12

STANDING COMMITTEE ON **AGRICULTURE**
(2001)

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MINISTRY OF AGRICULTURE
(DEPARTMENT OF AGRICULTURE AND COOPERATION)

CULTIVATION OF COTTON

{Action Taken by the Government on the Recommendations/
Observations contained in the Twelfth Report of the
Standing Committee on Agriculture (1998-99) on Cultivation of Cotton}

TWELFTH REPORT

Presented to Lok Sabha on 19 March, 2001
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LOK SABHA SECRETARIAT
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CHAPTER I

REPORT

This report of the Committee on Agriculture deals with the action taken by the Government on the recommendations contained in the Twelfth Report (Twelfth Lok Sabha) of the Standing Committee on Agriculture (1998-99) on Cultivation of Cotton which was presented to the Lok Sabha on 3rd December 1998 and laid in Rajya Sabha on 3rd December 1998.

1.2 Action taken notes have been received from the Government in respect of all the 22 recommendations contained in the Report. These have been categorised as follows :-

(i) Recommendations/Observations that have been accepted by the Government (Chapter – II of the Report)

RecommendationNo:
1,3, 5,6,7,9,10,11,12,13,15,16,17,18,19,20,21,22

Total 18

(ii) Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies (Chapter – III of the Report) Sl.No.14

Total 1

(iii) Recommendations/Observations in respect of which reply of the Government have not been accepted by the Committee (Chapter – IV of the Report) Sl. No.2,4,8

Total 3

(iv) Recommendations/Observations in respect of which final replies of the Government are still awaited (Chapter – V of the Report) Sl.No. NIL

1.3 The Committee will now deal with the action taken by the Government on some of their recommendations.

Disparity in Cotton Productivity in the same Agroclimatic Zone

Recommendation (Sl. No :2, Para No.4.2)

1.4 The Committee had noted that the average yield per hectare in the cotton growing areas of Pakistan was 602 kgs. in 1995 whereas in the States of Punjab, Haryana and Rajasthan which fell within the same agroclimatic zone and with the same intensity of irrigation as that of the areas across the border in Pakistan, the average yield per hectare during 1995-96 ranged from 338 kgs. to 442 kgs. When asked to explain the vast disparity in productivity in areas falling within the same agroclimatic zones, the Government could not tender any convincing reply. The Committee failed to understand as to how there could be such wide disparity in cotton productivity at two different places in the same agroclimatic zone. The Committee took a serious view of this disparity and recommended that the Government should analyse in detail the position and identify the constraints in the matter and chalk out a suitable Action Plan to boost the productivity of cotton in the States of Punjab, Haryana and Rajasthan.

1.5 The Ministry in their reply have stated that the question of disparity in productivity of cotton in this agro-climatic zone in Pakistan and India has been examined and it has been found that the productivity of the Northern cotton belt of India was more or less at par with that of Pakistan until the early 1990s. The productivity in the States of Punjab and Haryana started declining only after that period. The comparative figures are given below for the years 1995-96 to 1997-98 :

A = area in lakh ha.
P = Production on lakh bales (170 Kg each)
Y = Yield in kg per ha.

Country/ State		1995-96	1996-97	1997-98
Pakistan	A	29.97	31.49	28.93
	P	106.00	93.70	94.00
	Y	601	506	552
Punjab	A	7.50	7.42	7.27
	P	19.50	19.25	9.41
	Y	442	441	220
Haryana	A	6.46	6.52	6.38
	P	12.83	15.07	11.29
	Y	338	393	301
Rajasthan	A	6.06	6.54	6.45
	P	13.38	13.63	8.67
	Y	375	354	229

The reasons for this decline have been identified as under :-

(I) Due to excess irrigation of crops as well as seepage of canal water, the water table is rising causing waterlogging of cotton fields which is resulting in Soil Salinity. Thus due to waterlogging and salinity, cotton yields are reduced.

(II) Alongwith the increase in the irrigated area, the micro-climatical conditions are becoming more favourable for spread of diseases like Leaf Curl Virus causing damage to cotton production.

(III) American boll worm is becoming resistant to pesticides resulting in heavy loss to cotton crops due to occuring of this pest on epidemic scales.

(IV) In the recent years, there were unseasonal rains during September/October and cloudy weather from October to November. These conditions favoured the buildup of dieseases and pests, hindered spraying operations against pests as well as washing away of sprayed chemicals by rains which defeats the control measures taken against pests and diseases causing loss to cotton crop.

(V) Unscruplous sale of sub-standard inputs particularly pesticides and fertilisers,were also responsible for lowering of yields in cotton.

Research efforts have been intensified to control the Leaf Curl Virus and Myrothecium Leaf Spot diseases by developing pest resistant varieties/hybrids like LH-144. The integrated pest management approach is also being popularised.

Comments of the Committee

1.6 **The Committee are not convinced with the reply of the Government. The Committee note that the productivity of cotton in Northern belt of India was more or less at par with Pakistan until 1990, when the productivity in States of Punjab and Haryana started declining. The Committee are constrained to note that despite observing this declining trend during the last 8-10 years, no concrete measures have been taken to arrest the same. The main reasons for fall in production as stated in their reply were water-logging in irrigated areas and spread of certain pests which affected the cotton crop. The Committee feel that these problems can be overcome by better management of water resources and implementation of effective pest control measures. The Committee, therefore, reiterate that the Government should chalk out an Action Plan to enhance the productivity of cotton by taking appropriate and timely remedial measures in the States of Punjab, Haryana and Rajasthan so that the declining trend in production of cotton is reversed.**

Need to Produce and Supply Adequate Quantity of Certified Seeds
Recommendation (Sl. No :4, Para No.4.4)

1.7 The Committee found that due to non-availability of quality certified seeds in adequate quantity and in time, farmers resorted to the use of several non-descript varieties of cotton seeds which had led to use of impure seeds in consequent cultivations and also mixing of various varieties of seeds making it difficult to maintain genetic purity. The multiple varietal scenario also complicated the insect/pest problems making it difficult to tackle them. Due to the non-availability of required volume of pure and quality delinted seeds, the required plant population for enhancing yields could not be maintained. As of now only 55 per cent of the total area under cotton cultivation had come under use of certified quality seeds, owing to non-availability of certified seeds. It was a matter of grave concern to note that adequate quantity of certified seeds were not being produced by the State seed producing agencies, despite abundant

availability of breeder seeds. The government could supply only 2,43,372 quintals of certified seeds under the Intensive Cotton Development Programme (ICDP) during the whole of the Eighth Plan period against a target of supply of 3,59,479 quintals. The physical achievement of only 68 per cent of the target in this matter spoke volumes of the lack of effort on the part of the governmental machinery in the desired direction. Even during the first year of the Ninth Plan, the track record had not improved, as the quantum of certified cotton seeds supplied was only 49,967 quintals against a target of 66,415 quintals. The Committee were unhappy about the huge shortfalls in the achievement of targets in distribution of certified seeds. The Committee wished to impress upon the government that the use of certified seeds is the first requirement for increasing productivity, as the quality and quantity of cotton produced would be entirely dependent on the quality of seeds sown. Therefore, the challenge of increasing productivity should be first addressed at the seed stage itself. The Committee had noted that the government had admitted that this was the weak link in the entire chain of efforts and they, therefore, had recommended that a comprehensive cotton seed production and supply strategy should be first hammered out to meet the demand for certified seeds and the strategy should be implemented from the next sowing season itself. If necessary, the government should adopt steps to encourage the private sector also in the production of quality cotton seeds with sufficient incentives and also with adequate monitoring mechanism to ensure that they produce the desired quality of seeds. The Committee had desired that the working of the State seed producing agencies should be toned up by suitably reviewing their current practices, as they have actually failed in producing adequate quantity of certified seeds, despite the availability of breeder seeds in abundance. The Committee had recommended that adequate financial assistance should be given to the States for this purpose and it should be ensured that the funds allocated for this aspect is not diverted to other programmes. The Committee desired that the farmers should be pointedly educated on the use of acid delinted and chemically disinfected seeds and this aspect of education of farmers should form a specific part of the seed production and supply strategy.

1.8 The Ministry in their action taken replies have stated that as agriculture is a State subject, the production and distribution of quality/certified seeds is primarily the responsibility of the State Governments. Certified seed production is organised through State Seed Corporations, Departmental agricultural farms, cooperatives, etc. The distribution of seeds is undertaken through a number of channels. The efforts of the State Government are being supplemented by National Seeds Corporation and State Farms Corporation of India which produce varieties of National importance.

Certified/quality seeds requirement is assessed by State Governments on the basis of the area sown under different crop varieties, area covered by hybrid and self pollinated varieties as well as the seed replacement rate achieved. The Government of India periodically assessess the requirement and availability of seeds through detailed interaction with State Governments and seed producing agencies in the biannual Zonal Seeds Review Meetings and the National Kharif and Rabi Conferences. The Department of Agriculture and Cooperation facilitates tie-up arrangements with seed producing agencies to ensure that the requirement of seeds is met to the maximum extent

possible. Certified/quality seed requirement and availability of cotton from 1992-93 to 1998-99 is as under :

(Qty. in lakh Qtls.)

S.No.	Year	Require-ment	Availability		
			Certified Seed	Quality Seed	Total
1.	1992-93	2.16	1.93	0.31	2.24
2.	1993-94	2.21	2.12	0.05	2.17
3.	1994-95	2.02	2.49	0.30	2.79
4.	1995-96	2.26	3.35	0.06	3.41
5.	1996-97	2.26	2.80	0.08	2.88
	Total	**10.91**	**12.69**	**0.80**	**13.49**
1.	1997-98	2.62	3.57	0.12	3.69
2.	1998-99	2.62	3.52	0.12	3.64
	Total	**5.24**	**7.09**	**0.24**	**7.33**

Certified seed comprised approximately 97% of the total seed availability during 8th Plan. Similarly , during the period 1997-99, percentage of certified seed was 96% approximately.

The net-work of Seed Corporation has been strengthened through the National Seeds Project launched by Government of India in 1976 with assistance from the World Bank.

Besides, Central assistance for Seed production and distribution is also provided through Centrally Sponsored Scheme on Cotton Development Programme.

In so far as financial assistance is concerned, provision for assistance to the State Governments has been kept as 50% of the prescribed cost limited to Rs.2500 per quintal under Intensive Cotton Development Programme (ICDP) during 8th Plan for production of Breeder Seeds. For distribution of certified seed assistance to the State Governments, at the rate of 25% of the cost of seed limited to Rs.300 per quintal for Mechanically Delinted Certified seeds and Rs.400 per quintal on the Acid Delinted Seeds has been kept. Through Front Line Demonstrations farmers are educated on the use of Acid Delinted and Chemically disinfected Seeds.

Under the Technology Mission on cotton during IX Plan assistance for production of Breeder Seeds is proposed to be enhanced to Rs.3000 per quintal and production of Foundation and Certified Seeds has been kept at Rs.500 per quintal on additional production over and above the average of three years. Similarly assistance for distribution of certified seeds has been enhanced by 50% of the cost limited to Rs.1000 per quintal. Under Technology Mission on Cotton, the farmers will be educated through Frontline and Field Demonstrations for the use of quality seeds including the use of Acid Delinted and Chemically Disinfected Seeds.

Comments of the Committee

1.9 **The Committee find it surprising that although availability of certified and quality seeds exceeds the requirement of the cotton growers, but quality seeds are being used only in 55% of the area under cotton cultivation. In the remaining area under cotton cultivation, farmers continue to use non-descript varieties of cotton seeds, thereby obtaining lesser yield of cotton and incurring heavy losses. According to the Committee, the Government have not been able to popularise the use of certified and quality seeds among the cotton farmers. The Committee also note with regret that these are also not being made available to them at reasonable rates. The Committee, therefore, strongly recommend that vigorous efforts should be made to educate farmers and make them aware of the use of certified and quality seeds. The State Governments should also be asked to gear up their seed distribution machinery, so that certified and quality seeds reach the farmers without any hinderance and at a very reasonable rates.**

Production of more Hybrid Seeds

Recommendation(Sl. No . 5, Para No. 4.5)

1.10 The Committee further recommended that in the production of certified seeds, emphasis should be on the production of a higher quantum of hybrid seeds, as at present only in 37 per cent of the total land under cotton cultivation hybrid seeds are being used.

1.11 The Department of Agriculture and Cooperation in their Action Taken Replies stated that the Certified /Quality Seed requirement and availbility position of hybrid cotton during 1997-98 and 1998-99 as reported by State Governments during Zonal Seed Review Meetings as indicated below, shows that there was adequate quantity of hybrid Cotton Seeds to meet the requirement.

(Qty. in Qtls.)

Year	Requirement	Availability
1997-98	60,567	1,00,126
1998-99	80,182	1,57,074

It is true that at present hybrid seed covered only 37% land under cotton cultivation. This needs to be further enhanced.

Comments of the Committee

1.12 **The Committee would like to be apprised of the concrete measures taken by the Department to enhance land coverage under hybrid seed cotton cultivation.**

Panchayat Level Seed Production
Recommendation (Sl. No.8, Para No.4.8)

1.13 The Committee had recommended that a scheme should be evolved so that in each Panchayat some plots are identified and taken on rent by the governmental agencies and by non-governmental seed-growing agencies and by progressive farmers to undertake production of location-specific quality certified cotton seeds on those plots for onward supply to the farmers locally. The production of seeds should be got done with the active assistance and guidance of agricultural scientists available with the agricultural institutions in the vicinity. This arrangement would ensure timely availability of seeds at the village level itself and the seeds could be made available at cheaper rates, as the element of cost of transport of certified seeds to the distribution centres will be completely eliminated in this process. Since only location-specific seeds will be grown, there will be guaranteed germination of seeds. As a part of the Technology Mission, this endeavour should be undertaken so that the entire country is covered within a short span of time. In order that the farmers are encouraged to use only certified seeds, the Committee recommended that these seeds should be made available at heavily subsidised rates and it would ensure that the use of impure variety of non-descript seeds is completely dispensed with and within a short period of time, complete seed replacement with new quality varieties could be achieved.

The Committee further recommended that a special scheme should be evolved to encourage the setting up of seed grower cooperatives in the Panchayats so that this activity could be undertaken with more participation by the local community.

1.14 The Ministry in their action taken replies have stated that in the proposed Technology Mission on cotton, provision has been made for distribution of certified seed so that small and Marginal Farmers with poor resources can use the quality seed in place of the seeds of non-descript and uncertified varieties which lead to reduction of productivity and decrease of production considerably . For popularization of the use of certified seed, the proposal is for increase of financial assistance from Rs.400 per quintal in the existing Intensive Cotton Development Programme (ICDP) to Rs.1000 per quintal under the proposed Cotton Technology Mission during IX Five Year Plan. In the Technology Mission targets for distribution of certified seeds has been enhanced considerably in comparison to existing ICDP scheme. In the Cotton Technology Mission, provision has also been made for giving incentivies to seed producing agencies in public sector through State Departments of Agriculture for production of certified/foundation seeds. In the Mission, provision for establishment of delinting machines has been made through the State Seed Corporations and Cooperative Ginning Units so that seed free from pest and disease infestation could be supplied to the farmers. It is proposed that delinted seed shall be provided to the level of 50% of the total planting material requirment within next 5 years which will reduce the infestation of disease and pests and also improve the plant population resulting increase in the production and productivity.

Cultivators of Cotton Released / Notified since 1995 to till 1.9.99 are given below :-

S.No.	Name of cultivators	Area of Adaptations
1.	TM –1312	Southern Cotton Zone, Tamil Nadu, Andhra Pradesh, & Karnataka
2.	Fateh	Punjab
3.	LK-661	Andhra Pradesh
4.	LAM-389	Andhra Pradesh
5.	Arogya (NISD-2)	Central Zone
6.	Desi Cotton HD-107	Haryana
7.	Desi Pha-46	Maharashtra
8.	G Cot Hyb-10	Gujarat
9.	G Cot 16 G(B)-20	Gujarat
10.	G Cot 17 (Ch-Bhv-46)	Gujarat
11.	Desi Cotton LD-491	Punjab
12	American Cotton LH 1556	Punjab
13.	American Cotton HHH-81	Haryana
14.	PKV Hyb-3 (CAHH 468)	Maharashtra
15.	PKVRAJAT(AKH 84635)	Maharashtra
16.	Ankur –651	Maharashtra
17.	NH – 452	Maharashtra
18.	Desi Cotton PA 183	Maharashtra
19.	DHB-105	Karnataka
20.	Maru Vikas (Raj HH-16)	Rajasthan
21.	RS-875	Rajasthan
22.	NBHB-11	Recommended for cultivation in CZ comprising medium rain fall area of Gujarat, Madhya Pradesh and Maharashtra. Under irrigated conditions.
23.	Surabhi (VRS-7)	SZ (Tamilnadu, Karnataka & Andhra Pradesh under assured rainfall & Irrigated conditon).
24.	SVPR-2 (TSJ 289)	Karnataka, Tamilnadu & Andhra Pradesh
25.	JKHY-2	Madhya Pradesh
26.	Jawahar Tapti	Madhya Pradesh
27.	LDH-11	Punjab
28.	K-11	Tamil Nadu
29.	H-1098	Haryana
30.	SRUTHI (CDHB-1)	Tamil Nadu, Andhra Pradesh & Pondicherry
31.	OM Shankar (CSHH 29)	NZ Punjab, Rajasthan & Haryana (Cultivation of this hybrid in Western border area adjacent to Pakistan is to be avoided).
32.	Pusa B-6	Northern Cotton Zone (Pb, Haryana, Rajasthan & Western Uttar Pradesh)
33.	F 1378	Punjab

34.	DHH 11	Karnataka
35.	KC2	Tamilnadu
36.	Kashi Nath (NFHB 109)	Recommended for cultivation in Western Maharashtra & Gujarat in black cotton soil areas with average of 25" to 40" of well distributed rainfall
37.	Ankur-09 (WHH-09)	Maharashtra, Gujarat & Madhya Pradesh
38.	Ajit (LHH-144)	Recommended for cultivation in leaf virus affected areas of Northern Cotton Zone comprising of Punjab, Rajasthan and Haryana under irrigated condition.
39.	AAH-1(Desi Cotton Hybrid-I)	Rajasthan, Punjab, Haryana
40.	Narasimha (Nandyal-1325)	Andhra Pradesh

With the objective of ensuring that the Grower members are able to obtain quality cotton seeds, NCDC in the year 1988 introduced a scheme for cotton development. The objective of the scheme, among others, was to promote the use of good quality seed and encourage cultivation of new improved variety of cotton. The following formed a part of the seed production and distribution under the scheme :

The cotton grower members of coopeartive spinning mills should be encouraged to form small groups for the production of genetically pre-certified seeds. Production of foundation seed by these small groups on contract should be encouraged. Specialised staff would be appointed by the mills who would closely supervise these farms.

Foundation seeds to be multiplied by these farmer groups would be processed in the spinning mills ginnery and distributed to the grower members on a no profit/no loss basis.

Initially, the particpating cooperative spinning mill could take up around 25 ha. under seed production by organising 5 farmer groups of about 10 members each.

The cost of production of seeds would be partly subsidised by the GOI/NCDC and provide adequate margins to the farmer groups as incentive.

The scheme came into operation in Jan., 1988, initially for a period of five years and continued upto 1995-96. 14 spinning mills took advantage of the scheme. A statement indicating details of varieties of seed produced/provided to the beneficiaries is given below:-

Statement of varieties of Seeds Produced / Distributed under the Cotton Development Scheme

Year	Varieties of Seeds Produced/ Distributed
1988-89	Ankur-52, LRA-5166, MECH-1, ABADHITTA, JK-119, MECH-4
1989-90	LRA-5166, DCH-32, NHH-414, H-6, H-4, NHW-414, IRA-5166, AHH-468, MCU-5, SUPRIYA, KOP-498, LAXMI, SIMA-1, KANCHONA, Hb-224, DCH-32
1990-91	LRA-5166, JK-119, ABADHITTA, DCH-32, KAVADI, IRA-5166
1991-92	LRA-5166, JK-119, DCH-32, NHH-414, NEW VH-98, AHH-468, MCV-5, 4 HECT

1992-93	H-4, H-6, Y-1, PKV-2, LRA-5166, RCH-11, MECH, DCH-32, NHH, JAGDISH ACTT-100
1993-94	DCH-100, DCH-32, R-57g, J-34, F-505, SHARDA, ABADHITTA, LK-861, L-389, MCU-544, SAVITHA
1994-95	H-6, SAMEX, 4-AGRITE, RST-9, RGS (Desi), B-NARMA, SAVITHA, F-846, JK-276, 8-2
1995-96	H-6, MCV-5VT, RG-8, B-NARMA, RS 7-9, G-AGRITE, F-846, F-505, BIKANERI NARMA, SAVITHA

State Level Cotton Federations like the Gujcot are reported to have undertaken the work of producing seed of Hybrid Cotton with the aim to ensure that the farmers get pure and certified seeds.

Comments of the Committee

1.15 **The Committee note with concern that the Government have not given any specific reply to the recommendation of the Committee regarding identifying plots in each panchayat and taking them on rent for undertaking production of location specific quality certified cotton seeds to ensure timely availability of seeds to the farmers. They feel that no serious deliberations have taken place in the Ministry in this regard. The Committee, therefore, strongly reiterate their above recommendation and desire that a positve and early action be taken and compliance reported to the Committee within 3 months of the presentation of this Report to Parliament.**

Relief Measures in favour of farmers affected by the Cotton Crop Failure
Recommendation (Sl. No.18, Para No. 4.18)

1.16 The Committee had been informed that 269 farmers committed suicide in Andhra Pradesh while 23 farmers took this extreme step in Maharashtra mainly due to damage to cotton crop on account of (i) adverse weather conditions (ii) pest attack, and (iii) indebtedness. The Committee had been informed that several relief measures had been undertaken to mitigate the hardships suffered by the affected farmers. The Committee noted that steps such as rescheduling of bank loans and non-recovery of either principal or interest of agricultural loan for a period of two years, immediate dispersal of credit by banks for fresh crops, no compounding of interest in respect of rescheduled loans had been taken in respect of institutional loans taken by farmers. The Committee desired that suitable measures should be taken in respect of loans taken by farmers from private money lenders and from private financial institutions so that the farmers are given the right protection against exploitation by them. The Committee further noted that a study group under the Chairmanship of Shri Bhagat Singh, Additional Secretary, Department of Agriculture & Cooperation, had been constituted to suggest appropriate remedial measures in respect of crop failure in Andhra Pradesh. The Committee recommended that the report of the said Study Group should be got expedited and its recommendations

should be implemented in toto within two months from the date of presentation of this Report.

1.17 The Ministry in their action taken replies have stated that the Report of the Committee under the chairmanship of Shri Bhagat Singh, Additional Secretary, Department of Agriculture & Cooperation to look into the various aspects related to suicidal deaths on account of failure of cotton crop has been received. Following action has been taken :

(i) Report has been sent to Government of Andhra Pradesh , Reserve Bank of India, National Bank for Agriculture and Rural Development and agencies concerned for immediate appropriate action.
(ii) The district administrations are taking suitable steps regarding protection against private money lenders and private financial institutions.
(iii) State Governments have been impressed upon from time to time to enact legislations on matters relating to money lending.

Comments of the Committee

1.18 **The Committee would like to know the action taken on the recommendations contained in the Bhagat Singh Report on the suicidal deaths by farmers by Government of Andhra Pradesh, Reserve Bank of India, National Bank for Agricultural and Rural Development and agencies to whom the report was sent for immediate and appropriate action.**

Procedural Shortcomings
Recommendation (Sl. No.21, Para No.4.21)

1.19 The Committee had been informed that the State Governments had not been issuing financial sanctions for various components of the Intensive Cotton Development Programme and the funds were not released for the implementation of the scheme in time by them. Besides this, some of the state governments had not been sending appropriate feedbacks to the Directorate of Cotton Development and it hampered the preparation of Consolidated Reports for the proper review of the scheme in time. Some of the states did not implement all the components of the ICDP Scheme. The Committee, therefore, recommended that the State Governments should be instructed to implement all the components of the ICDP scheme and they should be directed to issue administrative sanctions in time and the release of funds under the scheme should be done on top priority basis. The State Governments should be asked to submit their monthly progress report on physical and financial achievements of the ICDP scheme to the Directorate of Cotton Development and the Ministry of Agriculture regularly without fail. The Committee felt that the ICDP Scheme and the Technology Mission on Cotton would be successful only if the State Governments follow all the guidelines scrupulously and

1.20 The Ministry of Agriculture in their action taken report have stated that the State Governments are clearly advised through the Administrative Approval issued by the Government of India to ensure timely sanction and release of funds for various

components of the ICDP scheme. The system of monthly reporting by the State Governments on physical and financial progress is strictly followed. However, some states defaulted in submitting timely reports and returns. The progress is monitored by the Directorate of Cotton Development, Mumbai. The progress is also reviewed in National Kharif and Rabi conferences on Agriculture campaigns and also during the visits by the Government of India officials to the cotton growing states. The matter is followed up from time to time with the State Governments as suggested by the Standing Committee.

Comments of the Committee

1.21 **The Committee note that some States have defaulted in submitting timely physical and financial progress reports and returns to Government of India under the ICDP Scheme. The Committee desire to know the names of these States and suggest that necessary instructions in this regard may be reiterated to the State Governments for timely submission of reports and returns.**

CHAPTER II

RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Provision of Micro Irrigation Facilities for Cultivation of Cotton

Recommendation (Sl. No. 1)

2.1 The Committee find that the average yield of cotton per hectare in India is much lower than that of the other major cotton producing countries. The major reason for the low yield as stated by the representatives of the Ministry of Agriculture during evidence session is that the crop is grown primarily under irrigated conditions in other countries, while in India only 34% of the total area under cotton has assured irrigation. While in the North India, all areas growing cotton are irrigated there is no assured irrigation available for cotton in other areas. In other areas, it is grown mainly under rainfed conditions. Even in the fully irrigated areas in the North Zone the highest yield per hectare in 1996-97 was 441 kg. in the State of Punjab which is far below the yield of 1063 kg. per hectare in Turkey. In unirrigated areas the yield per hectare was as low as 141 kg. in the State of Madhya Pradesh in 1996-97 which had normal rainfall during the monsoon season that year.

In order to promote optimum use of water in rainfed areas and to ensure continual supply of water at critical times for the cotton crop, a scheme of assistance for installation of sprinkler sets was taken up as a part of the Intensive Cotton Development Programme (ICDP) during the Eighth Plan. Against a physical target of 13,298 sets, only 11,525 sets could be installed under the scheme. Although the physical target under this scheme has been scaled up to an ambitious 1,37,360 sets in the Ninth Plan, the annual targets in the first two years of the Ninth Plan have been kept at as low as 2,698 and 3,350 for 1997-98 and 1998-99 respectively. The Committee are at a loss to know as to how an ambitious target of installation of 1,37,360 sprinkler sets could be achieved within the Ninth Plan period, if the annual plan targets are kept at around 3000 sets a year. The Committee take a serious view of the continued shortfall in the achievement of physical targets for installation of sprinkler sets in the Eighth and Ninth plan period. They therefore recommend that from 1998-99 onwards, the physical targets for assistance for installation of sprinkler irrigation sets should be suitably

revised upwards so that the Ninth Plan target could be actually achieved. Since irrigation is the most important singular basic factor on which the productivity of cotton depends, a quantitatively higher chunk of the funds should be earmarked for this scheme component. The Committee feel that if this basic facility is ensured in all rainfed areas, productivity of cotton can be dramatically increased overnight and all other components of the scheme will have meaning only if this essential basic input is provided in the cotton-growing areas. The key to the whole problem lies in the adoption of watershed based management approach in a big way and in the provision of micro-irrigation systems such as sprinkler irrigation sets, drip irrigation sets etc. The Committee, therefore, recommend that the entire strategy for cotton development should be re-oriented basing it on this aspect of provision of assured irrigation to cotton-growing areas.

Action Taken Reply

2.2 With reference to observations of the Standing Committee regarding low average yield of cotton in India, it is reiterated that cotton is cultivated in rainfed condition on 2/3rd area in which the yields are very low which lowers the average yield of the country. Since the existing scheme of ICDP had been implemented on existing basis during the first three years of the 9th Plan, the physical and financial targets therefore were fixed at lower levels with slight increase over the previous years. The target of 1,37,360 sets was proposed for the 9th Five Year Plan on the assumption that the New Centrally Sponsored Scheme of Technology Mission on Cotton (TCM) Development will come into operation at the initial stage of the 9th Five Year Plan. The TCM however, is still to be cleared for implementation. Under the Technology Mission on cotton, higher targets and allocations have been proposed for the remaining period of the 9th Five Year Plan. As during the first years under reference, the scheme was continued as per 8th Plan pattern, the targets were in line with the 8th Plan targets. Under the watershed development programmes, cotton is one of the crops in the cropping system which is followed under rainfed conditions. The watershed projects help in augmenting the moisture regime and water resource development for micro irrigation. Thus cotton is part of the watershed development programme particularly in areas like Maharashtra and Madhya Pradesh. Further, the strategy for cotton development has been reoriented giving higher thrust on micro irrigation through sprinklers and drips for which enhanced allocations are proposed.

Early Clearance for Technology Mission on Cotton

Recommendation (Sl. No. 3)

2.3 The Committee are happy to learn that the Government propose to launch a Technology Mission on cotton in the Ninth Plan to give a boost to cotton production. The Committee are, however, disappointed to find that the proposal has still not received the approval of the Planning Commission, although more than a year and a half of the Ninth Plan period is already over. The Committee desire that the approval for the scheme should be expedited and it should be launched for implementation without any further loss of time. The Committee recommend that under the component schemes of the Mission, the financial and physical targets for this year and for the years to come should be suitably enhanced in order to make good the time and opportunity lost in the initial period of the Ninth Plan so far.

Action Taken Reply

2.4 The proposed launching of Technology Mission on Cotton has unfortunately been delayed. It has, however, received the approval of the Planning Commission and Expenditure Finance Committee. The approval of the Cabinet Committee on Economic Affairs is being sought. In order to make good the loss of time, the targets meant for five years have now been compressed into three years.

Production of more Hybrid Seeds

Recommendation (Sl. No. 5)

2.5 The Committee further recommend that in the production of certified seeds, emphasis should be on the production of a higher quantum of hybrid seeds, as at present only in 37 per cent of the total land under cotton cultivation hybrid seeds are being used.

Action Taken Reply

2.6 The Certified/Quality Seed requirement and availability position of hybrid cotton during 1997-98 and 1998-99 as reported by State Governments during Zonal Seed Review Meetings as indicated below, shows that there was adequate quantity of hybrid Cotton Seeds to meet the requirement.

(Qty. in Qtls.)

Year	Requirement	Availability
1997-98	60,567	1,00,126
1998-99	80,182	1,57,074

It is true that at present hybrid seed covered only 37% land under cotton cultivation. This needs to be further enhanced.

Comments of the Committee

2.7 For Comments of the Committee please refer to Para No. 1.12 of Chapter I of this report.

Denotification of Old Varieties of Seeds

Recommendation (Sl. No. 6)

2.8 The Committee find that a large number of varieties of cotton seeds are in use in any given State at a time and it is necessary to reduce these many varieties to the growing of only specific varieties so that a proper strategy can be chalked out to tackle various problems the crop might face. The Committee, therefore, recommend that the Government should immediately take appropriate action to denotify old and unwanted varieties of cotton seeds. It should be stipulated in production guidelines that ginning should be done for only one variety of cotton at a time so that no mixing of various varieties of seeds occurs and the farmers use only one variety of delinted seeds and any problem affecting that variety of crop could be tackled by application of one uniform package technology.

Action Taken Reply

2.9 The procedure followed for de-notification of seeds is as follows:—

The concerned breeder or the Sponsoring Institute/State Governments sends the denotification proposal alongwith the justification for denotification and comments of the Projects Co-ordinator (Cotton) to the Central Sub-Committee on Crop Standards, Notification and Release of Varieties for Agricultural crops constituted under the Seeds Act, 1966 for denotification. So far 17 varieties of cotton have been denotified. A list of the Cotton Cultivars is given below:—

List of Cotton Cultivars De-Notified

S.No.	Variety	Denotification S.O. Number and Date
1	2	3
1.	C. Indore-1	563 (E)/30.8.91
2.	JKHY-11	—do—
3.	RS-89	—do—
4.	SS	—do—

1	2	3
5.	320F	563 (E)/30.8.91
6.	Vimar	—do—
7.	PST-9	—do—
8.	J. 34	865 (E)/27.11.92
9.	J-205	—do—
10.	LH-372	—do—
11.	AK-235	429 (E)/3.6.94
12.	AK-277	—do—
13.	Ganga-1	—do—
14.	TNB-1	424 (E)/8.6.99
15.	CDS-156	—do—
16.	MCU-8	—do—
17.	K-9 (Karunganni)	—do—

As per the seed production guidelines, ginning of only one cultivar of cotton is taken at a time. The ginning machine is thoroughly cleaned and rinsed before another cultivar of Cotton is fed into the machine so as to avoid mechanical mixing of cotton seeds of different cultivars.

Support Measures for Timely Sowing of Seeds

Recommendation (Sl. No. 7)

2.10 The Committee have been informed that timely sowing of seeds is often delayed by 3 to 4 weeks due to interruptions in power and water supply in the Northern Zone leaving very little time for land preparation. The Committee wish to impress upon the Government that timely sowing in the appropriate season is the time tested method for getting higher yields and for ensuring good quality produce. Therefore, the Committee recommend that the Union Government should take up with the State Governments the matter of providing water and power supply for the cotton growing belt in the Northern part of the country positively by the 15th May each year. In the rainfed areas of Southern and Central Zones, the Committee recommend that the Government should propagate the use

of techniques for advancing the sowing by such methods as crow-bar planting, dry sowing, transplantation of hybrids through proper agricultural implements, so that the activity of sowing is carried out within a short span of time and by the desirable time. The Committee desire that the farmers should be made to understand that synchronous maturing of cotton will take place only due to timely planting of one single variety and this is the only method for realising complete harvest of cotton at one time.

Action Taken Reply

2.11 This recommendation is relating to support measures for timely sowing of seeds like provision of power and irrigation. The matter has already been taken up with the cotton growing States of the country, so that they ensure power and water supply for timely sowing of cotton. In the rainfed areas of Central and Southern India, States are assisted for transfer of production technology in cotton under existing Centrally Sponsored Scheme of Intensive Cotton Development Programme (ICDP) through field demonstrations and training of farmers. Under the proposed scheme of Technology Mission on Cotton, efforts will be made to conduct more number of field demonstration, Farmers' training and supply of publicity material for increasing productivity of cotton including timely sowing of seeds.

Regulatory Mechanism to Stop Adulteration of Seeds

Recommendation (Sl. No. 9)

2.12 The Committee note that the Seeds Act, 1966, the Seeds Rules, 1968 and the Seeds Control Order, 1983 are the legal instruments now available to regulate the availability of good quality seeds to farmers and to stop the adulteration of seeds. The Committee have been informed that more than 3500 Seed Inspectors have been notified under these legal instruments. Apart from this, there are 99 Seed Testing Laboratories all over the country with a capacity to test more than 5 lakh seed samples. Despite these institutional arrangements, the Committee find that spurious cotton seeds are freely available in the market as a result of which there was large scale cotton crop failure in the last season leading to suicides by several farmers. The Committee are not at all satisfied with the working of these institutional arrangements and they recommend that an Expert Committee should be appointed to review the working of these institutional arrangements and to suggest remedial measures within a short time frame so that the legal arrangements and the enforcement machinery are made to function effectively.

The Committee further note that a national level Training Centre has been proposed to be set up at Varanasi for imparting training to officers involved in seed development during the Ninth Plan and no significant progress has taken place so far in the setting up of the Centre. The Committee recommend that immediate measures should be taken by the Government to set up this national facility within one year on a priority basis so that it enables the Government to strengthen the seed development work and the farmers get the quality seeds for cultivation. The Committee further recommend that the officers responsible for regulating the quality of seeds supplied in an area should be held responsible for any lapses if instances of supply of spurious seeds occur in their areas.

The Committee feel that there is an urgent need for imparting training in seed development to officers all over the country and they recommend that training centres on the subject should be established on zonal basis in addition to the national level training centre proposed at Varanasi.

Action Taken Reply

2.13 The Seeds Act, 1966, Seeds Rule, 1968 and the Seeds Control Order, 1983 have sufficient provisions to regulate the quality of seed distributed to the farmers. These provisions are implemented by the State Government. Under the Seeds Act a Committee called Central Seed Committee is constituted to advise the Central Government and the State Governments on matters arising out of the administration of this act and to carry out the other functions assigned to it by or under this Act. Under the Central Seed Committee, State Seed Sub-Committee for all the States is constituted to review the working of State Seed Testing Laboratories and implementation of Seed Law enforcement by the Seed Inspectors and submit its findings and suggest remedial measures for effective enforcement of Seed Law.

The Seed Policy Review Group, constituted under the Chairmanship of Dr. M.V. Rao, Ex-Vice-Chancellor, Andhra Pradesh Agricultural University, made some important recommendations for the development of the seed sector. The recommendations were examined by a Committee set up in this Department and based on its suggestions, the same were accepted to carry out Seed Policy reforms. Presently, Seed Policy Reforms which also include a Chapter on quality Control and Seed Legislation are under process for implementation.

For imparting training to officers involved in Seed Development during Ninth Plan, a National Seed Training Centre at Varanasi has been proposed. The CPWD had taken the work in hand to complete the work within 36-40 months. The progress would be monitored by the Department of Agriculture & Cooperation.

Under the Quality Control arrangement on seed, financial assistance to National Seeds Corporation, State Seed Corporation and State Seed Certification Agency for imparting training on Seed Development Programme has been proposed to enhance the knowledge level of Seed Development officers all over the country. Seven implementing agencies have already been identified for imparting training *viz.*

(i) Andhra Pradesh State Seed Development Corporation for Andhra Pradesh, Tamil Nadu, Pondicherry.

(ii) Karnataka State Seed Certification Agency for Karnataka, Tamil Nadu and Kerala.

(iii) Maharashtra State Seed Certification Agency for Maharashtra, Madhya Pradesh & Goa.

(iv) Gujarat State Seed Corporation for Gujarat, Madhya Pradesh and Rajasthan.

(v) Orissa State Seed Certification, Agency for Orissa, Bihar, Madhya Pradesh and West Bengal.

(vi) Assam State Seed Corporation for Assam, West Bengal, Sikkim, Himachal Pradesh, Meghalaya, Manipur, Mizoram, Nagaland and Tripura.

(vii) National Seed Corporation for Punjab, Haryana, U.P., Himachal Pradesh and Jammu & Kashmir.

Nutrient Management for Cotton Crop

Recommendation (Sl. No. 10)

2.14 The Committee find that the alluvial soil in the Northern Zone of cotton tract is generally deficient in nitrogen and humus and occasionally in phosphorous, while the black soils and loamy soils in the States of Gujarat. Maharashtra, Madhya Pradesh, Andhra Pradesh, Karnataka and Tamil Nadu are deficient in nitrogen, phosphorous and organic matter. The Committee also find that the farmers often use lower doses of fertilisers than the recommended ones particularly in the rainfed areas. The Committee have been informed that there is heavy incidence of pests due to excessive use of nitrogen fertilisers in the South Zone. The farmers do not have enough soil testing laboratories in their vicinity to know about the status of the nutritional contents of their soil in order to decide about

the quantum of various kinds of fertilizers that are required to be applied in their soil for producing a good crop. Even among the KVKs available nearby, there is no soil testing facility available to the farmers in most of them. The Committee, therefore, recommend that the ICDP and the Technology Mission should address this key problem so that location specific Integrated Nutrient Management packages are developed and made available to the cotton growers. The Committee recommend that more emphasis should be on management of soil fertility through adoption of suitable cropping systems. The package should aim at educating the farmers on the use of crop residues, organic manures, bio-fertilisers and recycling of farm-wastes. The farmers should be taught the right use of locally available mineral resources such as rock phosphates, pyrites etc. in order to strengthen the nutritional base of their soils, wherever these minerals are available. Sufficient number of demonstrations should be arranged on all these aspects of nutrient management.

The Committee further recommend that there should be a special component scheme in the Technology Mission on Cotton to have mobile soil testing labs in cotton growing areas for every panchayat block and all KVKs should have Mobile Soil Testing Labs to make available the fruits of technology at the door steps of the farmers.

Action Taken Reply

2.15 Large number of soil testing laboratories exists in the various States and some new laboratories are being established. These include many mobile laboratories also. The Centrally Sponsored Scheme of Balanced Integrated Use of Fertiliser has been approved for implementation during the 9th Plan under which 200 NPK (nitrogen, phosphorus and potash) laboratories and 30 micro-nutrient laboratories are proposed to be strengthened. In addition, 70 new NPK laboratories are also proposed to be established in areas where existing soil testing facilities are weak. In view of these proposals, the component of setting up of soil testing laboratories has not been made a part of the new scheme of Technology Mission on cotton.

Research system has already developed integrated nutrient management practices, which are being popularised amongst farmers through demonstrations and farmers' training under the existing crop production scheme. Large number of demonstrations and farmers' training are proposed under Technology Mission on Cotton for transfer of technology developed in the use of nutrients including bio-fertilisers, farm waste etc.

Shortfall in Achievements under Plan Schemes for Pest Control Arrangement in Cotton Crop

Recommendation (Sl. No. 11)

2.16 The Committee note that Cotton Crop is prone to pests and diseases which cause heavy damage to the crop Excessive use of pesticides and synthetic phyrothroids has also led to development immunity in the insects against pesticides. The lack of pest-resistant and disease-resistant varieties of cotton is the major reason for excessive use of pesticides. It has been noticed that the entire crop was virtually destroyed due to sucking pests like white fly, red cotton bug and jassids and by foliage feeders and by bollworms. Diseases like fusarium wilt, myrothecium leaf spot, root rot and leaf curl virus affect the crop in large areas. In order to tackle these problems of pests and diseases, the Union Government has been implementing a programme since the last Five Year Plan under the Intensive Cotton Development Programme (ICDP). The Committee are disappointed to note that under the programme physical targets could not be fully achieved in the matter of supply of plant protection equipments such as manually operated sprayers, powers operated sprayers and tractor mounted sprayers. The trend of low achievement continues in the Ninth Plan period also, as there was shortfall in the supply of power operated sprayers and not a single tractor-mounted sprayer was supplied in the first year of the Ninth Plan period. The achievement under the activities such as supply of bio-agents, pheromones and setting up of bio-agent labs was nil during the Ninth Plan period so far. Even in the matter of demonstrations on Integrated Pest Management Technique, there was shortfall in achievement in 1997-98. The Committee feel that there is need for toning up the pace of activities towards achieving effective pest management, as the large scale cotton crop failure in the last year was mainly attributable to the pest menace. The Committee recommend that the Government should undertake a special drive in the matter in the remaining years of the Ninth Five Year Plan so that productivity of cotton is increased significantly.

Action Taken Reply

2.17 With regards to distribution of plant protection equipment, targets were achieved in VIII Plan and during 1997-98 and 1998-99 for manually operated sprayers and power operated sprayers. However, in case of tractor mounted sprayers, no headway could be made even with very low targets. Farmers did not show interest in this equipment for low incentives and lack of standardised equipment.

The component of setting up of bio-agent labs and distribution of bio-agents were not part of the ICDP which is continuing since 8th Five year plan. These components have since been included in the newly proposed Centrally Sponsored Scheme of Technology Mission on Cotton with an enhanced financial assistance and allocation for these components to effectively handle increasing menace due to pests and diseases. In addition, an action plan has been prepared by the ICAR to tackle the problems of insect resistance through Insect Resistant Management (IRM).

American Bollworm Menace

Recommendation (Sl. No. 12)

2.18 The Committee have been informed that the yield in Punjab and Haryana in 1997-98 got reduced substantially due to large scale pest infestation. The Committee have been informed that a pest called American Bollworm has played havoc with the cotton crops in these areas in Northern Zone last year. The pest can only be controlled in the initial stages and no remedy is available against it in the advanced stages. No insecticide or pesticide is effective against this particular insect. The Committee have been informed that ICAR have still not developed a variety resistant to it, though they have started working on a transgenic BT material and hope to bring out the American Bollworm resistant variety in two to three years. The Committee, therefore, recommend that the Government should make concerted research efforts in this direction and bring out the desired variety in a shorter period of time.

Action Taken Reply

2.19 To minimise damages due to American Boll worm, pest Management package involving cultural methods, use of bio-agents and need based application of pesticides has already been developed and is being popularised. In addition, the research on evolution of transgenic cotton having resistance to American Boll worm is in progress at Central Institute of Cotton Research, Nagpur. Under the Technology Mission on Cotton, this activity is expected to receive a major thrust.

Control of Leaf Curl Virus Disease

Recommendation (Sl. No. 13)

2.20 During evidence, the Committee have been informed that in the last four years, a pest called Leaf Curl Virus had come into India from across the Pakistan border and has affected the cotton crop in large areas in the North Zone. The Committee have also been informed that this virus does

not affect the 'desi' varieties of cotton. In order to stop the transgression of this virus from across the border, it is necessary that along the border all over in the North West, desi cotton variety should be cultivated as a safeguard insulating belt. The Committee recommend that this suggestion for creation of a belt of desi cotton cultivated area along the Indo-Pak border should be implemented forthwith by suitably compensating the farmers who will be asked to cultivate desi variety of cotton in that area in the larger national interest.

Action Taken Reply

2.21 The IPM package for control of leaf curl virus has been developed and is being implemented in the States of Punjab, Haryana and Rajasthan. Varieties resistant to the disease have also been developed and recommended by the ICAR and State Agricultural Universities of Rajasthan and Punjab such as Rs-875, LHH-144, LRK-516, LRA-5166. These varieties are being popularised in the areas bordering Pakistan. In addition, the farmers in districts bordering Pakistan are being advised and persuaded to cultivate desi varieties to minimise damages due to the leaf curl virus in the villages. The response of the farmers is encouraging. Therefore, no provision of compensation has been felt necessary.

Emphasis on Bio-control Agents in the IPM Strategy

Recommendation (Sl. No. 15)

2.22 The Committee note that there is no appreciable progress made in the matter of construction of laboratories for multiplication of bio-control agents and for making arrangements for distribution of bio-control agents as a part of the Integrated Pest Management Strategy. The Committee recommend that more emphasis should be laid on these aspects in the cotton cultivating areas and larger financial allocations should be made for this purpose, as this is the only way for ensuring sustainable development and for ensuring a cleaner environment free from chemical pesticides.

Action Taken Reply

2.23 Bio-control agents play a vital role in the Integrated Pest Management (IPM) programme. Considering this, the Government has released Rs. 1067.50 lakhs during 8th Plan period to 29 States including major cotton growing States for the construction of Bio control laboratories, of which 14 have since been completed. Construction of the laboratories in remaining States except Bihar, Jammu & Kashmir, Uttar Pradesh, West Bengal and Goa are in progress (Annexure-I). The Scheme is being continued in the IX Plan. Bio-control agents are also being multiplied on a large scale

in the Central Integrated Pest Management Centres for release in the farmer's fields to the extent of 1800 million each year. In addition to the bio-control laboratories under the State Governments/Indian Council of Agricultural Research Institutions which are meeting the demands of the farmers, bio-control agents are also being produced in the private sector. Thus, national capacity for production of bio-control agents is as under:—

	Laboratories	Numbers
1.	Central Integrated Pest Management Centres (DAC)	26
2.	ICAR/SAUs	16
3.	State Bio Control Laboratories	30
4.	Private Sectors	39
	Total:	111

During the IX Plan, an additional component of Grants-in-aid to ICAR has been specifically incorporated under the IPM Scheme for mass production of quality bio-control agents/bio-pesticides with an outlay of Rs. 483.75 lakh.

Problem of Spurious Pesticides

Recommendation (Sl. No. 16)

2.24 The Committee find that there have been many instances of supply of spurious pesticides in the cotton growing areas of Andhra Pradesh, Karnataka and Maharashtra due to which the cotton crop suffered heavy damages last year. This is one of the reasons which was responsible for driving many farmers to commit suicides. The Committee feel that the present legal and institutional arrangements to address the problem are highly ineffective and unsatisfactory and desire that an expert Committee should be set up to analyse the problem and to suggest suitable remedial measures in the existing legal and institutional arrangements.In the meantime, there is an urgent need to tighten up the Enforcement machinery so that there is sufficient and effective check against the supply of spurious pesticides to farmers.

Action Taken Reply

2.25 For ensuring the availability of quality pesticides, following steps are being taken by the Government:—

(i) Drawal of samples by notified Insecticide Inspectors under the Act from the manufacturing premises and distribution/ sale points and get them analysed in the State Pesticides Testing Laboratories (SPTLs) (Annexure-II) to monitor the quality of pesticides. The number of samples analysed by State Pesticides Testing Laboratories (SPTLs) during the last four years and results thereof may be seen as per (Annexure-III).

(ii) Launching of prosecutions against the manufacturers/ suppliers of pesticides which are found substandard (Annexure-IV).

(iii) Periodical review during the Zonal Conferences on inputs and National Conferences on Agriculture for Kharif and Rabi campaigns to further strengthen the quality control arrangements including speedy trials against the manufacturers/suppliers of substandard pesticides.

(iv) Training of Insecticide Analysts and Insecticide Inspectors to upgrade their knowledge and skill in the analysis of pesticides and enforcement of the various provisions of the Insecticides Act, 1968 and the Rules framed thereunder, respectively are as under:—

Year	Analysts trained	Inspectors trained
1996-97	42	20
1997-98	77	488
1998-99	66	76

(v) Education of farmers for correct and judicious use of good quality insecticides under the overall ambit of eco-friendly Integrated Pest Management (IPM) approach.

(vi) Proposals for amendment of certain provisions of the Insecticides Act, 1968, to strengthen and streamline the existing legal and institutional arrangements, to give more teeth to the provisions of the Act and provide for stringent punishments, have been finalised and the Amendment Bill has also been prepared by this Ministry. The Amendment Bill could, however, not be introduced in the last Parliament Session on account of dissolution of 12th Lok Sabha. In the mean time, a 'Core Committee' constituted in the Ministry, have also considered certain further suggestions/proposals from the States etc. and based on its recommendations, further amendments to some other sections of the Insecticides Act are being considered.

Certain amendments to the Insecticides Rules, 1971 too have been carried out in May, 1999 to tighten the enforcement procedure. The 'Core Committee' has made some recommendations also for amendment of the Insecticides Rules, 1971. These are also under consideration.

In view of the action taken already, it is not considered necessary to appoint another Expert Committee.

Use of Remote sensing data to study spread of Diseases

Recommendation (Sl. No. 17)

2.26 The Committee have been informed that there are regular collaborative field surveys carried out by the Central Integrated Management Centres and by the State Departments of Agriculture for monitoring the pest and disease situation to enable them undertake timely control measures. However, the data available through remote sensing technique for early detection of spread of diseases are not being utilised by the Central and State Agencies to plan their efforts. The Committee strongly recommend that remote sensing technique should be extensively used in the matter of detection of spread of diseases on various crops including cotton for taking appropriate timely action. The Committee desire that the Government should take up this matter suitably with the Department of Space with a view to chalk out a programme for using their technology in this direction.

Action Taken Reply

2.27 Satellite imageries are being used in forecasting forest fires, pests and diseases in various advanced countries. In India, such imageries are being used to locate the greenery in the Scheduled Desert Area for finding the likely availability of locust populations in such green belts.

Remote Sensing Technology cannot be utilised for cotton pests as characteristic colouring symptoms are lacking in their case.

Department of Space has been requested to chalk out a programme and develop a technique for utilising remote sensing to detect pest and diseases in other crops.

Relief Measures in favour of farmers affected by the Cotton Crop Failure

Recommendation (Sl. No. 18)

2.28 The Committee have been informed that 269 farmers committed suicide in Andhra Pradesh while 23 farmers took this extreme step mainly due to damage to cotton crop on account of (i) adverse weather conditions, (ii) pest attack, and (iii) indebtedness. The Committee have been informed that several relief measures have been undertaken to mitigate the hardships suffered by the affected farmers. The Committee note that steps such as rescheduling of bank loans and non-recovery of either principal or interest of agricultural loan for a period of two years, immediate dispersal of credit by banks for fresh crops, no compounding of interest in respect of re-scheduled loans have been taken in respect of institutional loans taken by farmers. The Committee desire that suitable measures should be taken in respect of loans taken by farmers from private money lenders and from private financial institutions so that the farmers are given the right protection against exploitation by them. The Committee further note that a Study Group under the Chairmanship of Shri Bhagat Singh, Additional Secretary, Department of Agriculture & Cooperation, has been constituted to suggest appropriate remedial measures in respect of crop failure in Andhra Pradesh, the Committee recommend that the report of the said Study Group should be got expedited and its recommendations should be implemented in toto within two months from the date of presentation within two months from the date of presentation of this Report.

Action Taken Reply

2.29 The Report of the Committee under the Chairmanship of Shri Bhagat Singh, Additional Secretary, Department of Agriculture & Cooperation to look into the various aspects related to suicidal deaths on account of failure of cotton crop has been received. Following action has been taken:

(i) Report has been sent to Government of Andhra Pradesh. Reserve Bank of India, National Bank for Agriculture and Rural Development and agencies concerned for immediate appropriate action.

(ii) The district administrations are taking suitable steps regarding protection against private money lenders and private financial institutions.

(iii) State Governments have been impressed upon from time to time to enact legislations on matters relating to money lending.

Comments of the Committee

2.30 For Comments of the Committee please refer to Para No. 1.18 of Chapter-I of this report.

Insurance Cover for Cotton Crop

Recommendation (Sl. No. 19)

2.31 The Committee have been informed that cash crops like cotton have not been covered under the Comprehensive Crop Insurance Scheme mainly on account of non-availability of adequate past yield data and also due to the multi-picking nature of the yield of the crop. The Committee recommend that immediate steps should be taken to expedite the finalisation of the proposed modified Crop Insurance Scheme so that crop insurance to both loanee and non-loanee farmers is insured.

Action Taken Reply

2.32 Concerted efforts were stepped-up by this Department to finalise the Modified Comprehensive Crop Insurance Scheme (MCCIS) covering both loanee and non-loanee farmers as also covering cash crops like cotton, as recommended by the Parliamentary Standing Committee. After intensive discussions with the States/UTs, concerned Central Ministries/ Departments, like Ministry of Finance, Planning Commission and other agencies like Reserve Bank of India (RBI), National Bank for Agriculture & Rural Development (NABARD), General Insurance Corporation (GIC) etc. the proposal for introduction of a new Scheme entitled "Rashtriya Krishi Bima Yojana (RKBY)" in the country from the ensuing Rabi season has been approved by the Government of India.

The new scheme which is being implemented with effect from Rabi 1999-2000, will be available to all the farmers (Loanee and non-loanee both) irrespective of their size of holding. The scheme envisages coverage of all crops including cereals, pulses and oilseeds which are already being covered

under the existing Comprehensive Crop Insurance Scheme (CCIS). Three cash crops *i.e.* sugarcane, potato and cotton will be covered in the first year of its operation. All the remaining crops, including annual horticultural and commercial crops will be placed under insurance cover within the next three years subject to the condition of availability of past yield data.

Development of Mechanical Picker

Recommendation (Sl. No. 20)

2.33 The Committee find that the level of mechanisation with respect to various types of farm activities undertaken for cotton cultivation is very low and no research is being undertaken to develop suitable farm implements for cotton cultivation. The Committee have been informed that manual picking of cotton has become quite uneconomical due to shortage of manual labour and consequent high cost of labour. The Committee feel that there is urgent need for developing a suitable mechanical picker and there should be focussed research on developing a mechanical picker in areas where there is heavy shortage of labour at the earliest.

Action Taken Reply

2.34 It is true that the level of mechanisation with respect to various types of farm activities undertaken for cotton cultivation is low, however, it is not because suitable farm implements for cotton cultivation have not been developed. Cotton seed delating machine, cotton planters, weeders and high clearance sprayers for cotton crops have been developed and are commercially available. They need to be popularised by the State Governments.

As regards development of mechanical pickers, the same has not been developed so far. The cotton varieties being grown in the country are such that all the cotton bolls do not mature at the same time but mature over a period of time, necessitating more than one picking of the cotton. The cotton pickers available in other countries can be used only if such varieties of cotton are grown where the complete crop matures at the same time. Recently, a research project has been undertaken at the Punjab Agricultural University, Ludhiana, to develop a small power operated cotton picker. It is expected that within one or two years, a prototype would be available for field test.

ICAR has also informed that under a proposed MoU between ICAR and the Government of Uzbekistan, they have proposed to import one or two cotton pickers from Uzbekistan for field evaluation and adoption under Indian conditions.

This recommendation has also been brought to the notice of the ICAR for taking necessary steps both for varietal development and for developing suitable mechanical pickers.

Procedural Shortcomings

Recommendation (Sl. No. 21)

2.35 The Committee have been informed that the State Governments have not been issuing financial sanctions for various components of the Intensive Cotton Development Programme and the funds are not released for the implementation of the scheme in time by them. Besides this, some of the State Governments have not been sending appropriate feedbacks to the Directorate of Cotton Development and it hampers the preparation of Consolidated Reports for the proper review of the scheme in time. Some of the States do not implement all the components of the ICDP Scheme. The Committee, therefore, recommend that the State Governments should be instructed to implement all the components of the ICDP Scheme and they should be directed to issue administrative sanctions in time and the release of funds under the scheme should be done on top priority basis. The State Governments should be asked to submit their monthly progress report on physical and financial achievements of the ICDP scheme to the Directorate of Cotton Development and the Ministry of Agriculture regularly without fail. The Committee feel that the ICDP Scheme and the Technology Mission on Cotton will be successful only if the State Governments follow all the guidelines scrupulously and implement them.

Action Taken Reply

2.36 The State Governments are clearly advised through the Administrative Approval issued by the Government of India to ensure timely sanction and release of funds for various components of the ICDP Scheme. The system of monthly reporting by the State Governments on physical and financial progress is strictly followed. However, some States defaulted in submitting timely reports and returns. The progress is monitored by the Directorate of Cotton Development, Mumbai. The progress is also reviewed in National Kharif and Rabi Conferences on Agriculture Campaigns and also during the visits by the Government of India officials to the cotton growing States. The matter is followed up from time to time with the State Governments as suggested by the Standing Committee.

Comments of the Committee

2.37 For Comments of the Committee please refer to Para No. 1.21 of Chapter-I of this report.

Coverage of Non-Traditional Areas

Recommendation (Sl. No. 22)

2.38 The Committee feel that more area can be brought under cotton cultivation in non-traditional cotton growing States such as Orissa, U.P., Bihar and West Bengal if suitable varieties of cotton are made available to the farmers of those areas. The Committee recommend that the research machinery should direct its efforts towards the evolution of such varieties on top priority basis. The Committee also feel that there is need for conducting research in evolving improved varieties of desi cotton and they recommend that a separate programme of research should be initiated in this respect from this financial year onwards.

Action Taken Reply

2.39 Efforts are also on to develop cotton cultivation in non-traditional States like U.P. and Orissa. On launching of the Technology Mission on Cotton, efforts will also be made to cover the States of West Bengal and Bihar depending upon the feasibility of production. Research emphasis is being given for development of suitable varieties particularly of desi cotton for these States.

CHAPTER III

RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

Production of Bio-Pesticides

Recommendation (Sl. No. 14)

3.1 The Committee note that the use of bio-pesticides is very effective in the control of pests that affect cotton. However, these can be used only if they are produced on a large scale and made available at cheaper rates. The Committee, therefore, recommend that the Government should formulate a scheme under ICDP immediately to promote the establishment of cottage industries in village clusters for producing bio-pesticides so that they are readily available for use by the farmers in the vicinity.

Action Taken Reply

3.2 In view of the fact that the use of bio-pesticides is effective in control of pests of cotton and to make available bio-pesticides *e.g.* NPV, Tricogramma, Chrysopa etc., a large number of bio agent producing units are being developed with Government assistance under the programme of plant protection. In addition, provision is being made for setting up of such units in the cotton producing States under the proposed Technology Mission on Cotton. However, with a view to maintain quality control and viability, it may not be desirable to encourage bio-agent producing facilities at cottage industry level. The Plant Protection Directorate is promoting and popularising use of bio-pesticides which is a part of the IPM approach.

CHAPTER IV

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

Disparity in Cotton Productivity in the same Agroclimatic Zone

Recommendation (Sl. No. 2)

4.1 The Committee note that the average yield per hectare in the cotton growing areas of Pakistan was 602 kgs. in 1995 whereas in the States of Punjab, Haryana and Rajasthan which fall within the same agroclimatic zone and with the same intensity of irrigation as that of the areas across the border in Pakistan, the average yield per hectare during 1995-96 ranged from 338 kgs. to 442 kgs. When asked to explain the vast disparity in productivity in areas falling within the same agroclimatic zones, the Government could not tender any convincing reply. The Committee fail to understand as to how there can be such wide disparity in cotton productivity at two different places in the same agroclimatic zone. The Committee take a serious view of this disparity and recommend that the Government should analyse in detail the position and identify the constraints in the matter and chalk out a suitable Action Plan to boost the productivity of cotton in the States of Punjab, Haryana and Rajasthan.

Action Taken Reply

4.2 The question of disparity in productivity of cotton in this agro-climatic zone in Pakistan and India has been examined and it has been found that the productivity of the Northern cotton belt of India was more or less at par with that of Pakistan until the early 1990s. The productivity in the States of Punjab and Haryana started declining only after that period. The comparative figures are given below for the years 1995-96 to 1997-98:

A = Area in lakh ha.

P = Production on lakh bales (170 kg each)

Y = Yield in Kg per ha.

Country/State		1995-96	1996-97	1997-98
1		2	3	4
Pakistan	A	29.97	31.49	28.93
	P	106.00	93.70	94.0
	Y	601	506	552

1		2	3	4
Punjab	A	7.50	7.42	7.27
	P	19.50	19.25	9.41
	Y	442	441	220
Haryana	A	6.46	6.52	6.38
	P	12.83	15.07	11.29
	Y	338	393	301
Rajasthan	A	6.06	6.54	6.45
	P	13.38	13.63	8.67
	Y	375	354	229

The reasons for this decline have been identified as under:

(i) Due to excess irrigation of crops as well as seepage of canal water, the water table is rising causing waterlogging of cotton fields which is resulting in soil salinity. Thus due to water logging and salinity, cotton yields are reduced.

(ii) Alongwith the increase in the irrigated area, the micro-climatical conditions are becoming more favourable for spread of diseases like Leaf Curl Virus causing damage to cotton production.

(iii) American boll worm is becoming resistant to pesticides resulting in heavy loss to cotton crops due to occurring of this pest on epidemic scales.

(iv) In the recent years, there were unseasonal rains during September/October and cloudy weather from October to November. These conditions favoured the buildup of diseases and pests, hindered spraying operations against pests as well as washing away of sprayed chemicals by rains which defeats the control measures taken against pests and diseases causing loss to cotton crop.

(v) Unscrupulous sale of sub-standard inputs particularly pesticides and fertilisers, were also responsible for lowering of yields in cotton.

Research efforts have been intensified to control the Leaf Curl Virus and Myrothecium Leaf Spot diseases by developing pest resistant varieties/ hybrids like LH-144. The integrated pest management approach is also being popularised.

Comments of the Committee

4.3 For Comments of the Committee please refer to Para 1.6 of Chapter-I of this report.

Need to Produce and Supply Adequate Quantity of Certified Seeds

Recommendation (Sl. No. 4)

4.4 The Committee find that due to non-availability of quality certified seeds in adequate quantity and in time, farmers resort to the use of several non-descript varieties of cotton seeds, which has led to use of impure seeds in consequent cultivations and also mixing of various varieties of seeds making it difficult to maintain genetic purity. The multiple varietal scenario also complicates the insect/pest problems making it difficult to tackle them. Due to the non-availability of required volume of pure and quality delinted seeds, the required plant population for enhancing yields could not be maintained. As of now, only 55 per cent of the total area under cotton cultivation has come under use of certified quality seeds, owing to non-availability of certified seeds. It is a matter of grave concern to note that adequate quantity of certified seeds are not being produced by the State seed producing agencies, despite abundant availability of breeder seeds. The Government could supply only 2,43,372 quintals of certified seeds under the Intensive Cotton Development Programme (ICDP) during the whole of the Eighth Plan period against a target of supply of 3,59,479 quintals. The physical achievement of only 68 per cent of the target in this matter speaks volumes of the lack of effort on the part of the governmental machinery in the desired direction. Even during the first year of the Ninth Plan, the track record has not improved, as the quantum of certified cotton seeds supplied was only 49,967 quintals against a target of 66,415 quintals. The Committee are unhappy about the huge shortfalls in the achievement of targets in distribution of certified seeds. The Committee wish to impress upon the Government that the use of certified seeds is the first requirement for increasing productivity, as the quality and quantity of cotton produced would be entirely dependent on the quality of seeds sown. Therefore, the challenge of increasing productivity should be first addressed at the seed stage

itself. The Committee note that the Government has admitted that this is the weak link in the entire chain of efforts and they, therefore, recommend that a comprehensive cotton seed production and supply strategy should be first hammered out to meet the demand for certified seeds and the strategy should be implemented from the next sowing season itself. If necessary, the Government should adopt steps to encourage the private sector also in the production of quality cotton seeds with sufficient incentives and also with adequate monitoring mechanism to ensure that they produce the desired quality of seeds. The Committee desire that the working of the State seed producing agencies should be toned up by suitably reviewing their current practices, as they have actually failed in producing adequate quantity of certified seeds, despite the availability of breeder seeds in abundance. The Committee recommend that adequate financial assistance should be given to the States for this purpose and it should be ensured that the funds allocated for this aspect is not diverted to other programmes. The Committee desire that the farmers should be pointedly educated on the use of acid delinted and chemically disinfected seeds and this aspect of education of farmers should form a specific part of the seed production and supply strategy.

Action Taken Reply

4.5 As agriculture is a State subject, the production and distribution of quality/certified seeds is primarily the responsibility of the State Governments. Certified seed production is organised through State Seed Corporations, Departmental agricultural farms, cooperatives, etc. The distribution of seeds is undertaken through a number of channels. The efforts of the State Government are being supplemented by National Seeds Corporation and State Farms Corporation of India which produce varieties of National importance.

Certified/quality seeds requirement is assessed by State Governments on the basis of the area sown under different crop varieties, area covered by hybrid and self pollinated varieties as well as the seed replacement rate achieved. The Government of India periodically assesses the requirement and availability of seeds through detailed interaction with State Governments and seed producing agencies in the biannual Zonal Seeds Review Meetings and the National Kharif and Rabi Conferences. The Department of

Agriculture and Cooperation facilitates tie-up arrangements with seed producing agencies to ensure that the requirement of seeds is met to the maximum extent possible. Certified/quality seed requirement & availability of cotton from 1992-93 to 1998-99 is as under:

(Qty. in lakh Qtls.)

S.No.	Year	Availability			
		Require-ment	Certified Seed	Quality Seed	Total
1.	1992-93	2.16	1.93	0.31	2.24
2.	1993-94	2.21	2.12	0.05	2.17
3.	1994-95	2.02	2.49	0.30	2.79
4.	1995-96	2.26	3.35	0.06	3.41
5.	1996-97	2.26	2.80	0.08	2.88
	Total	10.91	12.69	0.80	13.49
	1997-98	2.62	3.57	0.12	3.69
	1998-99	2.62	3.52	0.12	3.64
	Total	5.24	7.09	0.24	7.33

Certified seed comprised approximately 97% of the total seed availability during 8th Plan. Similarly, during the period 1997-99, percentage of certified seed was 96% approximately.

The net-work of Seed Corporation has been strengthened through the National Seeds Project launched by Government of India in 1976 with assistance from the World Bank.

Besides, Central assistance for Seed production & distribution is also provided through Centrally Sponsored Scheme on Cotton Development Programme.

In so far as financial assistance is concerned, provision for assistance to the State Governments has been kept as 50% of the prescribed cost limited to Rs. 2500 per quintal under Intensive Cotton Development Programme (ICDP) during 8th Plan for production of Breeder Seeds. For distribution

of certified seed assistance to the State Governments, at the rate of 25% of the cost of seed limited to Rs. 300 per quintal for Mechanically Delinted certified seeds and Rs. 400 per quintal on the Acid Delinted Seeds has been kept. Through Front Line Demonstrations farmers are educated on the use of Acid Delinted and Chemically disinfected Seeds.

Under the Technology Mission on Cotton during IX Plan assistance for production of Breeder Seeds is proposed to be enhanced to Rs. 3000 per quintal and production of Foundation and Certified Seeds has been kept at Rs. 500 per quintal on additional production over and above the average of three years. Similarly assistance for distribution of Certified Seeds has been enhanced by 50% of the cost limited to Rs. 1000 per quintal. Under Technology Mission on Cotton, the farmers will be educated through Frontline and Field Demonstrations for the use of quality seeds, including the use of Acid Delinted and Chemically Disinfected Seeds.

Comments of the Committee

4.6 For comments of the Committee please refer to para No. 1.9 of Chapter I of this Report.

Panchayat Level Seed Production

Recommendation (Sl. No. 8)

4.7 The Committee recommend that a scheme should be evolved so that in each Panchayat some plots are identified and taken on rent by the Governmental agencies and by non-governmental seed-growing agencies and by progressive farmers to undertake production of location-specific quality certified cotton seeds on those plots for onward supply to the farmers locally. The production of seeds should be got done with the active assistance and guidance of agricultural scientists available with the agricultural institutions in the vicinity. This arrangement would ensure timely availability of seeds at the village level itself and the seeds could be made available at cheaper rates, as the element of cost of transport of certified seeds to the distribution centres will be completely eliminated in this process. Since only location-specific seeds will be grown, there will be guaranteed germination of seeds. As a part of the Technology Mission, this endeavour should be undertaken so that the entire country is covered within a short span of time in order that the farmers are encouraged to use only certified seeds, the Committee recommend that these seeds should be made available at heavily subsidised rates and it would ensure that the use of impure variety of non-descript seeds is completely dispensed with the within a short period of time, complete seed replacement with new quality varieties can be achieved.

The Committee further recommend that a special scheme should be evolved to encourage the setting up of seed grower Cooperatives in the Panchayats so that this activity can be undertaken with more participation by the local community.

Action Taken Reply

4.8 In the proposed Technology Mission on Cotton, provision has been made for distribution of Certified Seed so that Small and marginal Farmers with poor resources can use the quality seed in place of the seeds of non-descript and uncertified varieties which lead to reduction of productivity and decrease of production considerably. For popularization of the use of certified seed, the proposal is for increase of financial assistance from Rs. 400 per quintal in the existing Intensive Cotton Development Programme (ICDP) to Rs. 1000 per quintal under the proposed Cotton Technology Mission during IX Five Year Plan. In the Technology Mission targets for distribution of certified seeds has been enhanced considerably in comparison to existing ICDP Scheme. In the Cotton Technology Mission, provision has also been made for giving incentives to seed producing agencies in public sector through State Departments of Agriculture for production of certified/foundation seeds. In the Mission, provision for establishment of delinting machines has been made through the State Seed Corporations and Cooperative Ginning Units so that seed free from pest and disease infestation could be supplied to the farmers. It is proposed that delinted seed shall be provided to the level of 50% of the total planting material requirement within next 5 years which will reduce the infestation of disease and pests and also improve the plant population resulting increase in the production and productivity.

Cultivars of Cotton Released/Notified since 1995 to till 1.9.99 are given below:—

S.No.	Name Cultivars	Area of Adaptations
1	2	3
1.	TM-1312	Southern Cotton Zone Tamil Nadu, Andhra Pradesh & Karnataka
2.	Fateh	Punjab
3.	LK-661	Andhra Pradesh
4.	LAM389	Andhra Pradesh

1	2	3
5.	Arogya (NISD-2)	Central Zone
6.	Desi Cotton HD-107	Haryana
7.	Desi Pha-46	Maharashtra
8.	G. Cot Hyb-10	Gujarat
9.	G Cot 16 G (B)-20	Gujarat
10.	G Cot 17 (Ch-Bhv-460	Gujarat
11.	Desi Cotton LD-491	Punjab
12.	American Cotton LH 1556	Punjab
13.	American Cotton HHH-81	Haryana
14.	PKV Hyb-3 (CAHH 468)	Maharashtra
15.	PKVRAJAT (AKH 84635)	Maharashtra
16.	Ankur 651	Maharashtra
17.	NH-452	Maharashtra
18.	Desi Cotton PA 183	Maharashtra
19.	DHB-105	Karnataka
20.	Maru Vikas (Raj HH-16)	Rajasthan
21.	RS-875	Rajasthan
22.	NBHB-11	Recommended for cultivation in CZ comprising medium rainfall area of Gujarat, Madhya Pradesh and Maharashtra under irrigated conditions.
23.	Surabhi (VRS-7)	SZ (Tamil Nadu, Karnataka & Andhra Pradesh) under assured rainfall & Irrigated condition.

1	2	3
24.	SVPR-2 (TSJ 289)	Karnataka, Tamil Nadu, & Andhra Pradesh
25.	JKHY-2	Madhya Pradesh
26.	Jawahar Tapti	Madhya Pradesh
27.	LDH-11	Punjab
28.	K-11	Tamil Nadu
29.	H-1098	Haryana
30.	SRUTHI (CDHB-1)	Tamil Nadu, Andhra Pradesh & Pondicherry
31.	OM Shankar (CSHH 29)	NZ (Punjab, Rajasthan & Harayana) Cultivation of this hybrid in Western border area adjacent to Pakistan is to be avoided.
32.	Pusa B-6	Nothern Cotton Zone (Punjab, Haryana, Rajasthan & Western Uttar Pradesh)
33.	F 1378	Punjab
34.	DHH 11	Karnataka
35.	KC 2	Tamil Nadu
36.	Kashi Nath (NFHB 109)	Recommended for cultivation in Western Maharashtra & Gujarat in black cotton soil areas with average of 25" to 40" of well distributed rain-fall
37.	Ankur-09 (WHH-09)	Maharashtra, Gujarat & Madhya Pradesh
38.	Ajit (LHH-144)	Recommended for cultivation in leaf virus affected areas of Northern Cotton Zone comprising of Punjab, Rajasthan and Haryana under irrigated condition.
39.	AAH-1 (Desi Cotton Hybrid-I)	Rajasthan, Punjab, Haryana
40.	Narasimha (Nandayal-1325)	Andhra Pradesh

With the objective of ensuring that the grower members are able to obtain quality Cotton Seeds, NCDC in the year 1988 introduced a scheme for Cotton Development. The Objective of the scheme, among others, was to promote the use of good quality seed and encourage cultivation of new improved variety of cotton. The following formed a part of the seed production and distribution, under the scheme.

The Cotton grower members of cooperative spinning mills should be encouraged to form small groups for the production of genetically pre-certified seeds. Production of foundation seed by these small groups on contract should be encouraged. Specialised staff would be appointed by the mills who would closely supervise these farms.

Foundation seeds to be multiplied by these farmer groups would be processed in the spinning mill's ginnery and distributed to the grower members on a no profit/no loss basis.

Initially, the participating cooperative spinning mill could take up around 25 ha. under seed production by organising 5 farmer groups of about 10 members each.

The cost of production of seeds would be partly subsidised by the GOI/ NCDC and provide adequate margins to the farmer groups as incentive.

The scheme came into operation in January, 1988, initially for a period of five years and continued upto 1995-96. 14 spinning mills took advantage of the scheme. A statement indicating details of varieties of seed produced/ provided to the beneficiaries is given below:—

Statement of Varieties of Seeds Produced/Distributed under the Cotton Development Scheme

Year	Varieties of Seeds Produced/Distributed
1	2
1988-89	Ankur-52, LRA-5166, MECH-1, ABADHITTA, JK-119 MECH-4
1989-90	LRA-5166, DCH-32, NHH-414, H-6, H-4, NHW-414, IRA-5166, AHH-468, MCU-5, SUPRIYA, KOP-498, LAXMI, SIMA-1, KANCHONA, HB-224, DCH-32
1990-91	LRA-5166, JK-119, ABADHITTA, DCH-32, KAVADI, IRA-5166

1	2
991-92	LRA-5166, JK-119, DECH-32, NHH-414, NEW VH-98, AHH-468, MCV-5, 4. HECT
992-93	H-4, H-6, Y-1, PKV-2, LRA-5166, RCH-11, MECH, DCH-32, NHH, JAGDISH ACTT-100
993-94	DECH-100, DCH-32, R-57G, J-34, F-505, SHARDA, ABADHITTA, LK-861, L-389, MCU-544, SAVITHA
994-95	H-6, SAMEX, 4-AGRITE, RST-9, RGS (Desi), B-NARMA, SAVITHA, F-846, JK-276, 8-2
995-96	H-6, MCV-5VT, RG-8, B-NARMA, RS 7-9, G-AGRITE, F-846, F-505, BIKANERI NARMA, SAVITHA

State Level Cotton Federations like the Gujcot are reported to have undertaken the work of producing seed of Hybrid Cotton with the aim to sure that the farmers get pure and certified seeds

Comments of the Committee

4.9 For Comments of the Committee please refer to Para No. 1.15 of Chapter I of this report.

CHAPTER V

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH FINAL REPLIES OF THE GOVERNMENT ARE STILL AWAITED

— Nil —

NEW DELHI;
22 *February*, 2001
3 *Phalguna*, 1922 *(Saka)*

S.S. PALANIMANICKAM,
Chairman,
Standing Committee on Agriculture.

ANNEXURE I

INTEGRATED PEST MANAGEMENT CENTRES

VII[TH] plan outlay : Rs. 4500.00 Lakh

Approved Grants-in-Aid : Rs. 1500.00 Lakh

Physical Targets : Setting up of Bio-Control Laboratories in the States/UTs with 100% Central assistance by providing Rs. 30.00 Lakh for Construction of Laboratory Building and Rs. 20.00 Lakh for purchase of Laboratory equipment and one vehicle to supplement the Bio-Control efforts of the States.

Status of Grants-In-Aid Released to States/UTs for Setting-up of State Bio-Control Laboratories Utilisation Certificates Furnished by the States/UTs and Unspent Balances Lying with the States

Upto 30.06.99

(Rs. in lakh)

Sl. No.	State/UT	Approved during VIII Plan Building Equipment & Vehicle	Amount Released				Released During	
			1992-93	1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8	9
Head-3601								
1.	Andhra Pradesh	50	12.50	—	—	17.50	17.50	
2.	Assam	50	12.50	—	—	37.50		
3.	Bihar	50	—	20	—	—	30.00	
4.	Gujarat	50	—	20	—	10.00		
5.	Haryana	50	—	20	15	—	12.50	
6.	Himachal Pradesh	50	—	20	10	—	17.50	2.50
7.	J & K	50	—	20	05	—		
8.	Karnataka	50	—	20	10	20.00		

1 2	3	4	5	6	7	8	9
9. Kerala	50	—	20	10	—	17.50	2.50
10. Maharashtra	50	12.50	—	—	—		5.00
11. Madhya Pradesh	50	—	20	10	—		17.50
12. Manipur	50	—	10	20	20.00		
13. Orissa	50	—	20	10	—	20	
14. Punjab	50	—	20	05	25.00		
15. Rajasthan	50	—	20	05	25.00		
16. Tamil Nadu	50	12.50	—	17.50	—		
17. Uttar Pradesh (Two)	100	—	30	—	—	30.00	
18. West Bengal	50	—	20	—	10.00		
19. Nagaland	50	—	10	20	20.00		
20. Tripura	50	—	10	—	40.00		
21. Meghalaya	50	—	10	20	20.00		
22. Mizoram	50	—	10	20	20.00		
23. Arunachal Pradesh	50	—	10	20	20.00		
24. Sikkim	50	—	10	20	20.00		
25. Goa	50	—	05	—	—	20.00	
Head-3602							
26. Pondicherry	50	—	—	25	25.00		
27. Delhi	50	—	—	—	—		
Head-2400							
28. A&N Island	50	—	10	20	20.00		
29. Lakshadweep	50	—	05	25	20.00		
Total	1500	50.00	360	287.50	370.00	165.00	40.00

Sl. No.	State/UT	Total amount released upto 1998-99	Amount of administrative approval for 98-99	U.C. furnished by States	Balance unutilised by States	Physical Achievements
1	2	10	11	12	13	14
Head-3601						
1.	Andhra Pradesh	47.50	02.50	47.50	—	Construction completed
2.	Assam	50.00	—	12.50	37.50	Building under construction
3.	Bihar	50.00	—	—	50.00	Construction not started
4.	Gujarat	30.00	—	0.41	29.59	Building under construction
5.	Haryana	47.50	15.00	30.00	17.50	Construction completed
6.	Himachal Pradesh	50.00	02.50	47.50	2.50	-do-
7.	J & K	25.00	05.00	—	25.00	Construction not started
8.	Karnataka	50.00	—	42.72	07.28	Construction completed. Lab Equipments being procured
9.	Kerala	50.00	02.50	50.00	—	Construction completed
10.	Maharashtra	30.00	25.00	30.00	—	Under construction
11.	Madhya Pradesh	47.50	20.00	30.00	17.50	Construction completed
12.	Manipur	50.00	—	50.00	—	-do-
13.	Orissa	50.00	—	30.00	20.00	-do-
14.	Punjab	50.00	—	19.30	30.70	Building under construction
15.	Rajasthan	50.00	—	29.04	20.96	-do-
16.	Tamil Nadu	30.00	20.00	12.50	17.50	-do-
17.	Uttar Pradesh (Two)	60.00	—	—	60.00	Construction not started
18.	West Bengal	30.00	20.00	—	30.00	-do-
19.	Nagaland	50.00	—	50.00	—	Construction etc. completed
20.	Tripura	50.00	—	14.00	36.00	Building under construction

1	2	10	11	12	13	14
21.	Meghalaya	50.00	—	46.75	3.25	Construction completed
22.	Mizoram	50.00	—	50.00	—	Construction completed
23.	Arunachal Pradesh	50.00	—	50.00	—	Construction etc. completed
24.	Sikkim	50.00	—	30.00	20.00	Construction completed
25.	Goa	25.00	05.50	—	25.00	Construction not started
Head-3602						
26.	Pondicherry	50.00	—	25.00	25.00	Construction almost completed
27.	Delhi	—	—	—	—	Funds not provided
Head 2400						
28.	A&N Island	50.00	—	32.77	17.23	Building under construction
29.	Lakshadweep	50.00	—	49.86	0.14	Construction completed
	Total	1272.50	118.00	779.85	492.65	

Note: Since the construction work has not been completed, the States are not able to issue the utilisation certificate for the total amount released to them. States which have not sent the progress report on Physical Achievements.

ANNEXURE II

PESTICIDE TESTING LABORATORIES IN STATES/UTS

State/UTs	No. of Laboratories	Location	Capacity of analysis per annum
Established Laboratories			
Andhra Pradesh	4	Rajendranagar, Guntur, Anantapur & Tadepalligudem	8500
Assam	1	Guwahati	200
Bihar	1	Patna	500
Gujarat	2	Junagarh & Gandhinagar	2000
Haryana	2	Karnal & Sirsa	2100
Himachal Pradesh	1**	Simla	—
Jammu & Kashmir	2	Srinagar & Jammu	700
Karnataka	5	Bangalore, Bellary, Dharwad, Shimoga & Kotnoor	6000
Kerala	2	Trivendrum, Trichur	2000
Madhya Pradesh	1	Jabalpur	1000
Maharashtra	4	Pune, Amaravati, Thane & Aurangabad	4750
Manipur	1	Mantripukhri	20
Orissa	1	Bhubaneshwar	1000
Punjab	3	Amritsar, Ludhiana & Bhatinda	3300
Rajasthan	2	Jaipur, Bikaner	900
Tamil Nadu	9	Coimbatore, Kovitpatti, Erode, Madurai Trichy, Aduthrai, Salem, Cuddalore & Kanchipuram	16236
Uttar Pradesh	3	Meerut, Lucknow & Varanasi	3000
West Bengal	1	Midnapore	450
Pondicherry	1	Pondicherry	500
Total	45		53156

** Under Establishment

ANNEXURE III

STATEMENT SHOWING STATISTICS OF THE ANALYSIS OF PESTICIDES SAMPLES FOR QUALITY CONTROL IN STATE PESTICIDES TESTING LABORATORIES

S. No.	Name of the State/UTs	1995-96		1996-97		1997-98		1998-99	
		Sample analysed %	Sub standard	Sample analysed %	Sub standard	Sample analysed %	Sub standard	Sample analysed %	Sub standard
1	2	3	4	5	6	7	8	9	10
1.	Andhra Pradesh	7759	160 (2.0)	8210	238 (2.9)	8388	127 (1.5)	5994	109 (1.8)
2.	Assam	131	3 (2.3)	130	2 (1.5)	143	4 (2.7)	54	1 (4.3)
3.	Bihar	—	—	—	—	—	—	—	—
4.	Gujarat	2510	195 (7.7)	2330	165 (7.0)	2150	134 (6.2)	2309	162 (7.01)
5.	Haryana	1342	137 (10.2)	1588	207 (13.0)	—	—	1784	180 (10.1)
6.	J & K	630	19 (3.0)	555	11 (1.9)	729	6 (0.8)	522	7 (1.3)
7.	Karnataka	2105	123 (5.8)	2172	67 (3.0)	1828	101 (5.5)	1179	63 (5.3)
8.	Kerala	2831	17 (0.6)	1511	3 (0.1)	1213	6 (0.4)	55	— (0.0)
9.	Maharashtra	2964	49 (1.6)	2728	93 (3.4)	2838	98 (3.4)	3051	76 (2.5)
10.	Madhya Pradesh	795	86 (10.8)	746	138 (18.5)	595	94 (15.8)	520	68 (13.1)

1	2	3	4	5	6	7	8	9	10
11.	Manipur	18	—	18	—	18	—	—	—
12.	Orissa	630	—	951	—	842	—	815	2 (0.3)
13.	Punjab	3100	196 (8.3)	3451	189 (5.4)	3050	200 (6.5)	3350	130 (3.9)
14.	Rajasthan	753	54 (7.1)	720	70 (9.7)	1153	93 (8.0)	935	115 (12.3)
15.	Tamil Nadu	17578	96 (0.5)	16090	264 (1.6)	13287	309 (2.3)	11312	131 (1.2)
16.	Uttar Pradesh	3216	69 (2.1)	3307	224 (6.7)	3207	204 (6.3)	770	23 (3.0)
17.	West Bengal	173	—	33	—	170	—	—	—
18.	Pondicherry	500	—	518	—	500	—	305	— (0.0)
	Grand Total	47035	1204 (2.5)	45058	1671 (3.7)	39941	1376 (3.4)	33125	1067 (3.2)

ANNEXURE IV

ACTION TAKEN STATISTICS DURING 1998-99

State/UTs	Licence*						Prosecution*								
	Suspended			Cancelled			Launched			Judgement Obtained			Convicted		
	96-97	97-98	98-99	96-97	97-98	98-99	96-97	97-98	98-99	96-97	97-98	98-99	96-97	97-98	98-99
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Andhra Pradesh	9	16	8	142	1	236	41	26	78	31	31	14	10	14	7
Arunachal Pradesh	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Assam	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—
Bihar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Goa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gujarat	—	1	27	—	—	3	—	28	70	—	15	22	41	15	14
Haryana	—	—	1	—	—	—	185	—	83	—	—	—	—	—	—
Himachal Pradesh	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
J & K	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—
Karnataka	—	13	9	—	12	1	—	28	2	—	—	—	—	—	—
Kerala	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Madhya Pradesh	—	11	10	—	29	1	—	—	—	—	—	—	—	—	—
Maharashtra	2	9	9	—	341	43	24	8	91	—	1	—	—	—	—
Manipur	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meghalaya	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mizoram	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nagaland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Orissa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Punjab	—	—	3	—	150	102	—	11	5	—	—	—	—	—	—
Rajasthan	—	—	—	—	—	—	23	40	8	—	—	—	—	—	—
Sikkim	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tamil Nadu	63	39	109	—	—	—	23	19	29	18	10	17	8	7	16
Tripura	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Uttar Pradesh	—	—	—	—	—	—	75	37	23	4	—	6	—	—	—
West Bengal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A&N Islands	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
D&N Haveli	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chandigarh	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Delhi	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daman & Diu	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lakshadweep	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pondicherry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

*Based on the information received from the States.

APPENDIX I

MINUTES OF THE FOURTH SITTING OF THE STANDING COMMITTEE ON AGRICULTURE HELD ON 22ND FEBRUARY, 2001 IN COMMITTEE ROOM 'C', GROUND FLOOR, PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee sat from 1500 hrs to 1540 hrs

PRESENT

MEMBERS

Lok Sabha

Shri M. Master Mathan — *In the Chair*

2. Shri Ram Tahal Chaudhari
3. Shri Ramdas Rupala Gavit
4. Shri Raghunath Jha
5. Shri Abul Hasnat Khan
6. Shri Y.G. Mahajan
7. Shri Haribhau Shankar Mahale
8. Shri Savshibhai Makwana
9. Shri Dalpat Singh Paraste
10. Shri Adi Shankar
11. Shri Tejveer Singh
12. Shri Mahaboob Zahedi

Rajya Sabha

13. Smt. Jamana Devi Barupal
14. Shri Khagen Das
15. Shri. Kailash Joshi
16. Shri Devi Prasad Singh

SECRETARIAT

1. Dr. (Smt.) Paramjeet Kaur Sandhu — *Joint Secretary*
2. Shri Raj Shekhar Sharma — *Deputy Secretary*
3. Smt. Anita Jain — *Under Secretary*
4. Shri K.L. Arora — *Under Secretary*

In the absence of Hon'ble Chairman (AC), the Committee chose Shri M. Master Mathan to act as Chairman for the sitting under Rule 258 (3) of the Rules of Procedure and Conduct of Business in Lok Sabha. The Committee then took up the following Memoranda for their consideration and adoption:—

Memoranda No.	Reports
1.	Draft Action Taken Report on 12th Report (12th Lok Sabha) on cultivation of cotton of the M/o Agriculture (Deptt. of Agriculture and Co-operation)
2.	Draft Action Taken Report on 6th Report (13th Lok Sabha) on Demands for Grants (2000-2001) of the M/o Agriculture (Deptt. of Agriculture and Co-operation)
3.	Draft Action taken Report on 7th Report (13th Lok Sabha) on Demands for Grants (2000-2001) of the M/o Agriculture (Deptt. of Agricultural Research and Education)
4.	Draft Action Taken Report on 8th Report (13th Lok Sabha) on Demands for Grants (2000-2001) of the M/o Agriculture (Deptt. of Animal Husbandry and Dairying)
5.	Draft Action taken Report on 9th Report (13th Lok Sabha) on Demands for Grants (2000-2001) of the M/o Agriculture (Deptt. of Food Processing Industries)
6.	Draft Action Taken Report on 10th Report (13th Lok Sabha) on Demands for Grants (2000-2001) of the Ministry of Water Resources

The Committee considered the Draft Reports one by one and adopted them without any change.

The members of the Committee, thereafter, authorised the Chairman to present all the above mentioned Reports to the House on a date and time convenient to him.

The Committee then adjourned.

APPENDIX II

(*Vide* Para 4 of Introduction of the Report)

ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE TWELFTH REPORT OF THE STANDING COMMITTEE ON AGRICULTURE (TWELFTH LOK SABHA)

(i)	Total Number of Recommendations	22
(ii)	Recommendations/Observations which have been accepted by the Government Serial Nos. 1, 3, 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21 & 22	
	Total	18
	Percentage	81.82%
(iii)	Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies	
	Serial No. 14	
	Total	1
	Percentage	4.55%
(iv)	Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee	
	Serial Nos. 2, 4 & 8	
	Total	3
	Percentage	13.63%
(v)	Recommendations/Observations in respect of which final replies of the Government are still awaited	
	Nil	
		Nil
	Percentage	0.00%