 | 95 | 126 |
| | | U | 100 | 116 | 105 | 97 | 80 | 88 |
| | ii) OM | I | 99 | 78 | 16769 | 9833 | 6510 | 3626 |
| | | U | 32 | 56 | 12943 | 3931 | 3580 | 2438 |
| 6. All Sizes | i) CF | I | 125 | 125 | 122 | 174 | 108 | 126 |
| | | U | 121 | 100 | 115 | 251 | 94 | 97 |
| | ii) OM | I | 103 | 78 | 13808 | 9220 | 7284 | 3988 |
| | | U | 46 | 54 | 14043 | 9111 | 8194 | 2708 |

NOTE : I-for irrigated, U - for unirrigated ; CF-for Chemical Fertiliser, OM-for Organic Manures.

Source : All India Report on Input Survey, 1976-77.

**TABLE : IV - 10 : PERCENTAGE OF HOLDINGS AND PERCENTAGE OF AREA TREATED WITH FERTILISERS TO TOTAL NUMBER OF HOLDINGS AND TO TOTAL AREA RESPECTIVELY UNDER SELECTED CROPS IN IRRIGATED AREAS FOR SELECTED STATES AND ALL INDIA, 1976-77.**

| | Andhra Pradesh | | Haryana | | Punjab | | Tamil Nadu | | Uttar Pradesh | | All India | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CF | OM | CF | OM | CF | OM | CF | OM | CF | OM | CF | OM |
| 1. Marginal | | | | | | | | | | | | |
| Holdings | 77.3 | 93.0 | 83.1 | 85.5 | 79.1 | 49.6 | 78.8 | 74.6 | 77.8 | 56.2 | 62.9 | 51.0 |
| Area | 60.5 | 67.0 | 72.3 | 98.5 | 82.9 | 35.2 | 85.1 | 72.4 | 63.4 | 41.3 | 66.1 | 48.4 |
| 2. Small | | | | | | | | | | | | |
| Holdings | 71.7 | 78.9 | 89.1 | 91.4 | 80.0 | 51.2 | 82.1 | 77.5 | 80.1 | 59.3 | 74.8 | 60.9 |
| Area | 73.1 | 61.1 | 76.8 | 94.9 | 74.0 | 26.6 | 85.3 | 73.3 | 69.9 | 34.6 | 72.7 | 48.8 |
| 3. Semi-Medium | | | | | | | | | | | | |
| Holdings | 73.3 | 70.5 | 98.0 | 99.3 | 88.1 | 64.5 | 82.8 | 78.0 | 81.0 | 61.4 | 75.2 | 59.6 |
| Area | 70.9 | 50.8 | 78.5 | 92.9 | 72.6 | 22.1 | 85.6 | 75.5 | 78.7 | 38.0 | 72.9 | 46.6 |
| 4. Medium | | | | | | | | | | | | |
| Holdings | 68.1 | 69.4 | 98.1 | 100.0 | 95.6 | 70.5 | 80.6 | 69.9 | 88.7 | 64.2 | 77.6 | 58.7 |
| Area | 73.8 | 56.5 | 82.9 | 93.9 | 77.3 | 24.7 | 85.2 | 69.8 | 82.9 | 37.3 | 74.2 | 46.6 |
| 5. Large | | | | | | | | | | | | |
| Holdings | 74.6 | 82.3 | 99.0 | 100.0 | 75.0 | 53.8 | 82.4 | 72.7 | 84.4 | 67.3 | 73.6 | 57.7 |
| Area | 72.8 | 39.8 | 94.5 | 92.7 | 80.9 | 19.3 | 85.1 | 67.6 | 77.5 | 33.3 | 72.4 | 40.5 |
| 6. All Sizes | | | | | | | | | | | | |
| Holdings | 73.5 | 80.5 | 93.2 | 95.1 | 85.4 | 57.6 | 80.3 | 75.5 | 75.6 | 58.0 | 69.1 | 55.3 |
| Area | 70.4 | 55.4 | 84.4 | 93.6 | 76.7 | 23.5 | 85.4 | 72.8 | 73.1 | 37.0 | 71.4 | 46.5 |

NOTE : CF - for Chemical Fertiliser; OM-for Organic Manures

Source : All India Report on Input Survey, 1976-77

**TABLE : IV - 11 : NUMBER OF AGRICULTURAL MACHINERY OWNED PER 1000 OPERATING HOUSEHOLDS, FOR SELECTED STATES**

| Size Class | Andhra Pradesh | | Haryana | | Punjab | | Tamil Nadu | | Uttar Pradesh | | All India | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 71-72 | 76-77 | 71-72 | 76-77 | 71-72 | 76-77 | 71-72 | 76-77 | 71-72 | 76-77 | 71-72 | 76-77 |
| 1. Marginal | | | | | | | | | | | | |
| Ploughs | 543 | 568 | 470 | 410 | 935 | 1200 | 816 | 356 | 791 | 764 | 600 | 614 |
| Pumps | 9 | 18 | 16 | 89 | 41 | 410 | 29 | 47 | 8 | 18 | | 25 |
| Tractors | - | 0.3 | - | 5 | - | 60 | - | 0.1 | - | 0.2 | | 1 |
| 2. Small | | | | | | | | | | | | |
| Ploughs | 1051 | 804 | 876 | 751 | 1456 | 1410 | 1558 | 935 | 1251 | 1272 | 1183 | 938 |
| Pumps | 32 | 64 | 96 | 156 | 165 | 906 | 15 | 192 | 30 | 96 | 30 | 84 |
| Tractors | - | - | - | 36 | - | 60 | 6 | 2 | 1 | 4 | 0.2 | 5 |
| 3. Semi-Medium | | | | | | | | | | | | |
| Ploughs | 1313 | 1138 | 1140 | 1025 | 1951 | 2100 | 1904 | 1295 | 1514 | 1678 | 1449 | 1211 |
| Pumps | 43 | 158 | 86 | 188 | 240 | 770 | 228 | 356 | 57 | 237 | 58 | 148 |
| Tractors | - | 3 | - | 10 | 8 | 140 | 2 | 2 | 2 | 12 | 4 | 6 |
| 4. Medium | | | | | | | | | | | | |
| Ploughs | 1847 | 1671 | 1698 | 1266 | 2437 | 2210 | 3084 | 1612 | 2412 | 2309 | 1822 | 1523 |
| Pumps | 154 | 260 | 166 | 334 | 466 | 1200 | 481 | 462 | 128 | 486 | 134 | 251 |
| Tractors | 4 | 12 | 29 | 64 | 69 | 278 | 13 | 13 | 15 | 59 | 5 | 25 |
| 5. Large | | | | | | | | | | | | |
| Ploughs | 3549 | 2337 | 2557 | 1219 | 3397 | 3230 | 4836 | 1837 | 2707 | 3360 | 2493 | 1960 |
| Pumps | 378 | 549 | 365 | 374 | 879 | 1430 | 1058 | 635 | 249 | 535 | 156 | 347 |
| Tractors | - | 50 | 83 | 163 | 343 | 450 | 11 | 46 | 95 | 200 | 25 | 52 |
| 6. All Sizes | | | | | | | | | | | | |
| Ploughs | 673 | 910 | 1439 | 851 | 2054 | 1887 | 747 | 641 | 790 | 1072 | 790 | 891 |
| Pumps | 27 | 99 | 108 | 197 | 309 | 886 | 69 | 134 | 38 | 74 | 33 | 86 |
| Tractors | 0.2 | 4 | 12 | 36 | 44 | 164 | 1 | 2 | 1.4 | 5 | 1 | 6 |

NOTS : (1) Marginal class does not include the class with no operated land

Source : (i) NSS, 26,th Rd., No. 215 for 1971-72 figures.
(ii) All India Report on Input Survey for 1976-77 figures.

## CHAPTER - V

## THE STATE AND ADMINISTERED PRICES POLICY IN AGRICULTURE

5.1 In the preceding chapters we have examined in reasonable detail the direct and indirect impacts of the state policies of land reforms and new agricultural technology on capitalist development in Indian agriculture. In this chapter our concern is to study the implications of yet another state policy, namely, the administered prices policy in agriculture, for capitalist development in agriculture in India. It is generally viewed that, the state pricing policy is an integral part of the programme of new technology that has been introduced into the Indian agriculture because it is felt that to ensure maximum adoptation of this technology among farmers, price incentives to the producers would play a pivotal role in ensuring the gains from new technology. Therefore, we would like to examine the farm price policy in India particularly from the perspective of the class configuration in agriculture. Towards this end we decide to examine the three relevant aspects concerning this theme. Firstly, an account of price policy including a brief sketch of the role of Agriculture Prices Commission (APC, henceforth), its functioning and the role of politics in its price setting is discussed. The process by which free market prices are

influenced by the procurement prices is spelt out. Secondly, we study the impact of such prices on the terms of trade between agriculture and industry. And finally, the impact of farm prices on the distribution of income is studied, in reasonable detail.

## 5.2A. STATE PRICE POLICY - THE PROCESS AND ITS POLITICS

With the introduction of the new technology, in the mid 1960s, the state realised the express need to provide producers incentives for its adoption. The result was the Agricultural Prices Commission, set up in 1965 with a specific purpose to bring forth a 'balanced, well-integrated price policy' to obtain 'optimum land use and production pattern'. Price stability as an objective was of overriding importance.

The APC publishes, generally, two reports per annum recommending the procurement (and minimum support) prices of various crops. These recommended prices are then deliberated upon by the Union Minister of Agriculture, the other members of the union cabinet and the Chief Ministers of the states and the actual procurement prices are then decided upon by the government. It so happened that the actual prices decided upon exceeded the prices recommended

by the APC. Table 5.1 shows that between 1964-65 to 1976-77, in almost all the years, the actual procurement prices exceeded the prices recommended by the APC both for rice and for wheat. In some years this difference has been to the tone of twenty or thirty per cent.

This process gives an indication of the dominance of the surplus producing rich farmers in the political set up of India. This belief is even more strengthened when one takes into account how the functioning of the APC was adjusted to suit the needs of the political parties in powers. In 1979, the Janata government at the centre attempted to amend the terms of reference of the APC so as to make the latter take the net barter terms of trade between agricultural and non-agricultural commodities into consideration while recommending prices. Though this attempt was thwarted by the then chairman of the APC, the amendment was carried out only a year later by the next government at the centre. The crux of this amendment was that if prices of commodities bought by agriculture rise, then, productivity gains not withstanding, the prices of foodgrains would also rise.[1] In the very next year the procurement price made a quantum jump by Rs.12 per quintal

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1. Alain De Janvry & K. Subbarao, Agricultural Price Policy and Income Distribution in India, Oxford University Press, 1986

**TABLE : 5.1**

MEAN EXCESS OF THE PROCUREMENT PRICE FIXED BY THE STATE (GOVERNMENT) OVER THE PRICE RECOMMENDED BY THE APC FOR WHEAT AND RICE, 1964-65 TO 1976-77.

| Year | Percentage | |
|---|---|---|
| | Wheat | Rice |
| 1964-65 | - | 4 |
| 1965-66 | - | 7 |
| 1966-67 | 1 | 16 |
| 1967-68 | 34 | 21 |
| 1968-69 | 7 | 4 |
| 1969-70 | 9 | 1 |
| 1970-71 | 6 | 0 |
| 1971-72 | 3 | 2 |
| 1972-73 | 6 | 2 |
| 1973-74 | 3 | 12 |
| 1974-75 | 0 | -2 |
| 1975-76 | 1 | 0 |
| 1976-77 | 6 | - |

Note : '-' implies not available.

Source : Raj Krishna and G.S. Ray Choudhary, "Some aspects of wheat and rice price policy in India". World Bank Staff Working Paper No. 381, 1980; From : A. De Janvry and K. Subbarao, p.18.

to Rs.142 per quintal. Thereby, the necessity of the gap between recommended and actual prices was taken care of. That purely economic considerations were not the basis of the above change is clear if one notes that taking net barter terms of trade as a reliable index of relative profits and therefore purchasing power is subject to controversy. However to throw more light on this issue a detailed discussion is undertaken in section 5.3.

## B. THE RELATIONSHIP BETWEEN PURCHASE PRICES AND FREE MARKET PRICES

Having discussed the price fixation by APC we now see as to how the procurement prices work as a determining factor for the free market farm prices. It is often pointed out that the purchase price in general help in keeping the open market price much higher. This happens sometime inspite of the significant increase in the production of food grains. As a result, the impact of expansion of output on open market price determination is very weak. For example, between 1964-65 to 1972-73, the production of wheat increased by 125 per cent whereas that of rice increased by about 10 per cent. Therefore, it may legitimately be expected that prices of wheat and rice may fall. However, much against our expectation, not only did prices for both wheat and rice increase, the prices for wheat have risen at

a faster pace than those for rice. The rise in the weighted wholesale price index for wheat was around 100 per cent while the same for rice was 70 per cent.[2] So the effect of supply was quite weak on price determination in the market.

If output, or rather the demand and supply of it hold a relatively weak influence on determination of farm product prices or market prices, then what are the more dominant forces in their determination. It is observed that while the broad trend to prices is provided by the state through its reputation as the price setter, the actual open market prices are largely determined by the market operations of the large farmers who have surplus produce for the market. To begin with the state sets its prices through its intervention in the foodgrains marketing. Even if actual procurement is quite low (the percentage of procurement to production is between 15 to 20 per cent for rice and wheat in recent years)[3], the economic significance of these prices lies in the fact that they set a floor to the market price and they serve the purpose of indicators signalling the trends in market prices. But in the ultimate analysis it is the large farmers who hold large stocks of marketable surplus and are instrumental in setting the market

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2. See A. Mitra, Terms of Trade and Class Relations. OUP, 1986

3. Computed from the recent issues of Bulletin of Food Statistics.

prices, not the marketable surplus per se. The reason is that small farmers who market a proportion of their output do so at the beginning of the harvesting season because they have needs which have to be met expressly. Moreover, they hold too small stocks to indulge in speculative trading. On the other hand, the large farmers, with substantial marketable surplus in their hands (since their consumption needs form a relatively small proportion of their output), have a crucial impact on the setting of free market prices, the collective share of this class in the total marketed surplus not withstanding. This is due to their capacity to hold back stocks and control the time, place and quantity of release which has a pivotal role on price determination. In other words, they operate at the margin[4] where the influence on the price is decisive. That they can afford such speculation is aided by the insurance of state procurement prices. The procurement price is the worst bargain they need ever to settle for, though for necessities like foodgrains such a situation will perhaps never arise. And to the extent that state prices of any one crop has an inflationary effect on the general level of farm prices[5], their capacity to hoard gets further strengthened.

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4. A. Mitra, op. cit., p. 112

5. This is because of the bullishness that procurement prices impart on market expectations. For a clearer exposition see Mitra, op. cit., p.110

## 5.3 TERMS OF TRADE AND FARM PRICE POLICY

It has been mentioned by some that, by ensuring a relatively higher open market price, the Government in the process, has also helped in tilting the term of trade in favour of agriculture atleast during the earlier period of technological adoption by the farmers. Indeed, one well-known aspect of the Indian economy has been the relatively faster rise of the agricultural prices relative to the industrial prices. Ashok Mitra[6] has maintained all along that in the 1960s, the net barter terms of trade were moving in favour of agriculture. Similarly this trend has also been discerned by R. Thamarajakshi[7] (see col.3, Table 5.2 for his estimates). He estimated that between 1960-61 to 1973-74, the index of net barter terms of trade have moved up from 100 to 133.32. D.S. Tyagi (see col.1, Table 4.2) estimated a less favourable situation for agriculture. His estimate shows that the index of net barter terms of trade which was 79.1 in 1960-61 (1969-72 = 100) had moved up to 109.6 by 1973-74. Therefore, we see that in all of these estimates there seems to be little difference of opinion of the tendency of the net barter terms of trade to go in favour of agriculture.

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6. Mitra, op.cit.

7. R. Thamarajaskshi. Role of Price Incentives in Stimulating Agricultural Production.

**TABLE 5.2**

**INDEXES OF TERMS OF TRADE, INDIA, 1960-61 TO 1980-81.**

| Year | Net Barter | | | Income |
|---|---|---|---|---|
| | Estimate (Triemiumending (1971-72=100) | Estimate 2 (1971-72=100) | Estimate 3 (1960-61=100) | (1960-100) |
| 1960-61 | 79.1 | | 100.00 | 100.00 |
| 1961-62 | 80.6 | | 100.69 | 106.2 |
| 1962-63 | 72.3 | | 99.09 | 106.17 |
| 1963-64 | 72.9 | | 97,39 | 108.90 |
| 1964-65 | 94.0 | | 114.47 | 123.95 |
| 1965-66 | 102.9 | | 123.07 | 129.04 |
| 1966-67 | 112.9 | | 125.02 | 149.99 |
| 1967-68 | 115.6 | 117.8 | 116.27 | 143.62 |
| 1968-69 | 105.1 | 105.8 | 125.72 | 167.08 |
| 1969-70 | 101.8 | 102.0 | 127.32 | 178.88 |
| 1970-71 | 100.00 | 99.6 | 120.08 | 181.31 |
| 1971-72 | 97.5 | 97.7 | 118.90 | 173.81 |
| 1972-73 | 103.5 | 103.5 | 136.98 | 206.11 |
| 1973.74 | 109.6 | 108.6 | 133.32 | - |
| 1974-75 | 99.9 | 101.6 | - | - |
| 1975-76 | 84.6 | 86.7 | - | - |
| 1976.77 | 90.7 | 90.4 | - | - |
| 1977-78 | 90.8 | 90.3 | - | - |
| 1978-79 | 85.4 | - | - | - |
| 1979-80 | 88.6 | - | - | - |
| 1980-81 | 87.3 | - | - | - |

Source : i) D.S. Tyagi as in G.S. Bhalla-Some issues in Agricultural Development in India.

ii) Kahlon and Tyagi, Inter-sectoral terms of trade EPW XV (1980) : A-173-84.

iii) R. Thamarajakshi, As quoted in A. DE Janvry and K. subbarao, op.cit.pp.32-33

Note: Net barter terms of trade is computed by $P_x/P_y$ while income terms of trade is computed by $P_x.X /P_y$

Where $P_x$ denotes prices of agricultural export and $P_y$ denotes imports into agriculture, Xdenotes volume of exports from agriculture.

In providing the explanation for such a movement in the terms of trade it is mentioned (Mitra : 1977 )[8] that such movement in terms of trade can not be explained by the relative production levels of the two sectors also. Such a relatively faster rise of prices in agriculture could be attributed to the state's role to increase procurement prices and thereby the open market price. In the previous section, we have noted that open market farm prices also tend to get determined on the basis of state pricing policy and less by any actual movements in output.

During 1970s, the movements in the terms of trade seem to be subject to varied interpretations. According to the estimates of Kahlon and Tyagi the index of net barter terms of trade has decreased from 99.6 in 1970-71 to 90.3 in 1977-78. Tyagi in his separate estimate also reaches an identical conclusion (see cols. 1 and 2, Table 5.2). A look at Thamarajakshi's figures till 1973-74 would suggest that the movement is still in favour of agriculture. If one can extrapolate Mitra's analysis, since procurement prices have been rising steadily and sharply, the terms of trade might still be in favour of agriculture, since the former was his chief causal factor for movements in the latter.

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8. Mitra, op.cit., p.108.

The decline in the terms of trade for agriculture in the seventies may simply be a matter of statistics, if one notes the different base years taken[9] by the different economists. What is of significance is that, based on their analysis of the movements of terms of trade, Kahlon and Tyagi went to the extent of recommending a further rise in procurement prices to maintain producers' incentives as according to them "with the proportion of purchased inputs rising with the modernisation of agriculture, the adverse terms of trade can substantially affect the level of technological inputs used and hence capital formation and level of output".[10] However, given the doubts that arise concerning the actual movements in the net barter terms of trade, and also given that this index may not be a reliable indicator of the relative profit and purchasing power between the two sectors, using it to recommend policy prescriptions may not be fully justified. For example, movements in the income terms of trade would indicate that the relative income generated was much higher in agriculture. Table 5.2 (col.4) would suggest that during

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9. The prices during the triennium ending 1971-72 were unusually high because (much higher than in the mid-60s) due to the mid-60s being drought years. Unusually favourable terms of trade therefore existed for agriculture in this base year.

10. Kahlon & Tyagi, op.cit., p. A-182.

the period between the mid-1960s and 1974-75, the income terms of trade increased by 51 per cent more than the net barter terms of trade. The income terms of trade, since it takes into account the purchasing power of the sale proceeds of agriculture to the rest of the economy[11], may be a better indicator of relative profitability.

In the conclusion it may be said that the movements in the net barter terms of trade is both a result of administered price policy and is used in turn to prop up the administered prices. As a consequence of this cycle, the procurement prices have got a strong thrust in the upward directions. So long as the benefits flow to agriculture, since an overwhelming per cent of the population live within this sector, there may be little cause to complain. But the impact of this increase in administered price hardly seems to induce a favourable distribution of income in agriculture, the aspect we take up for discussion in the following section.

## 5.4 PROCUREMENT PRICES AND INCOME DISTRIBUTION

The economics of procurement prices is quite complicated to draw any definitive conclusions, given the

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11. See note 1 to the Table 5.2 for the definitions of the two indices.

complex character of the agricultural sector in India. However, few studies which have looked into this area did bring out the unequal impact of minimum support prices and procurement prices and of consequent high open market prices on the farmers of various size categories.

It is quite natural that the farmer who manage to sell a larger proportion of their output at open market price would benefit more and derive larger income advantages as compared to those who manage market surplus only during peak seasons. Table 5.3 suggests that the large farmers' share in total marketed surplus is considerably higher than their share in total output. Again whereas large farmers sell more than half of their output the small farmers (with holdings of less than 4 hectares) hardly sell a quarter of their produce. Moreover, if one takes into consideration that the large farmers sell during the peak-price season, one can easily visualise how the rising farm prices help the large farmers.

The above discussion, in itself is however, not conclusive. For a meaningful analysis one needs to analyse various other economic factors that go into determining the actual benefits. The most important factor is the cost of production which in fact, given prices, determines the actual

Table 5.3 Distribution of Agricultural output and marketed surplus by size classes. 1960-61 (per cent)

| Size of Farms (in hectares) | Share in the value of | | Marketed surplus as a percentage of total output |
|---|---|---|---|
| | Total output | Total marketed surplus | |
| Less than 2 | 25.2 | 16.3 | 23.0 |
| 2-4 | 22.7 | 17.0 | 26.6 |
| 4-10 | 27.1 | 27.1 | 35.3 |
| More than 10 | 25.0 | 39.6 | 56.6 |
| All sizes | 100.0 | 100.0 | 35.3 |

Source: Utsa Patnaik, Contribution to the output and marketed surplus of agricultural products by cultivating groups in India, 1960-61, EPW, X(1975), A90-100.

profits. The second is the beneficiary effect that rising farm prices (by raising output or farm activity) have on the agricultural labour (a good part of the small and marginal farmers fall within this class) through the employment effect. We will take up one by one.

## A. PROCUREMENT PRICES AND COST OF PRODUCTION

As far as the relationship between procurement prices and the cost of production is concerned, there has been some documented evidence to show that the procurement prices in recent years [Krishna and Ray Chowdhury (1980), Rao (1981) and Subbarao (1979, 1982)]. Broadly, these writings suggest that in the 1950s, procurement prices did not cover the costs of production. But as the procurement volume was low and the farm harvest prices exceeded the cost of production, producers' returns did not get hampered. After the Green Revolution however, the procurement prices have tended to be above the cost of production and sometimes approximating to the prevailing market prices. Krishna and Ray Chowdhury[12], commenting on the regional aspects of this price policy, note that until the early seventies, procurement price for rice did not cover the cost of production in West Bengal and all southern states, but did

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12. Raj Krishna and G.S. Ray Chowdhury, World Bank Staff Working Papers, no.381, Washington, 1980.

**TABLE – 5.4**

INTERSTATE DIFFERENCES IN AVERAGE COST OF PRODUCTION OF pADDY (A.P. AND PUNJAB) IN 1978-79 AND WHEAT (WEST BENGAL AND PUNJAB) IN 1975-76.

| | | Paddy | | Wheat | |
|---|---|---|---|---|---|
| | | A.P. | PUNJAB | West Bengal | Punjab |
| 1. | Total.cost (in Rs. per (hectare) | 3883 | 3361 | 2461 | 2632 |
| 2. | Purchased material inputs (in Rs. per he.) | 1289 | 1911 | 934 | 1164 |
| 3. | Labour input (in Rs. Per he.) | 849 | 418 | 577 | 536 |
| 4. | Other fixed cost (Rs. per he.) | 99 | 269 | 75 | 166 |
| 5. | Yield Quintals per hec.) | 30.7 | 49.5 | 119.9 | 23.1 |
| 6. | Average cost 99.58oduction (Rs. per mt.) | 88.36 | 67.49 | 114.0 | 99.48 |

Source : See Table 5.1

so in the northern states. From the mid 1970s, however, the procurement price fixed has been above the cost of production in all the states.

Given that the large farmers take a larger share of output marketed, even if the cost of production is uniform over different sizes (which however will not be the case) the retained profits by the large sized farms will be substantially high. However, since productivity now seems to positively related to farm size, large farmers will gain more because of the consequent drop in unit costs.

Another aspect worth mentioning here is that since the procurement price set is high enough to cover the cost of production in a high cost region, the low cost regions as well as the high productive farms in this low cost region gain substantial 'differential rents'. The consequential rise in the rental value of land (and rental income to these low cost farmers) is reflected in higher costs of the rent-paying farmers and therefore, is transmitted to a rise in the price fixed by the APC. The difference in costs between regions (see Table 5.4) by favouring the high productive states (e.g., Punjab) result in higher profits for such regions. For instance, procurement price for wheat in 1975-76, was Rs.105 per quintal, and the cost of production in

the same year was Rs.114 per quintal in West Bengal and Rs. 99.48 per quintal in Punjab. Thus as a region Punjab stood to gain relatively larger gains. Thus the pricing policy seem to shower larger benefits in the developed regions, thereby resulting in a lop-sided development of agriculture.

## B. PRICE RISE AND EMPLOYMENT EFFECT

Let us now try to observe the effects of a rising farm prices on the class of agricultural labourers. A general rise in output implies a general decline in price level. In a situation of less state intervention, the small farmers and agricultural labourers will gain due to two reasons; (1) beause they are net buyers of food and (ii) through the employment effects of output growth. However, in India, we see that output growth is accompanied by rising prices primarily due to state policy. Therefore, this class (of agricultural labourers and small farmers) which gains as a result of the employment effect will experience a substantial erosion of these benefits by a fall in its real income[13] (since they are net buyers of food). On the other hand, the surplus producing rich farmers gain through a rise in their nominal income. The situation does not change

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13. Alain De Janvry & K. Subbarao, op.cit. This line of reasoning is well explained by these authors.

perceptibly if one considers for analysis a partial rise in output and prices, i.e., for one crop, say wheat or rice.

What is the precise role of the price policy of the state then ? First, by making prices downwardly inflexible the state harms the nominal gains of labourers and small farmers through the employment effect. And secondly, public storage of foodgrains, by bidding up open market prices, also undermines the nominal income gains of the small farmers and labourers. "Price fixing and increased public storage, ....., have, however, been clear tendencies in the recent years of good harvests negating opportunities to the poor for substantial welfare improvements."[14]

A similar conclusion is reached by Binswanger and Quizon (1984) when they state that while the rural rich stand to gain from increased public storage (and price fixing), the net buyers benefit from free market domestic absorption of a rise in output.

Another aspect of price setting by the state is that in so far as price of any one commodity is fixed, it imparts a potentially inflationary effect on the general

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14. ibid. p.63.

price level[15]. Particularly if such price increases are associated with no output response[16], large and medium farmers gain both in the short run and in the medium or long run while the poor agrarian classes suffer due to (i) absence of any employment effect, and (ii) erosion of real income.

## 5.6 CONCLUSION

In this chapter we saw that the state pricing policy has concentrated on infusing a downward inflexibility into the farm prices. This has resulted in unequal benefits accruing to the different classes in agriculture. Given that the constant pegging up of purchase prices has an inflationary effect on the open market prices the large and medium farmers experienced a rise in their nominal income-levels. To the extent that the resultant output increase has, through a favourable employment effect, increased the nominal income levels of the small farmers and agricultural labourers, they stood to gain from increased prices. But

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15. This point is supported by the works of Mitra, op. cit. and De Janvry & Subbarao, op. cit.

16. Krishna, for example, shows that the supply elasticity with respect to technology is three times that with respect to price. See Raj Krishna, Food Research Institute Studies, as discussed in De Janvry & Subbarao, op. cit., p. 31.

this increase in their nominal income has been offset by erosion of their real income levels since they are net buyers of foodgrains.

The net effect of the state pricing policy therefore, has worked against the poor peasant and agricultural labourers. The attempt to increase agricultural production by promoting the growth of a small class of rich farmers (in a capitalist direction) seems to be at the cost of these deprived sections in agriculture.

**TABLE 5.5**

SURPLUS INCOME, CONSUMPTION AND SAVINGS OF PROGRESSIVE CULTIVATORS IN HARYANA.

(CLEAN VALUES PER OUTPUT)

| | Category of operational holdings | | | | | |
|---|---|---|---|---|---|---|
| | 5or less | 5 - 10 | 10 -20 | 20 - 30 | 30 above | Average |
| 1. Net operational holding (acres) | 3.38 | 7.95 | 15.03 | 24.32 | 38.56 | 12.28 |
| 2. Total farm output (Rs.) | 3802.81 | 8687.27 | 1538.17 | 20285.62 | 27857.91 | 11531.09 |
| 3. Total business income (Rs.) | 1718.77 | 3133.45 | 5698.10 | 7665.60 | 12022.86 | 4468.08 |
| 4. Farm business income (Rs.) | 2084.03 | 5553.81 | 9689.07 | 12617.02 | 15835.04 | 7062.99 |
| 5. Income from other sources (Rs.) | 707.55 | 405.42 | 546.40 | 630.39 | 17777.24 | 645.36 |
| 6. Consumption (Rs.) | 5552.08 | 4167.31 | 5946.39 | 8386.39 | 12807.73 | 5414.38 |
| 7. Savings (Rs.) | -560.47 | -1791.92 | 4289.08 | 4061.02 | 4804.55 | 2293.98 |

Sources : G.S. Bhalla, Transfer of Technology and Agricultural Development in India, Economic and Political Weekly, Vol. XIV, No. 551-52, December, 1979.

**TABLE 5.6**

PROCUREMENT PRICE, FARM HARVEST PRICE AND FREE MARKET PRICE OF WHEAT AND PADDY.

| Year | Wheat | | | Paddy | | |
|---|---|---|---|---|---|---|
| | Procurement price | Farm harvest price | Retail price | Prodúrement price | Farm harvest price | Retail price |
| 1965-66 | 44.50 | 66.63 | - | 35.00-40.00 | 74.84 | |
| 1970-71 | 76.00 | 78.31 | - | 45.00-56.25 | 94.81 | |
| 1975-76 | 105.00 | 105.72 | - | 74.00 | 92.40 | |
| 1976-77 | 105.00 | 110.90 | - | 74.00 | 92.25 | |
| 1977-78 | 110.00 | 112.23 | - | 77.00 | 115.81 | |
| 1978.79 | 112.50 | 115.50 | 137.91 | 85.00 | 116.99 | 167.30 |
| 1979-80 | 115.00 | 121.52 | 142.52 | 95.00 | 138.02 | 178.42 |
| 1980-81 | 117.00 | - | 186.83 | 105.00 | | 217.40 |
| 1981-82 | 130.00 | - | 196.44 | 115.00 | - | 299.38 |
| 1982-83 | 142.00 | - | 247.13 | 122.00 | - | 284.76 |
| 1983-84 | 157.00 | - | - | 132.00 | - | - |
| 1984-85 | 152.00 | - | - | 137.00 | - | - |

NOTE : i) Farm harvest prices for wheat are average of Punjab and Haryana prices and Paddy are average of Andhra Pradesh and Tamil Nadu prices,

ii) Retail prices are taken from De Janvry and Subbarao. In case of Paddy, retail price of rice is given.

Source: Bulleting of Food Statistics; De Janvry and Subbarao-see TAble 5.1.

## CHAPTER - VI

## CONCLUSION

Just after independence when the new Indian state came into being, one overriding policy objective that came to the fore was the elimination of poverty. Given that then more than seventy percent of the population derived their livelihood in agriculture, increasing agricultural output became an absolute necessity for poverty eradication Given that the agricultural sphere was backward and virtually stagnant for decades, state intervention to raise output was on the cards. It is at this point that the state took the most significant step for agrarian reforms that was to dictate all future policy prescriptions

At this time there were three alternatives to reform the institutional set - up in agriculture that were open to the state. First, it could have nationalised all cultivable land and then either make them state operated or lease land out to individuals for cultivation. However abolition of private property in land, as this would entail, could not have been carried out given the nature of the state. Second, it could have promoted the formation of co-operatives. This, as we noted in chapter I, was considered by Nehru only to be given up later since this involved a dissolution of the power of the rural oligarchy. The third

atternative was to induce a technological transformation into agriculture leaving private property in tact.

But at that point of time (early 1950s) the institutional set up clearly was not conducive to a technological break through. Absentee landlordism, over - abundance of a sterile class of intermediaries and various other feudal elements, put agriculture in shackles. Thus the land reforms were necessary. Even at this point the state had two alternatives to promote agrarian capitalism.It could have brought about the more egalitarian path of peasant capitalism under which land distribution is more equal, or it could have opted for landlord capitalism where output growth could have been achieved but without justice.This dissertation is an attempt to show that it has followed the latter path becouse of its very nature. The class of rich farmers and big landlords were made the flagbearers of agricultural growth while the vast mass of agricultural labourers and small farmers were left to the fringe benefits of growth. This not only shows that of growth was given preference to social justice, but also is a pointer to how the state policies were geared to the benefits of this class of rich peasants. That this class bias is reflected in most of the state policies is tried to be shown in this study. To this extent this work is more in

the nature of given an interpretation to state policy, from the view point of the class structure in agriculture.

Towards this end we subdivided the state policies into two broad strands, viz. , Land Reforms till the mid-1960s and the introduction of the New Technology after this period.Since price incentives to the producers was a major component of the new technology, we dealt with the state price policy in agriculture in a separate chapter. At each stage we have noted the emerging features of the agrarian structure, consequent to the state policies, that are compatible to capitalist production. Hence we would summerise the results very briefly

Despite their egalitarian overtones, the land reforms were a failure in so far as their major objective was land to the tiller. Consequently, the institutional set up that emerged was still characterised by acute concentration of land (both owned as well as operated) in the larger size groups. Further, the feudal stranglehold on output growth was considerably weakened by the abolition of various feudal rights and arrangements such as zamindari system etc. What is more, since the accent of these reforms was on self-cultivation, stagnating features like absenteeism or excessive leasing was effectively curbed. As

a result a class of rich farmers emerged who not only held adequately high land in their hands, but were also forced to take to self cultivation by increased hiring of labour. The latter was due to the ceilings acts which provided for substantial retentions for self cultivation. Hereditary or occupancy tenancy therefore diminished in significance. This class of rich farmers had all the pre-requisites to capitalist cultivation and would indulge in productive investment in land provided such investment yielded adequate returns.

To ensure this, the state introduced the new technology which was to raise the profit levels by breaking the technological barrier to productivity. Thus in chapter IV , we studied the use of these modern inputs by different size classes.The broad conclusion we arrived at was that the higher size classes (particularly the large and medium farmers) incurred higher level of expenditures on these inputs. Such inequality in use over size classes is clearly evident for irrigation by tubewells and pumpsets as well as for tractors. Therefore, it follows that the large landholders as a class have taken to increased use of such modern inputs.Such large levels of investment on modern inputs means that the class of rich farmers that was created consequent to the land reforms have in fact taken to

productive investment on land. Slowly but steadily, this class of landlord capitalist emerged in the agrarian scene in India.

The new technology, by raising the levels of productivity, succeeded in raising production level to unprecedented high levels. But increase in production necessarily meant a stability or even fall in the price levels. On the other hand, any fall or even a fall in the rate of increase in prices is bound to hamper producers incentives, even if such incentives matter only for the more affluent section of the peasant community.Therefore, the state, through the Agricultural Prices Commission followed a policy of raising the administered price levels which as we saw in chapter V, raises the free market prices. The cost of such artificial or induced price hikes was borne by the state in the nature of price subsidies. It is apt to note that since the large farmers supplied a very high proportion of marketed surplus, most of the benefits of such a price policy accrued to them. In addition, these farmers by controlling the time and quantity of release of stocks had a considerable determining effect on open market prices.

Two more points need to be emphasized now. Firstly, this emergence of landlord capitalists is most

prominent in the agriculturally advanced regions in general and in Punjab and Haryana (also western U.P.) in particular.Such a development was a result of their historically distinct characteristics, a feature we stressed at the beginning of chapter II.And secondly, throughout our analysis we have used the size classes(based on acreage groups ) as a proxy for social classes.If the incidence of capitalism is to be studied by the development of the classes characteristic to the capitalist mode of production, the above limitation poses a strong constraint.However since data on the basis of social classes can only be obtained through a primary field survey, we were forced to use acreage groups instead.That this limitation might affect the results drawn is quite possible.However as shown by Patnaik, analysis on the basis of economic classes would show a stronger existence of capitalism in Indian agriculture.This might explain the non-existence of class bias that one encounters while taking the application rates of fertilizers and HYV seeds per acre.

Therefore, we discern a rise in the importance of this class of landlord capitalists in the rural scene. That they owed significantly to the support of the state, hardly seems to be a moot point. In turn along with their growth in economic power , their political clout also is rising .

The ratio of representation of agriculture to business and industrial interest rose from 2:1 in 1951 (in Lok Sabha) to 3 : 1 in 1957 to 4 : 1 in 1967 to 9 : 1 1977[2]. This rise expectedly would result in this class influencing policy and thereby cornering the major benefits of such policies

Thus the rise of capitalist farming in in India has resulted in the maintenance of inequalities and the persistence of poverty. The net effect on ecomomic growth is hardly desirable from a loong term perspective.

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