

SEEDS

Seeds are a basic and critical input for agricultural production. The Indian seeds programme recognizes third-generation seeds, namely, breeder, foundation and certified seeds. The details of production of breeder and foundation seeds and of distribution of certified seeds for 2002-03 to 2005-06, and anticipated for 2006-07, are given in the table below:

Type of Seeds	Unit	2002-03	2003-04	2004-05	2005-06	2006-07 (Anticipated)
Breeder Seed Production	MT	4842	6048	6646	6488	6998
Foundation Seed Production	MT	61400	65000	690000	740000	80000
Certified / Quality Seed Distribution	MT	980300	1085900	1202618	1267438	1496300

6.2 Seeds Bill, 2004: In response to the changes that have taken place in the seed sector, the existing Seeds Act, 1966, is proposed to be replaced by a new legislation. The new Act, inter alia, proposes to (i) create a facilitative climate for the growth of the seed industry; (ii) enhance seed replacement rates for various crops; (iii) boost the export of seeds and encourage the import of useful germplasm; and (iv) create a conducive atmosphere for the application of frontier sciences in varietal development and for enhanced investment in research and development. The Seeds Bill, 2004, was introduced in the Rajya Sabha in December 2004. The Parliamentary Standing Committee on Agriculture to which the Bill was referred has recommended several modifications in the Bill. These are being examined in consultation with the relevant ministries/departments of the Government of India.

6.3 Implementation of Legislation on Plant Varieties and Farmers' Rights Protection: In pursuance of the provisions contained in the Protection of Plant Varieties and Farmers' Rights Act, 2001, the Department of Agriculture and Cooperation established the Protection of Plant Varieties and Farmers' Rights Authority in November, 2005. The Authority has the mandate to enforce provisions of the Protection of Plant Varieties and Farmer's Rights Act, 2001. Twelve crops viz. rice, bread wheat, maize, sorghum, pearl millet, chick pea, pigeon pea, green gram, black gram, lentil, field pea and kidney bean, were notified for the purpose of registration under the Act. The Authority has plans to extend its operationalisation and coverage to forestry and aromatic and medicinal plants. As against the provision of Rs 5.00 crore at RE 2006-07, the Authority has incurred an expenditure of Rs 2.43 crore till 31 December 2006.

6.4 Setting up of National Seed Research and Training Centre at Varanasi(NSRTC): The NSRTC, Varanasi (Uttar Pradesh), has been operationalised to impart training to the personnel working in various seed development organisations and also to act as a central seed testing laboratory. During the year 2006-07, an amount of Rs 4.02 crore has been provided at RE 2006-07 for the centre; and 23 posts have also been sanctioned for the Centre. The process of filling up these posts is in hand. The NSRTC is being notified as the Central Seed Testing Laboratory with effect from 1 April 2007.

6.5 Strengthening of Seeds Quality Control Organisations (State Seed Certification Agencies and State Seed Testing Laboratories): The responsibility of seed law enforcement is vested with the state governments. The seed inspectors notified under the relevant provisions of the Seeds Act, 1966, and the Seed (Control) Order, 1983, inspect the premises of seed distributing agencies to draw samples for testing. Appropriate action is taken against the sellers of sub-standard seeds as per the provisions of the Seeds Act/Rules and Orders. The inspectors are also authorised to stop the sale of sub-standard seeds and to seize stocks of such seeds. In a significant development, seed inspectors have been notified with the powers of enforcement under the Environment (Protection) Act, 1986. During the year 2006-07, an amount of Rs 12.63 crore has been released for the general strengthening of laboratories, strengthening of state seed certification agencies, equipping laboratories for International Seed Testing Associations (ISTA) Accreditation, DNA finger printing, Bt Cotton Kit, hybrid test, grow-out test etc., for the benefit of farmers.

6.6 The Seed (Control) Order: 62,381 seed samples were drawn during the year 2005-06 by the notified seed inspectors and 72 cases were taken up for prosecution.

6.7 Seed Testing: During the year 2005-06, 3,84,002 seed samples were tested in the seed testing laboratories of different states, out of which 38,649 seed samples were found to be sub-standard.

6.8 Seed Quantities Certified/Tagged by Seed Certification Agencies: During the year 2005-06, 24885.8 million tonnes of foundation seeds and 123504.5 million tonnes of certified seeds were certified by the seed certification agencies.

6.9 Financial Assistance to Central Seed Testing Laboratory: According to the Seeds Act, 1966, there should be a Central Seed Testing Laboratory (CSTL) to initiate seed testing programmes in collaboration with state seed testing laboratories. The CSTL is functioning in the Indian Agricultural Research Institute (IARI) since 1969. An amount of Rs 0.03 crore has been released to the CSTL (IARI) for its strengthening during 2006-07.

6.10 Policy on Export/Import of Seeds and Planting Materials: With the rationalisation and simplification of the import-export regime, the export and import of exponential seeds has increased. This has benefited Indian farmers, the seed industry and entrepreneurs. In all, 114 cases were recommended for issuing export and import permits from 1 April 2006 to 31 December 2006.

6.11 Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds: This is a central sector scheme intended to develop and strengthen the existing infrastructure for the production and distribution of certified/quality seeds. An outlay of Rs 90.00 crore was allocated to the scheme in the BE for the year 2006-07. Of this amount, Rs 81.66 crore was released till 31 December 2006. The scheme consists of components, namely: (i) Transport Subsidy on Movement of Seeds; (ii) Establishment and Maintenance of Seed Bank; (iii) Quality Control Arrangement on Seeds – National Seeds Research and Training Centre, Varanasi; (iv) Seed Village Scheme; (v) Assistance for Creation of Infrastructure Facilities in Public Sector; (vi) Assistance for Boosting Seed Production in Private Sector; (vii) Human Resource Development; (viii) Assistance for Seed Export; (ix) Use of Biotechnology in Agriculture; and (x) Promoting Hybrid Seeds.

6.12 Capacity Building and Training of Manpower for Post-release Monitoring of Genetically Modified (GM) Crops: There is a felt need for upgradation of the post-release monitoring infrastructure of GM seeds/crops. In particular, there is a need for capacity building for training of manpower in advance techniques of risk assessment and management of GM crops. The training of extension personnel and personnel belonging to enforcement agencies is yet another area which needs to be addressed in a holistic manner. The Bio-tech Consortium of India Ltd (BCIL) has been engaged as an expert agency to execute a public awareness programme with financial assistance of Rs 0.57 crore in nine Bt cotton-growing states at state capital, district and tehsil level.

6.13 Bt Cotton Seeds: At present, 62 Bt cotton hybrids have been approved by the Genetic Engineering Approval Committee (GEAC) for commercial cultivation. The area under coverage of Bt cotton is also increasing rapidly. It has increased from 73,000 acres in Kharif, 2002, to 30.81 lakh acres during Kharif, 2005, and is likely to increase three times during Kharif, 2006, in comparison to Kharif, 2005.

6.14 Programmes in North-Eastern States: The following programmes relating to seeds are being implemented in the North-Eastern region:

6.15 Transport Subsidy on Movement of Seeds to the North-eastern States including Sikkim, Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Hilly Areas of West Bengal: Under this component, reimbursement of 100 per cent difference between road and rail transportation charges is being made to implementing agencies for the movement of seeds produced from outside the states to the identified state capital/district headquarters. Further, expenditure for transportation of seeds within the state from state capital/district headquarter to sale counter/sale outlet is also being reimbursed to implementing agencies designated by the state government on an actual basis subject to a maximum limit of Rs 60 per quintal, whichever is less. Funds reimbursed to implementing agencies during 2003-04; 2004 – 05; 2005-06; and 2006-07 (up to 31 December 2006), is as under:

State/Agencies	2003-04)	2004-05	2005-06	(Rs. in crore)
				2006-07 (up to 31

				December 2006)
Nagaland	0.07	-	0.04	-
Assam Seeds Corporation	0.90	0.38	0.22	0.09
Sikkim	0.04	0.03	0.05	0.05
Mizoram	--	0.14	-	-
National Seeds Corporation and other States Seeds Corporations for North- eastern States	0.16	0.05	0.45	0.03

6.16 In addition to this, the National Seeds Corporation, State Farms Corporation of India, West Bengal State Seeds Corporation, Assam State Seeds Corporation etc., also availed of the transport subsidy for a major portion of seeds transported to North-Eastern states by these corporations. During the year 2006-07, up to 31 December 2006, an amount of Rs 0.46 crore has been reimbursed, out of which Rs 0.18 crore has been reimbursed exclusively for the benefit of the North-Eastern states.

6.17 **Seed Village Programme:** Under this programme, financial assistance has been provided to enhance the production and productivity of seeds in North-Eastern states. The details of funds released during 2005-06 and 2006-07 to various North-Eastern states is as under:

(Amount Rs in crore)

Sl.No.	Implementing Agency	Year	
		2005-06	2006-07
1.	Assam State Seeds Certification	0.01	-
2.	Assam Agriculture University, Jorhat, Assam	0.35	-
3.	Government of Tripura	0.30	-
4.	Government of Assam	-	0.006
5.	Government of Manipur	-	0.10
6.	Government of Sikkim	-	0.10
7.	Government of Mizoram	-	0.04
	Total	0.35	0.25

6.18. **Assistance for Creation/Strengthening Seed Infrastructure Facilities:** In order to create/strengthen infrastructural facilities for the production and distribution of certified /quality seeds, financial assistance of Rs 0.23 crore has been provided to the Government of Sikkim, and Rs 0.90 crore has been provided to the Government of Mizoram during 2006-07.

6.19 The details of the various programmes in the seed sector under implementation in the North-Eastern states are given in **Annexure-6.1**.