
UNIT 22 NEW AGRICULTURAL STRATEGY

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22.0 OBJECTIVES

After going through this unit, you will be able to:

- distinguish between the terms ‘planning’ and ‘strategic planning’;
- outline the various agricultural strategies adopted during the pre-reforms period;
- indicate the approach adopted for reorienting the agricultural development policies during the post-reform years of 1990s;
- state the objectives of the ‘New Agricultural Policy (NAP), 2000’;
- delineate the approach of NAP, 2000 in terms of its specific policy features;
- explain the proposed paths for tackling the issues under focus in the NAP, 2000; and
- analyse the trends of post-2000 years on the performance of agricultural sector during the Tenth and Eleventh Plan periods.

22.1 INTRODUCTION

We have already discussed in detail the efforts made under Green Revolution in unit 11. We also noted briefly (in section 11.4) the post-green revolution efforts made during the 1980s after the benefits of the first green revolution period began to taper off. These efforts, which were aimed at making us self-sufficient in food and spread the benefits of green revolution to the other as yet unreached regions, are what is referred to in literature as the 'new agricultural strategy'. This approach also includes what we studied in unit 8 on the diversification trends in Indian agriculture. While the objective of making India self-sufficient in foodgrains production has been achieved by the strategies adopted during the Green Revolution period, the challenges that our agricultural sector is facing in the post-economic reforms period are distinctly different. To cope up with this, the government formulated and implemented various strategies during the different plan periods of the post-reform years. In the present unit, we first take an overview of the strategic initiatives taken in the pre-reform period. We then focus more on knowing about the strategic initiatives that have been undertaken in the context of the pressing challenges facing the sector in the period since the initiation of economic reforms in the country in the early nineties. Before we do this, we will distinguish between the terms planning, policy and strategy.

Planning is the process of defining the objectives and develop a detailed outline of future course of actions required to be pursued to achieve the objectives laid. This includes the setting of targets along with the allocation of financial resources required for their achievement. Thus, planning is an intellectual exercise that rationally attempts to select from among available alternatives in a manner that best suits the achievement of the pre-defined objectives. It is a decision-making process that is consciously based on the planners understanding of the objectives and includes financial estimates of expenditure. The purpose of planning is to bridge the gap from 'where we are' to 'where we want to be'. In the first few decades of our planning for the development of the agricultural sector in India, four broad objectives have been kept in view. These are: (i) increase agricultural production; (ii) increase employment opportunities; (iii) reduce the pressure of population on land (by reducing the number of people working in agriculture); and (iv) reduce income inequalities in rural areas. However, development of the plan itself is not enough as the financial resources allocated are quite often not expended fully. Hence the actual implementation of the plan is of crucial importance as any faulty implementation and leakages in the system often leads to poor implementation of plan projects. Policies, in this context, are general statements (or undertakings) that guide the thinking in decision making. Policies relate to a specific area in which a decision has to be made and then ensure that the implementation of the decision is made in such a manner that it conforms to the achievement of the objectives laid. As guides to decision-making, policies allow a certain amount of discretion which makes them different from rules. A policy need not always be a statement; it can also be an unwritten way of doing certain things.

The terms 'policy' and 'strategy' are often used synonymously. There is, however, a difference between them. 'Strategy' refers to a comprehensive action plan, more than what is expected to be stated in a policy, that details how a stated objective will be achieved. A strategy outlines a specific programme of action indicating the direction of deployment of human and physical resources to maximise the chances of achieving an objective meeting the challenges that might lie in the way. In other words, a strategy is a game plan that is employed to achieve the position that 'we would like to be in' from 'where we are now'. It, thus, reflects the choices that the planners and administrators have made. In general, given the plan objectives for the agricultural sector mentioned

above, the strategies that have been employed in India include: (i) action plans directed towards increasing agricultural production and rural employment (e.g. implementation of community development programmes and agricultural extension services throughout the country, expansion of irrigation facilities, promotion of use of high yielding varieties of seeds, fertilisers, plant protection chemicals, and agricultural machinery and expansion of transportation, marketing and credit infrastructure); (ii) development of rural non-farm sector by inducing movement of people out of agriculture to non-farm activities (e.g. promotion of agro-industries and handicrafts); and (iii) land reforms related strategies aimed at reducing inequality and ensure social justice in rural areas. In this unit we shall be focusing on some of the specific strategies that have been adopted to meet the challenges that the agricultural sector has faced in the last two decades.

22.2 STRATEGIC INITIATIVES

As described above, strategy is an action plan that is implemented to achieve a desired objective i.e. to move 'to a situation/position where we would like to be' in relation to 'our current position'. A strategic initiative, therefore, requires that it must be well thought out and carefully controlled and monitored during implementation. For such a strategic initiative, various outcome indicators can be defined. These outcome indicators reveal the degree of success of the strategic initiatives. For instance, depending upon the nature of the initiative and the challenge that is being sought to be met, for agricultural and allied sector, some of the more common indicators that indicate the outcome of the initiative may be: (i) contribution to output or GDP (measured in value terms and expressed as growth rate over a suitable time frame like a decade or a five year plan period); (ii) changes in production and productivity in quantitative terms (expressed in absolute terms or per hectare/per animal terms, respectively); (iii) rising trends in export of agricultural commodities (expressed in percentages); (iv) declining share in employment in agricultural/livestock production and its corresponding increase in non-farm employment (relative percentage terms); (v) actual growth rates achieved relative to targeted rates for different sub-sectors/activities, etc. We shall, in this section, study the salient features of the agricultural strategy pursued and note the achievements in different periods marked for specific thrust areas in the different plans.

22.2.1 Pre-Reform Period: An Overview

The agricultural policy followed during the pre-reform decades can be categorised into three phases, viz.: (i) period from 1950-51 to mid-1960s (the pre-green revolution period); (ii) the 1960s to the end of 1970s (called the green revolution period); and (iii) the wider technology dissemination period of the 1980s.

The **pre-green revolution period** was marked by: (i) major agrarian reforms; and (ii) institutional changes for development of major irrigation projects. Other policy initiatives taken during this period include: (i) establishment of a food distribution network; (ii) nationwide community development programmes for village development; (iii) bringing fallow land under cultivation to increase land use efficiency; (iv) thrust on irrigated agriculture; (v) soil conservation programmes; (vi) development of cooperative institutions and national extension service; (vii) technology dissemination through community development network; (viii) adoption of improved technology to increase land productivity; (ix) adoption of area development approach for development; (x) extension of non-agricultural activities in rural areas; etc. The contribution of 'agriculture and allied' sector to GDP during the decade 1951-60 was 2.7 percent. This, however, declined to 1.5 percent during the decade 1961-70. A notable increase during the two periods was in the production of fruits & vegetables whose growth increased from a mere 0.6 percent in 1951-60 to a significant 5.8 percent during 1961-70.

The **green revolution period** was set off with a food crisis situation of early 1960s. There was a desperate search for quick breakthrough in agricultural production necessitated by the increasing dependence on food aid and imports. The period witnessed the development and spread of dwarf HYVs of wheat followed by rice. These HYVs were highly responsive to chemical fertilisers and irrigation and this strategy produced quick results with a quantum jump in the production of wheat and rice. Within a short span of six years from 1965-66 to 1971-72, Indian agriculture witnessed an increase of 30 million tonnes of foodgrains over that achieved in the period 1951-65. This marked for the biggest achievement of new agricultural strategy viz. the attainment of self-sufficiency in foodgrains. The period was also marked by a fast growth of agro input industry. On the policy front, research & extension, input supply, credit, marketing, price support and spread of technology received maximum attention. Specific policy thrust witnessed during the fourth and the fifth plan periods (i.e. 1969-74 & 1974-79) were in the areas of: (i) higher cropping intensity; (ii) emergence of agricultural price policy; (iii) second phase of land reforms with land ceiling acts and consolidation of holdings; (iv) implementation of 20-point economic programme; (v) continuation of area development strategy; (vi) drought-prone area development projects; (vii) impetus to dry-land farming; (viii) attention to issues of land degradation and land management in irrigated command areas; and (ix) modernisation of irrigation in select irrigation command areas. In spite of these initiatives, the period was characterised by a marginal increase in the contribution of 'agricultural and allied sector' to the GDP: from 1.5 percent in 1961-70 to 1.7 percent during 1971-80. Two specific areas which witnessed comparatively higher growth over the two periods of 1961-70 and 1971-80 are: (i) non-horticultural crops from 1.1 percent growth to 1.6 percent; and (ii) livestock from 0.4 percent to 3.9 percent.

The **post-green revolution period** Indian agriculture began in early 1980s. This period saw the wide dissemination of the green revolution technology with the rapid spread of the seed-fertiliser revolution to new areas and new crops leading to productivity increases in major foodgrains. During this period there was (i) growth in the agricultural sector accompanied by increase in real farm incomes in several regions/pockets; (ii) a considerable increase in subsidies and support to agriculture sector; and (iii) a decline in public sector spending in agriculture for infrastructure development. However, due to higher private investment by farmers, the rural economy witnessed diversification resulting in faster growth in non-foodgrain output like milk, fishery, poultry, fruits & vegetables, etc. The growth was thus largely market-driven which substantially contributed to growth in agricultural GDP during the 1980s. The increase in agriculture GDP was from 1.7 percent during the 1970s to 3.0 percent during the 1980s. In particular, the contribution to GDP from crop production per se (i.e. main agriculture) increased from 1.9 percent to 3.1 percent and in fishing from 2.9 percent to 5.8 percent. Major policy thrust for development of agriculture during this period included: (i) drought-prone areas and wasteland development programmes; (ii) lagging areas from green revolution benefits getting attention; (iii) soil erosion and land degradation receiving major attention; (iv) water conservation efforts getting a boost under the National Watershed Development Programme; (v) launching of oilseeds and pulses development programmes; and (vi) initiation of long term view of land management.

22.2.2 Economic Reforms Period: 1990s

The reforms decade of 1990s began with the Eighth Plan (1992-97) laying emphasis on: (i) trade sector priorities by generating surplus agricultural production for exports; (ii) increased emphasis on oilseed sector; (iii) incorporation of agro-climatic regional planning approach; (iv) initiation of productivity enhancement schemes; (v) promotion

of horticulture sector; (vi) institutionalisation of people's participation in land management at village level; (vii) emphasis on watershed development approach; and (viii) soil conservation merged with watershed development programmes. The Ninth Plan (1997-2002) continued to regard agriculture as a priority sector. Its policy thrust was on: (i) boost to agricultural research; (ii) emphasis on horticultural crops for exports; (iii) management of wastelands by bringing under-utilised land for cultivation; and (iv) institution of panchayati raj system of management for village land development. As a result of these efforts, the growth in agricultural GDP during the decade 1991-2000 increased to 3.3 percent from the 3.1 percent growth during the decade 1981-90. In particular, the fruits & vegetables sector grew impressively from its 2.4 percent growth during 1981-90 to 6.0 percent growth during 1991-2000. However, the challenges faced by the agricultural sector were becoming intense owing to the opening up of the sector for international trade. Until the 1990s, agricultural trade, channelled through state trading, was strictly regulated by high tariffs and quantitative restrictions. But the new international trade accord with WTO in the mid-1990s required the opening up of domestic market creating strong apprehension on its adverse impact on Indian agriculture. These developments compelled the government to come out with a New Agricultural Policy Statement in the year 2000. We may, therefore, conclude the present section by noting that over a long term time frame of 1951-2000, Indian agriculture (i.e. agriculture & allied sectors) grew at an average annual rate of 2.6 percent with three of its sub-sectors having grown at a higher than this average annual growth rate. These are: livestock (3.1 percent), fruits & vegetables (4 percent) and fishing (4.3 percent).

Check Your Progress 1 [answer in about 50 words using the space given]

- 1) State the distinguishing elements of 'strategic planning'.
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- 2) State any four outcome indicators which would reveal the impact of 'strategic policy initiatives' on agricultural development.
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- 3) What were the four major areas of policy thrust during the pre-green revolution years?
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- 4) State the specific policy initiatives of the pre-green revolution years?
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- 5) Indicate the trend in the contribution to GDP by the ‘agricultural and allied sectors’ during the roughly two pre-green revolution decades?
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- 6) Mention the specific policy initiatives for agricultural development during the IVth and the Vth plan periods.
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- 7) Which factor contributed to diversification of agriculture during the 1980s? Which two sub-sectors contributed to GDP substantially? How much was the increase/growth of these two sub-sectors?
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- 8) State the specific policy emphasis laid on agricultural development during the Eighth and the Ninth plan periods.
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- 9) Which particular sub-sector of agriculture, showed impressive growth during the 1990s? What was the magnitude of this increase?
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- 10) State the circumstances which compelled the government to come out with a New Agricultural Policy statement in the year 2000.
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- 11) Overall, how would you categorise as the growth profile of Indian agriculture over the five decade time period of 1951-2000? Which sub-sectors have performed better than this aggregate growth rate?

22.3 NEW AGRICULTURAL POLICY: 2000

The broad objective of the new agricultural policy, 2000, (NAP, 2000) is to facilitate the sector to grow in excess of an annual 4 percent by the year 2020. It seeks to achieve this target by a multi-faceted approach consisting of measures like: (i) strengthening the rural infrastructure to support faster agricultural development; (ii) promoting value addition by accelerating the growth of agri-business; (iii) creating employment opportunities in rural areas to secure a higher standards of living on the one hand and discourage migration to urban areas on the other; and (iv) enabling the sector to face the challenges arising out of economic liberalisation by catering to both domestic and export markets. The approach of the NAP is discussed in the salient features of the policy delineated below.

22.3.1 Salient Features

The approach to achieving the objectives stated in the NAP, 2000 are indicated in terms of its specific features as follows.

- a) Greater private sector participation through promotion of contract farming methods;
- b) Price protection to farmers aided by the launch of a National Agricultural Insurance Scheme (NIAS) to cater to unforeseen situations like crop failure;
- c) Dismantling the restrictions on movement of agricultural commodities throughout the country;
- d) Promoting strategies for rational utilisation of country's water resources for optimum use of irrigation potential;
- e) According high priority to promotion of allied agricultural activities like horticulture, animal husbandry, poultry, dairy and aquaculture;
- f) Establishing conducive environment for capital inflow with assured markets for crop production;
- g) Exempting the payment of capital gains tax on income accrued from compulsory acquisition of agricultural land necessary for infrastructural development;
- h) Taking suitable measures to minimise fluctuations in commodity prices by continuous monitoring of international prices;
- i) Bringing about a legislation for protection of plant varieties;

- j) Supplying of quality inputs to farmers in adequate and timely manner;
- k) According high priority to rural electrification; and
- l) Setting up of agro-processing units for creation of off-farm employment opportunities in rural areas.

22.3.2 Issues Under Focus

A multi-pronged strategy has been indicated in the NAP, encompassing several areas of critical concern, in order that specific policy prescriptions for achieving the envisaged growth target in a sustainable and equitable manner are evolved. To achieve this, the NAP indicates direction in terms of the following broad focal areas: (i) sustainable agriculture; (ii) food and nutritional security; (iii) generation and transfer of technology; (iv) inputs management; (v) incentives for agriculture; (vi) investments in agriculture; (vii) institutional structure; and (viii) risk management including other management reforms.

22.3.2.1 Sustainable Agriculture

The NAP notes that the erosion and narrowing of India's plant and animal genetic resource base has affected the biodiversity of the country. To rectify this situation, the NAP suggests the following specific strategies: (i) survey of genetic resources in a time bound manner to list, catalogue and classify country's vast agro bio-diversity; (ii) promotion of bio-technology for evolving plant species that are – (a) drought/pest-resistant, (b) contain more nutrition and consume less water, (c) give higher yields in an environmentally friendlier manner, etc.; (iii) sensitization of the farming community for balanced and conjunctive use of bio-mass, organic and inorganic fertilizers and controlled use of agro chemicals through integrated nutrient and pest management practices; (iv) promotion of agro-forestry and social forestry to balance and augment bio-mass production in agricultural systems; etc.

Currently, a major challenge being faced by the agricultural and allied sector in India is the possible adverse impact on production due to climatic variability. It is felt that the adverse impact due to climate change and extreme weather events could be severe if appropriate adaptation and mitigation strategies are not adopted with serious consequences in terms of shortages of food articles and rising prices that can negatively impact the food and livelihood security of the country. As a specific strategy to tackle this challenge, the Government of India has launched the National Mission for Sustainable Agriculture which seeks to transform Indian agriculture into a climate resilient production system through suitable adaptation and mitigation measures in the domain of crops and animal husbandry. To achieve this, the Mission will: (i) conduct research and development activities; (ii) absorb the improved technology and best practices; (iii) create physical and financial infrastructure and institutional framework; and (iv) facilitate access to information and promote capacity building. Focus will be on the development of suitable drought and pest resistant crop varieties for dryland agriculture and integrating farming systems with management of livestock and fisheries in rainfed areas besides ensuring adequate institutional support for this purpose. To ensure that agricultural production continues to grow in a sustainable manner, the Mission seeks to undertake strategic planning at agro-climatic zone level, develop customized interventions to enhance productivity, ensure easy access to information and institutional support, and linking laboratory to land.

22.3.2.2 Food and Nutrition Security

For raising the productivity and production of crops to meet the growing demand for food and raw materials needed for agro-based industries, a regionally differentiated

strategy (taking into account the agronomic, climatic and environmental conditions) will be pursued. For promoting animal husbandry, a national livestock breeding strategy will be evolved to meet the demands for milk, meat, egg and other livestock products. The involvement of cooperatives and private sector will be encouraged for development of poultry and dairy. In horticulture and floriculture, major thrust will be on the development of rain-fed and irrigated systems. It will especially focus on: (i) promotion of plantation crops particularly roots & tubers and aromatic & medicinal plants, (ii) bee-keeping, (iii) tissue culture laboratories, (iv) seed farms, etc. In fisheries, an integrated approach to design and promote sustainable aquaculture practices will be adopted. It will particularly focus on deep sea fishing to take advantage of vast potential of the country's exclusive economic zone.

A specific strategy adopted for improving food security is the National Food Security Mission, a centrally sponsored scheme launched in 2007-08 in 311 districts of 17 states. The objective of the Mission is to: (i) increase production of rice, wheat and pulses through area expansion, and enhance productivity in a sustainable manner in certain identified districts of the country through restoration of soil fertility and productivity at the individual farm level; (ii) creation of employment opportunities and; (iii) enhancing farm level economy to restore confidence among the farmers. The Mission seeks to involve all stakeholders in the planning, execution and monitoring of the programme. Through promotion and extension of improved technologies (like seed, nutrients, plant protection, soil amendments, resource conservation, farm machines and tools), it is envisaged to increase the production of rice, wheat and pulses to the tune of 10, 8 and 2 million tons, respectively.

22.3.2.3 Generation and Transfer of Technology

In technology application, developments in frontier sciences like bio-tech, remote sensing, energy conservation, etc. would be used to evolve location-specific varieties of agricultural and horticultural crops. This approach would also be extended to development of livestock species and aquaculture. The research and extension linkages would be strengthened to make it broad-based and to revitalise crop, livestock and fisheries based production systems. For promotion of demand-driven production systems, the role of KVKs (krishi vigyan kendras), NGOs (non-government organisations), farmers' organisations, cooperatives, corporate sector, etc. would be encouraged. Appropriate structural, functional and institutional measures will be initiated to empower women and build their capabilities so as to improve their access to inputs, technology and other farming resources.

22.3.2.4 Inputs Management

The endeavour would be to provide adequate and timely supply of quality inputs including bio-pesticides, agricultural machinery and credit at reasonable rates. To optimise efficient nutrient use, balanced use of chemical fertilisers with organic and bio-fertilisers would be promoted. A National Seed Grid would be established to ensure the supply of seeds especially to areas affected by natural calamities. Selective and eco-friendly farm mechanization through appropriate technology will be promoted to make agriculture efficient and competitive. Research and breeding of new varieties would be encouraged in the private sector with a focus on safeguarding the proprietary rights of individual researchers and corporate players.

In the case of seeds, a centrally sponsored scheme called the 'Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds' was launched during the Tenth Plan. A Seed Bank scheme was launched in 1999-

2000 with the objective of ensuring availability of quality seeds to the farmers particularly during contingency situations and to develop the infrastructure for storage of seeds. An important strategy in case of seeds has been the 'Seed Village' scheme. The New Seed Policy of 2002 seeks to strengthen this scheme to facilitate production and timely availability of seeds at local level.

22.3.2.5 Incentives for Agriculture

For creating a favourable economic environment aimed at increasing the capital formation in agriculture: (i) distortions in the incentive structure between sectors would be removed by improving the terms of trade for agriculture vis-à-vis industry; and (ii) external and domestic markets would be rationalised by effecting necessary tax reforms. Commodity-wise strategies for protecting the domestic growers from adverse impact of undue price fluctuations in world markets would be formulated. This would involve promotion of other aspects of marketing such as quality, choice, health and bio-safety standards. For promoting exports, a two-pronged strategy of: (i) diversification of agricultural production; and (ii) establishment of supportive public management system would be adopted. The latter would include rationalisation of import duties on manufactured commodities used in agriculture. The domestic agricultural market would be liberalised by removing all restrictions on the movement of agricultural commodities throughout the country. Other incentives like exemption of capital gains tax to farmers on compulsory acquisition of agricultural land and measures for keeping the agricultural sector outside the regulatory and tax collection systems would also be adopted.

22.3.2.6 Investment in Agriculture

A conducive environment would be established to promote private investment in agriculture. This would be done by a mix of price and trade related reforms. The quality of electricity supply to rural and agricultural needs would be improved by according high priority. For this, measures like: (i) bridging the gap between irrigation potential created and utilised; (ii) completion of all on-going projects for modernization of irrigation infrastructure; and (iii) encouraging the use of new and renewable sources of energy for agricultural purposes would be initiated. Due emphasis would be laid on development of marketing infrastructure and techniques for preservation, storage and transportation of agricultural produce with a view to reducing post-harvest losses. Producer markets on the lines of Rythu Bazars, with the active involvement and direct control of PRIs would be promoted throughout the length and breadth of the country. Establishment of cold chains and improvement of retail marketing arrangements would receive priority. Upgradation and dissemination of market intelligence will receive particular attention. Collaboration between producer cooperatives and corporate sector will be encouraged to promote agro-processing industry.

22.3.2.7 Institutional Structure

In view of the predominance of small and marginal farmers in Indian agriculture, policy of rural development and land reforms would focus on: (i) consolidation of holdings; (ii) redistribution of surplus and waste lands among the landless, unemployed, etc.; (iii) recognition of the rights of tenants and sharecroppers in the matter of tenancy reforms; (iv) development of lease markets to allow for the increase in the size of land holdings by making necessary legal provisions; (v) provisioning for giving private lands on lease for cultivation and agri-business; (v) updating of land records and its computerisation with the ultimate objective of providing pass books to farmers on their land holdings; and (vi) recognition of women's rights in matters of land ownership. The process of implementation of land reforms would increasingly involve PRIs, voluntary groups, social activists and community leaders. For allowing accelerated technology transfer, private

sector's participation through contract farming and land leasing arrangements would be encouraged. The rural credit institutions would be geared to promote savings, investments and risk management. Special measures would be taken to revamp cooperatives to remove institutional and financial weaknesses and evolve simplified procedure for sanction and disbursement of agricultural credit.

22.3.2.8 Risk Management

The scope of National Agriculture Insurance Scheme (NAIS) would cover all farmers and all crops. There would be built-in provisions for insulating farmers from financial distress caused by natural calamities, price fluctuations, etc. The practice of ensuring remunerative prices through the announcement of MSPs would be continued. The price structure and trade mechanisms would be continuously reviewed to ensure a favourable economic environment. Domestic market prices would be closely monitored to prevent distress sales and public and cooperative and marketing agencies would be strengthened. The coverage of futures market would be progressively enlarged to cover all commodities so as to minimize the adverse effect of wide fluctuations in commodity prices. In matters of other management reforms, the central government will complement the state governments' efforts through crop/area/target group efforts formulated in an inter-active mode and implemented in a spirit of partnership with states. Grading and standardisation of products would be promoted for export enhancement. The database for agriculture sector will be strengthened to make the estimates and forecasts more reliable and helpful in the process of planning and policy making. Greater use of remote sensing and IT would be made to collect, collate and disseminate 'real time data' on agricultural prices to analyse signals emanating from farms and markets for the benefit of farmers.

Check Your Progress 2 [answer in about 50 words using the space given]

- 1) What are the four broad objectives of NAP-2000?

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- 2) Among the specific approaches indicated in the NAP-2000, state the ones which are aimed at providing the benefit of price, insurance, tax and better capital flow to the agricultural sector?

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- 3) What are the eight broad focal areas under which the specific policy prescriptions are elaborated in the NAP-2000?

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- 4) Which four specific approaches are suggested in the NAP-2000 to establish the balance in the disturbed biodiversity base of the country?

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- 5) State the four major thrust/focal areas indicated in the NAP-2000 to promote the horticulture and floriculture segments of allied agriculture.

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- 6) Which two specific approaches/strategies are indicated in the NAP-2000 for: (i) creating a favourable economic environment for capital formation; and (ii) promotion of exports, in Indian agriculture.

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- 7) What specific measures are envisaged to be initiated in the NAP-2000 to ensure the supply of quality electricity needed for agricultural and rural development?

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- 8) What are the specific *institutional reforms* suggested to be implemented in the NAP-2000 for assisting the large 'small and marginal farmers' segment in India?

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- 9) How is the issue of 'risk management' sought to be addressed in the NAP-2000?

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- 10) In which areas an inter-active spirit of partnership is sought to be pursued for achieving a better coordination with the state governments in the implementation of agricultural development policies?
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22.4 PERFORMANCE DURING THE XTH AND THE XITH PLAN PERIODS

In section 22.2, in the brief indicative discussion on the policy initiatives during the economic reforms period, we noted that during the decade of 1991-2000, the growth of agriculture GDP was 3.3 percent. In this, the growth of agriculture sector during the Eighth Plan period (1992-97) was higher at 4.8 percent. But due to a downturn in the agrarian situation of the Ninth Plan period (1997-2002), during which time the agricultural sector grew at a much lower 2.5 percent, the decadal growth rate up to the year 2000 was pulled down to 3.3 percent. Also, as we noted before, the compulsion for the government to come out with a comprehensive strategy to boost the sector resulted in the first ever national policy to be announced in the year 2000. Despite the various initiatives taken in the years subsequent to the announcement of NAP-2000, the growth of the agricultural GDP during the Tenth Plan period (2002-07) was also low at 2.4 percent. However, in the subsequent Eleventh Plan period, the sector accelerated to grow at an annual 3.9 percent during the four year period of 2006-11. However, the year-to-year growth during the XIth plan period has been quite varied. While the sector grew at its highest ever growth rate of 7 percent during 2010-11 (at constant 2004-05 prices), in the subsequent year of 2011-12 the sector's growth plummeted to 2.5 percent. This decline was in spite of the good harvest in 2011-12 in which the total foodgrain production touched a new peak of 250.4 million tons. Evidently, the growth in the larger 'agriculture & allied' sector is influenced not merely by the total foodgrain production but also by its other allied sub-sectors and the inter-state differences in the performance. Due to these reasons, the average growth in 'agriculture & allied sector' for the entire Eleventh Plan period (2007-12) is placed around 3.5 percent. The volatility in the growth pattern of agricultural sector is also revealed by the higher coefficient of variation (1.6) in the 2000s as compared to the 1990s (1.1). This variation is far higher (nearly six times more) than that for the overall GDP growth of the country. Thus, the implication of this feature of volatility, which is expected to continue to prevail owing to climate change (or global warming), for the policy challenge to sustain the momentum required for the long term average annual 4 percent growth in the agricultural (and allied) sector is clearly evident.

22.4.1 Regional Variations in Growth

Since agriculture is a state subject, the overall performance of agriculture heavily depends on the initiatives and achievements of different state governments. As an explanation to the above noted wide differential in the year-to-year growth performance of the sector at the aggregate all-India level, we may note that the low performance of some of the larger states during the 2000s has contributed to this aggregate performance. For instance, during 2001-09, while the states of Rajasthan, Gujarat and Bihar performed better (at 8.2, 7.7 and 7.1 percent respectively), the two major states of U. P. and

W. B. performed poorly (at 2.3 and 2.4 percent respectively). Other states which have shown strong growth performance in agriculture (having improved from their earlier poor performing levels) are Orissa (3.2 percent), Chhattisgarh (6 percent) and H. P. (5.1 percent).

Another feature of comparative importance is that while the total economy has grown at a high rate of 6.5, 5.7, 7.6 and 8.2 percents in the Eighth, Ninth, Tenth and Eleventh five year plan periods respectively, the agricultural sector's growth has been at the rates of 4.8, 2.5, 2.4 and 3.5 percents respectively. Many analysts have pointed out that this shows an increasing divergence in the growth trends of the total economy with that of 'agriculture and allied sector'. The relative under performance of agricultural sector is linked to certain specific drivers. These are: (i) low public investment in GCF (gross capital formation) as percentage of agri-GDP during the 1990s (i.e. during the 8th and the 9th plan periods when it had slid below the 10 percent level which was later rectified to raise to the level of 13.9 and 18.7 percent, respectively, during the 10th and the 11th plan periods); (ii) the higher expenditure on subsidies which had the effect of crowding out public investment in agricultural research, irrigation, rural roads and power; and (iii) the changing structure of public and private investment ratio (which was nearly equal in the 1980s but changed adversely during the early 2000s making the private investment far larger than the share of the public investment at 2004-05 prices).

22.4.2 Special Initiatives and Programmes

Since 2004-05 priority has been given to increasing the production in the crop and horticulture sectors by certain mission mode schemes/initiatives. These include: (i) the National Food Security Mission (NFSM) (on which you have already studied in unit 19: section 19.5.3); (ii) Rashtriya Krishi Vikas Yojna (RKVY); (iii) the Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM); (iv) National Horticulture Mission (NHM); (v) the Macro Management of Agriculture (MMA) scheme; etc.

The RKVY is primarily a project oriented scheme aimed at incentivizing the states to increase public investment in agriculture and allied sectors by taking into account the agro-climatic conditions of the states. Under the RKVY, in 2011-12, many new sub-schemes with exclusive financial allocation have been launched. These are: (i) Bringing Green Revolution to Eastern Region (BGREI); (ii) Integrated Development of 60,000 Villages for Pulses in Rainfed Areas; (iii) Special Programme on Oil Palm Area Expansion; (iv) Vegetable Initiative for Urban Clusters; (v) Initiative for Nutritional Security Through Intensive Millet Promotion; (vi) National Mission for Protein Supplements; (vii) Accelerated Fodder Development Programme; (viii) Rain-fed Area Development Programme; and (ix) Saffron Mission Economic Revival Programme. While these initiatives would show their impact in the coming years, the post-2000 year efforts have yielded significant results particularly during the years 2006-12 [Table 22.1]. For instance, while the total 'foodgrains' production has doubled in terms of its growth rate during the decade 2001-2011 (2.2 percent) as compared to that during the 1990s (1.1 percent), its performance during the years 2006-12 is 3.1 percent. The effect of this is seen in the overall growth of 'cereals' in general which has grown at 3 percent over 2006-12. Further, in case of pulses and oil seeds, the growth rates have been still higher with 4.0 and 5.9 percent annual average growths during the years 2007-12 and 2001-11 respectively. Likewise, the centrally sponsored NHM scheme has resulted in significant expansion of the area under cultivation over the period 2001-11. The scheme has covered many horticultural crops like: fruits & vegetables, spices, plantation crops, medicinal & aromatic plants, roots & tubers, flowers, etc. In particular, nearly 2.93 lakh farmers, including many women farmers, have been trained in various aspects of

Table 22.1: Impact of Food Security Mission: 1991-2011/12**(million tons)**

Year	Food Grains	Rice	Wheat	Cereals	Pulses	Oil Seeds
1990-91	176.4	74.3	55.1	162.1	14.3	18.6
2000-01	196.8	85.0	69.7	185.7	11.0	18.4
2005-06	208.6	91.8	69.4	195.2	13.4	28.0
2006-07 (pre-NFSM)	217.3	93.4	75.8	-	14.2	
2010-11	244.8	96.0	86.9	-	18.2	32.5
2011-12	250.4	102.8	88.3	233.1	17.3	-
Growth Rate (%)						
1991-01	1.1	1.4	2.4	1.4	-2.6	-0.1
2001-11	2.2	1.2	2.2	-	5.2	5.9
2001-12	2.2	1.7	2.2	2.1	4.2	-
2006-12	3.1	1.9	4.1	3.0	4.3	-
2007-12	2.9	1.9	3.1	-	4.0	-

Source: (i) Economic Survey, 2010-11, Table A-17 and the Report on 'State of Indian Agriculture: 2011-12 (Table 4.1; p-90);

Notes: (i) Growth rates are based on point-to-point values and are average annual;
(ii) 2009-10 was a drought year with major dip in production figures.

horticulture. By ensuring the forward and backward linkages with a cluster approach, the scheme has focused on an end-to-end approach covering production, post-harvest management, processing and marketing to assure appropriate returns to growers.

The MMA scheme was launched in 2000-01 with the objective of ensuring focused spending of central assistance through specific interventions for agricultural development in the states. The scheme allocated funds based on a new criteria in which 'gross cropped area' and 'area under small and marginal holdings' were considered for 100 percent grants to states. In 2008-09, the MMA was revised to make it: (i) more relevant to the agricultural scenario in the states; and (ii) achieve the basic objective of 'food security' for which many new sub-schemes relating to crop production and natural resource management were included.

Credit, Insurance and Public Investment: The introduction of the Kisan Credit Cards (KCC) scheme in the year 1999 has resulted in an increased flow of credit to the sector marking for a substantial reduction in the borrowing from the informal sector to meet the short term needs of finance. The availability of institutional agricultural credit (as a percentage of GDP) has increased from 11.5 percent in 2000-01 to 32.2 percent in 2010-11. Further, under the NAIS-scheme launched in 1999, till 2010-11, a total of 176 million farmers have been extended insurance cover. However, while studies on credit advanced show that the system of institutional credit to farmers continues to suffer from factors like: (i) non-farmer friendly practices; (ii) delays in credit delivery; and (iii) collateral problems, studies on the insurance reveal that there is a heavy regional and crop bias in its coverage. The public investment in agriculture, as a percentage of GDP, which had sunk to a low level of 1.8 percent in 2000-01, rose to 3.7 percent in 2006-07.

It is thus clear from the above that the special schemes implemented right through the year 2000, but intensified further around the middle of the first decade of 2000s, have accorded a major thrust to boost production. Notwithstanding this, critical evaluation of these efforts has revealed that the mission mode efforts have lacked the component

relating to 'strategic and adaptive research' considered vital to meet the site-specific requirements of low producing districts. To address the lacunae on this front, the government had constituted a special Working Group to suggest measures on 'Agricultural Research and Education' for the 12th five year plan (2012-17). The report of the Group has suggested a research strategy on four lines: (i) strengthening the basic and strategic research to feed into applied research for accelerating technology flow by addressing anticipated challenges; (ii) launching of specific programs for research integration to achieve enhanced technology generation; (iii) up-scaling of technologies for larger adoption to facilitate the transformation of agriculture in a partnership mode; and (iv) strengthening the outreach of frontline extension programs by specific efforts.

Check Your Progress 3 [answer questions 2-7 in about 50 words using the space given]

- 1) Fill in the blanks:
 - a) The growth rate in the agricultural sector during the 8th plan period (1992-97) was percent which to percent during the 9th plan period (1997-2002).
 - b) The growth rate in the agricultural sector during the 10th plan period (2002-07) was percent which to percent during the 11th plan period (2007-12).
 - c) The highest growth rate registered in the Indian agricultural sector was in the year and the growth rate recorded was percent.
 - d) The three states to record the highest agricultural growth rate during the period 2001-09 are,, and The three states registered the growth rates of,, and percents respectively.
- 2) What are the three main drivers to which the relative under-performance of agricultural sector (as compared to the overall economy's growth rate) during the period 1992-2012 is attributed?
.....
.....
.....
.....
- 3) Mention the five major mission-mode initiatives launched to boost the crop and horticultural sectors during the post-2004 period? In particular, what were the new sub-schemes launched under RKVY in 2011-12?
.....
.....
.....
.....
- 4) As a result of the measures taken in the years post-2006, what major growth profiles can be sketched out on the mission-mode initiatives?
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- 5) What were the two new criteria on the basis of which 100 percent central grant to the state governments was provided under the MMA scheme? What were the two objectives with which the MMA scheme was revised in 2008-09?

- 6) What was the extent of improvement achieved in the availability of institutional credit to agriculture in the post-2000 years? Despite this, in what respects lacuna are pointed out to exist on this front?

- 7) What was the specific initiative taken by the government to remove the lacuna in the mission-mode initiatives during the 12th plan period? What are the four lines on which a strategy is suggested in this regard?

22.5 LET US SUM UP

Various agricultural strategies have been adopted by the Indian government to improve the performance of the agricultural sector right since independence. The efforts during the pre-1965 years were in the areas of first stage land reforms and measures like soil conservation, irrigation, technology dissemination, etc. However, these measures were inadequate to meet the growing food needs of the country. To deal with this situation, as a strategic policy response, the government adopted the implementation of green revolution measures. Within a short span of 6-7 years, this helped the country to increase its foodgrains production substantially and the country became food self-sufficient. However, the green revolution measures introduced many environmentally unsustainable characteristics. Besides, its benefits did not reach many pockets/regions of the country. In order to deal with this situation the government, during the 1980s, adopted many market-driven policies. This helped the agriculture GDP to touch a respectable 3 percent growth during the 1980s. The succeeding decade of 1990s was

a more challenging decade for the Indian agriculture mainly due to the adoption of economic reform measures. During this period, there was a steep decline in public investment in agriculture. The shortcoming of this policy was recognised and corrected by the government during the late 1990s. Further, the government announced a comprehensive agricultural policy known as the NAP-2000. The NAP-2000, among other directives, envisaged to accord the thrust needed for the sector to grow at an annual average of 4 percent by the year 2020. In the subsequent years, many mission-mode initiatives were launched. Owing to these initiatives, the low agricultural growth rate registered during the 10th plan period was reversed in the subsequent 11th plan period (the 5-year average annual growth being close to 3.5 percent). If we exclude the terminal year of the 11th plan (i.e. 2012), the sector had achieved its second highest growth rate of 3.9 percent over 2007-11 (the highest being during the 8th plan period: 4.8 percent). The performance of the sector during this period was marked by steep inter-state differences. While this is normal to expect, what is significant is that many states succeeded in attaining agricultural growth exceeding the 7 per cent mark. A major missing link in the approach of the government is identified as ‘strategic and adaptive research’. Steps have since been taken for correcting this lacunae and a four pronged strategy has been suggested to tackle this during the coming years.

22.6 KEY WORDS

Planning	: Includes the two components of setting the target for achievement and providing the required financial resources to meet it.
Strategic Planning	: Refers to a time bound action plan for achieving the stated objectives with targets. It envisages all possible obstacles in the way of achieving the targets set and provides for adequate coordination in implementation to deal with the obstacles expected. It thereby focuses on efficient spending of financial resources allocated.
New Agricultural Policy	: Refers to the response of the government for a comprehensive approach to attain the target of 4 percent average annual growth rate in agriculture by the year 2020.

22.7 SUGGESTED BOOKS/ REFERENCES FOR FURTHER READING

1. Government of India, Agricultural Strategy for the Eleventh Plan: Some Critical Issues, Planning Commission, New Delhi.
[<http://planningcommission.nic.in/aboutus/speech/spemsa/AgricultureStrategy.doc>]
2. Government of India (2011), Agricultural Research and Education for the XII Five Year Plan: 2012-17, Planning Commission, New Delhi. [http://planningcommission.nic.in/aboutus/committee/wrkgrp12/agri/wgrep_research.pdf]
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22.8 ANSWERS/HINTS FOR CYP EXERCISES

Check Your Progress 1

- 1) See section 22.1 and answer.
- 2) See section 22.2 and answer.
- 3) See section 22.2.1 and answer.
- 4) See section 22.2.1 and answer.
- 5) See section 22.2.1 and answer.
- 6) See section 22.2.1 and answer.
- 7) See section 22.2.1 and answer.
- 8) See section 22.2.2 and answer.
- 9) See section 22.2.2 and answer.
- 10) See section 22.2.2 and answer.
- 11) See section 22.2.2 and answer.

Check Your Progress 2

- 1) See sections 22.3 and answer.
- 2) See section 22.3.1 and answer.
- 3) See section 22.3.2 and answer.
- 4) See section 22.3.2.1 and answer.
- 5) See section 22.3.2.2 and answer.
- 6) See section 22.3.2.5 and answer.
- 7) See section 22.3.2.6 and answer.
- 8) See section 22.3.2.7 and answer.
- 9) See section 22.3.2.8 and answer.
- 10) See section 22.3.2.8 and answer.

Check Your Progress 3

- 1) a) to d) see section 22.4 and answer.
- 2) See section 22.4.1 and answer.
- 3) See section 22.4.2 and answer.
- 4) See section 22.4.2 and Table 22.1 and answer.
- 5) See section 22.4.2 and answer.
- 6) See section 22.4.2 and answer.
- 7) See section 22.4.2 and answer.