CHAPTER X

SUMMARY AND CONCLUSIONS

Madhya Pradesh is primarily an agricultural State. Agricultural sector is the mainstay of the State economy, accounting for 52.8 per cent of the State Income. According to the 1971 Census, 83.7 per cent of total population of the State resided in rural areas and the remaining 16.3 per cent was urban population. Agricultural workers consisting of cultivators and agricultural labourers formed about 79.42 per cent of the total workers. The dependence on agriculture is more marked in the rural sector, where the percentage of cultivators and agricultural labourers together forms about 88 per cent of the total working population. Madhya Pradesh has the largest tribal population which is 22.1 per cent of total tribal population in the Country and 20 per cent of the total population of this State.

The State presents a highly diverse situation in respect of physical, social, economic and institutional conditions. It is divided into several agro-climatic zones with vast differences in soils, topography, altitudes, water supply and climatic conditions which results in great variations in farming technologies followed and productivity obtained in different parts of the State.
Agricultural development is an essential condition for economic growth of this State. Pressing need of food production for our growing population and the requirement of materials for expanding non-agricultural sector requires a consistent and quick development of our agriculture. Productivity in agriculture is low and there is great scope for improving it through larger inputs and application of scientific techniques of farming.

Launching of the First Five Year Plan in 1950-51 marks an important phase in agricultural development of the Country as well as the State of Madhya Pradesh. During the First Plan period, the average of State income from agricultural sector (at constant prices of 1952-53) increased by 31.51 per cent over the agricultural income of the year 1950-51 and agricultural production increased by 46.30 per cent. The linear growth rate of agricultural production was 8.87 per cent per annum. This pattern started breaking up in the Second Plan period. The pace of growth in output slowed down. Agricultural income showed a lower rate of increase (27.08 per cent) over the First Plan Period and average agricultural production of this period increased by 31.9 per cent over the average of First Plan Period.
The blanket development strategy adopted in the fifties resulted in fast growth in the earlier years but gradually slowed down. In the early sixties, the force was exhausted and the output growth suffered. A new approach through Intensive Agricultural District Programme and Intensive Agricultural Area Programme was adopted to concentrate development activities in selected areas having better potentialities for rapid development. However during the Third Plan period, there was a further declaration in the output growth. Quinquennial growth rate of agricultural output at the end of this period, became negative i.e., -2.82 per cent. Average of agricultural production during this period was only 4.2 per cent more than the average of Second Plan period and the average income of agricultural sector declined by 3.25 per cent.

The 'New Strategy of Agricultural Development' popularly known as 'High Yielding Varieties Programme' brought a new life to the agricultural development programme after the year 1966. Inspite of the handicaps, the New Strategy resulted in outstanding gains in some areas and its impact on the State economy is visible from the increased agricultural income and output. In the subsequent period of three Non-Plan Years and Fourth Plan period, State income and
income from agricultural sector both had increased. Though the average production of three Non-Plan Years, was less than the average of Third Plan Period, but in the subsequent five years of Fourth Plan period, average production reached to 117.52 lakh tonnes. Its increase was 18.40 per cent over the Third Plan average. During the same period, the increase in income from agricultural sector was 26.54 per cent.

The impact of 'New Strategy', which brought out 'Green Revolution' in the Country, is limited in this State. Forty one per cent of the gross cropped area in the State covered by non-food-grains and pulses, had remained outside the orbit of 'Green Revolution'. Even of the rest 59 per cent except small area under Jowar, Maize and Bajra (only 34.00 per cent of total area under these crops), the influence of high yielding varieties had not been significant on millets which occupy an important place (22.39 per cent of gross cropped area) in this State. The impact of high yielding varieties is limited by and large to irrigated areas and there too, the crop which is under its major influence is wheat. In this State, only 23.50 per cent of wheat crop is grown on irrigated lands and rest 76.50 per cent is grown under dry condition on rainfed lands. The percentage of wheat area under high yielding varieties is 23.90 per cent.
Inspite of year to year fluctuations, agricultural production had been increasing. Overall increase in production was 171.09 per cent over the year 1950-51. The average rate of growth for foodgrains production (3.51 per cent per annum) was higher than non-foodgrains (2.12 per cent per annum). The food-grains production though succeeded in keeping pace with population growth (Linear growth rate 3.14), but it should not be considered adequate. The rate of growth of food production has to be large enough not only to meet the continuously rising demand but also to provide a cushion against short-term fluctuations in production due to vagaries of weather.

There has been considerable variation in the magnitude of increase in production of different crops. The estimated linear rates of output growth of 21 important crops of the State exhibited different trends. The crops in the period between 1971-72 to 1974-75 represented a phase of steep rise in prices but the year 1975-76, the phase changed and prices of all the commodities declined.

Agricultural wages have been increasing in the State. Indices of nominal wages moved from 123.97 in 1964-65 to 308.26 in the year 1975-76. The average annual
rate of increase was 14.56 per cent and the annual compound
growth rate was 7.7 per cent. Increase of consumer price
index during the same period was higher than the increase
registered in case of nominal wages. Consumer price index
registered linear growth rate of 19.20 per cent per annum
and compound growth rate of 9.1 per cent per annum. The
increase in nominal wages was off-set by the corresponding
increase in consumer’s price index with the result the
real wages showed negative linear growth rates of -0.228
per cent per annum and -0.28 per cent per annum the
compound growth rate.

The overall State position conceals considerable
regional or district-wise differences because of the vast
differences in soils, topography, water supplies, farming
practices, techniques and attitudes of farmers in different
parts of the State. The areas having assured rainfall and
facilities for controlled irrigation have indicated steady
progress whereas the areas with low rainfall and poor
irrigation exhibit low and unsteady progress. Biggest in
size, the Madhya Pradesh ranks sixth in population and
fourteenth in density in our Country. This low density of
population is in a way advantageous in that it allows a
larger area per person for cultivation and a higher per
capita production of food grains. Average size of holdings
in the State is 4.0 hectares as compared to all India average holding size of 2.30 hectares. Still, the State appears to be weak in many respects in its agricultural conditions. Though pockets of progress and prosperity co-exist with extreme poverty in the State, the State as a whole lags much behind some of the progressive States of the country.

In an under-developed economy, the increasing population resulting in demand for more food and work for more hands, naturally force to set-up production through extension of area under cultivation by utilizing the uncultivated cultivable land. It is the availability of arable land which limits the expansion of agriculture in this situation and the size of growth in a given period depends on its earlier unexploited potentialities. In the year 1953-54, 43.73 lakh hectares area in this State was classified as culturable waste which formed 10.1 per cent of total area. In the year 1975-76, culturable waste land remained 20.20 lakh hectares i.e., 4.5 per cent of the total area. This striking change in the area recorded in 1975-76 may be attributed mainly to the increase in net cropped area which increased from 151.92 lakh hectares to 187.20 Lakh hectares. This increase was 23.2 per cent. Most of the area being mono-cropped, the corresponding increase in
gross cropped area was 27.02 per cent. Increase in the acreage of all crops may be ascribed to two main possible sources:

(i) cultivation of lands non-previously used for raising crops,

(ii) raising more than one crop.

Utilization of the first source had been done to the extent of 53.9 per cent but the area under double cropping still remains only 14.10 per cent of the net area sown. Though double cropping holds great possibility for an increase in the total cropped area, but its expansion depends upon the level of agricultural water supply i.e., the rainfall and irrigation.

Average annual rainfall of the Eastern Region of Madhya Pradesh is 1297 m.m. and of the Western Region 1043 m.m. Its normal distribution varies from 669 m.m. in Bhind district to 1623 m.m. in Balaghat district. The Coefficient of variation of rainfall varied from 10.95 per cent in Shahdol district to 48.93 per cent in Khargone district. The most important rainfall characteristic of the State is that about 91 per cent of the total annual rainfall is confined to 'Monsoon season'. In the remaining eight months of the year, total precipitation is only 8.87 per cent.
Neither the total annual rainfall nor its distribution in various months of the year has any stability and both suffer from a high degree of variability. The weather uncertainty like insufficient rains or excessive rains and the natural calamities like flood, drought, hail, frost, insect-pest and diseases appear to be cyclical feature in the agricultural history of the State. On an average, 9.62 per cent of the gross cropped area is affected every year by natural calamities causing 4.12 per cent loss to the agricultural output of the State. Maximum loss occurs on account of insufficient rains, which affects 6.20 per cent of the cropped area and causes 3.29 per cent loss to total agricultural output. It is obvious that a certain amount of fluctuation is unavoidable in food-grains production because of weather hazards, but if these fluctuations can be kept within certain narrow limits, the problem of food management becomes relatively easy. The twin problems of low and uncertain crop production in the rainfed areas have always been a problem. These "DRY LANDS" with low (400-1000 m.m.) and erratic rainfall constitute about 28 per cent of the total cropped area of the State. With all the progress that has taken place in this State during the past 30 years, only 9.6 per cent of the cropped area has got irrigation facilities and the remaining 90.4 per cent land still depends for its crops on erratic rainfall.
The ultimate irrigation potential of the State as assessed by Central Water Commission is 99.3 lakh hectares which is about 44 per cent of the State's culturable area. In a Techno-Economic Survey of Madhya Pradesh, conducted by National Council of Applied Economic Research, the irrigation potential of the State was estimated to 97.10 lakh hectares and it was anticipated that it would be possible for the State to bring 36.4 lakh hectares (out of the total potential) under irrigation by 1971. By the end of Fourth Plan period, total irrigation potential created in the State was 12.07 lakh hectares which was only 12.79 per cent of the total estimated potential. By the end of the year 1974-75, irrigation potential created became 12.66 lakh hectares. The major, medium and minor irrigation projects shared 4.28, 4.38 and 4.03 lakh hectares respectively. The Madhya Pradesh lags much behind the all India average of 22.9 per cent of net irrigated area to net area sown. Leaving Maharashtra, this State ranks lowest among all the States of the Country in percentage of net irrigated area to net area sown.

Another drawback of the agriculture in the State is low proportion of area under cash-crops. While in the country, as a whole, 21.42 per cent of total cropped area is under commercial crops, it is only 14.85 per cent in
Madhya Pradesh. In a study of Cropping Pattern in Madhya Pradesh (1967), National Council of Applied Economic Research, New Delhi had found that there was considerable scope for improving the cropping pattern of the State even under the existing physical conditions. If additional facilities by way of irrigation, better seed suitable to local conditions and fertilizers, are provided, the possibility of changing the cropping pattern will further increase. More remunerative crops will be grown and the extent of substitution will also increase.

Low consumption of fertilizers in the State is also a reason for its agricultural backwardness. In the year 1958-57, consumption of fertilizers in Madhya Pradesh was 2.96 thousand tonnes which has increased to 144.57 thousand tonnes in the year 1973-74. The average growth rate was 7.6 per cent per annum. Rate of consumption per unit of cropped area has increased from 0.16 kg per hectare to 6.82 kg per hectare. Compared to the all India average of 17.1 kg per hectare consumption of fertilizers, consumption of Madhya Pradesh was only 5.3 kg per hectare in 1975-76. This State consumed only 4.11 per cent of total fertilizer consumption in the Country. The consumption of fertilizers per unit of cropped area in Madhya Pradesh had remained so low that normal fluctuation in fertilizer prices had no affect on their consumption till 1973-74.
but the exorbitant prices of fertilizers in 1974-75 affected the total consumption which decreased from 144.57 thousand tonnes in 1973-74 to 99.14 thousand tonnes in the year 1974-75.

Probably because of the low proportion of irrigated area and extremely low consumption of the inorganic fertilizers, the productivity of land as reflected in the yields per hectare is also low. Except a few crops i.e., Jowar, Bajra and Tur for which Madhya Pradesh has higher average yields, in respect of almost all other crops, yields of Madhya Pradesh are lower than all India average yields.

The task of developing agriculture will also require increase in employment opportunities for the huge number of agricultural population. An estimate assessed by Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi shows that at the rate of 300 days employment in a year, the extent of unemployment among agricultural workers of the State is 59.12 per cent. Labour absorption in agriculture had increased by 28.36 per cent in 1975 over 1951. It was a good sign and may be attributed to increase in cropped area, intensity of cropping and adoption of
high yielding varieties of certain crops but at the same
time, the corresponding increase of 35.08 per cent in
agricultural labour force had off-set it and resulted in
40.24 per cent increase in surplus labour. Thus, the task
of developing agriculture would be essentially one of
mobilizing and increasing the efficiency of the huge number
of agricultural population already available.

Predominance of small and marginal farmers in the
State is another factor which stood in the way of agricultural
development. Though the average size of operational holding
in the State is 4.00 hectares and the State ranks fourth
in this respect, the number of holdings below the average
size constituted 68.70 per cent of the total number and
shared 24.15 per cent of total area. Holdings above
four hectares constituted 31.30 per cent and shared 75.85
per cent of the total area. Special attention to small
and marginal farmers were given only in the recent years.

Cooperative credit institutions existed in the
area even before the formation of the present State in
the year 1956 when nearly 55 per cent of the villages were
covered. At present, all the villages of the State are
covered by Primary Agricultural Credit Societies. The
proportion of borrowing members (62 per cent) to total
members of Primary Credit Societies in the State during
1966-67 was highest in the country. But this percentage
declined to 33.48 per cent in the year 1973-74 which may be on account of expansion of credit facilities by the other agencies also. During the past few years, several measures have been adopted to strengthen the institutions engaged in supply of essential inputs and credit. Establishment of Small Farmers Development Agency and Marginal Farm and Agricultural Labour Agency and such other Institutions and Projects have contributed much in this field. Still, a lot has to be done to cope up with the growing demand.

To sum up the discussion, the overall slow rates of growth of agricultural production in the State may be attributed to:

(i) Lack of irrigation facilities for 90 per cent of the cultivated area,

(ii) Low level of adoption of improved technology and inputs, which has resulted in-
(a) low crop intensity (114.10 per cent),
(b) low proportion of area under cash crops (14.85 per cent) and
(c) low productivity of most of the crops; and

(iii) Poor condition of other enterprises such as dairying and poultry etc.
The causes of low level of agricultural technology in the State are -

a. Predominance of small and marginal farmers (49.57 per cent).

b. Inadequate net-work of institutions for supply of agricultural inputs and credit.

c. Lack of proper infrastructure in respect to communication, electrification, marketing and storage facilities.

d. Unemployment among agricultural workers (59.12 per cent of total available days (at the rate of 300 days a year), for the labour force).

e. Low level of literacy (16.81 per cent of rural population; and

f. High percentage of tribal and scheduled caste population in total population of the State (33.23 per cent).

To revitalize the course of agricultural development in the State, the steps which can be envisaged are suggested here:

1. Specific

   (1) Irrigation should be given high priority in the agricultural development programmes of the State as the agricultural growth crucially depends
on the growth of irrigation and the use of High Yielding Varieties' seeds and fertilizers, in which the modern technology is really embodied.

(ii) The Extension Agency of the State Department of Agriculture should be geared up to spread adoption of improved technology.

At present, the extension service is primarily absorbed in the service functions of arranging supplies of inputs, etc. The real job of transforming the traditional low technical function farmers into a modern scientific farmers with new technical functions on the farms has to be given greater emphasis.

(iii) The efforts should be made to raise the cropping intensity of the farms to a significant level in the State. The equal important is the ability of farmers to switch over to high value crops and a high intensity of cropping. It is the speed of shift that really matters.

II. General

(1) An early start in shifting to desirable cropping plans is the key to success. It is necessary to make full utilization of agricultural inputs and credit supplies being arranged at the cost of huge public funds. It needs to be emphasized that the public funds are not charity, they involve some
social responsibility too. Proper utilization of funds for their own well being is essential from social point of view. In this connection, a vigorous follow-up extension programme is essential to help the farmers to adopt the post-development cropping pattern immediately after the loans are advanced and utilized. It may also be necessary to keep on supervising the implementation of agreed farm plans and helping the farmers in financial management of their business from time to time.

(ii) The individuals must not have any option for individual programmes without accepting and adopting group programmes. The individual while enjoying freedom of action on his holding should be obliged to accept and follow a minimum component of the technical programme for which the extension service must not only prepare individual farm plans but also be involved in its implementation. The most important need seems to be to gradually discourage the hitherto adopted individual approach, yielding place to area programme approach.

(iii) Since small and marginal farmers and agricultural labourers form a bulk of the agricultural community in the State, it is necessary to organise and educate them to avail the benefits of the various agricultural development programmes under implementation in the State.

(iv) Under the existing circumstances, an educative effort is needed to make the farmers better informed
regarding prices, techniques, opportunities and the consequences of his decisions.

(v) Development and popularization of subsidiary occupations like Poultry keeping, Dairying and Piggery, etc., must be done to give additional income and gainful employment to the peasants.

(vi) The immediate need for corrections in the land records with regard to ownership holdings and leasing arrangements, is of prime importance, if the present size based criterion of financing is not replaced by income based criterion. The present 'size-based' criterion leaves enough room for bogus small farmers to avail benefits and often, the really needy farmers are eliminated.

(vii) Policies related with incentives and disincentives for production of certain crops should be prepared and declared well ahead of the growing season of the related crops. The decision should be firm and should not be changed in the middle i.e., before the close of growing and marketing season of the crop. Firm State policy for agricultural development properly integrated with the over-all rural development programmes and assured remunerative prices for agricultural produce must be the guiding force.