

# NATIONAL SEEDS POLICY, 2002

## INTRODUCTION

Indian Agriculture has made enormous strides in the past 50 years, raising foodgrains production from 50 million tonnes to over 200 million tonnes. In the process, the country has progressed from a situation of food shortages and imports to one of surpluses and exports. Having achieved food sufficiency, the aim now is to achieve food and nutritional security at the household level.

The increase in agricultural production, however, has brought in its wake, uneven development, across regions, crops, and also across different sections of farming community. In the decade of the 'nineties', a marked slackening in the pace of growth has occurred, pointing to the need for infusing a new vitality in the agricultural sector.

Seed is the most important determinant of agricultural production potential, on which the efficacy of other agriculture inputs is dependent. Seeds of appropriate characteristics are required to meet the demand of diverse agro-climatic conditions and intensive cropping systems. Sustained increase in agriculture production and productivity is dependent, to a large extent, on development of new and improved varieties of crops and an efficient system for timely supply of quality seeds to farmers.

The seed sector has made impressive progress over the last three decades. The area under certified seeds has increased from less than 500 hectares in 1962-63 to over 5 lakh hectares in 1999-2000. The quantum of quality seeds has crossed 100 lakh quintals.

The Seeds Act, 1966 and Seeds Control Order promulgated thereunder, and the New Policy on Seeds Development, 1988, form the basis of promotion and regulation of the Seed Industry. Far-reaching changes, however, have taken place in the national economic and agricultural scenario and in the international environment since the enactment of the existing seed legislation and the announcement of the 1988 Policy.

## AIMS AND OBJECTIVES

It has become evident that in order to achieve the food production targets of the future, a major effort will be required to enhance the seed replacement rates of various crops. This would require a major increase in the production of quality seeds, in which the private sector is expected to play a major role. At the same time, private and Public Sector Seed Organisations at both Central and State levels, will be expected to adopt economic pricing policies which would seek to realise the true cost of production. The creation of a facilitative climate for growth of a competitive and localised seed industry, encouragement of import of useful germplasm, and boosting of exports are core elements of the agricultural strategy of the new millennium.

Biotechnology will be a key factor in agricultural development in the coming decades. Genetic engineering/modification techniques hold enormous promise in developing crop varieties with a higher level of tolerance to biotic and abiotic stresses. A conducive atmosphere for application of frontier sciences in varietal development and for enhanced investments in research and development is a pressing requirement. At the same time, concerns relating to possible harm to human and animal health and bio-safety, as well as interests of farmers, must be addressed.

Globalization and economic liberalization have opened up new opportunities as well as challenges. The main objectives of the National Seeds Policy, therefore, are the provision of an appropriate climate for the seed industry to utilize available and prospective opportunities, safeguarding of the interests of Indian farmers and the conservation of agro-biodiversity. While unnecessary regulation needs to be dismantled, it must be ensured that gullible farmers are not exploited by unscrupulous elements. A regulatory system of a new genre is, therefore, needed, which will encompass quality assurance mechanisms coupled with facilitation of a vibrant and responsible seed industry.

## THRUST AREAS:-

### 1. VARIETAL DEVELOPMENT AND PLANT VARIETY PROTECTION

- 1.1 The development of new and improved varieties of plants and availability of such varieties to Indian farmers is of crucial importance for a sustained increase in agricultural productivity.

- 1.1.1 Appropriate policy framework and programmatic interventions will be adopted to stimulate varietal development in tune with market trends, scientific-technological advances, suitability for biotic and abiotic stresses, locational adaptability and farmers' needs.
- 1.2 An effective *sui generis* system for intellectual property protection will be implemented to stimulate investment in research and development of new plant varieties and to facilitate the growth of the Seed Industry in the country.
  - 1.2.1 A Plant Varieties & Farmers' Rights Protection (PVP) Authority will be established which will undertake registration of extant and new plant varieties through the Plant Varieties Registry on the basis of varietal characteristics.
  - 1.2.2 The registration of new plant varieties by the PVP Authority will be based on the criteria of novelty, distinctiveness, uniformity and stability.
  - 1.2.3 The criteria of distinctiveness, uniformity and stability could be relaxed for registration of extant varieties, which will be done within a specified period to be decided by the PVP Authority.
  - 1.2.4 Registration of all plant genera or species as notified by the Authority will be done in a phased manner.
  - 1.2.5 The PVP Authority will develop characterisation and documentation of plant varieties registered under the PVP Act and cataloguing facilities for all varieties of plants.
- 1.3 The rights of farmers to save, use, exchange, share or sell farm produce of all varieties will be protected, with the proviso that farmers shall not be entitled to sell branded seed of a protected variety under the brand name.
- 1.4 The rights of researchers to use the seed/planting material of protected varieties for bonafide research and breeding of new plant varieties will be ensured.
- 1.5 Equitable sharing of benefit arising out of the use of plant genetic resources that may accrue to a breeder from commercialisation of seeds/planting materials of a new variety, will be provided.
- 1.6 Farmers/groups of farmers/village communities will be rewarded suitably for their significant contribution in evolution of a plant variety subject to registration. The contribution of traditional knowledge in agriculture needs to be highlighted through suitable mechanisms and incentives.
- 1.7 A National Gene Fund will be established for implementation of the benefit sharing arrangement, and payment of compensation to village communities for their contribution to the development and conservation of plant genetic resources and also to promote conservation and sustainable use of genetic resources. Suitable systems will be worked out to identify the contributions from traditional knowledge and heritage.
- 1.8 Plant Genetic Resources for Food and Agriculture Crops will be permitted to be accessed by Research Organisations and Seed Companies from public collections as per the provisions of the 'Material Transfer Agreement' of the International Treaty on Plant Genetic Resources and the Biological Diversity Bill.
- 1.9 Regular interaction amongst the Private and Public Researchers, Seed Companies/Organisations and Development Agencies will be fostered to develop and promote growth of a healthy seed industry in the country.
- 1.10 To keep abreast of global developments in the field of Plant Variety Protection and for technical collaboration, India may consider joining Regional and International Organisations.
- 1.11 The PVP Authority may, if required, resort to compulsory licensing of a protected variety in public interest on the ground that requirements of the farming community for seeds and propagating material of a variety are not being met or that the production of the seeds or planting material of the protected variety is not being facilitated to the fullest possible extent.

## **2. SEED PRODUCTION**

- 2.1 To meet the Nation's food security needs, it is important to make available to Indian farmers a wide range of seeds of superior quality, in adequate quantity on a timely basis. Public Sector Seed Institutions will be encouraged to enhance production of seed towards meeting the objective of food and nutritional security.

- 2.2 The Indian seed programme adheres to the limited three generation system of seed multiplication, namely, breeder, foundation and certified seed. Breeder seed is the progeny of nucleus seed.
- 2.2.1 Nucleus seed is the seed produced by the breeder to develop the particular variety and is directly used for multiplication as breeder seed.
  - 2.2.2 Breeder seed is the seed material directly controlled by the originating or the sponsoring breeder or Institution for the initial and recurring production of foundation seed.
  - 2.2.3 Foundation seed is the progeny of breeder seed. Foundation seed may also be produced from foundation seed. Production of foundation seed stage-I and stage-II may thus be permitted, if supervised and approved by the Certification Agency and if the production process is so handled as to maintain specific genetic purity and identity.
  - 2.2.4 Certified seed is the progeny of foundation seed or the progeny of certified seed. If the certified seed is the progeny of certified seed, then this reproduction will not exceed three generations beyond foundation stage-I and it will be ascertained by the Certification Agency that genetic identity and genetic purity has not been significantly altered.
- 2.3 Public Sector Seed Production Agencies will continue to have free access to breeder seed under the National Agriculture Research System. The State Farms Corporation of India and National Seeds Corporation will be restructured to make productive use of these organisations in the planned growth of the Seed Sector.
- 2.4 Private Seed Production Agencies will also have access to breeder seed subject to terms and conditions to be decided by Government of India.
- 2.5 State Agriculture Universities/ICAR Institutes will have the primary responsibility for production of breeder seed as per the requirements of the respective States.
- 2.6 Special attention will be given to the need to upgrade the quality of farmers' saved seeds through interventions such as the Seed Village Scheme.
- 2.7 Seed replacement rates will be raised progressively with the objective of expanding the use of quality seeds.
- 2.8 DAC, in consultation with ICAR and States, will prepare a National Seed Map to identify potential, alternative and non-traditional areas for seed production of specific crops.
- 2.9 To put in place an effective seed production programme, each State will undertake advance planning and prepare a perspective plan for seed production and distribution over a rolling (five to six year) period. Seed Banks will be set up in non-traditional areas to meet demands for seeds during natural calamities.
- 2.10 The 'Seed Village Scheme' will be promoted to facilitate production and timely availability of seed of desired crops/varieties at the local level. Special emphasis will be given to seed multiplication for building adequate stocks of certified/quality seeds by providing foundation seed to farmers.
- 2.11 For popularising newly developed varieties and promoting seed production of these varieties, seed minikits of pioneering seed varieties will be supplied to farmers. Seed exchange among farmers and seed producers will be encouraged to popularise new/non-traditional varieties.
- 2.12 Seeds of newly developed varieties must be made available to farmers with minimum time gap. Seed producing agencies will be encouraged to tie up with Research Institutions for popularization and commercialization of these varieties.
- 2.13 As hybrids have the potential to improve plant vigour and increase yield, support for production of hybrid seed will be provided.
- 2.14 Seed production will be extended to agro-climatic zones which are outside the traditional seed growing areas, in order to avoid unremunerative seed farming in unsuitable areas.
- 2.15 Seed Banks will be established for stocking specified quantities of seed of required crops/varieties for ensuring timely and adequate supply of seeds to farmers during adverse situations such as natural calamities, shortfalls in production, etc. Seed Banks will be suitably strengthened with cold storage and pest control facilities.

- 2.15.1 The storage of seed at the village level will be encouraged to facilitate immediate availability of seeds in the event of natural calamities and unforeseen situations. For the storage of seeds at farm level, scientific storage structures will be popularised and techniques of scientific storage of seeds will be promoted among farmers as an extension practice.
- 2.16 Seed growers will be encouraged to avail of Seed Crop Insurance to cover risk factors involved in production of seeds. The Seed Crop Insurance Scheme will be reviewed so as to provide effective risk cover to seed producers and will be extended to all traditional and non-traditional areas covered under the seed production programme.

### **3. QUALITY ASSURANCE**

- 3.1 The Seeds Act will be revised to regulate the sale, import and export of seeds and planting materials of agriculture crops including fodder, green manure and horticulture and supply of quality seeds and planting materials to farmers throughout the country.
- 3.2 The National Seeds Board (NSB) will be established in place of existing Central Seed Committee and Central Seed Certification Board. The NSB will have permanent existence with the responsibility of executing and implementing the provisions of the Seeds Act and advising the Government on all matters relating to seed planning and development. The NSB will function as the apex body in the seed sector.
  - 3.2.1 All varieties, both domestic and imported varieties, that are placed on the market for sale and distribution of seeds and planting materials will be registered under the Seeds Act. However, for vegetable and ornamental crops a simple system of varietal registration based on “breeders declaration” will be adopted.
  - 3.2.2 The Board will undertake registration of kinds/varieties of seeds that are to be offered for sale in the market, on the basis of identified parameters for establishing value for cultivation and usage (VCU) through testing/trialling.
  - 3.2.3 Registration of varieties will be granted for a fixed period on the basis of multilocational trials to determine VCU over a minimum period of three seasons, or as otherwise prescribed as in the case of long duration crops and horticultural crops. Samples of the material for registration will be sent to the NBPGR for retention in the National Gene Bank.
  - 3.2.4 Varieties that are in the market at the time of coming into force of the revised Seeds Act, will have to be registered within a fixed time period, and subjected to such testing as will be notified.
  - 3.2.5 The NSB will accredit ICAR, SAUs, public/private organisations to conduct VCU trials of all varieties for the purpose of registration as per prescribed standards.
  - 3.2.6 The NSB will maintain the National Seeds Register containing details of varieties that are registered. This will help the Board to coordinate and assist activities of the States in their efforts to provide quality seeds to farmers.
  - 3.2.7 The NSB will prescribe minimum standards (of germination, genetic characteristics, physical purity, seed health, etc.) as well as suitable guidelines for registration of seed and planting materials.
  - 3.2.8 Provisional registration would be granted on the basis of information filed by the applicant relating to trials over one season to tide over the stipulation of testing over three seasons before the grant of registration.
- 3.3 Government will have the right to exclude certain kinds or varieties from registration to protect public order or human, animal and plant life and health, or to avoid serious prejudice to the environment.
- 3.4 The NSB will have the power to cancel the registration granted to a variety if the registration has been obtained by misrepresentation or concealment of essential data, the variety is obsolete and has outlived its utility and if the prevention of commercial exploitation of such variety is necessary in the public interest.
- 3.5 Registration of Seed Processing Units will be required if such Units meet the prescribed minimum standards for processing the seed.
- 3.6 Seed Certification will continue to be voluntary. The Certification tag/label will provide an assurance of quality to the farmer.

- 3.6.1 The Board will accredit individuals or organisations to carry out seed certification including self-certification on fulfillment of criteria as prescribed.
- 3.7 To meet quality assurance requirements for export of seeds, Seed Testing facilities will be established in conformity with ISTA and OECD seed certification programmes.
- 3.8 The State Government, in conformity with guidelines and standards specified by the Board, will establish one or more State Seed Testing Laboratories or declare any Seed Testing Laboratory in the Government or non-Government Sector as a State Seed Testing Laboratory where analysis of seeds will be carried out in the prescribed manner.
- 3.9 Farmers will be encouraged to use certified seeds to ensure improved performance and output.
- 3.10 Farmers will retain their right to save, use, exchange, share or sell their farm seeds and planting materials without any restriction. They will be free to sell their seed on their own premises or in the local market without any hindrance provided that the seed is not branded. Farmers' right to continue using the varieties of their choice will not be infringed by the system of compulsory registration.
- 3.11 Stringent measures would be taken to ensure the availability of high quality of seeds and check the sale of spurious or misbranded seeds.

#### **4. SEED DISTRIBUTION AND MARKETING**

- 4.1 The availability of high quality seeds to farmers through an improved distribution system and efficient marketing set-up will be ensured to facilitate greater security of seed supply.
- 4.2 For promoting efficient and timely distribution and marketing of seed throughout the country, a supportive environment will be provided to encourage expansion of the role of the private seed sector. Efforts will be made to achieve better coordination between State Governments to facilitate free Inter-State movement of seed and planting material through exemption of duties and taxes.
- 4.3 Private Seed Sector will be encouraged and motivated to restructure and reorient their activities to cater to non-traditional areas.
- 4.4 A mechanism will be established for collection and dissemination of market intelligence regarding preference of consumers and farmers.
- 4.5 A National Seed Grid will be established as a data-base for monitoring of information on requirement of seed, its production, distribution and preference of farmers on a district-wise basis.
- 4.6 Access to term finance from Commercial Banks will be facilitated for developing efficient seed distribution and marketing facilities for growth of the seed sector.
- 4.7 Distribution and marketing of seed of any variety, for the purpose of sowing and planting will be allowed only if the said variety has been registered by the National Seeds Board.
- 4.8 National Seeds Board can direct a dealer to sell or distribute seeds in a specified manner in a specified area if it is considered necessary to the public interest.

#### **5. INFRASTRUCTURE FACILITIES**

- 5.1 To meet the enhanced requirement of quality/certified seeds, creation of new infrastructure facilities along with strengthening of existing facilities, will be promoted.
- 5.2 National Seed Research and Training Center will be set up to impart training and build a knowledge base in various disciplines of the seed sector.
- 5.3 The Central Seed Testing Laboratory will be established at the National Seed Research and Training Center to perform referral and other functions as required under the Seeds Act.
- 5.4 Seed processing capacity will be augmented to meet the enhanced requirement of quality seed.

- 5.5 Modernisation of seed processing facilities will be encouraged in terms of modern equipment and latest techniques, such as seed treatment for enhancement of performance of seed, etc.
- 5.6 Conditioned storage for breeder and foundation seed and aerated storage for certified seed would be created in different regions.
- 5.7 A computerized National Seeds Grid will be established to provide information on availability of different varieties of seeds with production agencies, their location, quality etc. This network will facilitate optimum utilisation of available seeds in every region.
- 5.7.1 Initially, seed production agencies in the public sector would be connected with the National Seed Grid, but progressively the private sector will be encouraged to join the Grid for providing a clear assessment of demand and supply of seeds.
- 5.8 State Governments, or the National Seeds Board in consultation with the concerned State Government, may establish Seed Certification Agencies.
- 5.9 State Governments will establish appropriate systems for effective execution and implementation of the objectives and provisions of the Seeds Act.

## **6. TRANSGENIC PLANT VARIETIES**

- 6.1 Biotechnology will play a vital role in the development of the agriculture sector. This technology can be used not only to develop new crops/varieties, which are tolerant to disease, pests and abiotic stresses, but also to improve productivity and nutritional quality of food.
- 6.2 All genetically engineered crops/varieties will be tested for environment and bio-safety before their commercial release, as per the regulations and guidelines of the Environment Protection Act (EPA), 1986.
- 6.3 The EPA, 1986, read with the Rules, 1989 would adequately address the safety aspects of transgenic seeds/planting materials. A list will be generated from Indian experience of transgenic cultivars that could be rated as environmentally safe.
- 6.4 Seeds of transgenic plant varieties for research purposes will be imported only through the National Bureau of Plant Genetic Resources (NBPGR) as per the EPA, 1986.
- 6.5 Transgenic crops/varieties will be tested to determine their agronomic value for at least two seasons under the All India Coordinated Project Trials of ICAR, in coordination with the tests for environment and bio-safety clearance as per the EPA before any variety is commercially released in the market.
- 6.6 After the transgenic plant variety is commercially released, its seed will be registered and marketed in the country as per the provisions of the Seeds Act.
- 6.7 After commercial release of a transgenic plant variety, its performance in the field, will be monitored for at least 3 to 5 years by the Ministry of Agriculture and State Departments of Agriculture.
- 6.8 Transgenic varieties can be protected under the PVP legislation in the same manner as non-transgenic varieties after their release for commercial cultivation.
- 6.9 All seeds imported into the country will be required to be accompanied by a certificate from the Competent Authority of the exporting country regarding their transgenic character or otherwise.
- 6.9.1 If the seed or planting material is a product of transgenic manipulation, it will be allowed to be imported only with the approval of the Genetic Engineering Approval Committee (GEAC), set up under the EPA, 1986.
- 6.10 Packages containing transgenic seeds/planting materials, if and when placed on sale, will carry a label indicating their transgenic nature. The specific characteristics including the agronomic/yield benefits, names of the transgenes and any relevant information shall also be indicated on the label.

- 6.11 Emphasis will be placed on the development of infrastructure for the testing, identification and evaluation of transgenic planting materials in the country.

## **7. IMPORT OF SEEDS AND PLANTING MATERIAL**

- 7.1 The objective of the import policy is to provide the best planting material available anywhere in the world to Indian farmers, to increase productivity, farm income and export earnings, while ensuring that there is no deleterious effect on environment, health and bio-safety.
- 7.1.1 While importing seeds and planting material, care will be taken to ensure that there is absolutely no compromise on the requirements under prevailing plant quarantine procedures, so as to prevent entry into the country of exotic pests, diseases and weeds detrimental to Indian agriculture.
- 7.1.2 All imports of seeds will require a permit granted by the Plant Protection Advisor to the Government of India, which will be issued within the minimum possible time frame.
- 7.2 All import of seeds and planting materials, etc. will be allowed freely subject to EXIM Policy guidelines and the requirements of the Plants, Fruits and Seeds (Regulation of import into India) Order, 1989 as amended from time to time. Import of parental lines of newly developed varieties will also be encouraged.
- 7.3 Seeds and planting materials imported for sale into the country will have to meet minimum seed standards of seed health, germination, genetic and physical purity as prescribed.
- 7.4 All importers will make available a small sample of the imported seed to the Gene Bank maintained by NBPGR.
- 7.5 The existing policy, which permits free import of seeds of vegetables, flowers and ornamental plants, cuttings, saplings of flowers, tubers and bulbs of flowers by certain specified categories of importers will continue. Tubers and bulbs of flowers will be subjected to post-entry quarantine.
- 7.5.1 After the arrival of consignments at the port of entry, quarantine checks would be undertaken; which may include visual inspection, laboratory inspection, fumigation and grow-out tests. For the purpose of these checks, samples will be drawn and the tests will be conducted concurrently.

## **8. EXPORT OF SEEDS**

- 8.1 Given the diversity of agro-climatic conditions, strong seed production infrastructure and market opportunities, India holds significant promise for export of seeds.
- 8.2 Government will evolve a long term policy for export of seeds with a view to raise India's share of global seed export from the present level of less than 1% to 10% by the year 2020.
- 8.2.1 The export policy will specifically encourage custom production of seeds for export and will be based on long term perspective, dispensing with case to case consideration of proposals.
- 8.3 Establishment and strengthening of Seeds Export Promotion Zones with special incentives from the Government will be facilitated.
- 8.4 A data bank will be created to provide information on the International Market and on export potential of Indian varieties in different parts of the world.
- 8.5 A data base on availability of seeds of different crops to assess impact of exports on domestic availability of seeds will be created.
- 8.6 Promotional programmes to improve the quality of Indian seeds to enhance its acceptability in the International Market will be taken up.
- 8.6.1. Testing and certification facilities will be established in conformity with international requirements.

## **9. PROMOTION OF DOMESTIC SEED INDUSTRY**

- 9.1 Incentives will be provided to the domestic seed industry to enable it to produce seeds of high yielding varieties and hybrid seeds at a faster pace to meet the challenges of domestic requirements.
- 9.2 Seed Industry will be provided with a congenial and liberalized climate for increasing seed production and marketing, both domestic and international.
- 9.3 Membership to International Organisations and Seed Associations like ISTA, OECD, UPOV, ASSINSEL, WIPO, at the National level or at the level of individual seed producing agencies, will be encouraged.
- 9.4 Emphasis will be given to improving the quality of seed produced and special efforts will be directed towards improving the quality of farmers' saved seeds.
- 9.5 Financial support for capital investment, working capital and infrastructure strengthening will be facilitated through NABARD/ Commercial Banks/Cooperative Banks.
- 9.6 Tax rebate/concessions will be considered on the expenditure incurred on in-house research and development of new varieties and other seed related research aspects. In order to develop a competitive seed market, the States will be encouraged to remove unnecessary local taxation on sales of seeds.
- 9.7 To encourage seed production in non-traditional areas including backward areas, special incentives such as transport subsidy will be provided to seed producing agencies operating in these marginalised areas.
- 9.8 Reduction of import duty will be considered on machines and equipment used for seed production and processing which are otherwise not manufactured in the country.

## **10. STRENGTHENING OF MONITORING SYSTEM**

- 10.1 The Department of Agriculture & Cooperation (DAC) will supervise the overall implementation and monitoring of the National Seeds Policy.
- 10.2 The physical infrastructure in terms of office automation, communication facilities, etc., in DAC will be augmented in a time bound manner.
- 10.3 The technical capacity of DAC need to be augmented and strengthened to undertake the additional work relating to implementation of National Seeds Policy, implementation of PVP&FR Bill, Seeds Act, Import and Export of Seeds, etc.
- 10.4 Capacity building, including National and International training and participation in Seminars/Workshops will be organized for concerned officials.

## **11. CONCLUSION**

The Government of India trusts that the National Seeds Policy will receive the fullest support of State Governments/Union Territory Administrations, State Agricultural Universities, plant breeders, seed producers, the seed industry and all other stakeholders, so that it may serve as a catalyst to meet the objectives of sustainable development of agriculture, food and nutritional security for the population, and improved standards of living for farming communities.

The National Seeds Policy will be a vital instrument in attaining the objectives of doubling food production and making India hunger free. It is expected to provide the impetus for a new revolution in Indian agriculture, based on an efficient system for supply of seeds of the best quality to the cultivator.

The National Seeds Policy will lay the foundation for comprehensive reforms in the seed sector. Significant changes in the existing legislative framework will be effected accompanied by programmatic interventions. The Policy will also provide the parameters for the development of the seed sector in the Tenth and subsequent Plans. The progress of implementation of the Policy will be monitored by a High Level Review Committee.