

CHAPTER 2

THE AGRICULTURAL SITUATION

2.1 The most remarkable feature of agricultural production in 1975-76 was the record foodgrain harvest. The output of foodgrains rose to 120.8 million tonnes from a level of 99.8 million tonnes in 1974-75 and exceeded by a handsome margin the target of 114 million tonnes for the year. Not only was the stagnant trend in production in the previous four years reversed in a remarkable manner but the earlier peak of 108.4 million tonnes reached in 1970-71 was surpassed by 11.4 per cent. Because of this record performance the index of agricultural production (trienium ending 1961-62=100) in 1975-76 exceeded by 15.6 per cent the figure of 128.6 for the previous year and contributed principally to the sharp growth of national income.

2.2 Compared to 1974-75, kharif foodgrain production increased by 25.5 per cent and rabi grain production by 14.5 per cent. In fact, increases were achieved in the output of all the foodgrains except jowar. As a result, the index of foodgrains production rose from 124.0 in 1974-75 to 151.1 in 1975-76. The output of rice rose by 25 per cent, from 39.6 million tonnes to 49.5 million tonnes. The output of wheat rose from 24.1 million tonnes to 28.3 million tonnes, reversing the stagnation experienced since 1971-72. The output of coarse grains increased by nearly 3.8 million tonnes, and that of pulses by a little over 3.1 million tonnes from 10 million tonnes in 1974-75, reversing again the declining trend noticed since the sixties. There was a spurt in the production of gram to 5.9 million tonnes from just over 4 million tonnes in 1974-75. What is equally noteworthy was that these increases were registered in all parts of the country.

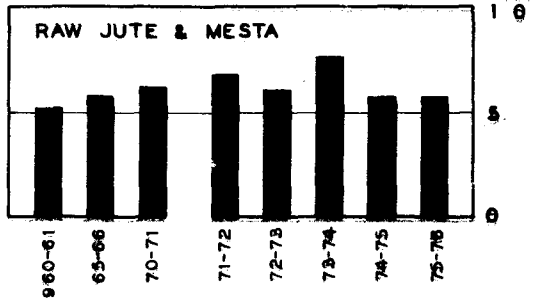
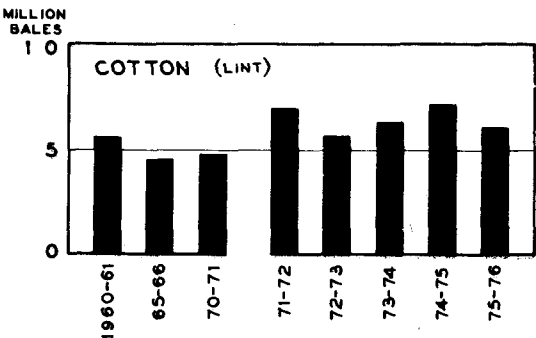
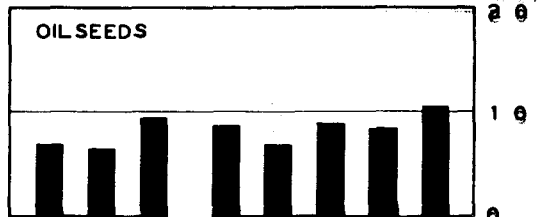
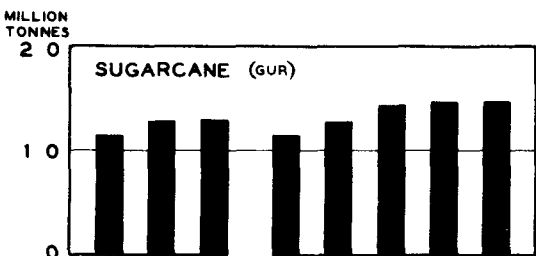
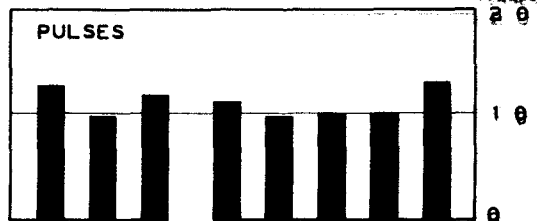
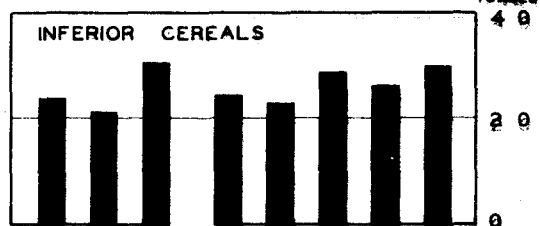
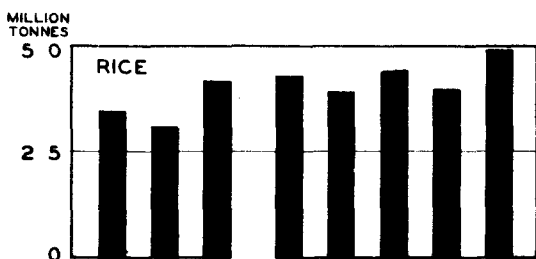
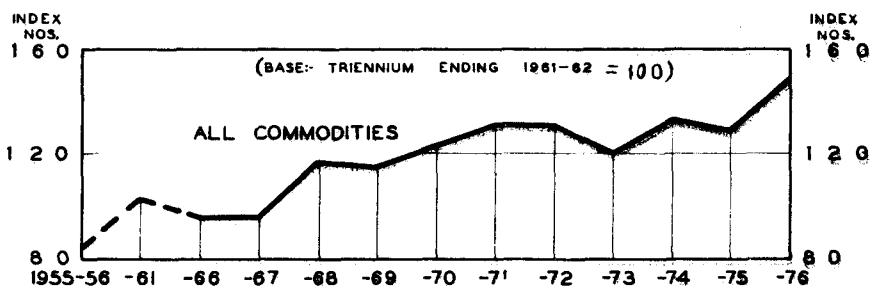
2.3 Such a sharp rise in a single year is rather unusual and seems partly to be the result of exceptionally good weather. Meteorological records show that such uniformly well distributed rainfall all over the country has not occurred in the last thirty-five years. The large increase in the production of coarse grains and pulses, which are mainly rainfed crops, bears testimony to this. On the other hand, the output of rice and wheat also shows a substantial increase over the previous peaks of 1973-74 and 1971-72 respectively. This would seem to indicate that, in addition to good weather, the greater use of irrigation, high yielding seed varieties, fertilisers and pesticides and modern

cultural practices also contributed to the increase in output.

2.4 There was an increase of nearly 2 million hectares in the area under high-yielding varieties of rice. A number of high yielding medium duration varieties for upland cultivation and others like Pankaj and Jagannath suitable for lowland cultivation have been successfully introduced. The large increase in the production of rice suggests that farmers are becoming more confident of exploiting the yield potential of new varieties of seed by adopting better agronomical practices such as timely planting through community nurseries and better water management. There is a steady increase in the area under summer rice and its output. Some success has also been achieved both in the control of diseases as well as in the introduction of more disease resistant varieties. For example, the wheat crop has not suffered any significant damage from rust lately. The successive reductions in the prices of fertilisers, an intensive fertiliser promotion campaign and the better availability of soil moisture seem to have stimulated a recovery in the use of fertiliser from the rabi season of 1975-76. Total consumption of fertiliser was 31 per cent higher than in 1974-75 rabi season and 16 per cent higher than in the rabi season of 1973-74. The area under irrigation also increased by about 2 million hectares. All this would indicate that factors other than good weather also contributed to this unusual increase in foodgrain output. The green revolution seems to be continuing though its progress may be less spectacular than in the past because rice is inherently a more difficult crop to grow than wheat and because the conditions under which rice is grown during the monsoon season are less easily controlled.

2.5 Commercial crops, however, exhibited a mixed trend. The production of the five major oilseeds registered an increase of about 19 per cent and reached a record level of output of 10.2 million tonnes. An extraordinary increase of 36.8 per cent in the output of groundnuts contributed to this. In contrast, the output of rapeseed and mustard fell from 2.3 million tonnes in 1974-75 to 1.9 million tonnes in 1975-76. The production of sugarcane (in terms of gur) was about the same as in 1974-75 at 14.7 million tonnes. The output of jute and mesta also remained at the

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1974-75 level. On the other hand, the output of cotton declined by 14.7 per cent to 61 lakh bales. This was a great disappointment because the performance in 1974-75 had given some evidence of a break-through in long staple varieties and the possibility of stabilisation of production at a high level.

2.6 Though rain and other climatic factors may be generally favourable, the performance of a crop depends very much on the availability of moisture in the soil and other agro-climatic conditions at critical stages in the growth of the crop. The lack of these factors partly explains the lower output of rapeseed and mustard in U.P., Punjab, and Rajasthan, and of cotton in Maharashtra, Karnataka, Madhya Pradesh, and Andhra Pradesh. Also the area under commercial crops seems to have suffered a marginal decline partly because of the prices which farmers receive. While there is an effective price support regime for cereals and minimum prices are fixed by State Governments for sugarcane delivered to sugar mills, no adequate regime operates in the case of other commercial crops. The area under cotton seems to have suffered particularly because of the inadequate returns received by farmers.

2.7 A noteworthy development of recent years is the emergence of potatoes as an important food crop. The production of potatoes increased by nearly 20 per cent to 7.4 million tonnes in 1975-76. It has shown a steady and high rate of growth in recent years both in terms of area and production, and has assumed an important position in the national food basket. It has also emerged as an item of export.

Agricultural Production in 1976-77

2.8 If the experience of 1970-71 is any guide, an exceptionally good harvest in any year is not likely to be followed by an equally good crop in the next year. 1976-77 did not turn out to be an exception and weather was again responsible for such an outcome. Though the monsoon was normal, on the whole, its behaviour was erratic and it was not well distributed. Many areas experienced long spells of dry weather. While drought conditions prevailed in States like Kerala, Karnataka, Tamil Nadu and parts of Orissa, Madhya Pradesh, and West Bengal, standing crops were damaged by floods in parts of eastern U.P., and Bihar and cyclonic storms in Andhra Pradesh. The production of rice may be lower in Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Orissa, Tamil Nadu and West Bengal. But this may be partly offset by higher production in Punjab and Haryana. The output of kharif jowar may be below 1975-76 level due to a fall in production in Karnataka. The

output of bajra is expected to be slightly above the level of 1975-76. On the whole, the production of kharif foodgrains may be around 67 million tonnes as compared to 74 million tonnes in 1975-76.

2.9 The production in the rabi season, however, appears to be good, particularly in the northern region—despite lack of rain in most parts of this region in the post-monsoon season and untimely showers in April. While the production of wheat is likely to remain close to the level of 1975-76, the production of other rabi grains may suffer some decline. The total production of foodgrains in 1976-77 may thus be around 111 million tonnes.

2.10 The production of commercial crops during 1976-77 was again uneven. The production of jute and mesta staged a remarkable recovery and their combined production which was 5.8 million bales in 1975-76 is estimated to be about 7 million bales. It is also estimated that the output of sugarcane will show a slight increase and may be close to 150 million tonnes. The major sugarcane producing State of Uttar Pradesh is reported to have increased both the acreage and production of the crop. On the other hand, it is estimated that the production of oilseeds will show an appreciable decline from the level of 1975-76, confirming the earlier diagnosis that oilseeds production is characterised by violent fluctuations around a stagnant level of production. Groundnut production is expected to be lower largely due to a poor crop in Andhra Pradesh, Karnataka and Tamil Nadu. The prospects for cotton production are also not good. Whereas cotton production is expected to be marginally higher in Punjab and other northern states, the production in the southern states and Maharashtra may be below even the 1975-76 level. As a result, the overall production of cotton is not expected to be higher than the level in 1975-76 which was substantially below the level of 71 lakh bales achieved in 1974-75. The decline in the cotton production is reported to have occurred mainly in long staple varieties whose production had been rising dramatically in the early seventies. This is a disquieting trend and the factors responsible for the same need to be carefully identified and corrective action taken.

2.11 The crop out-turn for 1976-77 has several important lessons. It goes to highlight the fact that Indian agriculture continues to depend on the weather to a large extent and is likely to remain so for quite some time in the future. Despite the record level of production in 1975-76, the growth rate of agricultural production during the seventies so far has been lower as compared to the growth rate achieved during the sixties. This deceleration has occurred both in the rate of growth of acreage as well as yield. Though

the production of foodgrains has been growing faster than population, its rate of growth has fallen considerably short of the targets envisaged in the Plans. Also the production of pulses continues to show a stagnant trend. There has been some improvement in the growth rates of commercial crops, particularly sugarcane, cotton, rapeseed and mustard, but they are far below the rate of growth of population. It is, therefore, necessary to examine the factors responsible for this deceleration and intensify the efforts to achieve a faster rate of development.

2.12 In a country in which only about 25 per cent of the area under cultivation is irrigated, fluctuations in output due to fluctuations in rainfall are unavoidable. Also since a fair proportion of the area under irrigation depends upon well and tank irrigation, the ability to withstand a failure of rain is limited and a serious failure of rain can, therefore, affect the crop out-turn severely. Nevertheless, the expectation that foodgrain output in 1976-77, despite the erratic behaviour of the monsoon, is likely to be higher than the earlier peak of 108 million tonnes in 1970-71 indicates that the part of the agricultural economy which has assured water supply is contributing more to total output. The growing share of rabi production in total foodgrain production—from less than a third in the sixties to two-fifths at present—also underscores the importance of irrigation. Therefore, if foodgrain output is to increase, and the amplitude of fluctuations is to diminish, the highest priority should be given to increasing the area under irrigation. Without an adequate water supply it would be difficult to derive much benefit from high yielding varieties of seeds, increased use of fertilisers and pesticides and improved cultural practices.

2.13 Notwithstanding the basic importance of water for increasing agricultural production the emphasis on extending irrigation facilities has varied. While the expenditure on irrigation accounted for nearly 19 per cent of the outlay in the First Plan because of a few giant irrigation projects, in the subsequent Plans it has accounted for 10-11 per cent of total outlay. More recently, however, the emphasis on irrigation has increased slightly. Currently, an area of 1.2 million hectares is being brought under irrigation every year through major and medium schemes and 1.1 million hectares through minor schemes. It is expected that by the end of 1978-79 an additional area of 11 million hectares would be brought under irrigation of which 5.8 million hectares would be through major and medium schemes. In order to achieve this target, the completion of on-going projects is being speeded up and financial outlays have been suitably enhanced.

2.14 Much more needs to be done if we are to achieve even more rapid progress in this field. Firstly, there is a necessity to set up monitoring cells at project and State levels to keep a proper watch on the progress of on-going projects and speedy removal of bottlenecks. A Central monitoring organisation has been constituted in the Central Water Commission and this has helped to achieve considerable progress in 18 selected projects in 12 States. If such organisations are set up by the State Governments, there is little doubt that progress would be even faster. There is also a need to undertake a conjunctive use of ground water and surface water resources. If there is a balanced use of ground water and surface water resources, surface water irrigation can reach larger areas. A fuller utilisation of ground water resources will not, however, take place if it is left entirely to individual initiative. There is, therefore, an urgent need for Government to draw up an appropriate strategy.

2.15 High priority is, however, being accorded to a more systematic and accelerated exploitation of ground water resources. It is estimated that during the two year period of 1974-76, about 3.6 lakh dug wells and 2.6 lakh tube wells have been constructed and 4 lakh diesel pump sets and 2.6 lakh electric pump sets have been installed benefiting an area of about 17 lakh hectares. The Central Ground Water Board has launched a programme for covering an additional area of about 500,000 sq. kms. with a systematic hydrological survey. Such a survey is necessary to avoid problems like lowering of the water table due to over exploitation, and salination due to indiscriminate use of ground water resources by individuals. At the same time a more satisfactory pace of ground water development will call for a radical transformation of the institutional structure of the rural economy. Fragmentation of land holdings makes it difficult to use available groundwater resources and very often the potential of tubewells is underutilised. Similarly, lack of tenurial security makes farmers unwilling to undertake the necessary investment. These factors also make it difficult for credit institutions to provide the necessary finance. A land consolidation programme is, therefore, one of the more important requirements for a better utilisation of the ground water potential that is available. Also government will have to play an important part in ensuring that tubewells are installed and worked optimally. This also calls for a simultaneous improvement of rural infrastructure facilities.

2.16 One of the problems in making full use of the water resources available has been the inadequate utilisation of the irrigation potential created due to what might be called unsatisfactory water management.

To achieve a more optimal utilisation of irrigation potential, greater attention is being given to command area development. Out of the 60 irrigation commands identified for integrated command area development, 36 command area development authorities have already been set up covering 46 irrigation projects. The programme of work covers modernisation of the irrigation system, provision of main and secondary drains, soil and topographical surveys and planning and designing of on-farm development works. 50 pilot projects of soil and water management have been established in selected command areas and 20 more projects are expected to be established during the next two years. These pilot projects have been established to test, demonstrate and educate the farmers in various improved on-farm development techniques like improvement in water distribution system, channel lining, water control devices, land levelling/shaping, improved drainage system and irrigation practices, better cropping pattern etc. Necessary finance for these on-farm development works is being provided by Government of India. The utmost importance should be attached to the economy's irrigation effort because it will provide the best instrument for expanding employment in rural areas, both when construction is being undertaken and later on when the agricultural potential improves.

2.17 While it has not been possible to eliminate fluctuations in foodgrains output, Government has sought to mitigate the economic impact of such fluctuations through a procurement and buffer stock policy. It has acquired a stock of 18 million tonnes and this prevented the disastrous fall in prices and incomes which the record output would have otherwise led to. At the same time it has acquired a strong instrument for mitigating the hardships that may arise from a future fall in production. By maintaining the incomes for grain farmers it has preserved the incentive to grow more foodgrains. However, the failure of the economy to absorb 121 million tonnes of foodgrains is disquieting. It reflects the inadequate growth of purchasing power and hence the deficiencies in the rate and pattern of development. Measures to use this stock for creating employment and thereby improving consumption need to be devised urgently.

2.18 While the buffer stock increases the manoeuvrability of Government regarding the regulation of the price level the fact that it consists more of wheat than rice (2/3rd, 1/3rd) limits the freedom of operation substantially. The principal foodgrain consumed in the country is rice and, therefore, a larger

stock of wheat does not give the same power over prices as rice would have done. For this reason as well a breakthrough in rice becomes a matter of the highest priority.

2.19 It also needs to be emphasised that one of the reasons for the slow growth of irrigation is the poor return on Government investment. While the cost of investment has escalated over time, revenue from irrigation rates does not even cover adequately the maintenance cost of the works. A sustained programme of faster development of irrigation resources has to be self generating and should largely pay for itself. The State Governments have recently shown greater awareness of this important constraint and have started raising the water rates.

2.20 The appreciable step up in the area under irrigation has been accompanied by a faster spread of high-yielding seed varieties as well as a higher consumption of chemical fertilisers. The area under high-yielding varieties jumped from about 26 million hectares in 1974-75 to about 31 million hectares in 1975-76. All the major cereals shared this expansion but the expansion of about two million hectares in the area under high-yielding varieties of rice is particularly notable. As mentioned earlier, this is indicative of increasing success of new varieties of rice which are suited to specific areas. The research effort in this direction will have to be kept up and further intensified. Since the bulk of the usage of HYV seeds is in wheat and rice, much more effort will have to be directed to popularise their adoption in other crops. Simultaneously, the distribution of new seeds will have to be adequate to meet the demand. The National Seeds Corporation, working in close cooperation with the concerned State organisations, has to ensure that the seed requirements of all regions are met satisfactorily. The minikit programme for the popularisation of new seeds (particularly short duration varieties of rice), better techniques and improved implements, as also the new programme of raising community nurseries for rice with a view to ensure timely paddy transplantation have been found to be very effective. This will help not only in increasing rice production but also enable timely sowing of the crops of the following season, resulting in higher output overall.

2.21 The revival of demand for fertilisers from rabi 1975-76 onwards is another development of considerable importance. The consumption of fertilisers which had been rising upto 1971-72 became stagnant upto 1973-74 and actually declined in 1974-75. A steep rise in fertiliser prices is considered

to have been the major factor responsible for this decline in consumption. With a view to reversing this trend, Government effected five successive reductions in the prices of fertilisers even though it involved considerable expense to the exchequer. These reductions did not have much impact upon the kharif season of 1975-76, but from the rabi season onwards the picture seems to have changed. Fertiliser consumption is estimated to have increased from 1.4 million tonnes in the rabi season of 1974-75 to 1.9 million tonnes in the rabi season of 1975-76, an increase of about 16 per cent. During the following kharif season this trend has not only continued but has become even more pronounced. Besides higher consumption there is a welcome awareness of the need for a more balanced consumption of various fertilisers as indicated by the increasing application of phosphatic fertilisers. An important feature of fertiliser consumption is that it is concentrated in certain areas and on certain crops. The areas having good potential but still lagging behind have been identified and an intensive promotional drive has been launched in 58 districts to educate the farmers in their use. However, with the revival of demand for fertiliser which is expected to go up considerably in the coming years, credit, movement and storage problems are likely to assume crucial importance. For ensuring timely and adequate supplies of fertilisers to different regions throughout the country, urgent attention needs to be given to these problems.

2.22 The performance of commercial crops is a cause for concern. The country seems to face the prospect of a medium term deficit of about 4 lakh tonnes in the oil economy unless vigorous action is taken. The solutions are : bringing a larger area under irrigation, extending the use of pesticides and phosphatic fertiliser, increasing production of more oil intensive crops like sunflower, encouraging the production of soyabean which does not need a diversion of area from any other crop and increasing the oil recovery from decorticated cotton seed and rice bran. We may also have to consider increasing domestic availability by exporting more expensive oils and importing larger quantities of cheaper oils. To make the latter more acceptable, blending may have to be permitted. Just as some shift has taken place to wheat in predominantly rice eating areas because of further wheat availability, a shift to these cheaper oils will have to be brought about gradually.

2.23 With regard to cotton, while a technological break-through has been achieved, institutional factors seem to have come in the way of full exploitation. These need to be overcome. Since land can be shifted from one crop to another in most parts of

the country an integrated price policy needs to be developed to prevent such shifts and optimise land use between different crops. Sugar production seems to have stabilised itself at a fairly high level.

2.24 The disparities in the extent of irrigation, fertiliser application and the adoption of high yielding varieties of seed, between different regions of the country are reflected in their growth performance from the sixties onwards. Whereas Punjab and Haryana have achieved appreciably high growth rates in agricultural production (5 per cent or above) a number of states such as Maharashtra, Bihar, Madhya Pradesh and Orissa are characterised by low yields and hence low growth rates (below 2 per cent). Similarly, the yields of important cereals such as wheat and rice vary from 5 quintals per hectare to 25 quintals per hectare in the different states. To achieve a further increase in production, it will be necessary to devote greater attention to reducing the disparities with regard to inputs among these states and bridging the gap in average productivity of high yielding and low yielding states. At the same time, greater attention will have to be paid to increasing the productivity of dry lands and areas which are prone to drought. Recently special schemes have been launched under which development programmes are supported by research in the techniques of dry land farming, with specific attention to land development, moisture conservation and identification of suitable cropping pattern. Diversification of farm enterprises suited to local conditions is part of the strategy of developing these areas.

2.25 The strategy of raising yields through more inputs, better technology and modern cultural practices can succeed only if farmers have the necessary finance to purchase the required inputs. Despite the continuing weakness of the cooperative system the overall supply of credit has been increasing continuously. During 1976-77 it is expected that Rs. 1199 crores of short-term loans and Rs. 80 crores of medium term loans would have been disbursed by the cooperatives, as compared to Rs. 871 crores and Rs. 110 crores respectively disbursed in 1975-76. Similarly, long term loans are estimated to have risen to Rs. 284 crores as against Rs. 193 crores in 1975-76. Considerable improvement has been made in the mobilisation of deposits and generation of owned funds at the level of central cooperative banks and overdues have come down in most of the states. To fill the credit gap the quantum of agricultural credit supplied by the commercial banks has risen more substantially. By the end of January 1977 the

outstanding advances for agricultural programmes by commercial banks (short, medium and long term) exceeded Rs. 1280 crores as against Rs. 1014 crores in March, 1976. For providing long term loans for investment the Agricultural Refinance Development Corporation is now playing an increasingly larger role. The actual disbursements by the Corporation in 1975-76 amounted to about Rs. 155 crores and have increased to Rs. 210 crores in 1976-77. Recently, A.R.D.C. has begun to shift its investment attention from minor irrigation to land development, farm mechanisation, animal husbandry and storage. Altogether institutional credit now meets more than one third of the credit needs of the agricultural sector. Yet the requirements of the rural sector are so large that much more needs to be done in the near future.

2.26 Employment generation remains one of the most important problems which the nation has to tackle on a priority basis. Though it has not been possible so far to quantify the magnitude of unemployment on a satisfactory basis, there is sufficient evidence to show that it is large and growing. There is, therefore, an urgent need for speedy efforts to generate employment in the rural areas. However, the experience of past efforts at employment creation through rural works indicates that, to be effective, the

measures for rural employment generation should form an integral part of a local development strategy. Such an integrated policy is likely to be most successful if implemented on the basis of a comprehensive area approach which would include, in addition to the development of agriculture and animal husbandry, the development of infrastructure, better utilisation of conventional waste material, farm forestry, etc.

2.27 In a country where the pressure on land is heavy, and the bulk of the peasantry has small holdings, a productive small farmer base is an essential component of strategy of agricultural growth. Security of tenure and tenancy reform has to be ensured if this strategy is to succeed. Therefore, the national policy of land reform evolved over a long period needs to be implemented with greater earnestness and vigour. Land owned in excess of a reasonable holding has to be taken over and distributed to those who have none or smaller holdings. Almost all the States in the country where a ceiling is relevant have passed laws for this purpose. But the implementation has been so tardy that though the completion/updating of land records and rights of tenants has been done, the task of acquiring surplus land and distributing it among the landless and other beneficiaries has remained largely incomplete.