

## CHAPTER 2

### TRENDS IN AGRICULTURAL PRODUCTION

#### Agricultural Production in 1973-74

2.1 Agricultural production showed a healthy rising trend from 1967-68 to 1970-71. The rate of growth of agricultural output averaged 4.1 per cent during this period. The index number of agricultural production (with the triennium ending 1961-62 = 100) reached a record level of 131.4 in 1970-71. Since then it has been subject to large fluctuations and the upward trend noticed earlier seems to have come to a halt. Due largely to adverse weather conditions, the index declined for two successive years after 1970-71. This was followed by a recovery in 1973-74 when the index reached a new peak level of 131.6. However, the index for 1973-74 was not significantly higher than that for 1970-71. The overall rate of growth of agricultural production during the Fourth Plan period was only 2.8 per cent per annum. In a number of crops, the growth of output has fallen short of the growth of population, leading to a decline in per capita availability of essential wage goods such as vegetable oils. The unsatisfactory performance of agricultural sector is the root cause of the stagnation of national income and the acute inflationary pressures which have emerged since 1972-73. The trend of production of principal crops is reviewed briefly in the following paragraphs.

2.2 Due to a rapid spread since the mid-sixties of the new agricultural technology based on high yielding varieties of seeds, the production of foodgrains reached a peak level of 108.4 million tonnes in 1970-71 but dropped to 97.0 million tonnes in 1972-73. Despite an improvement in weather conditions during the kharif season, the production of foodgrains increased to only 103.6 million tonnes in 1973-74. While the output of kharif foodgrains turned out to be 66.7 million tonnes, which is not far below the peak level of 68.9 million tonnes reached in 1970-71, the production of rabi foodgrains amounted to only 36.9 million tonnes, as compared to 38.4 million tonnes in 1972-73 and the peak level of 42.2 million tonnes reached in 1971-72. Thus the overall production of foodgrains in 1973-74 was not only lower than the Fourth Plan target of 129 million tonnes but also fell short of the actual output attained in 1970-71 as well as in 1971-72. As a result, an orderly management of India's food economy was rendered exceedingly difficult. The decline in output as compared to 1970-71 was shared by all crops with the exception of rice. The output of rice, which had declined to 39.2 million tonnes in 1972-73 from the peak level of 43.1 million tonnes reached in 1971-72, touched a record level of 43.7 million tonnes. It is, however, worth noting that, notwithstanding the steady expansion of area under the new high yielding

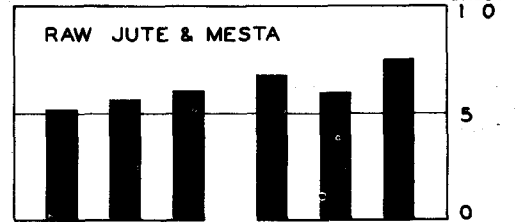
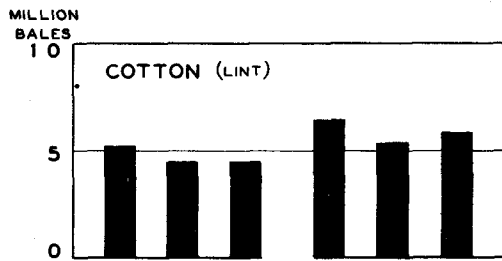
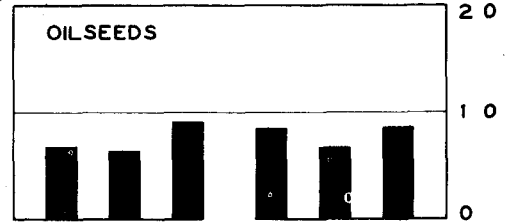
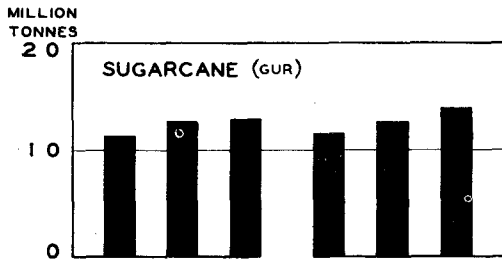
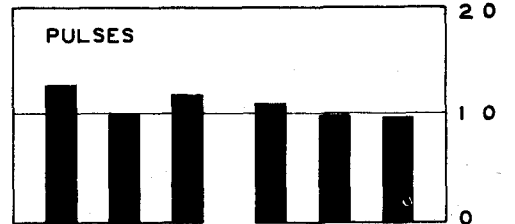
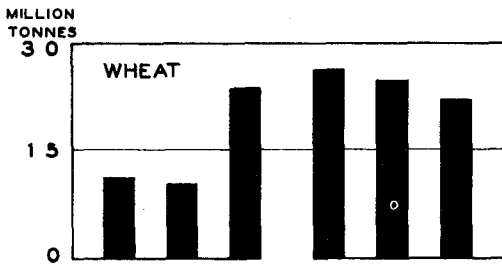
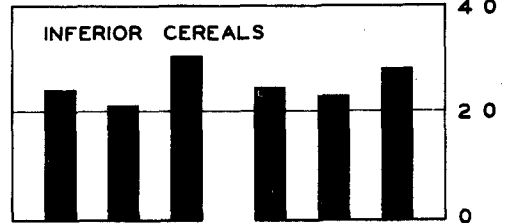
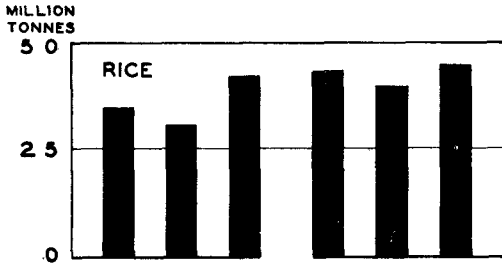
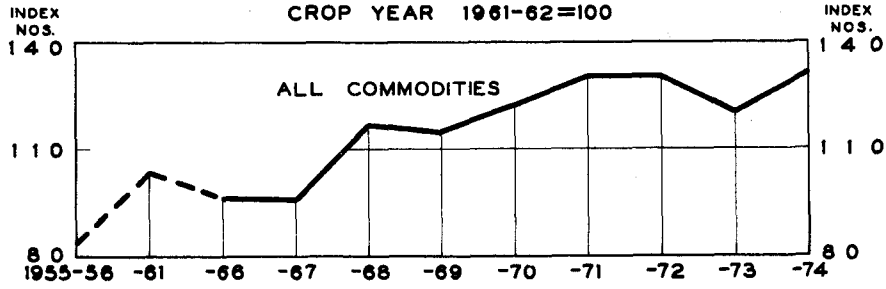
varieties since the mid-sixties, the output of rice since 1964-65 has risen at an average annual rate of only 1.2 per cent. Thus far, the new agricultural technology does not appear to have made any visible impact on the production of rice. The production of wheat, which offered the greatest promise and had exceeded the Fourth Plan target (of 24 million tonnes in 1973-74) both in 1971-72 and 1972-73, unfortunately declined, for the second successive year, to 22.1 million tonnes in 1973-74. As regards coarse grains, their output went up from 23.1 million tonnes in 1972-73 to 28.0 million tonnes in 1973-74. Although production of coarse grains continues to experience large fluctuations from year to year, these fluctuations have been superimposed on a generally stagnant trend level during the Fourth Plan period. The output of pulses, which increased from 10.4 million tonnes in 1968-69 to 11.8 million tonnes in 1970-71, declined in every year since 1971-72 and production in 1973-74 amounted to only 9.8 million tonnes.

2.3 Production of commercial crops, which had also been affected by adverse weather conditions in 1972-73, showed an all round recovery in 1973-74. Thus output of 5 major vegetable oilseeds went up from 6.9 million tonnes in 1972-73 to 8.7 million tonnes in 1973-74. Similarly, production of raw cotton increased from 5.4 million bales in 1972-73 to 5.8 million bales in 1973-74, of sugarcane from 12.8 million tonnes to 14.0 million tonnes. However, in the case of all these commodities, output in 1973-74 fell short of the Fourth Plan targets. Also, with the possible exception of raw cotton, the production of these commodities did not show a strong rising trend. Since agro-industries account for nearly 45 per cent of the weight in the index of industrial production, the sluggishness of production of the commercial crops constituted a major constraint on the rate of growth of industrial production throughout the Fourth Plan period.

2.4 In any appraisal of the agricultural situation in India, one must not overlook the vigorous efforts that have been made in the Fourth Plan period in imparting a scientific temper to Indian agriculture. For example, the Fourth Plan envisaged that over the five year period, 15.8 million hectares would be added to the area under the high yielding varieties programme for foodgrains. The available data indicate that this target has been more than fulfilled, and over 16 million hectares have been added to the area under HYP in the Fourth Plan period. Similarly, the target of 7.1 million hectares of additional area to be covered by major, medium and minor irrigation, during the Fourth Plan has been fully achieved. The target

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TRIENNIUM ENDING  
CROP YEAR 1961-62=100



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for the additional area under soil conservation has also been over-fulfilled.

2.5 Nevertheless, the fact that despite all these development programmes, the overall rate of growth of agricultural output has been no higher than 2.8 per cent per annum in the Fourth Plan is a matter for serious concern. It is certainly true that unfavourable weather conditions have been a major factor in the unsatisfactory behaviour of agricultural output since 1971-72. However, the gap in economic performance is too large to be wholly explained in terms of weather conditions. Clearly, a number of other constraints have also been at work, and, in any sound planning of agricultural development for the future, we must not lose sight of them.

2.6 As pointed out earlier, production of foodgrains has failed to keep pace with the Fourth Plan target despite the fact that the target of additional area under the HYP has been overfulfilled. By 1973-74, 11.30 million hectares of wheat land had been covered by this programme as compared to the Fourth Plan target of 7.7 million hectares. Yet, the production of wheat in 1973-74 was lower than the Fourth Plan target. A major explanation lies in the fact that since 1972, Kalyansona, a popular high yielding variety, has been subject to a rust disease which had led to a decline in productivity of wheat since 1972-73. The recent introduction of new rust resistant varieties such as Arjun 2009 may reverse this trend, but multiplication of seeds on a large scale is bound to take some time. As regards rice, the actual area under the HYP in 1973-74 was 9.40 million hectares, which was only marginally lower than the Fourth Plan target of 10.10 million hectares. However, there has been no matching acceleration in the rate of growth of productivity. This is due to the fact that most of the high yielding varieties introduced call for efficient water management practices, which is not an easy task under rainfed agriculture. Some new promising varieties such as IR 20, Pusa 2-21 and Ratna have been evolved but they have yet to make any visible impact. Among coarse grains, promising results have been obtained so far only in the case of hybrid bajra. As for pulses, there are currently no high yielding varieties of seeds, but some short duration and photo-insensitive varieties, which have now been identified, hold promise for the future.

2.7 As regards commercial crops, new varieties of seeds have made some impact on the production of raw cotton only. Varieties such as MCU-5, Hybrid-4 and Varalaxmi have gained popularity in irrigated areas and they now account for nearly one-sixth of total output of raw cotton. However, only a small part of the area under raw cotton is irrigated and there are no varieties of proved efficacy for the medium staple cotton. As a result, it has not been possible to raise output of raw cotton beyond the peak level of 6.6 million bales achieved in 1971-72.

2.8 Apart from such constraints of technological nature there have been shortfalls in the supply of chemical fertilisers, of improved seeds and in ensuring adequate utilisation of the available irrigation potential. In terms of NPK, the total availability of fer-

tilisers in 1973-74 was 29.8 lakh tonnes as against the Fourth Plan target of 55 lakh tonnes. While in the earlier years, lack of adequate promotional efforts seems to have affected the consumption of fertilisers, since 1972-73, there has been the further constraint arising on account of inadequate domestic production and limited availability of imported supplies. Already about 50% of fertiliser consumed in the country is being imported. Moreover, the application of fertiliser involves considerable cash expense to the farmer and, in the absence of adequate credit and extension services, the bulk of the small farmers remain deprived of its benefit for increasing their production. The distribution arrangements are also beset with problems as the infrastructure continues to be weak in several parts of the country.

2.9 Arrangements for the supply of seeds of assured quality have also proved to be inadequate and currently there is a considerable unsatisfied demand. Firm estimates of the extent of shortage are not available. However, from the available data it is estimated that the supply of certified seeds formed barely 30 per cent of the requirements in 1973-74. The extent of shortage is particularly marked in the case of wheat and paddy. To make up the shortfall, the National Seeds Corporation, the State Farms Corporation and the Tarai Development Corporation have undertaken to expand their programme of seed production. The State Governments are also setting up Seed Corporations to undertake production and multiplication of improved seeds.

#### The Agrarian Outlook for 1974-75

2.10 After the failure of rabi crop in 1973-74, it was expected that nature will provide some compensation in the following kharif season. But, as it happened, the country experienced floods and droughts on a fairly extensive scale. Whereas the States of Assam and Bihar were hit by floods, there was a drought in parts of West Bengal, Orissa, Tamil Nadu, Gujarat and Rajasthan. This has dampened the prospects for the current year. Firm estimates of production during the kharif season are not available so far. But on the basis of weather conditions which prevailed in different parts of the country, it is estimated that the production of foodgrains during the kharif season may not exceed 62 million tonnes. The output of kharif rice may be around 39 million tonnes as against 41 million tonnes achieved in 1973-74. Lower output is due mainly to a decline in production in the States of Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Orissa and U.P. A greater shortfall is anticipated in the case of bajra whose output is expected to decline by about 3 million tonnes from last year's production of more than 7 million tonnes. There is likely to be a big shortfall in the States of Rajasthan, Gujarat and also to some extent in Andhra Pradesh, Haryana, Maharashtra, Tamil Nadu and U.P. The output of jowar, maize and pulses is expected to be only marginally lower than last year.

2.11 Fortunately, the outlook for the forthcoming rabi crop is more promising. The weather conditions have been, on the whole, favourable even though States like Tamil Nadu have experienced a deficiency of rainfall. On present indications, the output of rabi

foodgrains is likely to exceed substantially the level of 36.89 million tonnes reached in 1973-74 and may be close to the peak level of 42.2 million tonnes achieved in 1971-72.

2.12 The improved prospects for the forthcoming rabi crop will no doubt facilitate a more orderly management of India's food economy. Even then, the fact that the overall level of food production in 1974-75 is not likely to be significantly different from the level achieved in 1973-74 is indicative of a continuing sizeable gap between demand and supply. In order to fill this gap and to maintain an orderly flow of supplies through the public distribution system, Government have arranged to import nearly 5 million tonnes of foodgrains in 1974-75. However, these imports have greatly strained our balance of payments and cannot be allowed to become a normal feature of food management.

2.13 The adverse weather conditions during the 1974-75 kharif season inevitably affected commercial crops as well. The late arrival of monsoon and deficient rainfall in certain parts of Maharashtra, Gujarat and Andhra Pradesh adversely affected the kharif groundnut crop in these areas. Efforts have been made to neutralise the effects of this shortfall by taking up cultivation of groundnut in the areas under the command of irrigation projects. A programme has also been launched for the cultivation of sunflower and safflower in areas affected by delayed rains. These measures may reduce the shortfall in the production of oilseeds, but the size of the crop is expected to be still about 7 million tonnes which is lower than the last year's output. The production prospects of cotton are however better than last year. Despite unfavourable weather conditions in some major cotton growing States, the total cotton production during the year is expected to be over 60 lakh bales. The trade estimates which are generally higher than the official estimates place the output at 65 lakh bales. On the other hand, the acreage under jute is reported to have shrunk considerably in all the jute growing States except Orissa. This fall in jute acreage has been attributed to drought during the sowing time in Assam and excessive rains in North Bengal and Bihar. To make this situation worse, Assam and North Bengal witnessed floods in quick succession which substantially damaged the standing crop. The low prices of jute and mesta prevailing in the preceding year have also contributed to a fall in the acreage. The production of jute and mesta taken together, is therefore estimated at less than 60 lakh bales in 1974-75 as against 76.3 lakh bales in 1973-74. Deficient rainfall in the States of Rajasthan, Haryana, Punjab and part of Saurashtra adversely affected the planting or growth of the standing sugarcane crop also. But on account of good rains in subsequent months the production of sugarcane (gur) this year may be about the same as last year's level of 14.0 million tonnes.

2.14 The foregoing account indicates that, with the exception of raw cotton, the output of commercial crops in 1974-75 is expected to be lower than in 1973-74. Taking account of the fact that the bulk of

India's commercial crops are raised in rainfed areas, lacking an assured supply of water, it is not surprising that weather conditions have a preponderant role in influencing their output. The availability of drought resistant high yielding varieties could no doubt moderate the extent of fluctuations in output from year to year. However, as pointed out earlier, high-yielding varieties are currently available only in respect of long staple cotton. In the absence of effective measures to increase productivity, the output of commercial crops can be increased only if a part of the cultivated area now under foodgrains, and of the expected addition to the gross cropped area in the coming years, can be diverted to the cultivation of cash crops. Since over 73 per cent of the total cultivated area is now under food crops, the diversion of even a small proportion of this area to commercial crops might make a significant impact on the production of these crops, particularly if the area released by food crops happens to be irrigated. However, in the current state of the economy, a shift from food to commercial crops can be looked upon with favour only if it is preceded by a significant increase in the productivity of foodgrains farming.

2.15 To sum up, the production of foodgrains in 1974-75 may be of the same order as in 1973-74. On current indications, the index of production of commercial crops may also not be significantly different from that of 1973-74. Taking all these factors into account, it appears that the overall index of agricultural production in 1974-75 may be about the same as in 1973-74.

#### Fertiliser Use and Credit Requirements

2.16 Due to a rise in feed stock costs in the wake of the oil crisis, and a steep increase in the prices of imported fertilisers, the government was forced to increase the price of pool fertilisers very substantially from the 1st of June, 1974. For example, the price of urea went up by about 90 per cent.

2.17 Fears have been expressed that higher prices may affect the farmers' incentive and ability to use chemical fertilisers. Some fragmentary data show that, despite higher costs, on balance, it is still profitable for the farmer to apply fertilisers in recommended doses. Nevertheless, it has to be recognised that a steep increase in the cost of purchased inputs such as fertilisers increases the uncertainty of agricultural operations, particularly in areas where there is no assured supply of water—either on account of lack of irrigation facilities or due to shortage of power and diesel needed to use the available irrigation facilities. As such, the situation needs to be kept under continuous review.

2.18. It is estimated that the total availability of fertilisers (NPK) in 1974-75 will be close to the level of 29.8 lakh tonnes reached in 1973-74. As prices of fertilisers since then have increased considerably, credit needs of farmers, particularly of small farmers, who do not seem to have benefited greatly from higher agricultural prices for want of a large marketable surplus, must have also gone up by a sizeable margin.

2.19. The availability of credit has now been recognised as a critical factor governing the purchase of modern inputs by farmers. Supply of institutional credit (short, medium and long term taken together) has increased steadily over the years. From Rs. 215 crores in 1960-61, it went up to about Rs. 950 crores in 1973-74, and is expected to increase to Rs. 1122 crores in 1974-75. There is no doubt great scope for improvement since institutional credit still accounts for only about 35 per cent of total credit needs of agriculture, and there is also considerable evidence to the effect that requirements of small farmers are not being adequately met. However, in view of the strong inflationary pressures during the last two years, it is necessary to exercise due care in the expansion and proper deployment of rural credit. One of the disturbing developments holding up the growth of credit supply from institutional agencies is the high levels and the increasing overdues of primary agricultural credit societies. According to a recent report of a Study Team appointed by the RBI, such overdues amounted to Rs. 377 crores as on June 30, 1972, forming as much as 44 per cent of the outstanding loans. Apart from the natural causes leading to failure of crops, an important reason for this alarming trend identified by the Team, *inter-alia*, was wilful default on a large scale (about 1/4th of the total overdues). Similar trends have also been noticed in respect of advances of the commercial banks to the agricultural sector. To curb this tendency, and to eliminate this major bottleneck in the way of increasing agricultural production, it will be necessary to enforce a firm discipline in the disbursement and recovery of institutional loans.

#### **Special Programmes for the Rural Poor**

2.20. In a situation characterised by considerable amount of underemployment and inequalities in the

ownership of productive assets, an increase in agricultural production provides, by itself, no assurance that the rural poor will share adequately in the fruits of economic development. Thus, institutional changes designed to reduce disparities in the ownership of land and to enhance the earning capacity of the poor must constitute an essential element in any integrated strategy of rural development.

2.21 In pursuance of these objectives, most States have enacted comprehensive legislation imposing land ceilings based on family size. However, progress in implementation has been tardy, particularly in areas where there are no upto-date records of land rights.

2.22 During the Fourth Plan, the Government had initiated a number of special programmes such as SFDA, MFAL, Drought Prone Areas Programme, the Crash Scheme for Rural Employment and Tribal and Hill Areas Development Programmes, for the benefit of the more vulnerable sections of the rural community. In the Fifth Plan, it is proposed to integrate most of these programmes in the framework of a comprehensive area development strategy. In accordance with a recommendation of the National Commission on Agriculture, the SFDA and MFAL programmes have been merged into a single composite programme for the benefit of both small and marginal farmers. In the Fifth Plan, this programme will cover 160 projects as compared to 87 in the Fourth Plan. The selection of new projects has been completed in the majority of States and some of the new projects have started functioning in 1974-75. A larger number of projects will be taken up in 1975-76. The main emphasis of the programme will be on crop husbandry supplemented by suitable subsidiary occupations wherever possible.