



FACULTY OF AGRICULTURAL SCIENCES & ALLIED INDUSTRIES

National Agriculture Policy

1. Agriculture is a way of life, a tradition, which, for centuries, has shaped the thought, the outlook, the culture and the economic life of the people of India. Agriculture, therefore, is and will continue to be central to all strategies for planned socio-economic development of the country. Rapid growth of agriculture is essential not only to achieve self-reliance at national level but also for household food security and to bring about equity in distribution of income and wealth resulting in rapid reduction in poverty levels.

2. Indian agriculture has, since Independence, made rapid strides. In taking the annual foodgrains production from 51 million tonnes of the early fifties to 206 million tonnes at the turn of the century, it has contributed significantly in achieving self sufficiency in food and in avoiding food shortages in our country. The pattern of growth of agriculture has, however, brought in its wake, uneven development, across regions and crops as also across different sections of farming community and is characterized by low levels of productivity and degradation of natural resources in some areas. Capital inadequacy, lack of infrastructural support and demand side constraints such as controls on movement, storage and sale of agricultural products, etc., have continued to affect the economic viability of agriculture sector. Consequently, the growth of agriculture has also tended to slacken during the nineties.

3. Agriculture has also become a relatively unrewarding profession due to generally unfavourable price regime and low value addition, causing abandoning of farming and increasing migration from rural areas. The situation is likely to be exacerbated further in the wake of integration of agricultural trade in the global system, unless immediate corrective measures are taken.

4. Over 200 million Indian farmers and farm workers have been the backbone of India's agriculture. Despite having achieved national food security the well being of the farming community continues to be a matter of grave concern for the planners and policy makers in the country. The establishment of an agrarian economy which ensures food and nutrition to India's billion people, raw materials for its expanding industrial base and surpluses for exports, and a fair and equitable reward system for the farming community for the services they provide to the society, will be the mainstay of reforms in the agriculture sector.

5. The National Policy on Agriculture seeks to actualise the vast untapped growth potential of Indian agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro business, create employment in rural areas, secure a fair standard of living for the

farmers and agricultural workers and their families, discourage migration to urban areas and face the challenges arising out of economic liberalization and globalisation. Over the next two decades, it aims to attain:

- A growth rate in excess of 4 per cent per annum in the agriculture sector
- Growth that is based on efficient use of resources and conserves our soil, water and bio-diversity;

- Growth with equity, i.e., growth which is widespread across regions and farmers;

- Growth that is demand driven and caters to domestic markets and maximises benefits

from exports of agricultural products in the face of the challenges arising from economic liberalization

and globalisation;

- Growth that is sustainable technologically, environmentally and economically.

Sustainable Agriculture

6. The policy will seek to promote technically sound, economically viable, environmentally non-degrading, and socially acceptable use of country's natural resources - land, water and genetic endowment to promote sustainable development of agriculture. Measures will be taken to contain biotic pressures on land and to control indiscriminate diversion of agricultural lands for non-agricultural purposes. The unutilized wastelands will be put to use for agriculture and afforestation. Particular attention will be given for increasing cropping intensity through multiple-cropping and inter-cropping.

7. The Government accords abiding importance to improving the quality of the country's land and soil resources. Reclamation of degraded and fallow lands as well as problem soils will be given high priority to optimize their productive use. Special emphasis will be laid on conserving soils and enriching their fertility. Management of land resources on watershed basis will receive special attention. Areas of shifting cultivation will also receive particular attention for their sustainable development. Integrated and holistic development of rainfed areas will be promoted by conservation of rain water by vegetative measures on watershed basis and augmentation of biomass production through agro and farm forestry with the involvement of the watershed community. All

spatial components of a watershed, i.e. arable land, non-arable and drainage lines will be treated as one geo-hydrological entity. Management of grazing land will receive greater attention for augmenting availability of animal feed and fodder. A long-term perspective plan for sustainable rainfed agriculture through watershed approach will be vigorously pursued for development of two thirds of India's cropped area which is dependent on rains.

8. Rational utilization and conservation of the country's abundant water resources will be promoted. Conjunctive use of surface and ground water will receive highest priority. Special attention will be focused on water quality and the problem of receding ground-water levels in certain areas as a result of over-exploitation of underground aquifers. Proper on-farm management of water resources for the optimum use of irrigation potential will be promoted. Use of *in situ* moisture management techniques such as mulching and use of micro overhead pressured irrigation systems like drip and sprinkler and green house technology will be encouraged for greater water use efficiency and improving productivity, particularly of horticultural crops. Emphasis will be placed on promotion of water harvesting structures and suitable water conveyance systems in the hilly and high rainfall areas for rectification of regional imbalances. Participatory community irrigation management will be encouraged.

9. Erosion and narrowing of the base of India's plant and animal genetic resources in the last few decades has been affecting the food security of the country. Survey and evaluation of genetic resources and safe conservation of both indigenous and exogenously introduced genetic variability in crop plants, animals and their wild relatives will receive particular attention. The use of bio-technologies will be promoted for evolving plants which consume less water, are drought resistant, pest resistant, contain more nutrition, give higher yields and are environmentally safe. Conservation of bio-resources through their *ex situ* preservation in Gene Banks, as also *in situ* conservation in their natural habitats through bio-diversity parks, etc., will receive a high priority to prevent their extinction. Specific measures will also be taken to conserve indigenous breeds facing extinction. There will be a time bound programme to list, catalogue and classify country's vast agro bio-diversity.

10. Sensitization of the farming community with the environmental concerns will receive high priority. Balanced and conjunctive use of bio-mass, organic and inorganic fertilizers and controlled use of agro chemicals through integrated nutrients and pest management (INM & IPM) will be promoted to achieve the sustainable increases in agricultural production. A nation-wide programme for utilization of rural and urban garbage, farm residues and organic waste for organic matter repletion and pollution control will be worked out.

11. Agro forestry and social forestry are prime requisites for maintenance of ecological balance and augmentation of bio-mass production in the agricultural systems. Agro-forestry will receive a major thrust for efficient nutrient cycling, nitrogen fixation, organic matter addition and for improving drainage. Farmers will be encouraged to take up farm/agro-forestry for higher income generation by evolving technology, extension and credit support packages and removing constraints to development of agro and farm forestry. Involvement of farmers and landless labourers will be sought in the development of pastures/forestry programmes on public wastelands by giving financial incentives and entitlements to the usufructs of trees and pastures.

12. The history and traditional knowledge of agriculture, particularly of tribal communities, relating to organic farming and preservation and processing of food for nutritional and medicinal purposes is one of the oldest in the world. Concerted efforts will be made to pool, distill and evaluate traditional practices, knowledge and wisdom and to harness them for sustainable agricultural growth.

Food and Nutritional Security

13. Special efforts will be made to raise the productivity and production of crops to meet the increasing demand for food generated by unabated demographic pressures and raw materials for expanding agro-based industries. A regionally differentiated strategy will be pursued, taking into account the agronomic, climatic and environmental conditions to realize the full growth potential of every region. Special attention will be given to development of new crop varieties, particularly of food crops, with higher nutritional value through adoption of bio-technology particularly, genetic modification, while addressing bio-safety concerns.

14. A major thrust will be given to development of rainfed and irrigated horticulture, floriculture, roots and tubers, plantation crops, aromatic and medicinal plants, bee-keeping and sericulture, for augmenting food supply, exports and generating employment in the rural areas. Availability of hybrid seeds and disease-free planting materials of improved varieties, supported by network of regional nurseries, tissue culture laboratories, seed farms will be promoted to support systematic development of horticulture having emphasis on increased production, post-harvest management, precision farming, bio-control of pests and quality regulation mechanism and exports.

15. Animal husbandry and fisheries also generate wealth and employment in the agriculture sector. Development of animal husbandry, poultry, dairying and aqua-culture will receive a high priority in the efforts for diversifying agriculture, increasing animal protein availability in the food basket and for generating exportable surpluses. A national livestock breeding strategy will be evolved to meet the requirements of milk, meat, egg and livestock products and to enhance the role of draught animals as a source of energy for farming operations and transport. Major thrust will be on genetic upgradation of indigenous/native cattle and buffaloes using proven semen and high

quality pedigreed bulls and by expanding artificial insemination network to provide services at the farmer's doorstep.

16. Generation and dissemination of appropriate technologies in the field of animal production as also health care to enhance production and productivity levels will be given greater attention. Cultivation of fodder crops and fodder trees will be encouraged to meet the feed and fodder requirements and to improve animal nutrition and welfare. Priority attention will also be given to improve the processing, marketing and transport facilities, with emphasis on modernization of abattoirs, carcass utilization and value addition thereon. Since animal disease eradication and quarantine is critical to exports, animal health system will be strengthened and disease free zones created. The involvement of cooperatives and the private sector will be encouraged for development of animal husbandry, poultry and dairy. Incentives for livestock and fisheries production activities will be brought at par with incentives for crop production.

17. An integrated approach to marine and inland fisheries, designed to promote sustainable aquaculture practices, will be adopted. Biotechnological application in the field of genetics and breeding, hormonal applications immunology and disease control will receive particular attention for increased aquaculture production. Development of sustainable technologies for fin and shell fish culture as also pearl-culture, their yield optimization, harvest and post-harvest operations, mechanization of fishing boats, strengthening of infrastructure for production of fish seed, berthing and landing facilities for fishing vessels and development of marketing infrastructure will be accorded high priority. Deep sea fishing industry will be developed to take advantage of the vast potential of country's exclusive economic zone.

Generation and Transfer of Technology

18. A very high priority will be accorded to evolving new location-specific and economically viable improved varieties of agricultural and horticultural crops, livestock species and aquaculture as also conservation and judicious use of germplasm and other biodiversity resources. The regionalization of agricultural research, based on identified agro-climatic zones, will be accorded high priority. Application of frontier sciences like bio-technology, remote sensing technologies, pre and post-harvest technologies, energy saving technologies, technology for environmental protection through national research system as well as proprietary research will be encouraged. The endeavour will be to build a well organized, efficient and result-oriented agriculture research and education system to introduce technological change in Indian agriculture. Upgradation of agricultural education and its orientation towards uniformity in education standards, women empowerment, user-orientation, vocationalization and promotion of excellence will be the hallmark of the new policy..

19. The research and extension linkages will be strengthened to improve quality and effectiveness of research and extension system. The extension system will be broad based and revitalized. Innovative and decentralized institutional changes will be introduced to make the extension system farmer-responsible and farmer-accountable. Role of Krishi Vigyan Kendras (KVKs), Non-Governmental Organizations (NGOs), Farmers Organizations, Cooperatives, corporate sector and para-technicians in agricultural extension will be encouraged for organizing demand driven production systems. Development of human resources through capacity building and skill upgradation of public extension functionaries and other extension functionaries will be accorded a high priority. The Government will endeavour to move towards a regime of financial sustainability of extension services through affecting in a phased manner, a more realistic cost recovery of extension services and inputs, while simultaneously safeguarding the interests of the poor and the vulnerable groups.

20. Mainstreaming gender concerns in agriculture will receive particular attention. Appropriate structural, functional and institutional measures will be initiated to empower women and build their capabilities and improve their access to inputs, technology and other farming resources.

Inputs Management

21. Adequate and timely supply of quality inputs such as seeds, fertilizers, plant protection chemicals, bio-pesticides, agricultural machinery and credit at reasonable rates to farmers will be the endeavour of the Government. Soil testing and quality testing of fertilisers and seeds will be ensured and supply of spurious inputs will be checked. Balanced and optimum use of fertilizers will be promoted together with use of organic manures & bio-fertilizers to optimize the efficiency of nutrient use.

22. Development, production and distribution of improved varieties of seeds and planting materials and strengthening and expansion of seed and plant certification system with private sector participation will receive a high priority. A National Seed Grid will be established to ensure supply of seeds especially to areas affected by natural calamities. The National Seeds Corporation (NSC) and State Farms Corporation of India (SFCI) will be restructured for efficient utilization of investment and manpower.

23. Protection to plant varieties through a *sui generis* legislation, will be granted to encourage research and breeding of new varieties particularly in the private sector in line with India's obligations under TRIPS Agreement. The farmers will, however, be allowed their traditional rights to save, use, exchange, share and sell their farm saved seeds except as branded seeds of protected varieties for commercial purpose. The interests of the researchers will also be safeguarded in carrying out research on

proprietary varieties to develop new varieties.
24. Integrated pest management and use of biotic agents in order to minimize the indiscriminate and injudicious use of chemical pesticides will be the cardinal principle covering plant protection. Selective and eco-friendly farm mechanization through appropriate technology will be promoted, with special reference to rainfed farming to reduce arduous work and to make agriculture efficient and competitive as also to increase crop productivity.

Incentives for Agriculture

25. The Government will endeavour to create a favourable economic environment for increasing capital formation and farmer's own investments by removal of distortions in the incentive regime for agriculture, improving the terms of trade with manufacturing sectors and bringing about external and domestic market reforms, backed by rationalization of domestic tax structure. It will seek to bestow on the agriculture sector in as many respects as possible benefits similar to those obtaining in the manufacturing sector, such as easy availability of credit and other inputs, and infrastructure facilities for development of agri-business industries and development of effective delivery systems and freeing movement of agro produce.

26. Consequent upon dismantling of Quantitative Restrictions on imports as per WTO Agreement on Agriculture, Commodity-wise strategies and arrangements for protecting the grower from adverse impact of undue price fluctuations in world markets and for promoting exports will be formulated. Apart from price competition, other aspects of marketing such as quality, choice, health and bio-safety will be promoted. Exports of horticultural produce and marine products will receive particular emphasis. A two-fold long term strategy of diversification of agricultural produce and value addition enabling the production system to respond to external environment and creating export demand for the commodities produced in the country will be evolved with a view to providing the farmers incremental income from export earnings. A favourable economic environment and supportive public management system will be created for promotion of agricultural exports. Quarantine, both of exports and imports, will be given particular attention so that Indian agriculture is protected from the ingress of exotic pests and diseases.

27. In order to protect the interest of farmers in context of removal of Quantitative Restrictions, continuous monitoring of international prices will be undertaken and appropriate tariffs protection will be provided. Import duties on manufactured commodities used in agriculture will be rationalized. The domestic agricultural market will be liberalized and all controls and regulations hindering increase in farmers' income will be reviewed and abolished to ensure that agriculturists receive prices commensurate with their efforts, investment. Restrictions on the movement of agricultural commodities throughout the country will be progressively dismantled.

28. The structure of taxes on foodgrains and other commercial crops will be reviewed and rationalized. Similarly, the excise duty on materials such as farm machinery and implements, fertilizers, etc., used as inputs in agricultural production, post harvest storage and processing will be reviewed. Appropriate measures will be adopted to ensure that agriculturists by and large remain outside the regulatory and tax collection systems. Farmers will be exempted from payment of capital gains tax on compulsory acquisition of agricultural land.

Investments in Agriculture

29. The Agriculture sector has been starved of capital. There has been a decline in the public sector investment in the agriculture sector. Public investment for narrowing regional imbalances, accelerating development of supportive infrastructure for agriculture and rural development particularly rural connectivity will be stepped up. A time-bound strategy for rationalisation and transparent pricing of inputs will be formulated to encourage judicious input use and to generate resources for agriculture. Input subsidy reforms will be pursued as a combination of price and institutional reforms to cut down costs of these inputs for agriculture. Resource allocation regime will be reviewed with a view to rechannelizing the available resources from support measures towards asset formation in rural sector.

30. A conducive climate will be created through a favourable price and trade regime to promote farmers' own investments as also investments by industries producing inputs for agriculture and agro based industries. Private sector investments in agriculture will also be encouraged more particularly in areas like agricultural research, human resource development, post-harvest management and marketing.

31. Rural electrification will be given a high priority as a prime mover for agricultural development. The quality and availability of electricity supply will be improved and the demand of the agriculture sector will be met adequately in a reliable and cost effective manner. The use of new and renewable sources of energy for irrigation and other agricultural purposes will also be encouraged.

32. Bridging the gap between irrigation potential created and utilized, completion of all on-going projects, restoration and modernization of irrigation infrastructure including drainage, evolving and implementing an integrated plan of augmentation and management of national water resources will receive special attention for augmenting the availability and use of irrigation water.

33. Emphasis will be laid on development of marketing infrastructure and techniques of preservation, storage and transportation with a view to reducing post-harvest losses and ensuring a better return to the grower. The weekly periodic markets under the direct control of panchayat raj institutions will be upgraded and strengthened. Direct marketing and pledge financing will be promoted. Producers markets on the lines of Ryatu Bazars will be encouraged through out the width and the breadth of the country. Storage facilities for different kinds of agricultural products will be created in the production areas or nearby places particularly in the rural areas so that the farmers can transport their produce to these places immediately after harvest in shortest possible time. The establishment of cold chains, provision of pre cooling facilities to farmers as a service and cold storage in the terminal markets and improving the retail marketing arrangements in urban areas will be given priority. Upgradation and dissemination of market intelligence will receive particular attention.

34. Setting up of agro-processing units in the producing areas to reduce wastage, especially of horticultural produce, increased value addition and creation of off-farm employment in rural areas will be encouraged. Collaboration between the producer cooperatives and the corporate sector will be encouraged to promote agro-processing industry. An inter-active coupling between technology, economy, environment and society will be promoted for speedy development of food and agro-processing industries and build up a substantial base for production of value added agro-products for domestic and export markets with a strong emphasis on food safety and quality. The Small Farmers Agro Business Consortium (SFAC) will be energized to cater to the needs of farmer entrepreneurs and promote public and private investments in agri-business.

Institutional Structure

35. Indian agriculture is characterized by pre-dominance of small and marginal farmers. Institutional reforms will be so pursued as to channelize their energies for achieving greater productivity and production. The approach to rural development and land reforms will focus on the following areas:

- Consolidation of holdings all over the country on the pattern of north western States.

- Redistribution of ceiling surplus lands and waste lands among the landless farmers, unemployed youth with initial start up capital;

- Tenancy reforms to recognize the rights of the tenants and share croppers;

- Development of lease markets for increasing the size of the holdings by making legal provisions for giving private lands on lease for cultivation and agri business;
- Updating and improvement of land records, computerization and issue of land pass-books to the farmers; and

- Recognition of women's rights in land.

36. The rural poor will be increasingly involved in the implementation of land reforms with the help of Panchayati Raj Institutions, Voluntary Groups, Social Activists and Community Leaders.

37. Private sector participation will be promoted through contract farming and land leasing arrangements to allow accelerated technology transfer, capital inflow and assured markets for crop production, especially of oilseeds, cotton and horticultural crops.

38. Progressive institutionalization of rural and farm credit will be continued for providing timely and adequate credit to farmers. The rural credit institutions will be geared to promote savings, investments and risk management. Particular attention will be paid to removal of distortions in the priority sector lending by Commercial Banks for agriculture and rural sectors. Special measures will be taken for revamping of cooperatives to remove the institutional and financial weaknesses and evolving simplified procedure for sanction and disbursement of agriculture credit. The endeavour will be to ensure distribution equity in the disbursement of credit. Micro-credit will be promoted as an effective tool for alleviating poverty. Self Help Group - Bank linkage system, suited to Indian rural sector, will be developed as a supplementary mechanism for bringing the rural poor into the formal banking system, thereby improving banks outreach and the credit flows to the poor in an effective and sustainable manner.

39. The basic support to agriculture has been provided by the cooperative sector assiduously built over the years. The Government will provide active support for the promotion of cooperative-form of enterprise and ensure greater autonomy and operational freedom to them to improve their functioning. The thrust will be on:

- Structural reforms for promoting greater efficiency and viability by freeing them from excessive bureaucratic control and political interference;

- Creation of infrastructure and human resource development;

- Improvement in financial viability and organizational sustainability of cooperatives;
- Democratisation of management and increased professionalism in their operations; and
- Creating a viable inter-face with other grass-root Organizations.

40. The Legislative and regulatory framework will be appropriately amended and strengthened to achieve these objectives.

Risk management

41. Despite technological and economic advancements, the condition of farmers continues to be unstable due to natural calamities and price fluctuations. National Agriculture Insurance Scheme covering all farmers and all crops throughout the country with built in provisions for insulating farmers from financial distress caused by natural disasters and making agriculture financially viable will be made more farmer specific and effective. Endeavour will be made to provide a package insurance policy for the farmers, right from sowing of the crops to post-harvest operations, including market fluctuations in the prices of agricultural produce.

42. In order to reduce risk in agriculture and impart greater resilience to Indian agriculture against droughts and floods, efforts will be made for achieving greater flood proofing of flood prone agriculture and drought proofing of rainfed agriculture for protecting the farmers from vagaries of nature. For this purpose, contingency agriculture planning, development of drought and flood resistant crop varieties, watershed development programmes, drought prone areas and desert development programmes and rural infrastructure development programmes will receive particular attention.

43. The Central Government will continue to discharge its responsibility to ensure remunerative prices for agricultural produce through announcement of Minimum Support Prices policy for major agricultural commodities. The food, nutrition and other domestic and exports requirements of the country will be kept in view while determining the support prices of different commodities. The price structure and trade mechanism will be continuously reviewed to ensure a favourable economic environment for the agriculture sector and to bring about an equitable balance between the rural and the urban incomes. The methodology used by the Commission on Agricultural Costs & Prices (CACP) in arriving at estimates of costs of production will be periodically reviewed. The price structure of both inputs and outputs will be monitored to ensure

higher returns to the farmers and bring about cost effectiveness throughout the economy. Domestic market prices will be closely monitored to prevent distress sales by the farmers. Public and cooperative agencies undertaking marketing operations will be strengthened.

44. The Government will enlarge the coverage of futures markets to minimize the wide fluctuations in commodity prices as also for hedging their risks. The endeavour will be to cover all important agricultural products under futures trading in course of time.

Management Reforms

45. Effective implementation of policy initiatives will call for comprehensive reforms in the management of agriculture by the Central and the State Governments. The Central Government will supplement/complement the State Governments' efforts through regionally differentiated Work Plans, comprising crop/area/target group specific interventions, formulated in an inter-active mode and implemented in a spirit of partnership with the States. The Central Government will move away from schematic approach to Macro-Management mode and assume a role of advocacy, articulation and facilitation to help the States in their efforts towards achieving accelerated agricultural development.

46. The Government will focus on quality aspects at all stages of farm operations from sowing to primary processing. The quality of inputs and other support services to farmers will be improved. Quality consciousness amongst farmers and agro processors will be created. Grading and standardization of agricultural products will be promoted for export enhancement. Application of science and technology in agriculture will be promoted through a regular system of interface between S&T institutions and the users/potential users, to make the sector globally competitive.

47. The database for the agriculture sector will be strengthened to ensure greater reliability of estimates and forecasting which will help in the process of planning and policy making. Efforts will be made to significantly improve and harness latest remote sensing and information technology to capture data, collate it, add value and disseminate it to appropriate destinations for managing the risk and in accelerating the growth process. The objective will be to engage in a meaningful continuous dialogue with the external environment in the changing scenario and to have on-line and real time system of 'Agriculture on line' capacity to analyze the signals emanating from the farms and the markets for the benefit of the farmers.

48. The Government of India trust that this Statement of National Agriculture Policy will receive the fullest support of all sections of the people and lead to sustainable development of agriculture, create gainful employment on a self sustaining basis in rural areas, raise standards of living for the farming communities, preserve environment and serve as a vehicle for building a resurgent national economy.

Source: Ministry of Agriculture, Department of Agriculture & Co-operation, GOI