

Overview



Seed is a critical and basic input for attaining sustained growth in agricultural production. Distribution of assured quality seed is necessary for attaining higher crop yields. Policy initiatives taken by Government of India during 1960s and 1970s for generating quality seed production and distribution of improved plant varieties developed by the scientists is one of the reasons for our self sufficiency in food grains. The Indian seed industry has shown impressive growth and should continue to provide further potential for growth in agricultural production. The role of the seed industry is not only to produce adequate quantity of quality seeds but also to achieve varietal diversity.

Indian Seeds programme largely adheres to the limited generation system for seed multiplication. The system recognises three generations, namely, breeder, foundation and certified seed. Details of production of breeder and foundation seeds as well as certified seed distribution for 1999 – 2000 to 2002 – 2003 and anticipated for 2003 - 2004 are as under:

Production of Breeder, Foundation and Certified Seed

Type of Seeds	Unit	1999 - 2000	2000 - 01	2001 - 02	2002 - 03	2003-04 Anticipated	2004-05 Target
Breeder Seed production	MT	5064	4269	4549	4886	5004	5100
Foundation Seed production	MT	46600	59100	54400	60000	65000	70000
Certified / Quality seed Distribution	MT	879800 (729600)	862700 (709200)	918000 (756500)	930000	1170000	1274000

(i)Data in parenthesis are of certified seed Distribution.

New Seeds Bill

Based on the changes that have taken place in the seed sector since 1966, the existing Seeds Act, 1966 is proposed to be replaced by a suitable legislation. Over the years, the following deficiencies have been noted in the existing Seeds Act:-

- Registration of seed variety not compulsory.
- Non-notified varieties are not covered.
- Commercial crops and plantation crops are not covered.
- Certification only through State Seed Certification Agencies.
- No provision for regulation of transgenic materials.
- Penalties for infringement are very mild.

The revision of existing Seeds Act is proposed to (i) overcome its present deficiencies, (ii) create facilitative climate for growth of seed industry, (iii) enhance seed replacement rates for various crops and (iv) boost the export of seeds and encourage import of useful germplasm, (v) create conducive atmosphere for application of frontier sciences in varietal development and for enhanced investment in research and development. The draft Seeds Bill, 2004 is under consideration.

The highlights of the proposed Seeds Act are as under:-

- i. Compulsory registration of varieties based on agronomic performance data.
- ii. Accreditation of ICAR centers, State Agricultural Universities and Private Organisations to conduct agronomic trials.
- iii. Accreditation of Organisations for certification.
- iv. Maintenance of National Register of varieties.
- v. To regulate the export and import of seeds.

- vi. Exemption for farmers to save, use, exchange, share or sell their seed without registration.
- vii. Accreditation of private seed testing laboratories.
- viii. Enhancement of penalty for major and minor infringement.
- ix. Inclusion of provisions to regulate GM crops and ban on terminator seed.

Implementation of Legislation on Plant Varieties and Farmers' Rights Protection

The scheme for implementation of Legislation on Plant Varieties and Farmers' Rights Protection was launched during the Ninth Five Year Plan. The Bill was passed by both the House of Parliament and was assented to by the President of India in October, 2001.

The objectives of the legislation are:-

- To stimulate investments for research and development both in the public and the private sectors for the development of new plant varieties by ensuring appropriate returns on such investments; and
- To facilitate the growth of seed industry in the country through domestic and foreign investment which will ensure the availability of high quality seeds and planting material to Indian farmers.

The Salient features of the legislation are:

- The legislation extends to all categories of plants except micro-organisms.
- In order to be eligible for protection, a variety must be new, distinct, uniform and stable.
- The legislation contains provisions for compulsory licensing in the public interest.

Farmers will continue to enjoy their traditional rights to save, use, exchange, share and sell their produce of the protected variety with the only restriction that the farmers will not be able to sell branded seed of the protected variety for commercial purposes. Plant Varieties and Farmers' Rights Protection Authority to be set up will be vested with necessary executive powers to perform all functions relating to the protection of plant varieties.

The Rules under the "Protection of Plant Varieties & Farmers' Rights Act, 2001" have been notified in the Gazette. The Protection of Plant Varieties and Farmers' Rights Authority is likely to be set up shortly which will administer the Act.

A provision of Rs.55000 thousand was made for the scheme in BE 2002-03 and Rs.10000 thousand in RE 2002-03. However, an expenditure of Rs.3100 thousand only was incurred as the Protection of Plant Varieties & Farmers' Rights Authority could not be set up. An outlay of Rs.50000 thousand was kept for the scheme in BE 2003-04. Against this, an expenditure of Rs.49,866 thousand has been incurred upto 31.3.2004.

Strengthening of Seed Quality Control

The Scheme aims at strengthening of quality control arrangements for seeds to ensure that farmers get good quality seeds. The Seeds Act, 1966 regulates the quality of seeds sold/distributed to the farmers through voluntary certification and compulsory labelling of seeds of notified kind/varieties. The scheme i.e. Quality Control arrangements on Seeds has the following components:

- Setting up of National Seeds Research & Training Centre (NSRTC) at Varanasi .
- Secretariat support to Central Seed Committee/Central Seed Certification Board.
- Strengthening of Seed Development Organisations, State Seed Certification Agencies and State Seed Testing Laboratories.
- Financial assistance to Central Seed Testing Laboratory (CSTL).
- Financial assistance to National Seeds Corporation (NSC)/ State Seeds Corporations (SSC)/SCAs/DOA for training of officials.

A provision of Rs.16700 thousand was made for the scheme in RE 2002-03 against which an expenditure of Rs.15900 thousand was incurred during the year. For the year 2003-2004, there was a budget provision of Rs. 24300 thousands. An expenditure of Rs.17827 thousand was incurred during 2003-04.

Setting up of National Seed Research and Training Centre (NSRTC) at Varanasi .

National Seed Research and Training Centre (NSRTC) at Varanasi is being set up to impart training to the personnel working in various seed development organisations. The proposed Seed Testing Laboratory of NSRTC at Varanasi would also act as Central Seed Testing Laboratory as required under the Seeds Act, 1966 in due course of time replacing the present Central Seed Testing Laboratory at Indian Agricultural Research Institute (IARI), New Delhi . An amount of Rs. 152800 thousands has already been provided so far including Rs.12700 thousand during 2002-03. An amount of Rs.6500 thousand was provided in RE during 2003-04. This Project is almost complete except some electrical work, which is in progress. An amount of Rs.443 thousand was released to NSR&TC during 2003-04 for completion of civil work.

Strengthening of Seeds Development Organisations (State Seed Certification Agencies and State Seed Testing Laboratories).

The scheme envisages strengthening of 15 Seed Testing Laboratories and 10 Seed Certification Agencies during the Tenth Five Year Plan period. As on date, 22 State Seed Certification Agencies and 101 Seed Testing Laboratories are functioning in the country. About 702243 MT of seeds were certified during the year 2002-03. These laboratories have also been upgraded and strengthened to undertake varietal, purity analysis and other quality parameters so as to conform to the seed standards prescribed. During the year 2002-03, the number of seed samples tested by these seed testing laboratories were 375315. During 2003-04, an amount of Rs.15632 thousands has been released to 10 State Government Organisations for strengthening of seed quality control arrangement of the country. This amount will be utilized for strengthening the state seed testing laboratory/certification agency.

The responsibility of Seed Law Enforcement is vested with the State Governments. The Seed Inspectors duly notified under the relevant provisions of the Seeds Act and Seed (Control) Order, 1983 visit the premises of seed distributing agency and draw samples for testing. Action is taken against the seller of sub-standard seeds as per provisions specified in the Seeds Act/Rules and Orders. 11,125 Notified Inspectors drew 76,610 seed samples for testing under different laws of which 3,999 were found sub-standard during 2002-03.

Financial Assistance for training to National Seed Corporation/ State Seed Certification Agencies/ State Seeds Corporations/DOA.

The development of human resources is of prime importance for the development of seed sector in India . It is proposed to organise the training in regular manner for the officials who are engaged in seed development programme with a view to achieve the aforesaid targeted seed distribution. Twenty Seed Development Agencies were identified to conduct training on seed development programme. An amount of Rs. 900 thousand was released during 2003-04 @ Rs. 50 thousands per agency for imparting training etc. to about 400 officials in the field of Seed Development.

Secretariat Support to Central Seed Committee (CSC) and Central Seed Certification Board (CSCB).

In accordance with the provisions of Seeds Act, 1966, Central Seed Committee(CSC) and Central Seed Certification Board (CSCB) were established so as to carry out the functions assigned to it. Besides, two Central Sub-Committees namely; Central Sub-Committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops and Horticultural Crops and State Seed Sub-Committees for Agricultural and Horticultural crops were also established. These two Sub Committees recommended 117 varieties of different agricultural crops and 35 varieties of horticultural crops for release/notification during the year 2003-04. 3315 varieties of Agricultural and Horticultural crops have been notified upto 31.3.2004.

Financial Assistance to Central Seed Testing Laboratories

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 designed to promote uniformity in test results between all seed laboratories in India, collect data continuously on the quality of seeds found in the market and make this data available to the committee, and to coordinate investigations to the methods of germination, etc. to standardize the testing procedure. The Central Seed Testing Laboratory at present is functioning in Indian Agricultural Research Institute since 1969. The CSTL is the only laboratory to perform the functions of seed testing samples when called upon to do so by various courts. An amount of Rs.1000 thousand has provided as financial assistance to CSTL during 2003-04. Once NSRTC is established at Varanasi , CSTL will be located within the NSRTC.

Export/Import of Seeds and Planting Materials:

In order to encourage export of seeds in the interest of farmers, the procedure for export permission for seed has been simplified. Seeds of privately developed varieties/ hybrids are being allowed to be exported freely, except where there is any emergency caused by the natural calamities and seed is required for meeting the demand within the country. Export against orders for which production of seed is organised, is allowed without restriction. In other cases, export is permitted freely subject to the provision of the EXIM Policy (2002-2007). Import of seeds and planting materials is also allowed subject to New Policy on Seed Development, 1988 read with Plant Quarantine (Regulation of Import into India) Order, 2003 and as per the Exim Policy, 2002-07. During 2003-04, 61 applications for import and 41 applications for export of seeds of restricted nature were received of which 45 applications for import and 39 applications for export were cleared.

Scheme of Transport Subsidy on movement of Seeds to the North Eastern States Sikkim , Jammu & Kashmir, Himachal Pradesh, Uttaranchal and Hill Areas of West Bengal .

Due to topographical situation and climatic condition not conducive for the production of seeds in the North Eastern States including Sikkim , a Central Sector Scheme on Transport Subsidy on Movement of seed was launched in 1986 - 87 through National Seeds Corporation Ltd. / State Farms Corporation of India Ltd., later on in 1995 – 96 through State Seeds Corporations also. As per this scheme, 50 percent of difference between rail and road transport charges for the movement of seed by these agencies to Assam and 100 percent difference for the movement of seeds to other North Eastern States was being reimbursed.

From 1998 – 99, the scope of this scheme was widened by including the States of Jammu and Kashmir, Himachal Pradesh and hill areas of erstwhile Uttar Pradesh and West Bengal as they also had same situation. As per modified scheme, reimbursement of difference between rail and road transportation cost is allowed for the movement of seeds produced outside the State and the actual cost, restricted to maximum of Rs. 60 per quintal for the movement of seed within the State from State capital / district Headquarters to sale outlets / sale counters.

For 2002-03 there was a provision of Rs. 17900 thousand in the Revised Estimates for transportation of 1.87 lakh quintals of certified seeds. An amount of Rs.16401 thousand was reimbursed for transportation of 2.03 lakh quintals of certified seeds during 2002-03. During 2003-04, there was a budget provision of Rs.14700 thousand for transportation of 1.84 lakh quintals of certified seeds. An amount of Rs.15656 thousand was reimbursed to implementing agencies during 2003-04 for transportation of 1.97 lakh quintals of certified seeds.

Establishment and Maintenance of Seed Bank

This scheme was launched with the basic objective of meeting requirements of seeds during natural calamity and also development of necessary infrastructure for storage of seed. The scheme is being implemented through National Seeds Corporation, State Farms Corporation of India and State Seed Corporations of several States.

Under the Scheme, for maintenance of Certified and Foundation seed of identified crops, grants are provided to the participating Seed Corporations for meeting the cost of revolving funds (i.e. 50% amount of procurement cost), revalidation charges (@ Rs.100/- per Qtl.), transportation cost (@ Rs.100/- per Qtl.), processing and packing charges (@ Rs.100/- per Qtl.) storage cost (@ Rs.8/- per Qtl. for 6 months), storage losses (@ 0.25% of value of seeds), insurance cost of seed during storage(@ 0.5% of value of seeds) and price differential for undistributed quantity of seeds. This Scheme also has a provision for creation of storage facilities as well as setting up of a data Bank for facilitating fast flow of information on the availability of seeds. Assistance is also available for State Seed Certification Agencies for strengthening of quality control infrastructure.

An amount of Rs.70000 thousand was provided for the scheme in RE 2002-03 and the same amount was reimbursed to the

implementing agencies. A provision of Rs.69700 thousand was made for the scheme in B.E. 2003-04. This provision includes an amount of Rs.4900 thousand for North Eastern States. Against this, an expenditure of Rs.68411 thousand has been incurred during 2003-04.

During the year 2002-2003, the Seed Corporations have maintained 11732.3 MT of Certified Seed and 835.5 MT of Foundation Seed of various identified crops against the targets of 12200.0 MT and 920.0 MT respectively. The crops covered under the scheme are Wheat, Paddy, Maize, Sorghum, Bajra, Gram, Peas, Urd, Moong, Lentil, Arhar, Soyabean, Sunflower, Cotton, Sesamum and Toria, etc. For NE States, a separate physical target of 1100 MT of certified seed was kept against which 1058.2 MT of seed has been maintained.

For the year 2003-04, a physical target of 14030.0 MT of certified seed including 1100.0 MT for NE States and 837.0 MT of foundation seed had been kept. Against this, 13754.3 MT of certified seed and 836.8 MT of foundation seed has been maintained by the Seed Corporations.

ACTIVITIES / SCHEMES TAKEN UP IN NORTH EASTERN STATES

Central Sector Scheme on "The Movement of Seeds to the North – Eastern States , Sikkim , Himachal Pradesh, Jammu & Kashmir, Uttaranchal and Hill areas of West Bengal ”.

Under this scheme reimbursement of 100 percent difference between road and rail transportation charges is made to implementing agencies for the movement of the seed produced outside the States to State capital / district headquarters.

Further, expenditure for transportation of seed within the state from State Capital / district headquarter to sale counter / sale outlet is also reimbursed to implementing agencies designated by State Government on actual basis subject to maximum limit of Rs. 60/- per quintal whichever is less. The fund reimbursed to implementing agencies during 2002-03 and 2003 – 2004 is as under:

Funds reimbursed to implementing Agencies

<u>Year</u>	<u>Physical</u> <u>(Quantity in</u> <u>MT)</u>	<u>Financial</u> <u>(Rs. in thousand)</u>
2002-03	20330.1	16,401
2003-04	19672.40	15656

Out of Rs. 16401 thousand during 2002-03 and Rs.14700 thousand during 2003-04, following amount were reimbursed to North Eastern States respectively:

(Rs. in thousand)

State/Agencies	2002-03	2003-04)
Nagaland	105	753
Assam Seeds Corporation	6638	9081
Sikkim	219	467
Mizoram	653	--

In addition to this, National Seeds Corporation, State Farms Corporation of India, West Bengal State Seeds Corporation, Assam State Seeds Corporation etc. also availed transport subsidy for major portion of seed transported to North Eastern States by these Corporations. During 2002-03, a sum of Rs. 7617 thousand has been reimbursed exclusively for the benefit of North Eastern States. During 2003-04, an amount of Rs.10301 thousand has been reimbursed exclusively to North Eastern States.

Annexure I

Programmes of North-Eastern States

Name of Division : Seeds Division						
S. No.	Schemes/Programmes Activities Approved	Details of Schemes/Programmes /Activities taken up	Targets	Achievements	Budget Allocation (Rs. in thousands)	Utili sation
1.	2.	3.	4.	5.	6.	7.
1.	Scheme for Establishment and Maintenance of Seed Bank.	The basic objective of this scheme is to keep the seed ready for meeting the requirement during natural calamity.	1100 MT (2002-03) 1100 MT (2003-04)	1058.2 MT (2002-03) 917.1 MT (2003-04)		
2.	Transport Subsidy on movement of Seeds to North -Eastern States.	Due to topographical situation and climatic condition being not	18400 MT (2003-04)	19672.40MT	14700	15656

		<p>conducive for the production of seeds in the North-Eastern States, 100 percent reimbursement of transportation cost is allowed for the movement of seeds produced outside the North-Eastern States and the actual cost, restricted to maximum of Rs. 60/- per quintal for the movement of seed within the State Capital/district headquarters to sale outlets/sale counters.</p>		
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Implementation of Legislation on Plant Varieties & Farmers' Rights Protection :

The Scheme for Implementation of Legislation on Plant Varieties & Farmers' Rights Protection was launched during the Ninth Five Year Plan. The Bill was passed by both the House of Parliament and was assented to by the President of India in October, 2001. The implementation of this legislation involves the setting up of a Plant Varieties & Farmers' Rights Protection Authority which will give effect to the provisions of the Act.

The objectives of the legislation are :

- To stimulate investments for research and development both in the public and the private sectors for the development of new plant varieties by ensuring appropriate returns on such investments; and
- To facilitate the growth of seed industry in the country through domestic and foreign investment which will ensure the availability of high quality seeds and planting material to Indian farmers.

The salient features of the legislation are :

- The legislation extends to all categories of plants except micro-organisms.
- In order to be eligible for protection, a variety must be new, distinct, uniform and stable.

- The legislation contains provisions for compulsory licensing in the public interest.

Farmers will continue to enjoy their traditional rights to save, use, exchange, share and sell their produce of the protected variety with the only restriction that the farmers will not be able to sell branded seed of the protection variety for commercial purposes. Plant Varieties & Farmers' Rights Protection Authority to be set up will be vested with necessary executive powers to perform all functions relating to the protection of plant varieties.

The Rules under the "Protection of Plant Varieties & Farmers' Rights Act, 2001" have been notified in the Gazette in September, 2003. The National test guidelines for DUS (Distinctness, Uniformity and Stability) Testing for Protection of Plant Varieties have also be developed for 30 crops and put on the website of the Department for information. The Protection of Plant Varieties & Farmers' Rights Authority is likely to be set up shortly which will administer the Act.

A provision of Rs. 50000 thousand was made for the Scheme in BE 2003-2004. Out of it an expenditure of Rs. 49866 thousand was incurred. An outlay of Rs. 85000 thousand was kept for the Scheme in BE 2004-2005. Against this, an expenditure of Rs. 30339 thousand has been incurred upto 30.9.2004.

Establishment & Maintenance of Seed Bank :

This Scheme was launched with the basic objective of meeting requirements of seeds during natural calamity and also development of necessary infrastructure for storage of seed. The Scheme is being implemented through National Seeds Corporation, State Farms Corporation of India and State Seed Corporations of several States.

Under the Scheme, for maintenance of Certified and Foundation seed of identified crops, grants are provided to the participating Seed Corporations for meeting the cost of revolving funds (i.e. 50% amount of procurement cost), revalidation charges (@ Rs. 100/- per Qtl.), transportation charges (Rs. 100/- per Qtl.), processing and packing charges (@ Rs. Rs. 100/- per Qtl.) storage cost (@ Rs. 8/- per Qtl. For 6 months), storage losses (@ 0.25% of value of seeds), insurance cost of seed during storage (@ 0.5% of value of seeds) and price differential for undistributed quantity of seeds. The Scheme also has a provision for creation of storage facilities as well as setting up of a data Bank for facilitating fast flow of information on the availability of seeds. Assistance is also available for State Seed Certification Agencies for strengthening of quality control infrastructure.

An amount of Rs. 69700 thousand was provided for the Scheme in RE 2003-2004 and an amount of Rs. 68410 thousand was reimbursed to the implementing agencies. A provision of Rs. 70000 thousand was made for the scheme in BE 2004-2005. This provision includes an amount of Rs. 5000 thousand for North Eastern States. Against this, an expenditure of Rs. 43573 thousand has been incurred during 2004-2005 (upto 30.9.2004).

During the year 2003-2004, the Seed Corporations have maintained 13754.3 MT of Certified Seed and 836.8 MT of Foundation Seed of various identified crops against the targets of 14030.0 MT and 837.0 MT respectively. The crops covered under the Scheme are Wheat, Paddy, Maize, Sorghum, Bajra, Gram, peas, Urd, Moong, Lentil, Arhar, Soybean, Sunflower, Cotton, Sesamum and Toria etc.

For the year 2004-2005, a physical target of 16000.0 MT of certified and foundation seed including the target for NE States has been fixed.

STATEMENTS-2004

Establishment & Maintenance of Seed Bank

Quantity of seed maintained by Seed Corporations in the Seed Bank

CERTIFIED SEED

2003-2004

Sl.No	CROPS	APSSDC	GSSC	HSDC	KSSC	MSSC	MPSSDC	NSC	OSSC	PSSC	RSSC	SFCI	UPSTDC	WBSSC	UPSDC	TOTAL
1	Wheat	-	500	2650	300	-	1750	12525	5000	3000	813	8750	-	2740	4000	42028
2	Paddy	1600	-	-	6600	2000	1200	12000	-	200	-	7000	6000	3000	2000	41600
3	Sorghum	800	-	-	1000	700	-	2000	-	-	-	-	-	-	-	4500
4	Bajra	-	1000	400	-	1000	-	1000	-	-	-	-	-	-	-	3400
5	Maize	-	-	-	-	-	-	1000	-	-	103	-	-	-	-	1103
6	Gram	500	200	1500	500	600	500	1000	-	25	275	2000	100	-	500	7700
7	Peas	-	-	-	-	-	-	1500	-	-	10	662	50	-	500	2722
8	Urd	1000	100	100	950	400	100	1000	600	-	100	100	500	100	25	5075
9	Moong	500	1400	200	-	-	91	2000	200	-	30	100	-	10	-	4531

10	Lentil	-	-	-	-	-	84	375	-	-	-	100	50	-	100	709
11	Arhar	500	100	-	-	100	100	1000	-	-	-	-	-	-	232	2032
12	Groundnut	-	-	-	-	-	-	2000	-	-	-	-	-	1000	45	3045
13	Soybean	-	-	-	-	1000	2000	2000	-	-	-	500	1000	-	-	6500
14	Sunflower	-	-	-	100	-	-	300	-	-	-	-	-	-	-	400
15	Toria/Mus.	-	200	50	NA	-	100	200	-	20	150	100	100	100	100	1120
16	Sesamum	-	200	-	-	-	-	-	-	-	-	-	-	50	-	250
17	Cotton(V) /Hyb	100	100	100	200	200	50	100	-	200	-	100	-	-	-	1150
18	Castor	-	500	-	-	-	50	400	-	-	-	-	-	-	-	950
19	Ragi	-	-	-	-	-	-	500	-	-	-	-	-	-	-	500
20	Smallmillet (Foxmillet, Parso millet, Kodo millet.	-	-	-	-	-	-	200	-	-	-	-	-	-	-	200
	Total:	5000	4300	5000	96500	6000	*6025	41100	5800	3445	1481	19412	7800	7000	7502	129515

Seed maintained for NE States (Certified)

i. Assam Seeds Corporation	3671 Qtls
ii. National Seeds Corporation	2750 Qtls.
iii. State Farms Corpn. of India	<u>2750 Qtls.</u>
	9171 Qtls.

Total

i. NE States	9171 Qtls.
ii. Other than NE States	<u>129515 Qtls.</u>
Total:	138686 Qtls.

* Earlier MP figure was shown as 4882 Qtls.

STATEMENTS-2004

Establishment & Maintenance of Seed Bank

Quantity of Seed maintained by Seed Corporations in the Seed Bank

FOUNDATION SEED

2003-2004

(Qty. in Qtls.)

Sl. No	Name of the State	Quantity of Seed Maintained (Qtls.)
1.	Andhra Pradesh	300
2.	Gujarat	499
3.	Haryana	300
4.	Karnataka	70
5.	Maharashtra	229
6.	Orissa	100
7.	Uttranchal	570
8.	National Seeds Corporation	1500
9.	State Farms Corporation of India	4800
	Total :	8368

