INDIA'S POVERTY and its SOLUTION

CHARAN SINGH

ASIA

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A COMPREHENSIVE study of the agrarian problems of India, this book presents a dispassionate analysis of the subject especially with reference to collective farming—a most controversial topic today.

The author does not approach the subject only from a theoretical point of view but, having years of experience as Agriculture Minister of the Government of U.P., also deals with the practical problems involved. With a complete mastery over the subject, he presents his arguments, with clarity and constructive reasoning, supported by statistics. He places before his readers an integrated picture of India's socio-economic problems and suggests positive measures for the eradication of poverty in India. For those interested in understanding the manifold problems with which India is confronted today, this book will provide plenty of food for thought.

Originally published under the title *Joint Farming X-rayed: The Problem and Its Solution*, this second, revised edition puts forward new evidence in favour of the old conclusions. A considerable amount of material has been rewritten—four chapters have been totally recast.

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Preface

Poverty of India is extreme: it is, indeed, now regarded as proverbial. Even elementary necessities of life—food, raiment and shelter—are not available to tens of millions of our people to the required degree. The gap in the levels of living of an average Indian and a citizen of Europe (excluding the USSR) has a ratio of almost 1 to 12. The world average is, at least, three times the Indian. And as time passes, the gap is becoming wider and wider still. Till only a decade ago the energies of the leaders of the country were directed against the foreign rule: the poverty of the masses was usually referred to only as an argument against the continuance of that rule. By implication the masses, and also, through process of auto-suggestion, the leaders themselves came to believe that, as soon as the foreign yoke was thrown off, rivers of milk and honey will begin to flow in the country as in the mystical times of yore. Contact with realities, however, has brought disillusionment and there is much brain-searching. Achievement of political freedom appears, in retrospect, to be an easier task than economic freedom—freedom from want, hunger, ignorance and disease. There is a frantic search for formulae of rapid economic development.

Some of the leaders of the country have hit upon the pooling of individual fields and labour as a sure remedy for creating farm surpluses which are an essential precursor of economic development. It is claimed that co-operative farming will accelerate capital formation by increasing the rate of internal savings and, thus, pave the way for industrialisation of India. Examples, particularly of Russia and China, are suggestively quoted on the basis of surprisingly superficial observation and merest hearsay. The Planning Commission has given consideration to the matter and made certain recommendations favouring the idea, albeit cautiously. The purpose of this book is to urge dispassionate and renewed thinking on this question as also our economic problems, in general, and their integrated solution or solutions. It is proposed to deal with co-operative farming, first.

Zamindari and the like systems have all but disappeared from this country. The peasant is rapidly coming into his own. While the results of this stupendous reform are still in the process of crystallising, word has gone forth from authoritative quarters that the country should switch over from peasant farming to an eco-

nomy of large co-operative farms established by farmers, pooling their lands and placing them under a common management.

The replacement of farm tenancy by peasant proprietorship effects no change in the soil, nor in the production technique; yet it raises production. That has been the experience all the world over. Statistics can be quoted in support, but it is unnecessary to do so in view of the wide and unquestioning acceptance of the proposition. The reason is that it generates forces which stimulate the free development of the peasant's personality. The thought that land has become his and his children's in perpetuity, lightens and cheers his labours and expands his horizon. The feeling that he is his own master, subject to no outside control, and has free, exclusive and untrammelled use of his land drives him to greater and greater effort. He receives a psychological fillip which vitalises his attachment and devotion to the land. In other words, although the abolition of landlordism does not affect the farm, it powerfully affects the farmer. Likewise, any system of large-scale farming in which his holdings are pooled must affect the farmer, but in the reverse direction. No longer will he be his own master; he will become one of the many; his interest will be subordinated to the group interest; he will have to submit to the control and direction of the group management. Even if the right to secede at will is preserved in theory, in practice it will nearly always be found that the seceder cannot be given back his land, for such restoration will be detrimental to group interest; he will have to be content with its money equivalent. The forces released by zamindari abolition will suffer a reaction, and one should in consequence expect a fall in production. This is in fact what happens. Inside these pages will be found factual evidence, derived from various sources and pertaining to several countries whence reliable figures are available, that per-acre production falls as the size of farm increases. In the case of a co-operative farm it will be a case of too many cooks. In a word, if zamindari abolition is psychologically right, co-operative farming is psychologically wrong.

The co-operative principle has undoubtedly a very fruitful mission in the field of agriculture, but when stretched to the point of merger of holdings, it violates the essence of true co-operation. Independent businessmen 'co-operate' to remove individual disabilities, but when independence itself is compromised and the farmer is reduced to a farm hand, it is not a case of true co-operation. It

is preparing the ground for authoritarian control. A self-elected few will exploit the simplicity, ignorance, credulity and lethargy of the overwhelming majority and dominate the co-operative farms. They will lean on officialdom for support and support it in return. In place of the intermediaries who have been liquidated, a new class of intermediaries will be created with the same hard core, but more powerfully entrenched and masquerading as the spearhead of a new co-operative movement. Local bosses, which the officials of the co-operative will degenerate into, will slowly but surely undermine the very foundation of our nascent democracy and reduce the peasantry, 'their country's pride,' to the status of mere labourers. Sovereignty resides in the people and for that reason the Constitution guarantees fundamental rights to the individual. To the extent that the individual is hampered in the proper appreciation and free exercise of the fundamental rights, to the extent that his personality is cramped, to the extent that his independence of thought and action is subjected to extraneous control, to the extent that his destiny ceases to be his sole concern, the seat of sovereignty will tend to shift from all to the few, and the country will have taken the road to regimentation and totalitarianism.

Large-scale farming, whether co-operative, collective or of any other pattern, inevitably attracts mechanisation. In fact, the popular but erroneous belief that mechanisation increases production is used as an argument for the introduction of co-operative farming. Whatever may be true of countries with different soils, different climatic and rainfall conditions, and differently placed in the map of the world, in this country with a tropical climate and a thin layer of fertility mechanised tilling will reduce, not enhance the yield. Mechanised cultivation on large farms may pay their few owners in money; it cannot pay the nation in greater tonnage, while in the circumstances of India every ounce matters.

Our economists and planners, perhaps, do not take into account Indian conditions but are influenced by the theories of Karl Marx who concluded without due examination of facts that the laws regarding industrial development at which he had arrived, applied to agriculture also. In India the amount of arable land is limited and the population dense. The production per acre has, therefore, to be increased. In the USA, Canada, Australia and other such countries, the best results are obtained by large-scale mechanised

farming, which increases the production per man, because plenty of land is available and labour is scarce.

The other effects of the displacement of human and animal power by petrol and diesel on the economy of the country may be easily foreseen. Unemployment will be accentuated. In the circumstances of our country, industries and services cannot absorb the number of persons that will immediately be released from agriculture by any large-scale pooling of lands. Co-operative farming as an instrument of national policy has thus a very important human aspect.

Import of machinery and motive power will strain the none too sufficient exchange resources of the country.

It is not generally realised that, with the replacement of the bullock by the tractor, farm-yard manure will become scarce and increasing use will have to be made of chemical fertilizers. Evidence collected in this book will prove that the use of inorganic fertilizers tends to reduce soil fertility, even though the immediate results may be striking. Organic manure, on the other hand, maintains fertility and makes the soil an inexhaustible source of food supply. It is not without good reason that the agricultural experts of this country do not now advise unadulterated use of synthetic sulphates and phosphates. The country should not too hastily embark upon a venture for which posterity may condemn the present leaders.

In short, large-scale farming will reduce production, injure the democratic principles which the country cherishes, invite bureaucratic control and lead to rapid mechanisation with all its consequences. Peasant farming, on the other hand, will enable the country to steer a path which may not be spectacular but which will ensure that it does not abruptly go off the rails.*

Our path to economic development is an uphill one and strewn with thorns. Prosperity cannot be reached through a *mantra*, or one bright idea, but has to be earned the hard and long way. Only

* Prime Minister Nehru said in a press conference in New Delhi on February 7, 1959:

"I want to do something in India, to change India within the few years left to me, to change the peasant in India, to change agriculture, economy and the rest. I may go wrong—as I do often—but it is my intense desire to reach a certain goal." (*Vide Jawaharlal Nehru on Co-operation*, issued by Government of India, 1959, p. 17.)

Any comment is unnecessary. The risk involved is as apparent as the sincerity of our Prime Minister.

if we realised it! We are faced with formidable impediments of lack of capital, miserably low ratio of capital formation to population growth, large-scale unemployment, still larger scale of underemployment, relatively inadequate land and other natural resources, insufficient agricultural production and an impatient population whose aspirations have been awakened and which is becoming increasingly conscious of poverty and economic differences. These problems will require all the energy, skill, administrative acumen and the statesmanship we are capable of.

There is no example which India can follow in solving her problems because in no other country conditions were identical to ours. We can never attain the standards of the USA because our physical resources per capita are comparatively little, or those of the UK because we cannot build up an industrial structure as the UK did on the exploitation of foreign resources and foreign peoples. Nor can we hope to copy the methods of the USSR or China because, as apart from the far more favourable natural resources—man ratio in the former country and the balance-sheet of results in their totality in both, we have given ourselves a democratic constitution.

The belief that our vast population is in itself a great asset and an incentive for large-scale industrialisation, is unfounded. In view of the paucity of physical resources relative to population, our low purchasing power and the hard fact that capital or financial resources can ultimately be constructed out of physical resources alone, India's huge population is an impediment to economic development or industrialisation—a definite liability, not an asset.

It is well established that non-agricultural employments enjoy superiority over agricultural employments as a source of income. That is why every advanced country has been trying ever since the beginning of the last century to develop its own manufactures and find employment for its nationals in businesses and vocations other than production of raw materials. In the case of our country, however, this trend has been in the reverse direction. Whereas the share of agriculture in the labour force in other countries declined, in this country, for want of sufficient non-agricultural vocations to absorb the year to year growing labour force, it moved up—a phenomenon which should cause alarm to every lover of India. The existing situation, therefore, calls for immediate and earnest measures for diversification of our economy—for the development of non-agricultural resources. In this respect there are two schools

of thought—one is an advocate of capital-intensive large-scale enterprises as exist in advanced Western countries while the other prefers a pattern of decentralised small-scale industries geared to agriculture.

For establishing large-scale enterprises, capital in the country is admittedly scarce. It is possible neither to obtain the necessary amount of capital from external sources without strings or at the rates of interest we can afford to pay, nor to raise it from internal savings, for capital formation continues to be slow and meagre. Employment potential of capital-intensive enterprises is also small. Disposal of goods produced by capital-intensive industries will present formidable problems, for our own people have a poor consumption capacity and foreign countries have a tendency to restrict imports. Further, *inter-alia*, because of restrictions on consumption and heavy tax burdens it involves, a policy of rapid large-scale industrialisation seems to be fraught with economic and political risks. Except for important qualifications, therefore, we need not make haste to set up a capital-intensive structure and, in consequence, have to rely on forced savings which might completely break the people.

Shortage of capital and redundance of labour being the governing factors in determining the pace of economic development, we have to begin with, and rely mostly on labour-intensive enterprises requiring little or small capital. Small units spread all over the countryside and carried on in cottages and small workshops, covering all branches of human needs, will produce almost all the consumer goods needed by the nation. By virtue of their extensive employment potential they will help in ensuring equitable distribution of wealth and fostering a democratic way of life. Such a structure is likely to increase the rate of financial savings and, in consequence, will result in capital formation because the time-lag between the input of labour and the flow of output would be almost negligible.

Progressive increase in the rate of capital formation and in the purchasing capacity of the masses will release a chain of economic reactions: markets will expand and, with the passage of time, a more favourable technological climate will develop. These, in turn, will provide the needed impetus for the growth of light, medium and thereafter large-scale industries. It is this sequence which would seem to suit our conditions best—and not the other way

round. Capital-intensive industries should form the apex, not the base. That was the path Mahatma Gandhi showed us.

We cannot shun advances in technology. Technology, in fact, is now not confined to big industrial units alone; small and light units can also be developed with latest methods.

If per capita income or output has to be raised, the rate of capital investments will have to be increased—and increased at a rate higher than the rate of population growth. This means that the rate of financial savings will have to be far greater than today. If capital formation cannot keep pace with, rather ahead of population, there will be a retrogression of economic standards—retrogression of even the miserable standards that we enjoy today. Prudence dictates, therefore, that in addition to taking other steps, we divert by voluntary persuasion, of course, the energies of the idle and the semi-idle labour in the villages to capital-construction schemes on *shramdan* (voluntary labour) basis, if possible, or on nominal wages, if necessary. Either of the alternatives, *viz.*, continued unemployment which the present situation means, or inflation which payment of full wages implies, will result in deferment of economic development and consequent prolongation of misery. To the extent, therefore, that unemployed and under-employed man-power can be so mobilized, will democracy be ensured and strengthened in India. Democracy in our circumstances entails obligations and demands sacrifices in a larger measure both from the leaders and the people, than we realize.

A surplus food supply is the *sine qua non* to industrialisation. We have till now been looking at it all from a wrong angle. Industrialisation, of course, to the extent it is possible in the conditions of a dense agrarian economy like India's cannot precede but will only follow—at the most it can only accompany—increased agricultural production. Our per acre yield, however, is miserably low, much lower than in most of the countries of the world. Despite 70 per cent of the entire population being engaged on land, food production remains short of requirements, necessitating import of millions of tons of foodgrains year after year even after the advent of Independence. Obviously, no country, much less a poor country like India, can afford to go on feeding her people indefinitely in this manner. It is even doubtful if foodgrains in such large quantities would be available in the world market after some years.

More capital investment, improved farming practices and harder

work on the part of the peasantry can undoubtedly make our fields yield several times more than at present, resulting in farm surpluses. Land being limited, the only practical solution of the problem lies in the intensive utilisation of our land resources. And it is small-scale farming on individual basis, aided by a net-work of service co-operatives, that will utilise our land resources at their maximum, that will increase production per acre—increase it to the extent of being so greatly surplus to the needs of the farmers, that, because of diminishing incentives in farming, people are automatically released for absorption in industries and services. Large-scale joint farming, on the other hand, will merely release workers without producing enough of food, to keep them alive and working.

As pointed out in Chapter XX, to put it in a nut-shell: inasmuch as industrialisation will progress to the extent men are released from agriculture, and men will be released to the extent agricultural production goes up, and agricultural production will go up to the extent agricultural practices improve and more capital invested, industrialisation or economic development of the country turns on improvement in agricultural practices we are able to effect and amount of capital we are able to invest in land. We must bear in mind, however, that in spite of our best efforts, inasmuch as our land resources relative to population are meagre and as, in a given area, more men produce a greater total of food than fewer men, we will, like Japan, and unlike the USA and other countries which have comparatively larger land resources, have always to keep a very large percentage of our people occupied in agriculture.

Promotion of innovations or technological improvements is as necessary as accumulation of capital. Only three centuries ago India stood, at least, on the same economic level as Western Europe. Today, things have considerably changed. The reason lies in the greater propensity of the Westerners to innovate. To that end impediments like illiteracy, ill-health, caste-system and a fatalistic attitude towards problems of life that most of our countrymen suffer from, will have to be removed. Then alone will the efficiency both of labour and available capital improve.

Stress will have to be laid mainly on bringing about technological improvements, for example, in indigenous ploughs, in the use of organic manures, in constructing small irrigation works, and in the organisation of handicrafts and small industries, rather than doing things in a big way or reproducing expensive European and

American models—big farms, big factories, big irrigation or hydro-electric projects. Apart from other considerations, big economic projects take time to fructify. Capital is locked up for years together; meanwhile, with passage of time and increase in population, problems multiply and become more and more intractable.

But there is a limit to all this. The country cannot go on allowing the population to increase indefinitely and, by improvement in the farming practices, producing more and more food and, by reliance on a mixture, howsoever judicious, of labour-intensive decentralised enterprises with capital-intensive forms, staving off poverty and misery for ever. There is a limit to substitution of land by labour, capital or improvements and, in consequence, not only a limit to agricultural production but also to development of services and industries, which means that there is a limit to population the country can support. A deceleration of the rate of population growth, thus, becomes imperative. Various methods of doing this have, therefore, also been briefly discussed in the concluding chapter.

This in brief is the theme of the book. Arguments advanced in these pages may be derided and even attacked as unpatriotic in the present intellectual and political climate of India. But the logical validity of an argument does not depend either on its popularity in intellectual circles, or on its political acceptability. If the book succeeds in making farmers, industrialists, public workers, etc. to think for themselves in the light of material provided herein and come to their own conclusions rather than be led away by mere imitative slogans borrowed from other countries or by the fact that some of the biggest leaders of the country have adopted a particular line of thinking and are very insistent on it, it will have served its purpose.

Perhaps it is necessary to indicate here that views expressed in this book are entirely my own; they have nothing to do with the All India National Congress or the Government of Uttar Pradesh, of which I happen to be a member.

It is in a spirit of great humility that I approach my countrymen with this book. I lay no claim to any originality. In fact, I do not consider myself intellectually equipped to write at all on such controversial subjects, particularly, industrial development. But in course of my duties as a public worker, I felt the need of an integrated picture of our economic problems and their solutions.

Others also have felt a similar need. Shri T. T. Krishnamachari, Finance Minister of the Union Government, in a speech in the Lok Sabha in April 1956, is reported to have said: "It is, however, true that we have not yet evolved an economic philosophy of our own, and such as exists is necessarily ambivalent. We have, perhaps, no clear idea of the entire picture of the economic future that we desire this country to have. We are apt to think in compartments without any attempt at synthesizing the conflicts that thinking in compartments necessarily engenders."* An attempt at supplying this desideratum has been made in these pages. Otherwise, almost everything that has been said here has already been expressed somewhere else and, perhaps, in a better manner. I have, in a way, only pieced together others' ideas to make a connected whole. I have drawn greatly, even in the words and expressions, from David Mitrany's *Marx Against the Peasant* (George Weidenfield and Nicolson Ltd., London, 1952), Horace Belshaw's *Population Growth and Levels of Consumption* (George Allen and Unwin Ltd., London, 1956), Elmer Pendell's *Population on the Loose* (New York, 1951) and Kingsley Davis's *Population of India and Pakistan* (Princeton University Press, New York, 1951). To the authors of these works I owe a deep debt of gratitude.

A special word of thanks is due to the late Shri J. Nigam, ICS (then Land Reforms Commissioner, UP), for his valuable suggestions and revision of a portion of the first part of the book. My next obligation is due to Shri Zahurul Hasan, IAS, Revenue Secretary, UP, who went through the entire draft and made some helpful suggestions. I would also like to thank the Economics and Statistics Department of UP for supplying various figures and statistics which form part of many a table in the book. Finally, I would thank Shri Harish Chandra Sanghi, News Officer in the Information Directorate, for the pains he took in going through the draft more than once and also for the suggestions that he made.

Lucknow
June 16, 1959

CHARAN SINGH

* Introduction to *A Philosophy of Indian Economic Development* by Richard B. Gregg, published by the Navjivan Publishing House, Ahmedabad, 1958.

Preface to Second Edition

In this, the second edition of the book, no change in the arguments or conclusions reached in the first edition is being made. Only some new evidence in favour of the old conclusions has been brought forward. In most of the chapters, there have been only a few verbal alterations, slight additions or a mere re-arrangement of the material. Three or four chapters alone may be said to have been re-written.

The title of the book is being changed from *Joint Farming X-Rayed: The Problem and Its Solution* to *India's Poverty and Its Solution*.

I am extremely indebted to members of my personal staff, who worked extra hours to type out the manuscript. I also owe greatly to Shri R. B. Singh, Research Officer of the Economics and Statistics, Directorate of the State, without whose assistance the various tables in the book could not have been brought up-to-date. My thanks are also due to Shri Ram Krishan, Deputy Development Commissioner (Agriculture), who took great pains in preparing the index of the book.

Charan Singh

Lucknow
May 1963

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PART I

CHAPTER ONE

Introductory

LIVING CREATES wants, which can be satisfied only by use and consumption of goods, collectively called wealth. By and large, wealth is ultimately derived from land. Raw materials must be produced before they can be processed and distributed, and food which, day by day, is necessary to life is mostly obtained from land. Exploitation of land, or agriculture in the narrower sense, is thus obviously the primary and basic industry. Manufacture and commerce, however important they may be in the economy of a country, must of necessity occupy a secondary place.

While land suffers from the limitation that it cannot be increased by any efforts that man may make, it has the supreme advantage of becoming better and better by proper use. All other forms of capital—houses, factories, locomotives, battleships, etc.—deteriorate or disintegrate and are ultimately destroyed, howsoever carefully they may be used; but land seldom. It is this inexhaustibility of land that gives those directly engaged in working it, a feeling of security, which no other means of occupation can offer. Land never disillusions a man completely; the hope of plenty in the future always remains, and is not infrequently realised.

Obviously enough, the prosperity of a country depends, in the ultimate analysis, on how efficiently it utilises and, at the same time, conserves this free gift of nature. Even the form of society or civilisation that a country hopes to develop will be influenced by the manner in which it exploits the land, and by its land-tenure. "Measures of land reform", observes the Planning Commission,[1] "have a place of special significance, both because they provide the social, economic and institutional framework for agricultural development and because of the influence they exert on the life of the majority of the population. Indeed, their impact extends much beyond rural economy." This is specially true of countries where large percentages of population earn their living by working directly on the soil.

[1] *Second Five-Year Plan of India*, p. 177.

India inherited from the British a feudal or landlord-tenant system called *zamindari*, under which ownership of land was concentrated in the hands of a few, while the vast majority, who worked day and night on the land, were mere tenants. The growth and development of democratic institutions are closely related to the national income of a country and its distribution. In an underdeveloped country like India, income directly derived from land has been the chief source of wealth, and ownership of land has since long been accepted as the prevailing standard of status. Wealth and power in the countryside have been concentrated in the hands of those who controlled rents. Land reform, therefore, was the one economic organisational change which was needed before an overall programme of social reconstruction could be contemplated, a more productive economy could be built up and, in fact, before we could dream of making democracy a success.

With few exceptions, landlords performed no economic function; the lands which were tilled by the tenants would not produce less if the landlords disappeared. They rendered no service in return for the rent they received, and were, in the truest sense of the term, parasites, or 'drones doing no good in the public hive.'

That man alone who is not subservient to another in the economic sphere, is truly happy. Under the *zamindari* system, however, the tenant was not free; somebody else was the owner of the patch of land on which he toiled along with members of his family. In most parts of the country there was no property he could cherish; and in many cases he was liable to eviction at the sweet will of the *zamindar*. Nor could he claim social equality with the latter, for status in the village was determined by rights in land.

Agricultural data from all over the world show that farm tenancy reduces output. The abolition of landlordism was not, therefore, just a matter of social justice to peasants. If agricultural production was to be increased, and the peasant's energetic participation in the country's economy was to be secured, he was to be given that much hold on the land which met his deepest desire. He was to be made the owner of the land he tilled.

The landlord-tenant system created classes and, therefore, led to class war. While the tenant pined for safeguards against capricious eviction, real security of tenure was odious to the *zamindar*. The state tried to strike a balance. Yet the conflict inherent in the system was never resolved. It led to economic and political unrest.

The big *zamindars* mostly stood for political reaction ; they were the props of British rule and dreaded a democratic set-up.

For these and other reasons, leaders of the country decided years ago that, if the decks were to be cleared for social and economic reform and for political stability, the feudal landlord-tenant system had to go.

CHAPTER TWO

Types of Agrarian Organization

THE LANDLORD-TENANT system has departed from almost all the States and consolidation of holdings is going apace in some. But neither the change in ownership and legal relations, nor consolidation of holdiings with all its benefits, can have much effect on either the size of the farm or the type of farming. So the question of the future agrarian organisation as an economic, technical and also as a social problem, has yet to be stated and answered. Is land consolidation the last step or is it merely an intermediate stage—a prelude to something else? There is confusion in the public mind on this crucial issue.

There are three alternatives before us, *viz.*

(*i*) Land can continue to be operated in small units, not by tenants in bondage as hitherto, but by an independent peasantry with or without the assistance of some hired labour;

(*ii*) We can have large private farms worked with hired labour;

or

(*iii*) We can have large joint farms constituted by peasant farmers pooling their holdings voluntarily or under compulsion, and worked with joint or collective labour.

Small-scale peasant farming and large-scale private farming need no explaining. Nor is joint farming today an altogether novel device. It has been used for a number of years in several countries, notably in Soviet Russia, Mexico and Israel. The Soviet type, although somewhat different in form in the beginning, had been ushered in China in 1955-56, but soon abandoned in favour of what may be regarded as a still more extreme or developed form—the commune. It will be useful to make a rapid review of the working of the system or systems in these countries.

CHAPTER THREE

Features of Modern Joint Farming[1]

In Soviet Russia, as a consequence of the Bolshevist Revolution of 1917 carried out under the slogan of 'Peace and Bread', all land was distributed among the peasants. The result was a splitting-up of all the land into some 25,000,000 small farms, each of them capable of producing barely more than was needed by the peasant's own family. Little, if anything, was left to supply the cities. To run his farm, the small peasant needed credits, and obtained them from the wealthier farmer, the *kulak*. Both the deficiency of marketable output and the dominance of the middle class *kulak* presented to the new Soviet State grave problems which had to be solved in terms of its Marxist ideology.

Following the industrial pattern, the Communists argued that farming had to be mechanized. If the peasants could be induced to pool their land and use agricultural machinery in common, not only would the dominance of the *kulaks* be broken but marketable surplus would also be better mobilised. In addition, large-scale joint farming by mechanical means would reduce the number of hands needed in agriculture, and thus free them for use in industry, the expansion of which was, in turn, the *sine qua non* of the mechanisation of agriculture.

A *Kolhoz* or *Kolkhoz*[2]—collective farm—is formed when several peasants living in the same neighbourhood decide, or are induced to make the decision, to socialise their 'basic means of production', *i.e.* labour, soil, draught animals, farm structures and implements, while keeping their individual homes, a small garden, a few livestock, poultry and the like for themselves. Membership is open to all toilers, who have reached the age of sixteen, and who are willing to comply with the established rules and regulations. Application for membership to an already established *kolkhoz* is taken up, first, by its Management Committee and is, legally, subject to the

[1] Account of joint farming in Russia, Mexico and Israel has been mostly taken word for word from Henrik F. Infield's article published in the *Year Book of Agricultural Co-operation*, 1951.

[2] Pl. *Kolkhozy*.

approval of the General Assembly. If accepted, the member pays an admission fee which varies in accordance with his previous status. Excluded from membership are *kulaks* and the people deprived of their civic rights. Exceptions are made in the case of families who count among their members a soldier, sailor, or village teacher who is ready to recommend the applicant. Interesting enough, and a sidelight on the effect of collectivisation when ordered from above, is the provision barring peasants "who, before joining the collective farm, slaughter or sell their cattle, get rid of their stock, or wantonly sell their seed corn".

The collective *Ejido* of Mexico can be considered as a sub-type of the *kolkhoz*. *Ejidos* are the new land settlements which were first formed under the agrarian reforms of 1915. They are the offspring of discontent among labourers in a country of large-scale capitalist farming. There must be at least twenty eligible males to form a group which petitions the Government for land. They must own not more than 2,500 *pesos*, or be of low income status. If the group can lay claim to land that once belonged to them, the land is 'restored' to them; if their only claim is landlessness, land expropriated from wealthy land-owners—*hacendados*—is 'donated' to them. Both processes are quite protracted and cumbersome, and open to many profiteering practices on the part of the administrative personnel. The allotted land is given to the group in common possession. The members are free to decide whether they want to divide it up and work it individually, or whether they prefer to run it collectively. No admission fee is charged, but each member of group applying for land must contribute his share to the expenses incurred in the process of land assignment.

While the *kolkhoz* and the *ejido* owe their establishment to administrative measures, the *Kvutza* grew out of the spontaneous decisions of those who first shaped its essential socio-economic structure. A particularly acute situation arose in connection with the requirements of Zionist resettlement in Palestine. The development of Jewish agriculture faced two main obstacles: (*i*) the extremely poor quality of available soil; and (*ii*) the almost complete lack of agricultural experience on the part of the prospective settlers. Progress along the lines of traditional individual settlement proved to be so slow as to make prospects for success in the near future very doubtful. The only alternative which offered itself under these circumstances was that of group-settlement. There was,

in fact, hardly a choice in the matter. The question appeared to be rather one of either group-settlement, or no settlement at all. The type of settlement which emerged has since become widely known under the name, *Kvutza* or *Kibbutz*.[1]

It was a small group of people devoted to the task of building a Jewish home in the land of their dreams who, after freeing themselves from the uncongenial supervision of a professional agronomist, step by step, experimentally testing their way ahead, developed out of their own free decision what is today called *kvutza* or *kibbutz*. Once this small group of pioneers had set the pattern, and others in relatively large numbers had begun to emulate it, the formation of a *kvutza* became formalised. Today there are two possible ways in which one can join such a settlement, or a group, which prepares for settlement. To be eligible in both cases, one must be a Zionist over eighteen years of age, in good health, and of good character. In the first case, one serves as a candidate for a period of six months to a year, during which time he enjoys virtually all rights of membership with the exception of a vote. At the end of this period, the case of the candidate is brought before the General Assembly, which decides about his or her admission. No admission or any other fee is paid; but the new member is expected to put all his possessions into the pool. In the second case, the applicant takes part in a training which often begins prior to emigration to Palestine, in one of the Pioneer Training Farms. This training is so devised as to develop the aspirant's capacity for working and living together with others aiming at the same goal. Groups thus prepared form a 'nucleus' (grain), which stays together after immigration to Israel. They continue for a shorter or longer period their preparation, while handling all affairs communally, until the time when they are assigned land for settlement. The period from the start of preparation to final settlement used to last formally sometimes as long as five years. The establishment of the State of Israel made larger areas available for agricultural settlement, and the waiting period has been shortened considerably.

The *kolkhoz*, the *ejido*, and the *kvutza* are alike in their theoretical adherence to the principles of co-operation. The internal administration of all three is based on the Rochdale Principles. It is only that, true to their nature as communities, all three had to

[1] Pl. *Kvutzot* and *Kibbutzim*.

modify some of these principles to make them fit their specific requirements. One of these principles is that of open membership. Community implies more than limited economic activity ; it means living as well as working together. Moreover, a community is also naturally restricted by the extent of the geographic area in which it is located. Because of these and other reasons, membership in a community cannot be open in the same sense as it is, for instance, in a consumers' store. For this reason the admission of members has to be subject to requirements stricter than those imposed in co-operatives of more limited aims.

Another principle which had to be modified when applied to the concrete community situation is that of distribution of dividends according to the amount of purchase. Since the most important aspect of participation in these joint enterprises is that of shared labour, distribution of net profits according to the amount of purchase would make little sense. The practice followed in all three instances is, rather to take the amount of labour contributed as the main basis for the equitable distribution of profit.

As to the remaining principles, the practice in all three instances is identical with that in any other genuinely co-operative association. No member has more than one vote ; only nominal interest, if any, is to be paid on investment ; all members have equal rights, there being no distinction on account of sex ; there are regular meetings at which the members participate in decisions ; and, finally, members observe rules of proper auditing.

In all three, it is the General Assembly of all members which is designed as the highest authority in all the internal affairs of the group. The practice of delegating the conduct and supervision of the community's business to elected committees is common. Admission, punishment and expulsion of members vests, by law, in the hands of the General Assembly.

Although theoretically autonomous, the *kolkhoz* and the *ejido* are much more dependent on government-controlled agencies than the *Ivwtza*. The *kolkhoz* is part of a planned economy. It depends, therefore, on decisions made by the state authorities, particularly, the *Gosplan* (The National Planning Commission). What is more important : it is under the direct control of the so-called Machine and Tractor Station which started as a machine-lending centre and has since become the 'heart and centre of the local agricultural administration'. Today, the MTS provides the *kolkhoz* not only with

all large-scale machinery and the staff, but also trains the members in the required skills, and advises them on rotation of crops, the proper use of fertilisers, soil conservation, and other related problems. Above all, the MTS enforces the delivery of that part of the farm produce which the state claims as its share.

A similar, though less stringent supervision is exercised by the state in the case of the collective *ejido*. Here there are two main supervising agencies: (*i*) The National Agrarian Commission which, through State Commissions, directs the establishment of the settlements; and (*ii*) The National Bank of Ejido Credit which, in addition to furnishing the funds necessary for the running of the settlements, exerts supervisory functions similar to those of the MTS. The Ejido Bank has been described as a combination of banker, agricultural expert, family doctor, school teacher, lawyer, athletic director, and personal adviser of the *ejido*.

It is true that the *kvutza*, too, has received both land and credits from the Jewish National Fund and the Foundation Fund respectively. From the moment of its formation, however, it has always been essentially on its own. In all its relations with the administrative agencies the role of the *kvutza* has been that of a 'contract-partner' rather than that of a 'controlled dependent'.

More marked than any other is the difference in the extent to which co-operation determines the internal activities of the three farm types. Only large-scale agricultural production is carried on jointly in the *kolkhoz* and the *ejido*. In both, work is done by the members themselves; outside labour may be hired only in times of emergency. In the *kolkhoz* the members form 'work-brigades' composed of five to fifty members, depending on the specific assignment which is made by the Executive Board. Each brigade is directed by a foreman. In the *ejido*, work is organized less strictly, but each member must obey the orders of the elected work-chief. An indicative provision of the Model Rules, which regulate work relations, is the one that forbids the members to accept any outside work as long as the *ejido* itself is in need of their labour.

Co-operation thus limited requires a rather complicated and cumbersome method of accounting. There are two sources of income for the members of the *kolkhoz* and the *ejido*. One is derived from the individual sector production which still exists but is gradually dwindling away: an acre or less of land, a cow, some pigs, and so on, in the *kolkhoz*; and some small animals, like poultry and pigs,

in the *ejido*. The main source of income, however, is large-scale jointly-run agriculture. In both the *kolkhoz* and the *ejido*, the members' share in the harvest is based on the number of labour-days contributed during the year. In the *kolkhoz*, this share is calculated after deduction for taxes, reserves, construction and repairs, on the basis of a measure called "Work-day" (*trudoden*). This measure is both quantitative and qualitative; an unskilled labourer will require more hours than a skilled one to fill his *trudoden*. In the *ejido* there are three kinds of compensation for work: (*i*) wages, which differ according to skill; (*ii*) piece-rates, paid during the cotton-picking season; and (*iii*) equal shares in the common profit. Work on community projects, school buildings, meeting-halls, roads, is done without any compensation.

The more restrictive aspect of the work relations in *kolkhoz* and *ejido* is reflected in the measures needed to enforce discipline. Punishment is provided in the *kolkhoz* for violations like failure to carry out assignments or to fulfil social obligations; for absence from work without adequate excuse; and for negligence in handling equipment and livestock. The punishment may range from reprimand or warning to temporary suspension and fine, or even to expulsion. In the *ejido* the utmost penalty is imposed for: (*i*) continued lack of willingness to work under the direction of the elected authorities; (*ii*) creating disorders; (*iii*) agitation against the collective system; and (*iv*) robbery and other criminal offences.

Compared with all this, the system of the *kvutza* is simplicity itself. The *kvutza* has no use for work-cards, advance wages, shares in profit; nor does it need any measures of punishment. In the *kvutza*, production, consumption as well as all social activities are co-operative, and everybody is trusted to work according to his best abilities, and to claim from the commonly available goods a share according to his own needs. If a member works on the outside, his earnings go into the group's common purse. No penalty has to be stipulated for absence from work or, for that matter, for any other offence. This does not mean that violations do not occur. They are dealt with in a spirit of "family" persuasion and admonition. Expulsions are extremely rare.

The organization of *kvutza* or *kibbutz* is probably the most complete form of communism in the non-political sense of the word, that the world has known outside monastic communities. Land is not owned, but leased, usually from the Jewish National Fund. Members,

who may be men or women, bring in little or no capital of their own; initial resources are provided by loans from various Zionist funds, and the 'own capital' of the *kibbutz* is accumulated gradually out of annual surpluses. In its dealings with the outside world, the *kibbutz* is on a money economy, and its accounts are kept in that form. Internally, no money passes. Members eat in the common dining-room and receive from the common store clothing, which is washed and mended at a common laundry. From the common store they draw also personal needs and comforts such as soap and cigarettes. As the settlement becomes established, cottages or small blocks of flats are built, in which each worker or married couple is allotted a room. The furniture of these rooms, books, pictures, wireless sets or musical instruments are their only personal possessions. They may be allocated from the property of the *kibbutz*, given by friends or purchased from the allowance, usually about £ 20, which each member receives for an annual holiday. There are no wages and no individual allocation of surplus at the end of the year. If there is surplus it is used to improve communal services or amenities. A member who leaves, has no right to any share in the common property of the *kibbutz*. The *kibbutzim* are predominantly agricultural, but many maintain sizable industrial enterprises.

Except in a few *kibbutzim*, children do not live with their parents, but are placed from early infancy in nurseries, where they pass to kindergartens and schools, always living with the children of their own age-group until they are old enough to become working members of the settlement. All settlements provide elementary schools. Education up to fourteen is compulsory in Israel. Some also have secondary schools, or a secondary school is run by a group of neighbouring *kibbutzim*. The decision to release a young worker for university education, and to pay for his or her expenses, is taken by the *kibbutz* as a whole, and is influenced by the *kibbutz*' need for a specialist in any particular field of study. The *kibbutz* takes full responsibility for the medical needs of its members and also for the care of the aged.[6]

The *kibbutz*, although probably the most discussed, is by no means the only form of co-operative agriculture in Israel. It was apparent at an early stage that there were prospective settlers who

[6] The degree to which an ageing population will alter the economy of the *kibbutzim* has hardly yet been considered.

were prepared to accept the ownership of land by a national fund, the avoidance of hired labour and a high degree of mutual aid, but not "the extension of collective discipline in the *kibbutz* to cover all aspects of social and economic life. They sought greater scope of personal initiative and individual variety. They felt, too, that the fundamental importance of the family as the organic unit of society, has been neglected by the *kibbutzim*."[8]

In settlements of this type known as *Moshav* or *Moshav Ovdim*, the land which is leased collectively on a forty-nine-year lease, is divided into small holdings, which may be from four to forty acres, according to the type of agriculture carried on. Not infrequently the earliest settlers received two plots, in anticipation that the second plot would be prepared for handing over to a member of the next generation. Some settlers continued to be part-time workers on private farms while they built up their holdings. The General Assembly of all the members elects a Council, which has to approve all transfers of farms and acceptances of new members. Though a general cropping plan is adopted by the settlement, members are free to carry on the work of their own holdings as they think fit. Mixed farming is general, including dairy cattle, poultry, vegetables, green fodder, sometimes grown in a communal field, fruit and grain, usually with the emphasis on the production of members' own food. The *moshav ovdim* are purely agricultural. Settlers have their own houses, and family life follows the usual pattern. In addition to farmers, the settlement includes workers providing village services—drivers, mechanics, cobblers, shopmen, besides teachers and doctors, amounting to some 20 per cent of the community.

Co-operative organisation is, however, comprehensive and compulsory. In some *moshavim*, a single co-operative looks after all the common interests of the village, social, administrative and economic. In others, there are two organisations, one, virtually a local authority, concerned with land leasing, roads, schools, health services and buildings; the other, a co-operative in the ordinary sense, engaged in the marketing of produce, the supply of domestic and agricultural requirements, and agricultural services such as stock-breeding, mechanical cultivation and water supply. In some cases the consumers' co-operative is a separate society. Credit is usually

[8] *Co-operative Farming in Israel*, Itzhak Korn.

made available, sometimes as specific loans, sometimes by the simple process of allowing debts to accumulate till crops are sold.

A variant of the *moshav* is the *Moshav Shituf*, which may be described as half-way between the *moshav* and the *kibbutz*, in that farming (with the exception of small flower and fruit gardens) is carried on collectively while the members continue to live their family lives in private. Each family has its own house and is responsible for its own domestic services such as cooking, laundry and care of the children (as in the *moshav ovdim*). Unlike the members of *kibbutzim*, they are paid, but in proportion to the needs of their families, not (as in Russia) to work done, and at least in some *moshavim shitufim* payment is made, to a considerable extent, not in national currency but in chits which can be cashed only in the co-operative store of the community.

As regards joint farming in China: originally, the Central Committee of the Communist Party of China laid down four types of organisation for agricultural production: (*i*) the temporary (seasonal) mutual-aid team—a simple form of collective labour. Under this arrangement any group of families, with or without land, might come together and form a labour exchange. The farmers were left in possession of their own fields. "Surplus draught animals and implements are loaned to the team by those members who do not need them for current use. Points are allotted to each member for the work done by draught animals, tools or human labour. The credit would be different for manual labour, use of implements or draught animals and also for quantity and quality of work; "[4] (*ii*) the permanent mutual-aid team—a certain division of labour and assignment of specific work on the basis of collective labour and a small amount of communally-owned property; (*iii*) the 'elementary' agricultural producers' co-operative—in which members pooled their land as shares and there was unified management and a greater amount of communally-owned property; and (*iv*) the 'advanced' agricultural producers' co-operative based entirely on collective ownership of the means of production.

The mutual-aid teams were relatively informal organisations. "In the elementary co-operative, 'the principal means of production

[4] Page 34 of the Report of Indian Delegation to China on Agrarian Co-operatives, 1956, hereafter described as the Patil Delegation after the name of its leader, Shri R. K. Patil.

such as land, draught animals and farm tools owned privately by members are put under a single, centralised management and gradually turned into their common property', and 'the co-operative pays each member an appropriate sum as dividend out of its annual income, commensurate with amount and quality of land the member pools in the co-operative'. The 'advanced' type of co-operative is 'a socialist collective economic organisation' to which 'peasants joining the co-operative must turn over their privately owned land and other important means of production, like draught animals, large farm tools, etc., to the collective ownership of the co-operative'."[7]

"In China, a distinction is made between the feudal elements in agriculture and the capitalist elements. The non-cultivating landowner is considered to be a feudal element and his lands have been confiscated without any compensation. The land-owner who cultivates himself is considered to be a capitalist element. While the Chinese authorities are pursuing a vigorous policy of substituting peasant proprietorship, which in their view is essentially capitalist agriculture, by co-operative farms, which is socialist agriculture, they have not confiscated the lands of any land-owner who cultivates them himself unless he has been accused of crime against the state and the regime."[8]

Those who are not eligible for admission into a co-operative include, "according to model regulations, former landlords, rich peasants and counter-revolutionaries whose status has not been changed and who have not yet qualified for membership under the warrant of the local people's council, and persons deprived of political rights. Poor peasants and middle peasants are specially encouraged to join co-operatives and active steps are taken also to draw in demobilised soldiers, dependants of revolutionary martyrs, soldiers and government workers and also new settlers."[9]

It was clear, however, that the Chinese agrarian policy was set towards an ultimate collectivisation of agriculture on the Russian model; the first three types were merely intermediate stages.[10] "Their ultimate objective is to pass on from peasant farming

[7] Page 110 of the Report of the Indian Delegation to China on Agricultural Planning and Techniques, July-August, 1956, hereafter described as the Krishnappa Delegation after the name of its leader, Shri M. V. Krishnappa. [8] *Ibid.*, p. 61. [9] *Ibid.*, p. 112.

[10] As has now transpired, even the collective farm was an intermediate stage to the commune.

first, to co-operative farming and, then, to collective farming at the earliest opportune moment."[11] They did not tarry at the intermediate stages even for five years. No sooner did the agricultural producers' co-operatives come into existence than they were converted into the 'advanced' or collective type. In July, 1955, Chairman Mao Tse-tung had made an important pronouncement when, following a tour of agricultural districts in Central China, he laid down the plans and the party line on agrarian policy and gave the "go-ahead" signal. In only a hundred days, in the autumn of 1955, according to an article under the name of Chau Hunaing circulated by the Chinese Embassy in New Delhi, 5,90,000 new agricultural producers' co-operatives were organised in China. This brought their total number to almost 1¼ million. It represented the highest tide, thus far, of a constantly accelerating movement that started in 1951. Then the country had only 300 co-operative farms. At the end of 1953, the figure had risen to 14,000. By the summer of 1955, just before the autumn upsurge, there were 6,50,000, with nearly 17 million peasant households as members.

It is said that by January, 1956, 60 per cent and by March, 90 per cent of the peasant families had joined some sort of a co-operative, of whom 56 per cent were members of the so-called 'advanced' co-operatives or collective farms. By the end of May, according to the Report of the Krishnappa Delegation, co-operatives which numbered a million included 91.2 per cent of the 110 million peasant households, of which 61.9 per cent became members of the 'advanced' type. Collectives or societies of the 'advanced' type in 1955 had numbered only 529. It was felt, initially, that it would take a period of three Five-Year Plans for bringing all households into co-operatives. But "such has been the speed with which co-operation has gone forward that, in most parts of China, the main task of establishing agricultural co-operatives of the advanced type is expected to be completed by the close of the winter of 1956."[12] At the time when the Patil Delegation left China, *viz.* at the end of September, 1956, a figure of 96 per cent was mentioned.

According to the *Economist*:[13]

[11] *Ibid.*, p. 61.
[12] *Ibid.*, p. 110.
[13] Quoted in the *Pioneer*, Lucknow, dated October 27, 1956.

Social changes have been most revolutionary in the countryside, and one is left wondering how Mao Tse-tung has succeeded in advancing without bloodshed where Stalin's path was strewn with corpses. Were tax relief and other incentives for the co-operatives and heavy taxation for private farmers enough to push 500 million Chinese peasants into the system? Out of the 110 million families now within the system, less than one-third are still in looser units, where a rent is still paid to them; the remainder are grouped in collective farms which approach the Soviet model.

True, a good deal remains to be done to bridge the gap. There are a million collective farms in China against some 90,000 *kolhozy* in the Soviet Union and the difference cannot be explained merely by the size of the rural population and the character of Chinese farming. Quite a lot of consolidation and amalgamation still lies ahead. The Chinese, however, are in no hurry in this respect; a decade will elapse before they even get the tools necessary for mechanisation. In the next five years the planned 35 per cent increase in agricultural production will have to come from a more rational use of existing resources, local irrigation schemes and fuller utilisation of natural fertilisers. Only afterwards are vast plans of irrigation and land reclamation to pave the way for the tractor.

China does not possess the resources to produce agricultural machinery in bulk; capital investment is going mainly into heavy industry, and there is little to spare for the import of agricultural machinery or the setting up of large numbers of state farms and machine-tractor stations. In 1953, only 104 (or 2 per cent) of the 4,926 agricultural producers' co-operatives in North-East China were practising mechanised farming. Of all state farms which numbered 3,000 in 1956, only 140 were mechanised. Again, as in Russia, the administration was faced with the problem of decrease in draught animals. In some districts half the buffaloes and oxen were said to have disappeared. Owing to the poor price paid by the co-operatives, peasants sold their beasts, particularly those too young to be worked, to the butchers. The state was almost overwhelmed with the number of hides offered to it for sale.

As usual the country cadres were blamed for mismanagement and ignorant 'Commandism.' But the *People's Daily* put its finger on one basic spot—"the peasant thinks only of getting as much as possible out of the co-operative and whether its interest increases or decreases is not his business."

Another evil, exposed by a long joint directive of the State Council and Central Executive Committee issued on April 3, 1956,

was the reckless waste of money by managers of co-operatives. "They merge villages together by building unnecessary houses, squander money on recreational facilities, sports grounds, roads and nurseries with toys for children, and make no attempt to economise to meet productive expenses."

But with the advent of the people's communes (*jen-min kung-she*) all that has been said above, became past history in a matter of months. The establishment of the communes is the latest in a series of tremendous, frenzied attempts to transform the whole of Chinese society. The commune began on an experimental basis in Honan province in April 1958. Following Mao's tour of that province four months later, the Central Committee of the Chinese Communist Party passed a resolution on August 29 (published September 4), stating that communes would be the basis of the future communist society in China. As a result, while the world's attention in the third quarter of 1958 was focussed on the Quemoy crisis, 'Red' China went through a new and gigantic domestic upheaval. According to official reports, all but a few of the Chinese peasants, viz. 99.1 per cent (126.9 million farm households), had been organised into 26,500 communes by early November, 1958. The first communes, of course, came into existence in the characteristically Chinese manner due to the local initiative of peasants!

A commune was formed by the merger of a number of collective farms, or the 'advanced' agricultural producers' co-operatives, as the Chinese call them. An agricultural producers' co-operative was generally co-extensive with a village while the commune is co-extensive with a *hsiang* (a big village or group of villages forming the lowest administrative level under the Constitution of 1954) and the avowed aim of the Chinese communist leaders was to extend the boundary of the communes still further.

The commune represented a social unit combining industry, agriculture, trade, education, culture, politics, local government and military affairs whereas the agricultural producers' co-operative was a social unit concerned with only one field of economic activity —agriculture. Communes revolutionised ownership, labour, consumption and family life as well. Private ownership was abolished not only in land and housing but even in domestic equipments such as cooking pots and so on. The principle of distribution also underwent a complete change. In the communes the peasant became a worker with a fixed income, paid partly in food eaten

at the common mess hall and in other amenities, and partly in cash. Labour was militarised to the extreme: each commune had its own militia, and the members were supplied with rifles and bayonets. Leisure was curtailed with the increasing tempo of regimentation.

Communes were so designed and operated as to wipe out the last vestiges of individualism and of traditional family bonds as understood all over the world. Establishment of communal canteens or public service restaurants, the creches, kindergartens and 'happy homes' for the old revolutionised the family life altogether. The peasants ate in communal mess halls, and individual cooking was forbidden. They slept in dormitories where these had been constructed, and put their children in commune schools and creches. The aim was to double the labour force by freeing women from household chores for work in fields and factories. And in fields and factories, husbands and wives, parents and grown-up children were not necessarily in the same team. "Nursing mothers and those of ailing children," says Dr. S. Chandrashekhar, Director of the Indian Institute for Population Studies, Madras, who had visited China recently, "can visit creches or kindergartens, though this is not necessary as children are under the care of trained nurses and teachers. Parents can give up their bourgeois emotional attachments and stop worrying about their children."[11]

While the commune represented a type of social insurance whereby everybody in the village was assured of a living, a roof above his head and two or three meals a day irrespective of his earning capacity, it also meant the total loss of individual freedom and initiative. The Household Registration Law, promulgated in early 1958, imposed harsh restrictions upon the rights of movement and association. Under that law everyone was required to notify the police before leaving a place and on reaching a new place. Everyone was required to notify the local authorities the arrival of a friend, relation or guest. In the communes all had to take part in military parades in the mornings and evenings and also to attend indoctrination courses and military classes. So that under this latest communist dispensation China had become one vast army camp. As a writer has observed, "even the Soviet Union is a free country compared with Red China."

[11] Article in the *Statesman*, New Delhi, 13 January 1959.

Dr. S. Chandrashekhar remarks: "This is the commune where human beings are reduced to the level of inmates in a zoo. But there is a difference. The animals in a zoo do not have to work hard and, what is more, they do not have to listen to the quasi-compulsory radio, which pours out the latest editorial from the *People's Daily*." "The lack of peace and quiet in the countryside," he adds, "where no one can retire and reflect, and the lack of privacy and solitude are to me more terrifying than all the hells put together."

As a result, there were many complaints and the work done in many a commune was poor. Reports of purges in the northern part of 'Red' China in November 1958, were the first indication to the outside world that the communes had run into serious difficulties. These reports, it may be mentioned, emanated not from propaganda sources but were contained in official Chinese communist publications. Although the party put off for an indefinite period the establishment of large-scale communes in big cities, it had no intention at the time to go back on the 'great leap forward' already taken. According to a resolution passed at its historic meeting held at Weechang from November 28 to December 10, 1958, the party came out with a call that the communes, estimated to total more than 26,000, be 'tidied up, checked up and consolidated' by April, 1959. The job was entrusted to army personnel who constituted a large proportion of the special 10,000-man inspecting teams in each province, which were expected to 'thoroughly reorganise, consolidate and improve' the communes.

The birth of the commune in 1958 was accompanied by propaganda about multiplying farm yields, free food and clothes for peasants, the elimination of the 'last remnants of individual ownership of the means of production' in agriculture, and the early dawn of true communism. A 'great leap forward' was promised and publicised, but in actual fact it did not materialise. Hardly, therefore, had a year passed since their inception that China's communist leaders were forced to undertake a painful revision of their economic plans based on the communes. Members of the Central Committee met in a plenary session at Lushan and conferred for a full fortnight, from August 2 to August 15, 1959, 'under the guidance of Comrade Mao Tse-tung'. The official communique showed that there was continued opposition within their ranks to the experiment in communal living. As usual, a 'rightist

deviation' was detected and some of the humbler party-men were blamed for their lack of ambition and unjustified pessimism.

The moderates, however, seemed to have come out on top with a compromise policy slowing down the pace of development while continuing the pledge of allegiance to the principles of the 'great leap forward' programme. This was reflected in an announcement on August 26, reducing the year's grain and cotton targets by about half and sharply scaling down figures originally claimed for these harvests in the preceding year.

Not only that, the claims—both ideological and economic—that were being made for the communes were toned down. The realisation dawned upon the communists that if agricultural production was to increase, the peasants needed some incentives and 'small freedoms.' The communes, therefore, are no longer expected to make a significant contribution to China's industrial output, and several features of the co-operative farms from which the communes sprang, were restored :

> Instead of working solely for the commune, peasants are now encouraged to grow food, keep pigs and hens in their spare time on individual plots and keep any income they make out of this . . . . Small local markets have been set up in communes where a peasant can sell his own produce to the state. A system of supplying peasants with food and clothing as part of their wages was introduced when the communes started. But now the peasants receive more of their income in cash and less in kind. An incentive plan under which those who work harder earn more, has also been brought in.
>
> At first, mess halls for all the peasants came with the communes. Recent official statements have stressed that the peasants need not eat there if they do not wish to, and they must be allowed to take their meals home or cook at home if they prefer.
>
> Military drills were started with the communes, but now they are never mentioned.[11]

After more than a decade of relentless effort and inhuman sacrifice, the Chinese were admitting that they were hardly closer to solving the nation's essential economic problem—food and agriculture—than when they began. In fact, rushing fast as they could, they have barely managed to stay in the same place. Point 4 of a 10-point plan for 1962 outlined by the Prime Minister, Mr. Chou-

[11] Reuter (*Vide* the *Pioneer*, Lucknow, 31 August 1959.)

en-Lai, in his speech in the secret session of the National People's Congress (Parliament), according to an official communique issued at the end of the session on April 16, 1962, aimed at *reducing the urban population and sending back into farm production the workers and functionaries who had come from the rural areas to the towns.* No further proof of the failure of the communes is required, or could be forthcoming. Land area being practically constant, progressive agriculture, as will appear later, can only mean that innovations in the art of farming are being increasingly introduced, more capital is being invested and farmers work harder, better and longer, so that labour is released from agriculture for absorption in other pursuits. A "back-to-the-land" call shows a reverse trend.

The idea of the commune had been tried out on a much smaller scale in Russia, and the experiment ended in failure. When Stalin later on set out to collectivise farming, he forbade every mention of the commune and, ever since, the commune has remained under something like an ideological ban in the Soviet Union. The Chinese, obviously not content with the collective farm, had startlingly rehabilitated the commune. They decided to move henceforth on the road of collectivism quicker and faster than the Russians, and this despite the fact that in technology their farming was very far behind the Russian. On the other hand, Khrushchev has made a series of important concessions to the peasants, relaxing the Stalinist rigours of collectivisation. He has sold the Machine-Tractor stations, hitherto state-owned, to the collective farms; he has freed the peasants from compulsory food deliveries and he has attempted to place the economic relationship between state and peasantry on something like a market basis. Thus, the whole trend of Chinese policy in regard to agriculture has been at variance with Soviet policy. In an interview with Senator Hubert H. Humphrey of the USA (published in the *Pioneer*, Lucknow, 21 January 1959), Khrushchev branded the commune system as 'old-fashioned and reactionary'. He said, "we tried that right after the revolution. It just does not work. That system is not nearly so good as the state farms and the collective farms." The reason given was that the principle, viz., 'from each according to his abilities, to each according to his needs,' on which the communes were based was not workable and that 'you can't get production without incentive'.

It may be added that Khrushchev preferred state farms because there a worker gets a remuneration according to the labour put in, and collective farms because he has lately been trying to reform them and provide incentives to its members.

Humphrey writes that he was startled at the leader of world communism rejecting the very core of Marxist theory. The Senator asked if his statement on incentives was not 'rather capitalistic'. "Call it what you will," Khrushchev replied, "it works."[14]

[14] Hereafter in these pages we will extensively discuss the primary or the elementary agricultural producers' co-operative alone, because it is only this type of agrarian organisation from China that the Planning Commission and the Government of India want to imitate.

CHAPTER FOUR

Co-operative and Collective Farming

THE SO-CALLED co-operative farm—a farm on the lines of the Chinese agricultural producers' co-operative—about which we hear so much and which so many eminent people in our country seem to regard as the panacea for most of the ills from which our rural body-politic suffers, is advocated as a type of farming which, while not affecting any of our fundamental social institutions or interfering with the framework of private property, will have all the advantages which the USSR is said to have reaped from the *kolkhos*. The co-operative farm is regarded as representing a golden mean between the capitalist organisation with its stress on individual rights and the complete collectivist system under which all individual rights of property are suppressed and merged in collective or state ownership.

Co-operative farms should be organised, says the Committee on Problems of Reorganisation appointed by the Planning Commission's Panel on Land Reforms, as a first step, on the surplus land obtained on the imposition of a ceiling, Government waste land considered suitable for cultivation, land reclaimed through public effort and land periodically let out by Government wherever such lands are available in sizeable areas. As a rule, these lands should be settled with co-operatives, and individual rights should not be created in them. They will constitute the nucleus for co-operative farming. The displaced tenants, the landless agricultural workers who may be selected for settlement on these lands, and the cultivators below the floor limit who agree to put their lands into the pool, will be admitted as members of the co-operative farm. The farms below the floor limit, which stay out of a co-operative farm at the commencement, should be located contiguously to the pooled area as part of operations of consolidation of holdings to enable them to join a co-operative farm at a later date.

The aim is to enlarge the co-operative sector until the entire farm land in the village is included in co-operative farming societies, in fact, until the entire area of the village, both cultivated and uncultivated, becomes the co-operative responsibility of the community

and is managed 'as if it were a single farm'.[1]

As regards the method of pooling of land, the following different forms were considered by the Committee :

(i) The ownership of land may be retained by individuals but the land may be managed as one unit, the owners being compensated through some form of ownership dividend ;

(ii) The land may be leased to the co-operative society for a period, the owners being paid agreed rents or rents prescribed by law ; or

(iii) Ownership may be transferred to the co-operative society, but shares representing the value of land may be given to individuals.

As the surplus and other governmental lands will be settled with co-operative groups and not with individuals, no difficulty regarding pooling of land would arise in their case. With regard to land pooled by individuals, no particular method is recommended and no rigid conditions prescribed.

The following different methods of co-operative management were discussed :

(i) The entire area may be distributed into family units, each unit being allotted to a member family or a small group of families (depending upon the extent of land available with the co-operative) for purposes of cultivation, the member family or the group paying rent to the society. Each family or a group of families will, thus, have a separate plot to cultivate. They will, however, co-operate in the non-farm operations such as provision of credit facilities, supplies, marketing, etc., and in such farm operations as may be feasible ;

(ii) The whole farm may be managed as one unit for carrying out principal operations such as ploughing, sowing and harvesting. For subsidiary operations like irrigation, weeding, hoeing, etc., the farm may be divided into small units, each being allotted to individual families from year to year, the families getting a share of the produce as remuneration for work on subsidiary operations ; and

(iii) The whole farm may be managed as one unit for all agricultural operations which will, thus, be centrally controlled by the society, the members being paid wages either on daily wage or on piece-work basis.

[1] *Second Five-Year Plan*, p. 197.

The adoption of any particular mode of management, says the Committee, will depend on the technique of farming that may be applied and the degree of co-operation which has developed among the members. Each co-operative farm will adopt the mode of management which suits it best according to its own circumstances. It is suggested, therefore, that at this stage all the various methods may be tried, till suitable techniques of co-operative management are fully established by experience.

The description of the working of large-scale joint farming in various countries and the ideas of the Planning Commission on the subject throw into relief three minor differences between an agrarian producers' co-operative or a co-operative farm and a collective farm of the *kolkhoz* type. These are :

(*i*) A co-operative farm is an entirely voluntary organisation, no one having a right to be admitted to membership as a matter of course. Whereas in a collective farm all workers of both sexes in the village or locality have a right to membership and it is doubtful whether any person holding land has a right to stay away ;

(*ii*) Under co-operative farming, ownership of land continues to vest in the members who contribute it, whereas under collective farming it passes to the society as a whole. It is not material to the definition of co-operative farming whether or not the individual owners have the right to withdraw their holdings physically from the co-operative farm though, according to most writers, they should have such a right. Where such right is denied to a retiring member, it is essential that he should receive due compensation for the property finally surrendered by him. In a collective farm, however, its members can decidedly have no such right and, as the ownership of land had already passed to the farm or to the society, no question of compensation either arises ;

(*iii*) A co-operative farm pays wages to workers, whether members or not, at prevailing rates and distributes net profit according to the value of the land and also of the live-stock and the dead-stock, if contributed. Or, it may adopt another procedure, *viz.* the net proceeds of the farm arrived at after deducting all the expenses of cultivation including payments to members for the use of their land in proportion to its value, wages paid to outsiders, cost of management and contributions to the reserve fund and other funds, if any are established, may be shared by members in proportion to the labour put in by each. The members of a collective farm, on the

other hand, are entitled to a share in the net income only according to the number of labour days put in by them. That is, in a collective farm the participants have only one kind of income from the farm—that due to work; in a co-operative farm those who have contributed the land or stock are entitled to a dividend or an income on account of their contribution, apart from anything they may earn as workers on the farm.

Apart from these differences in the organisational set-up, there is no difference in the actual working of the two types. Rather, there is much greater significance in their similarities. Both are joint enterprises. Land, labour and capital resources are pooled both in a co-operative and a collective farm, and whatever production technique can be applied to one may be equally applied to the other. The effect on peasants-cum-labourers constituting the farm is similar in both cases and, from the point of view of agricultural production, there is nothing to choose between them. In a co-operative farm the identity of both the farm and the farmer disappears as completely as it does in a collective farm. Whatever criticism applies to one applies equally to the other.

To call an agricultural producers' co-operative or the so-called co-operative farm as distinguished from a collective farm, a co-operative enterprise, will be a misnomer. A co-operative is an association of free autonomous economic units, whereas a co-operative farm consists of members who have lost their economic autonomy. A co-operative is intended to support the enterprise and the business activities of its members. This aim can only be realised if there are autonomous enterprises of the members who associate in order to support their individual enterprises. It cannot be the purpose of a co-operative association to dissolve the individual enterprises and replace them by a joint or collective enterprise.

One cannot have much quarrel with the Planning Commission's Committee on Problems of Reorganisation. It leaves the suitable method of co-operative management to be evolved by experience. The Prime Minister restated the same approach in his address to the Uttar Pradesh Political Conference in Jaunpur on 29 October 1956. He said:

> ...the Government did not intend to proceed in the matter arbitrarily. It was for the *kisans* themselves to take into account the pros and cons of co-operation and, if they considered it to be useful for them and the country, they should adopt it. But to him

there appeared to be no alternative. At this stage all that he wanted was that they should discuss the matter among themselves thoroughly and try co-operatives as an experimental measure.

The first method advocated by the Planning Commission's Committee under which each family has a separate holding to cultivate is but a variant of what is known as a Better Farming Society. Co-operation is not stretched to the point of merger of holdings, but is limited to non-farm activities where it can find its most fruitful field in the domain of agriculture. This method will be acceptable to all; but the Planning Commission insists that "co-operative farming necessarily implies pooling of lands and joint management". The only concession it makes is that "at this stage of development" it is not prepared to recommend any particular "manner in which lands may be pooled and operated" (*Second Five-Year Plan*, p. 201). It is this insistence which compels a dispassionate examination of the available evidence for and against large-scale joint-farming. Such examination is all the more necessary in view of the fact that the most powerful political party in the country, *viz.* the Indian National Congress has also, in its plenary session held at Nagpur in January 1959, agreed with the Planning Commission and accepted joint farming as the ultimate pattern for India.

The relevant part of the Nagpur Resolution says :

> The future agrarian pattern should be that of co-operative joint farming in which the land will be pooled for joint cultivation, the farmers continuing to retain their property rights and getting a share from the net produce in proportion to their land. Further, those who actually work on the land, whether they own the land or not, will get a share in proportion to the work put in by them on the joint farm.
>
> As a first step, prior to the institution of joint farming, service co-operatives should be organised throughout the country. This stage should be completed within a period of three years. Even within this period, wherever possible and generally agreed to by the farmers, joint cultivation may be started.
>
> Surplus land (obtained by imposition of a ceiling on large farms) should vest in the *panchayats* and should be managed through the co-operatives.

The scheme enunciated by the resolution is not so simple as it looks. While it betrays a confusion of thought there are several aspects which are sinister in their implications :

(*a*) The use of the words 'should be' in the first sentence indicates the mandatory nature of the resolution. The words also involve a notion of obligation on the part of the farmers. As if it is not their right to decide how they will or will not carry on cultivation of their lands. It seems to be forgotten that agriculture is not only a science that had to be learned, but also a way of life that could not be rushed or planned by somebody else for the farmer.

(*b*) The aim is defined as 'co-operative joint farming'. One would like to know whether there is a pattern such as 'co-operative single or several farming' also, from which it was considered necessary to distinguish the type recommended here. Co-operative farming cannot but be joint.

(*c*) In order to allay the fears of the farmers the resolution has laid down that they will continue to retain their property rights, but in view of the annotation that Prime Minister Nehru made in his speech in the *Lok Sabha* on March 28, 1959, the assurance contained in the resolution is not worth a moment's consideration. He said : "Of course, the House will remember that we have said that the ownership of the land will continue. Some people say that this is either a ruse or even if we mean it, we will not be able to stick by it. I do not know ; how can I say about the future ? This concept of ownership is a peculiar concept which has changed throughout the ages. The House knows Acharya Vinoba Bhave thinks there should be no ownership of land at all. There it is ; I respect it and I should be very happy, indeed, if that was so. But I do not think it can be so today..... The whole concept of ownership is changing and yet we are sticking to ownership by sitting on a square yard of land and being proud that this square yard is mine and nobody can take it.....In the cities there used to be roads privately owned, bridges privately owned, all kinds of things. Now, a road has become a public, municipal property, a bridge has become municipal or public property, public utilities and so on. Railways and so many things have become public property. The idea of private ownership changes and the public and the individual benefit by it. So, this changing society changes its ideals about these basic forms of ownership. That will happen. One should not be afraid of it. In fact, one should welcome that, provided it leads to the objectives we are aiming at."

(*d*) It would appear that landless persons also have a right to join the co-operative farm whether landowners want them or not.

It is not clear how their work will be evaluated. If wages are paid in cash on a fixed daily or monthly basis, they will be as good as labourers on private farms with no improvement in their status. If, on the other hand (they are given a say in the management, or greater rights than they enjoyed before, or) wages payable to the labourers are evaluated on the same basis as the landowners, the latter would never agree to join such a venture, or allow labourers to join it. The communists in Russia and China had forced the so-called co-operatives on the people only after land had been distributed to everybody in the village.

(*e*) The words 'may be started' in the second paragraph of the resolution would, again, seem to indicate as if it is not the farmers or landowners who will start the farms, but somebody else who will do it for them. If it is their volition alone that mattered, there was no need, in a way, to show a signal to anybody to go ahead today or three years later.

(*f*) It is not necessary, according to the resolution, that all farmers in a village should agree before a joint farm could be established. Only a 'general' agreement is required, and a general agreement could mean, if one so chose, even a bare majority decision. Now, it is not democracy to take away one's means of subsistence by the majority decision of one's neighbours and, thus, force upon him a complete change in his way of life as thrusting a man in a co-operative farm would amount to. Of course, if the nation as a whole so decides, it can do so, but in that case it will have to give itself a different Constitution.

(*g*) To call a joint farm established on surplus lands obtained by imposition of a ceiling, under the terms of the resolution, a co-operative farm, will be a misnomer. The land constituting the farm will not belong to the members, but to the state or the village *panchayat*. Nor will members, therefore, on resignation or expulsion, be entitled to take away a parcel or any share for individual cultivation. Nor will they earn any income other than that due to, and proportionate with the labour put in by them on the farm. So that, it is, pure and simple, a *kolkhoz*—a collective farm of the Russian type.

It is not without reason, therefore, that the communists welcomed the Nagpur resolution; rather, they congratulated the Indian National Congress thereon. They suggested only one amend-

ment, viz. the surplus lands that will be available on imposition of a ceiling should, for the present, be distributed among the landless.[1]

[1] The reason for the amendment has been explained in Chapter Ten *supra*.

CHAPTER FIVE

Our Problems and the Basic Limitation

It would be axiomatic to state that our economy, industrial or agrarian, should be governed by the conditions of our country and so regulated that it might help to solve the main problems that face us, or help to realise the ideals that we have in view. We cannot just copy or lift an agrarian economy obtaining in any particular country irrespective of the society that the latter hopes to build for itself, or irrespective of its conditions, geographical, climatic, and other which may or may not be applicable in our case. Now, the main problems that call for solution in our country, as in many others, can be formulated as follows :

(i) Increase of total wealth or production ;
(ii) Elimination of unemployment and under-employment ;
(iii) Equitable distribution of wealth ; and
(iv) Making democracy a success.

All our laws, schemes, and projects have to be evaluated in the light of these problems. Those which serve to contribute to their solution are beneficial to the country. Those which do not, have to be rejected.

It will be found that, of the three alternatives mentioned in Chapter Two, it is the first, *viz.* an economy of small farms operated by animal, or, if necessary, manual power, and individually worked, with such farms co-operatively linked with each other in all economic activities other than actual farming or production, which will best answer our needs and solve our problems taken together.

The form of agricultural organisation in a country will depend on the proportion in which the two factors of production, *viz.* labour and capital, either separately or more usually conjointly, are available in relation to the third, *viz.* land. The quantity of land that is available for production in our country today is, for all practical purposes, fixed ; there is little possibility, as we shall see, of extension of agriculture by reclamation and colonisation. In other words, land is relatively scarce and constitutes the limiting factor. On

the other hand, because of our large and increasing population, the supply of labour is unlimited. That part of capital which provides traction power, viz. draught cattle, is, by no means, lacking, if not actually surplus to our needs. Our agrarian organisation has, therefore, of necessity, to be such as would lend itself to the maximum exploitation of land, as will give us maximum yield per acre, even though it may not be consistent with the maximum exploitation of labour and capital. It is only in countries like the USA, Canada, Australia or New Zealand where land is not a limiting factor and labour is relatively scarce, that it may be in the national interest to obtain the maximum output per worker rather than maximum yield per acre. Such countries can afford to have an economy which may be wasteful of land. But we in India, where land is relatively so scarce and, therefore, more valuable than the other two factors, cannot but have an economy which is economical in its use of land resources, though it may be wasteful of labour and capital resources, that is, an economy where we have to apply to land more or increasing units of labour or capital, or of both in order that the fullest use may be made of the former, or, which is the same thing, bigger yields realised per acre. To quote W. J. Spillman: "The greatest profit from the business as a whole involves the greatest profit per unit of the limiting factor. Thus, if land be the limiting factor, the aim should be to make the largest profit per acre. If labour limits the business, the aim should be the largest possible profit per unit of labour. Similarly, if the limiting factor be materials, the aim should be the greatest profit per unit of materials."[1]

Marxism, like capitalism, has everywhere asked: How could one obtain from the existing surface a maximum return with a minimum of labour? The question for us is different. It is: How could we, on the existing surface, secure a living to a maximum number of people through the use of their labour in the villages? Land being the limiting factor in our conditions, our aim must be, obviously, not the highest possible production per man or agricultural worker, but highest possible production per acre. That is what will give us the largest total for India as a whole and thus eradicate poverty or want of wealth in the absolute.

[1] *The Law of Diminishing Returns*, p. 43.

CHAPTER SIX

Production of Wealth

SIZE OF FARM

A GOOD FEW think that a compact area of 100 acres will yield a somewhat higher produce than 10 plots of 10 acres each. That is, concentration of land will give greater yield per acre than if it is divided or dispersed into small units. People living in the cities who have before them the example of big economic units working successfully in the field of manufacturing industry, argue by analogy that big mechanised undertakings would produce more in the field of agriculture also. They consider that increased production of food cannot be achieved unless the peasants abandon small-scale farming and join or merge themselves into societies where large-scale farming is possible and tractors, combine-harvesters and similar mechanical devices can profitably be used. They would like to put agriculture, too, on a factory[1] basis.

The economists in our country and the intelligentsia, in general, have taken their views mostly from Marx, the core of whose economic analysis, as of his theory, was a fundamental belief in the superiority, and hence in the necessity, of large-scale production. To him large-scale production was the first condition for general well-being. That condition was clearly being realised in the field of industry; Marx took it for granted that the same process was bound to take place also in agriculture.

According to Marx the peasant was doomed because he was a peasant, and the evil to which the peasant was succumbing was just his dwarf holding. Neither the peasant nor his system was compatible with progress, and the development of the society was overcoming them both. The Communist Manifesto went straight to the goal—the scientific cultivation of the soil upon a common plan by means of armies of labourers.

The small peasant produces mainly for himself; the capitalist farmer mainly for the market. But capitalist farming was obno-

[1] In fact, some of the collective farms in the USSR, devoted largely to one crop, were known as 'wheat factory', 'sugar-beet factory', etc.

xious to the very principle of communism and, as the industrial workers depended on purchased food-stuffs and these, the Communists said, could not be obtained from the peasants, the old peasant economy was incompatible with the new industrialised state. The peasant was, therefore, to be transformed into a labourer and the nationalised soil tilled by co-operatives of production under the control of society as a whole.

As has been pointed out by David Mitrany,[8] no part of Marx's economic theory was more uncritically accepted than this. It was forgotten that when Marx was formulating his theory he was living in England where there were no peasants and no agrarian questions to challenge his outlook. His description of the agricultural situation was based on the life of the English labourer and of the pitiable Irish peasantry about the middle of the last century. It was, further, a period when everything seemed to point to concentration of land in the hands of a few large owners. An important aspect of this phenomenon, viz. that the increase in large estates had often been achieved by political and social pressure (through enclosures and partly as the price for emancipation of the peasants), and did not represent simply the victory of the better system in free competition, escaped his notice completely. The original views of Marx on agrarian development have, however, continued to grip the communist mind ever since, in spite of the statement of Engels that Marx had himself begun to doubt their validity in cases where, as in Eastern Europe, farming was not capitalistic.

The explanation why, as a consequence of an increased scale of output, a manufacturer can expect to obtain increasing returns per unit of labour or other economic resources employed, while a farmer cannot, lies in the fundamental difference between the two kinds of industry, which has been admirably brought out by Van Der Post. "The manufacturing process", says he, "is a mechanical process producing articles to pattern in succession from the same machine. The agricultural process, on the other hand, is a biological process, and its products are the result not of a man-driven mechanism, but of their own inherent qualities of growth. In the case of the industrial commodity, therefore, standing room for a machine and its operator will suffice in order that it be multiplied indefinitely. In the case of the agricultural commodity, on the other hand, standing

[8] *Marx against the Peasant*, London, 1952, Part I, Chapter I.

room is required for each article that has to be produced."[3]

From this fundamental difference between the nature of the two industries stem several other differences that characterise their working and also affect the size of the industrial and agricultural undertakings.

Agriculture depends on the area of land—on the area in which plants can spread their roots and expose their leaves to the sun, and from which they can draw water and chemical substances necessary for their growth. A plant will take the same space to grow, whether it is sown in a small farm or large, so that a large farm has no advantage over a small farm in per-acre production. Provided, therefore, there is no difference in farming methods and capital employed per man is equal, returns per man will diminish as an increasing number of men are put to farm a limited area of land, because the men have, on an average, less area to work with. At the same time, as more men cultivate the land, returns per acre will increase, because each acre has more labour applied to it. Thus, two men working ten acres of land can produce more than one man working those ten acres, and three men working the same area can produce more than two men. But the increase in product per acre, with the increase in the number of workers, is a diminishing increase: the increase in product is in lower proportion than the proportion by which the number of workers increases. Two men working the ten acres cannot produce double of what the one previously working them was doing; nor can three men produce as much per man as each of the two men. In other words, each equal additional quantity of work bestowed on cultivation of a given area of land yields an actually diminishing return, and this is what is called the 'Law of Diminishing Returns' in agriculture. It can also be described and, perhaps, more correctly, as the 'Law of Diminishing Increments'.

"Except for diminishing returns", says Dr. Elmer Pendell[4], "quantity of land in the world, or in one country, or on one farm, would have no relation to quantity of production. Except for diminishing returns, a twenty-acre farm would produce as much as a thousand-acre farm. If additional volumes of crops could be had in proportion to capital and labour put on the land, a given outlay of capital and labour would produce as much on a small acreage as on a large acreage."

[3] *Economics of Agriculture*, p. 162.

[4] *Population on the Loose*, New York, 1951, p. 40.

On the other hand, manufacturing is not dependent on area. If need be, it can also expand upwards. Land, therefore, does not enter substantially into the calculations of manufacturing or its production. Manufacturing deals with labour, raw materials, machines and other capital, which are not constant or limiting factors like land. Labour is increasing daily and raw materials can be produced and capital created by efforts of man. Thus, manufacturing in most branches can be, and is carried out in such a way that product per man or other economic resources employed, rises as the scale of industry is increased. This means that manufacturing works under the law of increasing returns. Manufacturing units, therefore, tend to grow big, which cannot be true of agricultural units.

Dependence of agriculture on area means that larger the size of the farm, the more scattered its operations. This not only makes large farming more expensive than large manufacturing, but makes it more difficult to supervise. Men concentrated under one roof, as is the case with manufacturing, are easier to supervise, than men spread over a large area.

Besides area or space, there is the time factor which tends to push up the size of an industrial undertaking as compared with agricultural. In manufacturing, as the size of the machine or industrial plant increases with improvement in technology, there is greater and greater operational and functional division of labour and, therefore, less and less time is taken in turning out a given quantity of product than before. Economy of time means economy of effort and expenditure. No such economy or economies, however, are possible in the sphere of agriculture where time, like space, is an irreducible minimum which remains unaffected by the size of the enterprise. An agricultural plant will take the same time to mature, whether it is sown in a small farm or large.

While manufacturing lends itself to specialization by tasks and by products and its production can be standardized, agriculture and its production, thanks to its biological character and, therefore, its dependence so primarily on local and particular contexts and imponderable factors like weather, cannot. Manufacturing, therefore, needs less supervision than agriculture and is susceptible to delegation and differentiation of managerial functions much better. These factors favour a larger scale of operations in manufacturing than in agriculture.

Further, crops (and cattle) need not only more intimate, affectionate and devoted care—they need a twenty-four hours' care. A workshop has its hours of working and closure, but agriculture simply has no closing hours. Necessarily, this distinguishing feature makes a lot of difference in the scale of undertaking in the two spheres.

The invention of the steam-engine in the eighteenth century led to an unparalleled economic revolution involving a complete upheaval in methods and rates of industrial production (and in civilization in general). Where hitherto man had scarcely known or used any but hand tools, he had henceforth at his disposal a machine driven by an external source of power, which could be harnessed to an indefinite number of other machines.

The great inventions heralding the birth of the capitalist economy, demanded large numbers of workers, heavy capital investment and world-wide markets. The handicraft workshop in which the master-craftsman worked alongside a few journeymen or apprentices gave way to the factory and the big firm in which concentration of property and the scale of production steadily increased and the machines were constantly improved.

While, however, introduction of the steam-engine brought a hundredfold, even a two hundredfold increase in man's capacity to produce manufactured goods in a given time and space, it did nothing of the kind in agriculture, which is a biological process. Mechanised equipment does not overcome the most important conditions limiting agricultural yields, *viz.* natural fertility of the soil and climatic conditions. In mechanical processing, replacement of hand power by steam power established a new relationship between the size of an undertaking and its production. But it could not influence the life process of plants, and the relationship between the size of an agricultural farm and its production necessarily remained unaffected. It was an 'Industrial Revolution' as it is rightly called, not an 'Agricultural Revolution'.

However, while in sheer theory, the size of the farm, in and of itself, did not affect production per acre, in actual practice and for reasons following, given the same resource facilities, soil content and climate, a small farm produces, acre for acre, more than a large one—howsoever organised, whether co-operatively, collectively or on a capitalistic basis. And it will continue to produce more, until a device is discovered which can accelerate nature's

process of gestation and growth—a device which can be used only on a large farm and not on small.

Firstly, a plant is a living organism. As such it requires individual care and attention somewhat in the same manner as an animal or human being does. In industry a worker can be 'functionally' efficient even if he is utterly uninterested in the work because work is highly routinised, impersonalised and mechanised. But farming is not a matter of routine. The yield of the land depends directly on the care with which the farmer conserves the soil and protects the crop. And there are limits to the physical and supervisory capacity of the owner or the manager of the farm—to the regard and solicitude which he can bestow. As no man or woman can satisfactorily look after two dozen cows or two dozen children, so no farmer can tend crops efficiently beyond a certain area or limit.

Nor can such care and attention be forthcoming on a co-operative or collective farm either, where no land or field belongs, or is entrusted to anybody exclusively. Distributed responsibility or responsibility of the many which a co-operative or a collective enterprise involves, unless its members are close blood relations, or are inspired by high idealism, which in the economic sphere of human life is rare, will ultimately boil down to the responsibility of no one, and cannot take the place of individual interest which alone can provide the close, constant and intimate attention that lands and crops require

A man who comes to have two adult sons living and working jointly with him, will produce more per acre, or which is the same thing, a greater total from the same area of land than when he was alone. Similarly, when he has, say, five sons, who are inspired by the same common good or interest of the family, they will produce a still greater total. If, however, whether during the life-time of the father or after his death, mutual distrust among the brothers emerges and they come to place, even in their thoughts, their own-selves, wives or children, above the family as a whole, the production will definitely decline. Where the brothers eventually separate and, thus, the incentive for hard work is restored, the production per acre will again go up and, possibly, will be higher than even when mutual trust and confidence existed between them. Such is the experience of all those who come from amongst the peasantry, or know the urges and the psychology of an average house-holder.

Conversely, when, say, five men who were heretofore separately working their holdings, howsoever small, merge or are made to merge them in a joint farm, they will not produce more per acre by virtue of mere merger. At best, that is, if the members of the farm have, with increase in the area of the farm, also broadened their sympathies and are inspired by a common interest, the produce from the joint farm will only total up to what it was previously on the separate farms. On the other hand, if the farmers have only merged their lands, and not their interests, thoughts and sympathies also—which state of affairs will be the rule if joint farms spring up as a result of a drive of Government or a political party—the production will markedly go down. And the larger the number of such farmers, the less possibility there will be of their working as a willing team—as an enthusiastic unit.

Secondly, a peasant farmer and his family are usually underemployed on their patch of land. They do not have to pay for the time and the labour that they devote to it, so that even for a small extra yield they will apply all the labour they are capable of. In peasant farming land is the limiting factor, and the greatest profits, therefore, lie in the maximum yield per acre. On the contrary, the owner of a big farm has necessarily to engage labour on payment, and unless the extra yield is commensurate with the extra labour that may be applied, the extra labour will not be worth-while. In his case labour is the limiting factor, not land ; for, land is there to which extra labour may be employed but it is too costly for the additional output. The maximum profits in the case of a big farmer will not, therefore, correspond to the maximum yield from land as in the case of a small farmer, but to maximum exploitation of labour.

In this context it may not be irrelevant to point to a non-economic consideration which tends to operate against a large farmer and in favour of a small one. Paid labourers can in no case bring to apply the same attention, the same devotion which members of a peasant family will, whether in tending the crops or the animals or in performing any other of the varied tasks of cultivation. Agriculture for a peasant is not only a means of living, but a way of life also. His wife, children and old parents labour not merely for gain. Whereas the labourers work for wages, not for love.

If the large farm is a co-operative or collective undertaking, the workers or members will lack the incentive, which a peasant farmer

owning his patch of land and being master of his produce has, for working hard. There is bound to be a world of difference between the self-employed farmer who works for himself and his family and uses his own judgment in his work, on one hand, and the farmer in a co-operative farm who has to work under the watchful eye of the supervisors, on the other. The knowledge that the total sum to be divided amongst more than a hundred or two hundred members of the co-operative farm depends upon how hard they all work, has proved too weak and diffused an incentive to be effective. "The farmer will not," write Sydney and Beatrice Webb, "be easily weaned from his habit of seeking always to do less work than his fellow-members, on the argument that only in this way can he hope to 'get even' with them, as they will, of course, be seeking to do less work than he does."[3] That is, the pace in a co-operative or collective enterprise is determined by that of the slowest worker.

A co-operative farm would produce even less than a large private farm of the same size. Because labourers on the latter will be working for definite aims—a fixed quantity of wages which may go up with good work, and member-workers on the former, managed as it will be on the basis of majority vote and consent, would be riven by distrust and strife.

"Generally experts, who advocate co-operative farming", says Dr. Otto Schiller, a German Professor of Agricultural Economics, "have in mind that in contrast to what happened in Soviet Russia, the ownership of land should be preserved at least as a title. But it is questionable whether a legal title to a piece of land which still exists in the records but has in fact disappeared as a visible unit in the fields, can provide the same incentive as real possession of the land, even if the profits of co-operative farming are shared according to the assessed value of the land contributed by each member."[4]

Right of ownership in property, in the ultimate analysis, means only right to control the property—to use it in any manner the owner likes or not to use it at all. Once this right to control disappears or is taken away, ownership is reduced to a myth. Those who argue that farmers need not apprehend liquidation of their indi-

[3] *Soviet Communism : A New Civilisation*, Longmans Green & Co. Ltd., London, 1937, p. 218.

[4] *Co-operative Farming and Individual Farming on Co-operative Lines*, pp. 11-12.

vidual ownership, because it would continue in the form of shares in the society on which dividends would be paid, ignore the basic fact that land to a farmer is much more than money or shares in a company. Merger of a person's land in a joint farm will mean a world of change in his life; not so the purchase of shares by him in a company. Today the farmer works on his farm in perfect freedom, confident that he is the master of all he surveys—though what he surveys may not be much; on merger he will become one among many, subject to discipline of the farm management, and exclusive master of nothing at all.

Thirdly, a peasant farmer, by dint of the surplus labour resources of his family available to him, is able to carry more cattle per acre than the large farmer. His family labour is a fixed factor which has to be maintained at all events: so he tries to utilize it by keeping live-stock, which adds to his output. No such labour force, or labour force commensurate to the size of the farm is available to a large farmer. Almost all the income is, therefore, confined to what the farmer is able to get from the crops.

Similarly, the capacity of a large farm to rear and maintain cattle is not enhanced by its being run on co-operative or collective lines. Cattle and poultry respond to gentle and affectionate treatment almost just as human beings do. They are, therefore, best cared for only when they are objects of pride to their proprietors. If it were not so, far greater concessions in the matter of keeping private livestock would not have been given to collective farmers in those areas of the USSR which are devoted largely to breeding of cattle as opposed to areas devoted largely to production of grain.

Lastly, inasmuch as a family farm can carry a larger number of cattle and poultry per acre than a big farm, the peasant farmer will have comparatively more farmyard manure at his disposal. Cattle waste is organic in character and, at least, in the long run more effective as manure than the inorganic chemical fertilisers which are obtainable in the markets. A large farm, whether private or co-operative, will, of necessity, resort to these fertilizers, since a tractor and a harvester combine produce no muck or organic manure. And while the truth that farmyard manure helps to maintain soil fertility best is admitted by all agrarian experts, some of them, at least, are definitely of opinion that artificial fertilizer, particularly when it is applied exclusively, depletes the soil.

It may be pointed out here, in parenthesis, that since the great depression of the thirties, doubts about the efficiency of large units have grown even in the field of industry. A most thorough investigation was made to this effect by the so-called Temporary National Economic Committee in the USA, just before the War, in 1941. Its elaborate studies showed that in none of the mass industries were the biggest units the most efficient in productivity. In a practical way the depression of the thirties had also served to show that even in manufacturing smaller units could more readily adapt themselves to changing conditions and markets.

COMPARATIVE DATA OF YIELDS

The conclusion we had reached in the previous sub-chapter, that production on small farms should be greater per acre of land than on large farms, or, in other words, production per acre will increase as the number of men cultivating a given piece of land increases, is well illustrated by Table I taken from Dr. Elmer Pendell's *Population on the Loose*, New York, 1951, page 37. In all cases below the horizontal line that cuts through the table, there are diminishing returns, which are shown in the column headed 'Average production per man'.

Clearly there is less production per man if more than four men work the 100 acres. The more the workers, the less is their per capita production. Dr. Elmer Pendell says that he chose soil which was not very good and where the farmers had only a little help from tools. Nor would tools make a difference to per capita production, at least, when as many as 18 men have to support themselves on a hundred acres. For, less the ground a man has, less the advantage he has in the use of farming equipment.

According to Dr. Elmer Pendell :

> As we proceed down a scale of diminishing returns we eventually arrive at an absolute maximum total and an absolute maximum per acre average. The total production will go up no further with further increases of manpower, and will actually go down instead—further and further down....
>
> We get valuable light on the whole problem by taking a look at China.
>
> John Lossing Buck, in *Land Utilization in China*, a book published in 1937 by the University of Chicago Press, reported the results of an extensive study of Chinese farms. He classified the farms by size into five groups. A simplified version of the data given by him on page 283 of the book is presented vide Table II.

TABLE I
ILLUSTRATION OF THE LAW OF DIMINISHING RETURNS

No. of men working the land	*Acres of land worked by the total no. of men*	*Total Production of the hundred acres in equivalents of bushels of grain*	*Production in bushels of grain attributable to the man in the series who is now considered for the first time*	*Average production per man, in bushels*	*Average production per acre, in bushels*
1	100	200	200	200.00	2.00
2	100	500	300	250.00	5.00
3	100	900	400	300.00	9.00
4	100	1,250	350	312.50	12.50
5	100	1,540	290	308.00	15.40
6	100	1,780	240	296.67	17.80
7	100	1,980	200	282.85	19.80
8	100	2,150	170	268.75	21.50
9	100	2,300	150	255.55	23.00
10	100	2,440	140	244.00	24.40
11	100	2,573	133	234.09	25.73
12	100	2,705	130	225.42	27.05
13	100	2,830	125	217.69	28.30
14	100	2,950	120	210.71	29.50
15	100	3,067	117	204.47	30.67
16	100	3,181	114	198.81	31.81
17	100	3,292	111	193.65	32.92
18	100	3,400	108	188.88	34.00

TABLE II
PRODUCTION ON CHINESE FARMS

Farm group	*Men-equivalents per 100 crop-acres*	*Crop-acres per man-equivalent*	*Production per man-equivalent in equivalents of bushels of grain*	*Production per acre in equivalents of bushels of grain*
A	25.00	4.0	79.2	19.9
B	31.25	3.2	62.0	19.4
C	38.46	2.6	53.5	20.6
D	47.62	2.1	43.1	20.5
E	66.67	1.5	30.6	20.4

There we have a striking statistical showing of diminishing returns. It is something like our other table except that this one shows a condition at a subsistence level and an arrival at an actually declining yield per acre (*Ibid.*, pp. 57-58).

The two tables taken together present a complete picture. Under conditions of manual and animal labour, or conditions where large agricultural machinery is not used, as more and more men work a given land area, that is, as a farm becomes smaller and smaller, production both per acre and also per man (or worker) increases till land per man is reduced to a point between 33·3 and 25 acres. This point coincides with 27.5 acres. Table I would show that if 4 men instead of 3 work 100 acres, that is, if the area per man decreases from 33·3 to 25 acres, production per acre increases by (12.5 — 9 =) 3.5 bushels. So that, presuming a uniform increase over the entire drop in area, production per acre increases by 3.5/8.3 = 0.42 bushel with every decrease by one acre. Calculation would show that both a holding of 28 acres and 27 acres will produce in the total less than 27.5 acres. But the larger holding will produce less, and the smaller more per acre than the middling. At 27.5 acres the law of diminishing returns begins to operate and production per additional unit of labour or quantity of work begins to decrease. In other words, with gradual decrease in the area of his holding below 27.5 acres, production per man will go on declining. On the contrary, production per acre will continue to increase, though by smaller and smaller increments, till land per man is reduced to a point between 2.6 and 2.1 acres—say, 2.5 acres.

It would seem from Table II above that when a man has less than 2.5 acres of land, production per acre also begins to decrease. Possibly, it is only a chance variation or decrease that production on Chinese farms belonging to groups D and E, shows in the above table. This decrease is so negligible that no inferences can be drawn on its basis. Or, for ought one knows, there may be a psychological reason affecting the farmer's mind which is responsible for the decrease. At least, there is no physical reason. We, therefore, do not agree with Dr. Pendell that a point can be reached where, with further increase of man-power on a given area of land, the total production will go down, further and further down. All that can safely be said is that there is a limit after or beyond which Mother Earth refuses to yield to human coaxing any further—when there are no additional returns due to additional application of labour. This limit, according to Chinese statistics, is reached when the area per man is reduced to 2.5 acres or so.

There is overwhelming factual evidence from various other countries also which establishes that the return per acre goes up as the size of an agricultural holding goes down. Below are given figures for the English, Danish and Swiss agriculture :[7]

TABLE III

VARIATION IN GROSS RETURN PER ACRE ACCORDING TO SIZE OF HOLDING

	ENGLISH		*DANISH*		*SWISS*	
	Size of Holding in acres	*Gross return per acre £. s. d.*	*Size of Holding in acres*	*Gross return per acre £. s. d.*	*Size of holding in acres*	*Gross return per acre £. s. d.*
1.			Under 25	20 1 0		
2.	1 to 50	11 19 9	25 to 50	15 4 0	7½ to 12½	22 11 7
3.	50 to 100	9 19 2	50 to 75	15 3 0	12½ to 25	19 0 3
4.	100 to 150	7 19 1	75 to 100	13 18 0	25 to 37½	17 17 2
5.	150 to 250	7 5 8	100 to 250	12 8 0	37½ to 75	16 2 3
6.	Above 250	7 4 4	Above 250	12 4 0	Above 75	13 17 7

App and Waller remark in *Farm Economics* (pp. 58-59) :[8]

It is quite evident that the larger the business, the larger will be the receipts. To what extent this would hold true as the size increases, will depend upon the type of farming, the locality, and somewhat upon the ability of the operator. In the surveys made in six States of the USA the results average as follows :

TABLE IV

VARIATION IN RECEIPTS PER ACRE ACCORDING TO SIZE OF HOLDING IN U.S.A.

FARM SIZE	*RECEIPTS PER ACRE*
Small	$ 42.90
Medium	$ 41.39
Large	$ 38.80

[7] *Economics of Agriculture* by Van Der Post, 1937, pp. 170-73.
[8] Published by J. B. Lippincott Company, 1938.

Recently studies on the economics of farm management were undertaken by the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, in six typical regions of the country, *viz.* Bombay, Madras, Punjab, Uttar Pradesh and West Bengal in 1954-55 and Madhya Pradesh in 1955-56. In each of the six regions two contiguous districts were selected for study in such a way that they represented the most important typical soil in the state concerned. These six regions taken together represent the major cropping pattern of the country. Sixteen villages were selected in each district. The data collected by the cost accounting and survey methods from five of these regions (data for Madhya Pradesh being not available to us) do not bear out the contention that large holdings are more productive than small holdings. The data rather indicate a contrary trend, *viz.* output per acre on small holdings is generally higher than on large holdings :

TABLE V

OUTPUT PER ACRE IN RUPEES
(MADRAS)

Size group (acres)	*Cost accounting method*	*Survey method*
0 — 2.5	181.1	254.6
2.5 — 5.0	160.9	141.8
5.0 — 7.5	123.0	91.1
7.5 — 10.0	143.8	109.5
10.0 — 15.0	68.5	66.3
15.0 — 20.0	75.3	64.0
20.0 — 25.0	31.0	96.6
above 25.0	101.0	68.3

SOURCE : *The Indian Journal of Agricultural Economics*, Vol. XIII, No. 1, p. 22, 1954-55.

TABLE VI

OUTPUT PER ACRE IN RUPEES
(PUNJAB)

Holding size group (acres)	*Cost accounting method*	*Survey method*
0 — 5	174	184
5 — 10	178	176
10 — 20	155	160
20 — 50	137	137
above 50	122	123

SOURCE: *The Indian Journal of Agricultural Economics*, Vol. XIII, No. 1, p. 24, 1954-55.

TABLE VII

OUTPUT PER ACRE IN RUPEES
(WEST BENGAL)

	Hoogly		*24 Parganas*	
Holding size group (acres)	*Cost accounting method*	*Survey method*	*Cost accounting method*	*Survey method*
0.01 — 1.25	307	294	260	169
1.26 — 2.50	285	221	199	160
2.51 — 3.75	238	184	221	162
3.76 — 5.00	223	200	178	144
5.01 — 7.50	248	242	188	161
7.51 — 10.00	250	152	207	172
10.00 — 15.00	278	187	62	108
above 15.00	153	103	—	121

SOURCE: *The Indian Journal of Agricultural Economics*, Vol. XIII, No. 1, p. 25, 1954-55.

TABLE VIII

OUTPUT PER ACRE IN RUPEES
(UTTAR PRADESH)

Size group in acres	*Cost accounting method*		*Survey method*	
	1954-55	1955-56	1954-55	1955-56
Below 5	313.5	276.9	311.6	291.4
5 — 10	300.6	239.5	260.9	252.7
10 — 15	253.8	204.1	255.3	240.8
15 — 20	238.9	200.3	252.5	215.6
above 20	252.1	204.9	236.7	190.4

SOURCE: *The Indian Journal of Agricultural Economics*, Vol. XIII, No. 1, p. 28, 1954-55.

TABLE IX

OUTPUT PER ACRE IN RUPEES
(BOMBAY)

Size groups of farm (acres)	*Ahmednagar District*	*Nasik District*
0 — 5	119.84	112.72
5 — 10	72.31	95.95
10 — 15	53.92	64.83
15 — 20	41.36	68.61
20 — 25	25.60	51.26
25 — 30	33.88	73.28
30 — 50	34.84	60.69
above 50	29.68	64.32

SOURCE: *The Indian Journal of Agricultural Economics*, Vol. XIII, No. 1, p. 54-55, 1954-55.

It is not only crops or pure agricultural farming that shows greater output per acre on smaller farms than on larger: mixed farming (as also cattle-rearing or dairy farming singly) shows the same results. This is illustrated by statistics drawn from five different countries given in Table X.

TABLE X

GROSS OUTPUT PER ACRE

	DENMARK			*NORWAY*			*SWEDEN*			*SWITZERLAND*			*CARMARTHENSHIRE* (An English County)		
	Under 25 acres	25—50 acres	50—75 acres	Under 25 acres	25—50 acres	50—75 acres	Under 25 acres	25—50 acres	50—75 acres	Under 25 acres	25—50 acres	50—75 acres	Under 25 acres	25—50 acres	50— acres
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Crops	1 11 7	1 4 4	1 13 5	2 7 1	2 8 11	2 14 7	1 2 5	1 4 4	1 18 8	2 2 4	1 19 1	2 1 11	0 0 1	0 1 8	0 0 1
Livestock and livestock products	20 14 5	15 19 8	14 7 1	12 17 6	9 16 5	8 9 10	10 3 3	6 15 1	6 19 10	12 7 2	12 11 0	11 8 5	7 14 8	7 10 8	7 8 7
Other sources	1 7 0	0 15 3	0 12 7	1 18 10	1 1 6	0 19 7	0 17 8	0 10 1	0 17 2	0 2 3	5 10 7	4 2 5	11 19 10	1 0 5	0 15 10
Total	23 13 0	17 18 5	15 13 1	16 3 5	14 0 10	12 4 0	12 3 4	8 9 6	9 15 0	20 12 9	20 0 8	17 10 9	19 14 7	8 12 10	7 10 8

SOURCE: *The Economics of Small Holdings*, Edgar Thomas, (1927), pp. 10-11.

It is not only gross production per acre that increases with the decreasing size of the farm; there is evidence to show that this is true also of net production. David Mitrany, the author of *The Land and the Peasant in Rumania*, says on page 254 of his book:

The progress in the science of agriculture has shown that the laws of industrial production do not also hold good for the production of food-stuffs. In agriculture, production follows a natural process which does not allow an indefinite division of labour; and this form of intensifying production has been proved to bring in returns which, for a number of reasons, diminish in the proportion in which the size of the agricultural undertaking increases, as illustrated by the so-called circles of Thunen. More recent inquiries have shown that this is true not only of the total output which was often conceded but also of net production. It might be useful to quote here one inquiry, because of its clear results and of the great competence of its author. The Director of the Swiss Peasant Secretariat, Prof. Ernest Laur, who is also a member of the League of Nations Committee on Agricultural Questions, worked over returns on capital for various categories of Swiss farms over a period of twenty years (1901-21), and has obtained the following averages, in Swiss francs:

TABLE XI

VALUE OF TOTAL AND SOLD PRODUCE PER HECTARE IN SWISS FARMS (in Swiss Francs)

Size of Farm in hectares	*Value of Total production per hectare*	*Value of sold produce per hectare*
3 — 5	1,180	795
5 — 10	1,005	740
10 — 15	900	700
15 — 30	825	660
above 30	710	595

A report of the British Ministry of Agriculture referred to in the monthly journal, *The Agricultural Situation in India, April*, 1952, issued by the Economic and Statistical Adviser to the Government of India, also points to the conclusion that net output per acre is highest on the small farms and declines as the size of farm increases:

TABLE XII

NET OUTPUT PER 100 ADJUSTED ACRES*

Farm size group (acres)	1947-48	1948-49
0 — 50	2,503	3,188
51 — 100	1,830	2,329
101 — 150	1,573	2,025
151 — 300	1,576	2,033
301 — 500	1,577	1,980
500 and above	1,551	1,923

*Adjusted acreage of a farm means the actual area in sole occupation reduced by expressing the acreage of any rough grazing in terms of equivalent acres of crop and grass, which vary from district to district according to local conditions.

Similar results have been obtained from a survey* conducted by a method close to the purposive selection method, on behalf of the Indian Peasants' Institute in Nidubrolu during 1957. The area selected was of 10 square miles in Divi Taluq, Krishna District in Andhra Pradesh, which contains rich black cotton soil and is inhabited by efficient and hard-working peasants—*vide* Table XIII.

Both Tables XII and XIII confirm David Mitrany's conclusion. They indicate a gradual increase in the net profits per acre, as well as in gross production, from the least intensive to the most intensive groups.

According to an address delivered by Professor Sering in the Emperor's presence before the German Agricultural Council in 1913, quoted in a memorandum submitted to the British Agricultural Tribunal of Investigation in 1924—"The evidence is conclusive that the new peasant holdings in the eastern provinces not only doubled the number of inhabitants in the colonized area—and that within ten years; they increased the cattle in the area from two to threefold; the pigs from three to fourfold; while the grain crops were, in some cases, half as large again, in others doubled. This was,

* *The Peasant and Co-operative Farming*, by Prof. N. G. Ranga and P. R. Paruchuri, published by the Indian Peasants' Institute, Nidubrolu and printed at the New Indian Press, New Delhi, 1957, p. 83.

Table XIII
THE SIZE OF HOLDINGS, COSTS AND PRODUCTION

Size of holdings (in acres)	*Value of the gross produce per acre**	*Average No. of unpaid family workers*	*No. of annual farm servants engaged on the holding*	*Total man-days of labour per acre in a year*	*Total paid costs per acre†*	*Percentage of paid costs to the value of gross produce*	*Total costs per acre if family labour is remunerated on par with the annual paid farm servants*	*Percentage of total cost (including remuneration to family workers) to the value of gross produce*	*Producer's surplus per acre (including the remuneration to family workers) that is, column 2 minus column 6*
1	2	3	4	5	6	7	8	9	10
	Rs.				Rs.		Rs.		Rs.
1—5	391.50	2.00	0.50	241	146.00	37.29	335.00	85.57	245.50
5—10	382.50	2.00	1.25	149	150.75	39.41	237.00	61.96	231.25
13—15	380.25	1.50	1.50	102	143.75	37.80	184.25	48.45	236.50
25—30	353.50	1.00	3.00	75	150.12	42.23	162.62	48.47	205.38
42—45	326.25	1.00	6.00	87	176.75	54.18	185.55	56.87	149.50
55—60	317.25	—	8.00	89	200.75	63.28	200.75	63.28	116.50
70—75	279.00	—	10.00	95	212.75	76.25	212.75	76.25	66.25
90—100	243.00	—	9.00	73	172.00	70.78	172.00	70.78	71.00

Source: Ranga and Paruchuri, *Ibid*, condensed from the tables on pp. 86-88.

* The value of the gross produce in column 2 is not arrived at on the basis of the price at which farmers actually sold their produce but only by multiplying the physical gross produce with the average of the market price in the specific month of 4 years, under the assumption that multipurpose co-operatives exist.

† Total of the wages of hired labour, out-of-pocket expenditure incurred on draught animals, cost of seeds, out-of-pocket expenditure incurred on manures (the real value of the manure available on the farm itself being not calculated or included) depreciation and maintenance cost of farm-sheds and agricultural implements, land revenue, managerial costs, if any have been paid, and miscellaneous costs.

of course, only by dint of harder work than mere hired labourers would care to perform, and by making use of their children and women and old people to do the extra harvest work for which the great land-owners had to rely on Polish season workers."

These peasant holdings had come into being consequent on the division of large estates.

In Poland the change from extensive corn growing to small-scale mixed farming showed great capacity for expansion in that direction. The number of animals (apart from improvement in quality) increased as follows between 1921 and 1938-39 :

TABLE XIV

INCREASE IN NUMBER OF ANIMALS OWING TO CHANGE IN FARMING PATTERN IN POLAND

	(1921)	(1938-39)
	(in millions)	
Cattle	7.89	10.6
Pigs	4.8	7.7
Sheep	2.5	3.2

In Czechoslovakia the division of the large estates resulted in an improvement in the number and quality of livestock, an increase in milk production and even a rise in corn yields, because more livestock meant more manure.[18]

The British Agricultural Tribunal of Investigation has the following comment to make about the family farm, that is, the farm worked by the occupier and members of his family with or without some hired labour :

We believe that the productivity of European agriculture, particularly, of that of Denmark, Germany and Belgium, where the output has been the greatest, has been largely due to the attention given to the organisation of the family farming system ; and in Denmark which still offers the most instructive field for comparison, the maintenance and extension of the system have been regarded as the most secure foundation for obtaining the maximum out of the land, while, at the same time, developing a democratic and rural social community (*Report* : 1924, p. 87).

[18] David Mitrany, *Marx against the Peasant*, London, 1952, p. 127

TABLE XV

AVERAGE YIELD* PER HECTARE (IN 100 Kgms.) DURING 1958-59—1960-61

Sl. No.	Countries	Crops	WHEAT		BARLEY		MAIZE		RICE (Paddy)		POTATOES		TOBACCO	
			Actual	Relative (USA = 1)	Actual	Relative (USA = 1)	Actual	Relative (USA = 1)	Actual	Relative (USA = 1)	Actual	Relative (USA = 1)	Actual	Relative (USA = 1)
1		2	3	4	5	6	7	8	9	10	11	12	13	14
1.	U.S.A.		16.9	(1.0)	16.4	(1.0)	31.7	(1.0)	37.3	(1.0)	206.7	(1.0)	18.1	(1.0)
2.	United Kingdom		34.1	(2.0)	31.2	(1.9)	—	—	—	—	200.0	(1.0)	—	—
3.	Denmark		38.7	(2.3)	34.1	(2.1)	—	—	—	—	200.0	(1.0)	—	—
4.	France		24.0	(1.4)	24.7	(1.5)	29.5	(0.9)	40.3	(1.1)	148.3	(0.7)	18.7	(1.0)
5.	Germany (F.R.)		32.0	(1.9)	30.1	(1.8)	30.2	(0.9)	—	—	222.0	(1.1)	24.0	(1.3)
6.	Belgium		37.3	(2.2)	35.4	(2.2)	43.7	(1.3)	—	—	218.0	(1.1)	24.9	(1.4)
7.	Netherlands		41.3	(2.4)	39.3	(2.4)	34.2	(1.0)	—	—	260.7	(1.3)	—	—
8.	Norway		22.5	(1.3)	24.2	(1.5)	—	—	—	—	213.0	(1.0)	—	—
9.	Sweden		24.0	(1.4)	23.2	(1.4)	—	—	—	—	127.7	(0.6)	24.4	(1.3)
10.	Switzerland		32.9	(1.9)	29.8	(1.8)	38.2	(1.2)	—	—	245.3	(1.2)	20.6	(1.1)
11.	Japan		23.5	(1.4)	25.4	(1.5)	23.5	(0.7)	47.4	(1.3)	167.7	(0.8)	20.5	(1.1)

SOURCE : *Food and Agriculture Organisation Year Book, 1961*, Volume XV.

* Main crops only.

Table XV shows the average production of some of the agricultural commodities of USA, UK, several western European countries and Japan.

The arable part of an average USA holding according to the 1950 World Census of Agriculture came to 64 acres out of 215, i.e. 29.5 per cent of the total area. The average arable holding in western European countries was far smaller, less than one-half, even less than one-sixth of the average arable holding in the USA. It was 10 acres out of 27 in Federal Republic of Germany. The entire average holding in England, Denmark, France, Switzerland and Netherlands had only an area of 82, 39, 29, 15 and 14 acres respectively as compared with 215 acres in the USA. The average holding in Japan was far too small—one-thirtieth of the American arable holding, i.e. two acres (including pasture land) as compared with 64 arable acres. However, the USA is seen to produce less than almost all the countries given in the above table, even less than Japan. It may be admitted that there are differences in topography, soil fertility, climatic conditions and the resource facilities that may be available to the farmers in the various countries and, therefore, the figures of production are not strictly comparable. Yet, the wide disparity in agricultural production in these countries, all of which are situated in the temperate zone and fall within the category of 'developed countries', cannot in its entirety be explained by these differences alone. The figures can, at least, be taken to point towards the conclusion that mere largeness of the size of an agricultural undertaking does not lead to increase in production per acre.

Whatever evidence is available of Russian collective farming also proves that concentration of land does not increase production per unit. Although "reliable statistics are not available", says Milovan Djilas, some time Vice-President of Yugoslavia, "yet all evidence confirms that yields per acre in the USSR have not been increased over the yields in Czarist Russia, and that the number of livestock still does not approach the pre-revolutionary figure."[11]

Yields of wheat in the Czarist and Soviet Russia, figures of which crop alone are available to us, when compared with yields of relevant periods in European countries, where the family farming system prevails, do not bring out the communist contention that large-scale joint farming increases production in any mysterious manner:

[11] *The New Class*, Thames and Hudson, 1957, p. 57.

TABLE XVI

YIELD OF WHEAT PER ACRE IN SELECTED COUNTRIES
(1885 — 1950)

Countries	*Annual average yield per acre in metric quintals*		
	1885-89	1934-38	1949-50
1. Denmark	10.3	12.8	14.4
2. United Kingdom	8.2	9.4	11.1
3. Netherlands	7.6	12.2	13.2
4. Belgium	7.6	11.6	14.3
5. Western Germany	5.7	8.9	10.6
6. Hungary	4.9	5.7	5.4
7. France	4.9	6.3	7.5
8. Rumania	4.4	3.9	..
9. Bulgaria	3.8	5.1	..
10. Italy	3.5	5.8	6.3
11. Yugoslavia	2.7	4.6	4.9
12. Russia (USSR)	8.2	3.2	2.9

SOURCE: *World Population and Production Trends and Outlook*, W. S. Woytinsky and E. S. Woytinsky, Table 249; published by the Twentieth Century Fund, New York, 1953.

Every pre-War European country, even such underdeveloped countries as Bulgaria and Rumania, had a higher yield than Soviet Russia; Denmark, the Netherlands and Belgium outdistanced Soviet Russia by more than 3 to 1. By present showing, collective farms will not be able to achieve even in 1985-89, the yields which Denmark, the UK, the Netherlands, Belgium and Germany had done a century earlier, *viz.* in 1885-89.

Collective farms in the USSR which numbered 2,60,000 in 1952 were reduced by amalgamation to 91,000 in 1955 and the average size rose to 5,230 hectares (12,918 acres), of which 38 per cent was

cultivated. With further amalgamation, the number of collective farms was reduced to 54,800 in 1960. Besides, there were 5,140 state farms with an average size of 30,800 hectares (76,076 acres), of which only 17.6 per cent was cultivated. A programme of extending cultivation to virgin areas was inaugurated in 1954, with the result that the number of state farms went up to 6,500, and the total sown area of the Union rose to 195.7 million hectares or 484 million acres in 1960. The main aim of amalgamation and enlargement of collective farms was to increase their productive capacity. But we do not think there are any who can seriously contend that the aim has been realised—that agricultural production in the USSR has increased with the increase in the size of the agricultural undertaking.

There have been constant shifts in internal organisation of the *kolkhoz*. Till 1958 all the MTSs, whose number rose from 158 in 1930 to some 7,000 prior to the outbreak of the last war, to 8,400 in 1954 and to more than 9,000 in 1957, had been run by the state. But after a two-day session held on February 25 and 26, 1958, the Central Committee of the Communist Party of Soviet Union decided to transfer the tractors and farm machinery from MTS to direct ownership of collective farms. According to official Party admission, the system had been a brake on production. "As a matter of fact," the official communique went on to announce, "there were many cases in which stations even hampered the progress of outstanding collective farms and throttled the initiative among farm personnel." Peasants were also freed from payment of compulsory food deliveries.

As recently as on December 22, 1961, in a speech made at Kiev, Premier Khrushchev announced that a new organisation of collective farms would be worked out as soon as the proposed new constitution was adopted. He insisted that it was necessary to give collective farms greater freedom of initiative concerning their working methods, provided they fulfilled their responsibilities to supply sufficient produce to the state.

Apart from frequent changes in the working of the *kolkhozy*, there is another circumstance which evidences, if not failure of joint farming, then, at least, the fact that large farms do not mean large production and the expectations of the founders have not borne fruit. The Soviet Prime Minister bitterly criticised a number of ministers and ministries responsible for administration of state

and collective farms at the closing of the Siberian Farmers' Conference in July, 1956, for their negligence. Again at a meeting of the Soviet Communist Party's Central Committee held on January 11, 1961, to discuss agriculture, Prime Minister Nikita Khrushchev declaimed fiercely against collective farm leaders who faked crop figures to hide bad management of the harvest in Kazakhstan during 1959. "This is a crime and such people should be brought to trial, whoever they are", he said. In one case a Minister went so far as to force the collective farmers to buy butter from the market and deliver it to the state as part of their own production quota. The Premier of the Ukraine, Mr. Nihifor Kalchenko and Kazakhstan Agriculture Minister, Mr. Nikhail Rooinets, were sacked.

At the Kiev meeting also, above referred to, Mr. Khrushchev devoted his main attention to the productive programme of the Ukraine, the bread basket of Russia, and strongly criticised Mr. P. A. Vlasyup, president of the Ukranian Academy for Agriculture, for misleading farmers and then blaming the party for it.

The ire of Mr. Krushchev is understandable. If an independent farmer under the system of individualistic farming bungles, crops only in a few acres suffer, but if the management of a large joint farm bungles, crops in hundreds and thousands of acres suffer.

Not to digress further, however. From Table XVII on page 61, we can easily deduce that large area of culturable land per man engaged in agriculture (or large size of the agricultural undertaking) does not mean large production per acre. Table XV enabled us to take a comparison of agricultural yields of some countries with those of the USA. Table XVII will enable us to make a similar comparison of present-day yields with the USSR. It will be found that, leaving out of account India and Philippines altogether (for they are acknowledgedly underdeveloped countries), the USSR, pride of the protagonists of large-scale mechanised farming, is bracketed with Turkey and Yugoslavia and occupies the lowest place, both as regards production per acre and production per man.

If we take mean figures both for agricultural production per acre and per person engaged in agriculture and treat the production of USSR as 100, we arrive at the results vide Table XVIII which will, perhaps, be more intelligible to a layman.

Again, it may be conceded that there is a difference in soil fertility and climatic conditions of the various countries mentioned

TABLE XVII

CLASSIFICATION OF 26 COUNTRIES WITH RESPECT TO THE RELATIONSHIP BETWEEN THE INTENSIVENESS OF CULTIVATION AND AGRICULTURAL OUTPUT PER PERSON ENGAGED IN CULTIVATION

*Value of agricultural production per person engaged** (Rs. per year)	*No. of persons engaged in agriculture per sq. kilometer of cultivable land*					
	0—5	5—10	10—15	15—20	20—25	25—30
Below 1,000	..	Philippines	..	..	..	India
1,000-1,500	..	..	Turkey Yugoslavia U.S.S.R.	..	..	..
1,500-2,000	..	..	Poland	Rumania	..	Italy
2,000-2,500	Brazil	Greece	Cyprus Bulgaria	Portugal	..	..
2,500-3,000	..	France Austria	Spain	..	Hungary	..
3,000-3,500	Sweden	Ireland	Syria	..	..	..
3,500-4,000	..	..	Germany Czecho-slovakia	Belgium	..	..
4,000-4,500	..	..	..	..	..	..
4,500-5,000	..	Britain	..	Nether-lands	..	..
Over 5,000	..	..	Denmark	..	..	..

SOURCE: An article entitled, 'Population Growth And Living Standards' by Colin Clark, published in the *International Labour Review*, August 1953.

* Value of agricultural production has been given in terms of Indian rupee prices of the year 1948-49.

n the following table. But this difference in conditions can, at most, be taken to explain the difference in production only where the cultivable land per person engaged in agriculture is equal or nearly equal, that is, higher production per acre in the eight countries mentioned in the left-half of the table, as compared with that in the USSR, may be due to their superior soil and climate. It will, however, be straining one's credulity too far to believe or to ask one to believe that higher production per person of the six countries mentioned in the right-half of the table where the area of cultivable

TABLE XVIII

COMPARISON OF AGRICULTURAL INCOME IN USSR WITH SOME COUNTRIES

Countries which have about the same area of cultivable land per person engaged in agriculture as in USSR		*Countries which have a smaller area of cultivable land per person engaged in agriculture than in USSR*		
Country	*Index of production per acre (and, therefore, per person)*	*Country*	*Index of production*	
			Per acre	*Per person*
USSR	100	USSR	100	100
Poland	140	Rumania	196	140
Cyprus & Bulgaria	180	Italy	252	140
Spain	220	Portugal	308	180
Syria	260	Hungary	396	220
Germany & Czechoslovakia	300	Belgium	420	300
Denmark	420	Netherlands	532	380

land per person engaged in agriculture is smaller than that in the USSR, is also due to this difference in soil and climate, or that the soil and climate of Germany, Czechoslovakia, Portugal, Hungary, Belgium, Denmark and Netherlands are three to five times superior to those of the USSR, particularly, when the claims of the Soviet Union regarding progress in agricultural research and availability of resource facilities on its state and collective farms are so wide and insistent. It will, therefore, be fair, by all standards, to conclude that the size of its agricultural undertaking, which is hundred times or more than that in any other country shown in the table, has not only not helped the USSR increase its agricultural output but, on the contrary, depressed it. There is no reason to suppose that, had the enormous amount of capital invested in the means to produce agricultural machinery, in land improvements, in supplying chemical fertilizers, etc., been sunk in small, private farms, the results would not have been much better.

The following figures would prove where the U.S.S.R., with a jointly-operated collective farm of fifty times the size of the average private farm in the USA., stands with regard to production of six main crops as compared with the latter: [11]

	U.S.A.	*U.S.S.R.*
Wheat	16.9	11.0
Barley	16.4	12.4
Maize	32.7	16.9
Rice (Paddy)	37.3	20.3
Potatoes	206.7	91.3
Tobacco	18.2	12.7

Taking the world as a whole, the Food and Agriculture Organisation of the United Nations has recently put out a very valuable survey called *Co-operatives and Land Use* published under its official auspices. On the general problem as to whether co-operative farming is more productive than peasant farming, the report says: "There is much evidence that the rural standard of living in countries extensively collectivised is below that of countries in similar latitudes where farming is individual." [12]

We may apprehend the same results in China, in India [13], or, for that matter, in any other country which adopts the agricultural pattern of the USSR. The main reason is not far to seek. To restate it: incentives for hard work which operate in individual farming and tend to increase its production are absent in large-scale joint farming.

[11] Source: *F.A.O. Production Yearbook*, 1961, Vol. XV. Figures relate to the period 1958-61 and are average yield per hectare (in 100 kgms).

[12] Report, p. 105.

[13] The following report in the *Hindustan Times*, New Delhi, would give an idea of the performance of co-operative farms in our country:

> The U. P.'s 334 co-operative farms made a profit of Rs. 2,39,710 last year, disclosed Mr. Mohanlal Gautam, Minister for Agriculture and Co-operation in reply to a question by Mr. M. S. Bhamti, in the State Council today.
>
> The Minister said that these co-operative farms had an area of 61,016 acres, and a working capital of Rs. 44,93,443.
>
> In reply to a supplementary question the Minister said that the present membership of these farming societies was near seven thousand.

One cannot end up this array of data in favour of small holdings better than by referring to the achievements of Shri Shrikant Apte, a worker of the Bhoodan movement in our country. He has achieved on a quarter acre of land—his farm is at Rander, three miles from Surat—results which stagger one's imagination. He has experimented with what he calls *Rishi Kheti*, which is a miracle of self-sufficiency from beginning to end.

He cultivates his plot in such a way as to get all his necessaries of life from it—food and cloth—and makes an annual saving of Rs. 400. He works on his land at an average of four hours a day with hand tools (no bullocks), fetches water on his head to irrigate it from the river a mile and a half away. The only manure he uses, is provided by his own excreta and the droppings of his two goats, whose fodder is procured by a circular pruning of the hedge round the farm. It takes six weeks to go round the hedge to get forage for the goats and by the time the circle is completed the hedge is ready for the next cycle of pruning.

Shrikant Apte has worked his farm with complete success in this manner for the last five years. And as if not to be outpaced by the produce of the modern farm managers, using new-fangled techniques and synthetic fertilisers, he has contrived to raise prize-size vegetables at his farm. Ever seen a carrot 4 inches less than 3 feet long ? If not, go to Apte's farm at Rander. Not only gargantuan carrots but you will also see mammoth *moolies* (weighing 5 lbs. each) and onions as big as ostrich eggs, weighing 1 lb. each.

Cotton is Apte's cash crop. He grows only 20 plants which yield him between 1½ and 1¾ maunds of cotton. His personal requirements are met by about 10 seers ; the rest he sells, just as he sells the surplus produce of vegetables. That is how he makes his extra Rs. 400 a year with which he runs a *Balmandir* and a library in the village.

Shrikant Apte works on his farm only for nine months in a year. Acharya Vinoba has asked him to propagate his technique, which, Apte claims, is 'possible for everybody.' It has been described by Acharya Vinoba as 'an introduction to the practical book of Bhoodan'.[14]

This may be an extreme case, but it shows what man is capable of, unaided by machinery and artificial fertilisers.

The report of the Krishnappa Delegation to China contains on pages 92 to 104 several tables showing acreages and production in China during the period 1949-1955. Two of these on pages 100-101

[14] *Hindustan Times*, New Delhi, dated 29 January 1957.

show the per-acre yield of major agricultural crops, and one may argue that the gradual increase from year to year mentioned therein is indicative of the correspondence between larger farming units brought about by the introduction of co-operative farming and higher output. The co-operative movement took shape in 1951 and it recorded its high water-mark in 1955. Between 1952 and 1954 the increases, if any, are insignificant, and it is unthinkable that the large operational unit of 1955 should have produced such immediate effects as are reflected in the significant increase between 1954 and 1955. Whatever increases have taken place must, therefore, be ascribed to the financial and technical assistance so largely extended by the Chinese Government to its farmers. Quite apart from these considerations, judged even from the standards of a statistically backward country like India, the Chinese figures are utterly unreliable. In respect both of area and yield, they are based merely on visual estimation and are, therefore, entirely subjective, in contra-distinction to the figures in the tables quoted earlier, which have been compiled on the basis of objective methods. In China, there is no counterpart to our *patwari*; there are no scientific measurements; there are no cadastral maps; there are no crop-cutting experiments.[16]

Our estimate of Chinese statistics is abundantly reinforced by the following observations made by the Krishnappa Delegation in its report:

> By and large, it appears to us that Chinese data after 1952 are not strictly comparable with earlier data. As such, a part of the improvement that is revealed by figures of area and yield of agricultural crops in China after 1952 over those of earlier years may be considered to be statistical (p. 86).
>
> In China, although some village maps were prepared during the land reforms, these were very rough sketch maps only and were not used for statistical purposes (p. 86).
>
> Since in China, the objective method of crop-cutting sample surveys is not followed for estimating the yield of agricultural crops, especially of food crops, and since during the last few years there

[16] The sample surveys carried out by Prof. John Lossing Buck in 1921-25 on 2,866 farms in 17 localities of 7 provinces embodied in *Chinese Farm Economy* (University of Nanking, 1930), and in 1929-33 on 16,786 farms in 168 localities and 38,256 farm families in 22 provinces, embodied in *Land Utilization in China* (University of Chicago, 1937), are, perhaps, the only examples in China of scientific statistics.

has been a vigorous campaign at all levels for increasing the yield and a spirit of competition is being fostered between different villages and different farmers, it may not be unreasonable to presume that the tendency towards psychological bias which we have observed in India should also manifest itself in China to some extent. When the peasants and members of the co-operative farms, local agricultural officials as also local party members are told that yield of crops must be increased from year to year and that their work will be judged by their record in this regard and when there is a natural enthusiasm in the whole countryside for increasing yields and also outdoing others, it will be only human if instead of understating the yield they tend to overstate it (pp. 86-87).

But the important point to find out is how far the yield per acre is improving year by year as a result of various measures undertaken in India and in China. Here, unfortunately, the statistics are not strictly comparable because while in India the figures of yield of foodgrains are at present largely based on crop-cutting sample surveys subject to no psychological bias, in China they are determined by subjective valuation which must be quite appreciably influenced by the psychological climate prevailing there (pp. 87-88).

The agricultural communes introduced in 1958 were much publicized in China and abroad as the main instrument of the 'Great Leap Forward' which was said to have doubled China's production. But how far Chinese statistics are worthy of credence will be clear from an official announcement made on August 26, 1959. The announcement sharply scaled down figures originally claimed for harvests of grain and cotton in 1958. The actual amount of grain was discovered to be not 375 million tons, but only 250 million; of cotton, not 33,50,000 tons but 21,00,000 tons. "Owing to lack of experience in assessing and calculating the output of such an unprecedented harvest," the announcement said, "the agricultural statistical organs in most cases made an over-assessment"[1]

Later on, Peking attributed this shortfall in agricultural production in 1959 and also that in the succeeding year, 1960, to natural calamities. It was repeatedly stated that in 1960 half the acreage was ravaged by floods and drought, while in 1959 nearly 40 per cent was affected. The truth, however, is that, while China did have adverse weather conditions during these two years, the major cause for decreased agricultural productions was lack of incentive among the peasants.

In the light of definite factual evidence given above, we have to consider or reconsider in all seriousness whether the plans and

attempts at agricultural reorganisation in our country with a view to increasing the size of the farming units, are not misconceived.

It is sometimes difficult to follow the logic of the advocates of agricultural producers' co-operatives when some of them are at the same time found pleading for a ceiling being put on the existing large, private holdings. They argue that the size of the farm has no bearing on production per acre and their breaking up and distribution in small units will not lead to decrease in total production. The latter view is certainly correct. But an upholder of this view cannot consistently advocate establishment of producers' co-operatives, which will be large units, with a view to increasing production. The two views are mutually contradictory.

MAINTENANCE OF SOIL FERTILITY

In order that the soil of the country may continue to produce food sufficient to feed our increasing population, we need a farming system which will not only maintain but improve the fertility of the soil. It is submitted that a system of small farms alone can do this. As has been shown in a previous sub-chapter, a family or subsistence farm will have more organic manure at its disposal than a large farm, which will, in all probablity, be mechanised and will consequently resort to inorganic fertilisers. And inorganic fertilisers are not an unmixed blessing. We will here refer to two long-term experiments on the effects of the two kinds of fertilisers.

An experiment to determine (i) the relative utility of the three major nutrients, nitrogen, phosphorus and potash, in the manuring of sugarcane, and (ii) the effects on soil fertility due to continuous application of artificial fertilisers, without being supplemented by organic or green manuring, was started in Uttar Pradesh at Shahjahanpur Sugarcane Research Station in 1935-36. The trial is being conducted in two adjacent fields in alternate years, so that a crop of sugarcane would be available every year, the rotation followed being cane-fallow-cane.

The treatments applied to the cane crop included all the 27 combinations of (i) 3 levels of nitrogen, namely 0, 100 and 200 lbs. N per acre; (ii) 3 levels of phosphate namely 0, 75 and 150 lbs. P_2O_5 per acre, and (iii) 3 levels of potash, namely, 0, 75 and 150 lbs. K_2O per acre. Nitrogen was applied in the form of ammonium

sulphate, P_2O_5 as super phosphate and K_2O as sulphate of potash. The trial has now completed a period of 27 years with 14 crops of sugarcane in one field and 13 in the other. After the first two or three crops the average yields in both the fields began to show more or less continuous fall showing thereby a marked deterioration in soil fertility. The rotation was accordingly changed in 1952-53 by introducing *Sanai* green manuring before cane. 5 crops of sugarcane have now been taken from each field after the introduction of green manuring. The results of this experiment are given in Table XIX.

It will be seen that in both the fields, till the introduction of green manuring, there was a marked deterioration in the average cane yields with the progress of years. The overall average cane yield fell from about 690 mds. per acre to about 325 mds. during a period of 17 years. With the introduction of green manuring the improvement in soil fertility became quite marked as shown by the increase in the cane yields in both the experimental fields. These have now been ranging between about 780—600 mds. per acre in different years depending, in all probability, on weather conditions, favourable or otherwise, during the growth period of sugarcane, in a particular year. With the application of green manure (organic matter) the artificial fertilizers under the given level of irrigations, have again brought the yield of sugarcane to a higher level.

The salient conclusions, according to Dr. R. K. Tandon the Director of the Research Station are :

(i) There is a definite fall in the average yields of both nitrogen-manured and unmanured plots. Phosphate and potash applications have not shown any response. The mean values for the overall average fall in yield are :

	Mds. per acre per crop.
Control (No nitrogen)	30.24
100 lbs. N per acre	55.34
200 lbs. N per acre	52.75

(ii) Continuous application of sulphate of ammonia without any organic or green manuring has resulted, on the average, in an additional deterioration (as compared with no manure) to the extent of about 25 maunds of cane per acre ;

(iii) For sustained high yields over long periods artificials only

Table XIX

MEAN YIELD OF MAIN EFFECTS N.P.K. IN MDS. PER ACRE

Year	*NITROGEN*			*PHOSPHATE*			*POTASH*		
	0 lbs. N_2 *per acre*	100 lbs. N *per acre*	200 lbs. N *per acre*	0 lbs. P_2O_5 *per acre*	75 lbs. P_2O_5 *per acre*	150 lbs. P_2O_5 *per acre*	0 lbs. K_2O *per acre*	75 lbs. K_2O *per acre*	150 lbs. K_2O *per acre*
Field I									
1933–36	339	887	852	769	733	776	723	763	793
1937–38	357	794	802	641	652	629	647	642	664
1939–40	564	916	898	784	797	791	784	792	797
1941–42	253	627	728	552	532	543	542	531	535
1943–44	396	662	678	568	580	588	584	569	589
1945–46	394	537	595	504	512	510	513	494	500
1947–48	376	462	515	447	445	461	453	447	452
1949–50	239	437	467	354	375	391	387	372	363
1951–52	109	266	341	239	243	235	244	238	234
1953–54*	434	708	718	611	626	624	612	609	630
1955–56*	523	798	817	709	714	714	710	713	712
1957–58	586	718	721	650	691	685	646	678	702
1959–60	613	680	654	639	654	654	642	648	657
1961–62	513	700	732	644	645	656	624	663	671
Field II									
1936–37	388	651	795	602	620	613	603	613	619
1938–39	501	832	884	755	761	761	751	758	767
1940–41	389	529	539	490	478	480	486	470	491
1942–43	466	932	1035	822	814	843	814	816	828
1944–45	429	747	785	629	648	663	646	646	648
1946–47	301	551	512	412	418	435	430	426	427
1948–49	289	513	545	441	453	456	445	439	454
1950–51	276	432	531	393	417	429	399	408	432
1952–53*	439	650	703	492	589	601	585	607	590
1954–55*	432	700	850	682	686	703	686	688	698
1956–57	686	813	845	761	781	803	756	783	804
1958–59	644	808	880	744	791	796	730	789	792
1960–61	536	600	642	591	575	613	584	593	602

*After green manuring.

cannot be depended upon; a proper balance between the organic manures and inorganic (artificial) fertilisers is indicated as a permanent policy for obtaining good yields over long periods.

There is evidence to support the conclusion that in countries like China, Japan and Taiwan, where lot of composts, plant and animal wastes were utilized along with commercial fertilizers, better crop yields of wheat per unit of nitrogen applied were still obtained, while the Law of Diminishing Returns was in actual operation in countries like the Netherlands, Belgium and Norway where unmixed commercial fertilizers alone were applied in heavy doses.

The famous Rothamsted experiment in regard to the effect of organic and inorganic fertilisers on the production of wheat has thus been described by T. B. Wood :[17]

Perhaps, the most famous field at Rothamsted is the Broadbalk Field on which wheat has been grown every year since 1852. This field is divided into nineteen plots, each plot being half or quarter of an acre. The plots are manured differently, but each plot gets the same manure year after year. One plot has been continuously unmanured since 1852. From 1852 to 1861 its average yield was 16 bushels per acre. From 1892 to 1901 it yielded on the average just over 12 bushels per acre. In fifty years, therefore, the productivity of this plot for wheat has only decreased by less than 4 bushels. Wheat is, therefore, a good forager, no doubt in virtue of its deep and extensive root system. The average yield of the unmanured plot over the whole 50 years is 13 bushels per acre.

The average yield of the plot manured every year with mineral manures, *i.e.* phosphates, potash, and lime is only 15 bushels per acre, from which we may conclude that wheat is not specially benefited by these manures. The plot manured annually with sulphate of ammonia has given an average yield of 21 bushels per acre, which shows that wheat is specially helped by nitrogenous manures.

It is not, however, entirely independent of phosphates and potash, for on the plot which received annually sulphate of ammonia, together with phosphates and potash, the average yield has been 31 bushels per acre, an increase of 10 bushels over the yield of the plot receiving nitrogen only.

The best yield is given by farmyard manure—36 bushels per acre on the average of 50 years or 5 bushels more than the plot receiving a complete mixture of artificial manures. This increase is, perhaps, due to the improvement in the physical condition of the

[17] *The Chemistry of Crop Production* by T. B. Wood, University Tutorial Press Ltd., London, 1920.

soil by the humus[18] resulting from the farmyard manure (p. 174).

Every manure, which disturbs life in the soil and drives away the earthworms and bacteria or other humus-making organisms, makes the soil more lifeless and more incapable of supporting plant life. The dangers of one-sided fertilising are, therefore, obvious especially when one uses strong doses of chemical fertilisers containing soluble salts like potassium or ammonium sulphates, of highly corrosive substances, such as nitro-phosphates (usually under some fancy trade name), or poisonous sprays, such as arsenic and lead preparations. These injure and destroy the micro-organic world. Soils intensively treated with chemical fertilisers alone or orchards sprayed for a long time with chemicals have no longer any biological activity.

Further all crop-increases purely from chemicals are short-term benefits. Chemicals do not add to the fertility of the soil but act as stimulants or drugs resulting in immediate bumper crops and in the end bring about a corresponding exhaustion of the land. Plants raised by these means are also much more liable to pest and disease attacks, the natural laws of growth having been violated and disturbed. Plant disease will cure itself when plants are raised on humus manures.

The great English agriculturist, the late Sir Albert Howard,[19] a former Director of Agricultural Research at Pusa, says of artificial fertilisers:

The feature of the manuring of the West is the use of artificial manures. The factories engaged during the Great War in the fixation of atmospheric nitrogen for the manufacture of explosives had to find other markets, the use of nitrogenous fertilisers in agriculture increased, until today the majority of farmers and market gardeners base their manurial programme on the cheapest forms of nitrogen (N), phosphorus (P), and potassium (K) on the market.

[18] *Humus* literally means soil or earth, but in practice it is used to indicate that decaying and undecayed residue of vegetable and animal waste lying on the surface, combined with the dead bodies of bacteria and fungi when they have done their work—the whole being a highly complex and somewhat varying substance—which is, so to say, the mine or store or bank wherefrom the organisms of the soil and then the plants or the trees draw what they need for their sustenance.

[19] *An Agricultural Testament*, Albert Howard, New York, 1943.

What may be conveniently described as the N. P. K. mentality dominates farming alike in the experimental stations and the countryside. Vested interests, entrenched in time of national emergency, have gained a stranglehold. Artificial manures involve less labour and less trouble than farmyard manure. The tractor is superior to the horse in power and in speed of work; it needs no food and no expensive care during its long hours of rest. These two agencies have made it easier to run a farm. A satisfactory profit and loss account has been obtained. For the moment farming has been made to pay. But there is another side to this picture. These chemicals and these machines can do nothing to keep the soil in good heart. By their use the processes of growth can never be balanced by the processes of decay. All that they can accomplish is the transfer of the soil's capital to current account. That this is so will be much clearer when the attempts now being made to farm without any animals at all march to their inevitable failure. Diseases are on the increase. With the spread of artificial fertilisers and the exhaustion of the original supplies of humus, carried by every fertile soil, there has been a corresponding increase in the diseases of crops and of the animals which feed on them.

Howard calls attention to the contrast between western farming methods and the processes that nature uses to keep the soil in living, healthy condition:

What are the main principles underlying nature's agriculture? These can most easily be seen in operation in our woods and forests. Mixed farming is the rule; plants are always found with animals; many species of plants and animals all live together. In the forest every form of animal life, from mammals to the simplest invertebrates, occurs. The vegetable kingdom exhibits a similar range; there is never any attempt at monoculture; mixed crops and mixed farming are the rule....

Howard goes on to say:

The main characteristic of nature's farming can, therefore, be summed up in a few words. Mother Earth never attempts to farm without livestock; she always raises mixed crops; great pains are taken to preserve the soil and to prevent erosion; the mixed vegetable and animal wastes are converted into humus; there is no waste; the processes of growth and the processes of decay balance one another; ample provision is made to maintain large reserves of fertility; the greatest care is taken to store the rainfall; both plants and animals are left to protect themselves against disease.

Even those who are in favour of chemical or mineral fertilisers advocate that they should be used in combination with one or other suitable means of humus maintenance, and farmyard manure is admittedly the best, so that a large farmer to the extent he uses machinery and lags behind the small farmer in the maintenance of cattle, will generally lag behind in the maintenance of soil fertility and, therefore, ultimately in the yield per acre. Green manure could, as the Shahjahanpur experiment has shown, be a substitute for farmyard manure though not a complete one.[29] The cultivation of leguminous and other nitrogen-fixing crops would, therefore, have to be promoted where the supply of farmyard manure is reduced by mechanisation. But this would prevent land from being utilised for cash or more productive crops.

There is a cycle in nature which a small farmer can help best complete: if this cycle is broken nature takes its revenge in returning smaller yields.

The task of agriculture is to transform solar energy into chemical energy stored up in human food. This transformation can be brought about only through the agency of living organisms. Green plants, and particularly, cultivated crops, constitute the best and most efficient among such agencies—the first basis of agriculture.

But only one-quarter of the material of which the crop is composed, occurs in a form suitable as human food. Three-fourth of the produce of plants occurs in the form of residues such as straw, chaff, roots, etc., which cannot serve as human food and other purposes of human consumption. Nature has, however, so ordained that these residues can serve as animal food instead. Not only that: the animals can convert this straw and chaff into other forms of organic matter fit for human consumption. But, as in the case of crops, animals too, on their part, can make available only a quarter of the energy they consume, as products in the form of milk and meat which human beings can use. The rest goes into waste material. The excreta contain all the mineral plant nutrients taken in

[29] Farmyard manure or human and animal wastes are superior to green manures (except leguminous ones which, because of symbiotic bacteria present in nodules on their roots, draw nitrogen from the air and fix it on the plants) inasmuch as they make a net addition to the richness of the soil, while the latter can return to it only a part of the nutrients extracted from what was already present in the soil.

by the animal in its food, and need to be decomposed and the nutrients re-converted into forms available to plants. This decomposed farmyard waste is usually known by the name 'compost'. The mineral nutrients originally derived from the plants have to be dug in or ploughed back in the form of compost into the soil which will make the nutrients again available to the plants. It is thus that nature's nutritional cycle becomes complete. It is thus, *viz.* by ensuring the return to the soil of organic wastes for regeneration by bacteria, worms, etc., that the fertility of the soil will be maintained.

If, therefore, we are to raise the productivity of the soil, we must make live-stock an indispensable element of agricultural economy. Live-stock—another living machine—is the second indispensable basis of agricultural industry. A large farmer can obviously keep a large herd but the very much greater overhead charges of its upkeep, and insufficiency, if not actual lack, of personal attention required by every individual animal will make the herd uneconomic. He cannot, therefore, ensure the return of all the organic wastes which may be primarily derived from his farm to the latter and cannot, therefore, aid nature in completing the nutritional cycle.

Speaking at the Lucknow University on the researches carried out in India and specially with which he had been associated from 1930 onwards, Dr. N. R. Dhar, Director of Sheila Dhar Institute of Soil Chemistry, Allahabad, said on 17 December 1956 that "cow-dung used by our ancestors from time immemorial was the best manure suitable to our soil. Next to it were organic plants such as weeds and legumes, etc., which liberated a large quantity of energy, due either to bacterial decomposition or photo-chemical oxidation. These not only increased the production of crops but also enriched the nitrogen content of the soil."

"Haber's method", he went on to say, "which was used at Sindri and other places in this country for the synthesis of ammonia and its subsequent conversion to ammonium sulphate, had some inherent difficulties. The soil of India and other eastern countries was more alkaline and so it could not absorb ammonia properly. Though this method gave good production of crops, it reduced the nitrogen content of the soil—an injurious thing for the soil."[21]

[21] *The Pioneer*, Lucknow, dated December 19, 1956.

The role of the peasant or small-scale farming in maintaining soil fertility has been very forcefully put by David Mitrany in his book, *Marx against the Peasant* (London, 1952):

Besides, perhaps the most important aspect of the matter had almost been lost sight of in the debate about production quantities, namely, the vital need of maintaining the productivity of the soil. That is a need which concerns every country, but not till the shock caused by some disaster, like that in the 'dust bowl' of the western United States, had it received the attention which it merits. Good farming means not only what is got out of the soil but also what is put back into it, to keep it 'in good heart and condition'. Everywhere and at all times experience seems to have shown the same close relation between large-scale farming, especially under tenancy, and the impoverishment of the soil. Even in the United States the policy is now to break up the old cotton lands of the South into small units for mixed subsistence farming, as the best way of redeeming the soil (as well as the health and self-respect of the eight million white and negro share-croppers) exhausted by the endless raising of the profitable commercial crops. The planter and large tenant often treated the land as an investment, to be used as long as it paid and sold as scrap: 'land is with him a perishable or movable property'. Marx, characteristically, had simply laid it down that small-scale cultivation impoverished and exhausted the soil. Yet how could a peasant, who expects to raise generations on the same bit of ground, treat his land otherwise than as a living thing? The virtue of ancient and recent peasant farming, wrote a reviewer in the scientific journal, *Nature*, is that it returns to the soil the elements of life.

There is a strong element of ideal truth in the old Socialist argument that being God-given, and needed by all, the land should be no man's private property. Yet the land as such would be of little worth unless its bearing powers are perpetuated. It is the function of the land, not its raw substance, that society must possess for well-being and survival and in that sense the claim to individual ownership may be logically rooted in the nature of agricultural production itself. With the factory worker, even the artisan, the quality of his product depends on the quality of the material and on his own skill. Whatever tools or machinery he uses are a passive factor, taken over as they stand from the previous user and passed on to the next, but little affected by their temporary use, or easily replaced. All the variable factors of production, materials and skill, are wholly absorbed in each object produced, while machines and tools are transient. With the farmer or peasant, the matter is very different. His chief tool is the soil itself, or rather it is partly tool, partly raw material, a unique combination in the whole scheme of production. It is unique in that it is both a variable factor, affected

by each period of use, and at the same time a constant factor, which cannot be replaced. What the farmer can get out of it depends greatly on the state in which the soil was passed on to him by the previous user, and his own way of treating it will affect the results obtained by the next user. Neglect of the soil by one may make it of little use for many. Quite apart from immediate benefits, therefore, the very nature and spirit of cultivation seem to require that the man who tills the land should have constant use of the same piece of the same instrument (pp. 128-129).

Only when the farmer has the same regard for his soil that he has for his bullocks, the welfare of which he guards daily, can we expect of it a performance commensurate with its capacities, year in and year out, without detriment to it. To the peasant, and, let us be clear in our minds, human nature being what it is, not to a member of a co-operative or collective farm, such care and regard are a matter of his own survival.

The few inches of top soil are the most prolific and universal source of wealth that mankind possesses. Large-scale technology which goes with big farms is, however, busy destroying this wealth. It takes nature, in the most favourable circumstances, from 500 to 1,000 years to make one inch of top soil. But today man, due to his indiscreet use of land, is turning vast areas of fertile land into deserts in much less than a generation, by helping causes of erosion. Modern large-scale farming using chemical fertilisers on a scale without precedent in the history of agriculture, has been most successfully developed commercially in America, but it is there that soil erosion has also proved most widespread and disastrous. The one-crop grain and cotton regions in the USA undoubtedly show a much larger decline in fertility than livestock districts. One hundred million acres of land have already been exhausted in the USA in less than two centuries of cultivation. On the other hand, there is Chinese agriculture based on the use of natural manure, which has endured for 40 centuries without any demonstrable exhaustion of soil fertility. The lesson is clear: only by faithfully returning to the soil, in due course, everything that has come from it, can fertility be made permanent and the earth be made to yield a genuine increase. The only way to preserve soil structure is to add humus—and the most feasible way to obtain humus is through the composted farmyard manure.

The small cultivator has, to repeat, a positive contribution to

make in this regard. He depends entirely on his animals and himself for all agricultural operations, works up his land well, has a valuable source of organic manure in his farm and animal wastes, keeps his land covered with one crop or other, and, above all, takes care of his land like a precious treasure, for that means life for him and his family and dependants. In mechanised cultivation, which means replacement of animal and human power by machines, a valuable source of organic matter is lost and, with that, starts the whole series of troubles for the land, animals and human beings. Chemical fertilisers then find increasing use and, if applied exclusively, give rise, in turn, to a number of plant maladies. In spite of insecticides and pesticides, the fact remains that diseases multiply unabated and the vicious circle spreads.**

CO-OPERATIVE FARMING UNNECESSARY

Protagonists of large-scale farming—and a co-operative farm is a large-scale farm—contend that it has several advantages over small-scale farming, which will lead to increased production. Firstly, technologies can be used, or scientific cultivation is possible, on big farms alone. According to our Prime Minister, "the argument for co-operative farming is based on the very small holdings that

** The argument as to the best scale for agricultural production can be seen yet in another light. Good nutrition is concerned as much with the kind and quality of the food-stuff as its quantity. Recent researches suggest that the healthiest peoples in the world are those who derive their food from their own soil and consume it in a fresh condition, maintaining fertility of the soil at a high level by practising the 'Law of Return', *i.e.* by returning to the soil all the organic wastes—all that has been removed from it by the crop—in the same way in which nature manages her operations. Experiments (vide *Soil Fertility, Renewal and Preservation* by Dr. Ehrenfried Pfeiffer, Faber and Faber Ltd., London, 1947, Chapter XIII) made by Dr. Pfeiffer and others on rats, chickens and turkeys have shown that the seeds, and still more the leaves, of plants sown in soil fertilized with organic compost have the peculiarity, when used as food for these animals, of increasing their capacity for resisting diseases to a greater degree than the corresponding seeds and leaves sown in soil fertilized with chemicals. An analysis made by Dr. McCarrison showed that no difference chemically existed between the compost-grown food-grain and that grown with artificials. This most revealing experiment, therefore, may be taken to prove that there are vital properties in compost-grown foods which cannot be analysed chemically but

farmers have. In countries where holdings may be twenty or thirty acres or more, this may not be necessary. But where the holding is one or two acres, it is not possible to use many modern methods (I am not referring to tractors for the present) and our technique of farming will not improve. It is only when we employ better techniques that we can improve our yield." Secondly, water, credit and marketing and technological facilities, which go to swell the produce and income of a farmer, are easily available to large farms rather than to small farms. Thirdly, large farms alone possess the financial resources required for effecting land improvements or reclamation of land that may be lying waste. Fourthly, planned crop rotation and a rational use of land, which will increase the double-cropped

which are reflected in the health and general well-being of those who eat them.

Professor F. Rost of Mannheim concluded from his experiments that the increased tendency to thrombosis, as we have observed it in recent years, stands in direct relationship of cause and effect with the increased potassium content in food which, thanks to the plentiful use of artificial fertilizers (and to the practice which has grown in recent years of not pouring off the cooking water of vegetables particularly, spinach, but of utilizing it) is higher than in earlier decades.

Incidence of cancer also is said to increase in societies which undertake mechanised agriculture using artificial manures. Said a doctor who had fled to Tanganyika in East Africa from Nazi persecution of Jews Germany, but returned to Europe in 1951 and was last heard of inin Russia :

"In India, with its teeming millions, in China, in Japan, in Russia, in Asia, and here in Africa, we have vast populations, running into hundreds of millions. The incidence of cancer in these countries is so small that it is completely negligible. Here in Africa the position is even more striking. Cancer among the European population all over Africa is definitely on the increase ; and in many cases alarmingly so. By contrast, the native population, which now increases at a more rapid rate than ever before in the history of Africa, is to all intents and purposes, entirely free of cancer. Such statistics as I have available, go to show that among the natives cancer is almost completely unknown. As you go higher in the scale, there is proportionate increase in the incidence of the disease. How, then, must we explain this startling, but demonstrable fact ?

"It is the food, my friend ; it is the food. The scientist and the botanist are creating cancer all over the world today wherever they interfere with the natural structure of plants and seeds. The Burbanks have given us ten grains of corn where only one grew before. In so doing they have altered the natural structure of the corn-seed. They will feed

area and the area under high-yield crops, is possible only on big farms. Fifthly, millions of acres of land will be available for crop production owing to elimination of field boundaries because of merger of individual fields and holdings into a co-operative farm. Sixthly, more than one wasteful operation necessitated by small size of peasant farms will be eliminated, costs reduced and capital resources which are so scarce but are wasted on these tiny farms conserved. Seventhly, large-scale or co-operative farming provides the only remedy of fragmentation and of the increasing number of small uneconomic holdings in the country which are characterised by 'lack of capital resources, low level of technique and productivity, and under-employment'. Finally, as a result of increased food production, co-operative farms will have a surplus which can be marketed to feed the towns, thus obviating food imports. This surplus, which is not available on peasant farms today, or, if available in some degree, is not capable of mobilisation, will provide the necessary capital for rapid economic development of the country.

Now to take the arguments one by one: The average holding in India is not one or two acres as the Prime Minister assumes. Today the population of the country can be put at 450 million persons and the total net area sown stands at 325 million acres. Fifty-six per cent of our people hold land or are cultivators, and an average family has a strength of five. So that we have $\frac{450 \times 56}{100 \times 5} = 50.4$ million cultivating families, which gives an average family holding of 6.0 acres for the country.

thousands more on the same acreage, but they will also kill hundreds more with cancer. When the natural structure of the plants and cereals we eat is altered, it has a detrimental effect on the glands in the human system, and that in turn produces cancer. I give cancer by glandular treatment and I take it away by glandular treatment. At this stage of my experiment each individual case is treated on its merits. I watch reactions and I increase or decrease the strength of the doses as required. Some day I hope to have a standard cure for all cancers. That day may never be, but it is certain that I can, and have, cured many cases to which I have given my personal attention. In the back room there are several mice, healthy and well; if you will come with me and select as many as you wish, I will guarantee to produce cancer in each of them within forty-eight hours" (*Vide* John F. Burger's *African Adventures*, Robert Hale Ltd., London, 1957, pp. 97-98).

As regards technologies in agriculture, according to James Maddox, they are of three kinds:

> One group of agricultural technologies springs from the biological sciences. Illustrations are the high-producing, scientifically-bred varieties of plants and animals, including, of course, various types of hybrids. Also, there is a group of vaccines for the prevention and cure of livestock and poultry diseases which are basically biological in nature.
>
> A second group is what may be called the chemical type of agricultural technologies, because it springs largely from the work of the chemist. Examples of it are the ordinary commercial fertilisers so commonly used in many countries, a large and important list of insecticides and fungicides, and also weed-killers. Still another example is some of the modern supplements to livestock rations.
>
> A third group of agricultural technologies springs from the work of the physicists and the engineers. Examples are tractors, the many complicated farm machines and equipment that go with power farming, and also a long list of other things such as farm buildings, silos, and storage facilities, and even farm-to-market roads, and marketing facilities. All these are basically engineering structures or designs.[29]

Now, as regards the first and the second group, they do not need essentially a large farm to use them. They are being used in the fullest measure on one-and two-acre farms of Japan. The responsibility for development of scientifically-bred varieties of plants and animals, preparation of vaccines, and discovery of fertilisers, insecticides and fungicides, shall, of course, have to be shouldered, as all the world over, by the state. Research takes generations and colossal sums of money, and cannot be the responsibility of individuals.

As regards the third group, *i.e.* tractors and other large machinery, etc., it is true that they cannot be used on small farms. But at the same time it is also true that these technologies do not increase production per acre that we in India are concerned with.

It may be stated here that use of machinery in agriculture is also called a higher or improved technique as distinguished from

[29] A paper entitled "Transferring Agricultural Technology from Developed to Under-developed Areas" read at the International Conference on Land Tenures and Related Problems in World Agriculture, held at Madison, Wisconsin, U.S.A., 1951, *Report*, p. 343.

bullock-farming which is characterised as a low technique. These erroneous designations have done much to create a bias in favour of the former and against the latter. The Prime Minister may not want tractors 'for the present'[24], but to many people modern farming implies mechanisation and, when co-operative farming is advocated, it is often due to the wrong assumption that great progress automatically follows mechanisation. There are, however, numerous examples where very intensive and modern forms of agriculture have been developed and high production achieved without mechanisation or, at least, a high degree of mechanisation.

That mechanisation is also advocated because it will serve as a chain which will bind the peasant to the co-operative farm once he enters it, will be clear from the remarks of the Indian Delegation on Agricultural Co-operation, known as the Patil Delegation, which went out to China in 1956:

> When cultivation is done through machines, the sharing of the common instruments of production could be a cementing factor. In the measure that a co-operative can become mechanised, the tendency to revert back may be less. (Report, p. 147).

Perhaps, comment on such an approach is unnecessary. It is known that mechanisation has greatly helped communist control of Russian agriculture.

We have already seen that in agriculture, unlike in industry, it is not machinery that produces the commodity but the soil. In fact, there is no work in the sphere of agriculture that human or animal labour cannot perform unaided by machine. In the words of Desmond L.W. Anker:

> The building of the pyramids in Egypt or, more recently, of airfields and roads during the war years in China and Burma almost entirely with hand labour indicates what can be done by men

[24] In 1960 an Indian firm started production of tractors, the capacity of the unit being 6,800 tractors a year. The Third Plan envisages the production of about 70,000 tractors annually by 1965-66 and licences have already been issued to five firms with a total annual capacity of 74,900 tractors by the end of the plan period. The number of tractors in the country stood at 2,100 in 1956 and 34,000 in 1961.

One is unable to understand what these tractors are meant for. Large private farms are being broken up, and there is not much land to reclaim.

working without machines; with the great amount of under-utilised labour to be found in these areas, would it not be preferable to use labour on agricultural development works, and use capital, the scarcest of the factors of production, for purposes more likely to yield greater economic return?

There would appear to be much to be said, under the conditions prevailing in heavily-populated underdeveloped countries, in favour of techniques for increasing agricultural productivity with a minimum amount of capital. It is claimed that with the use of such methods as improved seeds and application of fertilisers, yields could be increased by 50 per cent without any substantial change in present systems of farming, and without all the adjustments that mechanisation would make necessary. The experience of Japan is illuminating in this respect.[25]

Had machinery by itself contributed to agricultural production, the yield per unit of land in the United States of America, where the chief means employed in working the farm is the use of large machinery, would have been greater than that in Western Europe where much less machinery is used, and in Japan where land is worked for the most part by human labour. But we find that the reverse is the case. That the production per unit of labour in the United States is several times greater than in Japan is beside the point. That mechanisation of farming operations does improve considerably the yield per unit of labour is admitted; but it does not increase the yield per unit of land and it is this that matters in India and is in dispute. The USA is able to export agricultural produce not owing to high production per acre, but to her vast total acreage.

That the introduction of mechanised agriculture or cultivation by means of tractors does not lead to any increase in per-acre yield is, perhaps, now admitted by our experts also. The results obtained from some cultural experiments conducted by the Indian Agriculture Research Institute are given vide Table XX.

According to a study, the third of its type since 1948-49, conducted by the Board of Economic Inquiry, Punjab, the tractor-cultivated farm showed an overall average gross income of Rs. 250.86 per acre in irrigated, and Rs. 118.75 per acre in unirrigated areas. On the other hand, the average gross income at a bullock-cultivated farm was Rs. 296.58 per acre

[25] An article entitled "Some Effects of Farm Mechanisation," in *International Labour Review*, March 1955, p. 250.

TABLE XX

VARIATION IN COST OF PLOUGHING ACCORDING TO MEANS OF TRACTION POWER

	Type of Ploughing	*Mean yield in mds. per acre (sugarcane)*
C_0	*Desi* ploughing by bullock power..	409.9
C_1	Tractor ploughing upto 6 inches followed by twice discing and twice grubbing	361.3
C_2	Tractor ploughing upto 10 inches followed by twice discing and twice grubbing	356.2

in irrigated and Rs. 140.12 per acre in unirrigated areas.[26]

In tropical regions or regions of heavy rainfall like India, tractor-ploughing will otherwise prove a curse. "Steel mould-board plows," says Richard B. Gregg, "which turn over the soil, expose too much of the soil to the hot tropical sun, thus killing too many of the soil bacteria and other microscopic lives on which the life and health of the vegetation depend. It is no mere coincidence that soil erosion in America has advanced with the increase of technology in farming.[27] Methods that are continuously effective in temperate climates with moderate precipitation distributed evenly throughout the year are dangerous if applied to tropical lands with monsoon rainfall. Even European methods applied indiscriminately to American conditions did much injury to the soil."[28]

Mechanised cultivation is found suitable only in the conditions of the Russian steppes or prairies and in such other regions where the climate is cold or temperate and there is little or no rainfall, or where, as in Western Europe,[28] the land receives the rainfall distributed in the form of showers all over the year, but not in the conditions of our country which has a tropical or sub-tropical climate and large parts of which receive torrential rainfall during a short period.

The nitrogen and organic carbon contents of our soil are already

[26] Vide *The Times of India*, New Delhi, dated March 31, 1961.

[27] Many farmers in America are now veering round to the view held and propagated by Edward. H. Faulkner, author of *Ploughman's Folly*, for the last two decades or so, that deep ploughing is injurious to soil and crop production.

[28] *Which Way Lies Hope?* Navjivan Press, Ahmedabad, 1952, p. 54.

[28] It is understood that now under the action of farm tractors soil erosion is appearing in France and Western Germany also.

low and the layer of the humus thin. Mechanisation of agriculture, particularly, of tilling, will lead to erosion and further depletion of our soil. The fine humus structure of the soil cannot be produced or preserved by machines; they will rather destroy the real creators of natural humus. The soil being an assemblage of living organisms and living creatures—creators of humus—cannot be successfully managed by machines and mechanical processes. Tractors and machinery in our country, therefore, may with advantage be employed only in the eradication of deep-rooted weeds like *kans*, *hiranKhuri* and *motha*, in opening up and colonisation of new areas, *i.e.* in bringing cultivable, but hitherto uncultivated, waste land under cultivation, or, in clearing land originally under jungle.

The argument that ploughing with mechanical power is more economical than ploughing with animal power is supported neither by logic nor by experience. According to document no. 5 (pp. 19-20), published by the European Conference on Rural Life, 1939:

> While, in the case of tractors, variable costs are high and fixed costs low, in that of draught animals the variable costs are trifling and fixed costs are considerable. In other words, the tractors, though expensive when in actual operation, cost little when idle, while the cost of keeping draught animals, though scarcely higher when they are at work than when they are resting, is continuous since they have to be fed and cared for, whether working or not. Hence the use of tractors is most profitable when a great deal of work has to be done in a short time. Animals, on the other hand, are more economical when the work is divided fairly evenly over the entire year.
>
> Inasmuch as laid-up tractors do not eat, they are worthwhile only when the work is intermittent. They are not profitable for the usual run of agricultural work. In our country where steady and constant work on land throughout the year is generally available, the use of bullocks for traction purposes is not uneconomical as compared with that of machinery. In fact, the bullock in our conditions is far beyond the reach of tractor competition.
>
> The working costs of animal traction are comparatively low also because tractors do not repair their injuries as animals do. Breakdowns of machinery are inevitable and there will be need for repairs. In America, every village and town has a repair garage with spare parts. It is not so in India. If we maintain a Machine and Tractor Station at every co-operative farm or even at more

than one, the expenses will more than absorb the economy, if there is any, that pooling of land and labour resources may possibly bring about. Spare parts and repairs are available to farmers today only from the big cities, which means delay of several days and consequent crop losses. Nor, as has already been pointed out, do the tractors produce any kind of manure like animal dung, which is an important means of soil maintenance and improvement.

Yugoslavia found by actual experience before the last Great War that purchase of large machines (specially of tractors) and their maintenance was too expensive even on a co-operative village basis, particularly where, as in our country, working animals were adequate for the purpose and human labour was so plentiful. We believe the experience of owners of the few mechanised farms that exist in India, is also none too different. In our country, mechanisation is likely to prove more expensive than in the USA or the USSR because, at least, for some time to come, petrol and the machines will have to be imported from abroad. In the USA, the cost of kerosene and lubricants represents 42 per cent of the entire cost of tractor work. In India, which is distant from the sources of supply, these costs will be about 25 per cent higher, viz. 52 per cent owing to transport and tariffs.

The Chinese experience is similar. A conversation between Prime Minister Chou En-lai and the Krishnappa Delegation, which visited China in July-August, 1956, has been reported thus: "Mr. Chou En-lai went on to say that the heavy pressure of population in China meant that the development of agriculture, at least, for the present could not be based either on mechanisation or on large-scale reclamation. In China, the cost of production in mechanised farms might well prove to be higher than the cost of production in non-mechanised farms where farmers worked with ordinary farm implements. The reason was that labour was still much cheaper in China. These big state-owned mechanised farms when set up even with gift tractors were not, therefore, unmixed blessings. They were causing the state quite a lot of expenditure" (pp. 23-24 of the Report).

Professor John Lossing Buck in *Chinese Farm Economy* (The University of Nanking, 1930, p. 315) examined the possibility of replacing present Chinese methods of cultivation by tractor farming. He found animal power definitely more economical than the use of tractors. (*See* Table XXI.)

TABLE XXI

COST OF PLOUGHING IN CHINA BY TRACTOR AND BUFFALO

			Chinese Dollars
Initial cost of tractor			$ 2,300
Initial cost of two gang tractor plough			$ 300
Yearly depreciation, interest, repair and risk of the :			
(1) Tractor	$ 832		
(2) Plough	$ 77		$ 909
Cost of tractor-ploughing one hectare			
(a) Yearly non-recurring expenses	$ 4·75		
(b) Operating costs :			$ 10·43
(i) Kerosene 3·78			
(ii) Lubricating oil 1·40	$ 5·68		
(iii) Labour 0·50			
Whereas cost of ploughing one hectare with a water buffalo came approximately only to			$ 4·00

According to an inquiry conducted by the Board of Economic Inquiry, Punjab, already referred to, mechanised farming implied a heavy capital investment. The total investment in tractor-cultivated holdings worked out to Rs. 224 per acre as against an investment of Rs. 112 per acre in a bullock-cultivated holding.

It is reported that in the reclamation works after the Yangtse flood in China in 1947, bullocks and wheel-barrows were found to be cheaper than bulldozers (and the bullocks were later used as draught animals on the re-established farms).

Leonard E. Hubbard, an impartial writer on Russian agriculture, writing of the comparative costs of animal and mechanical power, observes :

> The apotheosis of the machine leads to its use out of season as well as in season. It was the experience of the German farm concession (the celebrated Drusag which until 1932 farmed some 27,000 acres on the Kuban) that ploughing with animal power was often more economical than ploughing with mechanical power. Animals (they use oxen a lot in the North Caucasus) were very cheap to keep and wages were low ; a unit consisting of eight yoke, a four-furrow plough and two men, or a man and a boy, to guide the leading yoke, ploughed a hectare as efficiently and at a smaller total cost than a tractor. The latter, of course, came into its own when speed was a factor; for instance, when autumn rain made the soil just right for sowing winter grain. The Russian, however, is inclined to think that, because the tractor turns over the soil at a prodigious rate and with lots of cheerful noise and bustle, it is doing it more

economically and efficiently than any other method. In 1935 the official standard consumption of tractor fuel in spring-ploughing one hectare was 21.6 kilos (vide an article *The Production Cost of Grain in State Farms in Planned Economy* No. 2, 1937), and in 1934 the price of one litre of benzine was about equal to the price of 10 kilos of grain. 21 kilos of benzine would be about 23 litres (one litre of water weighs 1 kilogramme, and the specific gravity of benzine is approximately 0.90), equal in cost to 230 kilos of grain. The quantity of corn and hay consumed by horses during the process of ploughing one hectare could not be more than the equivalent of 30 kilos of oats. According to the same authority, the total consumption of fuel in producing and, presumably, harvesting and threshing one hectare of spring wheat in 1933 was 57.3 kilos, equal in cost to 63 litres, or 630 kilos of grain or very nearly the whole crop ....If these figures are correct, it is no wonder that the state farms were being run at a loss.[20]

Further, we must remember that it is in the USA, Canada, Australia and the USSR alone that mechanisation is synonymous with the big tractor and harvester-thresher, or that mechanised farming means large-scale farming. In the first three countries an average farmer has a large arable area on which large agricultural machinery can be used. Now, a small holder meets difficulties in utilising large farm machinery because of the size of his holding, the fragmentation of his fields, and because he lacks the necessary capital. The Soviets solved this problem by adjusting the size of the holding to the requirements of the machine, that is, by establishing collective farms. That is one way. The other way is to adjust agricultural machinery and its utilisation to the given size of the holding, which in India, as in many other countries, is small. In Europe, mechanisation is increasingly taking the form of electrification of the countryside and the use of labour-saving machinery, leaving the structure of the small holding unaffected. There, the manufacturers of agricultural machinery had begun to turn out, before the last war, machines suitable for use on small holdings, while possessing the advantages of large machines. "Engineers are now designing small implements, machines and tractors, suitable for peasant holdings. Some can be worked by small internal combustion engines and some by electricity; the use of both was spreading over Europe before the War and we hope will continue to do so

[20] *Economics of Soviet Agriculture*, 1939, Macmillan and Co. Ltd., London, pp. 260-61.

after the War; either can work a small machine almost as economically as a large one," said Sir E. John Russell, Director of the Rothamsted Experimental Station, in a paper read in a Conference held in April, 1943. David Mitrany, the author of *The Land and the Peasant in Rumania*, had also written even before the last War, "that 3 *ha* was the smallest area on which machines and implements could be rationally used". Three hectares come approximately to 7.5 acres or 12 standard bighas only. German experience indicates that a field between 1 and 2 acres is not too small for a tractor of, say, 15 to 20 h.p. In Japan, they have devised small tractors which have 3 to 5 horse-power and can plough one acre a day. (These tractors which numbered 11,131 in 1950 throughout the country increased to 34,974 in 1953). That is, a large farm is no longer a condition precedent to the use of machinery or application of scientific knowledge.

When the holdings are too small and uneconomic for the use of bullocks, the inevitable conclusion is not to pool them so that large machinery may be used. Small holdings can be worked by manual labour as they are mostly in Japan and as they were worked, at least, hitherto in China also, and yet, as we have already seen, scientific techniques other than large machinery can be employed on them. Average size of holdings in Japan, it may need emphasizing, is, perhaps, the smallest in the world (see page 67 *supra*). Next came pre-communist China. In parts of France also, where arable holding of two to five acres abound, if the field is too small for ploughing, the spade is used for tillage and the average peasant has, by his industry, converted even the most rocky lands into orchards, vineyards and corn-fields. Surely, we can also do the same; for, lest we forget, our aim is, not profit per man, but to get the best out of the land, to make it yield the maximum production per acre and, at the same time, to keep the largest number of people employed. In fact, certain peasant communities in our country in certain localities are already doing it. For example, in the suburbs of the towns of Uttar Pradesh, vegetable-growers, mostly belonging to the *Kachhi* caste (the best quality of land, *kachhiana*, being known after them) usually carry on cultivation on their tiny holdings of two acres or so, without the aid of animal power, and produce far more (and derive far greater income) per acre than farmers in the interior do.

Reference has already been made to the example of a Bhoodan

worker in our country, Sri Shrikant Apte, who possesses no farming machinery.

In any case co-operatives can be established for the purchase of such agricultural machinery as the farmers may need, for example, for operations where the time factor is important, such as planting and harvesting, but either which they have not the means to buy or which would not pay if used on a single small farm. Only, joint use of such machinery will necessitate co-operative cropping schemes, which can be achieved without pooling of the land into a single large unit. But as against whatever advantage large agricultural machinery may possess, we must remember that members of the co-operative would all be wanting it at the same time, which will make the co-operative unworkable.

As regards the second advantage of large-scale farming, it is true that a man of small means, particularly, if he is an uneconomic holder, cannot often afford the facilities, technological and other, that will augment his produce or income. There are, however, two other courses open.

Either, the state should provide the facilities as it is doing today in a small measure in the form of canals and tube-wells and provision of *taqavi*, fertilisers and insecticides; or, the peasant farmers combine their resources, find these facilities for themselves, that is, shortcomings of small-scale production be mended by co-operative arrangements. In the latter case, the crucial question is—to what extent should they pool their resources? What is the right socio-organisation principle which will serve to raise the rural standard of living, and yet not rob the peasants of their liberty? Shall they pool their land and labour resources and work jointly on a large undertaking into which their holdings would have been merged, or, shall they keep their holdings intact, operate them independently and co-operate in non-farm operations alone, that is, pool their financial resources alone with a view to securing the facilities which actually go to increase the production or income of a farm, but cannot be secured by a small man on the strength of his small means? In our opinion, as we have already indicated, it is the latter type which will best suit our purpose. It is the co-operative principle, combined with the incentive of individual land use and private ownership of land, that offers the right solution.

Since an increase in the size of the farm does not lead to greater production per acre, it is unnecessary and it will be a mistake to

ask the peasant farmers to surrender their holdings, in order to constitute a large farm, or to hustle them into doing so. Co-operation need not extend to the act of farming, to those functions of farm management which can properly be executed within the boundaries of a single small farm. Such functions should remain the object of the independent individual himself. All that peasant farmers need do by co-operative action is to save themselves from the disabilities entailed by the small size of their business and their lack of training in the ways of a commercial civilisation. The real mission of co-operation in agriculture should be to secure to the peasant all the benefits and technical advantages of a large-scale undertaking, while they still retain freedom or advantages of private property. Through it the peasants should be able to secure the same results as a large-scale undertaking without the attendant hardships which this form of production has so often brought to the worker in manufacturing industry. Co-operation is the closer union of otherwise independent units—merely coming together of scattered entities—for purposes of eliminating certain disadvantages attendant upon independent, isolated action. Were the members of the organisation to sacrifice their economic and individual independence, it would amount to a merger, not co-operation. Nor, to repeat, from the nature of the agricultural business, is a merger leading to largeness of size, a condition precedent to increased production.

In agriculture, two kinds of reform are possible. One is institutional and the other technological. Transformation of peasant proprietorship into joint farming is an institutional change that will meet with the peasant's resistance. At best, it will take a long time before its efficiency can be assessed. On the other hand, the peasant will welcome technical improvements or technological facilities—irrigation water, manure, improved seeds, pesticides, and better farming practices in general, which can be easily used or introduced on small farms as well as on big. In the field of farming our model should be not the USSR or present-day China, but Japan which produces more per acre than either of these two countries. And the secret of Japan lies in technological improvements, not in institutional changes.

The report of a survey, *Co-operatives and Land Use* made by the Food and Agriculture Organization of the United Nations, already referred to, has this to say on the point:

During the last half century, the rise in yields due to scientific and technological advance has been general, and has been more rapid in many countries in which individual farming is practised than in those which have gone in for massive collectivisation (Report, p.103)

Advantages of large-scale undertakings, also called 'economies of scale', expected from co-operative or collective farming, are often referred to without necessary distinction being made between operational, commercial and financial economies. As we have already seen, in our conditions of a labour-surplus agriculture, there can be no operational economies, or economies resulting from mechanisation of farm operations; at best, such economies are insignificant. It is, however, only in commercial and financial economies—the economies of organised bulk buying and selling, and cheap credit—that large farms excel. But to achieve these 'economies of scale', no merger of holdings and obliteration of identities of the peasants is necessary; they can be achieved through service co-operatives, as they have been in several countries, while incentives remain unimpaired.

It is said that, because of the larger resources of a co-operative farm, Government will be able to advance larger credit to it than to small farms. True, but the needs of the large farm will also be large, and those of a small farm small. And inasmuch as money taken on credit will have to be paid back, the lender, even if it be a Government, will have to ensure that the borrower possesses sufficient security. The best security is land, and the total area of the land severally owned by farmers will not increase simply because of the pooling. If today, say, only a loan of Rs. 500 can be advanced to a farmer possessing 5 acres, not more than Rs. 5,000 can be advanced tomorrow to a co-operative farm in which ten farmers possessing 5 acres each would have pooled their lands. If we substitute expected produce per land as security (which, by the way, is a chimerical idea), it will not make any difference.

"Northern Egrope", says Dr. C. R. Fay, Chairman of the Horace Plunkett Foundation, "has proved to the hilt that the highest degree of technical excellence is entirely compatible with family farming, but only on two conditions: first, that the land unit is the special subject of state guardianship and, secondly, that individual family effort on the land is supplemented by group effort in purchase, processing and sale."[21] In other words, large-scale farm-

[21] Vide *Year Book of Agricultural Co-operation*, 1943, p. 64.

ing is not essential, and, peasant farming as such offers no hindrance, to technical progress.

We may state here that by state guardianship is meant prohibition by law of agricultural land either from being amassed in large areas by one person, or from being divided by inheritance or sale into too small units.

The Patil Delegation, however, does not think service co-operatives can prove an effective agency for bringing advantages of a large-scale organisation to the doors of the peasants. Improvements have not been carried out nor agriculture intensified in our country even on holdings exceeding 10 acres, which should provide fairly good units of cultivation. The reason, it is said, lies in the limitations inherent in family farming. Schemes of land improvement may be undertaken by a cultivator either with his own labour resources or with hired labour. No considerations of money costs (outlay) and benefit (return) are involved in undertaking the former. As regards the latter, a cultivator will take up only those which are remunerative for him. But in agriculture there are many improvements which are not sufficiently remunerative. This sets a limit to the extent to which a cultivator could go in undertaking improvements through hired labour even if he were to be provided with all the supplies and finances required for the purpose. Such improvements can, therefore, be effected either by the state or by an institution organised for common action based on considerations of community interest, rather than individual interest. A co-operative farm is eminently such an institution, so runs the third argument in its favour, which will bind together those who have got the land but not the necessary labour to work it and those who have got the labour but not the necessary land to keep it engaged. Such farms alone will, through undertaking land improvements and intensification of agriculture, ensure the fullest use of our available man-power, which is our greatest asset but is going waste today owing to unemployment and under-employment.

Service co-operatives, it is contended, cannot finance improvements on petty holdings—and most holdings in our country are petty—even if the improvements are remunerative. For, there is a gap between the actual income of the petty farmers and the requirements of bare necessities of life. The additional income which may accrue from improvements initiated and financed by service cooperatives would hardly cover the gap. Recovery

of loans from the petty farmers, therefore, presents serious difficulties.

The answer is simple. The report of the Patil Delegation gives no facts and figures to prove its assertion that even cultivators of holdings exceeding 10 acres do not undertake land improvements which may not be profitable in the economic sense. This may be true of owners of large farms to whom agriculture is a profession, but to an average cultivator in our country it is a way of life. Born as he is and living as he does in the midst of hazards, uncertainties and vicissitudes of nature, he does not reckon in the commercial way, nor does he draw up a balance-sheet of loss and profit. He makes no calculations where his land, the *Dharati Mata*, is concerned. He will sink any amount of money and labour on her improvement: this is proved by the high price which a cultivator is willing to pay for land—a price which if it is considerations of outlay and return alone that mattered, no industrialist or non-agriculturist will ever be willing to pay. Highly developed and well-kept peasant farms in central and north-western Europe, Japan and parts of India can be quoted by way of proof. The report embodying *Studies in Economics of Farm Management in Uttar Pradesh* undertaken in Meerut and Muzaffarnagar districts at the instance of Government of India in the year 1954-55, observed thus about the cultivators' love of land improvement, in the introductory chapter. "The whole of the countryside gives a look of very well-maintained and properly levelled fields .... As a result of careful cultivation soil has considerably improved. It owes its dark appearance more to its proper tillage and manuring than to its natural characteristics (p. 1) .... The noteworthy feature of farming in these districts is that there are few tracts elsewhere with so much 'made' soil by human efforts. The farmers have taken great pains to redeem the otherwise sandy or stiff clay by manuring, irrigation, drainage and levelling" (p. 2).

As regards the efficacy of service co-operatives, we need only refer to the example of Switzerland, Netherlands, Western Germany, Italy, Norway, Belgium and France where an average arable holding, varies from 7 to 16 acres, but which have made a success of service co-operatives. If, however, it is intended to convey that service co-operatives are of no avail where the cultivators possess only tiny, subsistence holdings, it should suffice to state that, according to the 1950 World Agricultural Census, the average farm hold-

ing in Japan (with only 12.5 million acres of cultivated land and 6.2 million farm households) is roughly 2 acres. Farmers who cultivate less than 1.25 acres represent 41 per cent., those who cultivate less than 2.50 acres represent 73 per cent and those who cultivate less than 3.75 acres represent 88.5 per cent of all farmers. It will not be irrelevant to point out here that the strength of a farm household in Japan is 6.0, while in India it is 5.1 and in the USA, only 4.5. Yet, the service co-operatives are a great success in Japan. In this connection we cannot do better than quote from the Patil Delegation's own report :

> Although there are no co-operative farming societies, Japan has a highly-developed co-operative structure in the field of credit, marketing and supply. More than 95 per cent of the total farm households are members of co-operative societies, which supply 39 per cent of the total agricultural finance and hold 65 per cent of the total savings of the farm households. 96 per cent of surplus rice and 85 per cent of the surplus wheat and barley are marketed through co-operatives (p. 103).

So far as possibilities of reclamation through co-operative farms are concerned, as will appear later, there is little land waiting to be reclaimed. Also financial resources required for land improvements or reclamation will be available to large co-operative farms only if their production per acre is greater than on small farms, and this is not borne out by the evidence collected in these pages. Further, experience shows that individual farmers under incentive of a high price of agricultural commodities are better able to reclaim cultivable waste. In the State of Uttar Pradesh, since the Second World War, while the Government could reclaim hardly 1,60,000 acres, individual farmers have brought under cultivation anew several times this area—more than 25 lakh acres in any case.

Lastly, in this connection we have to remember that our economic salvation in the sphere of agricultural production lies in still better utilisation of the land already under the plough, rather than in bringing marginal and sub-marginal land under it.

As regards the fourth advantage, viz. that of planned crop rotation and more rational use of land being possible on co-operative farms, there seems to be some confusion. What exactly is the objective of crop rotation? Obviously, preventing the soil from getting exhausted and maintenance of its productivity. If so, this ob-

jective is better served, as we have already seen, by a system of small farms, wherein big machinery is not used and more farm-yard manure is produced, thus helping maintenance of soil fertility. The charge that small holders are not able to practise crop rotation can possibly be laid only against such of them as are greatly uneconomic or sub-basic holders, but even this does not help the critics much. For, such farmers will not raise commercial crops which exhaust the soil and will, for their own subsistence, resort largely or wholly to food-crops which are not all or so exhausting and along with which nitrogen-fixing legumes can be easily grown. Crop rotation is not essential to good farming in all circumstances; mixed cropping so widely practised by small farmers can serve the purpose equally well. Nor do the small farmers lag behind in double-cropping and raising of high-yielding varieties. Indeed, a recent study in the Punjab shows that the intensity of cropping decreases with the increase in the size of farms. Double cropping is more widely practised on the small-sized farms. This naturally makes for an increase in the gross output per acre in the case of small farms compared to large ones. There are only two stipulations: in order that cattle dung which is so essential to maintenance of soil fertility is not burnt, cheap fuel has to be provided through community planting of non-arable, village lands, and, where necessary, a law has to be enacted preventing, particularly, very small farmers from sowing sugarcane or other exhausting crops, say, in more than one-third of their land in a year.

The argument about availability of large areas of land to a co-operative farm through disappearance of field boundaries is one that only needs to be stated in order to be rejected. Everybody who is conversant with the village conditions or agriculture, will testify that very little land is taken up in boundaries. Nor can boundaries be eliminated altogether; even the land of a co-operative farm will require to be irrigated, which cannot be done without boundaries. Also, land will be washed away during the monsoon but for the boundaries. The following extract from an article is given as typical of the advice that usually flows from our cities to the rustic farmer:

> Large areas of land are used in building up bunds to demarcate boundaries as well as to hold water. By destroying a huge portion of these bunds and hedges *the average size of holding can be multi-*

plied several times and more area can be brought under cultivation resulting in higher production.[31]

The sixth argument relates to reduction of costs on a large farm. It is not clear, however, which wasteful operations on a small farm the critics have in mind. Perhaps, they refer to loss of time involved in trips that men and bullocks have to make to the various scattered plots into which a cultivator's holding may be divided, and to loss of water that may be entailed in irrigating such plots whether from a well or a canal. If so, these defects will be removed when these plots are consolidated into compact blocks. It does not take a large jointly-operated farm to eliminate such waste of time or water. In actual experience, peasant methods are usually found to have lower costs than the 'modern' scientific methods and that is the main reason why peasant production has been able to withstand the competition of large estates all over the world. Anyway, reduction of operation costs is not our primary aim, at any rate, at the expense of a higher yield. Small farms require comparatively more human and animal power than bigger ones, and this is not of much consequence because owners of such farms do not have to pay for it. So that even if the money costs are reduced in a big farm, it will still be preferable to have smaller ones in view of their greater yield and the available surpluses of labour and cattle. There are no scarce capital resources which are wasted on small farms in our country. Text-book writers of western countries have mostly 'machinery' in mind while using this terminology. In the context of our conditions, the bullock is almost the only capital resource of a small farmer and is not so scarce.

On the contrary, costs on a large co-operative farm will be far greater than what they are on small farms taken together. Owing to the need of detailed supervision and a complicated system of accounting, overhead costs are bound to be very high, which will more than off-set any economy that may be effected by mechanisation of the farm and rationalisation of labour. "As the size of the unit increases, the difficulties and costs of management also increase faster in agriculture than in industry. The workers are spread

[31] Vide Dr. V. D. Nagar, "Agricultural Prosperity through Co-operative Farming" published in the *AICC Economic Review*, September 15, 1959, page 19.

over a much wider area and the supervision required is much closer than in industry. Thus it becomes necessary to have supervisors for every small group of workers. But, again, because of the nature of the operations the supervisors cannot be fully occupied merely in supervision. In other words, a complete separation of managerial and manual functions is very uneconomical in agriculture".[32] This accounts for the excessive costs of supervision and management in the Russian collective farms about which there has been continuous criticism in Russian economic literature. As much as 41 per cent of the total work-days are reported to have been spent on payment for administration and service personnel in Russian Collectives.[33] It is due to the diseconomies of large-scale management in agriculture that the size of the optimum unit is relatively low in agriculture in most countries—except where the abundance of land and shortage of labour makes the existence of large mechanised farms unavoidable. These diseconomies begin to offset the other economies of scale fairly soon. That is why net returns per acre on smaller family farms are often higher than on large-scale farms.[34]

The above applied only to working costs. The initial costs that will be required in setting up a co-operative farm will not be negligible. New investment of capital in the form of manager's office, cattle sheds, godowns etc., will have to be made while the existing ones owned individually by farmers will have little or no use.

Now to the seventh argument: it is claimed that co-operative farming (as distinguished from collective farming which, some of our public men grudgingly concede, has not proved a success in the USSR and may not be practicable in our conditions of a democratic set-up) provides a solution to the evils of uneconomic holdings and fragmentation. A little thought will, however, reveal that, at least, so far as fragmentation is concerned, we need not resort to co-operative or collective farming in order to obviate it. Fragments of land belonging to one farmer, but lying scattered and at a distance from one another, can be easily consolidated into one block or two, compulsorily through law or voluntarily through co-operation amongst farmers. Consolidation of holdings has been

[32] *Economics of Agriculture*, Cohen, p. 56.

[33] *Co-operative Farming*, Talpade, p. 3.

[34] Vide *Co-operative Farming*, a monograph published by the Indian Co-operative Union, New Delhi, 1957, p. 14.

carried out in several countries, resulting in great benefit and satisfaction to the peasantry.

That there are a large number of uneconomic holdings in the country is admitted. But it will be pertinent to point out here that they do not form such a large percentage as is generally assumed. The number of actual cultivators is smaller than might be calculated on the basis of entries in revenue records. The whole confusion in this respect, which has marred the conclusions of so many, otherwise ably-written books and reports, arises from the fact that persons, families and holdings have all been mistaken, one for another. For example, the cultivating population of Uttar Pradesh in 1945 stood roughly at 80 lakh families, but the number of persons entered as cultivators in revenue records (barring tenants of *Sir* and sub-tenants which must have counted nearly two million and a half) stood at 122.8 lakhs and the number of their holdings at about 200 lakhs. The explanation lies in the fact that smaller peasants usually possessed more than one holding, sometimes three and even four, and sometimes names of more than one member belonging to a joint family were entered in the records. In 1945 the number of holdings, possessing an area of four acres or less each in Uttar Pradesh stood, according to the Zamindari Abolition Committee Report, at 75.5 per cent, but the actual number of families which held four acres or less each would be found not to have exceeded 50 per cent in any case. Dr. Otto Schiller, a German Professor of Agricultural Economics, who served three half-year assignments from 1953 to 1956 in West Punjab (Pakistan) on behalf of the Food and Agriculture Organisation of the United Nations, and made a survey of two villages on the spot, has also reached the same conclusion about the conditions in Pakistan.[34]

Points about 'lack of capital resources and low level of technique and productivity,' which characterise small subsistence holdings, have already been dealt with. As regards under-employment on these holdings, it is true that these holdings do not provide full employment to the peasants all the year round and are, therefore, uneconomic, leading to poverty, and should disappear as soon as possible. But mere pooling of land is no remedy : it does not create more employment. If one hundred persons possessing, say, two acres each and operating them separately, have to remain idle today for

[34] Vide *Co-operative Farming and Individual Farming on Co-operative Lines*, All India Co-operative Union, 1957, pp. 19-20.

a good part of the year because of lack of sufficient land, one fails to understand how—by what magic—these persons will be able to find full employment throughout the year, merely because their land has been pooled into a farm of two hundred acres which they now work jointly or under a unified direction. The number of acres in the total has not increased by the pooling, nor has the number of workers gone down. The proportion of rural population to the land available remains as before.

Dr. S. Chandrashekhar, Director of the Indian Institute for Population Studies, Madras, who saw four communes in action, writes:

> Not only do the Chinese work all the time, but in massive numbers. One sees 20 people pulling a loaded cart—some pulling with ropes like animals and some pushing from behind. One would expect in a 'People's Democracy' that people would not be substituted for animals. But I have seen men and even women pulling a plough!
>
> The reason for this unhappy phenomenon is that people are at the beck and call of the regime and they need not be paid high wages. So the economy can afford to waste human labour which, in terms of dignity and monetary value, means nothing. What could be accomplished by two people is done by 20. A hundred people toil on one acre of land and literally thousands work to put up a building on a shift basis.[87]

If anything, unemployment in a co-operative farm is likely to increase, for, more likely than not, the farm management will, in the interest of smoother management, take to mechanisation.

The final, heavy-weight reasoning in favour of co-operative farming proceeds thus: we are in desperate need of funds or capital for making up the leeway. But programmes which have been undertaken for industrialisation and development of communications already place a heavy strain on the available resources. Nor can we emulate countries like Japan and England where economic development took place during a period of colonial expansion and a comparatively monopolistic access to raw materials. At that time, social consciousness had also not advanced so that internal exploitation could go on unchecked. Thus, through internal and external exploitation, large stocks of capital were created in these countries which form the basis of their industrial and economic prosperity.

[87] Vide *The Statesman*, dated January 10, 1959.

We have no colonies which we can or would exploit and, therefore, we have to depend upon our own resources. Capital has to be found out of our own efforts and our own savings. At the same time we have declared ourselves a 'Welfare State' and cannot, therefore, think of exploiting our people—exploiting in the sense a colonial or a capitalist government does. We have, therefore, to so reorganise our economy that it makes fullest use of our man-power which is our greatest asset, that it produces more and saves more. In the present agrarian economy based as it is on family-farming in small units, possibilities for savings and capital formation are severely limited. Co-operative farming offers the only solution for mobilising the national resources in which man-power plays the most dominant part.

The argument is naive. It assumes that as soon as land, dispersed today in small holdings, is pooled and jointly worked and agricultural labourers and, maybe, other landless people also are made members of the joint farm and management, the land will, almost automatically, begin to produce more per acre—produce a surplus to the needs even of the increased number of those who work it, just as large private farms do.

Such would also seem to be the view of Shri U. N. Dhebar, ex-President of the Indian National Congress. He says:

> The basic problem in agriculture is not that of supplying good seeds, water, manures, or providing the credit and marketing the commodities. Rather, it is the shape of the agricultural economy itself. On the basis of caste, land has been denied to the Harijans and landless classes, which are increasing and lead a precarious existence. Those who hold uneconomic holdings today will be added to the ranks of the landless tomorrow. The Law of Diminishing Returns is working in the case of small uneconomic holdings.[38]

We do not agree with any of the assertions of Shri Dhebar, except that land in many parts of the country has been denied to Harijans, *inter alia*, on the basis of caste. It is his view about the operation of the Law of Diminishing Returns, however, that needs be examined here. He implies that the law will cease to operate the moment small uneconomic holdings are pooled together to form a large holding. The Law of Diminishing Returns is a much-worked and much abused

[38] *AICC Economic Review*, July 1, 1959.

proposition. It simply says that, provided there is no difference in farming methods and capital employed per man is equal, returns per man will diminish as an increasing number of men are put to farm a limited area of land. One fails to understand how the law which operates in a case when the labour force of a single family working, say, 5 acres of land is increased from, say, three men to four (and thus the area per worker is diminished), ceases to operate when the labour force of ten families jointly working 50 acres of land is increased from thirty men to forty. Forty men will each or severally produce less than thirty from the same total area just as four men each will produce less than three. Operation of the Law of Diminishing Returns cannot be held back simply by pooling of land and labour, but only by improvement in farming methods or increase in capital employed per worker, or both. These two developments can be brought about without pooling of land and labour. Increased capital can be had from Government or through credit co-operatives, and improvement in farming methods is the result of farmers' own experience and enterprise, or of research carried out by Government. They are not the consequence, or do not flow out of a joint farm.

While the increase in product per worker, with the increase in the number of workers on a given area (subject to a floor) is a diminishing increase, more men result in more product per acre and, therefore, more total product, but only when incentives remain unimpaired—when land is divided into as many allotments assigned and worked separately. So, if some persons hold land more than they can efficiently exploit, and substantial areas are available, let us certainly arrange for their acquisition and distribution among uneconomic holders, but not pool the existing holdings. As will be apparent from the following pages, our problem of poverty will not be solved by putting more men on land—whether working jointly or separately—but to move them away to non-agricultural occupations, and this consummation will be brought about only if and when production per acre has increased.

The marketable surplus expected to prove the chief source of investible industrial capital for development of the country will not be available from large joint farms. No pains are taken—no facts and figures are given—to prove how greater production per acre will come about or whether it has actually come about in countries where large-scale joint farming has been introduced.

The argument only displays a pathetic, but unexplained faith in large-scale units in conformity with Marxist thinking.

Dr. Otto Schiller points out :

> It is not high productivity per acre which enables the large farms to play a predominant role for the supply to urban markets but the fact that less population and mostly also less livestock are attached to the same acreage as compared with the area of small holdings. The introduction of co-operative farming would improve the supply to urban markets, only if it leads to higher productivity per acre or to a shift of population. Both effects, however, are not automatic consequences of co-operative farming but depend upon other factors which can exercise their influence also under the conditions of individualistic farming.[29]

It is high productivity per acre which is the crux of the matter. Once this is achieved, as it can be on small, independent farms, the peasants will have more to consume and also more to sell. Even today they market the last grain they can. Unless, therefore, it is intended to extract from the peasantry a greater surplus than is left after bare subsistence has been kept back and unless our planners wish to emulate the mode of capital formation adopted in Russia, Eastern Europe and China, where the state (through its direct control of collectives, large, compulsory low-price deliveries, heavy taxes, etc.) forced down the actual consumption levels of the peasantry in the name of capital formation—incidentally, if this is not exploitation which the advocates of co-operativisation professedly want to avoid, nothing else is—there is no case for co-operative farming.

It is true that farms in India are too small—smaller than the best economic unit for profits. They are so small because, land-man ratio in the country being low and other occupations also in which the farmers could engage being limited, the farm land inherited from their fathers has to be re-divided amongst each succeeding generation of sons. It is an irrefutable proof of over-population. But the relevant point here is that, could large-scale agriculture be carried on more successfully, or produce more and give happiness to those engaged in it, should we not expect that logic of technological advance, *i.e.* economic and other forces by themselves would have, just as they did in manufacturing industry, led to the gradual

[29] *Ibid.*, p. 13.

disappearance of the small independent farm and its replacement, without any pressure from the state, by big units worked jointly by hundreds and thousands of persons? On the contrary, we find that the larger unit, almost wherever it existed, has been broken into small ones—a unique instance of deviation from the laws operating in manufacturing industry—and the average agricultural "business" all the world over, except where a deliberate imposition has not been made from above, remains as small as ever, with the peasant farmer as its owner and worker, manager and financier, all rolled into one. The peasant has refused to be fitted into any slogan: his is a role which has defied all economic theories. Indeed, it is not possible for modern economics, nursed in the field of capitalist agriculture with the background of 'wage and labour' and the criterion of as much rent or profits as possible, to give a true insight into the socio-economic nature of wageless family economy that the peasant agriculture symbolises.

At the time when Marx laid it down that in agriculture, as in industry, property was becoming increasingly concentrated and the large producer was bound to displace the small producer, scientific inquiry into agrarian problems had not yet begun and his plausible parallelism between agriculture and industry seemed incontrovertible. "But soon after the appearance of the third volume of *Capital* in 1894", says David Mitrany, "the planks of the Marxist platform began to give way. The German population census of 1895 (the first since 1882) disclosed the peasant's astounding refusal to die. Between 1882 and 1895 the number of holdings of 2 to 20 hectares had increased by 1.26 per cent and the total surface they covered by 659,259 hectares (about 1,650,000 acres). The same phenomenon was reported from countries as different as the United States and Holland. And the German census of 1907 killed the concentration theory altogether. It showed that notwithstanding the many favours which capitalist agriculture had received from the state during the preceding years, large estates and farms were constantly losing ground".[49]

On the contrary, peasant holdings prospered and multiplied because of the greater care and interest the peasant put into his work, and also because of the fact that his demands were sometimes lower than even those of a rural labourer. His readiness to

[49] *Marx against the Peasant*, George Weidenfeld and Nicolson Ltd., London, p. 25.

work harder and to consume less could be explained by the peasant's attachment to his land, as it explained his readiness to pay almost any price for it. "For the capitalist, property or tenancy is a means of employing his capital; for the proletarian, artisan and the small peasant, property is rather a means of employing his labour", said Otto Bauer, the Father of Austrian Socialism, some 40 years ago. The excess over the normal price which the small holder is willing to pay and the hard work which he willingly puts in may be called the premium which he pays for his independence. It is this love of the peasant for his plot of land and for his independence that we can mobilise and put to great advantage if we give him the encouragement and co-operation he needs. On the contrary, we are trying to destroy this love or this instinct of his, which could come to our rescue when we want more food and more exportable raw materials from our land. The Patil Delegation, unmindful of what effect it will have on its arguments in favour of co-operativisation, observed as follows:

> Every family in the co-operative had been allotted a small plot of land close to their house for vegetable cultivation. If there was no suitable land near the house, a piece of land in the fields close to the village site was given. This appeared to be the general system in all the co-operatives. These plots were very carefully and intensively cultivated and it was a treat to see many of them growing a rich crop of vegetables (Report: pp. 9-10).

We do not know whether the question as to why the Chinese peasants devoted more attention to these plots (and, therefore, presumably produced more on them per acre) disturbed the members of the delegation or not when they signed the report in favour of co-operative farming.

It is sometimes said that in India "land has been further concentrated in fewer and fewer hands and there has been more and more proletarisation of small peasants". This is not a correct appraisal, at least, so far as Uttar Pradesh[41] is concerned, of which figures are available to us (*See* Table XXII).

Figures of 1931 and 1941 have not been given because in these two censuses the occupation of workers alone has been recorded, and not of the entire population.

[41] *Census Report of Uttar Pradesh*, Part I-A, 1951, Table 79, pp. 96-97.

TABLE XXII
VARIATION IN PERCENTAGE OF AGRICULTURAL CLASSES IN U.P.
(1901–1951)

Principal means of livelihood	1901	1911	1931	1951
Cultivators	48.53	59.80	64.18	67.42
Agricultural Labourers	9.03	9.48	8.68	5.71
Rent receivers	7.11	1.80	1.76	1.06
Total	64.67	71.08	74.62	74.18

According to the *Census Report of India* for 1951 (Vol. I, Part I—A Report, pages 155-56), during the twenty years following 1931, the percentage of cultivating labourers to all workers on land had fallen in Uttar Pradesh (18 to 9), Orissa (30 to 19), West Bengal (40 to 28), Madras (38 to 35), Bombay (43 to 18), Madhya Pradesh (43 to 32) and Rajasthan (11 to 4). The percentage remained practically unchanged in Bihar (26-27), Mysore (13-14), Hyderabad (31) and Punjab (11-12). There was only one major state where this percentage had increased—Travancore-Cochin (34 to 47).

The fall in the percentage of cultivating labourers is the natural result of increase in the number of cultivators. According to the Report the proportion of agricultural rentiers, which was already small in 1931, became still smaller in 1951.

Whatever other conclusions may be drawn, these figures are an unmistakable tribute to the inherent internal strength of the system of peasant farming, its adaptability to changing circumstances, its capacity to bear the stresses of modernisation, and above all its power to endure.

Employment

Apart from the agricultural area, that is, arable and pasture lands that a country may possess, it is the availability of non-agricultural resources and, consequently, the density of agricultural population that will determine whether the country will have large-scale farming or intensive peasant farming. Of the three factors of production, viz., land, labour and capital, the one which is the most scarce and, therefore, dearest will be exploited more than the other two. Where land is plentiful, that is, a cheaper factor, and men few in number, the latter will not make the fullest use of the former. They will not try to obtain the highest yield per unit of land, but will bring a greater area of land under cultivation. In other words, large farms will come into existence and agriculture will become extensive. The more, however, the value of land increases relatively to labour (and capital), that is, the more the population or, to be exact, the more the agricultural population increases and the more scarce the land becomes, the greater yields will the cultivator seek to obtain from it by the use of increasing units of labour (or capital, or of both). In other words, small farms will come into existence and agriculture will become intensive. Extensive methods enable the farmer to obtain the biggest net return per unit of labour (and capital); intensive methods, however, give him a smaller net return per unit of labour (and capital) but a bigger gross and, according to some studies, even net return per unit of land.

Table XXIII on pages 108-9 shows the availability of land per capita of the entire population and per economically active person in agriculture in the various countries.

It is clear that Australia, New Zealand, the USA, Canada and the Union of South Africa, with more land relatively to population engaged in agriculture, can afford the luxury of large-scale, extensive farming whereas China or Japan, India or Pakistan, Italy or Germany, Norway or Netherlands, Egypt or Indonesia, with greater population engaged in agriculture relatively to land that is available, must of necessity have small-scale, intensive farming (provided, of course, economic laws are allowed to operate

and no external pressure is brought to bear on the peasantry).

India is faced with the problem of unemployment. National interest, therefore, demands an agrarian economy which, while serving to extract the maximum out of land that constitutes the limiting factor in our circumstances, will provide the optimum of employment for the rural folk. Such an economy can only be an economy of small farms as distinguished from that of large farms, whether private or co-operative. In fact, small-scale economy, both in the field of agriculture and industry, is the major solution of our unemployment problem.

Large holdings, private or co-operative, attract the use of large machines, thus displacing labour, whereas small holdings limit the use of machines thus employing more labour. The number employed per 100 acres in countries where small holdings predominate is greater than that employed in countries where large holdings form a large percentage. In the Irish Free State, for example, on equal areas of land in the twenties there were five times as many persons working on farms of 15 to 30 acres and three times as many on farms of 30 to 50 acres as on farms of over 200 acres. Similar results were obtained from English, German and Danish statistics. According to Lord Addison, an ex-Minister of Agriculture, records prepared for the Government in 1930-31 for thirty-five different county council estates comprising nearly 17,000 acres, showed that population on these council lands, after they had been divided into small holdings, had increased from 1,048 to 2,298.

Machinery can be profitably used only to the extent to which it saves labour that might otherwise be productively employed, or to the extent it performs work that hand labour cannot do, or cannot do as well, or cannot complete quickly enough to enable farm operations to be done at the most suitable time for maximum production. But a good proportion of labour in our rural areas is already going unemployed or under-employed today; there is no work in the sphere of agriculture that human or animal labour cannot perform and, our country being a land of small farms, our farmers can easily procure labour in their village itself or in the neighbourhood, that may be required to complete any farm operation in the quickest possible time.

Not only that mechanisation of agriculture is unnecessary, impracticable in our conditions, or too expensive: it will further increase unemployment. As use of machinery makes it possible

Table XXIII

STATEMENT SHOWING AVAILABILITY OF LAND PER CAPITA IN CENTS (CENT = 0.01 ACRE) AND PERCENTAGE OF ECONOMICALLY ACTIVE POPULATION ENGAGED IN AGRICULTURAL OCCUPATIONS

Sl. No.	Country	Year	Total Area	Land Area	Arable Land and Land Under Permanent Crops	Permanent Meadows and Pastures	Forests and Wood Lands	Total of Cols. 6, 7, 8	Percentage of Economically Active Population Engaged in Agricultural Occupations (Both sexes)	
									Year	Percentage
1	2	3	4	5	6	7	8	9	10	11
1.	Netherlands	1960	70	N.A.	22	28	6	56	1947	19
2.	Korea (Rep.)	1959	100	100	21	**	39	60	1955	60
3.	Belgium	1960	81	N.A.	26	21	16	63	1947	12
4.	Japan	1960	98	N.A.	16	3	66	85	1959	40
5.	Pakistan	1960	253	N.A.	79	N.A.	10	89	1954-56	65
6.	Germany (F.R.)	1960	115	113	40	27	33	100	1959	15
7.	U.K.	1960	115	114	34	59	8	101	1951	5
8.	Ceylon	1960	164	162	18	N.A.	89	125	1953	53
9.	India	1958	193	N.A.	93	8	31	134	1961*	72
10.	Italy	1960	151	148	79	26	29	134	1960	38
11.	Switzerland	1960	190	184	20	80	45	145	1950	16
12.	Israel	1960	242	237	48	93	9	150	1960	17
13.	China (Main land)	1954	410	N.A.	46	73	34	153	N.A.	N.A.
14.	Portugal	1957	246	243	113	N.A.	69	184	1950	48
15.	Denmark	1960	232	N.A.	150	19	24	193	1955	23
16.	Philippines	1959	273	273	62	11	121	194	1959	59
17.	Austria	1959	194	300	62	81	110	253	1951	34
18.	France	1959	303	N.A.	118	72	64	254	1957	26
19.	Thailand	1960	484	N.A.	25	N.A.	247	322	1954	88

20.	Greece	1960	389	381	110	155	14	339	1951	48
21.	Ireland	1959	610	568	119	290	14	443	1951	49
22.	Malaya (Fed.)	1958	496	498	83	**	390	443	1957	58
23.	Norway	1960	2232	2227	58	13	484	555	1950	26
24.	Turkey	1960	689	N.A.	225	254	94	573	1955	77
25.	Guatemala	1950	960	930	130	31	486	607	1950	68
26.	Burma	1959	819	N.A.	104	N.A.	547	651	1931	68
27.	Finland	1960	1874	1696	148	10	568	736	1950	46
28.	Chile	1950	2639	2608	196	16	582	794	1952	30
29.	Sweden	1960	1486	1359	119	23	744	886	1950	20
30.	U.S.A.	1959	1680	1662	255	152	357	964	1950	12
31.	Mexico	1950	1918	N.A.	194	732	378	1304	1958	58
32.	South Africa	1960	1917	N.A.	161	1424	44	1607	1951	33
33.	Venezuela	1956	3786	3661	121	739	789	1649	1950	41
34.	Columbia	1956	3174	N.A.	93	254	1386	1673	1951	54
35.	U.S.S.R.	1956	2778	2779	274	458	1092	1824	1959	397
36.	Peru	1959	2932	N.A.	41	281	1643	1966	1940	62
37.	New Zealand	1959	2848	2819	52	1339	992	2383	1956	10
38.	Brazil	1957	3431	3413	77	434	2067	2598	1950	58
39.	Argentina	1957	3434	3416	373	1466	1236	3015	1947	25
40.	Paraguay	1954	6569	N.A.	84	114	3377	3575	1950	54
41.	Canada	1956	15331	14132	624	336	6798	7758	1960	12
42.	Australia	1958	19345	N.A.	679	10659	1000	12338	1954	13

Source: The above table has been built on the figures of area taken from FAO *Production Yearbook*, 1961, on the figures of corresponding total population used for finding area per capita in different countries taken from UN *Monthly Bulletin of Statistics*, August, 1962, issue excepting Argentina and Mexico for which figures have been taken from UN *Monthly Bulletin of Statistics*, January 1962 issue; and on figures of percentage of economically active population in agriculture taken from *FAO Production Yearbook*, 1961.

* Figures for India in cols. 10 and 11 have been taken from *Census of India*, Paper No. 1, 1962 (P. 23, Statement no. 18).

† According to UN *World Economic Survey*, 1961, Table 3.6, the percentage of labour force engaged in agriculture in USSR in 1959 stood at 42.1.

** None, in negligible quantity. N.A. = Not available.

for a smaller number of workers to cultivate a larger area, a large farm served by tractors, combine-harvesters and threshers, employs less labour than small farms covering the same area. When machinery is employed, labour is necessarily saved. In one and a half hours a tractor can plough one hectare of land and a combine-harvester can harvest an equal area in one-third of the time. A labourer who formerly ploughed hardly one acre with a pair of bullocks will be able to plough at least 12 acres a day with a tractor. The average area of land per farm increased in the USA from 136 acres in 1890 to 215 in 1950, while the number of workers per farm in the same period decreased from 2.0 to 1.6, which means that in the USA increasing use of agricultural machinery in these 60 years, on a given area of a farm, led to a fall of 50 per cent in the number of workers. An American expert[1] gives the following estimate of man-hours that were found necessary, at various points of time, as mechanisation advanced, for growing and harvesting an acre of wheat land yielding 20 bushels:

Man-hours

In 1830—55.7 (Seeding and harvesting done by hand)
In 1896— 8.6 (Horse-drawn drill and binder)
In 1930— 3.3 (Tractor-drawn drill and harvester-combine)

In Sweden the use of farm machinery reduced labour requirements by 50 per cent in twenty years only, *viz.* from 1930 to 1950.

In the USSR in 1927, 25.6 million independent peasant farms contained 100.5 million hectares of arable land and, according to the census of 1926, 114 million persons lived by agriculture, thus giving an agricultural population of over 103 per 100 hectares of cultivated land. In 1937, after collectivisation of agriculture, there were a little more than 18.5 million families cultivating 110.5 million hectares which, at 4.8 members per family, works out at 88.8 million persons or 80 per hundred hectares of farm land. There was thus a fall of 23 persons per 100 hectares of land in a decade owing to mechanisation of agriculture.

Even so, wrote Sir E. John Russell, Director of Rothamsted Agricultural Research Station, after his visit to Russia in 1937:

[1] *Economist*, London, May 6, 1944, p. 592.

The number of workers per 100 hectares is usually large according to western ideas, especially if one assumes that much of the work is done by tractors and combines. On the farms I visited it was about two to four times as many as would have been needed in England, but the yields were less and the work not so well done, indicating a considerable difference in efficiency of the workers of the respective countries.

If agricultural labour were rationalised and machinery economically and efficiently operated, it would probably be found that about two-thirds of the present available labour on collective farms would be sufficient for the present type of farming. "If we calculate on the basis of West European norms of labour requirements in farming operations", says Dr. Otto Schiller, "the normal labour input of approximately 100,000 large-scale farms composing Soviet agriculture today with about 1500[2] hectares of crop land each, considering their actual present intensity of farming and their actual degree of mechanisation, we arrive at an excess farm population of at least 30 million."[3]

The Government of the USSR, however, as and when it considers necessary, can employ this surplus labour to bring new land in Siberia and Central Asia under cultivation. But in an ancient country like India, where manpower is running to waste and there are no vast areas of virgin soil waiting to be broken up, big mechanised farms would be nothing short of a calamity; industrialisation alone would not absorb tens of millions of workers that would be released from land.

Mr. Hubbard in *The Economics of Soviet Agriculture*, 1939, says:

Since 1928, industry in the USSR has absorbed probably between 12 and 15 millions of rural population, but since 1932 the rate of increase in wage-earners in all branches of activity has slowed down. Since industrial labour is steadily improving in efficiency and productivity, it is unlikely that demand will again expand at the same rate as during the first Five-Year Plan, when the total number of wage-earners doubled.[4]

[2] 2,000 hectares would be the more correct figure.

[3] An article entitled, "The Resources and Performance of Soviet Agriculture" by Dr. Otto Schiller, published in *The Journal of Farm Economics*, America, May, 1936, p. 306.

[4] *Ibid.*, p. 214.

Even in the USSR, therefore, throughout the buoyant period of economic expansion when tremendous cities and vast industrial enterprises were springing up all over the face of that country, only one million and a quarter persons—not more than one million and half in any case—were being absorbed into gainful employment each year, whereas in India the rate of increase in population alone calculated at the decennial rate of the last census period, comes to nearly nine million a year, not to say anything of the existing tens of millions who cannot be said to be gainfully or fully employed today.

Typical of the view that reduction in employment in agriculture caused by mechanisation will be compensated by a rise in employment in other directions, is the comment of Dr. W. Burns, made in his Note on *Technological Possibilities of Agricultural Development in India* submitted to the Government of India on September 30, 1943:

> Use of machines may mean fewer men per operation, but not per acre. There are numerous examples in which modern progressive farming has actually restored the numbers of men employed upon the land. Mechanisation, in addition, creates several new classes, those who make, those who manage and those who repair the machines. It employs, in addition, men-groups who are the suppliers and distributors of the spares, the fuel and the lubricants. Mechanisation, particularly if it involves the transference of machines from one place to another, involves the improvement of roads and here, again, a large prospect of employment is opened up (p. 127).

It is true that mechanisation of agriculture will lead to creation of certain secondary and tertiary industries in which some of the displaced agricultural labour will be able to find employment. But in a country where most of the rural areas are over-populated, where there is already a pressing problem of surplus agricultural labour even on the basis of the existing technique of agriculture, where the joint-family system contains so much hidden unemployment and under-employment, and where, therefore, expanding industry's demand for labour, for many, many years to come, is likely to be covered by the existing idle hands, there is no economic justification in creating a supplementary labour supply through mechanisation of agriculture. In the USA, Sweden and other countries, surplus farm labour released by mechanisation of agriculture did not create any problems of unemployment because it was absorbed by industries which developed in the meantime. In Soviet Russia,

one of the reasons for introduction of collectivised mechanised farming, thirty years ago, was the belief that it is a pre-requisite for the execution of a huge programme of industrialisation, with its increasing demand for human labour. This reason does not operate in India where agriculture is already labour-surplus today—where the marginal productivity of millions of people employed in agriculture is zero, or very close to zero.

In India it is thought that, with the bullocks and ploughs in common use, 100 acres in grain can provide employment for perhaps 15 persons 'gainfully employed' in agriculture; whereas the average number 'gainfully employed' in India per 100 acres is 30. Allowing for the fact that some of India's agriculture is more intensive than grain, Indian economists estimate conservatively that a quarter of the rural population is surplus, in the sense that its removal from that land would make no difference to agricultural output. This was equivalent to having some 20 million people permanently unemployed about a decade ago.[8]

The Planning Commission itself has stated that "in agriculture, except under certain conditions, in the present stage of development the possible economic advantages of mechanisation may be more than offset by the social costs of unemployment that such mechanisation would involve" (*Second Five-Year Plan*, p. 113). The surplus of labour in the countryside is already large enough to meet the demand for industrial labour for a long time. And as we will see in Chapter XVI, unemployment both in the urban and rural areas has increased despite implementation of two Five-Year plans.

Mahatma Gandhi had said:

> Mechanisation is good when the hands are too few for the work intended to be accomplished. It is an evil when there are more hands than required for the work, as is the case in India. I may not use a plough for digging a few square yards of a plot of land. The problem with us is not how to find leisure for the teeming millions inhabiting our villages. The problem is how to utilise their idle hours, which are equal to the working days of six months in the year.[9]

[8] *Aspects of Industrialisation*, Cairo, 1953, p. 8, quoted by Coale and Hoover in *Population Growth and Economic Development in Low-Income Countries*, Oxford University Press, 1959, p. 116.

[9] "Man vs. Machine", in *Harijan*, 16th November 1934, p. 316, as quoted in *The Mind of Mahatma Gandhi* compiled by R. K. Prabhu and U. R. Rao, Oxford University Press, 1945, p. 122.

On another occasion Mahatmaji said :

> An improved plough is a good thing. But if by some chance one man could plough up, by some mechanical invention of his, the whole of the land of India and control all the agricultural produce, and if the millions had no other occupation, they would starve, and being idle, they would become dunces as many have already become.[1]

In our country, with its dense population, the practical politician will have to correct the economic stand-point with the social, and in many respects the economic problem for him will become a problem of population. He will want employment more than he hates poverty. Hands, therefore, must have precedence over the machine in India (even if we equate mechanisation with plenty).

The objection that unrestricted use of machinery will create unemployment is usually met with the argument that the collective or co-operative farmers, who would include the whole rural population, could work only for, say, three hours a day and take holiday for the rest, which will mean more leisure for intellectual pursuits ; that in place of so much poverty and starvation of today we shall have a perpetually rising standard of life. But the latter contention does not hold. A large, mechanised joint farm cannot produce more per acre than small peasant farms do. But even if it does, it is doubtful whether a holiday of nine hours of day-light could be regarded as a national gain. That an idle mind is a devil's workshop, cannot be denied. "Leisure is good and necessary up to a point only," says Mahatma Gandhi, "God created man to eat his bread in the sweat of his brow, and I dread the prospect of our being able to produce all that we want, including our food-stuffs, out of a conjurer's hat".[2] Too much leisure demoralises society and it will be an evil day for India when its peasantry succumbs to temptations of ease and pleasure.[3]

[1] *Young India*, 5-11-1925. [2] *Harijan*, 16th May, 1936, p. 111.

[3] A series of articles from correspondents in various countries on the problem that increased leisure poses, opened in the *Pioneer*, Lucknow, dated July 17, 1960, with the following statement :

> "Effective use of increasing leisure in this age of automation is worrying sociologists in many parts of the world. As more and more machines increase productivity and reduce the need for long hours of manual work, workers find themselves with more free time than ever before.

The advocates of mechanisation forget that the chief benefit the rational use of machine promises, is certainly not the elimination of work; what it promises is something quite different—the elimination of servile work and drudgery. A peasant, however, is his own master and his work on his own farm is not, like a labourer's work in a factory, servile or a type of work that the machine was intended to eliminate. We are not opposed to use of all machines by the peasant farmers. Tools and machines which do not dispense with the use of animal power, or take away the need for a peasant farmer's labour and skill, which do not diminish his independence or lead to the disappearance of his very farm, but lighten his burden thereby easing drudgery, and increase the farmer's efficiency and productivity, are to be welcomed. It is to the all-purpose tractor that we are opposed. The tractor strikes at the very basis of independent farming. For, it nullifies the one competitive advantage which the peasant-farmer enjoys over the large farm or farmer, *viz.*, the cheap labour supply of his family.

Lastly, although the advocates of co-operative farming in India are not yet clear in their mind as to the traction power they would like to use, when confronted with the objection that mechanisation is likely to lead to unemployment, they sometimes reply that the co-operative farms of their conception will be run with animal power, instead. Now, this is a novel proposal: in the only countries in which co-operative or collective farms have been working for some time they are mechanised. It is already difficult to organise human labour in the various operations on a mechanised farm or *kolkhoz*: it will be still more difficult to do so if we add the work of looking after, say, 50 pairs of bullocks to the tasks of a farm. The personal attention and devotion which the tending of animals demands, can-

"In countries where standards of living are highest, there is a tendency today to reduce the length of the working week and increase the length of annual holidays. Suggestions and predictions for the future make the present average 35, 40 or 45 hour working week with retirement at the age of 60 or 65, look like slavery.

"In some countries, increased leisure has been blamed for an unusual increase in crime, especially among adolescents, in recent years. In others, boredom is said to be responsible for a big rise in the number of people requiring psychiatric treatment of one sort or another. Most countries are tackling this problem of boredom, first and foremost in the adolescent, considering that it is to youth that it constitutes the greatest threat."

not be forthcoming in a community of, say, 100 persons who have only a joint interest and responsibility. Animals can be best looked after only when they are the exclusive responsibility of individuals. It will not be out of place to refer those who would not learn by their own experience or from conditions in their own country, to a press report about China when the co-operative farms were only just in the process of establishment. China has not the resources to produce agricultural machinery in bulk, nor is it in a position to spare resources for its import. The co-operative farms, as and when they came into operation, were, therefore, being run with animal power. The report says :

> Another aspect of the same trouble is that when beasts are taken over by a co-operative, many perish from neglect through being left outdoors all night or from sheer lack of food, since it seems to be nobody's business to look after them.[18]

The Krishnappa Delegation to China observes in this connection :

> On the whole, Chinese agriculture is weak in animal husbandry. In the production and development plans of co-operatives more emphasis might be given to this aspect of the rural economy. This might require not only a larger allocation of resources but also, perhaps, certain changes of an organisational character. In the breeding and care of cattle, collective maintenance has a part to play but along with it there might be room also for individual families being enabled to breed and look after cattle as much for their own benefit as for the advantage of the community. Since fodder resources are at the disposal of the co-operative, such schemes of animal husbandry development would require special arrangements for making green and dry fodder available to individual families (p. 121 of the *Report*).

Capital formation and, consequently, industrialisation being a very slow process, any reduction of pressure on land is hardly likely, at least, in the foreseeable future. It is said, therefore, we have to think in terms of re-organising our agrarian economy in a manner that would enable us to provide increased employment opportunities within agriculture itself. The advocates of co-operative farming contend that it will not lead to unemployment but will open up

[18] *Hindustan Times*, New Delhi, dated May 15, 1956.

new avenues of employment for those who are unemployed or under-employed today.

It is argued that our villagers today suffer from under-employment while, side by side, there exists a large employment potential. On the one hand, according to the Committee on Problems of Re-organisation appointed by the Planning Commission's Panel on Land Reforms, those who have rights in land do not generally possess an adequate area of land for their own full employment or the employment of surplus labour in the village. On the other, there are wells to be constructed, tanks to be dug and repaired, irrigation channels to be extended, drainage works to be executed, houses and roads to be built, local manure to be conserved and, if soil erosion is to be checked, land has to be terraced, bunded and afforested, etc. Also, there are large areas which have gone out of cultivation due to soil erosion and have to be reclaimed. All these works are of labour-intensive nature. Things have to be so arranged that the huge under-employed (and unemployed) population in the rural areas is utilised in executing these works, i.e., in creating capital or physical assets—assets that will increase the production potential. But as long as peasants are tied down to their small plots of land they are not free to leave it for considerable periods to work on the creation of capital assets. Even if they have to work only for one or two hours a day to look after their cattle or land, they cannot leave the land. The existing pattern of land-use and management, that is, individual farming, thus impedes full utilisation of man-power. In a way, under-employment is an economic compulsion under conditions of individual farming. This compulsion or under-employment can be removed only by organisation of the existing small and uneconomic holdings into co-operative farms which, through rationalisation of work and pooling of resources, will release labour for capital formation and intensification of agriculture. Such fuller and more continuous employment, it is said, has helped to reduce and to a considerable extent even to eliminate the worst forms of rural poverty in China. This, according to the Krishnappa Delegation to China, is a lesson of great value to India. The delegation, however, is beset with doubt in the very next sentence when it says—"Nevertheless, it may be difficult for a rural economy so greatly dependent on agricultural operations as that of China to continue to expand indefinitely work opportunities in farms for which the main resource needed is organised human labour" (*Report*, p. 121).

Earlier in its report the Delegation on this very question observed as follows :

In reply to a question on the effects that the formation of co-operative farms on a large-scale was likely to have on the employment problem, Mr. Chou En-lai said that the problem should be looked at from the point of view of two sectors and two periods. The two sectors were the villages and the cities and the two periods were the present and the future. So far as villages were concerned, in the short period, lots of work had to be done. Apart from cultivation, water conservancy projects had to be undertaken, reservoirs and tanks had to be dug and roads had to be built. All these required a lot of labour and the formation of co-operative farms made some of these activities possible and absorbed a considerable amount of labour of the co-operative farmers. But this state of affairs obviously could not be expected to continue for a long time. Soon a stage was bound to come when all the water conservancy projects in the village would be finished, all the roads would be built, and then there would arise the problem of some surplus labour in the village. Steps have, therefore, to be taken during the interim period for the utilisation of this surplus labour for the production of agricultural by-products. There was a good market for agricultural by-products and if the surplus labour in the rural areas could be absorbed by developing these by-product industries and in other subsidiary occupations in the villages, the problem could be solved to a considerable extent. Of course, during the same period if there was a certain amount of industrialisation in the country, that would draw away a number of surplus labourers from the villages. He felt, however, that, by and large, most of the rural workers would have to be employed in the village itself. It was mainly the educated and trained workers who could migrate to the cities and find some employment there (p. 27).

We leave it to the reader to judge for himself whether the question of additional employment through co-operative farming has been satisfactorily answered by this delegation. The Dissenting Minute of the Delegation, however, has to say the following in this regard :

The argument that if agriculture is collectivised, there will be work for all is not borne out even by our Chinese experience, because there we found that, in a vast majority of the co-operatives, there was great under-employment. The members were not employed even for 200 days in a year. Most of the co-operatives have also to rely on subsidiary occupations. Subsidiary occupation has a loose meaning in China and, in fact, we found examples where work-

ing as labourers on a road being constructed by Government was also taken as subsidiary occupation. Payment received by the members on the road-work was very low, so the difference was made up by the co-operative—which meant—at the expense of the members. Even the Minister, Mr. Liao, admitted displacement of labour by formation of co-operatives and said 'extra labour available due to pooling of land is transferred to subsidiary occupations which are suitable for a particular area' (*Report*, p. 212).

The former Food and Agriculture Minister of the Government of India, Shri Ajit Prasad Jain, while inaugurating a two-day conference of representatives of state co-operative institutes in New Delhi on 18 April 1956, was pleased to observe that the scheme of agricultural producers' co-operative societies would not result in a surplus of labour. He said that "the position today was that in addition to a large number of unemployed persons in the agricultural sector there was a good number who were under-employed. The creation of co-operative farms with medium and small-size holdings would provide full employment to many. By the introduction of small-scale industries it would be possible to find employment for others". The Planning Commission's Panel on Land Reforms also holds much the same view when it says that "the other advantage would be that a considerable amount of industrial work for self-use could be organised very much better in these co-operatives".

But, if it is small-scale industries which will have to be established to provide full employment on a co-operative farm, one is intrigued to know why they cannot be established independently of a co-operative farm. Fifty-two per cent of farmers in Japan in 1950 possessing, on the average, a holding of two acres carried on home and small industries in their spare time, without having first organised themselves in agricultural producers' co-operatives.

Perhaps, it will not be out of place to refer here to the belief, often voiced, that peasant-farming cannot be carried on except with the help of hired labourers, who enjoy no security today and eke out their existence somehow in a state of semi or gradual starvation, and that co-operative farming alone offers a solution. Both the beliefs are, however, unfounded. There is no agricultural labour worth the name in the Hariana districts of the Punjab, and whoever does not possess land in western parts of Germany where, too, the holding is almost as small as in the Punjab, is engaged as an industrial worker in the factories. The existence of landless agricul-

tural labour, therefore, is not essential to peasant farming. In both these parts of the world the peasant's wife works in the field shoulder to shoulder with her husband and, instead of being a burden to him, as in certain other parts of India, she is an economic treasure to her life-mate. "The Jat woman in the Punjab does not plough, dig or drive a cart, but there is no other form of agricultural labour which she does not practise and ordinarily adorn", says Dr. Radha Kamal Mukerji.[11] Further, during periods of harvesting and on other occasions when time is a great factor, peasants can and, where necessary, do collaborate among themselves for providing the necessary labour.

As regards availability of employment in a co-operative farm for those who are landless today, well, it is simply not possible. If there is not enough land to go round, or, if it does not suffice even for those who are engaged upon it as cultivators today, we will have to find employment for the landless in occupations other than agriculture. A co-operative farm, if it is mechanised, will, rather, throw out of employment quite a good percentage even of those who are employed today.

[11] *Rural Economics of India*, 1926, p. 71.

CHAPTER EIGHT

Equitable Distribution of Wealth

In view of the small agricultural area as compared with the number of those who subsist on agriculture today, and will, of necessity, continue to do so tomorrow, there can be no place for large, privately-owned farms if it is our intention to build up an economy where wealth will be equitably distributed. So, taking away of land from large individual farms in excess of whatever ceiling may be decided upon, and its distribution amongst the landless and the holders of uneconomic farms, is an obvious course dictated by the principle of social justice enshrined in our Constitution. The Committee on Tenancy Reform constituted by the Panel on Land Reform appointed by the National Planning Commission has put the case admirably. It says—"There is no doubt that such solution will be welcomed by the large masses of the landless population; possession of land gives them security, increases their bargaining power and enhances their status as land-holders in the village. Where the landless people belong to the Harijan[1] caste, this is an essential preliminary for the removal of untouchability itself. Existing disparities in ownership of land in agricultural incomes will, to a certain extent, be reduced. This will facilitate co-operation and rural progress and the state will have laid down the fundamental basis for the creation of a socialistic pattern of society" (*Report*, p. 9).

There is one substantial argument advanced against the proposal to place a ceiling upon the existing land holdings, viz. that in order to be fair we should place a ceiling on non-agricultural incomes as well. Otherwise, we will be discriminating against the large owners of rural property and be guilty of a bias in favour of the urban rich. This argument, however, does not take account of the fact that, while man cannot create land, he can create other forms of capital. The large farmer has not added to the nation's

[1] It may be stated here that not all Harijans are agricultural labourers or landless. For example, in Uttar Pradesh, according to the census of 1951, 60.9 per cent of the Harijans were cultivators of land or farmers, and 17.2 per cent were agricultural labourers (the corresponding figures for the entire population being 67.4 and 5.7).

wealth in capturing more land than ought to have fallen to his share, whereas the industrialist or the non-agricultural property-owner has, in putting up a factory or a house, created something which did not exist before. Secondly, it is land that in our conditions is a limiting factor while, of the two factors of production with which the non-agriculturist deals, labour is surplus to our needs and capital, though wanting in the measure we need it, is after all not so limited as land.

The Committee on Tenancy Reform has the following observations to make in this connection :

> Monopoly in land and the ownership of large areas by a small minority of the agricultural classes is an obstacle to economic development. This does not apply with equal force to industrial development where large-scale organisation may lead both to greater economy and efficiency. Besides, redistribution of land is a simple operation as compared to changes in the much more complex organisation of industry and commerce. Historically also, redistribution of land, in a number of countries, preceded economic changes in the industrial sector (*Report* : p. 42).

It is not necessary to agree with the Committee in its entirety : except in Communist countries, redistribution of land by the state has not been regarded anywhere as a *sine qua non* to economic progress. Nor is imposition of ceilings on industrial ownership an impossible task. The American Occupation authorities successfully did it in Japan in the later part of the forties. The efficiency of large-scale industrial undertakings in all spheres is also, at best, a disputed point.

Ownership of industry is more concentrated—management control incredibly more so—than any other form of property or wealth. National policy in this regard has not only been halting, but faulty—with the result that disparities in incomes since independence have widened instead of being narrowed down. "The path of planned development", points out Dr. N. V. Gadgil in an article in a special number of *Economic Weekly* (Bombay, 1961), "that we have adopted, with its emphasis on forced growth of basic and capital goods industries, is largely modelled on the experience of the Communist countries. But we have not taken steps which the Communist countries did to destroy economic power residing in private interest groups and to ensure egalitarian distribution of

incomes, to control prices and production and distribution of consumer goods. Nor have we assumed responsibility for finding work and food for all. The alternative path in Capitalist countries where initial investment is made in less capital-intensive industries and the industrial classes are left to find their own capital resources, keeps the inequality in distribution of incomes from becoming too great. The attempt in India to follow the Communist route of planning combined with protection to heavy industries but little protection to farmers or consumer industries, has the result that we have the worst of both the worlds."

If breaking up of large organised businesses is not feasible or is not intended, the reasons being what they may, there are two sets of measures which can be easily applied and yet the structure of the operational unit will remain undisturbed. First : a ceiling just as in the case of land may be imposed on ownership of industry, if not directly, then through partnership or shareholdings. Dispersal of ownership will be a measure chiefly helping more egalitarian distribution of wealth and income. Second : without controlling policies of individual companies, Government should be able to ensure that their operations are conducted as befitting concerns affected by public interest. This could be done through imposition of uniform accounting systems, appointment of independent auditors or other measures of surveillance which will prevent acts of evasion, avoidance, collusion, etc. Such control will prevent accrual or accumulation of illegal profits which sometimes exceed lawful gains.

However, to return to land : the governing principle of redistribution of land should, perhaps, be that none is allowed to possess an area of land which under our technique of farming is beyond the capacity of an average man or worker to manage and none possesses less than an area below which, howsoever more labour may be applied to it, land will not produce more per acre. That is, the upper limit of the farm shall be governed by the capacity of one unit of manpower and the lower limit by the capacity of one unit of land. A reference to Table I will show that, as more and more men work a given land area, that is, as area per man decreases, production per acre increases with such great strides that production per man also increases, till land per man is reduced to 27.5 acres. Four men with hundred acres between them are found to produce more per man than three men with the same area. Below 27.5 acres, production per man begins to fall off as the area decreases although production per acre

continues to increase till land per man is reduced to a point between 2.6 and 2.1 acres—say, 2.5 acres (vide Table I). So that if the area a man possesses amounts to more than 27.5 acres, neither land is fully utilised, nor labour, because of its dispersal over too large an area, gets its full return, and if it amounts to less than 2.5 acres per worker labour is not fully employed and goes waste. At these stages, that is, when the above level of 27.5 acres and the lower level of 2.5 acres per man have been passed, both individual and national interests coincide and suffer equally. In between these levels, the more land a man or an agricultural worker has, the better for him, for his total production will rise with every acre added to the holding; the less land he has, the better for the country, for the country's total production will rise with every acre taken away from the holding.

Therefore, it is in the interest of the nation *and also in the interest of the farmers concerned*, if excess land is taken away from all those families which possess more than 27.5 acres per worker, and distributed to those which possess less than 2.5 acres per worker. Also, laws relating to transfer and partition of land should be so amended and enacted that no holding of less than 2.5 acres per worker comes into existence in the future. The figures of 27.5 and 2.5 acres have been arrived at with reference to conditions in a country other than India. If in our country we adopt the figures of 25 and 3.125 acres instead, or 40 and 5 standard *bighas* respectively, we will not be deviating, or deviating far from facts of agricultural economics.

The Committee on Tenancy Reform set up by the Planning Commission's Panel on Land Reforms is also of the view that "peasant farming can be stabilised only if provisions are made to ensure that units of management do not decrease below a minimum size."[1]

In order to determine the area of land a family may be allowed to retain, we will have to look to its labour resources. Indian agriculture has a labour force of 41 per cent so that an average farming family of five persons has a labour force of $\frac{5 \times 41}{100}$ or 2.05 men-equivalents. Therefore, for an average family land-holding, we arrive at a ceiling of $(27.5 \times 2.05) = 56.40$ acres. If we take the area of 25 acres as the ceiling for one worker, the corresponding figure for an average family will stand at about 50 acres.

[1] *Report of the Committee on Tenancy Reform*, p. 48.

There may be other criteria to determine the floor and the ceiling, depending upon the preference of an economist or a government concerned, or what ideas an authority holds on 'social justice'. The Size of Holdings Committee set up by the Panel on Land Reforms has suggested that the ceiling be placed at three times a family holding—the latter being defined as land held by an average family of five persons which brings a gross income of Rs. 1,600 per annum or a net income of Rs. 1,200 per annum (including remuneration for family labour) and is less than one plough-unit, that is, an area of land which could be cultivated with one pair of bullocks, or if the soil is inferior, with two pairs of bullocks. A family was deemed to consist of husband, wife, unmarried daughters, dependent sons and grand-children.

This definition of a family holding, however, is not very satisfactory. It speaks of three determinants, viz., income, size of family and its cultivating capacity. Income from land cannot be a reliable guide, for it will depend upon the type of farming, the locality, and the ability of the farmer. Also, it is likely to differ almost every year with the quantity of production and with prices, both of which, in their turn, depend on so many factors that are beyond the control of an individual. Nor is the size of the family a safe criterion. One man may have three minor daughters, and another three adult sons who are still living with him. A young man and an old man may have families of an equal size today, but in course of time, the size of the young man's family is likely to increase. A family holding may, therefore, better be defined solely with reference to the area that an average family may fully exploit. Besides land, there are two other factors of production, viz., labour and capital without which it cannot be worked. It would, thus, be rational to correlate the area of a family holding with the labour resources of an average peasant family and its minimum capital requirements, so that full use of all the three economic factors throughout the year is assured. Now, an average family has two workers, and the minimum capital it requires is a pair of bullocks. So that a family holding should have an area that may provide continuous employment for two workers and two bullocks. Since it is economic factors that determine its size, the holding may also be called an economic holding. Strictly speaking, the area of such holding also in various regions of the country will differ with the kind of soil, the nature of crops grown, the availabi-

lity or otherwise of irrigation facilities, and the performance of the bullocks, but almost all these factors are remediable. For, in most cases the soil can be improved, the cropping pattern changed, irrigation facilities provided where they did not exist and, where the bullocks are of poor quality, two plough-units may be allowed instead of one.

As for mechanised farms, according to Dr. L. Dudley Stamp,[3] Professor of Social Geography in London School of Economics and world authority on soil use, 100 acres are the optimum for efficient management, so that in the case of mechanised farms a ceiling can, with reason, be placed at 100 acres.

It must be conceded that in this respect, namely, the attainment of the objective of equitable distribution, a system of collective farming, if not that of co-operative farming, scores over an economy of small farms, where disparities in economic status, although greatly reduced, will still remain. It is a different matter, though, as there are various grades in men's capacities, difference in their economic conditions also should and will always remain. According to a decree of the Council of Ministers, dated April 19, 1948, there are nine classes of workers on a Soviet collective farm, ranging from the president, senior tractor-drivers, etc., who are credited with two to five labour-days for each day actually on duty, to watchmen, cleaners, etc., who score only half a labour day for every day on duty.

[3] "Land for Tomorrow", 1956, quoted in *The Peasant And Co-operative Farming* by Prof. N. G. Ranga and P. R. Pancheri, published by the Indian Peasants' Institute, Nidubrolu, 1955, pp. 56-57.

CHAPTER NINE

Making Democracy a Success

We have deliberately chosen a democratic way of life. Inasmuch as we have emerged into a full-fledged democratic state after centuries of colonial and despotic rule, which has demoralised our people, we have to take special care and special pains to see that the democratic spirit is fostered in our society at every step. All schemes that we frame in the social, economic or administrative sphere have to be tested on the touchstone of democracy, viz. whether or not they will serve to strengthen the democratic tendencies, inculcate democratic modes of behaviour and generate an atmosphere of personal freedom and initiative. Those which do not serve these purposes have to be scrupulously eschewed as a matter of national policy. The care and guardianship of this tender plant of democracy becomes all the more incumbent on us in view of the circumstances in which our country finds itself in the East—almost a lone standard-bearer of parliamentary democracy amidst a crowd of nations which either do not understand democracy, or have notions on it far different from ours, or are just struggling to find their feet consequent on the retreat of western colonialism from the region.

It is the individual who forms the base of democracy. It is he who as a voter chooses who will run the village panchayat, the State Government, or the Union Government for him. He should, therefore, be able to form a judgment or take a decision on his own responsibility, untrammelled by any restrictions or apprehensions. Now, it is axiomatic that a man who is not free in his economic life or who is dependent or leans on somebody else for his bread or has to take orders from others all the twenty-four hours of the day, cannot develop an initiative. He will have his personality cramped and, what is the crux of the matter, will not be free to act, much less vote, as he likes. So, an economic system in which the individual is not free, whether he works on land or in industry, will ultimately work out to the detriment of democracy. Political and economic freedom are interdependent—'you cannot have one for long without the other'. In that society alone will democracy, in the true sense, be a success where the individual, the bread-winner, is

the master of his tools or means of production. There he does not have to take orders from, or render account to, anybody or any group or association of individuals, in fact, any authority outside of himself. But he is the sole captain of his fate, free to regulate his conduct as best, or, even as worst as he likes. That is what Mahatma Gandhi taught us; that is the message of the *charkha* on which he laid so much stress.

We have now to decide which of the three alternatives set out in Chapter II will fulfil our purpose. In our opinion, it is the economy of small farms, again, which happens to be the answer. Not only does it produce more wealth and provide more employment, but it also removes glaring disparities from land and will also prove the most secure base of democracy. The liberty of the worker—a condition precedent to successful functioning of democracy—varies inversely with the size of the undertaking in or upon which he is employed. An economy of large private farms or capitalist farming envisages a rural scene where the number of persons who will give the orders, *viz.*, the farm-owners or managers, will be very few and the number of those who will carry out these orders, *viz.*, labourers, will be very large. For example, if we divide or distribute the arable land of Uttar Pradesh into farms of, say, 50 acres each, we will be left only with about eight to nine lakh persons or families of land-owners, and the rest, say, more than ninety lakh of families of divested peasantry, will be added to farm labourers, who already count more than a million and a quarter of families. In such an economy of large undertakings a few will get the whip-hand, who will develop, because of the nature of their business, an imperious attitude hostile to equality and freedom and who will gradually come to dominate the political life and the administration. While the vast majority, accustomed always to receive and obey orders, free though according to law, will not count either in social life or counsels of the States and the Union.

Under the Weimer Republic, concentration of large estates in pre-war eastern Germany, where a group consisting of three per cent of the population owned 20 per cent of land and was roughly characterised as *junkers*, resulted in a feudal society of poorly educated, poorly paid, and ill-housed farm labour population and in an educated and powerful land-owning 'elite'. This group formed the kernel of social and political 'reactionary-ism' in Germany. The majority of the *junkers* supported and encouraged all movements

aimed at the overthrow of the Republic. They were consistent and active opponents of democratic government.

A proposition of an economy based on large, private farms has, therefore, only to be stated in order to be rejected, and we need not tarry long over it.

Now, as regards the co-operative farm which will be a big economic unit with hundreds, sometimes thousands of workers jointly working under one direction or management—Will such an organisation ensure freedom to the individual or full expression of his personality? Will an economy based on large mechanised undertakings produce self-regulated individuals who are the first postulate of democracy? No, it cannot. Such an economy can efficiently be run only on the basis of planned management and over all regulation by the state. Whether we take the case of the Russian *kolkhoz* or the Chinese producers' co-operative, the degree of control, apart from the manner in which it is exercised, which the state has necessarily to apply to keep these organisations functioning, shows unmistakably the futility of imitating them in a democratic set-up.

In the USSR, the state through the State Planning Commission assisted by the Rayon and Provincial Commissions, lays down a production plan for each farm containing directions about the acreage to be put under different crops. It also decides how and when labour shall be applied, the agronomic measures the *kolkhoz* must apply, the amount of gross revenue that should be saved, that is, reinvested in means of production, and so on. The only freedom that a *kolkhoz* enjoys in this regard, is to decide matters of purely domestic nature, such as proportion of the surplus produce to be sold, the proportion to be distributed among its members and the percentage of the net revenue to be set aside for communal purposes, such as club-rooms and creches.

The measure of the external control to which the *kolkhozy* are subject in their day-to-day working can be realised from the fact that, apart from the internal accounting a *kolkhoz* has to render, it has to submit, at least, eleven returns at intervals ranging from days to six months to the Commissariat of Agriculture, showing the progress of field work, the state of crops, sowing and harvesting operations, etc.

In addition to the production plan and all it implies, the state lays down a rigid price policy for the greater part of the marketable produce of the farm. Every *kolkhoz* is compelled to deliver

to the state its quotas or fixed quantities of grain and other crops and meat per unit of cultivated land to the amount laid down for each region, for which it receives payment at the state purchasing price, nominally based on the cost of production. The prices paid are, however, extremely low in comparison with prices of manufactured goods bought by the peasant or the open market prices for the same commodities. These compulsory deliveries[1] are generally and appropriately referred to as a tax in kind as the state obtains a large part of its budget revenue by the sale, at greatly inflated prices to the consuming population, of the produce it has bought cheaply from the farms.

The same remarks apply *mutatis mutandis* to the Chinese producers' co-operative. It will be sufficient to quote from the Report of the Krishnappa Delegation to China :

> The co-operative must work to plan. It should draw up plans both for the production and sale of products in the light of its own conditions and gear these plans to the production and purchase plans of the State (Article 4 of the Model Regulations for Elementary Agricultural Co-operative quoted on p. 113).
>
> To ensure fulfilment of the annual production plan, the co-operative shall draw up schemes for the progress of work in the various farming seasons and stages of work, set definite production tasks and definite dates for their completion (Article 29 of the Model Regulations quoted on pp. 114-115).

It is out of the money extracted from the peasantry or the land-worker by an unrelenting dictatorship that heavy industries were built up in the USSR and are proposed to be built up in China. As the Report observes: "It should be pointed out here that the main emphasis in Chinese planning is not on agriculture but on industries, especially heavy industries" (p. 40 of the Report).

As an organisation both the *kolkhoz* and the Chinese producers' co-operative are political subordinates to the Communist Party—they have no independent thought or say of their own. Their primary organisational role is political propagation, *rather than agricultural production*. The joint farm by whatever name it may be designated in the two countries, was adopted because political instruction can be more effectively conducted among an associated

[1] See p. 23, however.

group than separate units. As a matter of fact, today, it is wrong to talk of co-operative farming in China as something distinct from collective farming in the USSR. The 'advanced' co-operatives, into which all 'elementary' agricultural producer co-operatives were later on converted, according to the Chinese themselves, were nothing but collectives.

The aims and considerations which impelled the Communist Governments to establish collective farms—the role which these farms were intended to fulfil—cannot be stated better than in the words of Leonard E. Hubbard:

Apart from the inconsistency of permitting agriculture to be based on private capital and enterprise while industry was completely socialised, and the possible danger to the Communist State if a large and influential class of prosperous peasant farmers were allowed to grow up, the Bolsheviks decided on the collectivisation of peasant farms because this was the only practical way of forming large-scale and economic farm units under effective government control. A collective farm could be made to grow whatever crop was considered best in the eyes of the Government, irrespective of whether it was the most profitable to the growers themselves; a large proportion of the harvest could be taken away from a collective farm than could easily be recovered from a number of independent farmers cultivating, in the aggregate, the same area; a collective farm could be compelled to introduce intensive methods of cultivation, including the use of modern machinery even if it raised product costs, while the independent peasant, even if a comparatively large farmer, was often too conservative and obstinate readily to adopt new and scientific methods, and in any case required to be convinced that it would be to his pecuniary advantage. Finally, as against State-farms, the collective farm was less calculated to involve the State in a loss. A State farm has to pay fixed wages and salaries and its overhead and working expenses were relatively inelastic: a collective farm, on the contrary, reimbursed its members out of its net proceeds in kind and money. If its proceeds were small the *kolkhozniki*[1] had to reduce their own consumption, and the State had to come to their assistance only if they were actually starving. For all these reasons and because cultural and political instruction can be more effectively conducted among an associated group than separate units, the collective farm was adopted as the standard farm of agricultural enterprise (*The Economics of Soviet Agriculture*, 1939. Macmillan and Co., Ltd., London, pp. 98-99).

[1] Members of a *Kolkhoz* or collective farm.

Article 8 of the Model Regulations quoted in the Report of the Krishnappa Delegation at page 120 proceeds thus :

The co-operative should take all measures which will bring about a steady rise in the level of political understanding of members; it should give them regular education in socialism and patriotism, and see to it that every member abides by the laws of the country. It should be ready to respond to the call of the Communist Party and the People's Government, and lead its members in the advance to socialism.

The Report goes on to say :

Yet, at this stage, it is difficult to escape the conclusion that local co-operatives depend heavily on direction and stimulus provided from county and district branches of the Communist Party and from cadres sent down to work in the villages by the People's Councils at higher levels (p. 120).

It should be clear, then, that the Chinese producers' co-operative has little liberty as an organisation. That advocates of co-operative farming in India are also actuated by some such temptation will be clear from remarks in the Patil Delegation's Report : "Without the producers' co-operatives, the needs of each one of the 50 million families engaged in agriculture have to be ascertained and provided for. With the producers' co-operatives, the State will have to deal alternately with less than half a million co-operatives which will become the organ of the State in implementing its welfare programmes" (p. 134).

It would seem that people of the way of thinking typified in the Patil Report have despaired of the slow processes of democracy, or are afraid of the vast number of individuals in the country who will have to be approached, persuaded or dealt with, and, therefore, would herd them into co-operatives or joint enterprises so that they may be better managed. They would very much like to copy communistic methods or programmes but, owing to circumstances beyond their control, have to resort to democratic terminology in order to achieve their purpose.

The liberty which its members enjoy as individuals is even less. We shall quote again from the Report of the Krishnappa Delegation :

Each production brigade consists of a number of working teams,

. . . . The management committee appoints the leaders of production brigades and of working teams. . . . A supervisory committee is also elected by the general meeting or by delegates elected by a general meeting, its functions being to see that the chairman and members of the management committee abide by the regulations of the co-operative and the resolutions of the general meeting, that the accounts of the co-operative are in order, and that there is no corruption, theft, sabotage, waste, or damage to the co-operative's property. The chairman of a co-operative is a person with much power and responsibility as he 'represents the co-operative in its dealings with other parties' . . . . . there are considerable reserve powers, especially with the leaders of production brigades and with members of the management committee, through which failures in team work, lack of application and indiscipline can be dealt with . . . . To put the piece-work system into practice each co-operative has to decide upon suitable norms for various jobs and to fix rates of payment. . . . The number of work-days a member earns for fulfilling the norm for each job is decided on the basis of the skill and intensity of labour involved and the importance of the job to the production of the co-operative as a whole (pp. 115, 116 and 117).

Election of committees and office-bearers has to be made from names given by the Communist Party.

Translated into capitalistic terminology, the farmers become wage-earners with the same widely varying wage-scales as the factory workers and with the same subordination. With this difference that a man not fulfilling the norms would not merely get less remuneration for less work, but would actually be punished. The Delegation sums up by saying :

It is not improbable that in many co-operatives there exist doubts and criticisms to which there may or may not be satisfactory answers. It is not easy for a visiting delegation to grasp such elements in a new situation in which large numbers of men and women are thrown together rather suddenly in a complex set of social, economic and organisational relationships such as a large agricultural co-operative represents (p. 118).

In his voluminous study of Soviet agriculture Naum Jasny comes to the conclusion that the contrast between theory and practice is most flagrant. Instead of voluntary participation there is coercion ; instead of democratic decisions by the General Assembly there is dictatorship of officials who themselves are only small cogs in a big administrative machine. There is a tendency to shirk duties,

to defraud the group for the sake of personal gain, and instead of a spirit of partnership the actual state of affairs makes the 'analogy to serfdom' increasingly justified. Jasny concludes: "the misnamed *kolkhoz* is the nutshell of a co-operative without the nut". The same is true of the Chinese venture in the field of co-operative farming.

The truth is that economic motives are only secondary. All the motive power comes from the social theory that the peasant is a capitalist and must, therefore, be uprooted from his land, eliminated as an independent unit and reduced to a proletarian, for otherwise he will remain a potential source of internal opposition to the Communist regime.

David Mitrany says:

> Pure Marxists were moved much more by political needs than by scientific arguments, and even less by any understanding or sympathy for the countryside. The Communist Manifesto had lumped the peasant together with handicraftsmen and small traders, etc., in the 'petty bourgeoisie' as an unstable and reactionary class and never thought of allotting him a place of his own in the revolutionary procession. If one considers not only *Capital* but his whole scientific and political activity, nowhere will one find signs that Marx had seriously studied the actual state of the peasants in any one land. His way had been to formulate a general theory and simply sweep them into it, never considering them as a subject fitted for a special plan or reform. It was a sentence without a trial. All his life, not only as an economist, but also as a townsman and a revolutionary, Marx was filled with undisguised contempt for the peasant (*Marx against the Peasant*, 1952, pp. 40-41).

None of the top leaders of the Russian Revolution who forced the co-operatives upon the peasantry, had a peasant origin or any connection with the village. They belonged to the urban intelligentsia or the proletariat and were, therefore, unable to appreciate peasant needs, and entertained no sympathy for peasant longings. The same is true of most of the ardent supporters of joint farming in India.

The aim of Communism is to gradually convert the independent peasants, through the system of collective farms, into a landed proletariat. Everywhere it has climbed to power on the backs not of capitalist bourgeoisie which did not exist, or were insignificant but on the backs of the working peasant masses. It first encouraged

the peasants to help themselves to land, only so that it might have its hands free to grasp political power, and then used that power to deprive peasants of land.

To implement this scheme, the Soviet Government sent out 25,000 industrial workers into the country in 1929 to become the first *kolkhozy* presidents. An equal number of members predominantly belonging to the urban proletariat was again despatched into the country in 1933 who were distributed among more than 5,000 political centres to exercise political supervision over the attached *kolkhozy*. According to an announcement in the *Pravda*, the Soviet leaders decided as late as in April, 1955, that a 'shock brigade' of 80,000 city-trained specialists or 'experienced workers' was to be sent into the countryside within the next four months to 'ensure the guidance of agriculture'. These men were to be 'recommended' as chairmen of those collective farms where weak leadership was responsible for inefficiency and shortage in output. It is almost superfluous to say that these specialists were chosen for their loyalty to the Party and their Communist single-mindedness, and not for their knowledge of agricultural conditions. It is these 80,000 persons who were the forerunners of a class of professional presidents and other functionaries who to-day rule the *kolkhozy*. It is these 80,000 persons and other technical personnel drawn from the town who assumed the leadership of the village : very few presidents of the *kolkhozy*, indeed, were local men or men of rural origin.

To quote again from the report of the Krishnappa Delegation in regard to China : "No less important than these technical and economic considerations was the view held by the leaders of the Communist Party that a socialist society could not be built up unless co-operative farming took the place of peasant proprietorship and, step by step, all vestiges of individual ownership in land were discarded. As they put it, 'the nation could not stand with one foot on socialistic industry and the other on a peasant economy.' Or, in the words of Chairman Mao Tse-tung, 'if positions in the countryside are not held by socialism, capitalism will assuredly occupy them'. It was for these various reasons that the Central Committee of the Communist Party declared a year ago that :

> The aim of the co-operative movement is to lead about 110 million peasant households from individual to collective farming and then go on to bring about technical reform in agriculture ; it is to

eliminate the last vestiges of capitalist exploitation in the rural areas and establish socialism. The building up of socialism is the cause of hundreds of millions of people (p. 107).

The Communist Party and its cadres at all levels have played a fundamental role in the organisation of producers' co-operatives as they did earlier in land reforms. They provide the core of the organised effort in every local community and in the future also the success or failure of co-operatives will turn largely on their performance, behaviour and leadership (p. 190).

But behind this organisation of the Chinese farmers into co-operatives and the mobilisation of the resources of the entire nation, there is a force which should not be lost sight of. It is the Communist Party of China which has 10.7 million well-organised, disciplined and hard-working members. It is the members of the Party working in the remotest villages who have brought about a fundamental change in the rural structure of China within a short period of seven years. It is also these party members who provide the necessary drive for increasing production and ensuring that the targets are fulfilled. There are writers on China who have spoken of the ruthlessness which might have marked the early phases of the new regime as a factor in the subsequent transformation from individual to co-operative cultivation. This may or may not be so, but we cannot comment on the suggestion from our own direct observations (pp. 191-92).

It is abundantly clear from these observations that the motive power for the Chinese co-operatives comes not from the Chinese farmer but from the active members of the Communist Party. Comparing the conditions with India the delegation observes:

In Indian villages in areas where development programmes are undertaken and the right kind of leadership is forthcoming, there is, perhaps, more voluntary effort, local initiative and general awareness than we were able to observe in China (p. 192).

There may be a view that in China the rural leaders lack flexibility and depend more on directions from the party as well as from the Government than on their own initiative or on the support of the local people. If this occurred, they would not compare favourably with rural leaders in countries with a long history of economic development on democratic lines, and in the long run this may prove to be a serious handicap and may limit the degree of technical as well as social progress which is achieved by the rural population (p. 191).

No fundamental reform can be divorced from ideological considerations. The ideology which has been responsible for the pheno-

mental growth of what is called co-operative farming in China, has been deliberately rejected by us. Can we transplant a seedling which has been sown, tended and nourished in a communist climate into our climate of fundamental freedoms? As observed by the Krishnappa Delegation on page 43 of its report: "The system of Communism in China, however it may have been adapted to the needs and conditions of Chinese society, does not, of course, provide for freedoms such as those of information, expression and association in the manner familiar to us in India. In this sense, it shares inevitably several typical political features with communist countries in the west." In the concluding sentence of its report the Delegation rightly cautions us thus: "We must emphasise, however, that any measures that we may adopt for economic development or technical progress should be fully in accord with our democratic institutions" (p. 199).

How the thinking of advocates of co-operative farming in this country is confused is well illustrated by a correspondent of a New Delhi newspaper dated June 1957:

> In India democratic socialist thought has yet to define its attitude to the small peasant clearly. Remnants of the archetypal Marxist-Leninist theory of the small peasant's doom, largely irrelevant in the context of India's man-land ratio, mixed with a genuinely democratic concern for the small peasant, produce a schizophrenic policy bristling with contradictions. Yields can be greater on small farms than on large farms and yet we regard an enlargement of the scale of farming operations as a pre-condition of increased output. We know that the small peasant is not an exploiter and yet we would treat him as a 'capitalist'. We wish to help the small peasant but we continue to believe in his doom. We know that in our peasant democracy the small peasant must predominate and yet it is for his proletarianisation that we work. Our administrative and co-operative structure has yet to prove equal to the supreme task of redistributing land and carrying enough resources to the small farmers, but we are already dreaming that it will soon co-operativise a substantial proportion of agricultural lands. We know how attached our peasants are to their holdings and yet we desperately wish to believe that they will pool them 'voluntarily'.
>
> It is high time we—all of us socialists now—come down to earth and squarely face the problems of the small peasant and give him what he needs, before delivering our *ex-parte* judgment that he cannot deliver the goods, unless we run him as a wage-labourer in a huge collective. The small peasant is not a person to be disposed of by starry-eyed logic; he is a harassed human being to be under-

stood and helped to help himself and to feed us. If we, who feed on him, mistreat him, collectivise him and write him off, inspite of the unprecedented peasant franchise that characterises our democracy, the results can only be fatal. Indian socialism must be for the small peasant, not against him.

A society based exclusively or overwhelmingly on big economic units, whether in the field of agriculture or of manufacturing industry, must inevitably lead to concentration of power in the hands of a few. The larger the size of an undertaking, the less the active participation of the members or workers in its affairs and fewer the opportunities for office-bearers to come into direct contact with them. This will affect the understanding of the members about the problems of the organisation and there will be a danger of decisions being taken by the few which may not be in its true interest. Ordinarily, majority of the people have little time and little inclination to think and learn all the facts necessary to make wise decisions on public affairs of a large institution. They prefer to follow someone else who is willing to think or in a position to think. So, in large matters people must delegate decisions to a relatively few representatives. This will be particularly true in the case of joint farming in India where few villagers can read and write.

"A society based on big economic units leads", said Acharya Kripalani, "to bureaucratic and dictatorial exercise of power. The rulers in that case not only regulate the political but also the economic life of the people. If political power has a tendency to corrupt the holders of power, this tendency is doubly increased by the combination of political and economic power in the same hands. Capitalism killed democracy because the capitalist class wielded, directly or indirectly, political power. Communism puts in the hands of the political dictator and bureaucrat the entire control of economic power. Herein lies as great a danger to democracy as under capitalism.

"Therefore, if democracy is to survive, it must discover a means of avoiding concentration of economic power in the hands of the ruler or rulers, however selected or elected. Even a political democracy can be a dictatorship if there are no spheres of free activity left to the individual."[2]

[2] Presidential Address delivered by Acharya J. B. Kripalani at the 54th Session of the Indian National Congress in November 1946, in Meerut.

The plant of freedom cannot thrive on the soil of collectivised farm which is a large joint undertaking, nor was it intended to thrive by its founders. When we find in India, therefore, persons who profess belief in democracy yet advocate establishment of huge, jointly-operated units of production as the remedy of our rural problems, one can only sympathise with them and wish they knew the country-side and the object of their arm-chair solicitude before offering solutions. No lover of the peasantry and the country would be enthused by the prospect when our countryside will be turned into huge barracks or gigantic agricultural factories. Such an economy would enslave the people and take away their freedom which is material to all definitions of happiness. Assuming a collectivist economy leads to a powerful and prosperous state, it is doubtful whether there is any advantage in having such a state if it is to be achieved at the expense of human freedom and happiness.

In a speech in New Delhi in the early half of 1955 the Prime Minister said that "India is trying to achieve economic prosperity without abandoning democratic institutions and would not sacrifice democratic institutions at the altar of economic progress". He went on to add that, "in the long run, economic prosperity based on a denial of human freedom and dignity could not carry a country far", and that progress had been achieved in Russia "at the cost of the freedom of the individual".

Whatever emphasis may be placed upon the differences[1] between a co-operative farm and a collective farm, so far as internal working is concerned there is, and there can be, no difference. Land, labour and capital are pooled in both and, the size being large, they cannot be managed without a plan and without orders issuing from some central unified authority. In both, the peasants will have to be assigned to brigades and the latter divided into teams, individual work evaluated, a complex accounting system adopted, a code of punishments provided, and so on. Nor is there a difference

[1] Even if there is a difference, transition from a co-operative to a collective farm is but a short step. The Nagpur Resolution already lays down that even those who do not possess land, can become members of the farm and will be entitled to "a share in proportion to the work put in by them on the joint farm". As time passes and people are reminded that land is a national asset and, therefore, belongs to all, the conception of private property will weaken, and the share payable to members in proportion to the land contributed by them would gradually dwindle and finally disappear altogether.

in the motives underlying the two. To the extent—and this extent in a joint undertaking will necessarily be large—the peasant, the member of the farm, is not free to obey his own desires, his liberty is curtailed; he is not independent. And to that extent democracy in the country will suffer.[1]

It is true that some control of the individual is inherent in all organisations, and that organisations—social, economic and political—are essential to all civilised existence. It is, therefore, on the degree of control that the question turns. *That society is best where control over the individual is the least.* Such is a society of small autonomous organisations usually consisting of a family, both in the sphere of agriculture and also, as far as we can help it, in the sphere of industry. Large organisations are inevitable in some branches of manufacturing, but not at all necessary in the sphere of agriculture.

A system of agriculture based on small enterprise, where the worker himself is the owner of the land under his plough, will foster democracy. For, it creates a population of independent outlook and action in the social and political fields. It is true that the peasants have to earn their living the hard way: only a few are able to accumulate a surplus. They may be conservative, but will not be reactionary; they may be in favour of a private economy, but are not exploiters, either. The peasant is an incorrigible individualist; for, his avocation, season in and season out, can be carried on with a pair of bullocks in the solitude of Nature without the necessity of having to give orders to, or, take orders from anybody. That is why the peasant class everywhere is the only class which is really democratic without mental reservations. The system of family-size farms also ensures stability because the operator or the peasant has a stake in his farm and would lose by instability.

Peasant farming also makes for a happy community and a satisfied individual. Security to the peasant owner is a matter of course.

To own the land and to be free to farm it in the traditional peasant

[1] Delivering the inaugural address at the annual session of the Federation of Indian Chamber of Commerce and Industry in New Delhi on March 7, 1959, Prime Minister Nehru said:

"As for somebody telling me that *co-operative* farming will lead to collectivisation, and, therefore, to communism, well, if it does I am not frightened" (vide a booklet *Jawaharlal Nehru on Cooperation* issued by Government of India, 1959).

way is to him nothing less than the equivalent of that 'social security' which has become the aspiration of industrial masses even in the advanced countries of the West. The life-line which in the west the State has to throw to the worker whenever he is in difficult circumstances, through the complex of insurances against unemployment, against sickness and want, for old age and so on, the peasant has always found in his traditional economy. As Miriam Beard says in her *History of the Business Man*, discussing his part through many centuries, 'men suffered on the land but survived; while in the cities they flourished—and faded'. The peasant's way to security may not provide him with such great material benefits as those now given in the West by the State, but it is a security which he can achieve with his own hands and which leaves him free to stand on his own feet.[4]

Inasmuch as the character of political institutions was determined by the fundamental laws respecting property, Jefferson, one of the architects of American democracy, firmly believed that a wide dispersion of private property—a wide diffusion of rights in land which makes for individual freedom and creative individualism, and an opportunity to acquire such rights—was essential to the establishment of democracy and the safest assurance that it would endure. Freedom is founded upon ownership of property. It cannot exist where, as under a system of state and collective farms in Russia and communes in China, it is the rulers who own everything. Against such a state the individual who owns nothing, has neither the means of defence nor anything to defend. Nor has he any freedom of action or any means of self-expression like houses to modify and crops to tend, or trees to plant and cows—even offsprings—to rear.

F. C. Howe states:

Farm ownership and the small farm are the economic bases of Danish life. To these economic conditions other things are traceable. The kind of land tenure that prevails is the mould of the civilisation of a State. This is true of nearly all countries. It is hardly a coincidence that wherever we find hereditary landlordism, as in Great Britain and Prussia, there we have political reaction. There is, so far as I know, no exception to this rule. It was this that explained old Russia. It was land monopoly that lay at the back of the Irish question and the long-continued poverty of the Irish people. On the other hand, wherever we find the people owning their own homes and cultivating their own land, there we find an entirely

[4] David Mitrany, *op. cit.*, p. 130.

different spirit and a different political system. With ownership we find democracy, responsible government, and with them the hope, ambition and freedom that prevails in France, Holland, Switzerland and the Scandinavian countries. For these are the countries where the people, rather than the old feudal aristocracy, own the land.[1]

[1] *Denmark : A Co-operative Commonwealth*, 1922, p. 71.

CHAPTER TEN

Impracticability of Large-scale Farming

THE NUMBER of persons holding cultivable land in India is vast; it was more than 226 million in 1961. The corresponding figure for the biggest state in India, viz. Uttar Pradesh, stood at about 47 million. In the context of these figures a pertinent question is whether large-scale farming as a method for general adoption in this country is really practicable.

Quite apart from the merits of the proposal, it is simply not possible for any democratic government to divest these people of their lands with a view to set up an economy of large farms. The psychology of the peasant will have to be considered. Habits centuries old are not changed in a day, and habits rooted in the soil are with difficulty changed at all. A large collective undertaking may be well adopted to the needs and mentality of the agricultural or industrial labour, but not one tenant in a hundred or one owner in a thousand wishes to be turned into a collectivist as long as he can make a living, however modest, on his farm. He is too tenacious of his independence and, if an owner, too attached to his land and too jealous of his social prestige. In membership of a co-operative or collective farm he sees a loss of all the three—his land, independence and prestige. Hardly any farmer, therefore, is a candidate for membership of such a farm.

The Food and Agriculture Organisation of the United Nations, in a survey report entitled *Co-operation and Land Use*, 1957, very truly says :

> In general, those to whom the co-operative farm appeals are either intellectuals without previous farming experience; the technically-minded, to whom machines and all that goes with them are more important than the bare ownership of land; the more dependent type of share-croppers and labourers with no experience of managing farms of their own; or tribal peoples who have no tradition of individual ownership. Experience shows that labourers and tenants, though they may at first accept land pooling, tend to develop the traditional peasant attitude as their experience increases, and to demand the division of land into individual holdings. It is possible that the attitude of tribal peoples will undergo a

similar change and that they may come to resent what they feel to be an attempt to force them back into the undifferentiated herd. Any kind of uprooting or migration makes the introduction of collective farming less difficult, since the sense of ownership is weaker and a shock makes easier the entry of new ideas (pp. 105-106).

Attachment to the land is a universal trait in the peasantry of all countries. The French peasant, for instance, calls his land his 'mistress'. Here is an extract from a French author, Michelet, which correctly depicts a peasant's passion towards his land:

If we would know the inmost thoughts, the passion, of the French peasant, it is very easy. Let us walk out on Sunday into the country and follow him. . . . I perceive that he is going to visit his mistress.

What mistress? His land.

I do not say he is going straight to it. No, he is free today, and may either go or not. Does he not go every day in the week? Accordingly, he turns aside, he goes another way, he has business elsewhere, and yet he goes.

It is true, he was passing close by; it was an opportunity. He looks but apparently he will not go in; what for? And yet he enters.

At least, it is probable that he will not work; he is in his Sunday dress; he has a clean kerchief and blouse. Still, there is no harm in plucking up this weed, and throwing out that stone. There is a stump, too, which is in the way; but he has not his tools with him he will do it tomorrow.

Then he folds his arms and gazes, serious and careful. He gives a long, very long, look, and seems lost in thought. At last, if he thinks himself observed, if he sees a passer-by, he moves slowly away. Thirty paces off he stops, turns round, and casts on his land a last look, sombre and profound, but to those who can see it, the look is full of passion, of heart, of devotion.[1]

Human nature is the same everywhere. Here, our peasant calls his land *Dharati Mata*—Mother Earth—inasmuch as it provides sustenance for all living things.

Everywhere the peasant is a firm believer in property striving for independence. Hence a collectivist economy will meet with his emotional resistance from the start. Ultimately it is not a question of economic efficiency or of form of organisation, but whether individualism or collectivism should prevail. Peasantry represents not

[1] *Vide* N. Gangulee, *The Indian Peasant and his Environment*, Oxford University Press, 1933, p. 59.

only a certain form of economy but also a certain way of life. Within the peasantry those characters, traits and moral forces are most pronounced which resist the tendency towards collectivism and of being levelled down into a uniform mass. On the other hand, the co-operative idea of self-help by voluntary association which does not efface economic independence appeals to peasants. It is significant that communists try to overcome the individualistic thinking of peasants by using co-operative slogans.

Any government with democratic pretensions, run by any political party whatsoever, attempting to establish an economy of large farms in India will either founder in the attempt never to recover, or, will turn dictatorial in the process. Constituting a majority of the total electoral strength as they do, the peasants cannot, even if all other sections of population combine against them, be coerced into accepting a course against their will. That is why in every instance the Marxist agrarian programme has had to be applied by force and to rely on force for its survival. The socialists who wanted to remain democrats had, in every instance, to abandon the programme.

The advocates of collectivisation commit the mistake of appraising India in terms of the psychology and the living conditions of old Russia and do not make an allowance for 'differences in political experience, social background and emotional response'. Possession of land had been in some sense joint and communal throughout Russian history. The *mir* or the *commune*, in which the village communities were organised, was a distinctive and peculiar attribute of traditional Russian civilisation. The characteristics of communal land-holding were :

(*i*) Distribution in strips,
(*ii*) Compulsory adherence by all members of the commune to a common rotation of crops,
(*iii*) Temporary occupation by the individual of his allotment, and
(*iv*) Periodical alterations in the size of the allotments.

The coming of the *kolkhoz* is, therefore, a purely Russian event that must be seen, understood and evaluated as such. "The *kolkhoz* is the collectivised farm emerging out of a primitive peasant economy", says G. D. H. Cole, "which had neither wholly lost nor forgotten the collective characteristics of serfdom and feudalism. It could not be developed out of a system of middle-sized tenant farms

such as existed in Great Britain, or out of a developed and civilised peasant proprietorship like that of France, or again out of the homestead farming characteristic of the United States and Canada".[1] Nor can it emerge, in our opinion, in India where individual ownership has a very long history and is deeply rooted in the consciousness of the peasantry.

The idea of peasant ownership came to the fore in Russia only in the latter half of the last century. It was after a long agitation beginning with the Emancipation Act of 1861 that on November 22, 1906, an ukase was promulgated depriving the *mir* of its authority and giving the peasants a right of separation from the commune, which laid the foundations of a class of true peasant proprietors. In 1928, therefore, when the Government of the USSR embarked on compulsory collectivisation, peasants whose ownership of land had some history behind it, were a small fraction of the entire peasantry, *i.e.* 10.7 per cent, the vast majority having come into ownership (a fact never openly recognised by the Communist Government) only in 1917 when the big landlords, the church and the crown were liquidated. Nevertheless, even in Russia collectivisation was bitterly resented by the peasants as a class who had hoped to enjoy the land some day in individual ownership as a result of the Revolution.

Some of the believers in collectivisation may, perhaps, like to argue that the desired end can be brought about by persuasion and that, provided the necessary propaganda, education and demonstration are forthcoming, the peasants can be converted to a voluntary acceptance of collective farming. So far, however, the experience of the USSR, Yugoslavia and other eastern European countries tells a different tale.

While, on the one hand, propaganda as a result of a resolution of the Fifteenth Party Congress held in December 1927, which decided upon collectivisation, was unleashed by the Soviet Government in 1926 for popularising the *kolkhozy*, and a few collective farms were set up to serve as demonstration, the Government introduced, on the other, a so-called contract system under which an independent peasant was bound to deliver to Government grain-collecting organisations the whole of his surplus harvest at the price fixed by the Government. It was the Government collecting agency

[1] *Practical Economics*, 1937, pp. 49-50.

itself which decided what quantity of grain was surplus to the needs of a particular peasant. In case a peasant or *kulak* failed to deliver his quota, his grain was confiscated under Article 107 of the Criminal Code and 25 per cent of it made over to the poor peasants of the village. All these measures and other restrictions, however, failed to attract the peasant into the *kolkhoz*. He remained unconvinced of its superiority, with the result that during two years from the spring of 1927 to the spring of 1929, percentage of peasant households collectivised rose from 0.8 to 3.9 only. In January 1930, therefore, the Central Committee of the Communist Party took a most decisive turn in policy. It resolved to eliminate the *kulaks* as a class by wearing down their resistance in open battle and depriving them of the productive sources of their existence and development (the free use of land, viz. the means of production, the renting of land, the right to hire labour, etc.). Instructions were issued that by coming spring 30 million hectares of land should be brought under collectivisation. This was about 25 per cent of the total area under crops in 1929. Peasants labelled rich were *ipso facto* condemned to liquidation, and taxes far heavier in proportion to those borne by the other groups, middle and poor, were imposed on them ; if they paid the first time, they were reassessed at twice or three times the original sum. Sooner or later the peasant failed to pay his taxes ; thereupon, his property was handed over to the nearest *kolkhoz*. Those who showed the least signs of resistance or gave cause for doubt or offence to the local party bosses, were liquidated or silenced by measures which are now part of history.

An attempt at coaxing the peasantry into collectivisation was made next in Yugoslavia, but it must be confessed that it met with the same disappointing results so far as the reactions of the peasantry were concerned. A movement to wean the peasants into collective farms was set afoot with open and covert official pressure, soon after the country had been liberated from the yoke of the Nazis in 1945. With the relaxing of official pressure, however, the movement evidently lost its momentum. As against 3,500 collective farming societies started in 1949, in 1950 only 353 societies came into existence. In the summer of 1951 the total number stood at 7,000 comprising 22 per cent of Yugoslavia's arable land and 4,20,000 households. Signs of discontent began to grow in the older societies. Management was inefficient and the credits were expended chiefly on buildings. There were many applications to withdraw, over 2,500 in

Macedonia and more than 3,000 in Croatia. The Communist Government, led by Marshal Tito, therefore, decided not to force the peasants into collectivisation at the point of the bayonet, and it is this deviation from the orthodox communist policy that formed one of the major causes which led to the breach of diplomatic relations between the USSR and Yugoslavia. The Yugoslav parliament, on 27 April 1957, formally passed a resolution abandoning altogether the system of collectivisation. It pointed out that collectivisation had shown negative results—loss of interest on the part of peasants and decrease in production all round. The country is now committed to what is called 'socialistic co-operation'—co-operation between farmers farming their own private land on one hand and co-operative societies dealing with marketing and machinery on the other. On 4 June 1957, Marshal Tito declared in Belgrade that the Soviet-style 'forcibly formed co-operatives' in farming had not worked in Yugoslavia and this was why she had switched to a compromise between collectivisation and private enterprise. According to a recent report, hardly 500 collective farms were extant today.

Nor have the peasantry of East Germany, Czechoslovakia and Hungary taken kindly to joint or collective farming, efforts of the local Communist Governments and the USSR, which holds these countries in its grip, notwithstanding. It is imposition of collective farms which is largely responsible for political unrest in the rural parts of these countries. Such farms, wherever they had been established, are now in the process of being broken up over large parts of eastern and central Europe.

. . . . In Hungary the socialised sector in 1955 included one-third of the arable land area, with 1.3 million hectares in co-operatives and 700,000 hectares in state farms; but between October 1956 and January 1957 there was a 50 per cent decline in the area and number of co-operative farms. In Poland the rate of formation of co-operatives was slower than in other Eastern European countries. By early 1956, the socialised sector comprised 23 per cent of the agricultural land area, with two million hectares, or 10 per cent in co-operative farms, and 13 per cent in state farms. Since the political events of October 1956, three-quarters of the co-operatives have dissolved. New policies, designed to increase output on peasant farms, and even to encourage land purchase, are now being introduced.[1]

[1] An article entitled "Changes in European Peasant Farming," by Doreen Warriner published in *International Labour Review*, November 1957, p. 463.

According to press reports, Gomulka, the new Communist leader of Poland, in his first policy statement made at the Eighth Plenum of the PZPR Central Committee, on 20 October 1956, said that "in agriculture it is only the private sector which has prospered and that it was a mistake to collectivise the *kulak*." He told the Committee that "individual peasant production per hectare was 16.7 per cent higher than in co-operative farms and 37.2 per cent higher than in state farms." He summarised his speech in the following words:

This is, in brief, an outline of the economic picture of co-operative farming. It is a sad picture. In spite of great outlays they had smaller returns and greater costs of production.

In an article, dated May 1957, on the alarming situation in the 6,000 state farms, General Ochab, the newly appointed Polish Minister of Agriculture, revealed "that in 1956 the deficit on the state farms amounted to £ 427,000,000. This was double the losses suffered last year. There was moreover no hope of any immediate improvement." The Minister ordered the dismissal of many hundreds of administrators and officials whose education and training had proved below the required standards. At the same time, the Government was presenting a new bill providing for the reorganisation of agriculture on the lines of 'peasant autonomy' suggested by Mr. Gomulka a few months before. This was designed to give greater freedom to peasants of state farms, collectives and other types of farms to plan the running of them 'from below', and thus make them share more fully in the responsibilities of everyday management and profits. Individual farms, in particular, were to be given much greater encouragement, and the process of giving freehold title deeds to peasants on the land they cultivate was to be expedited.

This picture of the agrarian situation in Poland is true of what obtains in all the East European countries under the orbit of the Soviet Union. The tide is now beginning to turn again in favour of the individual farmers.

The collective farm or *ejido* is proving a failure in Mexico also. Its production per acre is far less than on individual farms and only very recently members have been given the right to break away from the farm and take to individual farming.

It is claimed that the agricultural producers' co-operatives had

been a success in China. If so, one could naturally like to know, why was it necessary to convert and consolidate them into the 'advanced' or collective type of Russia? The truth is that in pursuance of their communist philosophy the Chinese Government regarded the co-operative farms merely as an intermediate stage to their ultimate goal of collectivisation, or shall we now say, communisation. Almost the same words, the same reasoning and the same technique which the Bolsheviks used in the USSR have been employed by their pupils in China. Chinese peasants, however, being what peasants are all the world over, these co-operatives, notwithstanding all the propaganda, could not have come into existence so suddenly as if by a magic wand and were, without question, a result of coercion. One can plan and, perhaps, also achieve physical targets at breakneck speed, but not targets which require or depend on progress in human consciousness to fulfil, as the organisation of co-operative farming does. With absolute political and military power resting in the hands of the Government, from which there was no escape and no appeal, the Chinese peasants, just as their brothers in Russia, had no choice, but voluntarily—'voluntarily' in the sense of the Communist dictionary—to opt or vote for the collective farm.

According to Peking, the people "volunteered" even for the communes. In an interview with Julius Burgin, secretary-general of the Polish-Chinese Friendship Association, Mao asserted: "The old organisational forms proved too narrow. . . . As a result of painstaking search for new forms, the idea for people's communes was born to meet the needs of hundreds of millions. Even the name of this new organisation was given by the peasants themselves: 'The people's communes'. . . . The peasants wanted the communes very much. They need them very much. They help to build Socialism, which the peasants desire and need because they want to live better. The people know what they need. We, I myself, wanted to be careful and thought it would be better if the communes were created gradually in order to accumulate experience, but the masses changed our ideas. They did not want to procrastinate."[4]

[4] Vide Introduction (p. 5) to Richard L. Walker's *Letters from the Communes*, published as a supplement to the *New Leader*, New York, June 15, 1959. [A critic must be forgiven if he sees a family resemblance between this statement of Mao Tse-tung and the claims of a section of our political leadership that co-operative farming is the 'demand' of the peasantry and that it is only 'vested interests' which are opposed to it!]

To come back to the co-operative farm : it was the utter poverty of the Chinese peasants which was exploited by the Chinese Government to fulfil its ideology. Says the Krishnappa Delegation to China on page 108 of its report :

. . . land reform in China meant an extraordinarily wide distribution of ownership in land. Altogether about 118 million acres of land were distributed among 300 million peasants, men and women, an average of one-third of an acre per head. Besides land, houses belonging to landlords containing about 38 million rooms, about 30 million draught animals, 39 million agricultural implements and about 5 million tons of foodstuffs were confiscated from landlords and redistributed. Many former landlords were allotted land on the same basis as tenants and labourers.

Again, on page 109 :

Agricultural co-operation followed naturally from land reform. Arrangements for state purchase of foodgrains and other farm products and the organisation of credit co-operatives closely linked with the People's Bank were important supporting developments. Together, they helped eliminate the rural trader, the urban merchant and the landlord, so that the ground was fully prepared for agricultural co-operatives.

Still, again, on page 62, the Krishnappa Delegation has this to say :

We were told that there was no attempt to compel the Chinese peasants to join a co-operative farm. All that the Chinese authorities did was to carry on intensive propaganda and to regulate the Chinese peasants indirectly through sales and purchases and other controls and also through the monopoly of credit and to offer them other inducements for joining a co-operative farm. . . . Price policy, technical assistance, provision of consumers' goods as well as producers' goods like fertilisers and, in some cases, contracts for purchase of the produce at a pre-determined price are the various means through which the Chinese Government is trying to make the Chinese farmers follow the planned pattern.

It was against this background—a background created by giving everyone one-third of an acre, destroying the freedom of sale and exchange, and displaying unrelenting ruthlessness—that the Chinese peasant was welded into what is called the voluntary Chinese Producers' Co-operative. The theoretical freedom of the peasants

to keep out of co-operatives was meaningless since it was impossible for them to function independently. The dissenting minute to the Patil Delegation's report says :

> Our colleagues do not see the evident contradiction between the professed principle of voluntariness and the simultaneous setting of high targets of the number of co-operatives to be established from year to year. How a 'voluntary' movement can progress according to the targets fixed by the State is something beyond our comprehension. We may here refer to a remarkable passage in Gomulka's famous report of 20 October 1956, in which he says, 'that a quantitative development of producers' co-operation cannot be planned, because on the basis of voluntary entry to a co-operative, this would amount to planning the growth in human consciousness, and that cannot be planned.' In the same report Gomulka says that the principle of voluntariness means not only threats or psychological compulsion but economic compulsion as well are excluded. Tax assessments and the establishment of the size of quota deliveries could also be an instrument of compulsion.
> (p. 200 of the Report)

Nor could these co-operatives be called a success in the economic sense. Sufficient time had not yet elapsed, nor were any reliable statistics available, to show that pooling of land into co-operatives has in any way contributed to increase in agricultural production. The Krishnappa Delegation to China clearly acknowledges that pre-war yields had not yet been attained.[1]

It was pure propaganda inspired by political considerations that was let loose on the world to the effect that as soon as China was taken over by Communism, food production went up by leaps and bounds and the offer, again inspired by political considerations, that China made to India of 50,000 tons of rice or so was cited as proof of the same. But what are the facts ?

Mr. G. F. Alexandrov, leader of the Russian Delegation to the 41st session of the Indian Science Congress, told pressmen in Hyderabad on 6 January 1954 :

> In 1950, Russia had begun implementing a five-year plan, which would be completed this year. The main feature of the plan was that side by side with the development of heavy industry, light industries and agriculture would also be developed. Russia was producing plenty of food-stuffs and was exporting a considerable

[1] Vide p. 89 of the Report.

quantity to *China*, France, Italy and other European countries (Italics ours).

In spite of the much-boosted rise in agricultural production in China, the prices of essential commodities continued to rule very high. The Krishnappa Delegation observed: "But we noted that the cost of living in China was substantially higher than in India. For instance, at the time of our visit, the retail price of ordinary rice was Rs. 0-9-3 per seer in Shanghai, of wheat Rs. 0-9-9 per seer, vegetable oil for cooking Rs. 2-2-0 per seer, potatoes Rs. 0-3-6 per seer, peas Rs. 0-3-6 per seer, mutton Rs. 2-3-0 per seer, sugar Rs. 2 per seer, cotton shirting Rs. 4 per yard, cotton suiting Rs. 8 to Rs. 10 per yard, woollen suiting Rs. 45 to Rs. 50 per yard and shoes Rs. 30 to Rs. 40 per pair" (p. 41 of the Report).

China, with such dense population, will suffer far more grievously owing to this venture of their Government. The USSR had a vast area of culturable land, compared to her population, on which men and machinery could be employed. Mr. Aneurin Bevan, the left wing leader of the British Socialist Party, who himself had visited China as a guest of the Communist Government, said in a public meeting in Delhi on 2 April 1957, "that the failures of the Soviet Government in the field of agriculture were covered up by the opening up of virgin lands. These new fields provided a cushion to Soviet rulers." He went on to advise India that "she could not afford to make the mistakes that Russia had committed because she did not possess empty spaces which could be called upon to make up for the failures and mistakes of agriculture. She had to bring about an economic revolution in harmony with the needs of the countryside."

In the country of its origin, the Soviet Union, the *kolkhoz* or collective farm to which a co-operative farm is admittedly only an intermediate stage, is not regarded as the final, logical form of agrarian organisation. Before his death, in *Economic Problems of Socialism in the USSR*, Stalin foresaw[8] that the *kolkhozes* should

[8] In the fifties there was a relative growth in state farms at the expense of collective farms. The tendency towards gradual elimination of differences between state and collective farms was reflected in the introduction of the guaranteed minimum wage in a sizable proportion of collective farms. Two of the reasons were that the state farm is ideologically more acceptable, and it produces more cheaply (especially because

become *sovkhozes* or state farms, which is to say that the bureaucracy should become their real owner. Criticising Stalin for his excessive use of purges, Khrushchev did not, however, renounce Stalin's views on property in *kolkhozes*. It will be a strange commentary on our wisdom that just when reports from the Soviet Union show that the *kolkhoz* has not given the results expected of it by its founders and the Communists are in desperate search of remedies and palliative, our leadership is enthusiastically recommending the preliminary form, the co-operative farm, for adoption in India. There can be no manner of doubt that in looking towards the USSR or the People's Republic of China for a tenure pattern we are looking in the wrong direction.

In this connection we have further to remember that educated persons living in the towns have not been able to make a success even of the Co-operative Stores, or Consumers' Societies which were concerned merely with marketing. Speaking at the 13th meeting of the All-India Handloom Board in Bombay on June 20, 1959, Mr. Lal Bahadur Shastri, Union Minister for Commerce and Industry expressed surprise that the private weaver who was not in the co-operative sector was able to compete easily with co-operatives and had almost monopolised the export trade in handloom fabrics. "And mind you" he said, "weavers in the private sector do not get any financial assistance for development purposes, nor any rebate. Only recently some facilities in regard to import of dyes and chemicals had been given to them. I would no doubt like it very much that they should all come under the umbrella of the co-operative system. However, there can be no compulsion."[1]

Nor are credit societies in the countryside yet a success in spite of so much time and effort that have gone into their organisation. Village panchayats, too, which are meant only to administer muni-

higher prices were being paid to the collective). Latest reports indicate, however, that the Russians are again having a second or third thought in this connection. Proposals to fuse the collective and state farms are "profoundly wrong", according to the *Kommunist*, which points out quite frankly that this would mean that the state would have to bear the losses. This journal of the Central Committee of the Soviet Communist Party goes on to state that "anyone at all acquainted with life in the *Kolkhoz* village" knows that the time for the abolition of the private plot "has not come, and will not come as soon as some people imagine" (vide *London Times*, dated June 21, 1961).

[1] *The Indian Express*, New Delhi, June 22, 1959.

cipal functions or common lands, have run into difficulties and are posing a problem. This is so because they are elected bodies and election on the basis of majority and minority votes, not to create factions, requires largeness of heart which is rare among villagers and even well-educated town-dwellers. How much more difficult it would be to organise agricultural production, which is such a complex task, on a co-operative basis and through an elected management, in a community of illiterate and semi-literate peasantry, can therefore, well be imagined. In fact, co-operative farming in the true sense of being voluntary, has not been a success anywhere in the world (except in Israel)—even where the farmers are cent per cent literate.

The initial success of co-operative farming in Israel is due to the peculiar situation which arose in connection with the requirements of Zionist resettlement. The abortive Russian revolution of 1905 brought to Palestine (then a part of the Turkish Empire) a number of young Russian Jews of some education, no agricultural or industrial experience, no private means, but of strong socialist convictions. Fundamental to these convictions was a belief in the immorality of employing labour. The exact form of the first settlements, and, in particular, the completely communist society which they evolved, thus owed something to the theories which the pioneers had brought with them to Palestine and something to their handicaps and environment—lack of means for individual settlement, lack of experience, and the need for mutual protection against a hostile Arab world. Something also may be attributed to their urban and intellectual background, which gave them interest and aspirations unlike those of the typical peasant. It should be remembered, too, that a great majority were, at that time, unattached young men and it was natural that their life should be modelled on the camp rather than the home. The Jewish refugees that trickled to these settlements, particularly, after the Balfour Declaration, had suffered prolonged persecution all over the world. United by this common distress, a common religious faith and a common desire to find a new homeland, they were determined to sacrifice all individualism for the sake of collective success of their new refuge. Also, the success of these settlements was greatly facilitated by the technical and other resources that the world Jewry placed at the disposal of the settlers.

Even so, the number of these settlements was not large. Only

half a dozen successful collective settlements were founded under Turkish rule, though a few more, which failed after a struggle, were later refounded. Under the British mandate their number increased fairly rapidly. A score or more dating from the 'twenties' and the number increasing steadily through the 'thirties' and 'forties', till by the time of establishment of the State of Israel (May 15, 1948) there were in all 136 *kibbutzim*. By mid-1955 the number rose to 279, but by December 1957, it fell to 228.

Difficulties in the working of the *kibbutz* have now begun to arise and multiply. There is no complete answer yet to questions such as : Are socialism and greater family cohesion incompatible? What about the care and education of children? What are the inalienable rights of individuals in a co-operative community? What about the dining-hall? What about hired labour? Many of the married couples left the *kibbutzim* because they felt that the *kibbutz* did not provide an opportunity for the kind of family life which they desired—the opportunity for the wife to keep her own house, raise her children by herself, and provide for her husband's personal needs. There is an increasing demand for personal comforts; there is increasing lack of participation in the General Assembly. Many members leave simply because they do not like their colleagues. A human being is not a very fit subject for governance by rules, however perfect or flexible. Particularly, none can be devised to meet temperamental problems. From the establishment of the State of Israel and the requirements of unrestricted immigration have also stemmed such problems as loss of the most active members, tendency on the part of the state to interfere in the internal affairs of the settlements and disinclination on the part of the new immigrants to join the ranks of the *kibbutz*. The past ten years have, therefore, seen a striking development in the *moshav* type of village, which has become the dominant form of social organisation in Israel today. It has grown in number from some 91 villages before the establishment of the State of Israel in 1948 to 356 in December 1957 (out of a total of 743 villages in the entire country). The *moshav*, because it answered the desire for individualistic living while providing a practical solution to economic problems in a co-operative frame-work, has proved more attractive to the incomer —the post-1948 type of immigrant.

Deriving from these developments there is a widely-held view that the *kibbutz* is a passing phenomenon incidental to the early

colonisation stage of the country and destined to disappear within the foreseeable future. Great masses of people can continue such idealism for only a limited period of time. The State was no longer to be built; nobody was any more personally involved. Until the emergence of the State, the *kibbutz* movement was the very distillation of Zionist idealism. Personal realisation of the Zionist ideal, Jewish self-defence, the absorption of immigrants, and a high degree of idealism in social relations were placed above all other interests. The individual *kibbutznik* felt he was not only creating a new society by his efforts—a unique accomplishment in itself: he was shouldering the burden or responsibility for the future of the whole *Jewish* people. At least, the new immigrants no longer feel that way. An over-powering reason—a reason which can become personal—which will make a person willing to live his way with people with whom he had no previous intimate relationship, did not exist in their case.

However, notwithstanding the problems that confront the *kibbutz*, it cannot be said yet that it is on the way out. Evolutionary changes are taking place within the *kibbutz* and it is still strong, vital and prospering.

Anyway, the Israel experiment can be regarded only as an extreme case that can hardly serve as a model for general application where similar conditions do not exist. Israel representatives attending the International Agricultural Producers' Conference in India in 1959, clearly stated that there seemed little scope of success for their experiment in India.

We will have to make a distinction between the adoption of co-operative farming in new settlements and its introduction in old villages of the traditional peasant structure. Perhaps, there are no examples where peasants in an existing old village have voluntarily given up individual use of their land, pooled it for joint utilisation and worked it as one undertaking for any considerable length of time.

Says the German expert Dr. Otto Schiller in a report submitted in 1959 to the Planning Commission which had asked him to make a study of co-operative farms in the country:

Pooling of land, however, is a hard decision for those land-owners who are cultivating their land by their own labour and that of their family members. For these farmers the transition to co-operative farming is combined with a complete change in their

working and living habits. While so far they managed their small holdings under their own responsibility and themselves had to decide how to organise their day's work, they now receive daily orders as to what to do, and have to work in a group. They also must be prepared to have their work supervised and evaluated by others which may entail that this evaluation does not coincide with their own opinion. Considering the peculiarities of the farmer's way of thinking, it is understandable that, under normal conditions, it is not a very promising attempt to persuade farmers to voluntarily change to co-operative farming. Few examples of this type, therefore, exist in the non-Communistic world.[8]

Peasants will not be persuaded easily to give up their independent way of living and will always prefer retaining their own individualities and prospects of bettering themselves by their own efforts to sinking or merging their identities into a collective enterprise or, for the matter of that, into a co-operative farm. By far the most eloquent proof of the ineradicable individualism of the peasants is furnished by the fact that "in 1941 during the first months of German occupation, in remote villages where, after the retreat of the Soviet Army, the Russian peasants felt free to act according to their own wishes, in all cases they dissolved the *kolkhoz* farms at once and turned to individual farming. The young *kolkhoz* members were no exception."[9]

The Bhoodan leader, Acharya Vinoba Bhave, who was originally inclined in favour of co-operative farming, told a public meeting in Gaya on 13 January 1961, that co-operative farming is entirely unsuitable for India where most of the farmers are illiterate. According to him, only the managers of the farm or a handful of large farmers will be profitted by a co-operative farm. He said that most of the co-operative farms in the country have been established merely with a view to take loans from Government. He went on to say that service co-operatives, which have not been opposed by any political party in the country can, of course, be a success in India.

An Indian Communist leader, Shri E. M. S. Namboodiripad, former Chief Minister of Kerala, also does not consider co-operative farming a practicable proposition. In reply to a question on the subject he said that, "service co-operatives which would supply seeds, manure, implements, etc. would be welcome in the State

[8] *Pioneer*, Lucknow, dated 7.10.1959.

[9] *Farm Economics*, Dr. Otto Schiller, May 1956, p. 308.

but joint farming co-operatives where the whole process of cultivation was done by co-operatives would not be feasible *at present*."[19]

The use of the words 'at present' is significant. Shri Namboodiripad knows that joint farming is not a practicable proposition under the present democratic Constitution of India. That is why, again, the Communist Party of India would distribute the surplus land that may be available after imposition of a ceiling on large holdings, among the landless, for individual cultivation rather than have it jointly cultivated, as would Congressmen in pursuance of the Nagpur Resolution of the Indian National Congress passed in January 1959. The Communists are a clever people and realise that the time for pooling of land and labour will arrive only when, after securing the good-will of the peasantry, they have attained absolute political power and clamped down a dictatorship.

Sometimes, it is argued that just as the state has abolished the landlord tenant system by law, similarly it can eradicate the attachment of the peasantry to the land by enactment of legislation, that is, by making them work jointly on their lands, on pain of law. It is forgotten, however, that efficient operation of the farm will require willing consent of the farmers, and this cannot be evoked by law. Just as you can take a horse to a pond but cannot make it drink, so you can pool the land of a thousand farmers but cannot make them jointly work hard and well by fear of law. Law can award damages for failure to honour a contract to work, but should not force a party to work. Law that can extract work under the threat of the lash will convert a free citizen into a slave —a voluntary worker into a prisoner. It can certainly be done as demonstrated by the USSR and China, but then India will cease to be a democracy (and its agricultural production, of course, will go down).

In 1955 the Planning Commission carried out a survey of 22 Co-operative Farming Societies in the country. They were not a representative sample by any means because the State Governments recommended only the more successful societies for study. It was found that joint cultivation was practised only in 16 out of the 22 societies. In seven of these societies the land had been obtained from the Government; in three of them it had been obtained in one block or two by lease or purchase from a landlord.

[19] *National Herald*, Lucknow, 17 September 1957.

Thus, there were only twelve societies in which members had pooled their existing holdings. But in eight of these twelve, most or all the members did not perform any farm work. In seven societies out of twenty-two, members also held land outside the farm; in one, their parents did so. It appears, therefore, that most of the so-called co-operative farming societies were either settlement societies or societies run on capitalist lines by groups of absentee landowners having all the work done by hired labour—a kind of joint stock estate farm established by joint families or extended families merely to secure the concessions given by Government in the form of loans or subsidies to co-operative farms. Some of the societies formed with Government land continued to exist only because members had no rights of transfer in the land which was allotted to the societies. If rights were given to the individual members, the societies would most likely be dissolved. The majority of the societies could be written down as failures, although it was only five years or so since they were established.

According to the Working Group on Co-operative Farming appointed by the Government of India in the middle of 1959 with Shri Nijalingappa as Chairman, there were 1,440 co-operative and collective farming societies on June 30, 1958: of them 1,098 were reported to be working. The membership was 39,075, but only 24,687 were working on the farms. The rest were sympathisers, absentees or non-working members. The Working Group visited 34 societies in eight States and found that while 9 had been started with a genuine desire to increase production and improve the economic conditions, 23 had been started with such objects as ejecting tenants or preventing them from obtaining better rights, obtaining Government land or financial assistance, settling the landless, purchasing a tractor, utilisation of effluent water from a factory, consolidation of scattered holdings, resisting eviction, and settlement of refugees.

How co-operative farming is being abused or exploited for fostering absentee landlordism will be clear from an extract of Dr. Otto Schiller's report just referred to above:

> The share of the non-working group in the membership is actually much higher than could be expected. This may obviously be explained by the fact that pooling of the land does not call for a difficult decision on the part of those land-owners who do not apply their own labour in cultivating the land. Instead of having their

land operated by relatives, tenants or hired labour thus receiving a rent, they now have it operated by the co-operative society. This may offer the advantage that their annuity thus is better secured and may be even higher.

Not only that: The amusing aspect of the whole situation is that instead of being deprecated as an undesirable development, emergence of absentee landlordism—or opportunity of leasing out one's lands without the risk of losing them, with the only difference that tenants will work collectively rather than individually—is being held up as an argument in favour of the co-operative movement. Addressing the villagers in a Kisan Mela-cum-Cattle Show at Bandi in Basti district on 28 January 1960, Shri Mohan Lal Gautam, the then Minister for Agriculture and Co-operation, Uttar Pradesh, is reported to have said:

> A man possessing five bighas of land could very well manage to hand it over to the joint farming society and himself take to some other work aiming at increasing the overall income of the family. His ownership of the land was not going to be affected in the least, contrary to what happened in the case of private land-owners and their tenants.[11]

Both the Planning Commission and the Working Group presided over by Shri Nijalingappa found, *inter alia*, that some of the so-called co-operative farms sprang into existence merely in order to secure financial concessions extended by Government with a view to encourage joint farming. Yet, public men and public servants continue to make lavish promises of monetary aid to induce farmers to pool their lands. The Working Group proposed setting up of 3,200 pilot projects and 20,000 other new societies during the Third Plan. It recommended per society an amount of Rs. 3,050 as subsidy for the manager's salary and a godown-cum-cattle shed, Rs. 2,000 as share capital to be subscribed by the Government and Rs. 7,750 as loan. Cost during the Third Plan period of education and training over these societies was estimated to be of the order of Rs. 424.40 lakh and over the technical, advisory and organisational staff, of the order of Rs. 237.44 lakh. The total outlay came to Rs. 3,526.44 lakh.

The question arises: if mere pooling of lands has all the virtues claimed for it by its advocates and can solve the problem of increa-

[11] *National Herald*, Lucknow, dated January 30, 1960.

sed agricultural production, then why should special financial concessions be at all necessary? And if financial aid to farmers is necessary, as we think it is, then why cannot this aid be extended to farmers individually, particularly when a large part of the aid to co-operative farms will be spent on salary of staff and construction of buildings which are unnecessary on individual holdings? If liberal aid is necessary even after merger of individual holdings, then joint farming has evidently no merits which a service co-operative does not possess.

And will all the aid that is being promised be forthcoming? Have the Union Government and the State Governments the necessary financial means? A co-operative farm, with a view to put up farm buildings of various kinds, to purchase various kinds of equipment and draught power, to pay overhead charges, etc. will require far greater amounts of capital than the individual farmers would have required.

The only merit of a co-operative farm compared with a collective farm, which lies in the fact that members remain owners of the land they contribute, proves its undoing. Cultivation is a work of such nature as to depend, for its efficiency, upon the personal qualities of the cultivator. Joint cultivation cannot be carried on, unless it is marked by a great degree of mutual confidence and liberality of heart between the participants. These qualities being not common, occasions when members will fall out, will be frequent. Says Mr. Phiroj J. Shroff, a former Principal of Sir Lallubhai Shah Law College and Deputy Secretary in the Ministry of State, Government of India:

> Co-operative farms will be breeding grounds of interminable disputes. The frayed tempers of the disputants are not likely to be pacified by the thought that they will have to pay for the services of the adjudicators of avoidable disputes. On the co-operative farms there will be endless disputes about the right approach to farming operations. When the majority will foist its will on the minority, the latter will be resentful and unco-operative. Sabotage cannot be ruled out by embittered members. Disputes about the division of the produce will be fierce and prolonged. All this will undermine the basic object of agriculture which is to produce increased yields of quality crops.[18]

[18] "Co-operative Farming: A Psychological Searchlight" published in the *Kalki*, a leading Tamil weekly of Madras, dated September 13, 1959.

Solution of the disputes and differences will be sought through resignation or expulsion. And whether they resign or are expelled, members will or should be free to withdraw their land from the pool. The area of the farm, therefore, will soon dwindle. If, on the other hand, the would-be members are told at the outset that they will not be entitled to take away their lands in any eventuality, they will not join at all.

Shri Shriman Narayan, Member, Planning Commission, however, claims to have found a solution of the problem. He says:

> It is being propagated by the critics of co-operative farming that once an agriculturist joins such a farm, it would never be possible for him to opt out of the farm. This is wholly erroneous. It is true that once a farmer joins a co-operative venture he should give it a fair trial for some years. But, if after a few years, he unfortunately finds it impossible to continue his membership of the co-operative farm, he can leave the farm, provided he gives due notice, say, of one year, repays all his loans and other liabilities, and deposits adequate compensation with the co-operative farm for improvements on his plot of land. After discharging these obligations, he may be returned either his original piece of land or another plot of land equivalent in value. All this would depend upon the terms of the original contract at the time of forming the co-operative farm.[13]

The learned member of the Planning Commission may rest assured that, if he is given the choice, no farmer would be foolish enough to walk into what would obviously sound as a trap. For, he will not be slow to conclude that while an increase in his income is, at best, problematic, his liabilities will definitely soar up—liabilities which, if he wants to disassociate himself from the farm, he will be able to clear off only by selling up his part of the land.

The kind of farming that is advocated by the Planning Commission and others in our country will lack both the advantage of joint farming in the USSR and China, viz. compulsion, and the advantage of individual farming practised in the rest of the world, viz. incentive for personal profit. Co-operative farms will fail as soon as they are set up, and we will have either to retreat to individual farming, or advance like the Chinese to the advanced agricultural producers' co-operative, which is a synonym for the Russian collective farm.

[13] "Advantages of Co-operative Farming", published in *AICC Economic Review*, dated September 1, 1959.

In fact, if we have to take the Chinese as our model, we will have to travel much faster than a democratic country like India has bargained for. As we have already seen, the Chinese have gone one step further than even the Russians. Agricultural producers' co-operatives, primary or advanced, have now been superseded by the communes.

Granting that the co-operative farm has certain advantages over the collective farm or the commune, the organisation is likely soon to fall apart: the centrifugal forces making for its disorganisation will be powerful. For, we should remember that it is not a problem of members alone, but of their respective families also. From a worker on his own individual plot of land the peasant will have become a cog in a vast land factory. It will mean an overwhelming change in his life—social and economic. Women and children from different families will come into closer contact and rub shoulders with each other far oftener than previously. Members will be working side by side, day after day, and depending on the co-operative farm for all or nearly all of their income. A co-operative farm is, thus, very different in this respect from other co-operative enterprises, *e.g.*, a co-operative consumers' store or a co-operative brick-kiln where a member's interest is very much limited. A farmer's joining a co-operative farm means voluntarily giving up a great deal of his individual authority which joining a non-farming society does not.

The reaction of the peasant to joining a co-operative or collective farm where all the three factors of production, viz. land, labour and capital, will be pooled, is, therefore, understandable. Human nature being what it is, even brothers born of the same mother usually separate from one another after the head of the family has been removed by death or other cause. In the circumstances it is utopian to expect that an average householder will, all of a sudden, identify his interests with the interests of those hundreds of persons in the village or neighbourhood who were total strangers to his life hitherto. A co-operative farm brings together indiscriminately under its banner persons with no long-established ties of kinship or social level—Hindu and Muslim, Brahmin and Harijan—owner, tenant and labourer. Were a man to reach the heights wherefrom he could see his own good in the good of every other human being, he will cease to be a householder that very day. The ties of family, language, religion and country would no longer have any meaning for him. In such ideal conditions planning will not be

necessary. Economic laws will become infructuous and, indeed, even government will itself be a costly luxury. The mother is able to nurse and nourish her child because she is selfish, because in the child she sees her own image. Did every other child in the village, or in this wide, wide world occupy the same position in her eyes as her own, she might as well turn a *sanyasini*. In our enthusiasm for a millennium right now in our own lives, we must not forget that man is not entirely a rational being. He is governed more by heart than by mind, and the heart has not yet made (whether it ever will make, being doubtful) the same advance as the mind which has narrowed down physical space and made the world a smaller place than it was in the days of our forefathers. Scientific progress or progress in control of the outer world has not resulted in greater control of the inner world of the self, without which a large joint economic undertaking cannot be run smoothly or successfully. Man remains as selfish or greedy, proud or jealous, and ambitious as ever.

Recommending collective cattle farming, Mahatma Gandhi wrote in the *Harijan*, dated February 15, 1942 :

> I firmly believe too that we shall not derive the full benefits of agriculture until we take to co-operative farming. Does it not stand to reason that it is far better for a hundred families in a village to cultivate their lands collectively and divide the income therefrom than to divide the land anyhow into a hundred portions ? And what applies to land applies equally to cattle.

As has been shown in previous pages, however, it does not stand to reason that a large area jointly operated as one unit should produce more per acre than when it is divided into small portions and operated severally. Nor does it do so in practice.

When advocates of co-operative farming buttress their case by reference to Gandhiji's opinion, they should remember that he was a world teacher, and world teachers in every clime and country have believed in and preached a widening of one's affections so as to embrace the whole village, the country and, in fact, the entire world in their compass. *Vasudhaiv Kutumbakam* (वसुधैव कुटुम्बकम्) meaning that the world is one family, is an old ideal enshrined in our religious lore. But political parties or administrators do not work or plan for a kingdom of God on earth. They work for what is practicable in the not too distant future.

Mahatmaji himself had warned that co-operative farming "would be possible only if people became friends of one another and as one family. When that happy event took place, communal trouble would be a thing of the past.... He, however, warned that co-operation must not be brought about by force or compulsion, it was not to be imposed from above, it should be based on strict non-violence and grow from below." [14]

Whether the 'happy event' or stage in their mutual relations of which Mahatmaji spoke had arrived, was for the peasants themselves to judge, and not any external agency.

Further, Mahatma Gandhi suffered from no inhibitions or complexes. Nor did he claim a monopoly of wisdom. The remarks made by him in respect of joint farming were made—if we may say so with respect—in a somewhat casual manner. Had he been able to devote some time to the problem and gather experience in the actual field, he would not have hesitated to own up his error. He never allowed prestige, rather false prestige to stand in his way.

Nor as men made of ordinary clay, do we, in all other matters, conform or are able to conform to what Gandhiji said and preached. For example, he had advocated self-restraint as the only desirable means of population control, but the Planning Commission and the Government of India are enthusiastically propagating all the modern contrivances, which were a taboo to him.

The Patil Delegation admits that there are inherent difficulties in the way of introduction of co-operative farming. It says:

> The difficulties inherent in the change from individual farming to agrarian co-operatives are great and must never be minimised. Individual owner is his own master. If he joins a co-operative, he has: (i) to surrender his right of individual management of his farm, and accept the discipline of a group; (ii) to place his capacities for production at the disposal of the group, and accept their valuation of them; and (iii) to accept some diminution in the transferability of his individual interest in land. These disadvantages appear formidable to him. His apprehensions could, indeed, be removed to some extent by a demonstration of successfully-run agrarian co-operatives. It could be shown, for instance, how techniques of working can be introduced which provide for maximum individual participation, do away to a large extent with the

[14] Prayer speech, February 13, 1947, vide the *Harijan* dated 9-3-1947 and *Mahatma Gandhi—The Last Phase* by Pyare Lal, Navjivan Publishing House, Ahmedabad, pp. 543-44.

evils of bureaucratism and commandism and thereby to ease the acceptance of group discipline. Evolution of norms and targets can provide respectively for the preservation of individual and group incentives. Co-operatives also offer opportunities for sharing much wider responsibilities than in individual farming, thus mitigating the possibility of a wrong judgment of individual capacities. Though joining an agrarian co-operative does mean a diminution in the transferability of individual interest, it is partly provided for by allowing the free exercise of the right of a member to leave the co-operative at his will. Once he is out, his transferability is restored. Moreover, the members could be permitted to transfer their ownership interest, *i.e.* the right to rent (p. 145). . . Thus, by evolving suitable techniques and procedures, the disadvantages which a farmer may feel in joining a co-operative could be minimised, but their basic character would not be altered. As against these disadvantages, there would be prospects of increased production and possibilities of a higher standard of living which would be demonstrated as years go by. In joining a co-operative, the farmer will naturally weigh these advantages against the disadvantages. His decision will naturally be subjective because, the disadvantages are not capable of economic valuation as the advantages. It is possible that to some the material advantages of increased production would outweigh the sacrifice they would be called upon to make in accepting group discipline, group estimation of their abilities and the restrictions on transferability. To many others, the sacrifice involved in accepting the new way of life may be too great to be compensated by material gains. It has been a common experience of group-working, whether within a family or outside it, that considerations of material benefits often fail to keep the people together, unless there are higher considerations of social value. For inducing peasants to join co-operatives on any scale and later to keep them together, it would be necessary, we feel, that considerations of material gain are combined with higher considerations of socialism and patriotism (p. 146).

The issue has not been put squarely. The summing up of the case by the Patil Delegation assumes that co-operative farming will lead to increased production. Facts and figures given in these pages do not, however, support this view. But even if the assumption made by the delegation is correct, for the overwhelming majority of the peasants increased material benefits brought about by co-operative farming will not compensate for loss of the individual freedom that they enjoy today on their independent farms. As if in proof of this realisation the report goes on to provide two safeguards which, in their view, should satisfy even the most extreme advocates of democratic values :

We are insisting that the principle of voluntariness should be scrupulously adhered to and there should be no coercion of any type in inducing farmers to join co-operatives. And, secondly, a person should be free to leave a co-operative whenever he chooses to do so, his decision being effective at the end of a season. In such an event he should be given a plot of land outside the area of the co-operative so that the compactness of the co-operative is preserved and he should be made to accept liability, if any, for any improvements on the plot of land made by the co-operative. And, finally, all efforts by the state to persuade farmers to join co-operatives must aim at producing in them a conviction to join a co-operative and not act, directly or indirectly, as leaving them no alternative but to join. Various examples of this could be given. If, for instance, under the pretext of making preferential supplies to co-operatives, supplies to individual farmers are barred, they would have no alternative but to join. These examples can be multiplied. The test of farmers joining voluntarily or not is whether the last decision to join is with them. State efforts should produce acceptance by the farmers of the co-operatives born of conviction and not compulsion (p. 150 of the Report).

The Planning Commission, however, does not believe in any policy of self-denial or *laissez-faire*! According to it while all cultivators in the village can avail of the general departmental services and the common facilities offered by the multi-purpose, better farming or large-sized credit societies, those alone who pool their lands in co-operative farming societies are to get special subsidies for administrative expenses, credit on specially liberal terms, preference in consolidation proceedings, preference in technical assistance, preference in the supply of seeds, fertilisers and construction materials, and special financial and technical assistance for developing ancillary occupations.

This discriminatory treatment is sought to be justified on the argument that just as under the Indian Income-Tax Act the taxable limit in the case of a joint-stock company is higher than in the case of individuals, so nobody should have any objection if a co-operative farm is granted more loans or subsidy or given priority in matters of supplies as compared with individual farmers. It is contended that this is one of the well-accepted principles of encouraging socially desirable patterns of organisation. The argument, however, is fallacious. First, it is taken for granted that a large joint undertaking in the sphere of agriculture is a more desirable form of organisation, just as it is in industry and commerce.

Second, income-tax rates of joint-stock companies, when worked out against the share-holders severally, are actually found not to be lower than if the share-holders carried on the business individually.

A pertinent question that arises in connection with co-operative farming is whether we have—in fact, whether any country has—the necessary human material. Individual families who cultivate their small holdings, a few acres in size, keep no accounts: they do not need to. It is all their own concern. They look after the entire agricultural process from sowing to harvesting of the crop. There are no fellow-members whose work has to be evaluated or supervised, or to whom account has to be rendered. They are self-employed persons—owners and workers, managers and financiers—all rolled into one. But in a large-scale undertaking, particularly, in one which is to be organised on the basis of voluntary co-operation, problems are bound to crop up which would demand leadership and character of the highest order. The organisers will be faced with several weighty problems, such as, relation between the co-operative farm and the Government, selection of members, the taking over of land, draught animals and farm tools; internal management or relation of members *inter se*, the formulation and implementation of production plans, the organisation of the labour force into working teams and production brigades; the utilisation of Government subsidy, if any, in terms of finance, equipment and expert advice; sale of necessaries and marketing of produce; the setting up of funds to meet production expenses, to acquire means of production, to provide relief and welfare, and for reserves; the provision of cultural and welfare services, and the education of members in the spirit of collectivism (which, in China, is undertaken under the 'guidance' of the Communist Party and the People's Government), etc.

A far more difficult and important task, however, than any mentioned above, is the assessment of performance of various agricultural and other operations and their proper remuneration. Differences in skill and consciousness are wide. Unless a proper system of measurement and evaluation of different types of farm work are evolved, jealousies between the efficient and the inefficient worker can easily wreck the society. Production in agriculture does not lend itself to specialisation by task and standardisation by products as it does in manufacturing. Measurement

and evaluation of various farm operations, therefore, requires extraordinary intelligence and scrupulous impartiality. If the farm operations are valued and paid for without much differentiation, inefficiency and light work get a premium and labour costs are inflated; if accurate differential evaluation is attempted, overhead costs are inflated. The Chinese, as the Russians, have tried to solve the problem by adoption of a system of norms for important items of work. 'Norm' is a standard of daily performance in regard to quantity and quality of output expected of an average member working on a specified job. It is to be seen whether the Chinese will succeed where even after 25 years of experience the Russians have not yet succeeded; for, we still hear of grave 'shortcomings in the standardisation of work, in the laying down of standards of production and the valuation of labour involved in work-days on the Soviet Collective Farms.

Will the requisite enlightened leadership be forthcoming in our countryside? In India which suffers from an acute shortage of competent managerial personnel and general illiteracy of farmers, the disadvantage of large-scale farming is obvious. It will be clear that a co-operative farm would be too big an affair, too big for ordinary peasants to control. We will have to draw upon the towns, which will rule the countryside and rule it unimaginatively, with all the evils that are associated with an unsympathetic bureaucracy. Also, by and large, a city-dweller has always looked down upon a villager as intellectually deficient and culturally backward. The villager has, on the other hand, always considered an urbanite as morally degraded. It is doubtful if the two, with the above background, can work harmoniously, at least, in the immediate future.

Lastly, there are two very important considerations or impediments that stand in the way of mechanisation and, consequently, of joint farming in India. Impediments to mechanisation have to be considered because whether we desire it today or not, joint farms will come to be mechanised some day. First, we do not manufacture large agricultural machinery, nor do we produce petroleum in the quantities that will be needed. Where will we find the colossal amounts of money that will be required for investment in the means to produce large agricultural machinery—the tractors, the threshers, the harvester-combines, etc.? People are finding it difficult even to pay the present taxes. What will we do

to our huge existing capital—the bullocks? Perhaps, they will have to be slaughtered. And, finally, what will happen to our land itself—eroded and damaged as it will be by tractors and chemicals? If so, India will soon become a desert.

Second, India does not possess enough petroleum even for her existing industries and transport and, if tractors are added, the problem of supply of fuel oil will become very difficult, indeed Nor can we cover our sky with a network of electric wires which will supply the motive-power to the tractors, combines and threshers all over the countryside. We will, therefore, have to depend on a foreign country to keep the machines going so that our teeming millions may have food. It will be nothing short of lunacy to plan for such an economy. The Nazi hordes in the last Great War had rushed towards the Caucasus not without reason; they wanted to capture the oil wells so that by cutting the vital artery of Russian economy they could more easily and quickly starve their enemy into surrender.

Let the enthusiasts of large-scale joint farming, therefore, pause and reconsider. Let there be a full and frank debate: let the people, viz., the peasants who are most concerned themselves decide. The recommendations made by the Congress Planning Sub-Committee, viz., "we shall experiment with the Cooperative joint farming wherever possible" (p. 53), in its report submitted to the All-India Congress Committee held in the last week of September 1959, in Chandigarh, represented an approach to which nobody can take any exception. The plenary session of the Congress held at Bangalore in January, 1960, endorsed this approach when it said, "Cooperative farming should be developed wherever it is desired by the *farmers concerned* and is considered feasible. It should be realized that cooperation in all its forms is a voluntary movement." Similar was the recommendation made (in February 1960) by the Working Group under the Chairmanship of Mr. S. Nijalingappa, appointed by the Ministry of Community Development, Government of India. The mere idea of compelling unwilling farmers to join a co-operative farming society was abhorrent to the Group which was hostile even to certain States' legislative enactments that went against the principle of voluntariness. Such laws, though not enforced so far, should be repealed—recommended the Group. Where voluntary experiments in co-operative farming can be promoted and assisted, and are truly understood by those engaged in them, they are well worth the

trouble and initial expenditure. If successful, they will inevitably find imitators.[18]

[18] Perhaps, all controversy about co-operative joint farming, so far as the Indian National Congress was concerned, would seem to have been set at rest by Prime Minister Nehru's statement at his monthly conference held in New Delhi in March 1960. He said that the proposal regarding establishment of a few large state farms on the Sutatgarh model "had nothing to do with the normal agricultural pattern of the country comprising peasants' small holdings, peasant proprietorship and service co-operatives."

A few days later, while addressing the Federation of Indian Chambers of Commerce and Industry at Calcutta on March 27, he declared as follows:

"Therefore, the conclusion was inevitable that there was no escape from cooperation, that cooperatives—service cooperatives for the present—was the right way for Indian agriculture, not to be imposed upon them. Our basic approach to agriculture is the approach of peasant proprietor cooperating with other farmers in service cooperatives."

Mr. Nehru said that the next point for consideration was whether there should be joint cultivation or farming. "That I admit may be an arguable point. Therefore, we have said that this is a thing which may—we approve of it as an ideal—depend on so many circumstances, first of all, willingness of the people. Apart from that it may be feasible in some conditions and it may not be in other conditions. There is neither any compulsion nor a rigid approach to the problem."

"Why does one talk of joint cultivation?" Mr. Nehru asked. "It was not as a high principle to be adopted everywhere, but in a country where the holdings were very small, a small owner was by himself too weak economically and otherwise. By joining, he lost nothing."

The *Hindustan Times*, New Delhi, dated March 28, commented on the above report as follows:

"Mr. Nehru's latest observations on joint farming are different from his first thoughts on the subject. An ideal which is not a principle and which may not be held to be rigidly applicable the whole way through is certainly not the same thing as a settled programme for enforcement according to a fixed time-table. Peasant farming, after all, is to stay; and to service cooperatives, of course, there has never been any objection from the critics of the Nagpur pattern."