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Vol 4

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REPORT TO THE PRESIDENT OF THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
AND THE
INTERNATIONAL DEVELOPMENT ASSOCIATION

ON
INDIA'S ECONOMIC DEVELOPMENT EFFORT

VOLUME IV
AGRICULTURAL POLICY
APPENDICES VI - X

CURRENCY EQUIVALENTS

1 Indian rupee	=	U.S. \$0.21
1 U.S. dollar	=	Rs. 4.762
Rs. 1 crore	=	\$2.1 million

AGRICULTURAL POLICY

APPENDICES VI to X

Note: Most of the Appendices are the work of individual members of the Mission and are referred to as such in Volume II, which is the main text on "Agricultural Policy". Accordingly, the list indicates the authorship. For an explanation of the relationship of the Appendices to the Report, see paragraph 15 of Volume II.

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APPENDIX VI

TYPICAL FEATURES OF
IRRIGATION DEVELOPMENT IN
INDIA

Louis Garnier

APPENDIX VI

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APPENDIX VI

TYPICAL FEATURES OF IRRIGATION DEVELOPMENT

INTRODUCTION AND SUMMARY

1. Because of its latitude, its topography and its tropical climate, irrigation has been, and necessarily will continue to be, one of the crucial factors in increasing India's agricultural production. From 80 to 90 million acres are already irrigated, which is equivalent to 3 times the irrigated area of the United States and about 20 percent of the total irrigated land of the world. The land under irrigation constitutes over one-fifth of the total cultivated area of the country and is expected to exceed one-quarter of that area by about 1970.
2. Sustained efforts to promote irrigation have been made, particularly since the first Five-Year Plan began in 1951. The relative importance of investment in irrigation in the Fourth Plan as well as the choice of options among various types of projects raises complex problems and sometimes leads to the voicing of divergent opinions in government circles.
3. The problem of irrigation in India has therefore been a major question under examination by the IBRD/FAO Mission, and has been the subject of discussions among the members of the Mission team responsible for agricultural affairs. Mr. L. Garnier, the main author of this appendix, spent several weeks studying this matter, although this is obviously insufficient time to do full justice to such a topic.
4. Therefore this paper cannot be considered a general review of irrigation or irrigation prospects in India, particularly because the country is so vast and natural conditions as well as social and economic factors vary greatly from one region to another. The purpose of this appendix, therefore, is much more modest, namely, to give a succinct picture of the leading features of irrigation in India, including: (1) a brief review of the present situation; (2) prospects of and trends for the Fourth Plan (1966 to 1971); and (3) some of the main problems involved in the expansion or improvement of irrigation.
5. The main conclusion that can be drawn from this very brief review is that India has reached a crossroads in irrigation. Despite the immense existing potential, there is the danger that even by the end of the Fourth Plan achievements may not have reached the required scale nor have met the basic requirements of agricultural production. It is therefore essential that progress be accelerated by defining the main objectives more clearly, arranging the institutional framework, training the technical staff and improving methods.

6. The task to be accomplished is neither unrealistic in scope nor beyond the Government's means and very appreciable achievements can be expected. There is little doubt that very few other spheres of action offer the same opportunity to give more important or lasting results in increasing agricultural production. This task requires first and foremost a sharp awareness of the requisites for sound irrigation policies, practices and patterns at all levels; for full success, it also requires the same balance of the various factors involved and the same harmonious organization as does any other successful human undertaking.

N.B. In this study the term "irrigation" is employed in its broadest sense, given it in Anglo-Saxon countries, that is to say, embracing all agricultural hydraulic works: irrigation works proper; surface and subsurface drainage; flood control; coastal protection, etc.

PART I: REVIEW OF THE PRESENT IRRIGATION SITUATION

A - Natural Conditions, as Basic Factors for Irrigation Development

(1) Topography and Soils

7. The subcontinent of India (810 million acres altogether approximately) is divided, topographically speaking, as follows:

- (i) mountains - 10.5 per cent of which about 95 per cent is uncultivable;
- (ii) hill tracts - 18.5 per cent of which about 3/4 per cent is uncultivable;
- (iii) plateaus - 28.0 per cent of which about 1/4 per cent is uncultivable;
- (iv) plains - 43.0 per cent of which about 1/20 per cent is uncultivable.

8. From this it will be seen that the maximum amount of land available for cultivation in India is about 475 million acres, that is, almost 60 per cent 1/ of the country's total area. Most of the plains or flat land suitable for irrigation are located in the northern portion (the Indo-Gangetic plain) and along practically the entire coast in the central and southern parts of the subcontinent.

9. In the valleys of the eastern Indus tributaries and the Ganges valley, almost all of the cropland consists of deep alluvial soils of fluvial origin, rather light and easily workable, of variable permeability and on the whole suitable for irrigation (provided that they do not contain excessive quantities of salt or alkali). On the coastal plains, most cropland is composed of alluvial soils of marine origin, also rather light and fairly permeable.

(2) Climate

10. The agricultural areas of India are almost entirely frost-free and there is practically no low temperature limit even in winter below which it is risky to grow staple crops.

11. The single determining climatic factor as regards irrigation prospects and patterns is rainfall. Almost all the rain falls during the monsoon season from June to October (90 per cent of the total) in the northern, central and western parts of the country. In the southeast (Madras), the main rains from the retreating monsoon occur between October and December.

1/ The corresponding proportions are about 25 per cent in the U.S.A. and 75 per cent in Italy.

12. Differences in rainfall between one part of the country and the other are very great: in the northern part of the Assam Valley rainfall may exceed 100 inches whereas in certain eastern portions of the Indus Valley it may only be 5 inches. It is usually considered that approximately one-third of the country has ample rain (over 50 inches), one-third receives sufficient rain for certain crops (30 to 50 inches) while the remaining third does not have enough (less than 30 inches). Irrigation seems advisable when the average rainfall is less than 50 inches and indispensable when it is below 15 inches. Generally, marked drought occurs one year in five and severe drought one year in ten.

13. In conclusion, rainfall is inadequate over a large portion of India; moreover, it is concentrated within a short season of about three months a year; and finally, the amount of rainfall and the time the rains begin and end during the monsoon season vary considerably. Therefore, the regular supply of water by means of irrigation is the decisive factor in geographic expansion and diversification of crops as well as in regulating and intensifying agricultural production.

(3) Water Resources Available for Irrigation

14. The water resources available for irrigation consist of surface waters (rivers), and ground waters (aquifers). They originate from rainfall over the entire subcontinent and from snow melt on a large portion of the Himalayan range.

Surface Water Resources

15. Rivers fed by both rainfall and snow melt have the most important discharges (the Brahmaputra; the Ganges and most of its tributaries; and the eastern tributaries of the Indus). In addition, even when the rivers are at their lowest level, their discharge is still considerable so that they are a source of irrigation water in the dry season. In central and southern India, on the other hand, discharge is very small or practically nil when the rivers are at their lowest stage.

16. The average annual discharge of all the rivers of India totals approximately 1,360 million acre-feet, of which 400-450 million acre-feet is considered usable and 140 to 160 million acre-feet (35 per cent usable) is presently used for irrigation.

Groundwater

17. Groundwater resources are as yet not very well known. The main aquifers offering the greatest potential supply are in the Ganges Valley on the left bank of the river, and in the Punjab.

18. According to estimates a total of about 300 million acre-feet of the surface water goes to replenish the aquifers and is therefore, theoretically, available for agriculture. It can be assumed that only about 20 per cent of these resources (50 to 60 million acre-feet) is actually being used for irrigation purposes.

19. Summarizing, in order to give an idea of the order of magnitude, total rainfall over the entire country is estimated to amount to an average annual volume of 3,000 million acre-feet (versus 4,640 million for the U.S.A.); water resources theoretically available for agriculture and other requirements (water supply and industry) amount to about 1,650 million acre-feet, divided between 1,350 million acre-feet from surface water and 300 million acre-feet from groundwater; of this total there are about 700 million acre-feet still to be tapped; an overall annual volume of about 200 million acre-feet might be used at the present time for irrigation (that is, almost 30 per cent of the total usable surface and groundwater resources).

20. From these approximations will be seen that India still has immense potential resources for irrigation and its development is not likely to be hampered even over a long-term period by the problem of water availability.

B - Present Irrigation Patterns

21. India is among those countries, civilized in antiquity, which can lay claim to having been the first to practice irrigation. From time immemorial innumerable wells were dug to supply drinking water, water for the paddy fields and for vegetables.

22. Irrigation on a large scale did not develop until little more than a century ago with the construction of major diversion canals tapping water from the rivers in the Indus and Ganges basins, and a few rivers in the southern part of the country.

23. At the time of Partition (1947), the total irrigable land amounted to about 70 million acres of which 50 million remained in India.

24. In India (today), irrigated areas are usually classified as follows: either

(i) according to the source of the water and the nature of the irrigation works, in which case the division is approximately as follows:

- (a) area irrigated by canals - 41 per cent;
- (b) area irrigated by wells - 31 per cent;
- (c) area irrigated by tanks - 19 per cent;
- (d) area irrigated by other sources - 9 percent;

or

(ii) depending on the cost of the initial installation when it is customary to speak of:

- (a) major schemes, costing more than Rs. 5 crores (approximately US\$ 10 million);
- (b) medium-sized schemes, costing between Rs. 10 lakhs (approximately US\$ 200,000) and Rs. 5 crores;
- (c) minor irrigation schemes, costing less than Rs. 10 lakhs.

The features of each type of scheme are somewhat different and an attempt is here made to describe the main ones.

(1) Minor Irrigation Schemes

25. About two-thirds of all India's irrigated land is under such schemes and, in some States (Rajasthan, Gujarat and Assam, for instance) four-fifths. They include systems supplied by shallow wells, tube wells, tanks or other sources (water drawn from small rivers, springs, etc.).

26. The main advantages of minor irrigation schemes are well known; easy participation of farmers in the framing, construction and management of the schemes; rapidity of construction; low cost per scheme; a short period between the completion of the works and when they are brought into full utilization; easy integration into the local economy. Furthermore, shallow wells or tube wells make perennial irrigation possible, and hence intensive agriculture, while at the same time serving to drain the soils in depth.

27. The main drawbacks are that the majority of schemes are undertaken without adequate preliminary surveys or any overall plan; that costs per unit area are often much higher than costs in major schemes and that maintenance is often neglected. Furthermore, in the case of tanks, very frequently the water reserves are found to be insufficient in abnormally dry years, just when water requirements are greatest.

28. It is thought, however, that at present in India the advantages of minor schemes outweigh their disadvantages, and this holds true especially for shallow wells and privately-owned tube wells. The main argument advanced in their favor is that they have a rapid impact on agricultural production. The enormous risk of drilling and equipping hundreds of thousands of wells in only a few years' time without a proper preliminary investigation of underground aquifers must be emphasized; however, the resources of such aquifers are necessarily limited and any excessive tapping thereof immediately results in an overall lowering of the water table, and progressive, slow but sure depletion that ultimately leads to the drying out of many wells during the dry season.

29. Moreover, soil preparation practices as well as irrigation practices are usually of the same mediocre standards followed in canal irrigation schemes mentioned below.

(2) Major and Medium Schemes

30. These irrigation schemes, usually supplied by simple diversion of river water have been devised and built essentially in order to overcome to some extent water shortages or poor distribution of summer rainfall. Fundamentally, therefore, they were built merely to provide supplementary irrigation during the monsoon season, thus guaranteeing more regular paddy or cotton crops.

31. Since this was the main objective, engineers built very widely spread systems, so designed as to distribute very small supplementary volume of water over as large an area as possible, without any expectation at all of providing adequate irrigation at all points every summer to satisfy full water requirements of the crops.

32. In these circumstances it is understandable that the engineers merely conducted water as far as the outlet to areas from 100 to 500 acres in size, without concerning themselves with the small distribution channels which carry water to individual plots. During the monsoon season and when irrigation is by submersion or flooding (basin irrigation), the fact that the water passes from one paddy field to another located immediately beside or below it is not a marked drawback.

33. It is therefore not surprising that usually there has been no attempt to prevent water losses by costly lining of canals or specific structures for measured distribution of the water. It is also understandable that the way in which systems are managed seems less and less suitable for mixed crops which sometimes differ greatly in their water requirements. It is not surprising, moreover, that many large canals were built without any preliminary land consolidation or simultaneous construction of drainage schemes.

34. In many cases canals still receive water after the monsoon season from the recession streamflow until, starting in February, discharge practically stops. The farmers can thus sow grains in October or November under fairly good conditions, although they are never certain that they will have enough water for the final waterings in February and March.

35. Water management and operation in the major irrigation schemes are somewhat different from State to State. As a rule, the interval between two successive irrigations is very long, from two to three weeks, as they were initially intended only for supplementary irrigation during the monsoon season. Furthermore, there is no pre-arranged water distribution plan, season by season, fitted to the actual crop-growing pattern or to the corresponding demands of farmers. The result is that the farmers can never be certain, either at sowing or planting time, that they will have enough water at the right times to obtain good crops. In the circumstances, the farmers have to be extremely cautious about expanding their dry-season crops; furthermore, they use only small volumes of water per unit area, usually far below actual plant requirements (and about one-quarter of the irrigation water volumes used in Europe or the U.S.A.).

36. The percentage of double cropping is therefore very low (about one-fifteenth of the irrigated area by major and medium-size schemes), and approximately equal in irrigated zones and in dry-farming areas.

37. To sum up, most of the large canals now in operation provide only supplementary seasonal irrigation over excessively large areas, there being no properly planned water distribution. The result is both low efficiency and an enormous waste of water, which leads to a rise in the water table, sometimes causing the formidable problem of waterlogging and salinity over vast cultivated areas.

38. It must, however, be emphasized that some progress is being made in the promotion of permanent irrigation schemes through the construction of a few large storage dams, as well as the digging of many tube wells. Furthermore, some canals are being lined and major drainage facilities installed, particularly in the Punjab. Finally the need to improve the present situation and the primary ways of doing so are, on the whole, common knowledge in Government circles.

(3) Flood Control and Surface Drainage

39. The violence of monsoon storms, as well as the intensity of rainfall, frequently leads to the rivers overflowing their banks and the inundation of vast expanses of land, mainly in the States of Assam and the Punjab, with the consequent tremendous losses in human life, livestock, crops (in full or in part), housing and facilities, etc.

40. In the last decade there has been a series of catastrophic floods due to a period of years with exceptionally heavy rainfall, no doubt aggravated by the phenomenon of soil erosion over large areas. Because of this, a large-scale program of construction of river embankments, canalization of natural streams (choes) and surface drainage systems has been initiated.

41. By way of illustration, in the Punjab alone, about 3 million acres were flooded in 1962, the corresponding damage being appraised at approximately Rs. 32 crores, and at the end of March, 1965, about Rs. 21 crores (equivalent to US\$ 42 million) had already been spent on flood control and surface drainage works.

(4) Waterlogging and Salinity

42. Because of the geological structure of the vast river basins such as the Indus and the Ganges, and the generally slight slope of their entire middle reaches, there exist groundwater aquifers, some of them saline. Their rather frequent replenishment from great floods, and the obstacles to surface drainage of engineering works (such as roads, railways, canals, etc.) built with no thought of adequate drainage outlets, as well as the spreading of enormous volumes of irrigation water over vast areas during the monsoon season, again with inadequate drainage facilities, and particularly the excessive seepage losses from canals, have often led to the over-replenishment of subsurface aquifers and a consequent dangerous rise in the water table. In the lowest portions, or those naturally poorly drained, the water table

has risen to the surface, arable, layer of soil, making any crop-growing more and more difficult and hazardous. Sometimes this replenishment of the aquifers is accompanied by the dissolving of enormous quantities of salt contained in the layers of soil through which the groundwater flows, leading to a gradual increase in salinity of large areas of farmland which in the long run become waterlogged.

43. Thus, millions of acres of excellent cropland have already been rendered useless, mainly in the States of the Punjab and Uttar Pradesh. It is further estimated that an additional 30,000 acres a year are made uncultivable as a result of soil degradation due to waterlogging and increase in salinity.

44. Such waterlogging is obviously much more widespread at the end of the rainy season (October) than at the end of the dry season (June). Thus in the Punjab, for instance, the area where the water table lies at depths of less than 5 feet below the surface, varies from 3 million acres to 1 million, according to the season.

45. Control of excessive surface water and desalinization are complicated and costly tasks, calling for several different measures (deep drainage, leaching out of excessive salts by large-scale flooding, lining of canals, flood control, etc.). That work must be based on a thorough study of the main causes of these two phenomena, in particular a long and meticulous hydrogeological survey. Measures taken in India have not been adequate either in scope or in complexity to meet the scale of the problem. Therefore, year after year, more and more agricultural land is being waterlogged or ruined by an increase in salinity.

(5) Other Hydraulic Problems

46. Under this heading, coastal protection works and experimentation and research in hydrology and hydraulic engineering should be mentioned.

Coastal Protection Works

47. The combination of sea tides and storms causes the intrusion of salty, ocean water on large expanses of cultivated land, mainly in the States of Kerala, Mysore, Mahashtra and Orissa. In the State of Kerala alone, for instance, there is need to extend coastal dikes and levees over approximately 200 miles, at a cost of from Rs. 25 to 30 crores (US\$ 50 to 60 million).

Experimentation and Research

48. Each State conducts its own surface water resources surveys, measurements and discharge observations, and then the findings are collated on a federal level by the Ministry of Irrigation and Power. For groundwater resources, the Ministry of Food and Agriculture has a federal body (Exploratory Tube Well Organization) which has already undertaken very useful borings and trials in several parts of the subcontinent.

49. On the whole, however, the study of water resources is being carried out by the most diversified methods and with different degrees of accuracy. Furthermore, and above all, there is no single organization to collect all the data on surface and groundwaters and draw up a water budget for the major watersheds.

50. For experimentation and research in the field of hydrology and hydraulic engineering, there are now about 20 stations in India, of which 2 are federal (at Poona and New Delhi), while the others belong to the States in which they are located.

51. The general impression is that most of these stations have research programs overloaded with too many and too diversified topics, compared with the means available to them. In addition, only very few of them have properly trained irrigation experts who are in a position to design and carry through scientific trials and experiments commensurate with the problems besetting the irrigation engineers and agronomists.

PART II: THE DEVELOPMENT OF IRRIGATION IN THE FIVE YEAR PLANS

A - Achievements and Related Outlays During the First, Second and Third Plans

52. At the beginning of the First Plan (1951) there were about 51.5 million acres under irrigation and 4.5 million acres were being double cropped, giving a gross utilized area of 56 million acres, of which 23.5 were included in major and medium-size schemes and 32.5 in minor irrigation schemes.

53. Tables 1, 2 and 3 appended show the changes in area irrigated in the first three Five-Year Plans and demonstrate an increase of approximately 160 per cent in gross irrigated area within 15 years; in other words, the irrigable area has been enlarged by about 34 million acres (13 to 14 million hectares, or a little less than 1 million hectares per year).

54. This expansion is considerable, far greater than that in other countries of the world (China excepted, probably). In order to appreciate the magnitude of this effort, it may be mentioned that during the same 15-year period, the area irrigated in Italy was increased by about only 1 million hectares, and in the U.S.A. by 2 to 3 million hectares.

55. In fact, the figures given in Tables 1, 2 and 3 should be considered merely as orders of magnitude, no doubt erring by exaggeration. For instance, in some estimates supplied by certain States, the figures may correspond not to areas actually watered artificially but to the total areas commanded by major canals or supplied by tube wells. However, the average discharge of State tube wells is such as to supply, at the very best, only one-quarter or one-fifth of its commanded area.

56. The tables show a more rapid expansion of minor irrigation schemes than major and medium schemes. The explanation no doubt lies in the fact that, in the latter case, major engineering works (dams, large canals, etc.) must first be constructed, which take several years, before canal distribution systems are extended to project areas.

57. The tables demonstrate that only a very small percentage of land is double-cropped. This underlines both the very extensive nature of the irrigation systems (which, as has been said before, were intended primarily to supply supplementary irrigation during the monsoon season) and on the other hand, uncertainty regarding water supplies during the dry season. Even in areas where there are State tube wells, such uncertainty prevails, no doubt because of poor organization.

58. In 1951-52, the area under minor irrigation (about 32.5 million acres) was made up as follows: 55 per cent from surface water systems and 45 per cent from groundwater schemes. These proportions are now roughly inverted because emphasis has been put more and more on deepening and boring wells during the last fifteen years.

59. Particularly, many tube wells were constructed. State tube wells very often have an average discharge of about 1.5 cusec although cooperative or private tube wells have a lower discharge (i.e., from 0.3 to 0.7 cusec). Sometimes tube wells contribute also to lower the water table and then to improve land affected by waterlogging.

60. Finally the tables set forth financial allocations for irrigation works in relation to total investment under each plan (public sector) and to the funds reserved for the agricultural sector as a whole. The serious diminution in percentage of funds earmarked for major and medium irrigation schemes (8 per cent for the Third Plan as compared with 13.3 per cent for the First Plan) is to be noted while percentage investment in minor irrigation schemes has remained fairly constant.

61. The number of major and medium-size schemes undertaken or proposed has been relatively high, about 200 under the Second Plan (1956/61) and 400 under the Third Plan. This excessive dispersal of funds and effort has entailed considerable delays in completion of irrigation systems, so that the area actually irrigated was far less than intended when original targets were set. Thus, for example, the areas newly irrigated under the Third Plan amount to about 7.5 million acres under major or medium schemes as compared with an anticipated 12.5 million acres.

62. During the 15 years of the first three Plans (1951/66), larger and larger appropriations were spent on flood control work, anti-waterlogging measures and consolidation of landholdings, although it is difficult to gather exact figures from the available documents.

63. Regarding flood control, anti-waterlogging and anti-sea erosion measures, about 11 to 12 million acres should benefit from works constructed between 1951 and 1966, at a cost, by the end of the Third Plan, of about Rs. 140 crores (the equivalent of US\$ 280 million).

64. As regards consolidation of land holdings, it is estimated that from 50 to 55 million acres, or 17 per cent of the cultivated land of the country, were consolidated during the same period.

65. Altogether, the achievements made, encouraging as they are, are still relatively modest in the fight against waterlogging and in land consolidation.

B - Trends and Targets Proposed for the Fourth Plan

66. Starting in 1954, surveys were made by the Central Power and Water Commission to determine the maximum area suitable for irrigation. The conclusions reached were that there are a maximum of about 100 or 110 million acres which could be served by major and medium schemes and about 70 or 75 million acres by minor schemes; the combined total of about 175 million acres would be the equivalent of over one-third of the potential arable land of India. Considering the possibility of double-cropping, the gross irrigated area reaches a maximum of about 200 million acres.

67. The target for the Fourth Plan proposed in October 1964 called for increasing the gross irrigated area from 90 million acres (the figure for 1966) to about 110 million acres by 1971, of which 50 by major and medium schemes and 60 by minor irrigation schemes. During the next Five-Year Plan, the increase in gross irrigation area would therefore be about 20 million acres, of which one-half approximately would be by minor irrigation schemes.

68. The outlay per unit area is expected to average 600 rupees per acre for major and medium schemes and 500 rupees for minor irrigation schemes. These seem to be underestimates; for instance, for two major irrigation schemes in the States of Maharashtra recently approved by the Central Government the cost per acre is estimated at 800 to 900 rupees, while for minor irrigation projects the State of Gujarat gives estimates of 800 to 1200 rupees per acre, for the preparation of its new Plan.

69. For minor irrigation, any average cost per acre is of little significance because this cost varies considerably according to the various categories of minor schemes; they include works for the improvement or restoration of existing schemes as well as works for the construction of new tanks, the digging of new wells or the installation of pump sets.

70. Even assuming an average of about 700 to 800 rupees per acre for all kinds of irrigation schemes, this would still in any case be far below average costs of modern gravity irrigation systems in southern Europe or the U.S.A. The main reason for this difference is that the Indian estimates do not include the cost of farm distribution systems, the construction of which is left to the initiative of the villages or the farmers themselves. Another reason lies in the very low percentage of lining of canals and in the very simple structures adopted for controlling water levels and water discharges in the canals.

71. At the present stage of preparation of the Fourth Plan it is not yet known how many new projects will be undertaken between 1966 and 1971. Some priority will be given to the continuation and completion of works already started (to which about four-fifths of the allocations for major and medium schemes will go) and to the deepening of existing wells (minor irrigation works).

72. The question whether it is best to refuse loans to individual farmers who wish to dig their own wells in sectors supplied with water by canals is more and more under discussion. Some States are now wondering whether it would not be advisable to draw up priority schedules for construction of State tube wells in these often very extensive sectors. This trend is one indication of the orientation, though sometimes confused, in favor of perennial irrigation. Another is the ever more systematic search than in the past for sites suitable for the construction of storage dams. Obviously this outlook is highly desirable from the standpoint both of agriculture and of economics.

73. According to the present intentions for the Fourth Plan, the main emphasis will be laid on minor irrigation schemes, mainly wells and private tube wells (built with the help of loans). If this trend continues the target would be to reach an irrigated area of about 60 million acres out of the potential area irrigable by minor schemes of 75 million acres.

74. In these circumstances, it might be feared that marginal schemes, more and more costly per unit area and perhaps less and less well planned, will be undertaken. For instance, it is intended that the targets for the Fourth Plan would include: construction of about 680,000 new open wells, restoration of about 160,000 old wells, boring of about 200,000 wells, deepening of about 200,000 existing wells, construction and equipment of more than 10,000 State tube wells. These figures represent an average increase of more than 50 per cent over the targets to be achieved in the Third Plan. In addition, about 260,000 electric or diesel engine pumpsets would be installed, against a total of about 150,000 during the present Five-Year Plan.

75. The need cannot but be emphasized that as many minor schemes as possible should be incorporated in a comprehensive program of work carefully worked out on the basis of thoroughgoing land and water resources surveys. However, until these preliminary studies have been completed it would on the contrary be advisable, as things stand at present, to go slow both in granting of loans to individuals as well as in the execution of collective works (such as State tube wells).

76. For large and medium irrigation schemes the emphasis would be put in the Fourth Plan on the completion of many projects already implemented during the first three Plans. At the same time the construction of several storagedams would be achieved thus giving a good opportunity for intensifying perennial irrigation on large areas.

77. The experience gained in other countries in the world shows that large and medium irrigation schemes, when they are well designed, constructed

and operated, can be the source of tremendous economic developments and of permanent progress in civilization for the whole region concerned. Through direct and indirect benefit they can increase not only the agricultural production but they foster many other kinds of investment and equipment. Therefore, they contribute, much more than minor schemes, to a large creation of new employments. Moreover, it is always easier for any Government to intensify in large irrigated areas agricultural research and extension, and to orientate the crop patterns towards national goals and industrial requirements (raw materials).

78. Therefore, it is not surprising that the Government would also like to follow-up in the Fourth Plan a rather important attempt in favor of large and medium irrigation schemes.

79. According to initial forecasts of expenditure, a total of about Rs. 1,450 crores will be required, of which 450 (i.e., 31 per cent) will be for minor irrigation schemes.

80. The total of Rs. 1000 crores proposed under the heading "Major and Medium Schemes" includes the financing of flood control and surface drainage works (Rs. 125 crores), anti-waterlogging measures and coastal protection works. In comparison with the grand total for each of the Five-Year Plans, these Rs. 1000 crores are equivalent to only 6.4 per cent of the total funds for the Fourth Plan, whereas in the First Plan, 13.3 per cent (or more than double that amount) were allocated for the same type of works.

81. In the tables attached to this study, it is stressed that because of conflicting sources of documentation, the figures given should be considered only as probable orders of magnitude. A clear distinction between different technical terms mentioned in statistics, such as "potential irrigable area," "irrigable area," "irrigated area," "utilized area under irrigation," etc., does not appear as often as necessary. Similar difficulties happen in many other countries.

82. However, it is essential for any progress or improvement to have more accurate figures. For this purpose, a useful new approach would be to progressively complement the statistics related to irrigation by indications on amounts of water really delivered for irrigated crops, at least in several well-selected areas. Then, it would be possible to ascertain whether water requirements are fulfilled with a better approximation.

PART III: THE MAIN PROBLEM

A - The Still Insufficient Impact of Irrigation on Agricultural Production

83. The still relatively low proportion of investments earmarked for major and medium irrigation schemes merely reflects the prevalent feeling

in Government circles that the fairly intensive development of irrigation in the last 15 years has not produced the hoped-for results in terms of higher agricultural production. On what is this opinion based and is it justified?

84. In general, those who disparage irrigation seem to found their arguments on samplings in irrigated areas and on miscellaneous agricultural trials and yardsticks devised for the implementation of the Fourth Plan.

85. It should be noted first of all that the attempts to find yardsticks, as the authors themselves acknowledge, have in most cases not included comparative and simultaneous trials with and without irrigation. When such trials have been made on irrigated land, they have simultaneously reflected other factors such as fertilizer applications and better quality seeds; practically speaking there have been no trials to determine the impact of irrigation along.^{1/} Furthermore, most of these trials have been aimed solely at finding yardsticks for foodgrains, that is to say, "poor" crops for which people in many countries do not consider it worthwhile employing irrigation.

86. Comparatively few trials have been made in irrigated areas; they refer solely to yields of irrigated foodgrains; they neither show the effect of irrigation by itself nor accurately reflect current irrigation practices. Obviously findings vary greatly, depending upon whether irrigation water was applied at the proper times and in adequate quantities.

87. In addition, as yet very few economic surveys with cost/benefit calculations have been made, even for the most recent major irrigation schemes. The few studies undertaken, in particular those by the Universities of Madras and Poona, effectively show that under present circumstances, that is to say, with present-day irrigation practices, gains have been relatively low, and too much time elapses between the construction of major irrigation works and their full utilization.

88. Furthermore, the qualitative impression of foreign experts generally corroborates this rather severe judgment as regards the impact of irrigation on agricultural production, which is generally based on comparisons of data from major irrigation schemes versus those from small sectors irrigated from individual wells. In the latter, increases in average yields as well as crop diversification are apparently much greater than in the areas irrigated by State tube wells. These experts also point out that the dangerous spread of waterlogging and the increase in salinity on millions of acres can be blamed on irrigation.

89. Finally, the rather widespread impression that irrigation does not pay is also due to the poor financial results from collective irrigation schemes, notably State tube well projects. For instance, in 1962/63 the net losses for about 7,000 State tube wells in Uttar Pradesh came to 45 million rupees (equivalent to US\$ 9 million) or an average loss of nearly 6,500 rupees per tube well - commanded area. A loss of the same order of magnitude has been found to have occurred in other States (Gujarat, for

^{1/} Brochure, "Development of Agriculture - India 1960/61 to 1975/76" by the Planning Commission, January, 1964.

instance). This is because in installing State tube wells for minor irrigation schemes the very same policies and practices as were followed in sectors irrigated by canals have been repeated.

90. An additional fact, which to some extent seems to support the opinion of low efficiency of irrigation in India, is that the targets of successive plans have not been attained despite higher investments than were initially anticipated. However, this is also true in most other sectors of the economy, as the targets set have almost always proved too optimistic.

91. However, most Indian agriculturists recognize that the development of irrigation has helped overcome the hazards of rainfall and thus regularize harvests. The benefits of irrigation, although not yet translated into accurate statistics, are particularly noticeable during dry years. Moreover, it is noticed that when farmers are assured that they will have enough water they try to utilize the best crop-growing techniques and diversify their crops.^{1/} The remarkable expansion of sugarcane growing is certainly attributable mainly to the development of perennial irrigation in certain States, for example, Uttar Pradesh and Madras.

92. Finally, statistics on agricultural production cover only 28 main crops, or 90 per cent of the cultivated area. These 28 crops do not include fodder crops, fruit orchards or market garden crops which have developed greatly in the past 15 years particularly around urban centers and supply them with food, especially the so-called health foods, milk, fruit and vegetables.

93. In conclusion, an objective examination of the fault found with major and medium irrigation schemes, namely their relative inefficiency, does not explain how far this adverse opinion is justified.

94. Probably the impact of irrigation on agricultural production is still low. Now, while the Fourth Plan is still being prepared, a crucial question must be faced as to whether these rather poor results should lead to the condemnation of major and medium schemes, and therefore a reduction in investments envisaged for this sector, in favor of minor irrigation schemes or other means of promoting agricultural development (fertilizers, etc.).

95. It is an undeniable fact, however, that conditions of topography and climate as well as natural land and water resources in India are such that in general irrigation is one of the essential factors for rapid and permanent increase in agricultural production. This is corroborated for instance by the spectacular results obtained in some sectors irrigated from individual wells. The relative inefficiency of the Government-built and managed irrigation schemes is due to other causes, which need to be reviewed briefly.

^{1/} See, for instance: "Economics of Irrigation and Water Rates, under Cauvery Mettur Project" - University of Madras, 1961.

B - Possible Explanations

96. Some of the causes of the low efficiency of irrigation schemes have already been mentioned in the preceding sections. In this section they are explained more fully, and an attempt is made to classify them logically.

(1) Technical Causes

- (i) Construction of most of the major schemes began over a century ago, without adequate study of the physical conditions of the natural environment. Therefore the serious danger of a rise in the water table over considerable areas due to water losses from canals and extensive irrigation systems was not appreciated. As a result, waterlogging and increased salinity occurred, aggravated by man-made obstacles in the form of engineering structures which prevent free run-off of rainfall because these works were built without attention to the maintenance of nature's equilibrium.
- (ii) For the major irrigation schemes, basic data were usually assembled with a view to extending supplementary irrigation water over as wide an area as possible in order to safeguard the crops of the monsoon season during dry years.

For this reason most irrigation systems have no perennial water supply. Furthermore, their design and operation are ill-suited to crops other than paddy and cotton, particularly during the "rabi" season (October to March) when there is still some residual discharge in the rivers. It is therefore not possible to expect regular, high yields.

When State tube wells were constructed similar criteria were used, even though tube wells assure a permanent, regular water supply. For this reason economic results were equally poor.

- (iii) Because of the main objective for which the major irrigation schemes were built, viz., for extensive irrigation, irrigation engineers have, both in the past and today, only been responsible for the works as far as the outlets which are capable of delivering a discharge of 1 to 2 cusec and command areas from 200 to 500 acres in size.

The task of spreading this water and conducting it from these outlets to each cultivated plot has been left to the farmers themselves. Not having legal means to acquire rights of way for the watercourses on reasonable terms, not the proper technical means to construct them, they met considerable difficulties and construction of the distribution systems is therefore extremely slow. The resulting systems have a most irregular layout and, since the casement is always too narrow for the construction of proper banks to the watercourses, the consequent

water losses are serious. In particular, the plots furthest from the outlets receive only an infinitesimal portion of the discharge, far too little for adequate irrigation, hence the unsatisfactory crop yields. Moreover, because of the complexity of the system excessive time, as well as water, is lost. The results of this situation are particularly noticeable during the "rabi" season, when lesser and lesser quantities of water become available.

These shortcomings in construction and management of the farm distribution networks are certainly among the leading reasons for the present low efficiency of irrigation.

- (iv) There is still much to be done in the way of preparation of farm plots and soils for irrigation; basin irrigation (flooding) has been practiced from time immemorial in paddy fields.

This method is still the one most widely employed, even during the dry season and for crops which would do better if other methods were used (bench border, furrow and corrugation methods).

Furthermore, soil preparation prior to sowing or transplanting often results in an excessively crumbly topsoil layer, and the formation of a practically impervious hardpan not far beneath the surface which neither water nor roots can penetrate readily.

- (v) The major irrigation schemes are operated in accordance with rigid rules usually framed to deliver maximum discharge at the end of the monsoon season and for technical reasons relating to their maintenance (closure of large canals during heavy floods to prevent their siltation, for instance).

Unlike the practice followed in many other countries, the operation program for a system is not drawn up in advance for each season to meet the demands of the farmers themselves based on their crop-growing intentions. Consequently farmers have no advance assurance that they will receive enough irrigation water at the time they need it, particularly during the dry season. Hence many of them are reluctant to expand or intensify their crops under irrigation or, in particular, to undertake double-cropping. Many of them try to overcome the great disadvantages of this management system by digging their own wells. They are therefore obliged to spend a great portion of their time and means on animal power in order to raise a very small discharge. However, this discharge is perennial and can be utilized when and as it is needed.

(2) Land Tenure System

- (i) Size of landholdings varies greatly both within natural regions and within the States. Because of pressure of population, laws have been promulgated on the one hand to set ceiling sizes (usually of about 30 acres) for landholdings, and, on the other hand, to make it easier for farmers and farm workers to obtain title to land.

Land reform is under way at present, but has not yet affected more than 15 per cent of the total area involved. Most irrigated areas are an irregular mosaic of holdings and plots of greatly differing size thus enormously complicating the task of laying out orderly farm distribution and drainage systems.

Furthermore, cultivation of this multitude of farm plots is extremely inconvenient due to the lack of access roads. Most farmers have to cross several other plots all bordered with dikes or bunds, in order to reach their own fields to bring seeds and fertilizers, and then to carry away the harvest.

- (ii) The many inconveniences of this land tenure system have not escaped the attention of the Government, which has launched an equitable land reform campaign and undertaken the consolidation of the many landholdings.

The present bad issues of land tenure are extremely serious handicaps to irrigation, in view of the necessities of properly planned and operated schemes. Yet it seems that absolute priority has not been given to improvement of the land tenure system in the existing irrigated areas. This is another fundamental reason for the low efficiency of irrigation.

- (iii) Ever since the promulgation of land reform laws for new irrigation schemes, land reform and consolidation of landholdings should have been instituted concurrently with the planning of the irrigation and drainage facilities.

This would have resulted in project areas comprising large plots of regular shape each with its own supply canal and roadway. Easements for the facilities would have been acquired free of charge as a compensation for consolidation of landholdings. There would thus have been constituted, as soon as the major hydraulic engineering works had been built, modern properly managed irrigation schemes which could have been put to agricultural use much more rapidly and intensively. This has not, however, yet been done.

(3) Institutional and Legislative Causes

- (i) Obviously the construction of irrigation systems is not an end in itself; the purpose is to help create more favorable conditions for agricultural production.

Their necessarily costly construction opens new prospects for farmers. The farmers should, however, want them, know their value and be capable of using them properly. Consequently, it is necessary to create first of all a proper psychological attitude toward irrigation, mainly by trying to induce qualified representatives of the farmers to participate in providing accurate data and in planning irrigation projects. It is also necessary to frame and implement in good time a simultaneous program of agricultural development within the same district (by the provision of credit, training and extension services, fertilizers, improved seeds and marketing facilities, etc.).

Such a policy requires close cooperation between all administrative agencies responsible for irrigation and agriculture and with the farmers themselves.

Such cooperation has been lacking for many years, which is another major reason for low efficiency in the field of irrigation. However, it must be emphasized that considerable progress has been made in cooperation between the main governmental departments in recent years. Nevertheless, India still does not have land development agencies for the management of irrigated areas (such as irrigation districts, local water boards, irrigation authorities, etc.) like those created in other modern countries for the coordination of all activities relating to irrigation, development of agriculture and organized marketing of farm crops.

- (ii) Whereas major and medium schemes are the responsibility of the irrigation department of each State and at federal level, minor irrigation schemes are in the hands of many different administrative bodies such as the Ministries of Agriculture (in charge of wells), the Rural Development Department (Panchayats), or Cooperative Department, Public Works Department, etc. There is thus in each State no central authority responsible for coordination of investigations, programs and works.

Hence there are delays, overlapping of work and complications, all of which also reduce efficiency in the field of irrigation.

- (iii) Furthermore, neither at the federal level nor in each State is there any single administrative body in charge of an all-inclusive water resources survey which can draw up a water budget or balance for each and every watershed. The appraisal

of surface water resources is one of the tasks of the Irrigation Department, whereas groundwater resources are under the Ministry of Food and Agriculture.

It is therefore not surprising that development plans for irrigation and drainage have been framed without accurate knowledge of water resources as a whole and rather often without appropriate laws for their conservation. It is also not surprising that the real causes of waterlogging and salinization, great handicaps to agriculture in several States, have not yet been fully analyzed and therefore the attempts to control them have not been very effective.

- (iv) These shortcomings have thus far impeded the formulation of sound plans for the distribution and optimum utilization of available water resources. The lack of such plans would become more and more serious as irrigation is extended and intensified. The use of water resources should be guided by intelligent agricultural and economic criteria, for instance, priority reservation of groundwater resources for areas with favorable soils but impossible to reach by gravity canals because of their elevation or remoteness. Finally, the proper utilization of groundwater is still dependent upon the adoption of sound legislation by the various States.

97. To summarize, the reasons for the low efficiency in the field of irrigation are many and only the main ones have been mentioned, viz., the low proportion of perennial schemes, the excessive fragmentation of rural landholdings and the poor arrangements for distribution of water to individual farm plots in all State schemes.

98. Nevertheless, despite the foregoing, the overall impression should not be too pessimistic for the following principal reasons:

- (1) Firstly, it should be emphasized that in all countries of the world there is a long period (sometimes ranging from 20 to 30 years) between the start of irrigation projects and their full utilization by farmers.

The changeover from dry farming to irrigation farming entails a considerable revolution in agricultural patterns, crop-growing systems, employment of labor, commercial dealings, etc. Such a transformation inevitably involves a long delay even if a whole series of concurrent measures are duly planned and executed.

- (2) Investments in irrigation works are intended for permanent improvement of local conditions and the more intensive and stable development of agriculture. They must therefore be considered to a large extent as part of the infrastructure (basic equipment) of a country, somewhat under the same heading as investments in public works, communication facilities, etc. Not only are direct benefits procured by such investments but, in addition, a great variety of

indirect benefits stem which are sometimes difficult to show on a financial balance sheet, such as, for instance, production of more diversified and more nutritive foods which help improve the health of the entire population, all of which are traceable to irrigation.

Therefore, no hasty and all too superficial comparisons should be made between investments in irrigation and in other means of improving agriculture of a less fundamental and less permanent character, the immediate returns from which may at first glance seem greater.

- (3) Modern irrigation technology has developed only recently in the world; the most striking progress has occurred only in the last 30 years so that India is not alone as regards unsatisfactory results from irrigation; similar criticism might be levied in many other advanced countries that have not been able to benefit from the latest advances of this science.

What is important is to note that there is a definite progressive trend in most States of India; moreover, government authorities also recognize the deficiencies and weaknesses in the present irrigation situation and are doing their best to overcome them. Great strides forward have already been made and the Fourth Plan may provide an opportunity to put this awareness to profit.

It is in this spirit that a few major recommendations seem worth presenting in order to help speed and further this evolution.

PART IV: MAJOR RECOMMENDATIONS

99. Numerous documents prepared in the last few years by certain universities and the principal Government agencies show clearly that the reasons for the poor irrigation situation in India are well understood. So, also, are the improvements required. It is therefore pertinent to ask if any purpose is served by making still further major recommendations, at the risk of repeating what the irrigation authorities of India already know very well.

100. There is no denying, however, that progress is still very slow, the scope of irrigation projects is still limited and regrettable mistakes continue to be repeated on a large scale, particularly in the operation of systems.

101. It might, therefore, be useful to try to outline certain fundamental recommendations deriving from on-the-spot observations and experience recently acquired in other irrigated parts of the world. Even if some of these recommendations merely confirm and strengthen the views and support the plans of the irrigation authorities, they will have served some purpose.

102. First of all, it appears necessary for a new overall irrigation policy to be carefully defined and expressed in precise terms by the Government and then widely disseminated at all levels.

103. At the present stage of India's development it should be emphasized that the essential purpose of the major and medium irrigation schemes should not be merely to offset the inadequate summer rainfall but primarily to promote a rapid increase in agricultural production and the diversification that is so necessary.

104. Such a radical definition of new objectives implies and should therefore lead to profound changes in the preparation of the Fourth Five-Year Plan, in the framing of projects and in the operation of irrigation systems. Thus:

- (i) Priority should henceforth be given to research and projects aimed at securing perennial irrigation (storage dams, tube wells, etc.);
- (ii) Projects should also include the construction of farm distribution systems reaching each individual plot;
- (iii) Land reform and consolidation of landholdings should be given highest priority, and be backed by greater funds, in irrigated areas, in new irrigated areas. In zones with excessive fragmentation of holdings, no Government irrigation system should be built until persevering effort has been made for basically improving the land tenure system;
- (iv) Operation of irrigation networks should be modernized so that the water supply is better adapted to the proposed crops and to the demands of the users;
- (v) The major irrigation schemes in certain States (the Punjab, Uttar Pradesh) should be modernized and completed by appropriate drainage systems in order to avoid further waterlogging or increase in soil salinity;
- (vi) The irrigation development programs should be directed towards cropping patterns with high-value crops. In this new policy, irrigated foodgrain production in the dry season should play a progressively smaller part.

105. For the preparation of sound development plans based on the principles of agricultural hydraulics and for their sound implementation it is necessary henceforth that preliminary studies be intensified and above all that comprehensive soil and water resource surveys be undertaken.

106. Any major irrigation project brings about a far-reaching upheaval in the natural equilibrium that has become established over centuries between climate, water, soils, fauna and flora, agricultural and commercial practices, etc. As soon as major irrigation and drainage works have been completed, environmental conditions evolve rapidly towards a new equilibrium. Only with a fuller understanding of initial environmental conditions can one hope to direct this evolution in such a way that the new equilibrium will be positively beneficial. Otherwise, we shall merely look on while the havoc is progressively wrought by waterlogging and increase in salinity of large areas, widespread erosion, widening financial deficits, and the like. It is

particularly important to intensify the study of water resources and to establish a water balance for large natural watersheds. Such studies should be pursued using the most recent methods of science and technology.

107. With the present land tenure system and excessive fragmentation of landholdings it is practically impossible to effect a rational system of water distribution. The very smallness of many farm plots (sometimes less than 1/10 of an acre in size), their irregular shapes, and their enclosure in an inextricable latticework of dikes and bunds, hedges and small canals absolutely prevent any change-over to a more intensive, modern type of agriculture.

108. It is necessary, therefore, to accelerate land reform operations and land consolidation, giving priority to irrigated areas. In zones with excessive fragmentation of landholdings, no government irrigation system should be built until such time as the land tenure system has been reorganized. The experience already gained in India shows that the administration in charge of agrarian reform and land consolidation has succeeded in surmounting problems which in too many countries postponed the necessary improvement of the land tenure system; therefore, it would be better, if necessary, to postpone for one or two years (average duration of land consolidation operations) the construction of large irrigation schemes, which can afterwards benefit from a good land tenure system during centuries.

109. This reorganization should be carried out in a relatively authoritarian way since it is in the general public interest. It should lead to the formation of landholdings sufficiently large to be profitable and to ensure adequate employment for farmers, even if thereby some fraction of the rural population has to be directed to other occupations. Finally, the consolidation of landholdings, an operation of which the farmers themselves are the beneficiaries, should allow for the free acquisition of the necessary rights of way for canals and drains of all types as well as access roads.

110. Such land management is fundamental. Irrigation cannot be expected to make any considerable impact on agricultural production without large-scale land reform conceived in the public interest and therefore at some sacrifice to private interests.

111. The present gap of responsibility between the outlets of the secondary or tertiary irrigation canals and the inlets to individual plots of land unquestionably must be filled by the irrigation authorities at public expense.

112. In other words, the task of building and taking care of farm distribution canal systems must not be left either to the villagers or to individual farmers but must be recognized as the responsibility of the Government, just as is the building and bringing into use of the main primary and secondary canals. The same applies to drainage systems.

113. Designs for the irrigation and drainage systems should be drawn up hand in hand with land reform plans. The best results will be obtained if

such systems are laid out immediately following the implementation of the plans for consolidation of landholdings.

114. Farmers must also be advised and helped in the management of their irrigated cropland (land levelling, contouring, furrowing and use of machinery, etc.). Finally, water distribution should be so organized as to supply enough water for the plants, taking into account soil quality and the danger that the water table may rise.

115. In short, the irrigation authorities must become acutely conscious of the tremendous significance of problems of land and water use and suitable farm management practices.

116. In the preparation of development plans, and in the granting of investment credit, the following measures are urged:

- (i) More adequate means should be provided for the study of natural resources (land and water) and environmental conditions in irrigation schemes.
- (ii) Appropriations for land reform and consolidation of landholdings should be increased since it is essential that they should be given priority in irrigation schemes.
- (iii) Priority should be given to projects aimed at perennial irrigation systems whether major and minor irrigation schemes.
- (iv) No new projects should be approved until such time as those already underway have been allocated sufficient funds to ensure their completion at a satisfactory rate. Taking into account the considerable number of major and medium irrigation schemes started during earlier Five-Year Plans and still not completed, allocations for their completion within the Fourth Plan would perhaps have a faster and bigger impact on agricultural production than equal allocations for minor schemes. In many cases, the main structures have probably already been constructed giving the opportunity now to extend the distribution system over large areas in a short space of time and without heavy expenditure.
- (v) Nor should new major projects be accepted until thorough economic studies have been made to determine their prospective profitability.
- (vi) New projects should be accepted only as part and parcel of carefully planned, integrated agricultural development programs.
- (vii) No ambitious programs for minor irrigation schemes should be approved or financed, even if already submitted as may be the case for most States, unless based on the findings of thorough preliminary studies, in particular, covering water resources and water balance.

117. In the division of responsibilities between ministerial departments and also in the terminology of irrigation, it is highly desirable that the distinction between "major," "medium," and "minor" irrigation schemes be eliminated. Whatever the size of schemes, the problems of water management and irrigation practices are in the final analysis the same.

118. It is therefore much more logical to distinguish between:

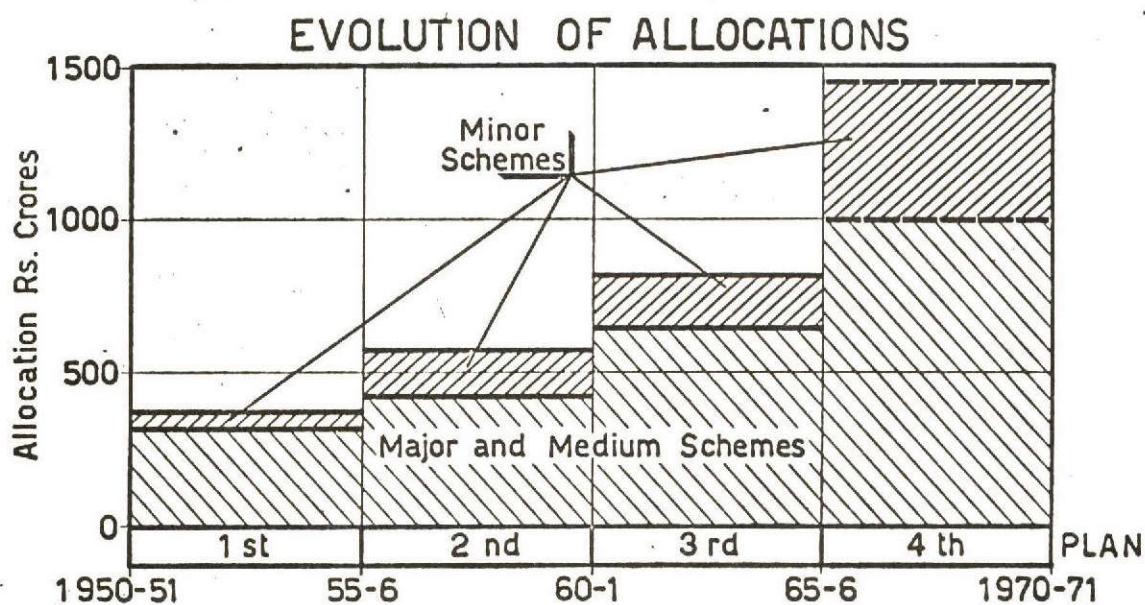
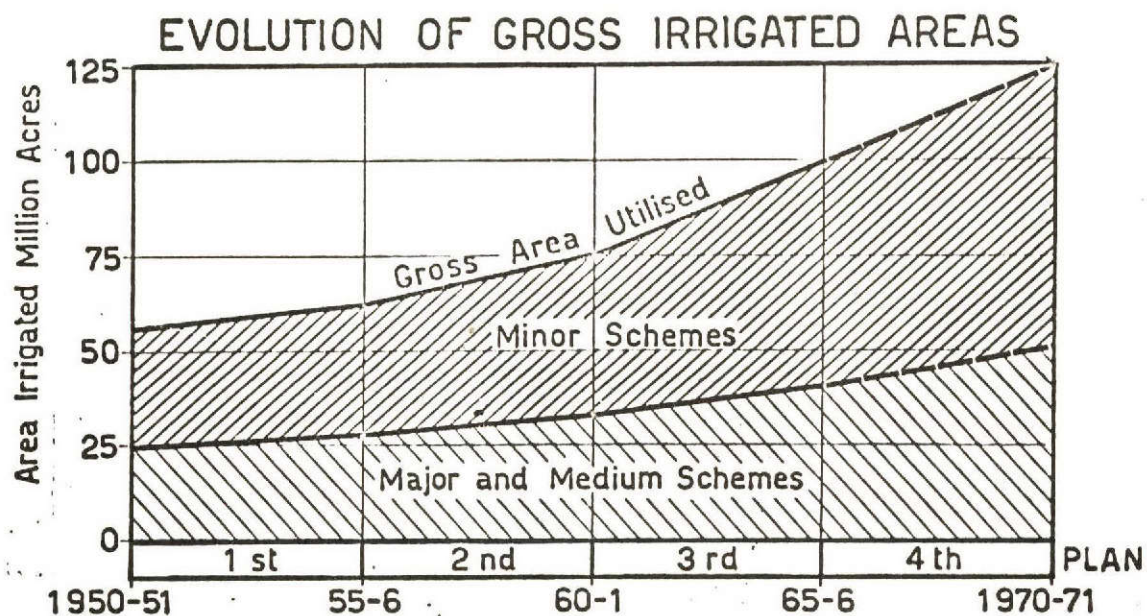
- (i) Major hydraulic works (dams, barrages, large embankments, major canals and major drains, etc.) which are essentially the field of the civil engineer and are very often multi-purpose; for both flood control and surface drainage; for irrigation and power, etc.; and
- (ii) Irrigation and drainage systems proper, the sole purpose of which is to bring water to plots of land and draw off excess water, and therefore which have similar features whether they be for large or small areas. For the design, layout and management of such systems not only civil engineering technology but also the principles of agriculture in the broadest sense of the term must be applied.

119. The problems involved should be considered as closely linked with land reform and there should be close cooperation between the agricultural services and representatives of rural communities.

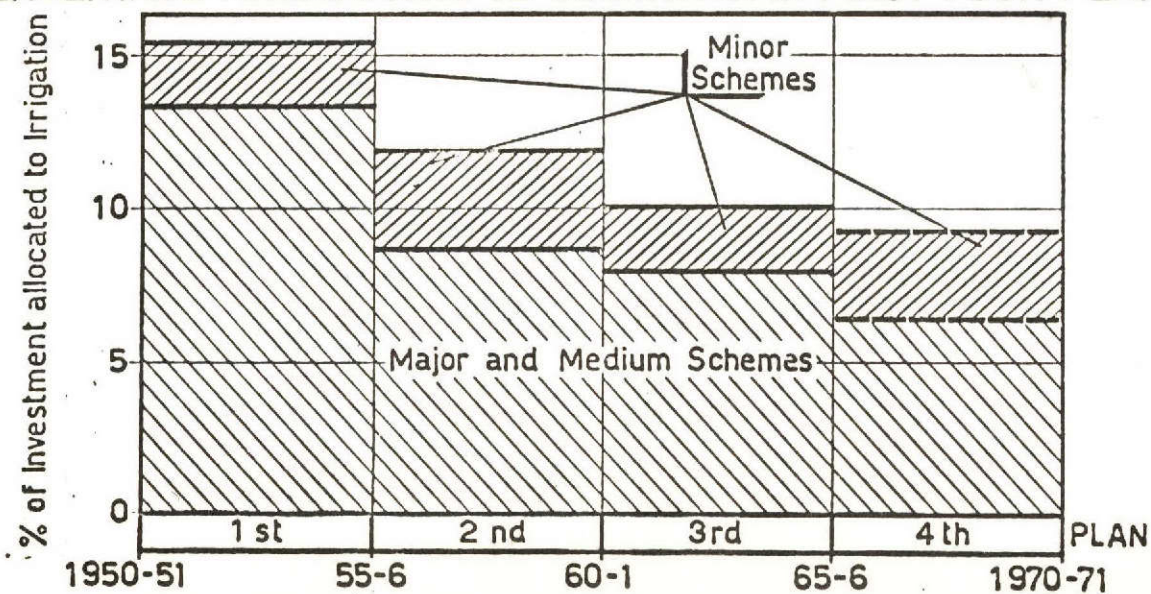
120. It is highly desirable that this new distinction between major hydraulic works projects and irrigation-and-drainage systems be reflected in the structure of the Government itself. In this respect and following the example of many other countries, each State should set up a special department or agency responsible for agricultural hydraulics. This new agency should fill the void that now exists between the present irrigation departments which are concerned with civil engineering problems, and departments of agriculture, land reform and cooperatives, whose structure does not enable them to deal effectively with problems of water management, irrigation practices and land use. Such new departments could be organized at the beginning not by engaging additional officers, but mainly by specific assignment of present irrigation engineers and irrigation agronomists, selected with great care in the existing departments.

121. Whether or not the preceding recommendation is taken into consideration, it is of prime importance that the irrigation systems themselves be studied, built and utilized in accordance with the needs of the crops. As has already been said, they should be planned and laid out hand in hand with land reform and consolidation of landholdings.

122. Problems of agricultural hydraulics as a whole, in conjunction with land reform can be solved competently only by technologists trained for this specific task. Experience in other countries shows that it is highly advisable that these technologists should hold university degrees in agriculture supplemented by advanced studies in civil engineering. In most European countries, for example, people holding degrees in both fields are given the title of agricultural engineers.



PERCENTAGE ALLOCATIONS TO IRRIGATION IN FIRST FOUR PLANS



123. Therefore, it is highly desirable that in India also university degrees in agriculture be supplemented by practical training in irrigation work, possibly by setting up agricultural engineering departments in schools of agriculture. Initially such advanced education could be limited to those States in which the proportion of irrigation farming is highest (e.g., the Punjab, Uttar Pradesh, Bihar, Assam, Maharashtra and Madras).

124. Obviously, these are long-term proposals. During a transitional period of a few years the present situation could be greatly improved by increasing the number and duration of certain training courses that have been organized by the Ministry of Food and Agriculture in the past two or three years. These training courses should be reserved for carefully selected agricultural experts and civil engineers already interested in problems of hydraulics in agriculture and likely to absorb a certain enthusiasm for irrigation and those who practice irrigation.

125. Finally, the need for greater cooperation between various Government bodies concerned with these matters cannot be sufficiently emphasized - from the stage of water resources surveys to the improving of yields of irrigated crops, and their marketing.

126. Not enough emphasis can be laid, either, on the gradual, progressive training of farmers practicing irrigation in order to bring them to a stage of evolution and organization such that they themselves can assume direct responsibility for the management, completion and improvement of their irrigation systems.

127. In many countries the need for cooperation and the concern that farmers should participate more and more in major irrigation schemes has led to the creation of semi-governmental bodies having a large measure of financial autonomy, and able to coordinate the technical, agricultural, economic and social aspects of agricultural development in large areas. Such bodies may be either national agencies, regional authorities or local irrigation districts. The authority delegated to them, their functions and the funds they are allocated vary from one country to another in accordance with circumstances.

128. So far no such agencies exist in India in the field of irrigation. It would be advisable for the Government to examine the eventual benefit they might gain by drawing on the valuable experience already acquired in other countries of this type of organization.

PART V: SUMMARY AND CONCLUSIONS

129. The development of irrigation in India is so important that it deserves to be examined in great detail. However, the only object of the present appendix is to identify some essential aspects of the problem and to point towards their solution.

130. A particular effort has been devoted to the development of irrigation during the first three Five-Year Plans. Its real impact on agricultural production is difficult to evaluate objectively and to calculate precisely. Therefore, the opinion seems to prevail that the impact is still weak and insufficient.

131. There are many reasons for this. They arise mainly from errors similar to those still committed in most irrigated areas in the world. In spite of errors and omissions, it can be said, however, that the irrigation techniques current in India are better than in many other countries. Moreover, it should be considered that investments in irrigation are investments in the structure of the country and that they will only reach full efficiency after a long period.

132. Irrigation in India is already evolving progressively. Most of the avenues for improvement and intensification now seem well known among the responsible authorities.

133. Their concrete application lags behind, however. There is needed a spirit of drive and of efficiency so that their effects may be fully felt at all levels. In this spirit, some major recommendations have been presented in the previous chapter.

134. The most essential recommendations are that priority should henceforth be given to perennial intensive irrigation with particular attention to water management, agrarian structure and land consolidation in the irrigated areas.

135. These questions are so important that they seem to justify the rapid formation of a body of true irrigation specialists who might be called "rural engineers."

136. It is undeniable that the topographic and climatic conditions as well as the soil and water resources of India are such that irrigation, judiciously developed, must continue to be considered as one of the essential factors of agricultural production.

137. It would certainly be regrettable if the investments allocated to irrigation in the next Five-Year Plans were to be reduced. The intended allocation of about nine per cent in the Fourth Plan may be judged as modest. The projects to be undertaken ought henceforth to include the smallest (quaternary) distribution and drainage channels and, if these works are to be included, moreover, the average costs per acre have undoubtedly been underestimated.

138. The real advantages of major irrigation schemes for long-term plans should entail a total expenditure of more than the Rs. 1,450 crores presently envisaged.

139. The argument as to whether priority should be given to minor irrigation is irrelevant. Irrespective of their size, the following types of projects should have priority:

- (i) Those for perennial irrigation;
- (ii) Projects already started during the previous Five-Year Plans;
- (iii) Projects based on proper preliminary surveys and investigations (particularly groundwater resources);
- (iv) Projects for which land reform and consolidation have been already achieved and for which economic studies have predicted favorable returns;
- (v) Projects to check the spread of areas badly affected by waterlogging.

140. Bearing in mind the scale of a country so widespread as India, and of its food problems, it could be held that the large and medium projects alone could offer sufficient development potential. It goes without saying that the arguments sometimes advanced for the advantages of the private minor schemes are out of scale with the needs of the problems of the population increase and the economic evolution of India. In planning irrigation development, obviously long-term food targets should be taken into account as well as those for the next five years.

141. Moreover, major and minor irrigation schemes are rather often complementary and therefore they should be implemented in many large areas, according to a sound overall program for agricultural intensification.

142. In the institutional field, it would be desirable not to augment but to reorganize the present administrative organization in each State by the creation of an Agricultural Hydraulic Department which would be essentially responsible for matters of water management and land use in irrigated areas as well as for managing the irrigation and drainage systems.

143. In spite of substantial progress recently achieved, there is need for further strengthening of cooperation between Irrigation, Agriculture and Agrarian Reform Departments. For this purpose it would be desirable if the Government of India were to consider creating semi-autonomous coordinating organizations in the large projects analogous to the offices, districts or authorities established in several other countries.

144. In conclusion, the irrigation projects already implemented or proposed constitute an enormous potential and their full utilization should make a considerable impact upon the increase of agricultural production in India. The current progress towards a policy and practices better adapted towards this objective give grounds for hope that substantial progress will be achieved in a relatively short period. Measures to speed up this progress must obviously be welded to a framework of comprehensive programs for agricultural development since irrigation is only one of the factors for regularizing and intensifying agricultural production.

TABLE 1

Land Utilization

	(area in million acres)					
	1950/51	1955/56	1960/61	1965/66 anticipated	1970/71 approximative targets	Remarks
	(1)	(2)	(3)	(4)	(5)	
Total geographical area	806.3	806.3	806.3	806.3	806.3	
<u>Area under 28 specified crops</u>						List of 28 crops does not include fruit, vegetables and forages, etc.
<u>Cultivated area:</u>						
- Gross area cultivated	317	365	376.5	393	424	
- Net area sown	285	320	328.0	335	341	
- Area sown more than once	32	35	48.0	58	83	
<u>Area unirrigated</u>						
- Gross area cultivated	261	303	301	296	299	
- Net area sown	233	264	258			
- Area sown more than once	28	39	43			
<u>Area irrigated</u>						
- Gross utilized area	56.0	63	74.5	90	110	
- Net utilized area	51.5	56	68.0	82		
- Area harvested more than once	4.5	6	6.5	8		
<u>Area under major and medium schemes</u>						
- Gross utilized area	23.5	26.5	32.5	40	50	
- Net utilized area	22.0	24.5	30.0			
<u>Area under minor irrigation</u>						
- Gross utilized area	32.5	36.5	42	50	60	
- Net utilized area	29.5	31.5	38			

Remarks on Table 1

In this table:

- (i) "Gross area" means the total area sown (harvested) in the year, thus including double cropping.
- (ii) "Net area" means the area sown (harvested) during the crop season in which the annual maximum is reached.
- (iii) In irrigated areas, "utilized area" means the area effectively irrigated during the crop season in which the annual maximum is reached.'
- (iv) A project costing Rs. 5 crores (US\$ 10 million) or more is considered as major; a project costing from Rs. 10 lakhs (US\$ 200,000) to Rs. 5 crores (US\$ 10 million) is classified as medium; a project costing less than Rs. 10 lakhs (US\$ 200,000) is classified as minor.
- (v) The present cultivated area in India may be considered as above 10 per cent of the total cultivated area in the world. The percentage of cultivated land as against total area (about 50 per cent) is one of the highest in the world, very similar to that in Poland, Italy and Spain.
- (vi) Statistics on irrigated areas often include newly irrigated areas as well as areas already irrigated for which improvements or restorations have been undertaken or are anticipated. Moreover, these figures sometimes also include areas improved by other means, such as flood control and surface drainage works, anti-sea water intrusion works, etc. Therefore, because of conflicting sources of documentation the figures indicated in the table should be considered just as orders of magnitude.

Sources: Memorandum of the Fourth Plan (October 1964) and other official documents.

TABLE 2

Additional Areas Irrigated and Related Allocations under Five-Year Plans

	<u>First Plan</u> (1951-56)		<u>Second Plan</u> (1956-61)		<u>Third Plan</u> (1961-66)		<u>Fourth Plan</u> (1966-71)	
	Rupees	Million	Rupees	Million	Rupees	Million	Rupees	Million
	Crores (1)	Acres (2)	Crores (1)	Acres (2)	Crores (1)	Acres (2)	Crores (1)	Acres (2)
A. <u>Total additional areas under irrigation</u>								
- Allocations (provisions at the beginning of each Plan)	370		570		830		1,450	
- Gross utilized areas		7		11.5		15.5		20
B. <u>Major and medium schemes</u>								
- Allocations	320		420		650		1,000	
- Gross utilized areas		3		6.		7.5		10
C. <u>Minor schemes</u>								
- Allocations	50		150		180		450	
- Gross utilized areas		4		5.5		8		10

Remarks - (i) According to conflicting sources of documentation, the figures given in this table should be considered as only an order of magnitude. In any case, they are round figures.

(ii) The average cost per acre should not be obtained here by just dividing the investment credits in columns (1) by the surface evaluation in columns (2). In fact, the figures in columns (1) refer to investments for irrigation networks proper as well as for flood control, waterlogging control, tidal reclamation, hydrological surveys, etc. On the contrary, the estimates in columns (2) refer only to additional irrigated cropping areas (including double cropping) under the main 28 crops only. These estimates, therefore, exclude garden crops, fruit crops and irrigated fodder crops; they exclude also minor schemes improved or restored, e.g. by deepening of existing wells or by water lifting appliances for small areas already irrigated.

TABLE 3

Outlays on Irrigation for Five-Year Plan

	Grand total Public sector (Rs.crores)	Outlays and percentages (in relation to grand total) for:							
		Total irrigation		Major irrigation		Minor irrigation		Agriculture (with minor irrigation)	
		Outlay	%	Outlay	%	Outlay	%	Outlay	%
First Plan (1951-56) Outlay:	2,400	370	15.4	320	13.3	50	2.1	360	15.0
Second Plan (1956-61) Anticipated outlay:	4,800	570	11.9	420	8.7	150	3.2	570	11.9
Third Plan (1961-66) Anticipated outlay:	8,200	830	10.1	650	8.0	180	2.1	1,090	13.3
Fourth Plan (1966-71) Provisions:	15,620	1,450	9.3	1,000	6.4	450	2.9	2,400	15.4

Remark: - According to conflicting sources of documentation, the above figures should be considered only as orders of magnitude, and in any case they were rounded up.

APPENDIX VII

BUFFER STOCKS AND GRAIN STORAGE

Part A: Statistical Comment
W. David Hopper

Part B: Grain Storage Plan
Summary of Government
of India Report

APPENDIX VII

BUFFER STOCKS AND GRAIN STORAGE

Part A

Statistical Comment

1. Modern methods of determining optimal inventories and their storage points in relation to transport facilities and consumption centers can provide Indian administrators with an operational basis for controlling buffer stocks. This is a technical problem that is beyond the scope of this Appendix. But past production trends and production realizations in relation to these trends do shed some light on the likely magnitude of buffer stocks if the aim is to provide some protection for India's consumers against serious deprivation at times when production falls seriously below trend.

2. During the period 1949-50 to 1964-65 there were six years in which total foodgrains production was below trend. In five of these years the drop was greater than five percent of trend value, Table I. Sixteen years is hardly a scratch on the needs of a good actuarial model, but it is a long enough span to gain an initial approximation of the probabilities involved. As an approximation it would look as if the probability of a year being below the compound trend is 0.375, and about 0.3125 that it will be below trend by five percent or more. From these estimates we should expect to find that the probability of two successive years being below trend is 0.14, and of both being five percent or more below, 0.098. In fact, of the 15 successive year pairs in the 16 year span, two pairs were in excess of five percent below trend, an observed probability of 0.13.

3. Likewise the probability of production exceeding the compound growth trend would be 0.625, and, by observation, of the ten years when trend was exceeded, it was exceeded by five percent or more on four occasions, or with a probability of 0.25 for the 16 years. On the basis of these approximations the theoretical probability of finding two successive years above trend would be 0.39, by observation seven successive year pairs were above, an empirical probability of 0.47. However, only on one occasion have there been two successive years when production has exceeded trend by more than five percent, an observed probability of 0.067, not different from the expected value of 0.0625.

TABLE I

Total foodgrain production - actual and trend -
1949-50 to 1964-65, and absolute and percentage differences^{/1}

(000 metric tons)

	Trend	Actual Production	Departure from trend	
			Absolute	Percent
1949-50	55,993	60,648	+ 4,655	+ 8.3 %
1950-51	58,014	54,918	- 3,096	- 5.3
1951-52	59,765	55,505	- 4,260	- 7.1
1952-53	61,582	61,671	+ 89	+ 0.1
1953-54	63,441	72,185	+ 8,744	+13.8
1954-55	65,360	72,593	+ 7,233	+11.1
1955-56	67,338	69,212	+ 1,874	+ 2.8
1956-57	69,377	72,333	+ 2,956	+ 4.3
1957-58	71,476	66,501	- 4,975	- 7.0
1958-59	73,635	78,635	+ 5,050	+ 6.9
1959-60	75,853	76,693	+ 840	+ 1.1
1960-61	78,132	80,981	+ 2,849	+ 3.6
1961-62	80,530	81,087	+ 557	+ 0.7
1962-63	82,929	78,440	- 4,489	- 5.4
1963-64	85,447	79,443	- 6,004	- 7.0
1964-65	88,026	87,500	- 526	- 0.6

^{/1} The compound growth rate trend was calculated from the annual indices for foodgrains production. Because of the data discrepancies noted in Appendix I there will be differences in the data in this table and the calculations in Table III of that Appendix.

4. The observed tendency for serious short crop years to have a higher incidence of occurrence in successive years likely has arisen from random factors that can not be determined from such a small time sample. (For example there is no statistically significant difference between the estimate of the probability of having two successive years below trend by five percent or more, and the estimate of having two that exceed trend by the same percentage.) But it is possible that a serious drop in production in one year could be followed by another year below trend for the purely physical reasons of a rainfall shortage and consequent soil moisture depletion in the first year being inadequately compensated in the second year when rainfall must be significantly above normal to restore water reserves. Whether such an explanation is in fact valid or not is not the concern in this Appendix, what is of concern is the fact that serious shortages in foodgrain production can and have occurred in successive years. A buffer stock policy designed to offset some of the vagaries of production must take account of the possibility of successive years below trend.

5. The optimal size of a buffer stock is not an easy, determinable quantity for a country like India where only 30 to 40 percent of aggregate production reaches the monetized sector. The average annual absolute deviation from trend for the 1949-50 to 1964-65 period was 3.9 million tons and in one year in six this value was exceeded by an additional 2.5 million tons. In the five years when production dropped below trend by more than five percent, the average annual drop was 4.6 million tons, the standard deviation of this average is 1.1 million tons, which implies that over time the expectation would be that about one year in six the production deficit would exceed 5.7 million tons. If the Government wished to protect itself against a drop below trend for two successive years it could hold between eight and nine million tons to cover an average two-year deviation. If it also wished to cover the one year in six when the average might be exceeded by more than one standard deviation, it would be necessary to raise stocks by an additional one to two million tons. If protection is limited to covering the marketed produce, and the expectation is that even in periods of reduced harvest farmers will market about the same proportion (say 40 percent) of their crop as in periods of plenty, then a buffer of four to five million tons - 40 percent of 10 to 12 million tons - would provide for a two year total annual average deviation of marketed surplus, plus an additional amount to cover at least one standard deviation for one year.

6. In assessing a buffer stock policy and the role it can play in stabilizing consumption levels and food prices, care must be exercised in choosing the base from which annual deviations are measured. The compound growth trend of production has been used in the above paragraphs, but if the growth of supply is not an accurate reflection of demand growth, the buffering of annual production vagaries alone will have only a partial relevance to stabilizing prices and per capita consumption. Appendix II dealt at some detail with the factors promoting demand. During the decade

of the fifties population grew at an annual average compound rate of 2.07 percent and per capita real income rose at about 1.5 percent. Assuming a rough income elasticity for foodgrains of + 0.5, demand growth would have averaged about 2.85 percent per annum. The average annual population growth for 1960-61 to 1964-65 has been estimated at 2.4 percent. Real income has grown at a rate a little in excess of 1 percent per annum (due to a relative stagnation in agriculture), so that demand has risen at a rate close to 3 percent per annum, about the same rate of rise as production for the years 1950-51 to 1964-65, but very much above output response for the 5 years 1960-61 to 1964-65.

7. If production continues below the growth of demand and if prices are to remain stable, available supplies must be augmented from imports. In such circumstance, however, there will be a significant pressure on those controlling buffer stocks (whatever the source of the stocks) to use them as short-run substitutes for imports, or as an inventory to prevent an inflation in food prices in years when production is significantly above its long-term trend but still below demand. These pressures are not easily ignored when there is uncertainty about the relative long-term rates of growth of supply and demand or the extent to which annual and short period anomalies are due to underlying structural changes in economic conditions or merely transient phenomena. In a society actively promoting development by hastening structural change there is a substantial danger that buffer stock policy will be shaped in an atmosphere laden with an optimism that interprets every short-run gain as a structural alteration, and every shortage a temporary aberration due to weather. In fact, a buffering of annual production variation calls for a close articulation of stock, import and price policies that must be based on a full appreciation of long-run trends and the annual domestic demand and supply departures from these trends. The curious anomaly of a policy that may find it necessary to claim foreign exchange to build grain stocks from imports at a time when there is a market shortage, can only be understood by reference to a long-period outlook. Yet if this outlook is lost for lack of political support because of shortsightedness, the buffer stock concept is also lost.

8. Perhaps the best safeguard in the immediate circumstance is also the most needed item for the formation of long-period policy, and that is up-to-date intelligence on agriculture placed in the context of the statistical record of past performance. To develop and implement a concerted policy for stocks, imports, and prices requires accurate information on immediate events projected against past trends. To obtain such information India must undertake an extensive overhaul of the agricultural statistical services now serving the Central and State Governments. The confused state of present intelligence is touched on in Appendix I; it would be folly to believe that from this sorry circumstance a good stock policy can be made. Yet in its plans for a Food Trading Corporation and an Agricultural Prices Commission no mention has been made of the need for better statistical reporting services. Without improved intelligence a day-to-day policy consistent with longer run prospects cannot be formulated, and the justification of policy decisions to the nation becomes a vacuous exercise.

APPENDIX VII

BUFFER STOCKS AND GRAIN STORAGE

Part B

GRAIN STORAGE PLAN

Summary of a Report Prepared by the
Ministry of Food and Agriculture
(Government of India - New Delhi)

1. The need to constitute and maintain grain buffer stocks of 5.5 - 6.0 million tons (wheat: 4.0 million tons; rice: 1.5 - 2.0 million tons) has been recognized by the Government. This means a need for about 7 million tons of storage capacity, on the assumption of 80% utilization of capacity. The Government will soon be completing construction of warehouses with a capacity of 2 million tons and plans for building additional storage capacity of 1 million tons are "well-advanced". The report considers alternative methods of storage and develops recommendations as to structure and regional distribution of storage for the additional 4 million tons of capacity required.

Alternative Methods of Storage

2. Grain has traditionally been stored in bags under simple masonry structures ("godowns"). The first phase of the Government storage construction program (2 million tons) has taken this "conventional" form. It is suggested that this capacity be used mainly for storing rice since rice can be preserved in bags for 1 to 2 years and no satisfactory bulk storage technique for rice has yet been developed.

3. The situation is different insofar as wheat is concerned. Maximum period of preservation of wheat using "conventional" storage is limited to six months to one year depending on the climate. On the other hand, wheat storage in bulk, a standard practice in many countries, prolongs the maximum storage period to three years ("flat" storage) or even five years ("vertical" storage: silos). This keeps the rate of grain turnover down and helps to limit interference with normal market forces. In order to avoid excessive market disturbance, it is estimated that annual turnover of the wheat buffer stock should not exceed 1.5 million tons (30% of an expected 5 million tons marketable surplus of wheat). This estimate makes the use of bulk storage methods mandatory for all the additional wheat storage capacity required. This seems to be recognized by the Government which has already made plans for 1 million tons of bulk storage.

4. Of course, bulk storage uses more capital and less labor than conventional storage. But it involves lower recurrent expenditures. In fact, even if turnover considerations are put aside, horizontal storage

in bulk ("flat" storage) seems more economical than "conventional" storage. For this reason, "flat" storage of wheat in bulk should be used in the Government program in preference to conventional storage.

5. Vertical storage in bulk is more expensive than both "conventional" and "flat" storage. But its low land requirements and its high handling reliability and speed make it the only attractive method for grain storage in ports. Also, as noted above, vertical storage has considerable advantages over flat storage from the point of view of grain preservation and turnover. For these reasons, a "mix" of "vertical" and "flat" storage seems justified for the second phase of the Government wheat storage program.

6. The objections to bulk storage are of three kinds:

- (a) technical: full benefits of bulk storage are obtained only if bulk handling and transport of grain is introduced and the practical implementation of such methods may raise technical difficulties;
- (b) social: mechanization will tend to displace unskilled workers from gainful employment, and adjustment may be particularly difficult in ports where the vested interests of unions are involved;
- (c) economic: mechanical storage and handling would use scarce foreign exchange and capital resources for which there may be better alternative use.

7. Optimism is warranted as far as the technical aspect of the problem is concerned: a number of experiments have already yielded favorable results and it is felt that coordinated efforts with the railways should resolve all outstanding technical difficulties. Opposition to bulk storage on social grounds is limited to port labor. Clearly, the national interest lies in a policy of bulk handling and mechanization which the Cabinet has already approved in principle. Finally, a substantial proportion of the equipment for horizontal storage may be manufactured locally and savings in the recurrent expenditure of storage, shipping costs and handling charges should more than offset the higher capital component of bulk storage. A summary comparison of wheat storage methods is attached (Annex I).

8. Taking account of the need to limit annual turnover of wheat stocks to 1.5 million tons, the following structure of total storage needs for wheat emerges:^{1/}

^{1/} This does not include the necessary allowance for under-utilization of capacity.

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	Million tons	
	<u>Storage Needs</u>	<u>Annual Turnover</u>
<u>First phase of Government program</u>		
"Conventional" Storage	0.5	0.5
<u>Second Phase of Government Program</u>		
"Flat" bulk storage	2.5	0.8
"Vertical" bulk storage	<u>1.0</u>	<u>0.2</u>
TOTAL:	<u>4.0</u>	<u>1.5</u>

Cost Aspects

9. The capital cost per ton of storage for the various methods under consideration is estimated as follows:

	<u>Rs. per ton</u>
"Conventional"	106
"Flat" bulk storage	117
"Vertical" bulk storage	257

10. Total annual cost per ton of storage for the various methods under consideration is estimated as follows:

	<u>Rs. per ton</u>		
	<u>Depreciation and Interest^{/1}</u>	<u>Operating Costs</u>	<u>Total</u>
"Conventional"	8.1	8.6	16.7
"Flat" bulk storage	9.2	5.2	14.4
"Vertical" bulk storage	20.4	6.6	27.0

^{/1} Assuming 50 year life of buildings and equipment and 6% interest. Variation of these assumptions within a reasonable range would not substantially affect the conclusions.

11. On the basis of the above estimates, the capital cost of the second phase of the Government program as outlined above would be about Rs. 685 million (US\$137 million equivalent). Corresponding annual recurrent expenditures would be about Rs. 25 million (US\$5 million equivalent).

Type of Bulk Storage	Storage Tons ^{/1} (million)	Capital Costs		Recurrent	
		Rs. per ton	Rs. million	Rs. per ton	Rs. million
"Flat" storage	3.125	117	365.6	5.2	16.3
"Vertical" storage	1.250	257	321.3	6.6	8.2
TOTAL	4.375	157	686.9	5.6	24.5
	=====	===	=====	===	=====

^{/1} Including allowance for under-utilization of capacity.

Location of Stocks

12. A table showing the proposed regional allocation of total grain storage capacity (7 million tons) is attached (cf. Annex II). The allocation has been estimated on the basis of the following main assumptions:

- (a) provision of stocks covering one-year consumption needs in all States (estimate based on average requirements during the past three years);
- (b) provision of storage capacity for one-third of estimates procurements in "surplus" States;
- (c) provision for one-month storage capacity in the main ports for PL 480 imports;
- (d) special storage allowances for large cities and new industrial centers to facilitate price stabilization in case of grain shortages.

Account has also been taken of the transport facilities available in the various regions and of the exceptional climatic conditions for storage in the State of Rajasthan.

Private Storage

13. Reliance on medium and small private storage units could be useful for relatively short periods (say, 3 months) in wheat procurement areas. But given the large units involved in bulk storage, the high quality standards which it implies, and the growing requirements for local storage, there is little chance that much capacity will be available from private sources to accommodate the storage needs outlined above. At most, the Government might be able to rent private facilities of the "conventional" type to the extent of 1 million tons. Government construction of the total second phase of the storage program (4 million tons) is recommended.

ADDENDUM

In preparing for the Mission's use the foregoing precis the IBRD officers concerned made the following observations:

1. The complex relationship between available transport facilities, milling facilities and the storage program does not seem to have been explored in sufficient detail. The proposed regional distribution should therefore be viewed by the Government as a rough basis for further study and detailed project preparation work - not as a definitive program of action.
2. The possible use of private storage accommodations deserves better treatment in the report; it is conceivable that much could be achieved by providing liberal credit conditions to private owners for storage built and handled under approved conditions.
3. The implications of the Government price policy on the storage program are not analyzed in sufficient detail.
4. The turnover risk estimated in the report is an interesting way of quantifying the economic advantage of the longer preservation period associated with bulk storage - an advantage already taken into account when setting the maximum 1.5 million ton limit on turnover. It is not an additional cost to be ascribed to the various forms of storage.
5. The 50-year depreciation used for both buildings and equipment is too generous and the 6% interest rate probably too low for economic evaluation; however, it seems that the ranking of the three methods would not be affected by reasonable variations in the depreciation and interest assumptions.

ANNEX I

GRAIN STORAGE PLAN
Comparison of Wheat Storage Methods

	Bag Storage ("Conventional")	Bulk Storage	
		"Flat"	Silo
<u>Preservation of grain:</u>	Maximum storage: 1 year assuming fumigation and humidity control devices are used.	Pest and humidity control easier than with conventional storage. Maximum storage: 3 years.	Grain quality perfectly preserved. Maximum storage: 5 years.
<u>Handling Equipment:</u>	Very little specialized equipment needed.	Substantial proportion of equipment may be manufactured in India.	Sophisticated foreign equipment required.
<u>Land Requirements:</u>	0.5 acres per 1,000 tons of storage capacity	0.2 acres per 1,000 tons of storage capacity	0.06 acres per 1,000 tons of storage capacity
<u>Staff Requirements:</u>	Mainly unskilled personnel	5 skilled and semi-skilled personnel for 50,000 ton storage	10 skilled and semi-skilled personnel for 50,000 ton storage
<u>Capital Costs</u> (Rs. per storage ton):			
Land ^{/1}	6.3	2.5	0.8
Buildings ^{/2}	85.6	62.8	)
Equipment ^{/3}	14.0	52.1	) 256.0
	<u>105.9</u> =====	<u>117.4</u> =====	<u>256.8</u> =====
<u>Recurrent Costs</u> (Rs. per storage ton):			
Maintenance	1.4	2.1	4.5
Other operating costs	6.2	2.6	2.0
Storage losses	1.0	0.5	0.1
	<u>8.6</u>	<u>5.2</u>	<u>6.6</u>
<u>Turnover Risk (Rs. per storage ton):</u>			
Required turnover per storage ton (tons)	1.0	0.34	0.20
Risk @ Rs. 13.5 per turnover ton ^{/4}	13.5	4.6	2.7

^{/1} @ Rs. 12,500 per acre.^{/2} Excluding ancillary structures^{/3} Including railway siding.^{/4} Rs. 0.5 per maund

ANNEX II

GRAIN STORAGE PLAN
Regional Distribution of Storage Capacity
(In 1,000 tons)

	Per cent	Total	Consumption Needs	Local Procurement	Storage Requirements for		
					Foreign Procurement (Ports)	Allowance for Cities and Industrial Centers	Contingency Allowance
Andhra Pradesh	4.0	280	89	60	53	32	46
Assam	1.9	133	111	--	--	--	22
Bihar	8.9	625	501	--	--	20	104
Gujarat	5.3	373	225	--	30	56	62
Kerala	4.5	313	241	--	20	--	52
Madhya Pradesh	4.8	336	30	220	--	30	56
Madras	5.9	413	227	30	20	77	59
Maharashtra	19.5	1,363	733	--	200	203	227
Mysore	2.2	153	86	--	--	42	25
Orissa	1.4	98	37	25	--	30	16
Punjab	6.2	435	83	260	--	20	72
Rajasthan	2.6	179	19	130	--	--	30
Uttar Pradesh	9.8	686	482	80	--	10	114
West Bengal	19.6	1,369	761	--	150	230	228
Delhi	<u>3.4</u>	<u>244</u>	<u>163</u>	<u>--</u>	<u>--</u>	<u>40</u>	<u>41</u>
TOTAL:	100.0	7,000	3,780	805	473	780	1,154
	=====	=====	=====	===	===	===	=====
Per cent		100.0	54.1	11.5	6.8	11.1	16.5

APPENDIX VIII

A BRIEF NOTE ON AGRICULTURAL PRICES

W. David Hopper

APPENDIX VIII

A BRIEF NOTE ON AGRICULTURAL PRICES^{1/}

1. The scope of this note is limited to a brief consideration of (1) recent price movements, and (2) the interrelation among agricultural prices. Two recent studies of Indian agricultural prices obviate the need to undertake an extensive examination of price issues here. The first, Agricultural Price Policy in India, was issued by the Ministry of Food and Agriculture in February 1963 and covers the major considerations in price policy formation, and reviews India's experience with price policy since the early fifties. The second, Agricultural Price Policy in India, by Louis F. Herrmann, was issued by the Ministry of Food and Agriculture in September 1964. In this work Herrmann pays particular attention to the geographic and time distribution of wheat and rice prices. The study raises serious doubt about the popular beliefs that the Indian market has strong elements of imperfect competition leading to large monopoly rents, and that grain storage to gain advantage of seasonal changes in prices is always a profitable use of resources. On the first count Herrmann found little evidence of non-competitive market behavior, and what evidence there was could be traced unmistakably to Government policies that intervened in the normal functioning of the market. On the issue of seasonability, he found no evidence that storage operations were automatically profitable business ventures returning profits in excess of rates of return on comparable competitive opportunities.

2. The several figures at the end of this Appendix show the movement of prices for selected important agricultural commodities according to the weekly index calculated from major markets by the Economic Times of India. The substantial upward movement in agricultural prices during the past two years contrasts sharply with a long period of relative stagnation during the decade of the fifties. It also contrasts with the relative stability of non-agricultural prices, Table I. The inflation in agricultural prices has turned the terms of trade in favor of the cultivator, Table II, after a long period of relative inflation in non-agricultural prices had cut rural buying power. Table III presents the actual annual prices for wheat and rice at selected markets 1960 to 1964.

^{1/} I wish to thank Mr. M.S. Rao of the Ford Foundation for much of the statistical analysis used in this note.

TABLE I:
Wholesale Price Index
 (1952-53 = 100)

	Rice	Wheat	Cereals	Manufactures - - Finished Products			
				Iron & Steel Manufac- tures	Cotton Manufac- tures	Chemicals	Fuel Power & Lubricants
1955-56	78	72	88	119	105	92	95.2
56-57	97	88	99	131	116	93	104.2
57-58	105	88	96	143	116	98	113.5
58-59	105	105	101	145	112	107	115.4
59-60	105	96	103	146	117	107	116.5
60-61	108	90	100	147	128	104	120.0
61-62	105	91	102	148	128	111	122.1
62-63	111	90	103	160	131	116	124.4
63-64	125	99	122	163	136	118	139.4
Dec. '63	122	106	118	163	136	118	139.9
Jan. '64	120	112	119	163	136	119	139.5
Feb.	121	121	124	163	136	119	140.5
March	122	121	122	167	137	120	140.4
April	125	116	124	169	135	120	142.5
May	131	113	129	170	136	119	142.7
June	136	112	134	170	136	119	142.8
July	140	116	141	170	135	119	143.3
August	146	124	146	170	136	119	143.8
September	146	135	153	170	137	120	143.8
October	144	135	147	170	137	120	144.7
November	132	135	141	170	139	120	144.8
December	129	145	142	170	137	120	145.3

Source: Reserve Bank of India Bulletin, January 1965.

TABLE II

Wholesale Price Index of Agricultural Terms of Trade - Cereal Price Index (Wholesale) to Index of Selected Commodities

1952-53 = 100

	Iron & Steel Manufactures	Cotton Manufactures	Chemicals	Fuel, Power and Lubricants
55-56	135.2	119.3	104.5	108.2
56-57	132.3	117.2	93.9	105.3
57-58	149.0	120.8	102.1	118.2
58-59	143.6	110.9	105.9	114.3
59-60	141.7	113.6	103.9	113.1
60-61	147.0	128.0	104.0	120.0
61-62	145.1	125.5	108.8	119.7
62-63	155.3	127.2	112.6	120.8
63-64	133.6	111.5	96.7	114.3
Dec. '63	138.1	115.2	100.0	118.6
Jan. '64	137.0	114.3	100.0	117.2
Feb.	131.5	109.7	96.0	113.3
March	136.9	112.3	98.4	115.1
April	136.3	108.9	96.8	114.9
May	131.8	105.4	92.2	110.6
June	126.9	101.5	88.8	106.6
July	120.6	95.7	84.4	101.6
August	116.4	93.2	81.5	98.5
September	111.1	89.5	78.4	94.0
October	115.6	93.2	81.6	98.4
November	120.6	98.6	85.1	102.7
December	119.7	96.5	84.5	102.3

Percent change (improvement) in terms of trade 1962-63 to 1963-64
 +14.0 +12.3 +14.1 +5.4

Percent change (improvement is +) in terms of trade Dec. 1963 to Dec. 1964
 +13.3 +16.2 +15.5 +13.7

cont'd...

TABLE II (cont'd)Indices Underlying Terms of Trade Data in 1962-63 and 1963-64,December 1963 and December 1964

	1962-63 & 1963-64 Indices	Percent Change	Dec. 1963 & Dec. 1964 Indices	Percent Change
Cereals	103 122	+18.4%	118 142	+20.3%
Iron & Steel Manufactures	160 163	+ 1.9%	163 170	+ 4.3
Cotton Manufactures	131 136	+ 3.8	136 137	+ 0.7
Chemicals	116 118	+ 1.7	118 120	+ 1.7
Fuel, Power and Lubricants	124.4 139.4	+12.1	139.9 145.3	+ 3.9

TABLE III

Wholesale Prices of Wheat in Seventeen Markets - Annual

State	Market	Variety	Rupees per Quintal (220.4 pounds)				
			1960	1961	1962	1963	1964
Bihar	Khagaria	White	51.68	49.59	48.92	49.96	69.31
Gujarat	Dhanduka	Red	53.95	43.58	49.62	42.75	61.50
	Rajkot	Red	50.83	51.20	51.85	51.50	62.81
Madhya Pradesh	Sugar	Coarse(Pissi)	35.80	36.65	40.37	40.38	57.54
	Bhopal	"	35.61	38.10	41.40	41.07	50.72
	Rewa	"	33.34	35.11	39.92	40.00	58.54
Maharashtra	Bombay	Nasik Yellow	58.33	52.00	57.17	55.12	--
Punjab	Abohar	Coarse	38.98	39.41	42.50	40.34	54.50
	Moga	Farm	41.75	43.63	46.33	45.54	55.84
Rajasthan	Kotah	Coarse(Deshi)	42.70	43.72	41.69	39.50	51.72
Uttar Pradesh	Hapur	Dara	47.38	41.87	40.70	42.85	71.35
	Kanpur	Red	43.19	38.78	36.09	35.82	64.81
	Chandousi	White	44.62	41.87	40.14	44.16	71.94
	Bahraich	White	41.40	40.19	38.12	39.19	69.62
Delhi	Delhi	Dara	40.36	39.80	40.95	43.43	52.20
Madras	Madras'	Imported	37.51	37.51	37.51	37.51	37.51
West Bengal	Calcutta'	Imported	37.51	37.51	37.51	52.63 ²	37.51

' Relates to government wholesale rate to fair price shops.

²/ Relates to indigenous coarse variety.

TABLE III (cont'd)
Wholesale Prices of Rice in Eleven Markets and
All India, Annual

State	Market	Rupees per Quintal (220.4 pounds)				
		1960	1961	1962	1963	1964
	Kumbakonam	56.82	61.09	60.84	61.34	66.47
	Trivandrum	58.22	61.60	60.84	61.34	71.33
	Vijayawada	55.94	57.47	57.58	56.57	63.00
	Shimoga	99.56	61.17	64.50	55.66	66.50
	Sambalpur	44.90	38.66	47.77	62.42	56.36
	Cuttack	47.80	40.78	50.85	60.69	61.20
	Dumka	55.75	55.78	58.38	64.63	67.78
	Contai	59.34	48.65	60.42	78.03	64.38 ^{/3}
	Sainthia	63.63	51.52	59.83	77.60	64.38 ^{/3}
	Raipur	40.86	43.19	48.81	55.78	59.10
	Kalyan	65.53	54.81	49.67	60.50	74.34
	All India ^{/1}	55.33	53.19	55.68	61.84	67.75 ^{/2}

^{/1} Computed from Index 0 100 = Rs. 50.90 a quintal

^{/2} Average of January to October

^{/3} Control prices fixed statutorily

Source: Ministry of Food and Agriculture

3. The determinants of agricultural prices are complex and their study is beyond the scope of this note. Some light can be shed, however, from the work of Herrmann and M.S. Rao. Herrmann^{1/} found that for the years 1950-51 to 1963-64 the index of cereal and pulse prices had the following relations to daily per capita availability and money supply:

$$(1) \quad P_c = 106.28 - .235 X_1 + 1.352 X_2$$

$$R^2 = .62$$

P_c = Index of wholesale prices of cereals, 1952-53 = 100

X_1 = Availability of cereals, daily per capita net, in grams

X_2 = Money supply with the public, Rs. per capita

Elasticities: $X_1 \text{ E } X_2 = -.85$

$$X_1 \text{ E } X_3 = .78$$

$$(2) \quad P_p = 118.63 - 1.706 X_1 + 1.407 X_2$$

$$R^2 = .71$$

P_p = Index of wholesale prices of pulses, 1952-53 = 100

X_1 = Availability of pulses, daily per capita net, in grams

X_2 = Money supply with the public, Rs. per capita

Elasticities: $X_1 \text{ E } X_2 = -1.20$

$$X_1 \text{ E } X_3 = .89$$

In an extension of this work, Rao^{2/} has found that for foodgrains as a whole the relations are less well defined:

^{1/} Herrmann, L.F., Op. cit. p. 15.

^{2/} Private communication

- (1) Period: 1950-51 to 1962-63* (Semi-Log form)

$$X_1 = \text{Constant} - 1.67^{**} X_2 + 2.54^{***} X_3$$

(.86) (.48)

$$N = 13$$

$$R^2 = .60$$

Where X_1 is Foodgrains Wholesale Price Index $\div$ 100

X_2 is Log (Per capita availability of foodgrains)

and X_3 is Log (Per capita income at current prices)

Elasticities:

Per capita availability = -1.74

Per capita income = 2.64

* Data on X_3 available up to 1962-63 only.

** Significant at 10% level;

*** Significant at 1% level

- (2) Period: 1950-51 to 1963-64

$$X_1 = \text{Constant} - .04 X_2 + .71^* X_3$$

(.12) (.34)

$$N = 14$$

$$R^2 = .33$$

Where X_1 is foodgrains wholesale price index

X_2 is per capita availability of foodgrains

and X_3 is money supply with the public (per capita)

Elasticities:

$$X_1 \text{ E } X_2 = -.18$$

$$X_1 \text{ E } X_3 = .43$$

* Significant at 5% level.

4. Once a perspective can be gained on the experience of the past 18 months there will be much opportunity for serious study of why the price inflation of 1964-65 was so large in the agricultural markets relative to prices of other commodities. The short crops in 1962-63 and 1963-64 have undoubtedly had a strong influence, but the five to eight per cent drop from normal trend in each of these two years is hardly enough to explain a rise in the cereal price index from 103 in 1962-63 to 122 in 1963-64, and 142 by December 1964; a rise of 18 per cent in one year, and 38 per cent in 18 months. Even without the offsetting effects of imports (and these have been running at about 5 per cent of total production) such a price rise would imply an extraordinarily low price elasticity for foodgrains, on the order of -0.2.

5. One possible explanation is that farmers have held back on market supplies. For example, if the marketable surplus is ordinarily 35 per cent of production, and if, in anticipation of further price rises, farmers hold back supplies from the market so that the surplus disposed of is only 30 per cent of crop already down from normal by, say seven per cent, the total drop in quantity available for non-farm consumption will be $.30 (N - .07 N)$ - where N is the normal crop on the basis of trend - or $.279 N$, a drop of 20.3 per cent from a marketing of $.35 N$. Such a drop with a price increase of 38 per cent would imply an elasticity of -0.5, not an unrealistic value. Unfortunately, market sales data and information on physical quantities of grain imported and distributed are not readily available to check and discriminate between the facile hypotheses implied in this analysis. Another task for agricultural economic research.

6. An Addendum to this Appendix presents the Government policy for foodgrains prices in 1964-65 as set forth by the Food Department of the Ministry of Food and Agriculture. The specifics of the policy outlined in this statement will undergo many shifts and changes as the Agricultural Prices Commission starts its work and as the difficulties of implementation are met, but the determination to intervene in the market by one form or another to hold prices above or within specified limits will remain a central core.

7. The tropical circumstance of Indian agriculture gives the cultivator a wide choice of crop alternatives in any crop season. The cobweb effects of pre-season prices on acreage allocations among crops, on next season's market supply and thence to prices have been as yet imperfectly explored. Krishna has examined acreage and price data from the undivided Punjab for several crops using a distributed lag model^{1/}. The detailed results of his work will not be reproduced here, but it should be noted that he found a strong relation between lagged prices and acreage allocations ^{2/}.

1/ Krishna, Raj, "Farm Supply Response in India-Pakistan: A Case Study of the Punjab Region", The Economic Journal, September 1963.

2/ See also paragraph 18 of Appendix I.

8. The interdependence of commodity prices and acreage allocations can be reflected in part in a study of the correlations between each price and every other. As a part of a larger factor analysis study K. S. Rao has calculated the zero-order correlations between prices and acreages in the Punjab 1948 to 1962. His results are presented in Tables IV to VI. The evidence of this work suggests strong mutual interactions among prices and acreages for many commodities. The work is not conclusive however, and it has not concluded. But enough has been done to show clearly that simple market intervention to set or control the prices of only some commodities will have an effect throughout the system that may have far reaching and unexpected results on prices and supply of non-controlled products. The escalation from a small measure of intervention to the attempt at full control of all aspects of the price-supply relation is a too familiar feature of Indian economic planning. An effort to unravel some of the complexities underlying the agricultural price, supply and demand relations must play a central role in a price policy consideration if the familiar escalator ride is to be avoided.

TABLE IV

Zero-Order Correlation Matrix of Wholesale Prices of Agricultural Commodities in the Punjab
(1948-1962)

	Trend	Wheat	Gram	Barley	Rice, husked	Maize	Bajra	Jowar	Gur	Cotton (D) (ginned)	Cotton (A) (ginned)
	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Trend	1.00										
Wheat	.21	1.00									
Gram	.38	.18	1.00								
Barley	.47	.67	.59	1.00							
Rice	.14	.82	-.04	.49	1.00						
Maize	.58	.66	.65	.85	.56	1.00					
Bajra	.81	.61	.60	.79	.47	.86	1.00				
Jowar	.71	.65	.59	.66	.41	.78	.89	1.00			
Gur	-.19	.22	.12	.22	.18	.07	-.09	.003	1.00		
Cotton(D)	.58	.15	.39	.58	.21	.53	.49	.46	.28	1.00	
Cotton(A)	.42	.24	.58	.56	.19	.50	.52	.56	.29	.72	1.00

Cotton (D) is desi, indigenous short staple.

Cotton (A) is American, medium staple.

TABLE V
Zero-Order Correlation Matrix of Harvest Prices in Punjab (1947-48 to 1961-62)

	Trend	Wheat	Gram	Barley	Rice (unhusked)	Maize	Bajra	Jowar	Gur	Cotton (D) Unginned	Cotton (A) Unginned
	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Trend	1.00										
Wheat	-.02	1.00									
Gram	.31	.48	1.00								
Barley	.43	.74	.76	1.00							
Rice(unhusked)	.47	.44	.53	.74	1.00						
Maize	.48	.15	.64	.42	.23	1.00					
Bajra	.64	.45	.54	.65	.53	.56	1.00				
Jowar	.21	.64	.53	.49	.53	.29	.62	1.00			
Gur	-.22	.27	.09	.29	.29	-.18	-.16	-.07	1.00		
Cotton (D)	.58	.11	.49	.51	.58	.49	.35	.10	.43	1.00	
Cotton (A)	.56	-.06	.51	.48	.66	.46	.34	.13	.32	.87	1.00

TABLE VI

Zero-Order Correlation Matrix of Area under Different Crops in the Punjab
(1947-48 to 1961-62)

	Trend	Rice	Jowar	Bajra	Maize	Wheat	Barley	Gram	Sugar- cane	Ground- nut	Cotton(D)	Cotton (A)
	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Trend	1.00											
Rice	.85	1.00										
Jowar	.54	.36	1.00									
Bajra	.58	.68	.19	1.00								
Maize	.87	.91	.35	-.71	1.00							
Wheat	.98	.83	.50	-.62	.84	1.00						
Barley	-.53	-.49	-.39	.10	-.62	-.47	1.00					
Gram	.66	.65	.02	-.70	.67	.71	-.48	1.00				
Sugarcane	.82	.94	.26	-.69	.88	.78	-.40	.49	1.00			
Groundnut	.96	.84	.41	-.60	.84	.93	-.51	.60	.87	1.00		
Cotton (D)	.70	.62	.59	-.36	.63	.70	-.26	.12	.68	.71	1.00	
Cotton (A)	.83	.57	.36	-.47	.57	.84	-.37	.76	.49	.76	.30	1.00

APPENDIX VIII

ADDENDUM 1/

Ministry of Food and Agriculture
(Department of Food)

IMPLEMENTATION OF FOODGRAINS
PRICE POLICY FOR 1964-65

1. The main objectives of the foodgrains price policy of Government are to assure a fair price to the producer and to stabilize the prices for the consumer. Assuring the producer of a fair and certain return for his produce in an effective incentive to encourage him to undertake necessary investment for raising agricultural productivity. At the same time, it is necessary to protect the consumer, especially the vulnerable sections of the population, against unreasonably high prices by reducing the wide fluctuations in prices between the post-harvest months and the lean season. Thus the foodgrains prices have to be maintained within defined minimum and maximum limits. To evolve such a price structure on a scientific basis, it is proposed to set up an Agricultural Prices Commission. Pending the setting up of this Commission, Government of India appointed an ad hoc Committee - the Foodgrains Prices Committee - under the chairmanship of Mr. L. K. Jha. On the basis of the recommendations of this Committee and in the light of the discussions held with the State Governments, Government has announced the producers' prices for paddy, wheat, jowar, bajra, maize and gram for 1964-65 season, and has authorized the State Governments to fix maximum prices of rice at wholesale and retail levels.

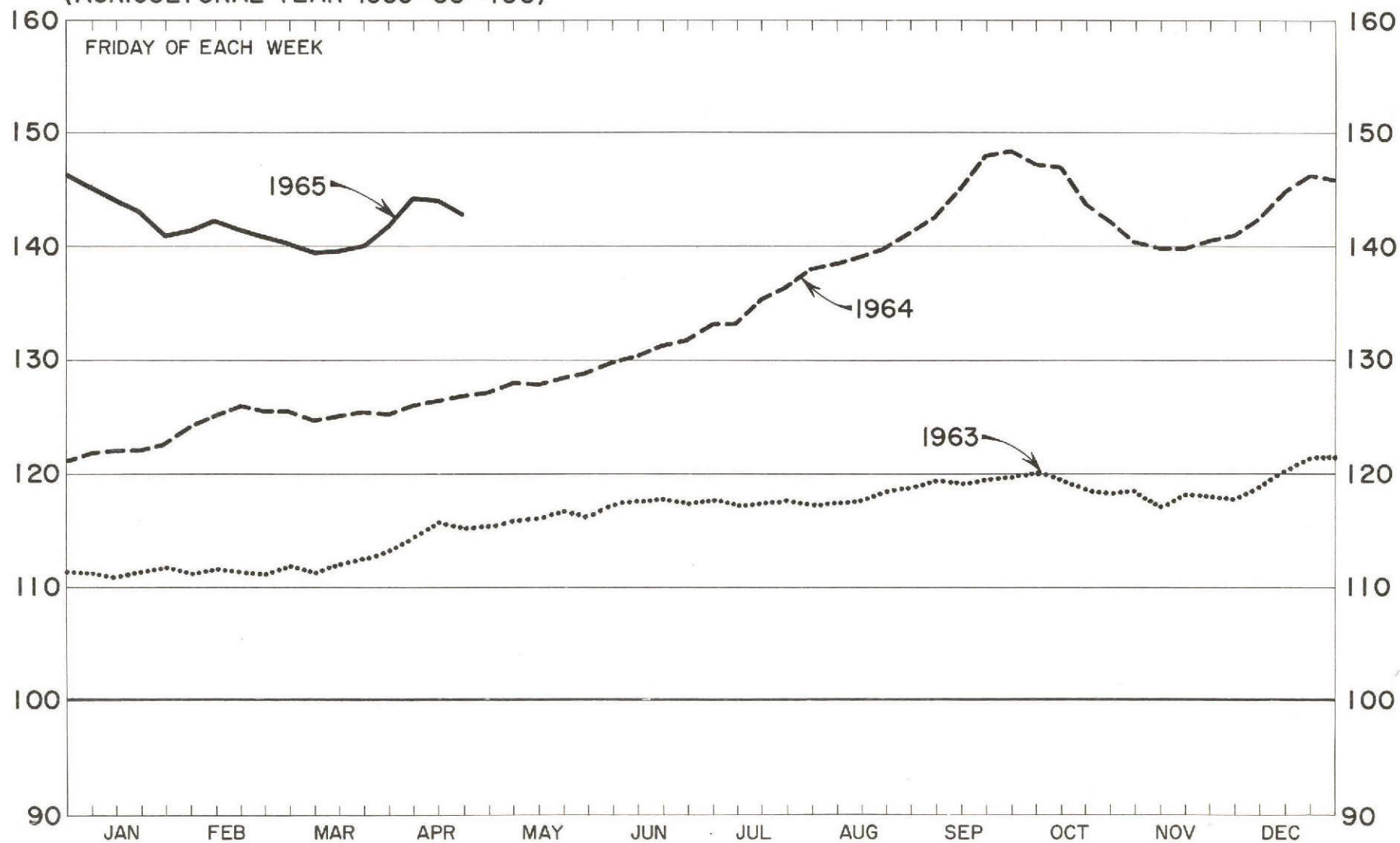
2. The main purpose of announcing the producers' prices for foodgrains is that the farmer should be guaranteed against any undue fall in prices so that he can go ahead with the task of increasing agricultural production without any apprehension of losses arising out of a decline in prices. As a guaranteed support price is more important to the producer than high but uncertain prices, support prices announced for 1964-65 contain an element of incentive and are higher than the average of market prices in the post-harvest seasons of the preceding three years. These may, therefore, be expected to induce the farmer to raise the productivity of his land. In order that the price incentive achieves the desired objective, it is also necessary to ensure that the resources like fertilizers, better seeds, pesticides, irrigation facilities, etc., are available in adequate quantities.

1/ Announcement by Ministry of Food and Agriculture, 1964

3. With the announcement of the support prices for the producer, it is necessary to make arrangements to purchase paddy and other foodgrains which are offered at support prices at the declared assembling points. The State Governments have therefore been requested to set up purchase centers at important assembling points, and also give wide publicity that all quantities of foodgrains offered at the announced support prices would be purchased by Government. Through such purchases Government would not only be able to assure the producer of the support prices that have been announced, but also build up stocks that can be usefully deployed in the lean season in preventing the prices from piercing the notified ceilings.

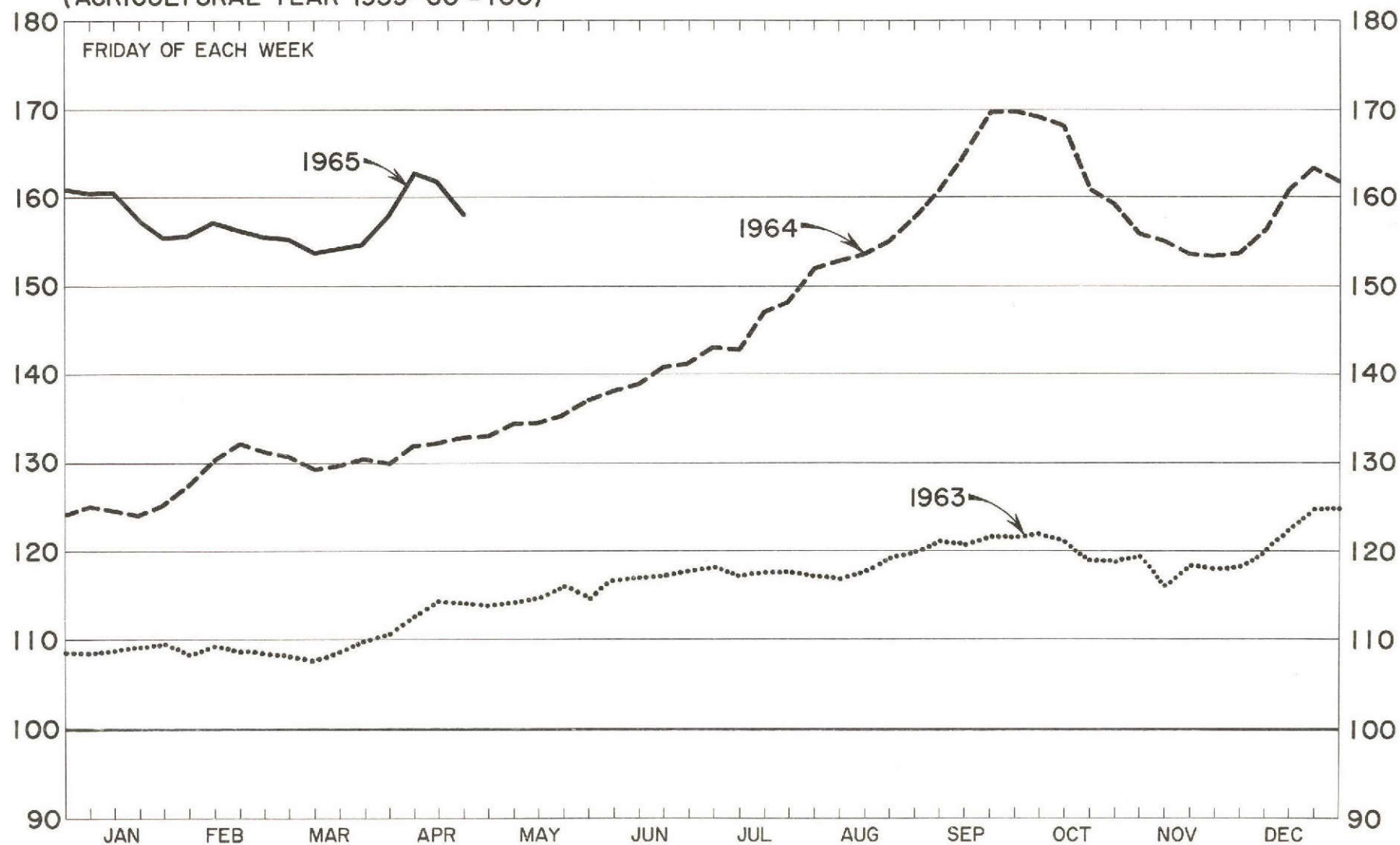
INDIA: ALL COMMODITIES - "THE ECONOMIC TIMES" ALL-INDIA WHOLESALE COMMODITY PRICE INDEX

(AGRICULTURAL YEAR 1959-60 = 100)



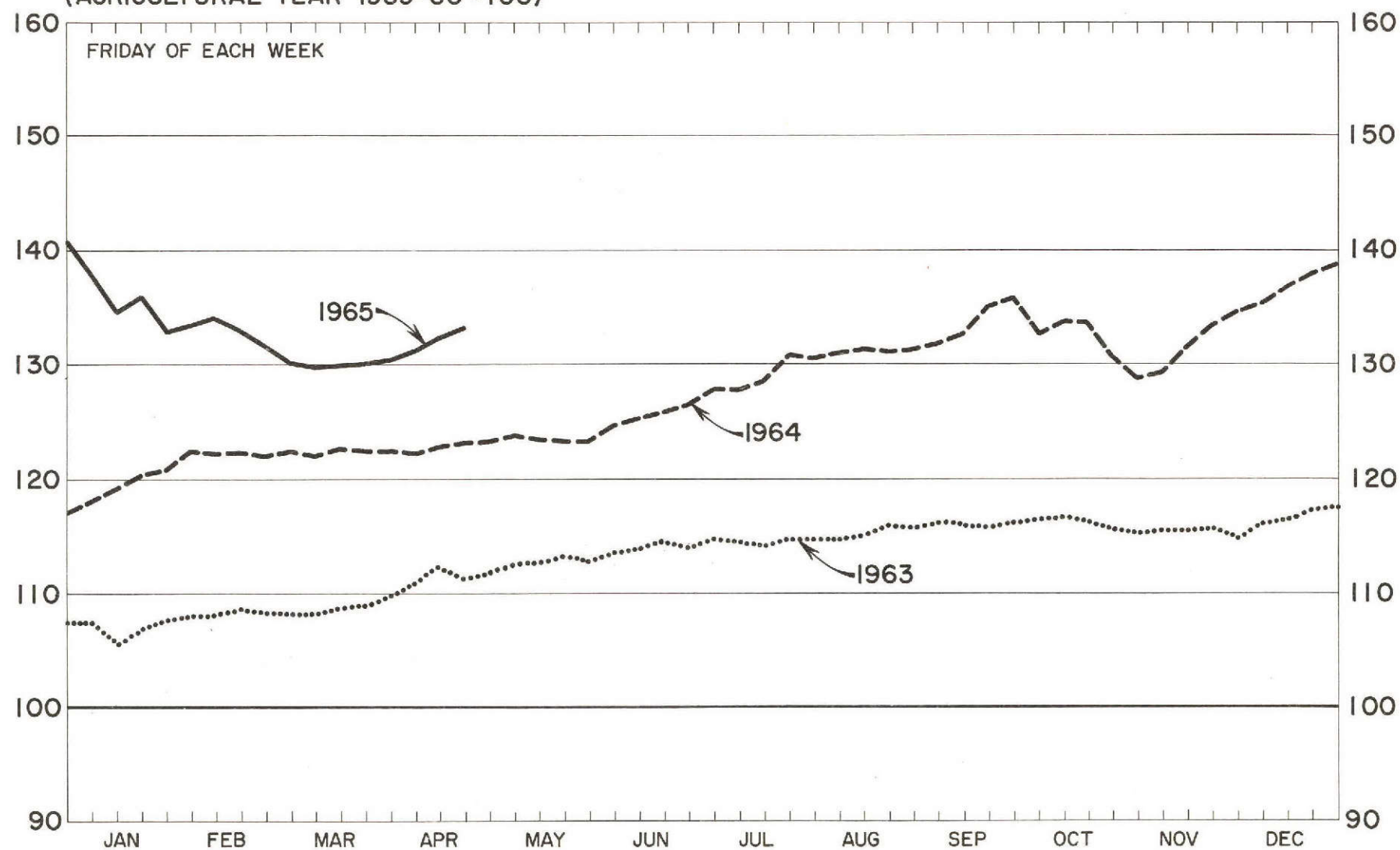
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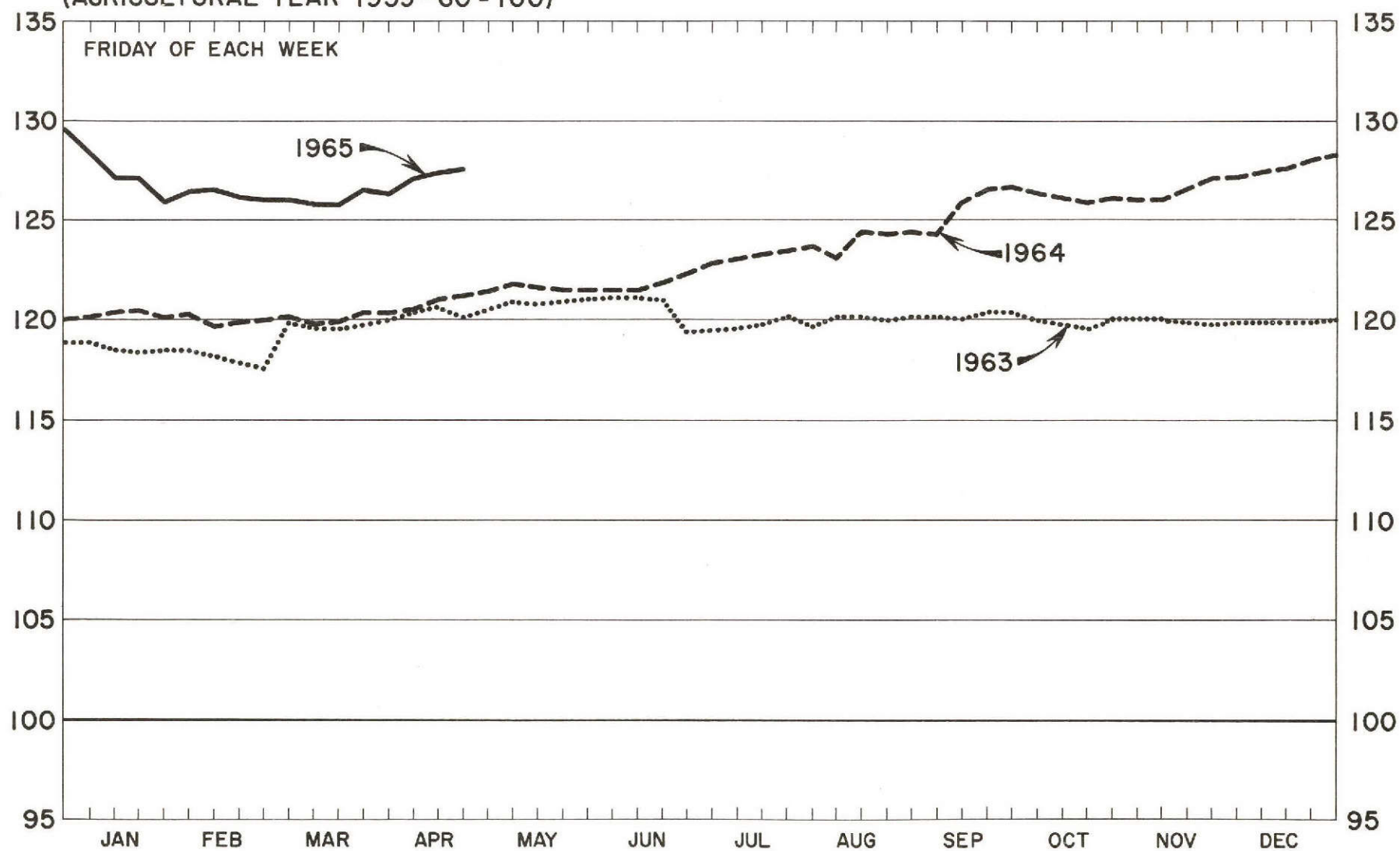
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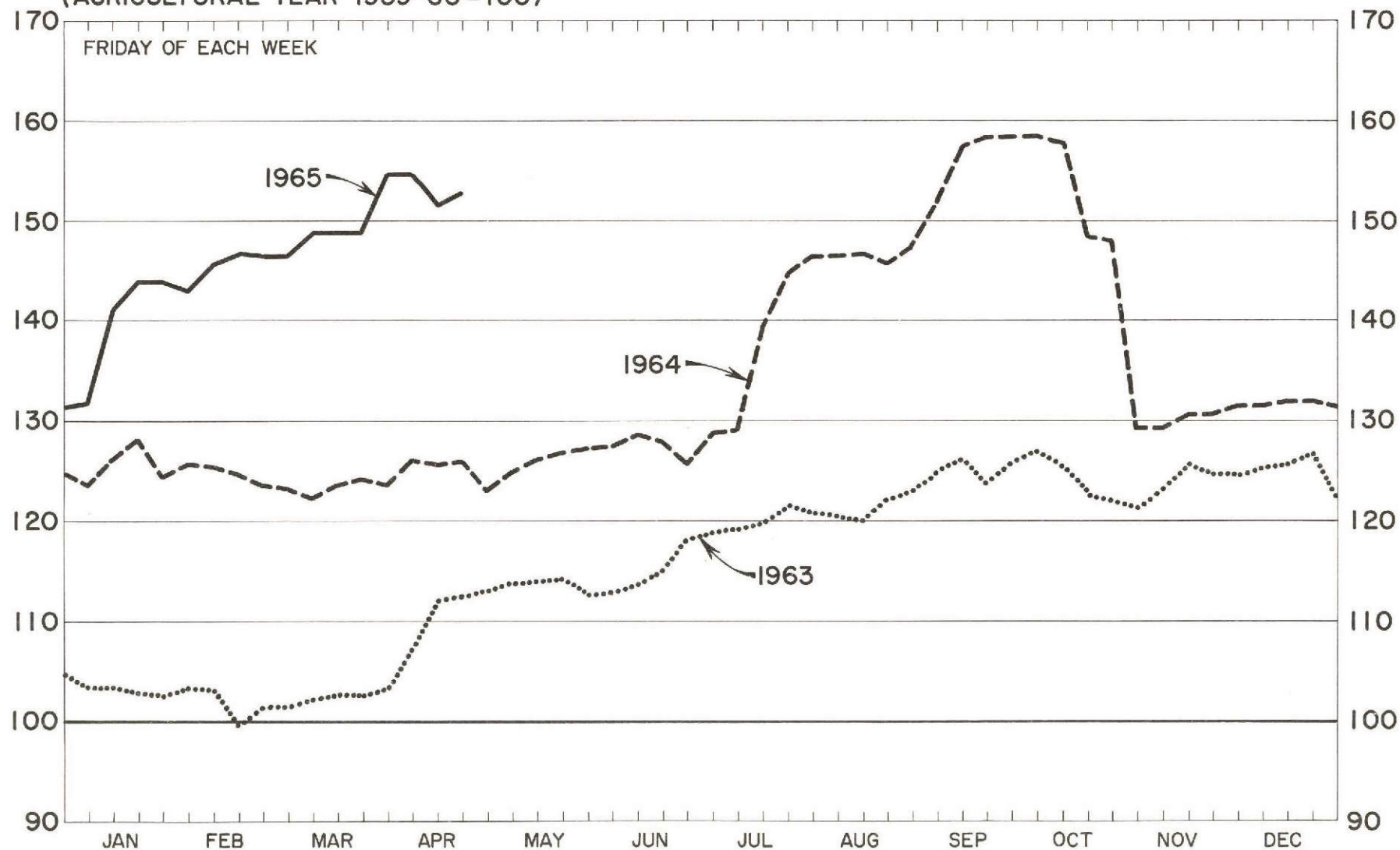
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(AGRICULTURAL YEAR 1959-60 = 100)



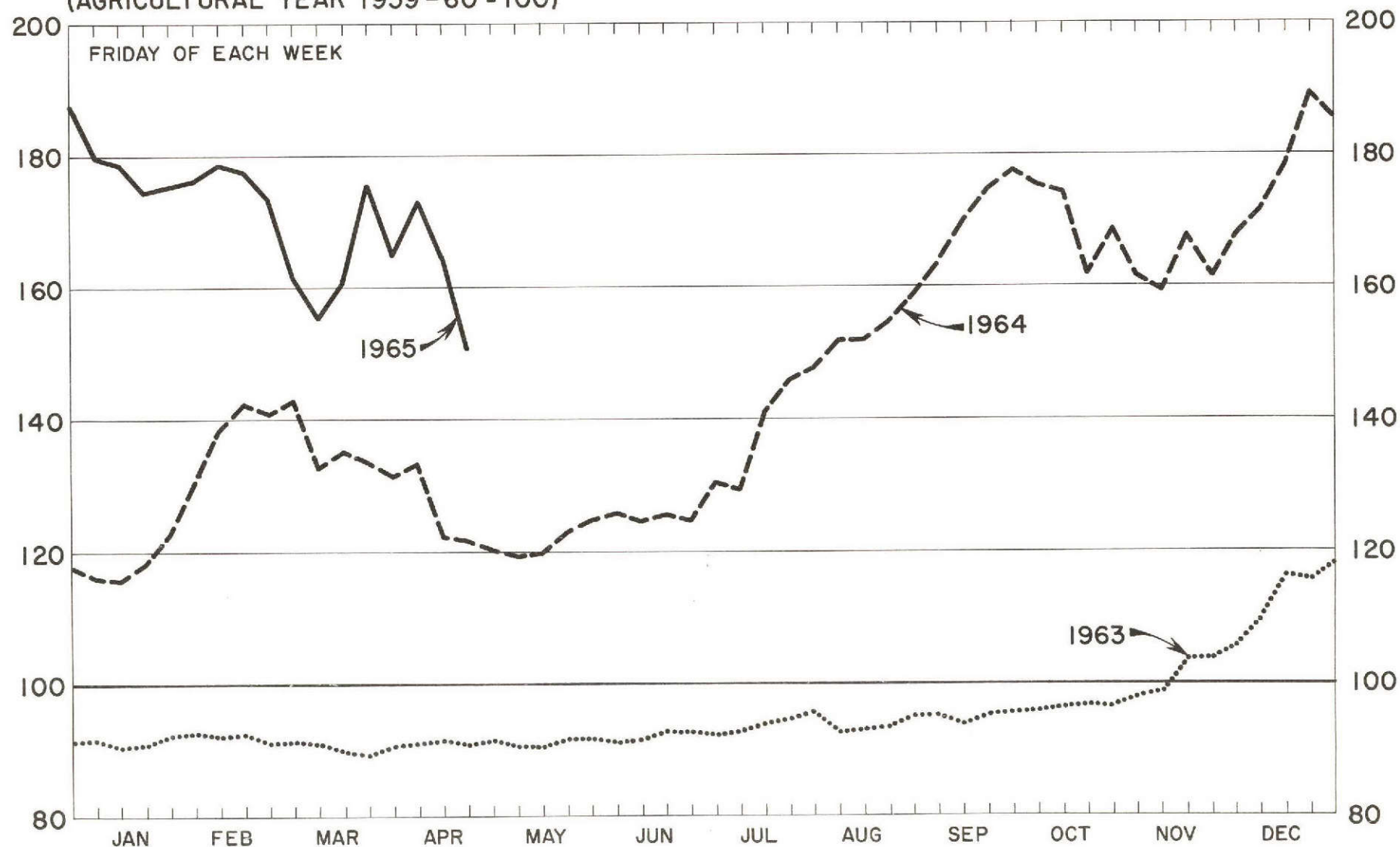
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(AGRICULTURAL YEAR 1959-60 = 100)



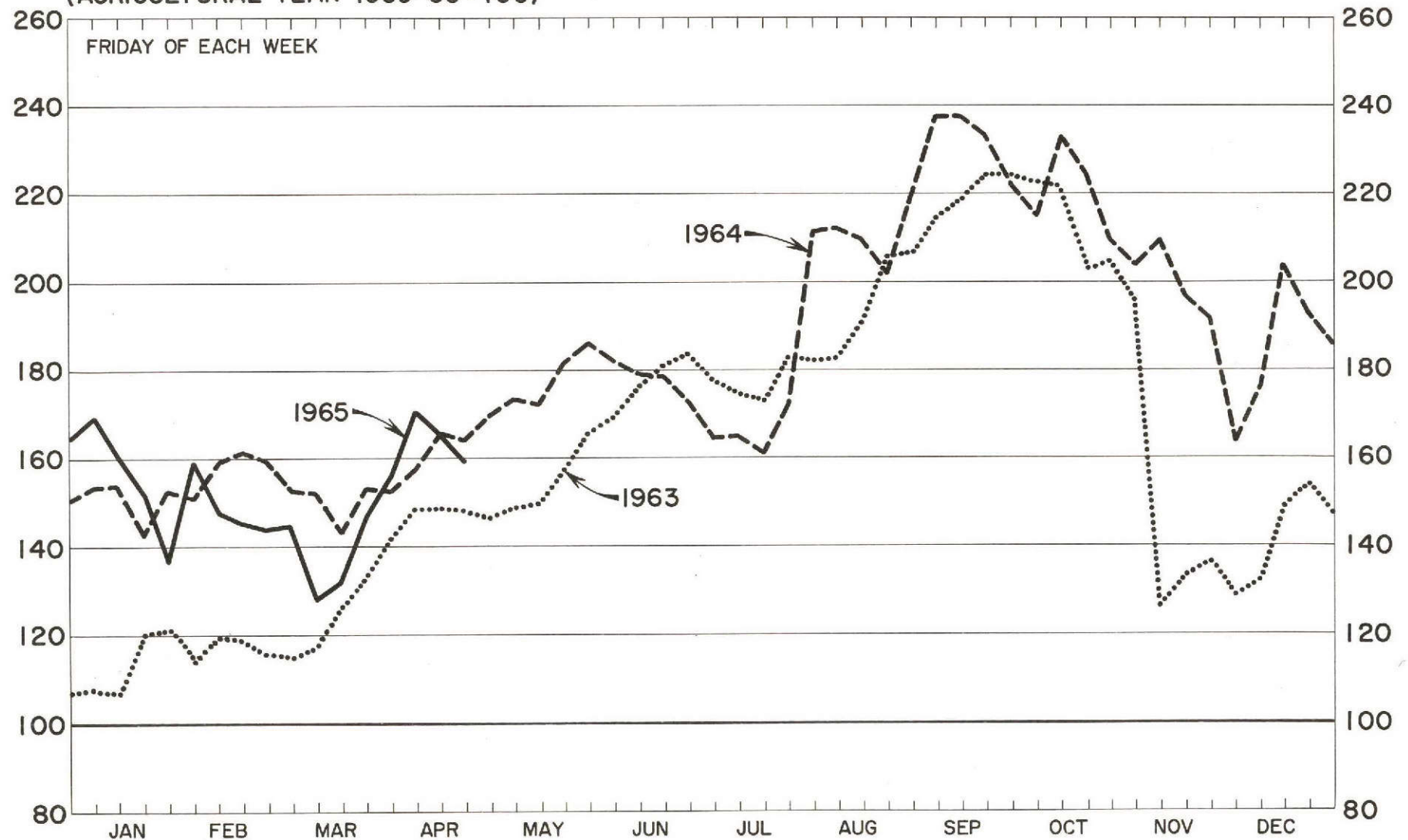
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(AGRICULTURAL YEAR 1959-60 = 100)



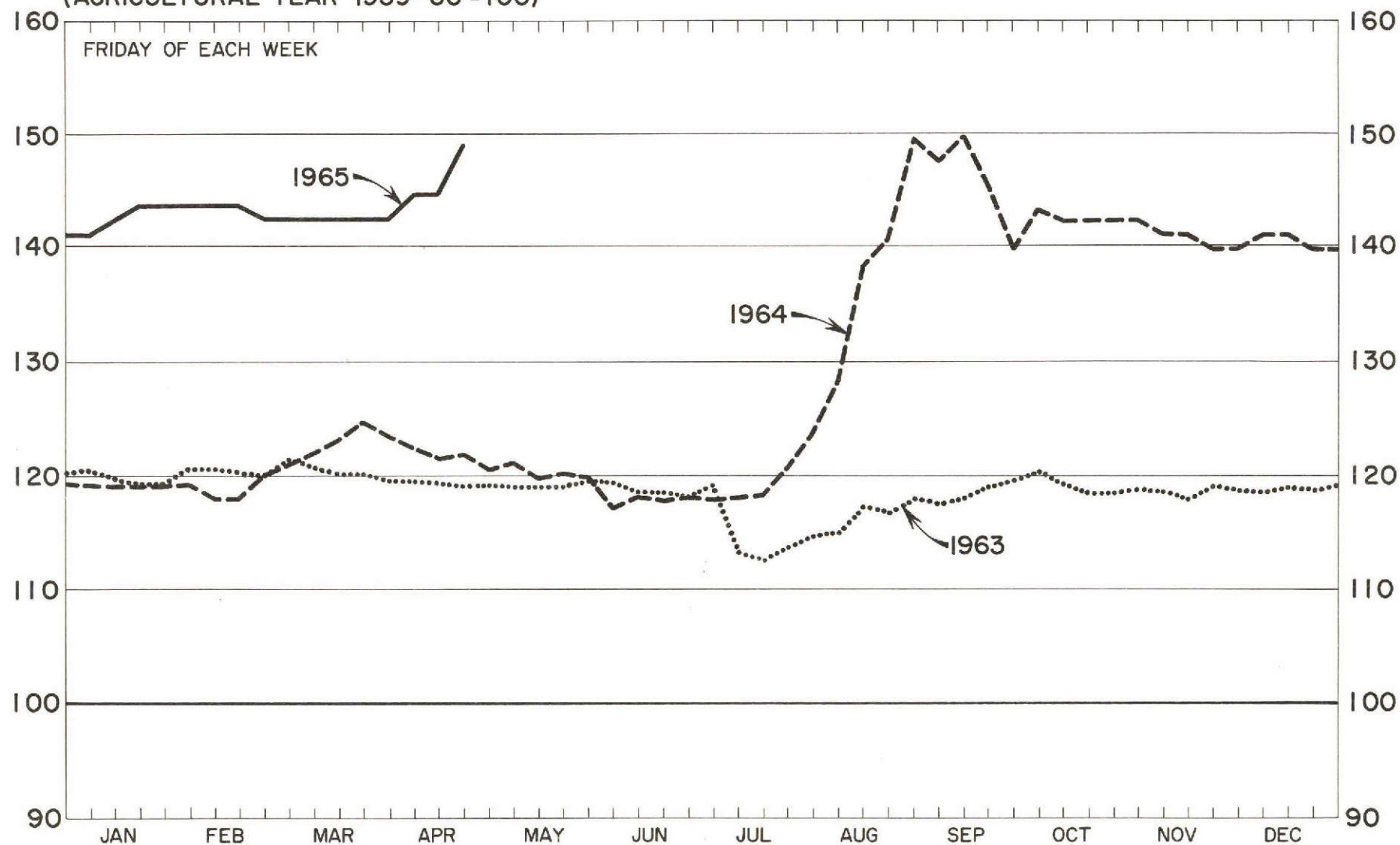
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(AGRICULTURAL YEAR 1959-60 = 100)



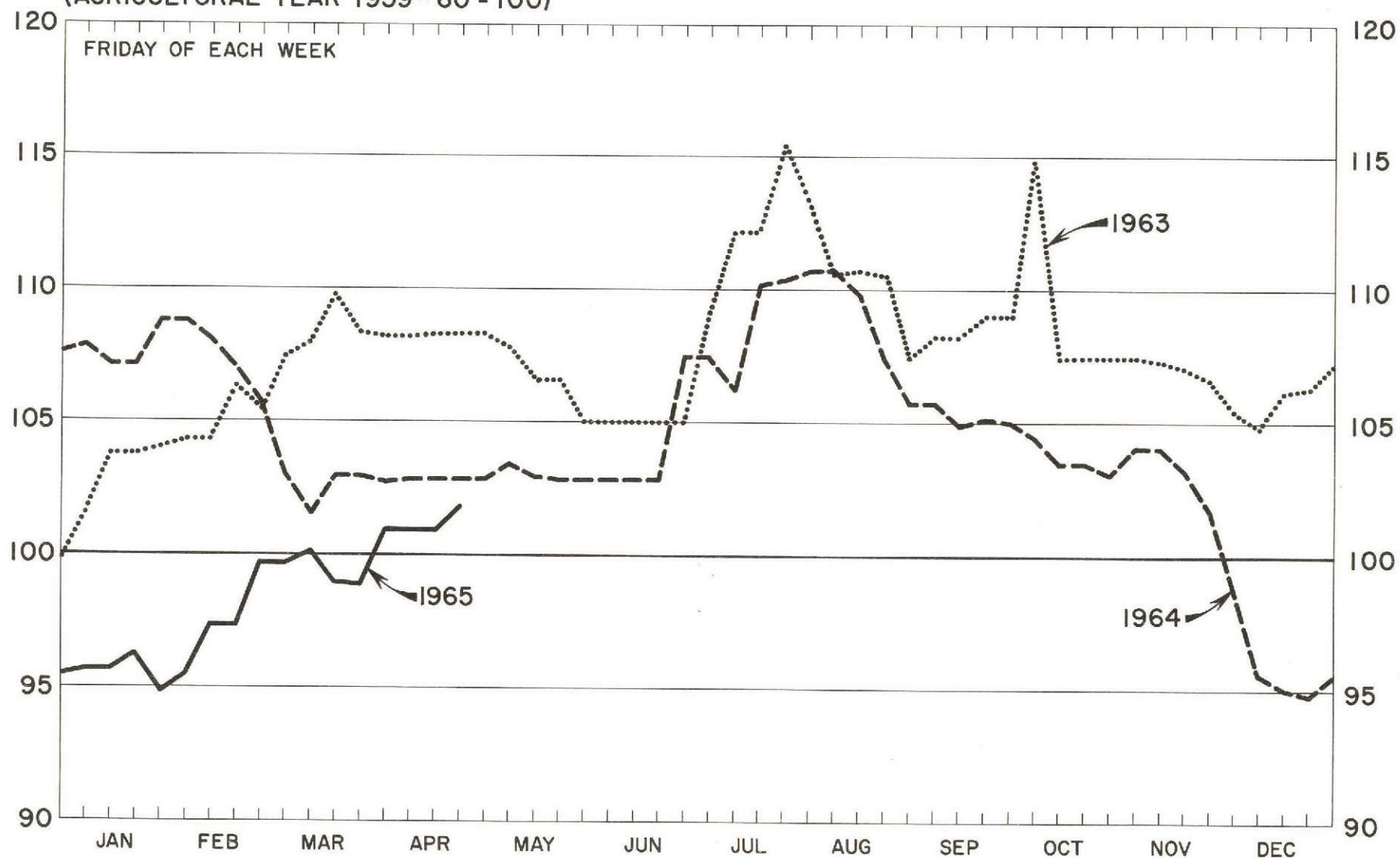
INDIA: RAW JUTE - "THE ECONOMIC TIMES" ALL-INDIA WHOLESALE COMMODITY PRICE INDEX

(AGRICULTURAL YEAR 1959-60 = 100)



INDIA: TEA - "THE ECONOMIC TIMES" ALL-INDIA WHOLESALE COMMODITY PRICE INDEX

(AGRICULTURAL YEAR 1959 - 60 = 100)



APPENDIX IX

AGRARIAN REFORM IN INDIA

Wolf Ladejinsky

APPENDIX IX

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APPENDIX IX

AGRARIAN REFORM IN INDIA

I. INTRODUCTION

1. Agrarian reform in India is more than a century old. Its history is replete with twists and turns, ranging from the early attempts to protect the cultivator's rights in the land, to "the land to the tiller" idea, to "cooperativization" of agriculture, and back to such fundamentals as security of tenure and controlled rents. The early history can be left to the historians. The stress here is on a few underlying principles of agrarian reform: the conditions which give rise to reform; India's attempts to deal with the problem since Independence; the success, failure and the consequences of these attempts; and the measures that would be required to ensure the implementation of the reforms in the years immediately ahead. Above all, the emphasis is on the fact that the Indian tenurial system is one of the elements that inhibit agricultural productivity. Any consideration of this problem involves such questions as who owns or doesn't own what land, the conditions under which land is held by those who do not own any, how the product is shared, and the effect on investments in agriculture and productivity. Additionally, and related to all of this, are the important questions of social status and political power in the countryside. For all these reasons, in India, where land is a scarce prime resource, and pressure on the land continues to mount, the farmers' rights in land are an issue of transcendent importance.

A. Agrarian Reform Defined

2. The term "agrarian reform" is a loose one. Broadly viewed, it is made up of a good many elements. It stands, to begin with, for redistribution of land among the landless, the creation of individual proprietorships, security of tenure, and controlled rents. But no single panacea meets the issue. For even redistribution of the land could not answer all the basic needs of the new owners unless it were accompanied by the necessary means to work and improve the land. With any new economic opportunities and psychological incentives which come with the possession of the land or security of tenure, there must go, hand in hand, a host of other developmental measures. This is illustrated by the underdevelopment of the land of those who have small holdings of their own. Any psychological incentives created by land reform must be put to use for productive purposes by augmenting the resources of the new owners. For this reason, agrarian reforms in the sense considered

here include also the following elements: favorable financial arrangements for land-purchases; better methods of cultivation through technical assistance; land consolidation of fragmented holdings; adequate credit; cooperative marketing facilities; farm price schemes to stimulate agricultural production, etc.

3. Though agrarian reform is a combination of a great many things, not all of them are of equal importance. Important though the other ingredients are, unless those who work the land own it or hold it securely, it could be asserted that all the rest will not have the anticipated results. Hence proprietorship and security of tenure are at the top of the list. It is because not all tenants in India (or elsewhere) are likely to become owners that "security of tenure" becomes a paramount issue. In the sense interpreted here, security of tenure is seen as calling for a set of conditions which tend to stimulate agricultural production, improve the economic conditions of the tenants, and preclude social unrest. The following then become the principal elements of "security of tenure": fixity of tenure, fair rentals and compensation for improvements made by the tenant.

4. The relationship between the two parties must be in the form of a written agreement, spelling out all the pertinent rights and obligations of the two parties. (This is an important point, for it is probably correct to say that even now the majority of the Indian tenants have no written contracts, carrying on at the whim of the landowners; there is no security of tenure under such an arrangement.) Crucial to the concept of security of tenure is that the period of tenure must be long enough for the tenant to realize the opportunities provided by the leased land, added resources and reasonable management. The obverse is true of a tenant with a short-term contract, which by itself spells uncertainty and insecurity. A contract can be as long as a lifetime (U.K.) or as short as one crop season (India); a five to six year period is considered a minimum. The right of renewal is considered to be a necessary part of the contract, unless the tenant "abuses" the land, and/or unless the owner takes back the land for legitimate self-cultivation. (In India, as we shall point out elsewhere, "self-cultivation" is often a misnomer.) Part of the arrangement of a fairly long lease is that the tenant is entitled to ample notice in advance of the expiration of the contract.

5. We indicated in paragraph 3 that the tenant must be compensated for improvements made with his own resources. Failing that, the tenant will have no incentive to improve the land if the ultimate beneficiary of the unexhausted value of the improvement is the owner or the new tenant. The sharing of the cost of inputs by owner and tenant is therefore thought to be a vital part of a sound tenancy agreement. (The practice of this kind of mutual investment is not, however, prevalent in India.) The resources of the tenant are minute, at best, and it would be idle to expect of him to use a volume and quality of inputs commensurate with good farm practices -- unless the landlord contributes no less than his share of all the input requisites. It is thought desirable, therefore, to stipulate in the contract that the

variable costs of inputs will be shared in proportion to the share of crops received. Therein lie two advantages: an incentive to the tenant to invest and an incentive to the owner to extend his interest in the land beyond mere rent collecting.

6. Perhaps the most important element in a tenurial arrangement is the amount of rental and how it is paid. It needs no arguing that the level of rents can make the difference between a tenant's incentive to invest or not invest in agricultural production, just as it can, in the final analysis, determine his standard of living and his ability to climb or not to climb the "agricultural ladder". (With respect to India, rentals before and since the reforms were and are admittedly unduly high, above the level justified by the other factors mentioned in this and the preceding paragraphs. The Indian reformers have recognized this and it explains why the prescribed rents, as distinguished from those actually paid, range in most cases from a high of one-third of the crop to a low of one-sixth.) How the rent is paid is also a matter of considerable importance to the tenant. Crop-sharing is seen as making economic sense only where there is a danger of recurring crop failures. Barring such exceptions, it may be said that part of security of tenure should be a fixed, monetary rent. In the long run this would be an incentive to produce more, retaining the increment of additional input in whatever form. Finally, secure tenure is envisaged as providing a system of arbitration to adjust the differences arising in landlord-tenant relationship. Such differences, whether relating to rents, sharing of inputs, crop-failures, etc., are inevitable, and proper arbitration procedures are required as a basic part of any tenancy improvement program. Taken all together, these are the main elements which serve to create "security of tenure".

B. Obstacles

7. Agrarian reforms are difficult to attain. In most cases land redistribution or putting land securely under the control of a non-owner are acts by a government imposing upon the landowners economic and legal terms unpalatable to them. In effect, such policies if carried out are revolutionary acts which pass property and redistribute income, political power and social status from one group of society to another. To the extent that legislative assemblies are still dominated by land-propertied classes, it is not difficult to see why both the enactment of appropriate legislation and its enforcement present formidable problems. It may be concluded that land reform has not only powerful economic implications, but commences essentially as a political question, running head-on into a fundamental conflict of interests between the "haves" and the "have-nots".

C. The Indian Setting

8. The conflict of interest takes place in a setting of which India is a classic example. It may be summed up as follows: many people on too little land; scarce land, yet concentrated in relatively few hands; capital invested in each unit of land is negligible and the land is generally underemployed; inadequate irrigation facilities and dependence upon mercy of nature; low yields, but high rents; poor farmers, but expensive farms; small holdings getting smaller under the rising pressure of population with no alternative occupations; inadequate tools, indebtedness and usury, malnutrition and illiteracy; and absence of the agricultural ladder. Probably three-fifths of the cultivating families have little or no margin for innovation and risk-taking, and it explains the prevalence of subsistence farming with its lack of dynamics or regenerative capacity. This setting has undergone some changes since Independence but it still holds true to a large degree even after the reforms came into being.

9. Tenancy as an institution has had a bad name in underdeveloped countries but it can be and is a sound economic system. Numerous examples can be cited where a cultivator prefers the tenant status, investing his capital in basic inputs of productivity rather than in the purchase of land. In such cases tenancy arrangements have created conditions mutually satisfactory to the tenant and owner. Before the reforms this was not true of India where the bargaining power between landlord and tenant was altogether on the side of the former. That tenancy conditions in India were not mutually satisfactory was alluded to in the preceding paragraph, but more specifically the following may be added. Whether rents were paid in cash or in kind, they exceeded more than 50 per cent of the crop, and rents as high as 60-70 per cent of the crop were no rarities.^{1/} In most cases the landlord paid only the land revenue, the tenant shouldering all the costs of production. There were also illegal contributions, too many to list, sanctioned by custom so as to remain in the good graces of the landlord and thereby insure the renewal of the lease. In the Zamindari areas, about which more later, sub-infeudation

^{1/} To cite a few examples: In the Punjab, before Independence, in the prevailing share-cropping areas the landlord's share could go as high as 80% of the crop. (H.D. Malaviya. Land Reforms in India, p. 164) The Tanjore Tenants and Pannaiyals (agricultural laborer) Ordinance of August 23, 1952, provided for a reduction of rentals by lowering the landlord's share to 60% of the crop; prior to that the tenants share ranged from 15-33% of the crop; in Hyderabad it was two-thirds to the landlord and one-third to the tenant.

or successive grades of intermediaries, or tenure holders, between the landlord and the actual cultivator, also tended to separate the latter from a considerable share of his meager share of the crop ^{1/}. The landlord's participation in the agricultural process was more often than not merely that of a collector of rents and whatever else he chose to impose upon the tenant. Leases were mostly short-time affairs, oral, but even if written, they did not provide the peasant with security of tenure. Indebtedness on usurious terms was the rule, and neither the cultivator nor the land could prosper. In such a scheme of things, there was no place either for peasant initiative or savings to innovate and improve the land.

10. The "have-nots" in India are made up of "pure" tenants, tenants with some land of their own, and a vast army of landless agricultural laborers. Just how many there are of each will be discussed in the next paragraph. What should be noted here is the unequal distribution of land ownership, area cultivated, and size of holdings. Thus, 53 per cent of the rural households of India own 16 per cent of the land, and at the other end of the scale, 7 per cent of the households own 52 per cent of the land. Twenty-two per cent of the households own no land at all. The data on area operated indicate the same disparity: 70 per cent of the households operate 16 per cent of the land and, at the other extreme, 9 per cent operate 51 per cent of the area ^{2/}. The third criterion also reveals great disparities. Seventy-eight per cent of the holdings are up to ten acres, but they cover only 33 per cent of the cultivated acreage; at the other extreme, 6 per cent of the holdings account for 35 per cent of the area. Since most of the big owners find it more profitable to lease out a great deal of their land rather than to cultivate it personally, the institution of tenancy is inevitable.

11. Accurate data on the number of tenants and the tenancy acreage are difficult to find, and data in general vary from source to source. According to the census of 1961 ^{3/}, in the country as a whole the percentage of pure tenants in terms of households and acreage held was 8 and 4 per cent, respectively; the respective figures for mixed tenancy were 15 and 18. There is reason to believe that both categories are greatly underestimated. The estimates may not always take into account the common practice of oral agreements, thus tenanted land appears as owner-cultivated; the definitions of "tenancy", "ownership" and "cultivation" are not always what they are; some land actually held by tenants is probably included by the respondents as area under "personal cultivation"; there is a rise in unrecorded share-cropping type of tenancy; important, too, is that since the onset of the reforms both

^{1/} H.D. Malaviya, Land Reforms in India, p. 103-105.

^{2/} Reports of the Committees of the Panel on Land Reforms. p. 3, Table 4. Planning Commission, 1959.

^{3/} P. Sharma, A Study of the Structural and Tenurial Aspects of Rural Economy in the Light of 1961 Census, Table 7.

landlord and tenant have been reluctant to speak frankly to casual inquiries - such as census takers, among others, about their tenurial arrangements. But even if the census figures are accepted at their face value, in about half of the States of India the land cultivated under pure and mixed tenancy ^{1/} range from 31 per cent in Bihar to 67 per cent in Kerala. According to the Planning Commission, in the late fifties about 20 per cent of the cultivated land was under various forms of tenancy and share-cropping arrangements.

12. A writer on the subject interpreting data of the National Sample Survey of 1954-55, concluded that "it is clear that the actual proportion of tenant cultivated area is much larger than any available statistics indicate. If only all kinds of tenants were given the ownership of the land cultivated by them with their own hand ... perhaps half or more of the cultivated land of India could be effected by this process alone" ^{2/}. In view of the developments in this field under the reforms, this estimate is undoubtedly on the high side. While nobody seems to be certain about the extent of tenancy in India at the present time, we are inclined to the view expressed by Dr. A.M. Khusro. He wrote that "recent researches permit the statement that while the total acreage under open tenancy in India might be about 12 per cent of all acreage, the acreage under camouflaged share-cropping tenures of an exploitative type is likely to be at least as much as that under open tenancy." ^{3/} On this basis, about 85 million acres of the total cultivated land of India is tenant-cultivated. But whatever the figure, there has been a decline of tenancy in India since the reforms. How much of it (in peasant-proprietorship areas) can be traced directly to the positive and negative effects of the reforms no one can say. But as will be pointed out elsewhere, the "de-tenancyzation" was only partly a result of the shift of tenants to an ownership base. The evidence points to the fact that only a small, if undetermined number, made the grade and acquired some of the "de-tenanted" land; the majority remained on the land as tenants or lost what little hold they had on the land.

13. India is a big country with a great variety of rental conditions, but, as we shall see, they have not responded to the provisions of the reform laws. One can argue that though fixed rents (so much produce or so many rupees per acre) remained unchanged, increased yields and higher prices have succeeded where the laws have failed ^{4/}. As against this, there is share-

^{1/} Mixed tenancy includes in part land also owned.

^{2/} Raj Krishna: Some Aspects of Land Reform and Economic Development in Land Tenure, Industrialization and Social Stability, The Marquette University Press, 1961. p. 228.

^{3/} A.M. Khusro, Rural Development, p. 12; mimeographed manuscript.

^{4/} A.M. Khusro, op. cit. p. 11.

cropping with its annual and mostly upward changes, and what might be called the fixed "moving" rent: as yields increase the landlord raises the rent accordingly. When these are juxtaposed against Dr. Khusro's argument, one sees no significant change in the rent-burden, exceptions notwithstanding. Overall, as a producer of the crop the cultivator continues to share the output in a manner that adds only little to his income, his standard of living, or investment capacity. His rentals are still nearer to 50 per cent of the crop, and whatever production inputs he applies are often - though not always - at his expense. Their problem is made worse since the majority of them cultivate only an acre or two.

14. The consequences in relation to agricultural production have been described on numerous occasions, all adding up to the tenants' limited capacity to innovate and improve the land. Perhaps the most recent study on the subject deals with one of the most tenant-ridden districts of Madras. We have reference to Effects of Tenure on Use of Improved Production Practices on Paddy in Thanjavur (Tanjore) District (February 1964), prepared by the Ford Foundation's Intensive Agricultural Development Program (IADP). The burden of the findings is that, while the improved packages of practices could indeed raise the tenant's productivity, his obligations to the landlord are such that it neither pays him nor has he the means to apply the full package of practices. Since he must, perforce, use only a limited part of the available inputs, his increase in yields are correspondingly lower and so is his net gain. Under the circumstances, his burden of risk-taking as a function of innovation becomes heavy enough to preclude him from becoming a full participant of the program. We should note that the study assumes that the tenants pay the prescribed rent of 40 per cent of the crop. In practice, the rent is closer to 60 than to 40 per cent.

D. Fragmentation and Consolidation^{1/}

15. At first glance, fragmentation and land consolidation lie outside the immediate land reform considerations. Yet, where fragmentation affects so adversely all the cultivators of India, including tenants, it becomes a "legitimate" subject of agrarian reform in its broad sense. Most operating holdings in India are small ^{2/}, but the difficulty of working them is greatly accentuated by their fragmentation to a point that, in the expression of a farmer, "the earth is crumbling under our feet". Fragmentation refers to land scattered throughout the village area in plots separated by land in the possession of others and it must not be confused with excessive subdivision.

^{1/} The information contained in this section is derived mainly from Consolidation of Holdings, prepared by Mr. Sundar Singh. Planning Commission, 1957.

^{2/} About 63 per cent of the holdings are less than 5 acres each, and about 40 per cent of these are less than 2.5 acres each.

The former connotes holdings which, irrespective of their size, are broken up into scattered fragments; the latter, holdings that repeated partition has made dangerously small. It is not often that one finds a holding that is not split up into at least three or four plots. On an all-national basis, the average holding has approximately 6 plots of 1.1 acres each. In individual cases fragmentation can assume a grotesque form; this was underscored by that mine of information, the Report of the Royal Commission on Agriculture in India. The Commission noted that:

"In extreme cases the result is ludicrous: in Ratnagiri, for instance the size of individual plots is sometimes as small as 1/160th of an acre... In the Punjab, fields have been found over a mile long and but a few yards wide, while areas have been brought to notice where fragmentation has been carried so far as effectively to prevent all attempts at cultivation." 1/

16. The origin of fragmentation cannot be attributed directly to India's inheritance laws. According to the latter, the land is equally divided among the heirs, usually the sons. In theory, then, if the inherited land consists of three fields to be divided among three heirs, each receives one field. The practice is quite different, each getting one-third of each field. This is done to insure to each one a share in each kind of land, since very often the quality of the land is not uniform. The result is that successive generations descending from a common ancestor inherit not only smaller shares of his land but inherit that land broken up into smaller and smaller scattered plots. Fragmentation, therefore, is not a result of the inheritance law as such but of the method by which the property is divided among the heirs.

17. For the country's agricultural economy, whether owner or tenant-operated, fragmentation is an unmitigated evil for which no advantages can be claimed. Time is wasted and extra expense involved in moving workers, animals, seed and fertilizer implements, to and from farmstead, or from one field to another. Supervision is made more difficult, depredation of animals and birds is harder to control; expenses on water supply, buildings, threshing floors, etc., are often much greater; comprehensive irrigation and drainage facilities or other measures of improvement become extremely difficult. The sum total of these disadvantages seriously impede agricultural progress and act as a deterrent to full utilization of land.

18. India's answer to fragmentation is consolidation. The term stands for amalgamation and redistribution of the fragmented land so as to reduce the number of plots in the holdings, thus making them more compact. Consolidation aims, therefore, at giving every rightholder a compact area equivalent in value to what he held before in scattered plots. It neither

1/ Report of the Royal Commission on Agriculture in India, p. 134. London, 1928.

aims nor results in creating economic holdings where they did not exist before. Consolidation is a difficult process, particularly when the stress is not merely on regrouping of scattered plots into compact ones, but also as a means to better land use through more efficient water use, better cropping patterns and so on. Consolidation is made up of a number of phases, most of them presenting formidable problems. The so-called "preliminary steps" are indeed difficult to take, since they involve securing an agreement among the villagers to undertake consolidation. Voluntary agreements are not easy to secure; what is involved is the conviction on the part of the farmer that in the process of consolidation (correction of records, land measurements, land classification, land valuation and re-assignment of the consolidated land) his interest will be protected. The touchiest of questions is land valuation. While it is a truism to say that plots of land vary greatly in the quality of soil, facilities for irrigation, productivity and distance from the village, it is a Herculean task to evolve methods of valuation by which different classes of land can be reduced to a comparable basis. Unless valuation of land satisfies the community, consolidation cannot succeed. On the other hand, if correctly valued, the possibilities of disputes and discontent are reduced to a minimum.

19. Consolidation in India, begun in the middle of the 19th century, was very slowly proceeding on a voluntary basis, and all villagers had to agree to the scheme. Compulsion was gradually introduced, so that consolidation became obligatory for a village if a certain percentage of land owners holding a certain percentage of area had agreed to consolidate. More recently, virtually every State, through legislative enactments, has the authority to undertake consolidation where it deems necessary. This factor, and the keen interest displayed by the Planning Commission, have brought about considerable progress. Detailed and exact data on consolidation are not readily available, but whatever is available seems to justify the above claim. By the end of the Second Plan, about 30 million acres had been consolidated. The target for the Third Plan was 31 million; of this, 15 million acres had been consolidated during the first two years, and 8 million acres was to have been consolidated in 1962-63^{1/}. We do not know how much of India's 320 million acres of cultivated land are in need of consolidation, but, whatever it is, considering the extremely difficult technical, economic and human problems which accompany consolidation, the figures cited are a very considerable achievement. Punjab is the star performer, accounting for almost half of the total, with Uttar Pradesh and Madhya Pradesh following in order of importance. Our impression is that the cost of consolidation is not excessive and has never been a serious problem. Neither in talks with the farmers nor in the literature on the subject has this subject been raised as a limiting factor. Moreover, though in theory the cultivator is responsible for the cost, a portion of it is actually met by the State Governments. And it is interesting to note that the land revenue is

^{1/} The Third Plan Mid-Term Appraisal, p. 101. Planning Commission, November 1963.

not raised following consolidation, the theory being - and this is only a theory - that the value of the consolidated land has not undergone any significant change.

20. What happens to a village after consolidation can be seen at a glance from the two attached maps. They show the layout of the same average village of 97¹/₄ acres before and after consolidation. In the words of the commentator:^{1/}

"Even the first look at these maps will show the tremendous change that has been brought about as a result of consolidation. The previous fields, some minute, others large, and all of irregular and haphazard shapes, have been completely replaced by rectangular fields of a uniform size. Similarly, roads have been straightened and properly laid out wherever needed and regular paths have been provided to the holdings of individual owners ... "

21. Not in all instances was it possible to convert the scattered plots into single blocks, but the total number of plots in the village has been reduced from 1,398 to 426, or an average of more than two acres per plot as against 0.7 of an acre per plot before consolidation. The advantages of consolidation along such lines as operational and administrative efficiency, extension of cultivation, increased productivity and social gains do not call for much comment. One socio-economic gain, however, should be noted. Indian villages abound with costly - often bloody - and long-drawn out disputes about boundaries, right of passage for men and beast and water courses. Through consolidation much of this has been greatly reduced.

22. Considering that the average holding in India is still made up of six scattered plots, much remains to be done. Much, too, needs to be done to preclude further fragmentation, so as to avoid wherever possible the very complicated consolidation task. What is called for, therefore, is preventive action. States have recognized this by attempting to regulate partitions, transfers and leases of land fragmented or in danger of being fragmented. In Bombay, for example, the principal legislative measure is the "standard area", or a plot of a size below which profitable cultivation is not possible. For dry crops, the "standard area", depending upon the region, runs from 1 to 4 acres; rice, from 0.7 to 1 acre, and grasslands from 2 to 6 acres. A plot smaller than the "standard area" is declared a "fragment" and can be transferred only to a landholder of a contiguous piece of land. It cannot be partitioned. A number of other provisions define the eligibility-priorities of persons who are to use the fragments. One might note that the priority is given to the tenant of the holding or his heirs. The State of Bihar seeks to prevent the transfer of a fragment to persons other than a co-sharer or one with contiguous

^{1/} The Third Plan Mid-Term Appraisal, p. 101. Planning Commission, November 1963.

land. Yet, this measure is of dubious validity because partition of a fragment is allowed. The one useful provision is that a consolidated holding cannot be transferred in a way that might create fragments. With variations, most other states have enacted somewhat similar legislation of a preventive kind.

23. Enforcement, as usual, varies from state to state. The measures can be enforced, and they are in some states, particularly Bombay. Naturally, there are many evasions, caused by administrative, economic and social problems. When carefully explained, the farmer can readily see the advantages of consolidation or those of preventive action, but it may not suffice under certain circumstances. Despite the regulations, an owner of a compact field may have a compelling need to sell off a piece of land informally. There is always a buyer for it, because with holdings small and alternative occupations at a premium, a fragment of land assumes great importance. Consolidated land can be, and is occasionally, held by co-shares. This in turn may lead to informal partition of the land, which is administratively difficult to enforce. Thus, even wisely designed measures to create compact holdings may run into purely individual problems of the character just mentioned. It is obvious that both consolidation and preventive action is essentially a never-ending process of careful adjustment and change in tune with conditions peculiar to the land arrangement, extent of the acreage and customs prevailing in a village community. But in the main, it may be said that the village has come to recognize the beneficence of these schemes.

II. INDIAN REFORMS SINCE INDEPENDENCE

A. Zamindari Abolition

24. Agrarian reform in India falls into two broad categories: (a) Zamindari abolition; and (b) changes in the tenurial system in the rayotwari or owner-proprietorship areas. The Zamindari system was a by-product of the British rule and covered about 40 per cent of India. Under it, a zamindar, or an intermediary between the British administration and the actual cultivator, was given the right to collect a fixed revenue on behalf of the administration. In return, he was not only permitted to keep one-tenth ^{1/} of the revenue but he was also recognized as the proprietor of the revenue-bearing land. At Independence, this system covered about half of the cultivated land in former British India and Princely States. In time, as the population pressure on the

^{1/} In the temporary settled areas (Uttar Pradesh and Madhya Pradesh) the zamindars retained a much larger proportion.

land kept rising, the system created some of the worst abuses that can be perpetrated upon a peasantry, including a long chain of non-cultivating sub-lessees, all getting a share of an inflated rent from the same piece of land and the same cultivator.

25. The following case shows the system's dis-incentive character, and how badly it affected agricultural production. Between the zamindar of a certain estate of 2,000 acres and 360 cultivating tenants there were four groups of intermediaries, each with its own distinctive nomenclature. The principal zamindar received 8.3 per cent of the total rent paid by the tenant. The four individuals of the group directly under the zamindar received a total of 12.5 per cent; the 20, 80 and 160 individuals of the three subsequent groups received 20.9, 25.0 and 33.3 per cent, respectively. In rupee terms, this meant that, though for revenue purposes, the estate was assessed at 200 rupees, the principal zamindar and the 264 other intermediaries extracted from the tenants 4,800 rupees^{1/}. To this should be added a long list of illegal dues imposed by the higher groups, everybody protecting his position vis-a-vis the group above him. These tiers of interest were often many times four, but whether four or eighteen as the author cites, they all formed "a Jacob's ladder of which each rung is occupied not by an angel but by a tenure-holder, and the topmost by the proprietor".^{2/} They were all middle-men, rent-collectors, in no way interested in agricultural progress, draining the land of its resources. On the other hand, so little was left for the actual cultivators and so insecure was their position that they had neither the incentive nor the means to improve the land and raise agricultural productivity.

26. The British did not plan it that way, and between 1859 and 1935 they introduced more than a dozen Tenancy Acts to rid the system of its grosser abuses and absurdities, by giving the tenants a measure of protection. They succeeded in some States (Bengal) and failed in many more, always working within the zamindari system, trying to preserve rather than abolish it. It remained for the Indian Government after Independence to do away with the system altogether as the first order of agrarian reform. Within six years (1951-1956), and despite the opposition and administrative problems, the zamindari tenures were virtually abolished. The abolition of the system is important for what it has achieved and also in relation to the slower and less successful progress in dealing with tenancy problems in non-zamindari areas. The zamindari system was the weakest enemy to attack, because it was imposed by a foreign power which handed out property rights to which neither the British nor the recipients had any claim. Thus, abolition of the system became one of the symbols of freedom from the British rule, and it is not surprising that as that rule went, the zamindari system went along with it.

1/ R. Mukerjee: Land Problems in India, p. 111

2/ Ibid. p. 98

27. What of the consequences of the abolition? Some students of the reform minimize or deny altogether its economic benefits, while crediting it with social significance. This much can be said. Tenures have been simplified; in the Uttar Pradesh, for instance, out of the chaos of 40 types of tenures only 3 types have emerged. The tenants pay land revenue directly to the Government. But since the revenue is equivalent to the rent they used to pay the zamindars, the reform is much criticized ^{1/}. The tenants, the arguments run, have exchanged one landlord for another, the State, and the State benefits financially from the arrangement. The latter is true; in the typical case of Uttar Pradesh, the annual land revenue of 20 crores is considerably above what the state used to collect from the principal intermediaries. The rationale behind this is twofold: (a) land revenue had not changed in years and is, in fact, low when compared to the rise in prices during the same period, and (b) the government uses part of the revenue as compensation for the intermediaries ^{2/} - a basic provision of the reform - and for developmental purposes.

28. The critics do not give sufficient weight to these facts: many of the tenants are securely on the land; they are no longer burdened by a host of illegal exactions, and some have acquired ownership from the State for a moderate purchase price. To be sure, considering the difference in conditions between States and within States, not all have benefited equally, and not all of the estimated 20 million cultivators affected have received permanent, heritable and transferable rights without strings attached. But overall, the effort was undeniably the first and major step -- the clearing of the ground - toward a reconstruction of Indian agriculture. The abolition provided many of the cultivators with incentive, freedom from fear, freedom from being ordered around, and an enhanced political and social standing which they did not enjoy before. At the same time, recalling our experience in the typical ex-zamindar Aligarh District, one need not tire repeating that small owners or tenants with occupancy rights paying low rentals (land revenue in this case) still meet with difficulties searching for the means to invest and produce more and better crops.

^{1/} Daniel Thorner, The Agrarian Prospect in India and Walter C. Neale, Economic Change in Rural India (Land Tenure and Reform in Uttar Pradesh 1800-1955).

^{2/} Compensation is based on the net income of an intermediary at the time of the acquisition of rights by the State. The multiple is higher in cases of lower income groups. In the Uttar Pradesh, compensation varies from 8 to 2 times the net income and in Bihar, from 3 to 20 times. In some States, compensation is paid in cash, in others in bonds. The total compensation to all the intermediaries is estimated at Rs. 641 crores, of which Rs. 225 crores has been paid off. (Progress of Land Reform, p. 4, Table I, Planning Commission 1963).

B. Tenancy Reforms

29. Getting rid of the zamindari system did not put an end to tenancy in India. Even in the ex-zamindari areas, the "home farms" retained by the former middlemen continued to be operated by tenants. Above all, there were millions of tenants in the "rayotwari" areas where owner-proprietorship had long predominated. Prior to Independence, numerous attempts had been made to relieve the conditions of the tenants in the rayotwari areas through some form of land occupancy rights. In the main, however, the practical effects of the measures were to safeguard the rights of the owners, while denying occupancy rights to many cultivators. There were numerous exceptions to this, but, on the eve of the First Five Year Plan, the great majority of the tenants didn't enjoy security of tenure, the prevailing conditions being as described in paragraph 9.

30. In its First Five Year Plan begun in 1951, the Planning Commission laid down the general policy for new legislative enactments on tenancy. The goals of that policy centered on the following: (a) security of tenure subject to the right of an owner to resume a limited acreage for self-cultivation; (b) reduction of rents; (c) conversion of non-resumable land under tenancies into ownership; and (d) ceiling on land ownership so that the excess above the ceiling might form a pool of land for redistribution among tenants and farmhands. In addition, there were a number of more specific guidelines: the resumed acreage had to be limited only to bona fide cultivators; eviction of tenants had to be avoided wherever possible; rents were not to exceed one-fifth or one-fourth of the crop, and land purchase prices had to be so fixed as not to exceed a new owner's capacity to meet them.

31. Agrarian reform like agricultural policy in general, is constitutionally a function of the States; and the Planning Commission's reform policies or guidance are not binding upon the States. However, under the continuous prodding of the Planning Commission the States have enacted a voluminous body of legislation, each State acting in its own way. Hence there is a great variety in the content of the reforms and manner of enforcement, although the stated principal goals are seemingly the same. The question is: How successful or unsuccessful have these enactments been after nearly 15 years of effort?

32. The answer is that, in the main, the reforms have been in serious trouble. This is not to say that significantly useful changes have not taken place. Along with the zamindars, the jagirdars (counterparts of the former in Rajasthan, Hyderabad, etc.) have gone; and even some of the big landlords of the South are no longer what they used to be. Many tenants acquired lands following the zamindari abolition, and some have acquired some land and some security of tenure under the tenancy reforms we are about to discuss. But as against all of this there are the delays in enacting reform laws, faulty content of the laws, and half-hearted enforcement, and the widespread evictions of tenants traceable to the legislation itself. To this should be added the

prevalent failure of rental provisions, and the wholesale evasion of the ceiling provisions, upon which the new ownership was to rest. Reform was in the air before the enactment of the laws, and this, combined with the long delays in passing a law, made it possible for the landlords to reduce the number of claimants for rights in the land by evicting tenants or shifting them to the status of farmhands. The same held true after the laws went into effect. This doesn't mean that all tenants were thus treated, but there is enough evidence that for large numbers the reforms were far from a blessing.

33. The eviction movement has been widespread, but data on how many tenants have been affected are not available; what is available relates to the early 1950's and to a few States only. Nevertheless, the practices described below are not only typical of the States mentioned; they illuminate the eviction problem in the countryside as a whole. For the former States of Bombay and Hyderabad, the Planning Commission's Panel on Land Reform ^{1/} gives the following information: in Bombay, between 1948 and 1951, the number of "protected" tenants ^{2/} declined from 1.7 million to 1.3 million, i.e., by 20 per cent; in Hyderabad, between 1951 and 1955, the number declined by 57 per cent and the area held by them by 59 per cent. In a study of the reform movement at Hyderabad, the best of its kind in India to date, we find that of every 100 protected tenants in 1951, by 1954 only 45 per cent still held the same status; 12 per cent purchased their land, 2.4 per cent had been legally evicted; 22 per cent had been illegally evicted, and 17 per cent had "voluntarily surrendered" their claims to the land.^{3/} The author states: "The so-called voluntary surrenders are very often a subtle form of illegal evictions and only a proportion of these surrenders are genuine", and "The implementation of tenancy legislation is a function of the degree of consciousness among the tenantry". ^{4/} The author concludes his findings in these words:

"Surrenders sometimes are genuinely and purely voluntary because many a tenant is completely reconciled to the idea that the landlord, after all, has every right to have his land back, notwithstanding the law... Sometimes there have been offers of money by the landlords in return for voluntary surrender of land ... All too often ... the landlord is in a stronger position vis-a-vis the tenant and has a greater capacity to rally official (village) support ... a tenant has often thought it fit that he should surrender the land to maintain good relations, particularly if by this action he can make certain that he could continue his lease on another part of the land

^{1/} Panel, 1956, p. 36.

^{2/} Tenants who are supposed to be protected by law against eviction.

^{3/} A.H. Khusro: Economic and Social Effects of Jagirdari Abolition and Land Reforms in Hyderabad, p. 169.

^{4/} Ibid. p. 169.

.... Many a landlord has often taken advantage of the ignorance of his protected tenant and has asked him to leave on the ground that the period of lease was over! Notwithstanding the fact that a protected tenancy, by definition, is one which is free from the question of time duration, many a tenant has left the land lest he should be involved in litigation with the landlord. Cases have been noticed where tenants have had to leave due to their inability to pay enhanced rents - a device used by many landlords to eject them, notwithstanding the law ... in plenty of cases force has been used for evictions ..." 1/

34. The emphasis in the above is largely on poor or total lack of enforcement, the superior position of the landowner and the inferior social and economic status of the tenant in the village. Additionally, the laws are very complex and the "bulk of the peasantry find it difficult to understand them. Moreover, after the enactment of a law, it was generally left to the tenants and the landlords to take advantage of the provisions of the new legislations and no organized effort was made to make the tenants understand the law and to ensure that they take advantage of it".2/ There is, however, another side to the story, namely, the faulty content of the legislation itself and of some of the questionable underlying principles upon which the reforms are based. The most glaring manifestation of this is the right of the landlord to resume tenanted land for what is euphemistically called "personal cultivation".

35. On the face of it, the right to resume land for personal cultivation was a sensible policy vis-a-vis what the Planning Commission called "small and middle" owners. The Commission went to great pains defining and redefining the meaning of "personal cultivation", the conditions under which it should apply, setting limits to resumption, and all with an eye to satisfying or reconciling the interests of the owners and the tenants. The provisions on resumption, which in effect meant ejection of tenants from a certain amount of land, varied from State to State. A few examples will suffice: in Assam an owner can resume $33\frac{1}{3}$ acres and in Punjab, 30 standard acres, 3/ subject

1/ A.M. Khusro: Economic and Social Effects of Jagirdari Abolition and Land Reforms in Hyderabad, p. 169.

2/ Panel, p. 37.

3/ A "standard acre" is the measure against which comparable values can be assigned to different classes of land. This was first evolved in Punjab in the attempt to give uniformity to the amount of land distributed among refugees from Pakistan after the partition of India. For example, if an average acre of irrigated or generally good land yields 20 bushels and an unirrigated and generally poorer land yields only 10 bushels, this meant in practice that a settler was entitled to an acre of irrigated land or two acres of unirrigated. In instances where given land yields more than the "standard acre", that land gets a higher valuation than the "standard acre". The criteria in some states is not necessarily yield of principal crops; it can be the rate of assessment, the rent rate, or the market value of the land. Currently, the equivalent of "standard acre" in terms of an "ordinary acre" in a number of States is as follows: Andhra Pradesh 2.32; Kerala, depending upon the region, 1.92 to 1.61; Gujarat, 1.58 to 1.23; and Madhya Pradesh, 2.38 to 1.33. (Progress of Land Reform. Pp.120-123. Planning Commission, 1963.)

to the minimum area to be left with the tenant. In Andhra the landlord can resume the entire area. In West Bengal a landlord who held 10 acres or less was permitted to take back the entire area; if he held more than 10 acres, he could resume 10 acres or $2/3$ of the area owned, whichever was greater, subject to a maximum of 25 acres. On the other hand, in Uttar Pradesh the landlord couldn't resume any land.

36. The minute this right became part of law it opened a Pandora's Box of all sorts of problems. In most cases the legislation favored the owners, but even so they went beyond the permissible. This was not difficult to do with policing of the provisions at a minimum. More than that, there was a built-in contradiction between the right of resumption on the one hand and security of tenure on the other. This so particularly in the case of small and middle landlords because there just is not enough land to meet the goals of both recommendations. It applies to big landlords as well, because they can resume any parcel or parcels of land cultivated by a tenant. The Planning Commission's Panel on Land Reform gives an excellent example of legal loopholes and its adverse effect on the position of the tenants under the law. The Panel states:

"Though a restriction was placed in many States on the extent of land which a landlord may resume by ejecting tenants, no provision was made for the demarcation of the resumable area as distinct from the non-resumable area. Thus, though the landlord's right of resumption was limited in extent, he was able to exercise an undue influence over all the tenants which added to his bargaining power and rendered the law ineffective. He could even extort money by threatening to resume land."1/

37. We conclude that while the principle of self-cultivation of a limited area was well-intentioned on the part of the Planning Commission and its refinement in the Second Plan much to the point, in the context of the real distribution of power - economic, organizational and political - between the classes affected, it resulted in a chaotic situation of which the landlords have taken full advantage. Despite the examples cited (paragraph 32), data on ejections and of those who remained securely on the land with occupancy rights are practically non-existent. But one thing can be said with certainty: The right of resumption for "personal cultivation" has weakened the main goal of security of tenure, and, doing that, has made the enforcement of reduced rents impossible. The latter is not easy to enforce even given security of tenure; the demand for a piece of land in India is keenly competitive, with land and alternative occupations scarce. With much of security of tenure in the rayotwari areas in jeopardy, it is altogether a hopeless task. Resumption of land for personal cultivation served to accentuate the inherent difficulties of that problem. The recommendations of the Planning Commission were not without influence upon the official fixation of rents in the States, although in Andhra Pradesh, Kashmir, and for share-croppers in West Bengal, the rent may go as high as 50 per cent of the crop, Bihar 35 per cent, and Madras 40 per cent

1/ Panel, p. 37.

2/ Forty or fifty per cent of the crop is rental for a single crop; if the land is double-cropped the rental in most cases is less than doubled.

In other States (Gujarat, Maharashtra, and Rajasthan) the prescribed rent is as low as 1/6 of the gross produce, while in still others it accords with Plan recommendations. However, whatever the prescribed rents, for reasons just mentioned, in most cases they are more nearly in accord with the customary rents of the pre-reform days.

C. Converting Tenants to Owners

38. The tenancy reforms have done rather poorly in shifting tenants to an ownership base. Some tenants have purchased land, and it would be extremely useful to know just how much land had changed hands, changes directly traced to the land purchase reform provisions. (Surely just as important would be a census on land ownership and tenure, in which the States would give most careful consideration to the evasions that have already taken place under the land reforms.) But no data are available to give even an approximately correct idea on how much land was acquired. But even if available, they would indicate that relatively little land changed hands from landlord to tenant. Recent observation in the field and the official testimony make this clear. The Review of the First Five Year Plan (page 322) has this to say: "Judged by the amount of land purchased by tenants and the numbers of tenants who have been able to acquire ownership rights, the steps (for making tenants owners) can be said to have produced no significant results." The Second Plan adds more of the same: "Progress in this direction has been slow." This is partly because the land ceilings, about which more later, are inoperative in India, and partly because the resumption scheme limits drastically a tenant's right to purchase a particular piece of land. The reason is simple: a landlord can render that right ineffective by saying that he would resume that particular plot of land for personal cultivation. But there are other and more vital reasons which underlie the weakness of the entire purchase idea as incorporated in the legislation.

39. From the point of view of the tenant's right of land purchase, the reforms have three serious shortcomings: the price of land is often much too high for the tenant to brave it; the installment payments are spaced within too limited period of time, and the transaction itself is essentially a matter of landlord-tenant bargaining, which is to say that the outcome is heavily weighted in favor of the landlord. The purchase price has been determined in the following four ways: multiple of land revenue, occasionally with a wide range, such as 15 to 20 times in Assam, and 20 to 200 times in the former State of Bombay; multiple of rent; portion of market value - 3/4 of market value in Punjab and "fixed" value as in Bihar, with a wide range of from Rs.30 to Rs.1,050 per acre. But whatever the method of official prescriptions, and even if they favor the tenants, realities observed in the field are quite different. The role of Agrarian Land Tribunals, the supposed watchdogs of land transactions, is not nearly as important as might have been anticipated. A landlord is not really compelled by law to sell lands and when he does wish to

sell he is seldom constrained by the official provisions. This is the limiting factor so far as the tenant is concerned, because installments aside, few tenants in India can take on such a burden of financial responsibility. It should be added here that three States, Uttar Pradesh, Kerala and Mysore, have enacted legislation that gives them the right to resume land directly for reallocation to the tenants. Only Uttar Pradesh exercised that right; in Kerala and Mysore that right has not been so far exercised.^{1/}

40. In India, as in other underdeveloped (and developed) and densely populated areas, land prices are high, bearing no relationship to its productive value. Unrealistically low assessment of agricultural land and comparatively low land revenue are the main reasons for the high market value, particularly in areas with high population pressure on the land. Added to this are such factors as social and political prestige and influence gained from the possession of land, as well as favored tax position as compared with that of alternative investments in commerce or industry. These are facts that must be faced by reformers in approaching the question of land pricing, so as not to impose a heavy burden upon the would-be new owners.

41. Viewed in this light, and assuming that the State Governments are bent on promoting land-ownership among tenants, the price fixed must be considerably below the market price. Land purchase in India under reform conditions cannot be an ordinary real-estate transaction where seller, broker and buyer meet in a free market. If it were, and if tenants were able to pay the "going price", there would be no need for this part of the reform. Since this is not the case, the price fixed by a government must be an arbitrary one, the degree of its arbitrariness depending upon how a reformer answers this question: "For whose benefit is the measure designed?" Important, too, from the point of view of enforcement of the reform is that the purchase transaction must not be left in the hands of landlord and tenant. The government must purchase the land from the landlord and, in turn, resell it to the tenant. The reason for this is obvious: if left to the landlord and tenant even a fixed price favoring the tenant is not likely to prevail. Enough has been said about the dominating role of the Indian landlord to labor the point. These are not theoretical musings. Pre-Second World War reform attempts in Japan foundered on just this point. The lessons of that experience eventually led to fixed prices favorable to the tenants, as well as to direct government intervention in the buying and selling of land. In India, on the other hand, the legislative enactments are markedly at fault on these all-important issues. Co-joined with indifferent enforcement and the failure of the ceiling measures, the results are as they are: little land has shifted from hands of the landlords to those of the tenants, or, in the words of the Draft Outline of the Third Plan, "action in this direction has been inadequate in most areas".

^{1/} Progress of Agrarian Reform, pp. 57-58. Planning Commission, 1963.

D. Ceilings

42. One of the basic reform objectives was to reduce the number of tenants and increase the number of new owner-farmers. Its main tool is the well-tried and tested land "ceiling", a device which permits a landlord to retain a certain amount of land (ceiling), the remainder or excess being earmarked for redistribution among the landless. It is the size of the ceiling that determines how far-reaching the program might be, always with the proviso that the ceiling is enforced.

43. The extreme mal-distribution of land in India, with nearly a quarter of the rural households owning no land at all and another one-fifth owning less than an acre each, provides ample social and economic reasons for the use of the ceiling as a means of redressing this imbalance. The ceiling question gave rise to more debate and argument than any other reform issue, for it did touch on the raw nerve of tampering with private property rights. But regardless of the arguments for or against ceilings, the Planning Commission laid down the basic policy, concluding that "We are, therefore, in favor of the principle that there should be an upper limit to the amount for land that an individual may hold".^{1/} The Second Plan went a step further, concentrating on a number of questions of execution and policy. These questions were:

- (1) To what land should ceilings apply;
- (2) The levels at which the ceiling may generally be fixed;
- (3) What exemptions should be made;
- (4) Steps necessary to prevent mala fide transfers;
- (5) The rate of compensation; and
- (6) Redistribution of land, among those with primary claims.^{2/}

It would take one too far afield to touch even in general terms upon all or any of the questions just mentioned. What should be said is that in a formal way the States followed the recommendation of the Planning Commission, each State determining the ceilings, compensation, exemptions, priority of land allotments, and also taking note of illegal transfers before legislative enactments and how to deal with such transfers.

44. At one time, a rough estimate attributed to the Planning Commission indicated a possible surplus of about 37 million acres. According to one assessment, "this would be 90 per cent of the area required to give any/every

^{1/} First Five Year Plan. Page 188.

^{2/} Second Five Year Plan, page 194.

landless family a minimum basic holding or 42 per cent of the area required to increase sub-basic holdings to basic holdings; or 29 per cent of the area required for both these purposes. The basic holding was assumed to be 2.5 acres for one State, 5 acres for 7 States and 10 acres for 10 States". ^{1/} Nothing came of it in practice, for the problems associated with legislating and implementing ceilings are indeed most formidable even in conditions of good administration, sound and speedy legislative enactments, and a minimum of opposition. Such conditions, however, are not prevalent in India. Some land vested in State governments was distributed. Not much land was taken from the private owners who did have land in excess of the fixed ceilings. With becoming candor, the Planning Commission in the Third Five Year Plan noted that "On the whole, it would be correct to say that in recent years transfers (illegal) of land have tended to defeat the aims of the legislation for ceilings and to reduce its impact on rural economy". For the moment - and for the foreseeable future - the question of how much land might have been available for redistribution is academic. Holdings have been divided up among members of families so that on the face of it they are under the ceiling. Field observations reveal that many didn't bother even with such precautionary steps. There was no reason why they should have. The legislative enactment did not contain the "teeth" to prevent such transfers, as was notably the case in Japan and Taiwan. Enforcement was not a problem; really, there was little to enforce.

E. Why Reforms Are Subverted

45. In paragraph 7 we noted the reasons why it is so difficult to carry out land reform programs in most countries. It cannot be stressed strongly enough why in India a similar attempt is incomparably more difficult than in most other countries. And yet this is not a justification for vague and complicated measures generously seeded with loopholes, and for the entire array of evasions which separate so many tenants - literally and figuratively - from the land; reduce their production incentives; affect adversely overall production; and on the social and economic scale keep them near the bottom of the village hierarchy.

46. We already pointed out that the political milieu of India with its anti-reformism shared by landowners and many politicians alike, has much to do with this state of affairs. It will be pointed out in another section, "The Latest Phase", that the nature of the village itself contributes to the same end. That part of these notes also ventures at certain corrective actions. But at this juncture we wish to underscore the proposition that the peasants, too, have been unwitting allies of all those who have done so much to subvert some of the most important segments of the reforms.

^{1/} Raj Krishna, *ibid.* page 229.

47. It is a singular experience for a close observer or student of land reforms in other countries to find many tenants in India surrendering land to owners even though they have a right to remain on it undisturbed. It is equally anomalous to find tenants surrendering their all-important "protected" status in exchange for the uncertainty of finding another piece of land or becoming another member of the rural proletariat. The answers to this puzzle are many and closely intertwined, but one of them stands out: lack of political and social consciousness. Where this is the case, the tenant sacrifices his position of security and status. The obverse is just as true and such cases are not lacking. In trying to single out the basic reason explaining the lack of will to stand up for their rights, one concurs with Dr. Khusro's major finding that although the peasants hungered for the land or to remain on the land securely on reasonable terms, they neither fought nor agitated for their economic "liberation" in post-Independence days. The reforms in India are not a result of popular demand, but rather the brain-child of the intellectuals of the Congress Party. This is not a criticism of external intervention; on the contrary, such interveners are indispensable catalysts of a reform movement. Where the criticism comes in is that they stopped short of going one step further - of seeing to it that the peasants shared in the process, which would have been one of the important ways of enhancing their political and social consciousness. And failure to stir them up turned the would-be participants into mere onlookers, and, for a good many tenants, with results to match.

F. Position of Landless and Farm Laborers

48. The reforms in India aimed at the improvement of the condition not only of the tenant, but of the agricultural laborer as well. These workers form the group whose major source of income is agricultural wages, the group which is at the very bottom of the social and economic structure of the village. The increase in the population has borne particularly harshly on this section of the population because of the heavy underemployment from which it already suffered. The sheer number of agricultural laborers and the continuous rise in their numbers, more recently augmented by dispossessed tenants, makes any ameliorative effort very difficult to carry out. In 1956-57, out of a total of 66 million rural households, agricultural labor households were estimated at 16.3 million, or nearly 25 per cent of the total. Of these, 57 per cent were landless, while 43 per cent held small pieces of land, either owned or leased.^{1/} Nearly 75 per cent of the workers are casual laborers, depending upon a daily wage; the remainder are so-called "attached" laborers, the attachment arrangement ranging from one month to one year. The total number of days of employment of a male laborer is 221, of which 21 days are in non-agricultural activities. Harvesting being the busiest season, it accounts for 25 per cent

^{1/} Agricultural Labor in India, Vol. I, pp. 46-47.

of the man-days worked; ploughing and transplanting account for 14 and 7 per cent of total man-days, respectively. The earnings and way of life of this village group which consists of from 80 to 90 million persons was pithily summed up as follows: "The agricultural labor households cannot generally make both ends meet and are thus in chronic debt."1/

49. These are some of the basic facts, and it is obvious from them that agricultural labor poses grave economic, political and social problems. The First, Second and Third Plans have all addressed themselves to the problem of improving its lot. The First Plan included proposals for its settlement on land "and protection against ejectment from homesteads."2/ As to the first, "not much progress was made in schemes for land settlement;"3/ as to the ejectment from homesteads, this is a recurring theme in the subsequent Plans. Considerable sums of money were allocated for a variety of welfare services for the benefit of this group, but the question of settlement on the land was and is of continuous concern to the Planning Commission. Since ceiling land is not available, culturable waste land and land gathered under the Bhoodan movement, through the efforts of Vinoba Bhave, have been put into play. It is not clear just how much of this poor land was distributed, nor among how many agricultural laborers. But the amount of land and the number of settled laborers could not have been very significant, judging by the effort provided for in the Third Plan. Thus, "It is envisioned that during the Third Plan efforts would be made to settle 7 lakh (700,000) families of landless agricultural laborers on about 5 million acres ... "4/. It is fair to conclude that though some of these workers may have gained a new footing on some kind of land, the vast majority of this group still carry on as of old. Moreover, since the group grows in size by from 2 to 2.5 million yearly, its immediate concern is not so much betterment as warding off the worsening of the existing conditions.

50. What of the prospects in the years ahead? Aside from India's long-range and basic problem of the high rate of population growth, the answer to the question depends upon two shorter range factors: the extent of agricultural development as a major source of village employment, and the extent of the demand for rural labor to be generated by the country's industrial and commercial expansion. With respect to the first, the answer depends in part on whether agricultural development will be employment-oriented or labor-displacing through the utilization of modern equipment. As regards the second, the answer is not at all reassuring for years to come.

1/ Agricultural Labor in India, Vol. I, p.43.

2/ Third Five Year Plan, p. 375.

3/ Ibid. p. 375.

4/ Progress of Land Reform, 1963, p. 26.

51. With respect to the first factor, it is significant that mechanization or rationalization of agriculture is beginning to take place and is likely to increase with the passage of time. In the short-run, therefore, a reduction rather than an increase in labor input is to be expected. Despite the rise in the rural population, the demand for labor in the harvest season forces wages up sufficiently to justify the introduction of labor saving machinery. And some time not only in consequence of higher wages during the harvesting season; in the Punjab, for example, new farm equipment is often labor-saving, that is, intended to displace hand labor. Mechanization, the main purpose of which is to increase agricultural productivity, may have similar results, if India's experience is like that of other countries, and a reduction in the demand for the presently already unemployed or underemployed agricultural workers is probably inevitable. The Government of Punjab is helping the process along by subsidizing the purchase of farm equipment to the tune of 50 per cent of the sales price. This raises a question of policy: is it wise to take measures leading to the "economization" of labor? It appears to us that, given the current state of all aspects of Indian economic development, any policy which has the effect of increasing the rural labor surplus before urban occupations can provide employment not only for the growing urban labor forces (which it cannot quite do today) but for rural workers also will only add to an unemployment problem already beyond the capacity of the economic and political system to cope with.

52. Agricultural development of the type indicated cannot result in absorption of any significant volume of rural surplus labor. We shall point out subsequently, in some detail, that within the foreseeable future, industrialization cannot do it either. The answer, or partial answer, lies in increased employment within agriculture and, as a corollary, increased agricultural production. To attain that:

"This requires capital formation and changes in techniques; but not all techniques can be introduced in the context of heavy underemployment. If we selected those techniques which are labor-absorbing rather than labor-displacing in character, and if we used labor for capital construction, we meet the requirements of increased productivity as well as of employment, without having to indulge in costly population transfers. Fortunately agriculture happens to be precisely the sector where, with a small additional amount of fixed capital, a relatively large output can be generated ... If only organization could be brought to bear upon the situation and surplus labor geared to the activity of further capital formation, we have an elaborate list of capital projects which can be put through." 1/

1/ A. M. Khusro, Economic Development with no Population Transfer, pp.41-42, Institute of Economic Growth, 1962.

53. The list covers such well-known items as irrigation and drainage facilities, single cropping into double cropping, other changes in cropping patterns, reclamation, levelling and bunding of land, more frequent fertilization, weeding, etc. - all absorbing more labor in the process of more intensive cultivation of the land, and all activities the importance of which cannot be overestimated.

54. The absorption of surplus labor within agriculture will also depend, at least to a degree, upon the opportunities that public works schemes in rural India might readily provide, such as flood control, river embankments, large irrigation and drainage canals, roads, bridges, and so on. These can produce not only employment but essential rural capital, with positive effect upon farm production. In addition, such measures can, as they have done in other countries stimulate the latent local talent, which awaits only the chance and resources to demonstrate what this combination can attain. In the final analysis, what is involved here is the question whether rural India can reach its full growth potential if the wastage of her manpower no longer continues unabated; all this, provided the organizational problems generated by an effort of this kind can be successfully overcome. Another possible source of rural-non-rural employment opportunities lies in what John Lewis calls "The Agro-Industrial Rural-Urban Continuum",^{1/} a combination of economic activity that springs in circle from large cities, through medium cities, to villages.

55. Whatever the long run holds in store for the great multitudes of the underemployed village proletariat, up to now, the improvements have not been significant. The Third Plan is frank on the subject; it notes that "It is apparent from the experience of the first two Plans that while special schemes in the interest of agricultural laborers are useful, they can touch only the fringe of the problem".^{2/} The Third Plan itself provided for programs estimated to cost Rs. 111 crores for the welfare of the village backward classes, a considerable part of which was to have benefited agricultural workers. Public works projects were to have been the major component of the programs, but in most instances they have barely gotten off the ground. Community Development with its agro-industrial plans has done no better. The problem of how to provide an additional 100 days of employment for only 2.5 million persons by the last year of the Third Plan^{3/} is still to be resolved. What compounds it, is that the persistence of a rigid social structure largely based on caste makes the position of agricultural laborers particularly vulnerable. This is especially true in conditions of lagging rural development. In these circumstances, the writers of the Third Plan come to this conclusion: "Ultimately, it is by achieving rapid and intensive development in the rural areas as part of the process of economic development for the country as a whole that the landless section of the (village) population can be substantially benefited."^{4/}

^{1/} John P. Lewis, Quiet Crisis in India, p. 183

^{2/} Third Five Year Plan, p. 376.

^{3/} Ibid., p. 378.

^{4/} Ibid., p. 376.

56. The conclusion of the Planning Commission is quite right, especially when industrialization is considered as a possible means of syphoning off rural unemployed. Dr. Khusro's illuminating Economic Development With No Population Transfers throws much light on the subject. In brief, he divides the pool of the available labor supply into two categories: non-agricultural and agricultural. Calculating the non-agricultural labor supply based on 2 and 1.75 per cent growth of population per annum, he arrives at this conclusion: "If there were no other source of the supply of labor, i.e., if the non-agricultural sector were the only sector in the economy, a state of full employment would be reached by 1975" 1/ if the rate of population growth is 2 per cent, and in 1972 if the rate is 1.75 per cent. This would not be bad but the findings become ominous when the obvious is noted: the agricultural sector with its millions of unemployed and underemployed, confounding matters still further. Dr. V.K.R.V. Rao's study on Population Growth and Its Relation to Employment in India, referred to by Dr. Khusro, leads to the same conclusions: a speedier reduction of birth rate and agriculture - not industry - as the prime vehicle to absorb its surplus labor.

57. The lessons to be drawn from all of the above are clear, as the preceding paragraphs demonstrate. But the problem of what to do with the rural underemployed is so crucial that we do not mind laboring the point by way of a summary in Dr. Khusro's words:

"If the demand for labor in the non-agricultural sector is not sufficient to absorb the supply of labor from within that sector for many years to come, then the precepts of the recent theories of development about population transfers have to be modified ... until a situation of unemployment and underemployment persists in non-agriculture, every man that is transferred from agriculture to non-agriculture merely adds to the pool of unemployed in the latter sector ... Apart from creating open unemployment and all that it connotes, transfers of population now appear to be positively wasteful, for the cost of such transfers are unnecessarily incurred ... Two fundamental questions then arise. If the door (in India) is closed, even though temporarily, for any net absorptions of agricultural population in non-agricultural jobs,

1/ Third Five Year Plan, p. 32, and tables on pp. 37-39. Dr. Khusro adds a footnote to his conclusions, part of which is reproduced here:

"Unless the set of assumptions least favourable to our argument is improbably or wrong, the results hold good. And even if they are wrong - i.e., the assumed rates of income growth are too meagre or the share of non-agricultural income is too small, or capital-output ratios too low or capital-labour ratios too high, or the assumed rates of population growth are too large - even then, the effect of introducing the correction will be to exhaust the pool of unemployed somewhat sooner. It is also possible that the mistakes in our assumptions will be of a compensating character, the effect of one being countered by that of the other."

what is the solution for underemployment in the agricultural sector? Secondly, if population is not transferred and food is not released, how is the non-agricultural sector to get its annual increment of raw material and food for the annually growing labor force of that sector? The answer to the first would seem to be increased employment within agriculture rather than in the other sector; the solution to the second is increased productivity of agriculture. Since increased productivity depends on capital formation in agriculture, the obvious solution to the dual problem of low productivity and low employment is to use the underemployed labor in the agricultural sector to build capital within that sector, rather than attempt to transfer it to the non-agricultural sector."

58. This is the crux of the author's summary. It doesn't differ in essentials from the position taken by the Planning Commission, except that Dr. Khusro and, on another occasion, Dr. Rao, have furnished chapter and verse to demonstrate that for a long time to come relief to the underemployed agricultural labor can come only from greater development of agriculture itself, the emphasis being on labor-absorbing rather than labor-displacing techniques. It is not at all certain that the new trends in Indian agriculture will be of this character; what little there is points in the opposite direction. Nor is it certain that Government policy can effect a change in this trend. If, on the other hand, agricultural development does proceed apace along the line propounded here, the amelioration of the conditions of the farm laborer is possible. But a word of caution is in order. The ameliorative effects can be realized provided they are not overtaken by further surge in population numbers, and we come back once again to the question of population control. There is another item that must not be overlooked. Assuming the population surge tapers off, the degree to which the condition of farm laborers can be improved will depend upon the loosening of the social structure of the village. If the line of demarcation between "high" and "low" is not narrowed, the position of agricultural labor will remain precarious. While the effect of more employment cannot be gainsaid, the social status of the "underprivileged", or their "acceptance" as part of the village community is of great importance. So long as betterment continues to be measured along a social ladder which shows little or no resiliency, it is inevitable that even more employment will not preclude the laborer's getting the short end of the sum total of all the measures intended for the reconstruction of the agricultural economy of India.

G. Cooperative Farms

59. The preceding references to agrarian reform in India relates to individual, private cultivation of land, be it owned or tenanted. But it is of some importance to touch on yet another type of agrarian reform - "Cooperative Joint Farming". This should be mentioned not because it has attained any acceptance of any significance, but (a) because of the considerable ideological

preoccupation in important circles of India with the question of peasant proprietorship versus farm cooperativization and (b) because of the demonstrated gulf between official intention and the peasants' attitude in regard to that intention.

60. The rationale behind cooperative farming runs like this: small-scale farming in India is inefficient, whereas large-scale voluntary cooperative farming is efficient. The latter would provide fuller employment for the landless; give substance to the idea of social justice; make better use of available and borrowed resources and create a better technological base; provide a food surplus normally not available from small-scale, individual producers; finally, it is a "higher", "socialist" form of social and economic activity. With the country, or rather the Congress Party, committed, at least in theory, to a socialistic welfare state, the last reason is not among the least important ones propounded in favor of cooperative farming. As to the main features of a cooperative farm, they are as follows: the pooling of the land and centralized management; the retention of proprietary rights in the land; ownership dividends in addition to remuneration for work done, and heavy financial assistance to insure the success of such farms. Clearly, this is not cooperation for specific proposals such as tube wells, or land consolidation; it is presumably cooperation for an integrated farm enterprise.

61. There has been no lack of arguments to demonstrate the fallacy of this type of agrarian reform ^{1/}. It is not our intention to add to the debate, but rather to state the official policy, what it led to, why so few become "cooperative" farmers, and what of the future of this type of farming.

62. While in agriculture the Plans concentrated mainly on the reforms already discussed, cooperative farming was not neglected either. The First Plan approached the matter rather gently, suggesting that "Small and medium farms in particular should be encouraged and assisted to group themselves into cooperative farming societies."^{2/} This expression of hope gave way to a rather bold and ambitious view voiced in the Second Five Year Plan: "The main task during the Second Five Year Plan is to take such essential steps as will provide sound foundations for the development of cooperative farming so that over a period of 10 years or so a substantial proportion of agricultural lands are cultivated on cooperative lines."^{3/} Sweeping as this statement was, the Indian National Congress, in its Nagpur resolution (January 1959), went the Planning Commission one better. It affirmed without equivocation that "the future agrarian pattern should be that of cooperative joint farming." Despite this, the Third Plan deviated from this dictum even if asserting that,

^{1/} N.G. Ranga and P.R. Paruchuri. The Peasant and Cooperative Farming. Raj Krishna, "Socialism and Farming", Modern Statesman, June 19, 1957
Raj Krishna, et. al., Cooperative Farming - Some Critical Reflections (New Delhi: All India Congress, 1956).

^{2/} First Five Year Plan, p. 194

^{3/} Second Five Year Plan, p. 194

"it is essential to intensify efforts to develop cooperative farming throughout the country and to realize as speedily as possible the objective in the Second Plan"; at the same time, and perhaps mindful of the fact that not much had been accomplished during the First and Second Plans, its emphasis is much more cautious and matter of fact, while accepting the recommendation of the Working Group on Cooperative Farming to set up 3,200 cooperative pilot projects, or 10 per district. The Plan states:

"In the main, cooperative farming has to grow out of the success of the general agricultural effort through the community development movement, the progress of cooperation in credit, marketing, distribution and processing, the growth of rural industry, and the fulfillment of the objectives of land reform."^{1/}

So much for official policy. What of the results?

63. Measured in terms of numbers and size, as of the end of October 1964,^{2/} there was a total of 1,806 "pilot" societies, and 1,651 "non-pilot" societies. The first had a total membership of about 32,000 and covered an area of 184,000 acres; the respective figures for the second type were 37,000 and 200,000. The average membership of a pilot society was 18 and of a non-pilot, 22; the average size of the farm was 102 acres as against 120 acres for non-pilot society. The fact that numerically they are far below anything anticipated by the Second Plan or by the Congress Party is important for what it reveals about the premature expectations and the lack of response on the part of the farmers. But more important than this is what lies behind these statistical bare bones. The official findings and personal interviews with officials of Community Development are not too illuminating. But the inquirer is not without help; the State Governments (and the Union Government) also farm out all manner of studies to schools of higher learning. Some of the evaluation studies are revealing, and the same may be said of a personal visit to two cooperative farms.

64. The cooperative farms are indeed voluntary affairs except for certain involuntary influences yet to be touched upon. They are heavily financed, which is the chief attraction to the members of the farms. Very few live up to the principle of "jointness" in work, management and distribution of income. The character of the membership and why the great majority of the cooperatives came into being shed much light on this point. Contrary to official expectation, in most instances it is not the small or the medium farmers who find their way into these cooperatives. The greater part of the membership is a mixture of a few fairly large owners - often not more than one or two - and a much larger number of agricultural workers, tenants, and ex-tenants who are invited to join for two reasons: (a) to attain the minimum prescribed membership; and (b) to

^{1/} Third Five Year Plan, p. 209.

^{2/} The India Express, December 21, 1964.

provide the requisite labor force. Some who pooled their land are absentee and often the resident owners do not participate in cultivation of the land either. The agricultural laborers do the work for a stipulated wage, which doesn't exceed the prevailing village wage. Their advantage lies in a longer period of employment, but they are not really members of cooperative farms; they represent the "bogus" membership.

65. Only part of the owners' land (40 per cent in the case of Madras societies), often the poorer part, is assigned to the cooperative. The few exceptions aside, a landowner organizes a cooperative in order to get the rather substantial financial assistance from the Government. In the Punjab, for instance, "the eagerness to possess a tractor seems to be the main motivation force for the organization of a society". And it can be other reasons, such as the more readily available inputs, or the paying off of old debts. Another reason why one owner or more organize a cooperative is to evade some of the provisions of the tenancy laws. This picture is relieved by the fact that there is a small number of societies organized by convinced "cooperators", and there are also those organized by ex-servicemen, landless, displaced persons, etc., on Government-owned land; the problem here is that a good deal of it falls into the category of culturable waste land.

66. There are a few genuine cooperative societies managed and "owned" by a landowner^{1/} in the spirit of true cooperation. But the tone is set by the majority. Therefore, the recurring refrain is that "no joint farming was in evidence in many of these societies" is not surprising. Some farmers actually work the land individually within the society. Anticipated land improvements have been spotty; the hopes for significant increases in yields have not been realized; the available evidence for the Punjab, the Uttar Pradesh, Andhra Pradesh and Kerala indicate no superior production compared with that on an individual holding. In fact, a declining trend had been reported in the societies of the two first mentioned states. True, occasionally there has been an economy in animal power and equipment, but it is not clear with what consequences. Poor management and poor allocation of labor tasks had not been conducive to the best utilization of the available inputs or in the creation of new crop patterns. And so, it is "no wonder cooperative farms in general did not achieve spectacular results in terms of yields per acre". Nor could these farms demonstrate any superiority of the much argued point of "economy of size". In short, the authors of one of the principal evaluation studies concluded that the societies have not attained the advantages of cooperation. With refreshing candor they arrive at yet another conclusion: "The ruling party which is committed to cooperative farming ... had not mobilized its cadre at the grass roots levels to support this movement." This plaint has a familiar ring with respect to the entire agrarian reform issue.

67. In retrospect, one wonders if the supporters of cooperative farming in India have probed deeply enough into its realities, in the context of the Indian village. Hence the apparent assumption that there is hardly any gap

^{1/} Daniel Thorner, Progress for Cooperation in Indian Agriculture (mimeographed)

between the verbalization of an idea and the deed itself. One may rightly question whether any degree of exhortation can induce large numbers of farmers to opt for this type of farm organization. Only compulsion imposed by a dictatorial regime might have done it on a large scale. As it is, the farmers of India, individualists and devotees to their pieces of land and their way of doing things, simply took no notice of this would-be movement - despite the tempting prospect of generous financial assistance. The lessons of the current experiment are a very poor augury for any shift in attitude by the non-joiners.

68. Community Development is presently trying to correct the situation by: (a) making cooperative farming an integral part of the Community Block Development Program; (b) by pouring in more financial support into the cooperatives; and (c) by urging a number of States to take "effective steps" to accelerate those programs ^{1/}, which is to say to meet the numerical target of pilot societies as laid down under the Third Plan. To clinch this emphasis on "targetism" rather than quality of performance, the National Cooperative Farming Advisory Board saw fit to recommend that "the Governments of Madras and Kerala should reconsider their decision not to organize any new societies until the working of the existing societies was improved". ^{2/} If, as it appears, numbers count, not content, then the comments in the preceding paragraph should suffice.

69. Even for a staunch proponent of individual, private ownership of land individually operated, it is to be regretted that the record of "cooperative joint farming" leaves so much to be desired. There is room in India for this type of farming among the landless and the owners of small holdings with next to no other resources to sustain them. Given state-reserve land for the first group, plus careful technical guidance, financial support and emphasis on performance rather than numerical targets, the chances are that the results of this kind of an experiment might present a brighter picture. The landless in particular might be coming in in much greater numbers as members of their own farm, rather than as the coerced ones, for reasons which have little to do with "jointness" or "cooperation". If the political leadership is indeed so convinced of the promise held out by "cooperative joint farming" that it is willing to allocate for this purpose scarce resources, let it be tried among those who have farming skills but no land of their own and among those who have little land but no resources to go with it. While this would not advance the country's agricultural problems nearer to a solution, it might ease the lot of some few with little or no stake in the agricultural scheme of the village, and this is important. Finally, having delineated the scope of cooperative farming, the confusion aroused by the Nagpur resolution about cooperativization on the one hand, and all the other basic reforms on the other, could be very usefully laid to rest.

^{1/} The Indian Express, December 21, 1964.

^{2/} Ibid.

H. The Latest Phase

70. The year 1964 has witnessed an unusual spurt of land reform activity on the part of the Planning Commission and the National Development Council. The cause behind it was the critical report on tenurial conditions in some of the food "package" districts, prepared for the Planning Commission^{1/}. More specifically, the National Development Council, in its meeting in late December, 1963, concluded that "the speedy execution of the program of land reforms was vital for increasing agricultural production and strengthening the rural economy and called upon the State Governments to complete implementation of the land reform programs before the end of the Third Plan." In a meeting of the Land Reforms Implementation Committee of the National Development Council, held in June 1964, it was stated that the "loopholes in the legislation rendered implementation ineffective. As a result, provisions for security of tenure and rent were not enforced. This leads to problems of production. The tenants, for lack of security, cannot get necessary supplies and credits and in view of high rents they have to pay, they cannot utilize such facilities even if they were available." Two items stand out in these deliberations: (a) the recognition that the problem will not just fade away; and (b) the tone of urgency that somehow reform matters must be dealt with if the tenants are to get deeply involved in raising agricultural production on a large acreage of the total cultivated area.

71. The immediately significant result of the deliberations was the appointment of two teams of officials from the Planning Commission for an on-the-spot re-examination of the agrarian reform problems. Twelve states were covered and reports for the following nine states had been prepared as of the end of 1964: Bihar, Gujarat, Madhya Pradesh, Madras, Maharashtra, Mysore, Punjab, Rajasthan and Uttar Pradesh. The reports put the record straight with no attempt to sooth, whitewash or gloss over India's agrarian reform doldrums. Achievements are not overlooked, but the emphasis is on the shortcomings. Nor are the reports short of specific recommendations as to how to raise the quality of legislative enactment and implementation procedures. Whether this latest effort will help to redress the balance at this date is another matter, but we believe that this kind of official enlightenment is a pre-condition of an attempt to improve on past performance.

72. The reports reveal once again the success in abolishing intermediaries, progress in land purchases here and there, as well as the slow progress and failures of other aspects of the reform movement; the great variety of tenures and their extreme complexity which would be a source of wonderment, perplexity and envy even to a hardbitten Philadelphia lawyer; the timidity of the tenants to stand up for their rights, borne of fear of the landlords; the absence of a protecting hand from many State legislatures and the character of the village society which doesn't always breed independence of thought and action where and when most needed; the insufficiency of financial and technical assistance if the psychological and economic incentives of a measure of new ownership, of security of tenure and reduced rents are to be given full play; the omissions and commissions in the legislative enactments which, by themselves, have tended

^{1/} Wolf Ladejinsky, Tenurial Conditions and the Package Program.

to inhibit implementation; the failure in most cases to inform the intended beneficiaries as to the ABC's of the enactments; the temporary character of some of the laws (Madras); the wide time-gap between the enactment of new laws and the initiation of implementation, notably in Bihar with its 12 year gap; the lack of technical preparation prior to or following the enactment of a piece of reform legislation; and, finally, the successful opposition to the reforms by those bent on thwarting them. The recommendations are pointed and practical in the sense that they can be carried out - provided the States have the effective will to apply themselves to the task with more vigor than in the past, and, by way of a comment, provided the peasants are participants in a movement affecting them profoundly.

73. A number of quotations picked at random throw additional light on the current state of land reform in India and why this issue cannot be neglected. This is so unless one is to assume that: (a) poverty-stricken tenants or poor farmers in general make good producers; and that (b) social and political stability can be maintained in rural India for years to come in conditions already noted. In Bihar, for example, on the subject of tenancy, we read the following:

"The tenancies in Bihar are still regulated under the Tenancy Act of 1885 with some modifications. Special provisions for conferment of security of tenure and ownership on tenants have been made in the Ceiling Act, but this provision will apply only to the tenants of owners who are subject to the ceiling. As the number of such owners is not likely to be significant, not many tenants are likely to benefit from the provisions of the Ceiling Act. Practically all the leases in the area are oral and according to the law, therefore, the tenants should have security of tenure. However, it is generally admitted that this law is completely ineffective. A tenant holding land from a raiyat acquires occupancy rights on 12 years continuous possession. Few have acquired the right of occupancy so far."

While the share rent cannot exceed one-fourth of the produce of the land, "in actual practice, the rent payable by the tenant is usually half of the gross produce and in some cases where it is fixed in terms of a given quantity of produce or its value, the rent goes up to even about 65% of the gross produce". Adding to this the tendency of a landlord to change his tenants with little difficulty and the failure of the ceiling law, the case of Bihar speaks for itself.

74. The State of Gujarat demonstrates many of the reform handicaps similar to those of Bihar, but of special interest is that part of the legislation which intended to convert tenants into owner-cultivators through land purchases. It shows what happens when two unequal parties - landlords and tenants - are presumed to bargain freely in determining the actual price of the land, as well as the method of payment. Says the report:

"The implementation of laws relating to tenancy reforms has been slow and unsatisfactory. Further, there is a very large percentage of ineffective purchases which would lead eventually to the ejectment of tenants. The purchase price covered a very wide range, from 20-200 times the assessment, and the tribunals had to determine the purchase price in different cases. Even though the tenant's capacity to pay is to be taken into account in determining installments, the tribunals have generally fixed the installments only on the basis of the agreements between the tenants and the landlords. In some case the purchase price is high and the number of installments is so small as to render payment difficult."

Little wonder that "in a very(great) many cases purchases have become ineffective on account of the pressure of the landlords". This in turn leads to the ejectment of tenants altogether. The suggestion of the team that State Mortgage Bank advance purchase loans would not solve the main problem, because few tenants, if any, especially in India, are in a position to buy land at a price fixed by the landlord even if the installments were more widely spaced, namely, from the currently prescribed 12 installments in 10 years to 20 installments in as many years. In any event, the high price alone couldn't meet the sensible recommendation of the Planning Commission that the total burden of annual payments falling upon the new owner, including installment of the purchase price and the land revenue to the Government, should not exceed $1/4$ to $1/5$ of the gross produce.

75. Just as Gujarat State represents a case of how not to convert tenants into owner-cultivators, "Madhya Pradesh presents a classic example of how a good measure of tenancy reform is becoming ineffective due to lack of adequate steps for implementation. The law provides for ownership for all tenants (on that portion of land which the landless cannot resume). In practice, very few have become owners". The law is too complicated - and so are the procedures involving its application - to warrant a detailed comment. But the following quotation from the report should suffice:

"As the right of ownership accrued automatically (to tenants on non-resumable land) it was necessary for the (State) Government to initiate steps for effecting mutations in favor of the new owners under Sections 108 and 110 of the Madhya Pradesh Land Revenue Code. This was not done and it was left to the tenants to make applications for acquisition of ownership. As a result only a few tenants have acquired ownership."

The failure on the part of the State to do its duty cannot be interpreted as other than an anti-reform action, thus cancelling out a major provision intended to benefit the tenants. The failure of the Tenants to make the applications is typical of the fear and timidity of an unorganized tenantry to face up to the whims of the landlords on this, as on many other issues, affecting landlord-tenant relationships in India.

76. In the Punjab, where the reforms differ somewhat from those of the other states, the authors conclude: "... that the main object of the tenancy reform is to enable a small landowner to have unfettered right over his land, unfettered by any opposing claims of the tenant," and "provisions with regard to maximum rent do not appear to be effective". This doesn't mean that no tenant has acquired proprietary or occupancy right in land; actually, 19,000 tenants out of an estimated 80,000 have acquired such rights in a total of 128,000 acres. Nevertheless, when the realizations are measured against the anticipations, the above conclusions of the investigator of tenancy conditions in the Punjab are warranted.

77. In the face of the most bitter opposition to land reform measures in India, Rajasthan did yeoman work in abolishing its powerful intermediaries. Rajasthan also tried to regulate rents, but in this proved much less successful. In fact, Rajasthan exemplified the well-tested proposition that in the absence of security of tenure rents cannot be controlled. "The Rajasthan law seeks to regulate rents (the maximum permissible rent being 1/6th of the gross produce) but it doesn't provide for security of tenure. It is not surprising that in the absence of any provision for security, the provisions for maximum rent are ineffective. The tenants are in actual fact rack-rented ... paying rent amounting to half of the produce in many cases." Additionally, "Information on some of the important aspects of the implementation of land reforms is either not available or else is so incoherent and inconsistent that little reliance can be placed upon it."

78. The former Bombay area of Western Maharashtra is not without its serious lapses in the application of tenancy provisions. This is true of its principal provisions - conferment of ownership upon tenants in respect of land not subject to resumption. What is obvious is not only failure which the report emphasizes, but success as well. By the end of December 1963 out of 1,098,000 cases, purchases became effective in 400,000 cases, while 190,000 tenants couldn't keep up with their payments and turned the land back to the owners. One gleans from the report that one of the causes of the failures is that the prices fixed by the Agricultural Land Tribunals (from a range of 20 to 200 times the assessment) is on the high side. The authors conclude that "the position is disturbing and the object of land reforms may be defeated if remedial action is not taken." But there is a more vital reason for the failures and the authors recognize it when they say that "If transfer of ownership is placed on a compulsory basis, the landlords would not be in a position to exercise influence on some of the tenants." The importance of the compulsory element in land purchasing had been discussed in paragraph 40 and no other comment need be made here. What is surprising and encouraging is that though the purchase program is very far from completion, 400,000 tenants did acquire 1,054,000 acres of land.

79. All of the above sums up the current state of India's reforms after more than a decade of legislating and implementations: good in some respects, spotty in others, and altogether poor in many other vital respects. The most

recent effort at fact-finding, analysis and recommendations is one more round on the part of Land Reforms Implementation Committee of the National Development Council to convince the Chief Ministers of the various States that, for reasons noted in paragraph 69, they must revitalize the reforms and enforce them. Discussions, or rather negotiations, are now on. The pressure upon the Chief Ministers of the States exerted by the Implementation Committee is seemingly greater than ever before. But the outcome is in doubt, for only an organized peasantry, conscious of its strength and capable of telling the seekers after their vote that "we support those who support us", could, at least in part, effect the changes which have so far eluded them. Barring that, one of the important pre-conditions for improved agricultural production on a large acreage of the cultivated land of India, as well as one of the important pre-conditions for a greater degree of social and political equality, will be long in coming.

III. WHAT REFORM REQUIRES

A. Social Character of the Village and Reform from Below

80. In the preceding paragraph, reference was made to effecting changes "at least in part". The qualifying part of the sentence comes from the notion that, in India, even good reform laws and sympathetic implementors might not quite suffice to carry out the basic tenurial readjustments. The word of caution stems from the character of the Indian village society. The picture is not an encouraging one. To Ghandi the village was an idealized community with eternal verities, the very bedrock of India. But this breaks down upon the evidence of those who cared to look at the village more clinically. To Dr. Ambedkar, the leader of the Harijans (untouchables), "... What is the village but a sink of localism, a den of ignorance, narrow-mindedness and communalism?" ^{1/} To yet another Indian of vast knowledge and experience, "There are now few values which can be said to be common to the whole (village) community, and certainly there is no common purpose which inspires all sections equally".

81. The principal features from which the mentioned strictures are derived, and of concern to us on grounds of agricultural production and tenurial adjustments, may be summarized like this. The touchstones of the village society are certain built-in restrictive and unproductive factors which have a long history of economic, social and legal relations, peculiarly typical of the Indian village. Part of it is the subject of this paper. But it is more than that. Many peasants have limited economic aspirations and they had come to regard poverty almost as an accepted mode of living. The idea of self-help is not widespread, whereas reliance upon the government to do what

^{1/} Quoted by Hugh Tinker in "The Village in the Framework of Development", p.97 Chapter in Administration and Economic Development in India. Braibanti and Spengler, Editors.

they themselves can do is widespread. Whether it be cause or effect, sections of the village suffer from long-standing social and political disabilities in relation to the elite of the village. Relationships, values and loyalties often transcend economic self-interest and betterment. One of the banes of village life, heavy indebtedness for social purposes (weddings, funerals and feasts), is just one more facet of it. Despite the new winds which even the village cannot escape, factionalism is rampant, and the barriers separating group from group have been only slightly dented. Each group knows only too well its place in society, deeply entrenched as it is in a tradition of inferiority and inequality - conditions accepted on all sides 1/.

82. Certain religious beliefs, such as the god-like veneration of beasts of burden - though they are mostly underfed and mistreated - have a debilitating effect on agricultural production. There is not much evidence of community good-will, community loyalty, and of concepts of village welfare. "Caste and class distinctions are so acute that the feeling of belonging to the community had not yet come. Self-help, therefore, has amounted to helping certain sections or individuals only."2/ Significant, too, is that those of the village who in recent decades succeeded in acquiring a formal education to qualify for a job in government or in business are lost to the village with hardly a trace, which means the loss of potential new leadership. Finally, since village organization is more social than administrative, villages are hardly capable of initiating and carrying out needed economic and social changes. And Dr. Hugh Tinker concludes, "so one could go on, demonstrating that village associations are powerful but mainly negative, working against corporate action and initiative"3/.

83. Though this litany of woes is true in its essentials, this picture is overdrawn in somber colors. It must be tempered by the fact that while the core of the old society is seemingly intact, there are many deviations from the norm. Many more people, including women, take greater interest in village affairs. Village schools are multiplying rapidly, and the children of the "untouchables" do partake in them, suffering no outward discrimination. There is a widespread acceptance of modern medicine and a virtual elimination of malaria, and very important is the fact that younger people contest for the leadership though it is still largely in the hands of the greybeards. Whether it be in the Punjab in the North, or in parts of Andhra Pradesh, or still further south in Madras or Kerala, one can find economically developing

1/ Walter C. Neale, Economic Changes in Rural India (Land Tenure and Reform in Uttar Pradesh, 1800-1955), pp. 207-208. All India Rural Credit Survey, Report of the Committee of Directions, Vol. II, The General Report, Bombay, 1954, pp. 277-8. Daniel Thorner, The Agrarian Prospect in India (Section I, Agrarian structure, and particularly, page 11). Kusum Nair, Blossoms in the Dust, (particularly Chapter I).

2/ Kurukshetra, April 1959, page 12.

3/ Ibid. page 128.

communities with a spirit of self-confidence formerly lacking. As far back as 1925, one of the great British civil servants of India, Sir Malcolm Darling, in his classic, The Punjab Peasant in Prosperity and Debt, noted the change. "Everywhere", he wrote, "the age-long isolation of the village is breaking down and, as intercourse with the outer world is established, a new self-consciousness is dawning and new forces are being released."^{1/} Anyone who cares to look at the village at close range can see also the much stepped-up momentum of change forty years later, and not only in the Punjab. A number of new developments are in evidence. Universal suffrage has come and is practiced; though this right is not used to full advantage by a goodly number of the village community, the vote is theirs and someday it will be put to better use.

84. Not all farmers of India are about to turn Calvinists in the sense that the magic of the carrot of "profitability" will quickly undo the heritage of centuries of tradition and the acceptance of the status quo. As against this, it is reasonable to assume that the changes noted, and the changes in the claims on the land, buttressed by the application of the existing technology, let alone the first outcroppings of a new technology already practiced by some farmers, are bound to induce people to take a few more steps, even if hesitating steps to begin with, in the direction of greater change. One agrees with Darling that "the new light is definitely in conflict with the old", and we believe that this conflict born out of developments already noted will gradually undermine the still predominating and inhibiting values and attitudes. Under such conditions, there would be no place, for example, for the common aberration of "voluntary surrenders" of land, under the reform, by the tenants in favor of the landlords.

85. The new stirrings cannot be denied, and these straws in the wind are encouraging signs. The question is how to speed up the process of change; how to be rid of the "aberrations", which benefit neither the tenant nor the land he cultivates, nor, for that matter, agricultural production as a whole. Dr. Walter Neale has a ready answer - effective reforms do not depend upon gifts from on high and they must be fought for by the "lower orders in the hierarchy", taking the responsibilities that go with such effort. He quotes approvingly from Gunnar Myrdal's Rich Lands and Poor to this effect:

"No society has ever substantially reformed itself by a movement from above; by a simple voluntary decision of an upper class, springing from its social conscience, to become equal with the social classes and to give them free entrance to the class monopolies. Ideals and social conscience do play their very considerable role, which should not be forgotten. But they are weak as self-propelled forces, originating reforms on a large scale - they need the pull of demands being raised and pressed for. When power has been assembled by those who have grievances, then is the time when ideals and social conscience can become effective."^{2/}

^{1/} Page 263

^{2/} Walter C. Neale, page 257.

Dr. Neale sums it all up in terms of an all-embracing principle in these words: "Land reform does not make new men of peasants - new men make land reforms."^{1/}

86. In relation to Indian agrarian reforms, as to those of other countries in need of the same, neither Myrdal's or Neale's prescriptions are wholly valid, though an organized, articulate peasantry bent on satisfying its demand is indeed an essential condition for effecting changes. Denying the Government and the elite the role of a catalyst, Myrdal and Neale fly in the face of historical precedent, be it Western or Asian. The French Revolution (and one of its consequences, establishment of peasant-proprietorship in France) did not wait upon the masses to make their demands; nor did the English Whigs wait upon their masses to initiate the long series of political and economic reforms beginning in 1832. Perhaps even more to the point, and closer to our own times, is the case of Japan. Literate Japan was devoid of the constraining forces of a village society a la India; in addition, it had an effective cooperative movement and strong tenant-farmer unions - to mention only these two elements. Yet, it took strong initiative from the top, indigenous and foreign, to come to grips with the agrarian reform issue. With minor variations, the same may be said of Taiwan.

87. Without equating the two mentioned countries with India, there are, nevertheless, lessons in this for the latter, discussed in subsequent paragraphs. To be sure, the process of change in India is excruciatingly more difficult, since the feature of the poverty-stricken village is, in the main, and so far, the absence of a strong tendency to improvement, for reasons already commented upon. One gets the impression that in certain segments of the rural economy of India low output and income tend to perpetuate themselves. Institutions do chain economies to the past and the breaking of the chains is essential to progress. Failing that through internal pressures, there is little chance for agrarian reform and significant and widespread application of new farm practices in general in a country laboring under a system in which a large group of the population is confined by tradition and law to share a meager product.

B. Suggestions for Action

88. We come back full circle where we started from: how to break the chains which still tie a multitude of farmers to conditions best forgotten. One approaches the task with great diffidence. This is particularly true of one who was privileged to take part in the preparation of the agrarian reform, part of the First Plan, and who has closely followed its fortunes since then. Moreover, one is aware of the fact that so much of the advice proffered the

^{1/} Walter C. Neale, page 258.

Government of India about what is wrong with this or that facet of its economy often sounds like a cliché, resembling the endless repetition of an old, familiar, much-played-over record. With these caveats out of the way, the question still remains: What is to be done on the tenurial issue in the time immediately ahead?

89. In attempting to answer this question, it is well to make clear what is now in India not meant by agrarian reform. The problems of land ceiling, and, by the same token, of shifting large numbers of tenants to an ownership base, are not current issues. This is not an expression of a personal predilection. On the contrary, the failure to enforce land ceilings and institute a working purchase program (from the point of view of the would-be owner) has diverted the agrarian reforms of India from its original course: he who cultivates the land should own the land. But the ceilings are no more; they have disappeared into the hands of sons and daughters, uncles and aunts, cousins and second-cousins, "charitable" institutions, and, hard to believe but true, as in a case known to us in Madras, into a "Foundation". Such are the realities and it would be impossible to unscramble what was too blithely and with impunity scrambled up under the very eyes of the State Governments. What remains, therefore, of the reform program is its less ambitious, though important, part: the enforcement of security of tenure and, with it, the enforcement of fair rents; and the enforcement of the purchase provisions of non-resumable land. This, in briefest form, is what the reform is about at the present time.

90. On the legislative side, this program calls for a number of enactments and amendments. The Planning Commission in its Memorandum on the Fourth Five Year Plan, published in October 1964, notes some of the points demanding action (page 37). In the words of the Commission they are as follows:

- (1) Replacement of temporary provisions for prevention of ejectment of tenants by comprehensive legislation on security of tenure;
- (2) Restricting the right of resumption for personal cultivation;
- (3) Removal of legal and administrative deficiencies relating to registration of voluntary surrenders of tenancies;
- (4) Conferment of rights of ownership on tenants of non-resumable land: and
- (5) Commutation of rents in kind into cash rents.

91. To this list a number of items should be added, and item (2) should be drastically revised. It is well known that absentee owners (along with resident owners) and owners whose principal occupation is not agriculture, have evicted many tenants. They do not cultivate the land themselves but resort to concealed tenancy arrangements. All such land should be acquired

by the Government at a fixed price and placed at the disposal of a State Land Board for resale to the tillers. If a tenant declines to buy the land, the Land Board may lease it to the tenant at a controlled rent fixed by the State. At the same time, tenants on such lands should be given full occupancy and heritable rights.

92. Policing of tenancy arrangements has not proved effective either in regard to security of tenure or controlled rents. In view of the social conditions prevailing in the countryside, it is doubtful whether even a perfectly framed law can be enforced; it is recommended, therefore, that the State Governments should interpose between the tenant and landowner, be the latter absentee or resident. The law should be so framed that the tenant pays the controlled rent to the Government and the latter reimburses the landowner accordingly. There is a workable precedent for this approach in the former state of Trivandrum, now part of Kerala. In order to allay, in a certain part of the State, the rising disputes between the Jennis (landowners) and the Kudiyans (tenants), the then existing Government stepped in and took upon itself the collecting of rent. It paid the landowners the rent after deducting an "administrative fee" of 5 per cent. The practice came to an end after the tenants acquired the land upon a reasonable compensation fixed by the Government. The moral of this is clear. With the intervention of the Government the rent-evasions were eliminated. The resistance of the owners was softened while the bargaining position of the tenants was strengthened. Above all, the right of the tenant to remain on the land so long as he paid the rent became legitimized in practice. Hence the suggestion of adopting the practice of rent-collecting by the Government in other states. The Revenue Service might be pressed into this additional job, or the task may be entrusted to a new organization to administer the reforms.

93. There are many tenants willing to buy what is left of the non-resumable land or any other land that might be available for sale for the benefit of the tenants. Compensation and what form it is to assume enter the picture very importantly. We have stated repeatedly why few, if any, tenants can pay for the land at once (in cash) even if its price is fixed by the Government, or why they cannot meet yearly installments if payments are too closely spaced or the land is too highly priced. We have also indicated (paragraph 40), and so have the members of Agrarian Reform Division of the Planning Commission (bottom, paragraph 27) that unless the landlord is effectively compelled to sell the land subject to purchase, progress will be halting at best. Experience demonstrates that this issue cannot be resolved through voluntary compliance. To this end, it is recommended that the State Governments buy the land directly from the landowners for re-sale to the tenants. Many of the landlord-tenant behind-the-scene involvements, which so often prevent a land transaction, would be eliminated if the Government intervened in so clear-cut a fashion, thereby providing the tenant with a much-needed protective shield. This is the reason why the Japanese and Taiwanese Governments placed the entire land purchase scheme on this basis.

94. If the Government adopts this recommendation, how will it pay for such purchases? We may recall that, more than a decade after the Zamindari abolition, the Government still owed the former intermediaries not quite two-thirds of the agreed-upon purchase value of the land (footnote 1, paragraph 27). For reasons explained in the Zamindari abolition section of this paper, the same treatment cannot be applied to the landlords considered here; they are not British-created, but the "more equal", indigenous brand, who must be dealt with with greater circumspection. Whatever the price agreed upon, the State Governments will not find it easy to pay promptly and in fairly large sums. They could, of course, dip into the chronically depleted State treasure boxes, or resort to the usual payments in long-maturing, low-interest bearing bonds. We believe that this will not suffice and that the problem can be eased by tapping a financial resource hitherto untouched.

95. We recommend for the consideration of the Planning Commission the exchange of stocks of Government-owned enterprises in part-payment for land purchased under the reform. At first glance, and in conditions where the Government has never practiced such a scheme, and owners have never handled a share of stock, this idea may seem far-fetched. Yet, Taiwan offers a successful precedent. There, the National Government decided to part with some of its public sector industries (Cement, Paper and Pulp, Agricultural and Forestry Development and Industrial and Mining Corporations) to cover 30 per cent of the land value purchased by the Government from landlords for re-sale to the tenants. The properties were evaluated, stock issued, and a requisite amount of stock transferred and accepted by the landowners. The two cardinal points of the scheme are that the stock is not overpriced and that the selected industries are well-managed and profitable. In Taiwan the stocks were possibly overpriced, but the industries proved to be extremely profitable, and those who held on to the shares have reaped a return beyond their expectations. It is not without interest that in Taiwan the sellers of land under the reform were much smaller holders than those of India and knew no more about stocks than their Indian counterparts.

96. Our information about India's large public sector is minimal, but we know that it contains a profitable segment of industries, and suggest that the latter might provide a basis for the transfer of shares in lieu of payment for purchased land. In relation to India, as against the familiar to us, case of Taiwan, we cannot venture outside the general character of the idea. It is in such terms that we aired it before an important official of the Planning Commission. It did not seem forbidding to him and, in fact, he could see its application in other fields, while preserving Government control over the public sector. Nothing said here can be interpreted to mean acceptance of the idea. The wide and complex ramifications of the recommendation are recognized and so is the need for a thorough study and analysis of a mass of pertinent information before judgment is rendered. Only the Planning Commission can initiate the appropriate examination along those lines and determine what the public sector could do to further the cause of this aspect of the reform program.

97. The foundation upon which all other recommendations must rest is the preparation of a basic record of tenancies. Its importance cannot be overestimated. In many States tenancies are on oral basis, and a tenant cannot assert security of tenure rights unless they are recorded. Without a written record any and all provisions relating to security of tenure cannot be enforced. In the Uttar Pradesh a few million records were corrected or newly inscribed in the course of a special drive organized by the State Government in connection with the implementation of the Zamindari Abolition and Land Reform Act. The same cannot be said of a sizable part of the country, particularly of Andhra Pradesh, Assam, Bihar, Kerala, Madras, Mysore and Orissa ^{1/}. Evidently the Uttar Pradesh method, largely based on the determined leadership of Mr. Charlan Singh, the then Revenue Minister, was not or could not be duplicated in many other states. In order to overcome this difficulty, we suggest the following. The patwari ^{2/} cannot carry out so important a task, and here is where the participation of tenants comes into the picture. A committee should be set up in every village made up of two tenants, one part-owner/part-tenant, one owner-cultivator, and one landlord to help the patwari and other revenue officials to prepare the record of rights. This suggestion is based on two practical considerations. What the officials don't know or pretend not to know about "who is who" in the village, the three first mentioned members of the committee do know. The other important consideration is to give the tenants the reality of participation in the implementation of the land reform program.

98. Deeply involved in every aspect of agrarian reform is the Agrarian Reform Division of the Planning Commission. The one suggestion we offer in this regard is the urgent need to enlarge its staff in order to expand the scope of its work. The Division is the only one of its kind in the Center, for neither the Ministry of Food and Agriculture nor the Ministry of Community Development and Cooperation engage in any agrarian reform work. In size, the staff, including the Director, is not a dozen strong. Yet it is called upon to perform a great variety of services, ranging from the formulation of major policies to rushing all over the country "putting out fires". From our personal observations, the Division is more than overburdened trying to keep up with a whole array of difficult and essential chores connected, especially in recent years, with the implementation of the programs, their evaluation, and the continuous prodding of the States into more vigorous action. The surprising thing is that so few have done so much and so well in difficult circumstances.

99. While all this is true, it is just as true that the Division should probe a good deal more into basic problems, if it is to fulfill its unique position as the watchdog of Indian agrarian reforms. We have in mind the need for basic information and analysis that might be of great assistance to the policy-maker, administrator and the student alike. Much is known in a general way; much is unknown in a specific way.

^{1/} Progress in Land Reform, page 180. Planning Commission, 1962.

^{2/} A patwari is the hereditary village official who keeps the land records and the revenue rolls.

100. To cite a few examples. Eviction of tenants following the application of the reforms is a common phenomenon, but how many, even if not to the last decimal, remains to be determined. Co-joined with this is what happens to them after eviction. Some tenants have acquired land under the reforms, but the answers to the questions of how many, how much and in which states are very inadequate. The extent of open tenancy is highly debatable despite the census data. More or less tenanted acres or more or fewer tenants are not academic questions: they have serious bearing on agrarian policy. It is one thing for officials of a well-known state to claim that tenancy is almost non-existent any longer; it is another matter to find that it is there all the same but in a different and worse guise.

101. "Underground" tenancy is a post-reform phenomenon and rising fast. There is ample reason for studying it and drawing the necessary policy conclusions. Studies of the effects of tenancy as they relate to landlord, tenant and land have been made, but they are far from common and are not particularly up-to-date as one might wish. Besides, often the subject enters by indirection, as it were, the emphasis being placed on other aspects of farm management. The economic and social consequences of the reforms implemented and unimplemented are still practically a virgin field; it could stand a good deal of deep plowing and much light would be shed on these issues. The land reform laws are on the statute books of every state, and there is nothing in those laws and their amendments with which at least two individuals of the Agrarian Reform Divisions are not thoroughly conversant. At the same time, a codification and interpretation of the reform laws would be of great value for all concerned with the reform movement in India. The "anti-reform-reform-legislation" of some of the states is pregnant with touchy and crucial questions on why reforms in certain states have gone wrong. There is much else in this area of problems that the Division could explore on a continuous basis. And there might be also the possibility of enhancing its advisory services to the states in an effort to improve the legislation enactments. A well-staffed special unit, branch or bureau of the Agrarian Reform Division could and should address itself to issues mentioned and unmentioned, as befits the clearing house of reform ideas, policies and basic information.

C. Administrative Reform

102. The recent recommendations of the Planning Commission are well taken, and it is tempting to echo the Planning Commission by saying that they ought to be enforced, as indeed they ought to be. The same should apply to all the recommendations grouped under the heading "Suggestions for Action". But even the best recommendations don't get carried out merely because one wishes them well. To reach their objective they must, first of all, function within an effective administrative agrarian reform framework. Such a framework, India doesn't have.

103. There is a good deal of poor content in the reform legislation in India, but it can be corrected. The technical problems of administering a program are not insurmountable, and India offers examples of resolving such difficulties. These are encouraging exceptions but they should not blind one to the fact that for all practical purposes India has no administrative mechanism specially designed to implement its reforms. For reasons to be discussed in subsequent paragraphs, India is doing it "on the cheap", relying almost entirely on the existing revenue administration.

104. The Planning Commission realizes the inadequacy of this instrument. It states rather frankly that "The collection of land revenue and other miscellaneous tasks take so much time of the field staff (of the revenue administration) that they are not able to give adequate attention to the maintenance of land records and the administration of land reform programs."^{1/} More specifically, in a number of States, "particularly Bihar, Orissa and West Bengal and over large areas of Rajasthan, there was hardly any revenue agency below the district or sub-divisional level. In some other States, such as Assam and parts of Madhya Pradesh, the staff at the village level has been inadequate to discharge the multifarious duties entrusted to it. Although steps have been taken, notably in Bihar, Orissa, and West Bengal to build up agencies in the field, much still remains to be done"^{2/}. There are other reasons explaining why the revenue administration is not the vehicle for reform administration.

105. Consider the administrative structure from the bottom up. First comes the patwari, the hereditary village official who keeps the land records and the revenue rolls, and is part of the revenue administration. The reform entanglements have added no staff of any kind to assist him. There is the revenue inspector, covering from 20-40 villages; there are the sub-deputy collectors covering 100 villages, presided over by the deputy collector, and collector in charge of an entire district. Only occasionally does one find in the collector's office a special officer for agrarian reform affairs. On the State level there is the Revenue Minister, and in some states only is there a Land Reform Commissioner, assisted by a small staff. By a most generous estimate one might add up 6,000 - 7,000 people not connected with the revenue offices, directly involved in reform administration. But fundamentally agrarian reform is in the hands of the revenue department and the patwaris. And what must be stressed here is not the lack of numerical strength of these administrators but their attitude toward reform.

106. The patwari is the only official crucial to the reform at the grass-roots, but he is a hindrance to, rather than a promotor of, reform enforcement. Personal observations in other states amply support this comment on the patwari in Uttar Pradesh: "the enforcement of land law in particular faced the other

^{1/} Progress of Land Reforms, page 182. Planning Commission, 1963.

^{2/} Ibid, page 180.

immense difficulty, the character of the patwari or village record keeper."^{1/} According to a classic description of this ancient village official, he is capable of any form of deceit, corruption and malpractice ^{2/}. Not all of them are cut of the same cloth, but the author's most charitable comment is: "... the methods of dishonesty pursued by the various occupants of this office differ as widely as their habits of thoughts." With the passage of time his role and attitude have not undergone a significant change. Past and current assessments make this clear. So much for the patwari, the village king-pin and supposed reform implementator.

107. The other two vital personages are the Revenue Minister and the Collector, for they set the tone, particularly the Minister, for the entire revenue establishment. By and large, and understandably so, they look upon reform work as an intrusion into their multifarious activities. That traditionally these activities also involve settlements of rent disputes doesn't detract from the statement. But more germane is the fact that more often than not these individuals, by social caste, are not reform zealots. On the basis of field observations, the same may be said of their principal subordinates. The position taken by many States vis-a-vis the reforms serves to compound this negativism.

108. In fairness, not all patwaris are devoid of all rectitude and not all revenue officers are "negative". After all, the zamindari abolition is a fact and so is the implementation of some of the other new tenancy provisions, spotty though it is. The overriding consideration is that neither the patwaris nor the revenue establishment are instruments for administering so gigantic an enterprise, quite alien to their thinking and way of life. We suggest that a Land Reform Administration in every State, appropriately staffed by people solely devoting their efforts to the reform work, is a prime need. It will be indicated elsewhere that this is envisaged as only part of the administrative scheme; but for the moment let it be stressed that even this bare minimum doesn't exist. This is the more incongruous when we note that, numerically speaking, Community Development has 67,000 Village Level Workers as against hardly 6,000 workers devoting all their time to agrarian reform work only.

109. This contrast is the more striking when we take a leaf out of the Japanese experience. There, the total amount of land transferred from landlord to tenant was no more than 5-6 million acres. Yet the enforcement of the program called for nearly 120,000 members of village land commissions, made up of tenants, owner-cultivators and landlords; upward of 400,000 village volunteers, and many thousands of officials and clerks on national, prefectural and village levels. And this in a country with no patwaris to "doctor" records and no opposition worth mentioning. The moral of it all is: if India is to

^{1/} Walter C. Neale, Progress of Land Reform, page 201.

^{2/} Sir Cecil Walsh, "Indian Village Crimes", pages 149-151. Quoted by Walter C. Neale.

proceed with so much that has been left undone, it is indeed time to create an administrative structure for that very purpose. There is a second moral in the Japanese story: there was the will in Japan to carry out the enabling legislation, whereas in India, and with the exception of the Zamindari abolition and only occasionally in tenancy reforms, the attitude has been one of great reluctance.

D. Congress Party and the Peasant

110. One can go on at still greater length pointing out weaknesses and laying down "should be dones" to eliminate them. Instead, we shall rather repeat the one all-embracing soft spot just mentioned: the lack of sufficient will to grapple with the problem by those who legislate and those who are charged with the duty to implement reforms. And it is the former rather than the latter with whom the responsibility lies. There is yet another group of people upon whom the primary responsibility devolves. In fact, it pre-dates, if one may put it that way, enactment of legislation and the means of enforcement. This group, too, can affect profoundly both the character of the legislation and enforcement. We speak of the Congress Party.

111. Not too many years ago it was the leadership of the Congress Party that had the vision, social conscience and dedication to pioneer the reforms. This fact was of singular importance, for it is political leadership which makes or unmakes reforms. It is political leadership which provides the impetus or lack of impetus, which decides between reform and "reform". There is no gainsaying the fact that the economic environment, population pressure on the land, and customary relationships sanctioned by a long history of social and religious traditions exert great influence on what happens to legislation designed to change old institutional molds. But this does not invalidate the main premise - that the content and implementation of agrarian reform are a reflection of a particular political balance of forces in a country. India, of course, is no exception to this, and it is India's political leaders who at one time strove with might and main to give birth to the agrarian reform idea - Zamindari and non-Zamindari. The Party was then the authentic "agrarian reformer". Without going into the reasons why, it must be recorded that that all-important role has been gradually diluted to a point of nonrecognition. It is not in evidence even at the auspicious party gatherings when pro-forma tributes are also paid to outworn party slogans. And yet, the Party's active allegiance to the reform idea is more important now, when early idealism has given way to the painful realities of attempted changes in the old rural order. More concretely, unless the political leaders assume that role once again, the chances of improving the legislative content of the reforms and of implementing them are very poor indeed. By itself, even the best administrative machine cannot meet the task assigned to it. It is understandable why in a review of the Alliance for Progress, the writer, noting its slow development, wrote in this wise:

"The execution of agrarian reform, rural community development and an adequately financed and staffed national education program depend ultimately on political leaders ... and not on experts ... what the Alliance for Progress needs to be a success in these countries is only the commitment of the political leadership to back up the experts."^{1/}

112. Another serious problem related to the one just mentioned is that the people in whose behalf the reforms were designed have never been, as was noted above, a party to the process of reform formulation and enforcement. They are objects of the reforms but never means of helping formulate and carry them out. Whether consciously or unconsciously, the Congress Party had never reviewed this distinction with the consideration it deserves. The reliance is upon a reluctant, numerically small bureaucracy to do the job. Reluctant officials and timid farmers are not a good combination to advance the cause of reform. Besides, and the exceptions notwithstanding, no bureaucracy, however competent and devoted, as exemplified by the Japanese and Taiwanese cases, can carry out the task without the assistance of the top policy-makers and of the peasantry. To illustrate but one point: even though many Indian villages have records of rights full of holes, the villagers know who is who, who owns what land, who rents from whom and at what rate, and much else. When nudged in that direction, their role is indispensable. There was a time when Community Development might have played the role of a catalyst in this regard, but it carefully shunned the reform problem for reasons best known only to itself. Nor has there been in recent years any non-governmental group, in or out of the village, that felt deeply enough about the reform cause to carry the message into the countryside. This being the case, it would be appropriate for the Congress Party leadership, which once spark-plugged the agrarian reform movement in India, to re-assert its interest in the welfare of its own offspring.

113. The renewed and active interest can assume a number of forms, reaching out, in the first instance, to the state legislatures and "tidying" up enactments long overdue. More important than that is the task of forging the missing link - the participation of the tenants in the reform process. This means organizing them by the Congress Party - if need be into "farm lobbies" - so that they may play an active role in all matters relating to agricultural development, including, of course, agrarian reform matters. Reforms in Japan and Taiwan demonstrated that adding this party to the "bargaining table" is the sine quo non of a meaningful reform. Since the initiation of such a movement cannot come from the tenants themselves, it must come from the centers of power just mentioned. This would not constitute an altogether novel experience for the Party. The "kisan" (peasant) movement in the Zamindari areas in the late 19th century was guided by the very people who later on spawned the Congress Party. The latter displayed its great organizational talent in the struggle for Independence, and in ushering it in during the early perilous years,

^{1/} Juan de Onis, New York Times, December 15, 1964.

and in settling down to the tasks of running a new state. It has lacked no talent in soliciting the peasant vote since Independence, and it should lack no talent to organize the farmers so that they may articulate and actively advocate their interests. Admittedly, this may not be easy and will take time. The cake of custom is hard to crack, and values and attitudes do not change overnight. But they are not forever. The Communist leadership in Hyderabad in 1948, and the same leadership in Madras, witnessed by this observer in 1952, demonstrate that the peasants respond to those who assume the role of their leaders and protectors and act upon it. Under such conditions customary predilections, when pitted against known self-interest, do change even in the Indian village. It is the Congress Party's opportunity to speed up that change.

114. A move in this direction is a political act, but the entire reform movement in India is not without political considerations, heavily-weighted, to be sure, in favor of the landowners. The Union Government through the Planning Commission has repeatedly pressed the State Governments to get on with their responsibilities. The pressure, however, has fallen short of its mark. The State Governments depend upon the Union Government for nearly 75 per cent of their developmental funds, but have the purse strings been used as a "handle" for extracting agrarian reform concessions from some of the recalcitrant State Governments? The same political party dominates the Center and the States. If the latter continue in their refusal to accept and act on Center's important policy decisions, might it not then be advisable to put into play the financial resources of the Central Government? It is recognized that stronger political pressure might provoke political dissensions within the Congress Party, as well as give rise to overt discontent in the countryside on the part of the reform opponents. But the alternative to refocusing on the land problem is putting the reform issues, at least in certain states, into a deep-freeze, retard agricultural production on 70 or 85 million acres of land, and eventually risk political tensions the country could well do without.

115. There was a time when under the care of the Congress Party agrarian reform was a national issue, in the sense that the principles of tenurial reforms had been accepted as one of its major guiding policy principles. To be against reform was akin to being against Independence, for it had been for some years past part of one grand design of the country's development. Is it too late to infuse the Party with the old, original meaning, when the welfare of India's submerged was one of its articles of faith? If the voluminous legislative enactments of some of the states give birth to reform measures of questionable value, must not then the leadership of the Congress Party somehow assert itself, publicly, reaching out into every nook and corner of those States, carrying the message of people's rights in the land? Would not then the proponents of reform in the countryside take heart and make their contribution to an effective enforcement of what is now known as agrarian reform in India? Would not a good purpose be served if the Congress Party convened and examined the course of the reform movement since Independence? It is possible that a deliberation of this kind might provide much of the needed stimulus to push agrarian reform in India off dead center.

E. Pro-Reform and Other Considerations

116. The current food difficulties are a propitious time to link them with the reform problem. Greater agricultural productivity and better tenurial arrangements go hand-in-hand. The discussion of security of tenure, if nothing else, points that way. If one is serious about the first, one must be just as serious about the second. The argument, recently restated by a top official in Punjab, that it is best to leave things as they are so as not to disturb the status quo, is neither good argument nor good advice. There is nothing in the agrarian reforms of India as envisaged in this paper that infringes on big landed properties. Most of them are already broken up, worked by tenants, farm hands, or tenants turned farm hands by the very laws which were supposed to prevent much of that. What is at issue is the injection of a touch of dynamism into the use of land by giving the cultivators the incentives that go with security of tenure and reasonable rents, and such modest purchases of land to which the tenants are entitled under the law. And if, we repeat, there are State Governments not prepared to grant these reasonable conditions, at the same time laying by the side questions of social justice and equity, then it is up to the centers of power to step into the breach, provide an effective stimulus for the fashioning of the ameliorative conditions long overdue.

117. There is another reason why it is not best to leave things alone, as they are, but, instead, finish the job expeditiously, salvaging what can be salvaged from original reform goals. To date, the landowners have done well, while multitude of the tenantry has not done well. But it would be correct to say that even the landlord group is not in too happy a frame of mind - the successful evasions notwithstanding. The preoccupation with agrarian reform is bound to continue; there is too much at stake for too many for it to die a natural death. It can't fade away. Deficient though some of the laws are and obstructed though their execution is, their very existence is a promise to the tenant and a threat to the landlord. Even though the cards are still stacked in favor of the landowners, it has been this observer's experience that surely some of them are not of an easy mind; not about the plight of the tenants but about their own future. They know that this is not the last round in their tug of war with the tenants. Some of the provisions most damaging to them (ceiling, occupancy right, security of tenure, reduced rents, etc.) are still on the statute books, and someday someone may venture to apply them. If the sense of uneasiness is to be allayed on the part of the owners and the sense of despair on the part of the tenants, what better remedy than the enforcement of the minimum program rather than prolongation of the state of uncertainty with all its debilitating effects?

F. Minimum Programs and Maximum Application

118. The stress is on amelioration rather than final solutions, for the minimum program can do no more. This is not to denigrate the beneficence of such measures effectively carried out. It is well to remember that the objects

of the ameliorative reforms are small, hand-to-mouth farmers, where every bit counts. The point can be illustrated simply. At its most rockbottom level - the food level - more or less rent may mean the difference between two meals a day or one meal, a full rice bowl or a half-empty one. It is that basic. And it may mean more too - just as it can mean less also. It is one thing to be secure in one's tenancy rights, it is altogether a different matter to be at the bottom of the heap as a landless laborer; it is one thing to be a tenant, it is another thing to be an owner of non-resumable land. Granting these most significant distinctions, it is understood that the measure that lies closer to a "solution" is the widespread ownership of the land by those who cultivate it. This has been the guiding principle of the reforms in countries of Asia, in the current reform developments in Iran and in Latin America, and, of course, in India. But for the many reasons stated, no such drastic changes in the agrarian structure of India will take place in the foreseeable future. One must settle, therefore, for the proverbial "bird in hand", for the minimum that can be realized as against the maximum which cannot be now attained. Anything that eases the immediate burden of the tenants is an opening wedge of two-fold significance: it contributes to the unlimbering of a large part of the agricultural economy and, by the same token, tends to weaken the village set-up which smothers initiative in all manner of ways. It assumes, of course, that technical and financial assistance will be there to underwrite the new psychological and other incentives.

119. Admittedly, past experience has taught that even the realization of the minimum program presents enormous difficulties, especially in India. They stand repeating for their content and for reasons given in the next paragraph. Among the difficulties are the sheer enormity of the task of giving security to millions of tenants on millions of acres of tenanted land; the correction of some of the mischief already committed; administrative decentralization, with each State a law unto itself; the fact that an estimated third of the tenanted land belongs to owners with five acres or less; that a quarter of the farm population has hardly any stake in land at all; the fierce competition for any tillable plot of land on almost any terms; the prevailing lack of peasant initiative and the failure to stimulate it, and the millions of more people added annually to the already overcrowded land. This is enough even for some stout-hearted, let alone the faint-hearted, to seek refuge in "all hope abandon".

120. These are restated not only for what they are - and surely not to weaken one's resolve - but rather to call the attention of the Congress Party and of the Central Government that if they are to take a more searching look at these problems and to redeem at least part of the pledge to the tenants, it would take all instruments of government - due process of law and, when necessary, unceremonious vigor - to deal with them. Above all, it will take effectively organized will, without which much else will be written in water. Assuming that this will be the approach, they ought to bring into the open, through all possible media, that anti-reform sentiments are thwarting the expectations aroused by the coming reforms nearly two decades ago. That this

is so is an open secret, but it would be useful if they aired them from the "house-tops". They should proceed with the creation of an administrative organization encompassing all aspects of the agrarian reform programs. They should make the strongest possible bid "to place the peasant", as the late Prime Minister Nehru put it, "in the center of the piece". This is one of the main roads to progress, certainly until the day when an awakened peasantry becomes a source of authority and a mainspring of change.

121. The Planning Commission is an arm of the Union Government. As such, it has not failed to try to advance the reforms in the desirable direction. But the Commission does not pass land laws; only the States have that right, and the Commission is not in a position to honor the promissory reform notes issued to the tenantry by the Congress Party before and upon Independence. It is for the Party which embodies both Union and State Government to come to the aid of the Planning Commission by matching words with deeds. What is at stake is much more than security of tenure, reasonable rents, and a measure of land-ownership; these, of course, but also much else that might generate correctives to social instabilities and low agricultural productivity. It is recognized that the very attempts of this kind might usher in a disturbing shaking-up and waking-up process. But the risks is worth taking, for the Indian village as presently constituted cannot play anything like the full role in developing its not inconsiderate and still undeveloped resources - even with the help of better and more physical inputs. In the long run the "unsettlement" might prove to be part of India's "silent" revolution, heralded with so much fanfare and so much hope in early days of Community Development but which died aborning enroute from anticipations to realizations.

G. Closing Remarks

122. It may be presumptuous even for an interested outsider to treat this subject at such length and in such terms. If any excuse need be offered, it is this: it is not trite to say that the grave difficulties raised by the reform issues are a challenge to great efforts; failure to bring them to the fore in order to do what can be done is to accept the unacceptable, namely, that tens of millions of acres of land will not produce what they are capable or producing, and that for millions of cultivators' life, in Kipling's words, will continue to be "a longdrawn out question between a crop and a crop". All this, and much else unspoken but implied, fall into the over-sentimentalized and dubious village maxim of "Let All Things Old Abide". Not everything that is old in Indian villages is worth preserving; surely not at a time when the country must mobilize every resource - including the agrarian reform resource - if it is to grapple successfully with a host of seemingly intractable problems. The agrarian reform is an important part of that resource that must be used to its full capacity. Its implementation and completion should be one of the orders of the day.

123. Ceilings aside, India provides examples which demonstrate that some aspects of the program can be dealt with. The flaw is that so much of the fulfillment is a partial success only, the path being strewn by many failures. The pervasiveness and stubbornness of the reasons that lie behind them are not minimized, but we are of the opinion that, given the underpinnings already discussed, in addition to the indispensable ingredient of will from the top, the unfinished agrarian reform business of the possible can be managed even in the excruciatingly difficult Indian conditions. This presupposes no further delay. The long drawer has been in use too long, and with lamentable results. Some are apparent to the naked eye, while others, the less apparent, are possibly more dangerous in their political consequences for the future. Taken together, they spell out a slower tempo of rural development, diminishing at the same time the tempo of social change. We agree, therefore, with Mr. M.R. Bhide, Vice Governor of the Reserve Bank of India, that "the (reform) problem is both serious and immediate and unless it is handled firmly and promptly it may well be taken off our hands by persons who are more radical in their thinking and more ruthless in implementing their plans"1/. It is the business of the Government of India that that day never comes.

1/ From an unpublished paper on Wolf Ladejinsky's Tenurial Conditions and The Package Program, prepared for the Planning Commission.

Table 1: CUMULATIVE PERCENTAGE DISTRIBUTION OF ESTIMATED
NUMBER OF HOUSEHOLDS AND OF TOTAL AREA OWNED BY
SIZE-LEVEL OF HOUSEHOLD OWNERSHIP HOLDINGS

Size Level	Percentage Area Owned		Percentage Area Cultivated (Operated)	
	Household	Area	Household	Area
0.00	22	-	6	0
1.00	47	1	40	1
2.50	61	6	54	5
5.00	75	16	70	16
7.50	83	26	79	27
10.00	88	35	85	36
15.00	93	48	91	49
20.00	96	58	94	60
25.00	97	65	96	67
30.00	98	71	97	73
50.00	99	84	99	86
Above 50.00	100	100	100	100

Source: Reports of the Committees of the Panel on Land Reform,
Planning Commission, 1959. Page 3, Table 4.

Table II-1/ PERCENTAGE DISTRIBUTION OF NUMBER OF OPERATIONAL HOLDINGS
AND OF AREA OPERATED BY SIZE CLASS OF OPERATIONAL HOLDINGS

Size class of Operational Holding	Percentage of No. of opera- tional holding	Cumulative percentage of operation- al holding	Percentage of area operated	Cumulative percentage of area operated
up to 0.49	10.92	10.92	0.39	0.39
0.50 - 0.99	8.50	19.42	0.93	1.32
1.00 - 2.49	21.28	40.70	5.39	66.71
2.50 - 4.99	22.26	62.96	12.17	18.88
5.00 - 7.49	11.85	74.81	10.88	29.76
7.50 - 9.99	7.00	81.81	9.07	38.83
10.00 - 12.49	4.76	86.57	7.97	46.80
12.50 - 14.99	2.86	89.43	5.88	52.68
15.00 - 19.99	3.66	93.09	9.42	62.10
20.00 - 24.99	2.17	95.26	7.20	69.30
25.00 - 29.99	1.35	96.61	5.53	74.83
30.00 - 49.99	2.32	98.93	12.99	87.82
50.00 and above	1.07	100.00	12.18	100.00
Estimated number of operational holdings (000) 48752				
Estimated area (000 acres)			324969	

1/ National Sample Survey, No. 122, Sixteenth Round, July 1960-June 1961.

2/ An operational holding has been defined to include all lands used wholly or partially for agricultural production operated as a single technical unit by a single household or a number of households operating jointly.

VILLAGE CHATIAAULIA

TEHSIL SONEPAT

PANCHI JATAN

Distt. ROHTAK

BEFORE CONSOLIDATION

SCALE
0 20 40 80 120 160 GATHAS

(1 GATHA = 33 INCHES = $\frac{1}{2}$ KARAMS)

S. NO.	NAME OF THE RIGHT HOLDER	TOTAL AREA	FRAGMENTS BEFORE	FRAGMENTS AFTER	COLOUR
1	SIAN DASS	54	23	6	6
2	CHHOTU RAM	29	9	7	1
3	SRI LAL	41	7	9	
4	JIA LAL	31	11	7	

INDEX	
REFERENCES	SYMBOL
1 TRIJUNCTION PILLAR	⬢
2 ROADS	—
3 MINOR	—
4 PONDS	—
5 ABADI	—
6 SCHOOL	—
7 MADWARA	—
8 GRAVE YARD	—
9 BURIAL GROUND	—
10 MANURE PITS	—
11 PASTURE AREA	—
12 EXTENSION OF ABADI	—
13 PANCHAYAT AREA	—
14 PUBLIC LATRINES	—
15 POTTERS PITS	—



SANDAL KLAN

PATWARI: KANUGO: Asstt. CONSOLIDATION OFFICER: CONSOLIDATION OFFICER:
So. So. So. So.

VILLAGE CHATIAAULIA

TEHSIL SONEPAT

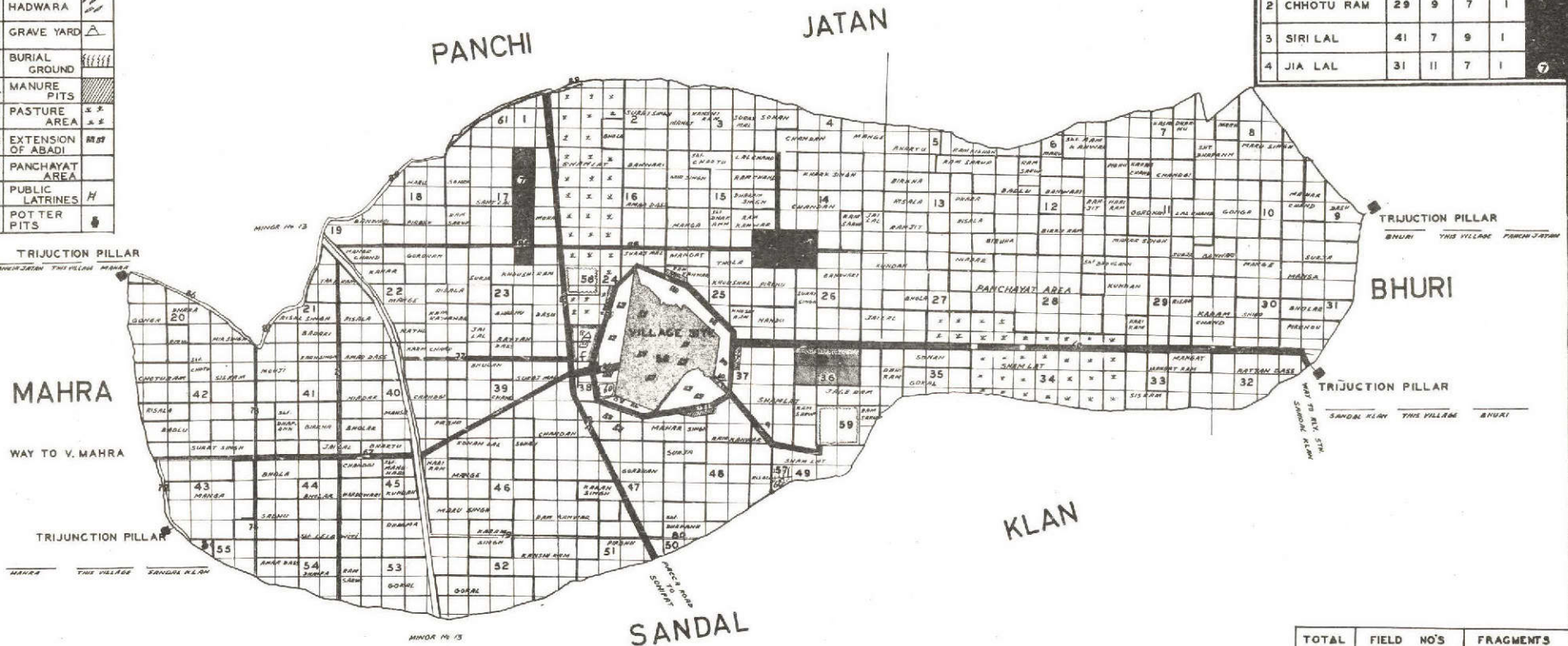
Distt. ROHTAK
After Consolidation

INDEX	REFERENCE	COLOUR
1. TRIJUNCTION PILLAR		
2. ROADS		
3. MINOR		
4. PONDS		
5. ABADI		
6. SCHOOL		
7. HADWARA		
8. GRAVE YARD		
9. BURIAL GROUND		
10. MANURE PITS		
11. PASTURE AREA		
12. EXTENSION OF ABADI		
13. PANCHAYAT AREA		
14. PUBLIC LATRINES		
15. POTTER PITS		



SCALE
0 50 100 200 300 400 500 KARAM
(ONE KARAM = 66')

S No	NAME OF THE RIGHT HOLDER	TOTAL AREA	FRAGMENT BEFORE C/H	FRAGMENT AFTER C/H	COLOURS
1	GIAN DASS	54	13	6	1
2	CHHOTU RAM	29	9	7	1
3	SIRI LAL	41	7	9	1
4	JIA LAL	31	11	7	1



PATWARI SD. LILA RAM
KANUGO SD. TARIF SINGH
ASTY. CONSOLIDATION OFFICER SD. TEHKAR SINIBISLA

CONSOLIDATION OFFICER SD. NAGINA SINGH B.S.C.

TOTAL AREA IN KAMALS	FIELD NO'S		FRAGMENTS	
	BEFORE	AFTER	BEFORE	AFTER
7792	2429	1449	1398	426
974 ACRES				

APPENDIX X

COMMUNITY DEVELOPMENT AND AGRICULTURAL PRODUCTION

Wolf Ladejinsky

APPENDIX X

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APPENDIX X

COMMUNITY DEVELOPMENT AND AGRICULTURAL PRODUCTION

PART I: INTRODUCTION

1. Of all the postwar rural reconstruction efforts in India none has achieved so much prominence as Community Development. The tone was set at its very inception: "Community Development is the method and Rural Extension the agency through which the Five-Year Plan seeks to initiate a process of transformation of the social and economic life of the village." ^{1/} Anyone interested in this would-be "New Deal" in the countryside must recognize that Community Development is the fountainhead of ideas, methods, and ways of translating the effort to fruition. As such, Community Development embraces every phase of rural needs - save for agrarian reform.

2. India was not the first country to use Community Development as a means of rural betterment. The policy had many predecessors in India and elsewhere, in programs under such names as "mass education," "social education," "rural welfare," "local community organization," "rural welfare centers," "village services," "village uplift," and so on. But India was the first country to unify most of the programs of this type into a single Program. In addition, "She was the first country to say clearly that she was going to use Community Development as an extension method, and the first to avow that her great mass of illiterate, poverty-ridden villages are a developmental resource." ^{2/} These, in combination with the cardinal assumption that the cultivators would closely participate in the endeavor through self-help, were to have provided the key to a revitalized village. The complete confidence in, and the skillful articulation of, Community Development concepts quickly raised it to the level of something akin to a new religion. Its apostles carried its message beyond India, into other under-developed, aid-receiving countries, stopping at few borders. Most of the under-developed countries are currently attacking their rural problems through one form or another of what goes under the name of Community Development. It must have been enticing to have a program which lays claims to so many promising innovations all rolled into one, for in the words of one writer, Community Development is:

"A process of change from the traditional way of living of rural communities to a progressive way of living; ... a method by which people can be assisted to develop themselves in their capacity and resources; a program for accomplishing activities in fields concerning the welfare of the rural people; and a movement for progress with a certain ideological content." ^{3/}

^{1/} First Five-Year Plan, page 223.

^{2/} Taylor, Ensminger, Johnson and Joyce, India's Roots of Democracy, page 169, Orient Longmans, 1965.

^{3/} B. Mukerji, Community Development in India, page 2, Orient Longmans, 1961.

3. Community Development is a dozen years old and, geographically speaking, covers virtually all of rural India. The first few years witnessed a rising tide of activity, with it went an elan that promised better things to come. India's Roots of Democracy correctly notes that "Before the program had been operating three years, it was being called a 'community development movement,' which meant it was so highly sanctified by everyone from the villagers to national leaders that a faith in its progress had become a national contagion." 1/ There is additional evidence to support this judgment, for indeed perhaps for the first time in India's long history, Government was seemingly successfully penetrating the village with a program that spelled the good of the villagers. But much has happened since the pioneering days; the high tide of useful activity has long since subsided, and the Community Development of 1965 is not the Community Development of old. It stands revealed with huge chinks in its armor, and the active discussion in recent months about the abolition of the Ministry of Community Development and Cooperation is in itself a telling commentary on the current state of affairs in Community Development. Clearly, much has happened to the program in little more than a decade, and it is the purpose of this paper to deal with the following: (a) why Community Development with the great hopes placed in it at the beginning has fallen on dire days; (b) what effect Community Development's programs, particularly its agricultural programs, has had on the village community; (c) what lessons may be learned from Community Development about ways and means of increasing agricultural production through extension services; and, finally, (d) Community Development's role in relation to the Fourth Plan's ambitious agricultural goals.

PART II: SOME FACTS, PHILOSOPHY AND TRENDS

4. Community Development in its current form came into being in 1952, and has spread its wings far and wide since then. A few figures tell the story. Community Development now operates in 5,237 blocks, 2/ and 567,000 villages, with a total population of about 400 million. Quantitatively, Community Development met the target of the Third Plan. Whether the Plans have or have not stinted the organization for funds is difficult to say, but there have been no complaints from Community Development on this score. The Second Plan appropriated Rs. 189 crores 3/ for Community Development as against Rs. 46 crores during the First Plan. By the time the Third Plan rolled around, Community Development operations had become the subject of one of the most severe critiques. 4/ Yet, the Third Plan allocated Community Development Rs. 322 crores, in addition to Rs. 91 crores for cooperatives and Rs. 28 crores for the Panchayats (local village councils). These are the "anticipated Third Plan Outlays" and they constitute nearly 40 per cent of the

1/ India's Roots of Democracy, Chapter 9, page 179.

2/ A block is a geographic unit comprising about 100 villages, designed for the coordination of administrative and technical services and government assistance to the villages.

3/ One crore = ten million rupees.

4/ Report of the Team for the Study of Community Projects and National Extension Service (Balvantray G. Mehta, Leader). Three Volumes, published in 1957.

total outlays for agriculture.^{1/} They do not include funds contributed by the villages, mostly in the form of labor. According to official sources, the amount of the people's contribution was around Rs. 16 crores from 1956-57 to 1958-59, dropped to Rs. 14 crores in 1960-61 and to under Rs. 10 crores in 1961-62. The latter is a provisional figure, and excludes Uttar Pradesh.^{2/} Most evaluation reports consider these figures either "grossly inflated" or just "inflated."

5. One of the controversies surrounding Community Development almost from the very beginning is centered on whether it is or is not agriculturally production-oriented. That point will be discussed below, but it may be useful to give a breakdown of its expenditures at this point.^{3/} Total expenditures under the Second Plan amounted to Rs. 189 crores. Of this, "Agriculture and Animal Husbandry - Irrigation and Reclamation" accounted for 31 per cent of the total; the remainder may be classified as non-agricultural. It is not without interest that expenditures on "Block Headquarters (including transport, office building, equipment, etc.)" were roughly of the same magnitude as those for agriculture. In 1961-62, with pressure on Community Development to concentrate on agriculture mounting, expenditures on agriculture represented a smaller percentage (27 per cent) than on the average under the Second Plan. Only in 1963-64, did the figure rise to 35 per cent of the total. These figures become more meaningful when the quality of Community Development's agricultural performance is considered.

6. At the Center, Community Development is a small organization, employing a staff of no more than 300-400 people. In the field, on the block and district levels, as of March 1964, the staff numbered 36,500; in the villages, Community Development was being served by 58,000 Village Level Workers (VLWs). The figures have undoubtedly risen since then, following the partial launching of the IAA (Intensive Agricultural Area) scheme in some of the 1,500 selected blocks. However, the real importance of Community Development doesn't stem from the number of its employees or its coverage of all of rural India but from the scope of its work and the aims of that work.

7. Community Development assumes that all basic village problems are inter-related and must be treated simultaneously. It has placed all its emphasis on developing an integrated multi-purpose program that comprises all the principal features of agriculture, and, in addition, rural employment through small-scale industries, health and sanitation, education, housing, economic and social welfare of women, children and youth, and the special problems of the "underprivileged" classes, the "Harijans," or the "untouchables." Hardly anything is left out, except, we repeat - agrarian reform. The adoption of such a broad program presupposed that the cultivators would be stimulated to band together to undertake self-help improvement projects which would then (or simultaneously) be supported by external material and technical assistance. It should be repeated that Community Development's stress was to have been on the awakening of the farmers to an awareness of their opportunities

^{1/} Table I, pages 29-30 of Memorandum on the Fourth Five-Year Plan, October, 1964. The table doesn't include the allocation for Panchayats.

^{2/} See attached Table I.

^{3/} Table I.

and to act on them. This was crucial. In defining the purpose of Community Development, V. T. Krishnamachari, former Vice-Chairman of the Planning Commission, put it this way:

"To create in the millions of rural families a burning desire to change their old-time outlook and arouse enthusiasm in them for new knowledge and new ways of life. This 'will to live better' is to be brought about by ensuring every family a programme for increased employment and production for which it is assisted; that every family is represented in at least one multi-purpose cooperative society in its own right; that every family makes its voluntary contribution to works of benefit to the community as a whole."

8. V. T. Krishnamachari's statement may strike one as over-ambitious, as programmatic statements often do. But if this pronouncement is read as a recognition that the attainment of goals lies in the involvement of the rural people in the process of fashioning and carrying out a program, then the point is well-taken - even if not every rural dweller participates. The fly in the ointment is that Mr. Krishnamachari's expectations, like those of all who have beat the Community Development drums loudest, have fallen short of realization.

9. In theory at least, it is difficult to take exception to an "integrated" multi-purpose program, made up of series of "packages of practices," supposedly moving in unison. But it became apparent not long after the launching of Community Development that some programs were more equal than others. This would be true of agricultural production as against the so-called "amenity" programs, such as village roads, paving of streets, construction of community halls, school buildings, etc. - all important in themselves but less important in comparison with the ever-present urgency of raising the farm output. An attempt was made to resolve the problem of priorities in the famous Mehta Report of 1957. One of its major conclusions was that Community Development did not address itself to what was truly important - the agricultural development of the village; that the emphasis was on "brick and mortar" programs easier to carry out, and "impress the casual observer." This was indeed the case in the early years of Community Development's existence. The report pleaded for a reversal of priorities on the ground that, with agricultural production in hand, the basis would have been created for a self-sustaining program leading to all the other goals of Community Development and for only such Government financial assistance to be given which is indispensable for the success of the project. Since this issue is germane to our discussion, it seems proper to give the following lengthy quotation from the Mehta Report:

"Here we would point out that the tendency in the past years has been to stress the welfare activities more than the economic development activities. This is because the former are popular, easy of achievement and impress the casual observer; the villager himself, often unable to understand even the meaning of terms Community Development and National Extension Service, as translated into his own language, gives a full measure of his admiration and

gratitude for the people who have brought him these amenities. We would urge that the emphasis should shift without delay to the more demanding aspects of economic development. The priorities as between the different activities should be: supply of drinking water, improvement of agriculture and animal husbandry, cooperative activities, rural industry and health followed by all others. The allocation of priorities is, however, not intended to operate by way of absolute precedence, but to indicate a greater concentration on certain items of work and less on others without totally excluding the latter. An intensive programme of economic development will generate a demand for a programme of amenities. We are of the view that greater stress on the former, especially in the initial stages will gradually lead to the latter." 1/

PART III: COMMUNITY DEVELOPMENT AND AGRICULTURAL PRODUCTION

10. Since 1957 much has been said on the soundness of this recommendation, and considerable pressure has been exerted upon Community Development to turn the attention of its agents to agriculture in preference to much else. Recent observations in the field seem to support this to a very limited degree only. The "wholeness" approach dies hard; so long as that concept is held and the idea of a multi-purpose program persists and the VLW is, for all practical purposes, almost the only agent in the village, it will not be easy to draw a sharp line of demarcation between the agricultural and non-agricultural activities of the scheme. It is not certain, therefore, that even in the current Community Development program agriculture has top priority and is firmly in the saddle. This, however, is not the whole issue. Good drinking water, health and sanitation, education and roads are primary needs. The practical argument whether these or agriculture should be given top priority becomes more difficult to resolve when the quality of the agricultural performance cannot be given high marks. Then, even large resource allocations to agriculture do not meet the needs. In India, and under Community Development, a number of conditions have conspired to make the work in agriculture much more difficult and less rewarding than work in the non-agricultural fields.

11. What Community Development's role in raising agricultural productivity might have been had it concentrated on that role from the outset is difficult to say. There are too many factors to isolate and values to apportion to come up with a meaningful answer. Nevertheless, the evaluators of Community Development agree in giving the organization bad marks for failing to bring about important increases in agricultural production. The Mehta Report, for instance, dealing with the early 1950's, is of the opinion that "material progress in the agricultural sector can be judged only by the total increase in production," and judges Community Development accordingly. Conceding the scantiness of the data furnished by the Ministry of Community Development, the report states that, nevertheless, "the all-India average of additional food production in the Community Development and National Extension Service blocks comes to only 10.8 per cent, varying in the individual States from 2.7 per cent to 19 per cent; only Andhra Pradesh shows 41.4 per cent." 2/

1/ Mehta Report, page 4.

2/ All the quotations in this paragraph are from the Mehta Report, page 71.

These data do not indicate the period covered, but the conclusion drawn by the authors is that "these figures make unhappy reading and merely emphasize the need for greater attention to the agricultural sector in our schemes of community development."

12. Evaluation reports of the late 1950's come to similar conclusions. An intensive study of six Community Development villages carried out in 1958 doesn't differ much from the findings noted in the Mehta Report. Thus, "Owing partly to the short period of about five years during which community development programs have been in operation in the Ghosi Development Block prior to the initiation of the field investigations referred to in this study, and partly to limitations of extension work, the gains noticeable in the sphere of agriculture - acceptance of improved practices, gains in production, capital formation, etc. - have been rather modest though distinct." ^{1/} The combination of "modest though distinct" is of this magnitude: "On the whole, the additional production capacity in the Block as a whole resulting from the use of improved seed and fertilizer may be put at 6 to 7 per cent." ^{2/} Since the foodgrain yields in India in the past three years have remained practically stationary, and since most of the country is under Community Development, it is reasonable to infer that yields in the Community Development Blocks have not shown an appreciable increase since then. The paucity of information indicating the contrary in recent Community Development literature is perhaps another clue pointing in the same direction. What are the reasons for Community Development's poor showing in agriculture?

A. General Failure Causes

13. The predilection of Community Development for non-agricultural activities as part of its many-sided approach and as demonstrated by fund allocations within programs is undoubtedly a restricting factor. On the other hand, not all elements inhibiting agricultural production in Community Development areas are of its own making. All manner of extraneous causes lying outside Community Development's control enter the picture. Mr. Asoka Mehta, Deputy Chairman of the Planning Commission, made this clear. If agricultural performance, he argued, did not live up to expectations "it is to a considerable extent due to failure of industry, power and irrigation to supply the growing needs of agriculture. In concrete terms, it is the inadequacy of fertilizers, pesticides, farm equipment and other material inputs produced by industry for use in agriculture, insufficient and delayed utilization of water resources and our failure to take the fullest advantage of the increasing supply of power for agricultural uses which are really at fault." ^{3/} To this may be added a host of other shortcomings, notably administrative problems, generated both by Community Development and a variety of other agencies, both Union and State.

^{1/} Community Development and Economic Development, page 67, part 11A. A case study of the Ghosi Community Development Block, Uttar Pradesh. Prepared by ECAFE/FAO Agricultural Division, U.N. Bangkok, 1960.

^{2/} Ibid, page 62.

^{3/} Asoka Mehta, "Words on Agricultural Revolution," Presidential Address, 24th All-India Agricultural Economics Conference, 1964, page 4.

14. Total responsibility for poor performance in agriculture cannot be placed on one cause, in this instance on Community Development. But having said this, it doesn't follow that Community Development is without responsibility, in part or altogether, for a number of constraining developments and attitudes that tended to undermine its original purpose, including, of course, measures to increase agricultural production. A number will be discussed in some detail, but the following may be enumerated: the ambivalent attitude toward agricultural production already touched upon; the failure to concentrate on the adoption of better farm practices already in use (the latter is an important untapped resource that cannot be neglected - there are few villages in India without some superior producers, but narrowing the gap between their practices and the practices of less effective cultivators has not been emphasized by Community Development); the tendency to lay down a program from above rather than to build one up from below; conscious or unconscious favoritism of the village "high" as against the "low"; accepting quantitative targets while lacking resources to achieve them on an acceptable qualitative basis (this was particularly true in agriculture); undue reliance on Government financing instead of a greater harnessing of indigenous resources and the practices of the better farmers for the benefit of other farmers; undue preoccupation with the "philosophy" of Community Development as against stress on the hard realities of "changing the outlook" of the village people, the avowed purpose of Community Development; the intractable problems of selection, training and use of village workers, agricultural specialists and Block Development Officers; and, finally, the failure of the program administration to change the administrative procedures and practices which are essential to field operation. These shortcomings are listed not as a bill of particulars against Community Development but as an index of its unpreparedness and underestimation of its huge and difficult task.

15. Practically all evaluation reports dwell on the lukewarmness of many farmers towards accepting Community Development's programs, including the agricultural ones, as their own. Much of this attitude stems from the ready-made, official character of many of Community Development's activities. It is easier to devise a program from the outside and hand it down. But when this happens, the "felt needs" of the farmers are not always part of the program even though it may be administratively easier to achieve or more readily recognizable as a program. One of the by-products of such a course of action is that the farmers are less interested in utilizing their own resources, since they believe that with a Government sponsored program will come Government financing. Such an attitude leads to unwarranted expectations that are not always realizable, and to a failure to attempt to carry out those which are warranted and manageable but are not acted upon. Without intending it as a justification, the Community Development approach is not uniquely Indian. It is common that "agencies and workers who themselves decide the specific form development should take, assume, of course, that they know better than the people what the people want." ^{1/} The ultimate danger is clear, unless the agency responsible for mounting or guiding a program comes to terms with the farmers on what, for example, the agricultural program is about or the nature of the agricultural changes contemplated.

^{1/} From India's Roots of Democracy, page 590. The quotation is from a study by T. R. Batten, a British social scientist. Title of the work is not given.

16. Of a somewhat different character, but leading to serious confusion of purposes, is Community Development's seeming acceptance of the idea that the village is a united, corporate body, ready to follow outside leadership, as well as to initiate on its own much needed changes in the rural economy. The village doesn't quite operate that way, and collective endeavor is not a common commodity there. Not only has the compartmentalized community with its variations in resources, needs and aspirations failed to respond as expected, but the benefits to which Community Development gave rise were unequally distributed along the very same compartmentalized lines. This is not to say that external forces cannot or should not play a major role in promoting the more widespread use of better traditional practices of tested value, or that external influence in arousing the legitimate wants of the cultivator cannot be a great boon. We merely note that the influence provided by Community Development has not always proved to be effective. In the case of the particular issue discussed here, the beneficiaries of what Community Development was in a position to offer, particularly by way of material resources, were the better-off farmers, not the poorer ones - the "high" of the village community rather than the "low."

17. Community Development as an institution does not deliberately discriminate between the two, but what happens in the field is another story, reflecting as it does the economic stratification of the village. We shall have much to say about the Village Level Worker (VLW) later on, but we invoke his name here to illustrate the point. According to the case study already referred to, the principal aid extended by the VLW relates to the supply of improved seeds and fertilizers, and "It is the large cultivators who benefit most. Beneficiaries of this assistance and recipients of loans and grants-in-aid amount to over 78 per cent of the large cultivators, and the corresponding percentage of the medium and small cultivators are 39 and 29. A very large proportion (55 per cent of the small cultivators and 48 per cent of the medium) reported receiving no direct assistance from the village level worker. The percentage of those of the large cultivators who did not report any direct assistance is only 36 per cent. Thus, the main beneficiaries of the services of the village level worker appear to be the large and medium cultivators."^{1/} Larger holdings, better practices, good credit-worthiness - not to speak of social standing in the community - all combine to stimulate the demand for more credit and more physical inputs, as well as to obtain them more readily. As for the Village Level Worker, consciously or unconsciously, he gravitates more toward the higher village group. The nature of the village itself exerts that pull. And Community Development's original aim to pay particular attention to the poorer in the village is watered-down in the process.

18. We have called attention to the fact that in less than a three-Plan period, Community Development came to cover all of rural India. That is to say that, in one way or another, it came to touch most of India's more than 550,000 villages with their 400 million people, at the same time creating administrative mechanisms in all of the 5,237 blocks into which the country had been delimited to serve the work of Community Development. The sheer magnitude of the feat staggers one's imagination. It is to be regretted, however, that what appears at first glance a formidable performance rapidly

^{1/} Community Development and Economic Development, page 20.

gives way to bewilderment rather than admiration. The fact is that it does not take much searching to conclude that this double-quick coverage of all of rural India carries with it but one lesson: how not to promote an effective Community Development program in general, and a program of agricultural improvement in particular.

19. Throughout its career, Community Development has not been averse to "Empire Building," but to take over all of rural India in one Community Development "package" was not a mere whim on its part; it was rather a means to an end, dictated by post-Independence political and economic considerations. There were to begin with, the undeniable and pressing needs of the Indian people in agriculture, health, education, etc., which had to be satisfied as quickly as possible. Indian villages were physically isolated and were just as mentally isolated from the centers of economic and political power. The first successful demonstration of village uplift, on a small scale, pointed the way to a solution of the problem of isolation so the argument went, if expanded to a national scale. The fledgling Community Development was to be the vehicle for the effort, and the Plans were there to sanction, blueprint and finance the effort. The favorable position of cities as against the rural areas was another powerful argument for the program. Rural India was allegedly neglected because the power-elite in India was almost exclusively urban-oriented. Immediate post-Independence development schemes were mostly concerned with industrial development; moreover, even agricultural development programs were concerned mainly with educational institutions to train supervisory staff, staff, incidentally, largely of urban origin. This trend, it was argued, had to be reversed, and the way to do it was through stress on rural improvement. One additional factor favoring the spread of Community Development was the Indian version of the American "pork barrel." Since uplifting the village called for official material assistance, the elected politicians and local ward heelers were quick to ask and compete for Community Development representation in their respective areas. There were no alternatives to these widespread demands. Whether valid or invalid, they were accompanied by a lack of awareness on the part of those involved in Community Development and almost everybody else of the myriad of difficulties entailed in the rapid mounting and execution of an all-national program of such huge proportions. The mere desire for universal and quick betterment could not be matched, in Indian conditions, by a concern for what was possible. The chickens were not long in coming home to roost.

20. The very early days of Community Development, before it became an ESTABLISHMENT and while it was working in community projects areas, were marked by considerable enthusiasm on the part of most rural people. The coverage was relatively small and indigenous and external resources were relatively ample for such programs as wells, minor irrigation, school buildings, dispensaries, modest community halls, and so on. According to the testimony of one of the most devoted leaders of rural development:

"Local contributions for such works were genuinely forthcoming. Rich people contributed cash and the poor contributed labor. This was the 'golden age' of the 'Local Workers' programme, when both the people and the extension service were not 'target minded', and crafty public leaders, and unscrupulous public officials had not learned the art of magnifying estimates, and getting the public contributions largely or exclusively from Government funds. In the early days, such was the enthusiasm for development that a temporary impression had been created that the key to rural development had at last been found."^{1/}

21. As Table II shows, coverage mounted irresistibly. Blocks, villages and people filled up the Community Development columns at such a rate that the First, Second and Third Plans were fulfilled and over-fulfilled. Schemes for recruitment and training were undertaken on the widest scale, and inevitably, at the expense of quality. Once Community Development became an important and far-flung organization, bureaucratic administrative changes followed, and Community Project Administration became Ministry of Community Development, and not many years after, Ministry of Community Development and Cooperation, thus ingesting the administration of rural cooperatives as well. But one thing was increasingly and visibly missing as expansionism held sway - the early enthusiasm, vigor and vitality among the farmers and among those charged with the development and implementation of the programs.

22. Since neither material nor human resources were in ample supply to cope with this kind of targetism, it gave rise to hastily prepared schemes for recruitment and training, to watering down of qualifications, tricky problems of administration and supervision, and bickering among staff, recruited wholesale from different departments. Above all, to fill and overfulfill targets became one of the pre-occupations of Community Development. This was essentially a statistical and mechanical "Forward March!", and it could not but lead to the dilution of resources, particularly human resources, which, in the long run, proved to be neither quantitatively nor qualitatively ample. More than that, as Community Development's attention was increasingly directed at reaching out for ever larger coverage, the not so readily visible yet all-important task of drawing out the initiative and cooperation of the cultivators could not but suffer in the process. There was naturally no room in the rapidly growing hastily gathered staff for the vision, practicality and dedication of the original small number of community development workers. One came more and more to hear the endless verbalizations on the "philosophy of community development," essentially a grab-bag of generalities, often removed from village realities, and of promises that could not possibly be met. Hence the serious and adverse effect of this rush for coverage on all Community Development's activities and, with the passage of time, on its standing in the countryside.

^{1/} R. K. Patil, The Community Development Programme - An Assessment in Retrospect. Kurukshetra, Tenth Anniversary Number of Community Development, October 1962, page 17.

23. As we pointed out, the attempt to achieve Community Development on an all-India scale, and rapidly, was no accident. Another consideration, not altogether novel but novel to the extent of the agricultural element injected into it also entered in. It was "planned" that way with the best of intentions, and for the reason just mentioned. Mr. Tarlok Singh makes this clear as he looks in retrospect at the planner's dilemma of spreading out resources or concentrating them. His quoted forthright comments are worth the closest reading. Here they are:

"Ten years ago when the approach of community development and national extension was being worked out, it seemed hard to contemplate that, for years on end, only a proportion of the villages of India should receive the benefits of the proposed development. It was then thought that there would be no contradiction between extension of community development so as to cover the entire countryside and the growth of agricultural production, provided (a) the necessary priority which the Plans contemplated was always given to agriculture and (b) extension services were established by each State Government first in areas which already had irrigation or assured rainfall or which were likely to come under irrigation in accordance with the Plan programmes. Neither of the two assumptions were fulfilled to the extent our Plans and policies had postulated ... A common danger in planning is that certain labels may be used, but the content may be quite different." 1/

24. Community Development is indeed an example of what Mr. Singh is talking about, but we believe that the responsibility of the Planning Commission is not nearly so great as the statement implies. The limited scope of Community Development's agricultural-mindedness must be given its due as a factor in the outcome described by Mr. Singh. The planner cannot be expected to tailor his goals to permit complete realization unless the aims are very much beyond reach, as in the attempt of Community Development to cover all of India. But Community Development would have proved a weak reed as an executor of the Planning Commission's agricultural goal even if the two conditions cited by Mr. Singh had come close to realization. Community Development used the "agricultural label" forced upon it by the Mehta Report, but the label didn't fit either the content or the extent of Community Development's agricultural preoccupations.

25. Official and unofficial field examinations of Community Development in more recent years shed light on some of the points mentioned above. Rural India abounds in exceptions from the prevailing low norms. But even so, a thorough investigation of 18 Community Development blocks in 13 States leads the authors to this major conclusion:

1/ Tarlok Singh, "Planning and Plan Implementation - Lesson from the Five-Year Plans," page 4.

"People's reactions in most of the blocks studied are not yet generally favorable to the growth of self-reliance in village communities which is the primary area of the C.D. programme. The majority of the villagers do not regard it as their own programme and seem to rely mainly on the government to effect the development of the rural areas. The basic philosophy and approach of the C.D. programme are therefore inadequately subscribed to by the people in these areas." 1/

26. Information from one block only suggested that the people regarded the the Community Development program "as their own and realize that it can be implemented only by them." It is well to point out here that a cultivator considers a program as his "own" when he is consulted about it; when it meets his needs; when he is willing to participate in it and is ready to contribute of his resources, however meager. But when Community Development comes to the village, as it often did, with "pre-packaged" programs, based on money allocations to be spent, they are just as likely not to be accepted by the cultivators as their own. This is where internal and external views may well be in conflict: the cultivator thinks most of all about his farm, whereas the Community Development officer may place the emphasis - though not always - on the "overall concept of community development," something about which the farmer couldn't care less. In many areas, the Block Development Officer (BDO) was identified with the revenue officials because of the administrative tie-in of developmental and revenue functions, while many farmers went so far as to say that the "programme benefits the officials more than the people." Under these conditions one may be reluctant to accept a program as one's own even if the program has merit.

27. It is essential to the achievement of Community Development's goals that the farmers are well aware of them, accept them, and do something about them. The awareness itself is important. One might expect that after a dozen years of Community Development exposure to the countryside, its objectives would be well implanted in the minds of the majority of the farmers. This is apparently not so.

28. It has been our personal experience occasionally to find little or no sign of Community Development's presence in a village, or, in a Community Development village, to discern not even a rudimentary knowledge of what it is about. In a country of more than half a million villages, this is not surprising but these are evidently not isolated instances. In one of the first studies of its kind, on Delhi State, 2/ conducted by the Indian Institute of Public Administration, the problem is pointed up rather sharply, although the picture is not altogether clear-cut.

29. When the 400 farmers constituting the sample were asked "what prompted you to make these (agricultural) changes?", two-thirds attributed their actions primarily to the advice and prodding of Community Development

1/ Seventh Evaluation Report on Community Development and Some Allied Fields, page 70. Published by Programme Evaluation Organization, Planning Commission, 1960.

2/ Indian Institute of Public Administration, The Citizen and Administration. (A survey of Attitudes in Delhi State, 1964.)

and other governmental officials. Only a fifth felt that Community Development was doing a "poor job"; over two-thirds felt the program was "worthwhile," and a small proportion thought there was great opposition to the program. "Worthwhile" does not necessarily mean participation in, or enthusiasm for, Community Development. When the same farmers were asked "what does the government want you to do to increase agricultural production?" only 15 per cent could give a specific and relevant response; most of them did not know or did not care to divulge what surely some of the agricultural specialists and VLWs must have advised them to do. Instead, they claimed to have been told to "work hard."

30. Another relevant question reflecting on the role of Community Development was whether Panchayati Raj (See Appendix XII) had improved the administration of the Block Development Office in the past ten years. Only a fifth mentioned a change for the better; 16 per cent saw a change for the worse, while 60 per cent said that no change had occurred or that they did not know. As to knowledge of the goals of Community Development, in the words of the study: "Very few had considerable knowledge of the goals of Community Development - 5 per cent - while over 50 per cent were almost completely ignorant. Similarly, when asked to explain what the accomplishments of Community Development in their villages were, only a third could mention specific accomplishments, while a fifth said that nothing had been done, and over 40 per cent said they did not know what the accomplishments were ... About the same proportion (over 50 per cent) do not know any Community Development officials at any level in the rural areas." ^{1/} In the light of these responses, the answers to the question: "Would you say that you are very interested in the Community Development Program, somewhat interested, or not interested?" is not surprising - 27 per cent said they were "very interested"; 32 per cent had no interest; 29 per cent were "somewhat interested" while the rest did not know or had no opinion.

31. To the authors of the study the attitude toward Community Development seemed "mixed," as indeed it is. Community Development unquestionably reached many farmers but not the mass of the farmers. Less concentrated and methodical official evaluation studies point roughly to the same results. The conclusion of the authors of this study is: "The low level of public interest in Community Development, no doubt a major factor in the pattern of attitudes, is frankly admitted by the villagers." ^{2/} Perhaps even more important is the reaction of Mr. Asoka Mehta expressed in his inaugural address at the Annual Conference on Community Development and Panchayati Raj, on July 20, 1964. He quotes extensively from the findings of this study and notes with satisfaction that two-thirds of the people felt that Community Development was "worthwhile," and comments as follows: "This shows that when the people are fully exposed to the programme, the response is encouraging. Why then does the exposure remain patchy?" Mr. Mehta evidently gives considerable weight to the "worthwhileness" response. Yet, in his opening statement on the findings of the study he has this to say: "Those entrusted with the conduct of the Community Development Movement cannot shrink the responsibility for the unsatisfactory nature of the impact, even in terms of bare awareness, made by the Movement on the rural people." "Awareness"

^{1/} Indian Institute of Public Administration, The Citizen and Administration. (A Survey of Attitudes in Delhi State, 1964.) Pages 19 and 9.

^{2/} Ibid., page 19.

was that Community Development instilled in the farmers in its pioneering days; "awareness" a decade later is one of Community Development's difficult problems. The inadequacy of its presence adversely affects Community Development programs as a whole, and cannot but affect similarly the most urgent of its programs - the adoption of the existing better farm practices on an ever-widening scale.

32. The most common charge against Community Development is "targetism". A critic ascribes this to the fact that:

"Officials at all levels get good marks for targets fulfilled and bad marks for reports about village resistance to proposed development or preference for other objectives. Therefore each official makes his returns appear more favorable as they pass upward to the programme-setters according to plan."^{1/}

This is Indian and non-Indian, and only part of the story. Another part is that Community Development promised more than it could deliver, failing at the same time to recognize or acknowledge the inescapable obstacles that lie in its path. One of them is the tendency in the Indian village to "let the Government do it". The more so since Community Development came armed with funds to dispense, which was a novel experience for the farmers. There is, however, another, and perhaps more fundamental, difficulty overlooked by Community Development. The "insiders", the village leaders, an eminent rural sociologist writes, "are sharply limited in their desire for change, and are strongly constrained by short-range views".^{2/} Possibly Community Development could have made more impact upon such traditions, which are giving way here and there, but it did not address itself to this particular task other than through a vast literature of exhortation, which did not reach the farmers, and which if it reached them they could not read anyway. The exposure would have had to be more methodical, less hurried, more searching and of a more practical, demonstrating kind, while at the same time extended to a broader cross-section of the community. After all, if we take improved agricultural production as an example, it is not so much the "haves" as the "have-nots" who should be the object of Community Development's attention.

33. The preceding account of the problems of Community Development can be best understood only if we examine its principal tool for the implementation of programs in the village - the National Extension Service. In its operations lie important lessons, and any future scheme to expand agricultural production in India must take account of them.

^{1/} Evelyn Wood. Project into Pattern, page 36. In Kurukshetra, Tenth Anniversary Number on Community Development, October 2, 1962.

^{2/} Howard W. Beers. Relationships Among Workers in Community Development Blocks, page 6. National Institute of Community Development, 1960.

B. Extension Service, Village Level Worker (VLW)
and Block Development Officer (BDO)

34. The National Extension Service is the backbone of Community Development in the countryside. Its purpose is to get farmers to adopt tested, locally suitable, improved farm practices, not beyond the skill and investment potential of the adopter. More specifically, the task of extension may be defined as follows:

"To carry this message (of improved practices) to the farmers, inform, educate, and convince them through demonstration and other methods, help them in getting the necessary supplies and finance as far as possible, advise and counsel them on their problems of adjustment to the new technology (including problems of marketing) and carry back from them for study and solution, information on the more difficult of these adjustment problems."^{1/}

As an institution, the extension service is represented in the field by the Block Development Office headed by a Block Development Officer (BDO). As far as agriculture is concerned, the functionaries who form part of the office are the Village Level Workers (VLWs) and the Assistant Development Officer for agriculture. The main object of our concern is the VLW who operates almost entirely on the village level in the effort to translate extension into practice. But because of the crucial role played by the BDO, we shall comment on him first, and note in passing the role of the agricultural specialist attached to the BDO. It is no exaggeration to say that the fate of Community Development depends upon how these officers, and particularly the VLWs and BDOs perform. The question, therefore, of how well they play their roles is all-important; the answer is that, in the main, they have so far failed to live up to expectations.

35. The BDOs are the principal officers in charge of a block of about 100 villages with a population of 60,000-70,000, it is they who set the tone for the 40-50 people under them. They are supposed to have administrative experience, capacity for leadership, and a general appreciation of Community Development aims. In brief, the BDO is supposed to be the key man of the rural development program in his block. He is supposed to be all of this, but he often is not. The good performers are not in the majority, and not only, as is commonly assumed among participants and students of Community Development, because they are not well "trained" for their roles. This is understandable because the trainers themselves have not had a clear enough idea what the training is about. But there is much else besides.

^{1/} J.P. Battacharjee. Agricultural Extension, Inputs and Community Development. "The Economic Weekly", Annual Number, February 1965.

36. The Government Services were - and are - the source of recruitment of BDOs, and the best have not always been available to Community Development. In a rush for block-leaders Community Development could not be choosy. Most of the BDO's are actually drawn from the Revenue Service usually on a temporary (two-year) non-career basis, and continue to look to the Revenue Service for advancement. Their previous connection with the village is mostly fiscal; all their other knowledge of the villages and villagers and of developmental problems is skin-deep. These handicaps have not precluded them from administering people, material resources, allocating funds, and working with great diligence. According to firsthand testimony, this applies to the great majority of the BDOs. But there is another, more basic, side to the story.

37. One of the closest students of Community Development writes, and with a touch of wishful thinking, "that if there could be combined in a Block Development Officer the best types of behavior and attitudes we had observed in the best of them, he would be an ideal entrepreneur of rural development".^{1/} One has reason to believe that he would settle for less than the ideal - a competent BDO concerned more with development of the village and the involvement of the farmers in it than with management of the Block Development Office. Of such there are no large numbers. There could not be in the light of this statement of an intimate observer and supporter of Community Development. "The present system", said he, "keeps the gaze of too many officers fixed on remoter places, and they are concerned more with appeasing higher officers than in serving village people".^{2/}

38. This is the crux of the matter, for what is Community Development, in view of its avowed goals if not a movement to serve the rural people, to look, as one put it, "downward toward the people, not upward toward his superiors in the line of administrative authority?" The BDO as the would-be spark-plug of village improvement, improvement that can only come about through an increase in agricultural production, cannot be blamed for what he is not. Only the exceptional among them are able to keep sight of their ultimate objectives as they wallow in day-to-day routine work. It is demanded of the farmers that they have "plans" of their own; the futility of such a demand will be touched upon elsewhere, but it would be more appropriate in Community Development's scheme of things for the BDO to be the planner of his block. It is questionable if he fits the role by experience. Part of the explanation which is applicable not only to BDOs, was summed up by Mr. Asoka Mehta. Said he, "A rather caustic commentator has drafted a variant for planners of Gresham's Law: 'daily routine drives out plan purposes.'"^{3/} Forgetting the

^{1/} India's Roots of Democracy, page 623.

^{2/} Howard W. Beers, page 11.

^{3/} Mr. Asoka Mehta, Deputy Chairman, Planning Commission, in Inaugural Address at the Annual Conference on Community Development and Panchayati Raj. July 20, 1964.

formal idea of "plan" altogether, the mental awakening of the rank and file of the Indian village is a pre-condition for sound utilization of available material inputs and the growth of agricultural production. Mr. Mehta put it very well, and we quote him again: "Physical inputs are important; enthusiasm and social change by themselves cannot produce grapes from thistles. But the golden harvest we seek will never be unlocked unless the physical inputs are matched and mixed with the intangible social and psychological tools that the Community Development movement can provide."^{1/}

39. It is one of the bedevillments of Community Development that its major representatives in the field, the BDOs are not nearly the shaker-uppers and the waker-uppers of a lethargic peasantry that must somehow take and initiate the challenges and the risks of spreading proven old practices not to speak of advancing new ones. There are exceptions among them, of course, but for historic and other reasons already outlined, there are not nearly enough BDOs capable of sharing the vision and excitement of a breakthrough that can come from their active involvement in village development affairs.

40. The extension agricultural specialists attached to the blocks are supposed to supervise the work of the VLWs. As a group, they have considerable theoretical knowledge and some practical agricultural experience. They are not students of advanced agricultural science and along this line their influence among the "progressive" farmers is circumscribed. They have much to contribute, however, to the wider diffusion of known practice employed mainly by the few, and on the face of it they appear to be a Community Development asset. But there is a debit side, too, to the group. Although relatively young, it tends to be tradition-bound, rule-conscious, and not without caste prejudice. Its members spend an inordinate amount of time at block headquarters, preoccupied with paper work. Teaching and guiding the VLWs how best to put on a field demonstration suffers as a result. For the same and probably other reasons they devote little time to organizing local groups for the purpose of the dissemination of improved practices among them. To "born-and-bred" community developers, this is a basic failing of the Community Development process. To establish close contacts with the village and to correct that failing on the purely agricultural side, the agricultural extension specialist was expected to spend two-thirds of his time in villages; his visits are, to put it mildly, much less frequent. Moreover, the specialists are poorly paid, career advancement is uncertain, and the morale of even the best of them suffers accordingly. Not unlike the BDOs, they are eager for better and more remunerative jobs elsewhere. In reality, therefore, the role of the block level agricultural specialist is very limited. Writing five years later, the judgment remains just as severe:

^{1/} Mr. Asoka Mehta, Deputy Chairman, Planning Commission, in Inaugural Address at the Annual Conference on Community Development and Panchayati Raj, July 20, 1964.

"The Community Development structure especially at the Block level, was intended to serve as the medium through which various development agencies and, in particular, the State Agricultural Departments, could carry new practices and ideas to the villages. In practice, agricultural officials at the district and block levels have generally lacked the confidence and ability to use the Community Development machinery effectively."1/

41. The representative of Community Development in the village is the VLW. In theory he is a great many things. He is the "friend, philosopher and guide" of the farmer; he is the direct link between Community Development and the farmers; he passes on useful information to village people who have need for it or puts them in touch with those who have the knowledge to give. Being so many things to a great many people with varied interests, he is not a specialist in any one field; his many functions and general training preclude specialization, though more recently his training has been more largely along agricultural lines. According to the same theory, he is the "Mr. Fix It" in the village, and in the words of an enthusiast of Community Development the VLW "will go down in history as one of the greatest social inventions of the present era". As late as 1963 one could still come across a statement that the "Gram Sevak's (VLW's) sense of duty and service pervades the village in the same way as fragrance in a flower."2/ So much for theory.

42. The reality is different, for surely in relation to agricultural improvements and production, the VLW is not what he is painted. There are exceptions, but for the great mass of VLWs, the consensus is as noted at the beginning of this paragraph. But before calling attention to what he is as against what he is supposed to be, it should be made clear that this exercise is not made in the spirit of condemnation of the VLW, for he, above all, has not made the bed he is expected to lie in.

43. The fact is that since virtually all the country is under Community Development blocks, almost the whole brunt of agricultural extension work has come to rest on the shoulders of the VLW. The degree to which he is able to discharge this responsibility satisfactorily depends on many factors: his basic training and equipment, the extent and effectiveness of the technical, supervisory and guidance services he relies on, the availability of supplies, his ability to exercise a reasonable measure of leadership among the farmers, and the demand on his time for other activities. Such being the criteria, the VLW as he is now can hardly meet them.

44. He is, to begin with, young, at the bottom of the professional totem pole, and lacks sufficient knowledge and authority in the field the farmer thinks he knows best, namely, farming practices. The importance of this

1/ From an unpublished statement prepared by the Planning Commission.

2/ R.C. Tiwari, Village Level Worker and the Cooperative Movement, page 59, published by Ministry of Community Development and Cooperation, 1963.

point cannot be minimized, and the evidence of the VLW's unpreparedness is fairly obvious. One of the conclusions of a detailed study of six villages of one Community Development Block reads as follows:

"It is fairly clear from the field investigations that the agricultural extension work in the villages studied needs improvement, particularly with a view to building up the confidence of the cultivator in the ability of the extension worker to advise him in regard to the adoption of improved agricultural practices. For, at present, very few cultivators seek his advice regarding the adoption of improved practices. While, therefore, it may be reasonable to infer that, with better arrangements for extension work, improved practices would have been adopted to a greater extent, it is obviously not possible to arrive at quantitative estimates of the consequential increases in production."1/

45. Lest there be any misunderstanding of the force of the conclusions, it is reiterated that "As indicated above, the limited use of the village level worker as an extension adviser shows lack of confidence in his advisory capacity."2/ He is both poorly prepared and poorly trained to do what is expected of him. This theme is echoed by the Agricultural Personnel Committee of the Planning Commission. "The training (in agriculture) which a village level worker gets at present is very inadequate, and cannot give him the necessary confidence and competence for performing the very heavy and responsible duties that he is called upon to perform."3/

46. There may have been improvement since 1958, but it could not have been very appreciable, judging by available evidence. Community Development has created a great many centers for the training of VLWs and, though training is in the charge of the Ministry of Agriculture and Food, it continues to elude the trainers and the trainees alike. It is not for nothing that the question has often been raised as to who was going to train the trainers of the trainees. The training period has been gradually increased from a few months to two years, seemingly an adequate period. The question is, however, not so much the length of training as the character of the training. It is generally admitted that it is of a theoretical character since so many of the instructors themselves lack practical agricultural experience. "Tell me frankly", writes a future VLW from a training center, "is all this relevant in the actual work also? What is the use of all this theorizing?"4/.

1/ Community Development and Economic Development, page 63. Emphasis added.

2/ Ibid, page 63.

3/ Report of the Agricultural Personnel Committee of the Planning Commission, 1958, pages 11-15.

4/ Anil C. Shah, A Trainee in a Training Center. Kurukshetra, June, 1961, page 39.

47. A close observer of Community Development's training program writes that:

"They have taught their courses strictly as technical subject matter, paying little attention to how the village workers were to apply what they were taught when they took up their assignments... In the beginning, this state of affairs had to be accepted, but today, the same situation exists, and relatively little effort is being made to train and keep competent staff in the centers ... the field experience is carried on very much like the instruction, in that it is subject-matter oriented and not village-problem and village-solution oriented."1/

The author adds the optimistic note that "Fortunately, the weaknesses in his training are, without any great effort, correctable" 2/. So far, and despite the corrective measures, the training problem has yet to be resolved for the quoted writer. In the meantime, when the VLW emerges from the center, he carries with him many bits and pieces but not nearly enough knowledge - not to say experience - to sustain him as an agricultural extension worker. But he is faced with many other problems.

48. The VLW is often not of the village, and adjusting to it is a task in itself. He is a lowly, Rs.100 a month, harassed "official", and with practically no foothold on the professional ladder. His duties, whether he attends to all of them or not, were - and are - altogether too many. According to the Mehta Report he had at one time sixty-four different chores to attend to; he has fewer today, but the list of about twenty is sufficiently long to put the best VLW in a quandary. He can pay more attention to agricultural activities in the Intensive Agricultural Development Program (popularly known as a "package" district program), but even there his duties are taxing. The following are a list, as we recorded them in 1963 in the Tanjore (Madras) district, while listening to a VLW tell his story:

1. Preparation of reports upon which his work is judged.
2. Preparation of farm plans.
3. Preparation of loan applications.
4. Seed distribution and testing.
5. Handling coupon fertilizers for fertilizer distribution.
6. Dissemination of information on package practices.
7. Field demonstrations, five per year.
8. Crop-cutting experiments.
9. Pesticide control work.
10. Inspection of farm practices.
11. Enlistment of new cooperative members.
12. Loan disbursement activities.
13. Repayment of loan activities.

1/ India's Roots of Progress, pages 201-202.

2/ Ibid, page 202.

14. Arrangements for cattle vaccination.
15. Panchayat work - two days per week.
16. Sales of cash certificates - ten days per year.
17. Distribution of beehives.
18. Emergency bond sales.
19. Family planning work - with targets of four sterilizations per month.

This list is still accurate, judging by a recent visit to the same district.

49. The list of duties shows that even in the "package" districts, which are not typical of all other Community Development blocks or districts, the VLW cannot neglect other tasks. To be sure, there has been, over the years, and especially since the Mehta Report of 1957, much agitation to concentrate the VLW's attention on agriculture only. Instructions from the Center to the field delimiting his functions are not lacking, but they are essentially edicts with no relations to the demands made upon this many-sided handyman which do not appear on any list. The fact is that while he is the Community Development's man in the village, he is also a man of the block headquarters, at the beck and call of his supervisors. He is expected to spend most of the time in the villages to which he is assigned. In practice, he spends an inordinate amount of time (25 to 40 per cent) at the village headquarters where he lives, or at the Block Development Office. It is understandable why a staunch supporter of Community Development writes as follows:

"Each specialist, and programme and high officer (at the block) has felt that he or it could make almost any demand on the village worker. Without any intention to have it so, and actually the contradiction to expectations, this has sometime made the Gram Sevak more of a servant of higher officers than a helper of village people."1/

The net results are that so long as a VLW is involved in such a multiplicity of tasks, even the best among them is not infrequently a garbage can into which a motley refuse of responsibility is dumped.

50. Concentrating on agriculture should have its positive effects but only if the VLW is well-trained in agriculture. But as already indicated, good training is difficult to come by. The clever and ambitious ones among them could learn more from a good farmer than in the training center. Technical specialization goes hand-in-hand with progress in a particular field. Lacking that in the agricultural field, specialization militates against the effectiveness of the VLW as an agricultural worker. This serves to explain why currently not an overly large number of VLWs are able to put on a good field demonstration or explain its implications to the farmer. This explains also, at least in part, the preoccupation of the VLW with the supply line

1/ Howard W. Beers, page 12.

rather than with technical agricultural problems. It throws light also on why relatively few VLWs have had the standing and influence not only to awaken and sustain popular initiative among the farmers but also to seek their advice. According to some testimony their activities in these respects have diminished with the passage of time, one of the reasons being that Community Development's important prop, availability of funds, has declined with the fast pace of covering entire rural India.

51. There is ample reason to believe that the size of the available funds is not a serious issue; the VLW's lack of expertise is at the core of the peasant's reluctance to rely upon it, while welcoming those who give him credit for material inputs. In introducing new practices or new crops, the VLW must convince the farmers of their economic benefits, and this he is often not capable of doing. This has been apparent for years. The Ghosi case study indicated that in 1956-57 and 1957-58:

"... only 14 per cent of the large cultivators and 16 per cent of the medium cultivators consulted the village level worker for advice regarding improved agricultural practices. Even if the percentage of those who consulted the village level worker for plant protection measures is also taken into account, only 21 per cent of the large cultivators and 26 per cent of the medium cultivators consulted the village level worker regarding improved practices. By far the most important factor which emerges from this ... is that the main assistance which is being rendered by the village level worker relates to the supply of improved seeds and fertilizers."^{1/}

52. This is not a temporary phenomenon. As of 1963 the VLW was still the runner for all and sundry, with a multitude of tasks. Only concentration on technical agriculture could improve his usefulness to the farmer. A number of provisos attach to this, one of which is the caliber of the man selected as a VLW trainee. While many old-timers have learned from experience, the new recruits, as will be pointed out in a subsequent paragraph, are poorer "material" than their former counterparts.

53. A VLW used to cover 10 to 17 villages with a population of 8,000 to 14,000; he now covers half that number, and in a few instances, in "package" districts, one VLW serves only two villages. This is indeed a welcome development, for it enables the VLW to take better care of the supply line, and the chances are that he will increasingly wet his feet in the practical matters of farm improvement. There is a growing belief among Community Development officialdom that the day will come when one VLW will serve only one village. The State of Maharashtra is actually contemplating raising the number of its VLWs from 3,500 to 20,000, or approximately one to every village.

^{1/} Community Development and Economic Development, page 20.

But this much is clear: the matter of developing good village extension workers, let alone the paragon Community Development that popularizers talk about, lies in the future. This is so for the many reasons already given, and, in addition, for one more which is really an inheritance from Community Development's rush to encompass all of rural India.

54. The growing need for VLWs has had a change for the worse in their caliber. A BDO in one of the Community Development blocks in Uttar Pradesh explained to this observer in late December of last year why the change is for the worse. In the early days of Community Development young men with college training - and some fresh from agricultural colleges - could be induced to enter the service. Those were the days when the best among them were recruited on the understanding that they could be promoted eventually as extension specialists and on to the rank of Block Development Officers. A career was apparently ahead of them, and expansion should have furthered it. Actually, rapid expansion in all directions and the filling up of posts put an end to career prospects - and to that type of recruit. Most of the present recruits are high school graduates who cannot enter a college or university, or get a job in the regular government aservice or in private business. As an informant put in: "Any college boy can earn Rs. 100 a month or more selling cigarettes and betel-nuts and no supervisors to tell him what to do." For the time being, therefore, and keeping in mind the intensive agricultural programs commencing in 1,500 blocks throughout the country, there will be more, but hardly better, VLWs. This is likely to be so unless the whole character of the service undergoes a drastic change in respect of selection, training, duties, relationships to the Block Development Headquarters, and, of course, in career prospects in extension work. Consideration might be given, of course, to whether a better service might not be rendered to agriculture if fewer but better VLWs were given the responsibility for ministration to fewer villages on a concentrated basis.

55. In summary, partly because of his own shortcomings but mainly for reasons not of the VLW's making at all, he has been placed in an unenviable position. He could not possibly fill the role of specialist "working with the people" as originally conceived by Community Development. That is not a post factum conclusion; the literature on the subject is not lacking in such predictions. In relation to agriculture, he can do little more than he is doing now - act primarily as expediter of fertilizer distribution through a cooperative credit line, and putting on farm demonstrations, some of which are useful and some are not. These are important services, but the VLW remains a far cry from the kind of man the village needs to help bring about agricultural improvements on the existing technological base or such as might come from scientific advances in agriculture.

56. The views expressed above do not relate to any particular period of Community Development's extension service, following the pioneering days; nor are they views of opponents of extension service as such. On the contrary, they are all for it, except for the methods and techniques resulting in poor performance, and the tendency on the part of Community Development to accept

shadow for substance. This has been recognized on the highest level of government planning in India, even if not exactly in the terms presented here. This can be best illustrated by an important statement on administration and planning of agricultural production programs, prepared in the Planning Commission, in early 1963. The reference, restricted mainly to the VIW, is as follows:

"Agriculture was to be the main focus of Community Development. Translation of this concept into concrete administrative action has been none too easy. Village level workers were to be par excellence agricultural extension workers at the village level. This called for sound basic training, continuous build-up of experience, concentration on agricultural work and appreciation by cultivators of the value of the village level worker as an extension worker. Only a small proportion of village level workers has succeeded in fulfilling these expectations."

C. Assessment

57. It would be a mistake, however, to conclude from the above that Community Development has not left both agricultural and non-agricultural marks on the countryside. Many schools, roads, wells, culverts, community halls have been built and community radios installed; sanitation amenities have been introduced; even the term "development", springing from "development block" is not without its value as a symbol of changes or would-be changes in the village. And many farmers come in contact with cooperatives for the first time. Community Development played an invaluable part in yet another respect. In the experience of this observer, a dozen years ago a farmer's contact with Government was largely through the revenue officer - the tax collector. This is no longer true. While the relationship between the officials and farmers is still often at arm's length, on the whole the presence of Community Development in the countryside has tended to reduce the former apartness between Government and the rural population. Community Development deserves full marks for this. Although it is true that not all the mentioned and unmentioned Community Development measures have gone far enough to effect the "silent" revolution Community Development has set out to bring about, their usefulness in many instances cannot be denied. In short, the idea of village development, imprecise as it is, is no longer foreign to many peasants in Community Development areas.

58. From an agricultural point of view, numbers of farmers have benefited to some degree from Community Development and its agents, the VIWs; this is especially true of the more well-to-do farmers. The wide gap between the well-to-do and the poorer farmers in the extent of assistance obtained is a recurring theme in much of the criticism against Community Development. Given the sharp stratification of the village, benefits almost inevitably gravitated into the hands of those who rule the village roost. As to the form of the benefits Community Development has been in a position to render, it has been mostly helping to distribute fertilizers through cooperative credit, and to a smaller degree, improved seed. On the other hand, numerous cases are recorded of farmers failing to obtain such assistance because they claimed they did not need fertilizer - or more fertilizer - better seed or pesticides, or found it difficult to obtain them, or too costly.

59. In the main these benefits, important though they are, are largely of a supply character. There is less evidence that farmers have been taught

how to put supplies to better use; or that top priority should be given to irrigation as the basis of effective utilization of fertilizer and much else; there is less evidence of instruction in green manuring, shifting of crop patterns, more intensive cultivation, better and more frequent weeding, simple soil consolidation practices, and more wide-spread introduction of improved hand tools. Farm demonstrations, the main tool of a VLW in convincing the farmer of the advantages of better practices, have been hit-and-miss propositions. The practices mentioned are not brand-new innovations to be introduced from the outside: most, if not all of them, are known in the village and are already practiced by some farmers. Bearing on this point is the fact that Community Development has not succeeded in mobilizing indigenous farm resources, or in spreading widely the better practices already in existence. This is of the utmost importance, for the available knowledge is still shared only by the few. Granted that the peasant does not easily change his ways of working the land, that any innovation in circumstances of limited resources is a risk, and that, in the words of an old Russian saying, one must "measure nine times before cutting once" - granting all this, the peasant will venture if shown and convinced that a new practice makes sense.

60. In this important respect, Community Development has not done well, and has not lived up to expectations by a wide margin. The quality of Community Development's performance in agriculture can be almost - if not quite - equated with the quality of the performance of the extension service in the village. India's top 15-20 per cent of "good" farmers aside, extension (with inputs) is the method for shifting the rest from low to higher levels of productivity. There are no shortcuts or substitutes for it, and Community Development's trust in the National Extension Service and confidence in it of the Five-Year Plans are understandable.

61. One of Community Development's principal aims was to give currency to the idea of self-help among the farmers, by initiating on their own useful programs and projects. In fact, to rely solely or mainly on Community Development as the stimulant of village reconstruction was deemed contrary to its basic village approach. But, in the main, this kind of involvement has been very spotty indeed. The authoritative Mehta Report minimizes sharply the existence of such initiative. Its comment on this point reads as follows:

"Admittedly, one of the least successful aspects of the C.D. & N.E.S. work is its attempt to evoke popular initiative. We have found that few of the local bodies at a level higher than the village panchayat have shown any enthusiasm or interest in this work; and even the panchayats have not come into the field to any appreciable extent. An attempt has been made to harness local initiative through the formation of ad hoc bodies mostly with nominated personnel and invariably advisory in character. These bodies have so far given no indication of durable strength nor the leadership necessary to provide the motive force for continuing the improvement of economic and social condition in rural areas." 1/

1/ Community Development and Economic Development, page 5.

62. This statement is as of late 1957, but there is no evidence that the situation has been changed since then. Many reasons have been cited why this is so, and we will repeat only one. Community Development, as one put it, "attempted far too much, in far too many places, with far too many people, and with far too inadequate resources." This means that there was little room, so to speak, for careful and persistent enlistment of the support of the mass of the farmers. By the same token, even if the BDOs, extension specialists and VLWs were of a higher caliber, the opportunity was limited to inch the farmers towards exercising initiative, community action, or help create a village leadership bent on developmental purposes. The "too muchness" continued into the very recent past, and in our view the conclusion of the Mehta Report quoted above probably holds nearly as good eight years later.

63. In the preceding paragraphs we pointed out why much of extension's latent possibilities failed to materialize in practice - yet another factor that worked to the same end. This was over-administration of the Development Blocks (Extension Service) from the top - Center and States - and within the Blocks themselves. In the first respect, this meant edicts that the Blocks should do this or that despite an absence of information about conditions prevailing in them; in the second respect, it meant over-emphasis on managerial duties as a means of meeting the developmental needs of the farmers. A student of the Development Block writes that "They (the officials) have not done so in the past (use effectively Community Development methods) at least partially because, no matter what the original plan provided, they have either themselves envisioned their role as, or been forced to play the role of, administrators." 1/ The results were not far to seek. Decisions were relayed from the top to block headquarters officials and down to the villages, instead of the other way around, or at least in consultation with the farmers. And hence the comment that, at some point of this extension approach, "They (the VLWs) had largely become the errand boys of programme administrators rather than catalyzers and servants of village people and organized village groups." 2/ Coming as this does from one of the leading architects of modern Community Development in India and elsewhere, those strictures need no additions; they speak for themselves.

64. In the final analysis, much of what has been said above is tied in with the question of Community Development leadership. Though self-evident, it is worth stressing. The performance at the Center, States, Block Development Offices, and in the countryside reflects the fact that, over all, leadership has not been available. The successes noted serve to underscore what widespread leadership could have done to pull the mass of the peasantry along the path of better agriculture. There are signs in Indian villages that some farmers have made breakthroughs, that others are ready to be shown and to make the next move, while still others are lagging badly. For reasons indicated in this paper and in Appendices IX, XI and XII, the existing village leadership is not concerned with pulling their neighbors a step along the ladder so that the two might meet; this, despite a number of salutary changes taking place in the village. The Panchayati Raj (See

1/ India's Roots of Democracy, page 633.

2/ Op. cit., page 622.

Appendix XII), or the village council whose primary business it is to deal with the development of agriculture, has in most cases done little or nothing about it. In the words of one observer, after looking into a number of Panchayati Raj establishments, "Yet again one must emphasize the great lack of production mindedness." 1/ In the circumstances, Community Development leadership could have filled this wide gap not by trying to work with individual farmers so much as with Community Development organized farm groups. The numerical strength alone of a Block Development Office dictates such a course; there simply are not enough agricultural specialists and VLWs to contact a great many farmers, let alone all farmers. It is not clear why this approach has been largely shunned; what is fairly obvious is that by failing to take this approach, on the one hand, and concentrating on administering people and programs on the other, Community Development neglected the opportunity to provide the village with a leadership of a sufficiently wide scope which might have involved larger groups of farmers in activities that lead to higher agricultural productivity.

65. This assessment is not without its errors of omission and commission, but there is enough supporting evidence to warrant these final observations. In its earlier days Community Development's promise had a firm basis. This is partially the reason for the blank check it received from the country to go on with the all-Indian task "of helping the farmers to help themselves." In the process, Community Development stirred up a goodly number of farmers in the realm of "amenities" and, to a smaller degree, in the field of agricultural production. By doing this, it left a mark of lasting significance. At the same time, however, it became a prisoner of its own propensity to act as though dogmas and wishful thinking could take the place of effective rural reconstruction. There is no contradiction between the two statements, for the work of Community Development or rather its embodiment, the National Extension Service, is characterized by successes that are outweighed by failures, or by unfulfillment on a large scale. Moreover and most important, Community Development is no longer sure of itself, has not convinced the majority of the farmers that it is deeply concerned with their welfare and has lost its creative zest and vigor, indispensable ingredients in any promising effort to meet the farmers on their own ground. That these strictures, or something like them, have gained wide currency in India is attested not only by the persistent critique of Community Development since the Mehta Report of 1957 had its weighty say, but, as mentioned in paragraph 3, by the current discussion of what to do with Community Development - to abolish or not to abolish the Ministry of Community Development and Cooperation.

PART IV: COMMUNITY DEVELOPMENT'S FUTURE

66. Such, in the main, is the Community Development balance sheet, and it is pertinent to inquire at this point about the future of Community Development, particularly in relation to the agricultural goals of the Fourth

1/ Dr. Gilbert Etienne, "Some Observations on Rural Development in India." Unpublished report submitted to the Planning Commission. The notes cover a number of widely dispersed districts in India. They refer to conditions as of mid-1964.

Plan. A brief reference to these goals is in order, and they can be judged by a few relevant figures, comparing the tentative targets and investments envisaged by the Fourth Plan with those of the Third Plan.

67. The estimated 1965/66 output of foodgrains of 92 million tons is expected to rise to 120 million tons by the end of the Fourth Plan, an increase of 30 per cent. The area of minor irrigation works, which falls within the purview of Community Development, is expected to increase from 13.8 to 17 million acres, or by 23 per cent. Consumption of chemical fertilizers is expected to more than triple - rising from 1 million tons to 3.3 million tons; the area under green manures is expected to more than double; acreage under improved seeds (foodgrains) is expected to rise from 164 to 274 million acres, or by two-thirds, while the area under plant protection is expected to be quadrupled. The acreage under soil conservation and land reclamation is expected to show a rise of more than 50 per cent. One may wind up this list of expectations by noting that total Fourth Plan investments in agriculture may reach Rs. 2,400 crores compared with Rs. 1,098 crores under the Third Plan.

68. These are formidable targets, and whether they are carried out in full or even in major part, it would take not only material inputs but will and dedication, organization and concentrated effort to meet them. In view of Community Development's role in recent years, it is doubtful whether in its present state it can contribute significantly to the realization of the agricultural aims of the Fourth Plan.

69. Community Development came into being primarily because it was expected to enthuse, inspire and guide the people into active participation in rural reconstruction. In this it succeeded to a very limited degree only, and its early vigor and vitality are gone. Community Development rendered certain useful services, but neither in agriculture nor in non-agricultural activities has it measured up to anything like the promises or expectations aroused. It has been clear for some time that the Ministry of Community Development and Cooperation is not an indispensable agency, particularly at a time when the question of increasing agricultural production under the Fourth Plan is so vital. In the language of the day, it has never been agriculture-production oriented. And whatever the reasons, Community Development's record vis-a-vis the panchayats (see Appendix XII) and farm cooperatives as important aids to agricultural production has not been a good one either.

70. We indicated elsewhere (Appendix XII) that there is a good deal of fragmentation of responsibility for agriculture at the Center. One of the serious "fragmentors" is Community Development. While the Ministry of Food and Agriculture (MFA) is in charge of agriculture, Community Development has been a source of considerable duplication of activity. According to one estimate, the two Ministries "compete" in minor or larger ways in more than a dozen fields. Attempts at coordination have not been successful, and even more recent agreements to transfer some activities from Community Development to MFA have not eliminated duplications of one kind or another. For some time now, Community Development has been supposedly under the general supervision of MFA, but the relationship is more apparent than real. There is an unwritten

understanding, for example, that on important matters of policy, Community Development must follow the lead of MFA. But here again it was inevitable that the handling of all or part of the same subjects by two ministries, under different conditions or approaches, was bound to lead to divided responsibility and weaken the effort to implement farm production programs.

PART V: RECOMMENDATIONS

A. Shifting Extension and Cultivation to MFA

71. Keeping all the above considerations in mind, and remembering that Community Development's real interest in agriculture has not been major, the often talked about merger of Community Development with the MFA has much validity. This is based on the proposition that the Center needs a Ministry in which all activities directly contributing to agricultural production are concentrated. We do not believe that the total abolition of Community Development as an institution is called for. There is ample scope for the latter to devote its attention to the following: (a) village panchayats which are greatly in need of prodding and strengthening, and (b) the continuation of the numerous activities that fall in the "amenities" category, and which has been Community Development's main concern in the past. As to the agricultural extension work and rural cooperatives in all their forms, we recommend that they become an integral part of MFA.

72. It seems obvious that extension and cooperatives logically belong in a Ministry of Agriculture. We shall have much more to say below on the first point, but it seems clear that the people involved in agricultural extension ought to serve but one purpose - the spread of agricultural knowledge. It seems reasonable to assume that under MFA, the chances of attaining such concentration are greater than under Community Development. As for the cooperatives, it will be a case of their returning to the fold where they were until November, 1958. The decision of the National Economic Council to transfer them to Community Development was supposedly made on the ground that MFA couldn't pay sufficient attention to their rapid development. Events have proved that this certainly applies to Community Development vis-a-vis the cooperatives. More to the point in judging where they belong is the fact that all types of credit, marketing and processing cooperatives are intimately and vitally connected with agricultural production. If we take by far the major segment of the cooperatives, the credit cooperatives, it can be readily seen that they fit in with the input requirements and the supply line for which the Ministry at the Center is responsible in the broadest sense. For this reason alone, they cannot be separated from the agricultural production programs, forming as they do what is virtually a pre-condition for the implementation of such programs. There is yet another related reason, which seems to us to sum up the case for incorporating the cooperatives in MFA:

"Programmes under Agriculture and Cooperation are inter-dependent and must be fully dovetailed. In practice, this is not happening even in the intensive agricultural districts, and the two sets of activities are being largely pursued in separate contexts. The consequence is that Agriculture is not benefiting adequately from Cooperation and Cooperation is not receiving the support it must have from agricultural programmes. This divergence is noticed at the State, district and block levels, and even exists at the Centre." 1/

Mr. Tarlok Singh did not intend the above statement as an argument for transferring the cooperatives back to the Ministry of Food and Agriculture. But if the divergence is as great as he points out, then indeed it is time to eliminate it in the manner we suggest.

73. If extension and cooperatives are transferred to MFA, the latter will have no rich heritage to live off. The troublesome questions of administration, unshared responsibilities and a more effective line of communication between the Center, States and villages will all undoubtedly come in for much soul-searching once again within the appropriate agencies of the Indian Government. On the Report side, Sir John Crawford has dealt with them amply in his Report on Agricultural Policy in India. 2/ Our comments are directed to the extension service and its central figure, the VLW. How to improve his performance, whether under Community Development or MFA, and, through him, the service to the farmers in order to increase agricultural production, is the subject of the subsequent paragraphs. The suggestions for change, or the recommendations, are not new. They are well-known in the agricultural circles of India; in one form or another they have been stated by others on different occasions. The excuse for restating them lies in the value of iteration and in the possibility that now arises for carrying them out. There is the hope, too, that in contrast with the past which was characterized by discussions and patchy attempts to improve the extension service, this time, the energizing element often lacking in "should be dones" might make itself felt; we have in mind the organized will to translate recommendations into practice.

B. VLW Recruitment

74. In part, the heritage it is recommended should be given to MFA should be no surprise to it; it has been responsible for the training of the VLW for some time past, and it should know by now what the net product is. If the product is to be improved, the starting point should be the selection of potential VLWs and agricultural extension officers in the block. A basic condition of the selection must be the recognition that they, like the farmers whom they are supposed to serve, are also entitled to incentives in terms of higher remuneration to begin with and of a lasting career based on merit. The Rs. 30 per month given them while they are in training and Rs. 100-120 they earn after the training period of two years are no great inducements. Failing some improvement, the chances of proper selection are minimal, and so are the chances of good training or willingness to absorb it.

1/ Mr. Tarlok Singh, Memorandum on Administration and Planning of Agricultural Production Programmes, February 9, 1963.

2/ Section E of Part III: Institutional Programs

C. Compulsory Recruitment

75. India's 65 agricultural colleges and 18 veterinary colleges graduate yearly more than 3,000 and more than 1,000 students, respectively. While these numbers are not large, it would be extremely useful to enlist their services for agricultural services in the villages for a stated period of time - even if such a move called for compulsory measures. This recommendation is made because, in recent years, the graduates were mostly candidates for office jobs in agricultural institutions rather than for practical experience in village work. This explains why VLWs are now predominantly recruited from among high school graduates with little practical or theoretical knowledge of agricultural practices of even the simplest kind.

D. VLW's Task

76. Anyone familiar with the VLW in the field cannot help but recognize that he is overloaded with chores beyond his capacity. If he is to function well - and this assumes he is fit for the job - even his so-called agricultural jobs call for drastic pruning. It should not be his business, for example, to help distribute fertilizer, seeds and insecticides. Since all these are often tied in with the credit cooperatives, the latter should attend to these tasks, just as private distributors do. The VLW should be relieved of preparing what is euphemistically called the "farm production plan." It provides some data on farmers' holdings as a means of securing a loan, and little else by way of what might be called a production plan. The loan is important, but a farmer should be able to secure one from the cooperative as a result of his membership, as a result of which it has certain pertinent data already in its possession; if the data are not there, it is the cooperative's task to secure them. In this connection, the Reserve Bank's requirement that its loans to Central Cooperative Banks be based on farm plans should be eliminated. If it is not eliminated, it should not be the responsibility of the VLW to continue this fiction. If a farmer is to accept the VLW's cooperation and instructions, the latter's paper chores must be reduced to a minimum, whereas some of his farming skills must be raised to a maximum, and confined - but not rigidly - to such items as the following: handling a plow, spade and harvesting sickle properly; yoking the animals and working with whatever implements the occasion demands; preparing seed beds; compost-making from whatever material is available in the village; spraying and dusting and preparation of fungicide and pesticides for this operation; finally and most germane to his role as a purveyor of better practices, preparation of good demonstration plots. If the non-agricultural tasks are eliminated, a well-selected and well-trained VLW would be in a position to cope with the problem of introducing better practices. Having reached that stage, he will have justified his role as an extension man, or that of a promoter of expanded production. And we repeat, all this on the assumption that his work is strictly delimited to technical matters directly influencing agricultural production.

77. Although the emphasis is on the VLW, we call attention once again to the agricultural extension officer at the Block level. He plays a key role in supervising and guiding the VLWs, yet his limitations, to which reference

has been made, are very considerable. If he is to do what is expected of him, he should be above all a well-rounded agricultural specialist capable of grasping the essentials of existing practices as well as of modern techniques coming into play. He will then be able to decide, in conjunction with the district research specialist or agronomist, what is practical and economically applicable to the region to which he is assigned. Men with such qualifications, which incidentally approximate those of a "county agent," are not readily available in India in sufficient numbers. This means that a cadre of this type of extension specialist must be built up.

E. VLW and the Farmers

78. We indicated elsewhere that the drive is on for more VLWs, partly to limit and concentrate their coverage and partly to meet the demands resulting from the expansion of the area under "intensified" agricultural programs. We do not think a great increase in VLWs is necessary on either account - provided the character of his relation with the farmers undergoes a drastic change. Currently, a VLW is expected to work with every farmer, and he does so in helping farmers to prepare papers for cooperative loans. In the matter of better practices, he works with relatively few. A knowledgeable VLW could render greater service if he worked with a group of farmers, large and small holders alike. The advantages of such an approach are many. The small farmer would gain attention formerly denied him. There would be a greater interchange of knowledge and experience between the group on the one hand and the VLW on the other. This has proved to be good extension practice wherever good extension takes place. The other advantage stems from the scarcity of good extension workers, which argues, among other things, for the best utilization of the best available talent; it argues also against a headlong rush for more VLWs; the quantitative target may be reached, but not the qualitative one. The lessons of Community Development are clear on this point, and the same mistakes need not be repeated. But the point to underscore is that if the VLW is to reach the mass of the farmers he must work with groups of farmers.

F. Training - Current and Future

79. All of this is easier said than done, and this brings up once again the vexing question of training. Perhaps more than the term "coordination," the term "training" has come to evoke both hope and despair in India. No one can gainsay its importance, for how else can the gap be bridged between the skilled and unskilled, the experienced and inexperienced, and a meaningful line of communication built between those charged with reconstructing the village and the villagers themselves? There is no substitute for a beginning wherein training is imparted with skill as the center around which later knowledge grows. Stacks have been written and no end of advice has been given on the subject, and yet the end is not in sight. The problem is not in a lack of training institutions, but rather, as some observers noted, "in 'training' as the way to solve all problems of communication, of attitudes and of action," ^{1/} in the subject matter itself with its heavy permeation of extraneous subject matter, in the trainees and the trainers, and in the great numbers of people to be trained.

^{1/} Report of a Community Development Evaluation Mission in India, page 83, U.N. published by Community Development, 1959.

80. We do not know how many training institutions there are in the country at the present time, but as of 1961/62 there were a total of 195. ^{1/} They were all created by Community Development, although not all the training is in its hands - extension officers for cooperatives go through the paces under the supervision of the Reserve Bank, and many of the VLWs are trained under the supervision of the MFA. Altogether, there are 11 categories of Community Development officers, ranging from the VLWs, who account for 93 of the training centers, to the Senior Administrative and Technical Officers who account for only one center. The great array of institutions built up by Community Development points to its many-sided activities, and, we suspect, to Community Development's flair for the grandiose. The nomenclature itself reflects it, as one proceeds from the simple Extension Training Center to the Orientation and Study Centers, on to the Institute for Instruction on Community Development, the Planning Research and Action Institute, and, at the apex, the Central Institute of Study and Research in Community Development. There is evidently no shortage of physical facilities, fit presumably for every type of trainee and every occasion. And yet it is quite clear that this huge complex of facilities does not necessarily make for good training. ^{2/} The perennial question has been but one: how to improve it.

81. In some of the preceding paragraphs we suggested a number of corrective measures, but much more needs to be added. Field observations and an examination of the pertinent literature make clear some of the things - not all of equal importance - that inhibit good training. As to the less important factors, there is the duplication of curriculum among different institutions; the questionable need of such a number of varieties of training centers, and the dispersal of instructor-resources, notoriously deficient in quality. Among the important deficiencies one should cite the strong tendency to use the classroom lecture system rather than village "case" studies in keeping with village conditions and practices; a curriculum filled with generalizations as against the concrete and specific; ideological preconceptions at the expense of matter-of-factness, and, of course, the subject of extolling Community Development as an institution and a movement.

82. It follows from the above that what is needed is a minimum of theory textbooks and classroom lectures and a reasonably good training in basic agricultural scientific principles combined with practical experience of the main aspects of farming. Only training of this kind will fit the VLW to hold his own as he cooperates and advises the farmer on improved practices. To this end, the existing manuals should be "purged" of the generalities nonessential to the agricultural job of work the VLW must do in the village. Lectures ought to be reduced to a minimum and training centered in the field and in the village, so far as possible. Another change might be considered in the method of training, namely, the enlistment of knowledgeable cultivators as instructors of future VLWs. One more corrective measure might be worth serious thought: the location of training centers in a rural setting or as close to one as possible. The location of many centers of training in urban areas, which is the case now, provides many amenities a

^{1/} Actually there is also an undetermined but large number of unofficial training institutions.

^{2/} Kurukshetra, June 1961, Special Training Number. Observation in the field and talks with Community Development officers in the field point to the same conclusion.

rural area lacks, and the temptation is as obvious as it is understandable. But the fact is that the "pay off" of the training centers for all categories of Community Development officers takes place in the village. Hence the suggestion of bringing the two closely together; otherwise, the trainees will not be provided with conditions like those in which they will have to function after their training is completed.

83. Aside from extension training there is orientation training designed for BDOs, Block Level Extension Officers, and some other official and non-official groups. Its curriculum is so general, so "philosophically-oriented," and so full of worn-out Community Development cliches that it is difficult to conceive that all of this bears on their tasks, or that it can be assimilated within the allotted two months. But the curriculum goes beyond that, and the following quotation shows the air of unreality that surrounds "training." Says the author, having already enumerated eight formidable items of the orientation course:

"The basic training must attempt to create in the workers belief in the ideology and faith in the programme. The training must have an inspirational quality. In addition, the training has to pass on information regarding Government policies, schemes, etc., so that the workers can see their operation field and responsibilities more clearly. And lastly, the workers have to be given some skill in working with people, as individuals, as groups and as communities."^{1/}

84. All this strikes one as good for "experts" who insist on making orientation training or just training both comprehensive and complicated. The syllabus or curriculum is neither short, nor simple, nor of a self-evolving nature which should be based on the one requirement that truly counts - the fields, farms and farmers. All this and as mentioned earlier, much more besides, are part of the "orientation" training given in a period of two months. In searching for corrective measures, it should be remembered that it would not make any difference if the period of orientation were lengthened or if the curriculum were "tightened up." The curriculum would have to be drastically changed to cover such specific items as the nature and goals of the programs, the clear-cut duties and responsibilities of officers vis-a-vis the programs, and how best to gain the farmers' acceptance of the programs as their own and their participation. In short, the remedies are to be sought in changing or radically modifying the existing three-fold training approach: (a) the nature of the subject matter which is irrelevant to much that the officers in question have to deal with; (b) the implied assumption that everybody must be trained and that this kind of training will solve all problems; ^{2/} and (c) Community Development's seeming denial of intelligence, experience, and flexibility on the part of many of the "orienteers" on the one hand, and the unsupportable assumption of superior knowledge, omniscience and experience on the part of the trainers. ^{3/} It is questionable whether at this point Community Development could reverse long-nurtured training attitudes and established practices. MFA cannot start with a clean slate either.

^{1/} B. Mukerji, leading Community Development program-planner in Problems of Training, *Kurukshetra*, page 6, June, 1961. Italics added

^{2/} See Appendix XII, paragraphs 47 and 48.

^{3/} Ibid.

However, MFA is not committed to many of the currently prevailing training fallacies. It is reasonable to conclude, therefore, that it is in a more favorable position to begin to turn a new leaf in respect to effective training aims and practices.

G. Extension and Research

85. If the extension service is to diffuse more than the agricultural knowledge already used by a few but not many farmers, innovations must flow from research centers into the village for those who are ready for them. This subject has been dealt with comprehensively in another part of the Report, but it seems pertinent to the preceding discussion to mention it here in passing. The reference is to the Indian Council for Agricultural Research. The past performance of the Council has left something to be desired, and the new Council for Agriculture and Food Research to take its place may well fill the research gaps, without which no major breakthrough in agricultural productivity can be attained. That assumption is based on a number of conditions: (a) that through the new Council the MFA will create a unified network of research institutions; (b) that they will be amply financed; (c) that the objectives of research will be clearly defined; (d) that research in all its ramifications will be directed by scientists rather than generalist-administrators no matter how highly trained or placed; (e) that remuneration will be adjusted to the highest levels now commanded by the administrative services; (f) that promotions will be geared to merit rather than seniority; and that (g) research will readily find its way into the extension service. All this seems like a tall order already urged upon MFA on other occasions. ^{1/} This time, however, such suggestions are within the realm of the possible for three reasons. Although past suggestions are still largely in abeyance, the climate for change is better now than before. India now has a very productive-minded Minister of Food and Agriculture. Finally, there is a growing recognition in India that miracles and reliance on the vagaries of the monsoon do not produce bigger and better crops. It is not unlikely, therefore, that a combination of these factors will lead to a change in research and extension. If so, a vital pre-condition will have been created for increased agricultural production. We speak advisedly of "vital pre-condition" instead of "the condition"; the fact is that still unresolved or only partly resolved institutional arrangements in the countryside (agrarian reform, cooperatives, community development, panchayats and administration) will also exert their influence on the state of agricultural production.

H. MFA and the States

86. In all of this and much else the Union Ministry and the States should be closely involved. This is well-known and the obvious is repeated here only because the relationship should go beyond fund allocations to the States upon which the Ministry, too, must pass judgment. This is not to minimize the importance of such funds for agriculture. But the time has

^{1/} Report of the Agricultural Administration Committee, pages 11, 12 and 14. Ministry of Food and Agriculture, 1958. See also Report of the Joint Indo-American Team on Agricultural Research and Education, 1955.

surely come when a Ministry dedicated to agricultural production must somehow evoke from the States a response that the agricultural goals of the Fourth Plan ought to be one of the primary concerns of the States. In the process of wrestling with stepped-up farm output the sharp edge of agricultural separatism between Center and States should be considerably dulled. That agriculture is exclusively in the jurisdiction of the States does not diminish the fact that its significance is national. The constitutional provisions that specify the scope of national and state powers are realities, but it is just as real that food production and supply and the well-being of the farm population and consumers are also inescapably national responsibilities. That these can be hampered is illustrated by recent and negative zonal-state restrictions on inter-state food shipments. Hence the suggestion for a minimum of separatism and the role the MFA ought to play in minimizing it.

87. Another and quite obvious reason why MFA's working relationship with the States is of paramount importance is this: it is the States with their districts, blocks and villages that make or unmake production goals and programs. This is a truism but worth reiterating in Indian conditions. We add to this the belief that, given a somewhat better agricultural environment currently in the first stages of development, the "making" rather than the "unmaking" could be made to prevail. Not necessarily in terms of 120 million tons of foodgrains as anticipated by the Fourth Plan, but an increase large enough to set Indian agricultural production in greater motion.

PART VI: CONCLUDING REMARKS

88. The above comments might suffice to highlight some of the issues as they relate to the advancement of the production goals in the coming years. Those issues call for careful treatment and the recognition that the aim of the effort is a higher rate of farm output. Viewed thus, and for reasons already stated, we do not believe that Community Development is the agency best suited to administer extension and the cooperatives. The premise lies in a strong and integrated Ministry of Food and Agriculture under a strong Minister. Aided by what might hopefully prove an emerging incentive climate created by the new agricultural price policies, such a Ministry should be in a position to concentrate on agricultural production, and thus a beginning made to exploit the potential of land already under cultivation. We are not assuming that the Ministry will resolve in one fell swoop all other mentioned problems and their inhibiting effects. Good administration, for example, is probably a decade or more away; ditto for well-managed cooperatives; surely the same may be said about the unfinished business of agrarian reform, and so on. For the time being improvisations will have to do. Under the circumstances, a fairly adequate supply line and ampler irrigation facilities will have to serve as compensating shortcomings for other inadequacies. The farmers will then tip the balance in favor of greater farm output. As to the land's fullest potential, that development may be anticipated when the existing institutional arrangements undergo the much needed salutary changes.

89. At the risk of carrying coals to Newcastle, one more paragraph about "food" as India's prime necessity: India has lived with this problem for nearly a century. While the Famine Commission of 1880 estimated that the country had a theoretical surplus of 5 million tons, 8 years later the Dufferin Inquiry on the same subject brought out that 40 million people suffered from insufficiency of food and were semi-starved. Yet, at the cost of lowering the peoples' food intake, India managed to export at that time 4 million tons of food yearly. ^{1/} This has not been the case for many years past, for reasons too well known to require restating. Nor will this be the case for years to come. The issue is "food" for the people, and is a part of every developmental effort India is engaged in now. And it is on this point that we invoke the late Prime Minister Nehru's words. In a letter of August 1, 1957, to the Chief Ministers of the Indian States, Mr. Nehru wrote: "The keystone of our planning is agricultural production." In a letter written on a similar occasion on May 18, 1958, the point is made with still greater force:

"Whichever way we start considering our various problems, whether it is in the Second Five Year Plan, or the development of industry of our major schemes in India, or foreign exchange, we come to food. If we fail there, that failure affects all other major activities."

Little needs to be added to this in the year 1965, though a better crop was harvested than in 1964. The issue remains as stated by Mr. Nehru. And whoever is in charge of agricultural policy in India can do no less than ponder and act upon the meaning of the late Prime Minister's admonitions.

90. The suggested transfer of extension and cooperatives from Community Development to MFA is one of the many required policy changes for the reason so well put by the late Prime Minister. Anything that does not advance sufficiently the cause of a greater, indigenous food supply is not in the best interests of the country. The record of extension and cooperatives ^{2/} under Community Development belongs in that category. It is indeed time to pursue a policy leading to the improvement of their past performance. We believe that the beginning of an active policy is in the integration of extension and cooperatives with the Ministry of Food and Agriculture. This is the agency responsible for India's agricultural production, and the agency which is now seemingly bent on increasing agricultural production.

^{1/} B. M. Bhatia, "Food Policy and Prices," The Statesman, February 25, 1965.

^{2/} See Appendix XI.

Table I: COMMUNITY DEVELOPMENT EXPENDITURE ACCORDING TO MAJOR SUBDIVISIONS (Rs.lkhs)^{1/}

Item	During First Plan		During Second Plan		1961-62 Actual		1962-63 Actual		1963-64 Revised	
1.	2.		3.		4.		5.		6.	
I. Block Headquarters (including Transport, office bldg. equipment, etc.)	1051	22.76	5456	28.91	1379	26.36	1690	31.08	1692	32.04
II. Agricultural Development										
a) Agriculture and Animal Husbandry	355	7.69	1100	5.81	436	8.33	516	9.49	651	12.33
b) Irrigation and Reclamation	1083	23.45	4859	25.65	1205	23.03	979	18.01	1196	22.65
III. Village Industries	218	4.72	701	3.70	296	5.66	298	5.48	243	4.60
IV. Amenities										
a) Health & Rural Sanitation	379	8.21	1687	8.91	549	10.49	485	8.92	414	7.84
b) Education	344	7.45	1206	6.37	276	5.28	276	5.08	241	4.56
c) Social Education	200	4.33	1019	5.38	292	5.58	311	5.70	247	4.68
d) Communications	516	11.17	1261	6.66	402	7.68	470	8.64	329	6.23
e) Housing	173	3.75	1090	5.75	293	5.60	294	5.41	202	3.82
V. Unclassified (including imported equipment, suspense charge, etc.)	279	6.04	313	1.65	80	1.53	75	1.38	30	0.57
Total	4598		18712		5208		5394		5245	
Central Schemes	20	0.43	230	1.21	24	0.46	43	0.79	36	0.68
Grand Total	4618	100.0	18942	100.0	5232	100.0	5437	100.0	5281	100.0

^{1/} One lakh = 100,000 rupees.

SOURCE: Ministry of Community Development and Cooperation.

Table II: ALLOTMENT AND COVERAGE OF COMMUNITY DEVELOPMENT BLOCKS

(1952-53/January 1, 1965)

Year	Number of Blocks Allotted In the Year	Cumulative Total of		
		Blocks Covered	Population Covered (Million) <u>1/</u>	Villages Covered (000) <u>2/</u>
1.	2.	3.	4.	5.
<u>First Plan</u>				
1952-53	212	212	17	27
1953-54	336	548	38	70
1954-55	279	827	56	102
1955-56	248	1075	69	143
<u>Second Plan</u>				
1956-57	489	1564	112	209
1957-58	647	2211	112	276
1958-59	225	2436	165	302
1959-60	283	2719	180	323
1960-61	418	3137	203	364
<u>Third Plan</u>				
1961-62	452	3589	285	412
1962-63	599	4188	329	456
1963-64 <u>3/</u>	690	4877	379	532
1964-65 (1/1/65)	361	5238	406	567

Source: Ministry of Community Development and Cooperation.

1/ Figures for the year 1952-53 to 1960-61 are based on 1951 Census.

Figures for the year 1961-62 onwards are based on 1961 Census.

2/ Estimated.3/ January 1, 1965.

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