

AGRI-INPUTS

Timely and adequate availability of inputs is vital for enhancing crop productivity. Strict vigil was maintained on the supply of seeds, fertilizers and pesticides to the farmers in the state. These inputs were supplied under various schemes. The progress is given as under:-

(A) CHEMICAL FERTILIZERS AND COMPOSTS

i) Consumption of Fertilizers

Balanced and judicious use of fertilizers is essential for increasing the agricultural production. As a result of extensive training and promotion programmes launched by the Department of Agriculture, consumption of fertilizers in the State has increased many folds over the year and now the per unit area consumption in the State is highest in the country. The consumption of fertilizers in the State from 2005-06 to 2009-10 is given as under:-

CONSUMPTION (NUTRIENT IN '000' TONNES)

Year	N	P	K	Total
2005-06	1255	369	63	1687
2006-07	1299	354	39	1692
2007-08	1316	344	38	1698
2008-09	1332	379	57	1768
2009-10	1358	433	74	1865

However, to reduce the use of chemical fertilizers, organic farming and bio-fertilizers are being encouraged in the state.

ii) Sale of fertilizers on subsidy basis

As per policy of the Government of India, subsidy on concessional sale of phosphatic and potassic fertilizers was given directly to the manufacturers/Importers by Govt. of India on their sale to the farmers. The detail of the subsidized sale of fertilizers during the year 2009-10 is given below:-

Name of Fertilizers	Sale Rate (Rs. PMT)		Quantity sold on subsidized rate (000 MT)	
	2008-09	2009-10	2008-09	2009-10
DAP (Indigenous & imported)	9350	9350	736	870
NPK 12:32:16	7637	7637	19	23
MOP	4455	4455	81	108
SSP (P)	3400	3400	*13	24
SSP (G)	3800	3800		
NP 20:20	5343	5343	9	9
Urea	4830	4830	2582	2586
Ammonium sulphate	10350	9350	8	6
* SSP (Whole P&G)				

iii) Supply of micro nutrients (On sale basis)

Due to intensive cropping, deficiency of micro-nutrients has appeared in the soils of the State which adversely affect the crops yield. Deficiency of Zinc has appeared especially in the soils having coarse texture, low organic matter and high pH value. Major crops in which deficiency of Zinc has been noticed are wheat, maize and paddy. In order to meet the deficiency of Zinc, 23046 MT of Zinc Sulphate (21%) was consumed in the State during the year 2009-10 . Generally, in paddy crop, ferrous sulphate (19%) is applied as foliage spray to make up the deficiency of Iron and 1784 tonnes of ferrous sulphate (19%) was used for this purpose during 2009-10. Area of 3.03 lac hectares were also covered with micronutrients by providing assistance under NFSM. Detail is already given in chapter 4.

iv) Supply of Gypsum for Land Reclamation

Scheme for the reclamation of alkaline soils is implemented on 90:10 with assistance of Govt. of India. Under this scheme, gypsum is given to the farmers on 50% subsidy. Progress made during 2008-09 & 2009-10 is as under:-

Year	Amount of subsidy (Rs.)	Gypsum distributed (MT)	Area reclaimed (Hectare)
2007-08	2,96,66,515	62456	12491
2008-09	6,30,000,00	51095	10218
2009-10	Not Recd.	15712	3143

v) Supply of Bio-Fertilizers

To improve soil health, bio-fertilizer villages were adopted in the state. Training camps were also organized to impart training on the use/ benefits of bio-fertilizers to the farmers.

vi) Promotion of vermiculture – (Improvement of soil health-vermiculture scheme) and Organic Farming.

Due to continuous adoption of paddy-wheat rotation, the soils have been impoverished. Besides, excessive use of chemical fertilizers is creating environmental pollution and health hazards. In order to add organic matter in the soils, the FYM is being used by the farmers. But its scarce availability force the farmers to use chemical fertilizers. The use of vermicompost can fill the gap to some extent and it can also promote organic farming. So, vermiculture is being popularized by giving demonstrations and organizing farmer training camps. Under National Project on Organic Farming grant of Rs.15.11 lac was received and 14.19 lac was incurred. 38 training camps, 38 field demonstrations, 29 demonstrations of enriched biogas slurry were organized and 0.96 lac Rs. were spent on distribution of literature during 2009-10.

vii) Production of Rural Compost and Town compost

Extensive use of organic manures improves the soil structure and maintains the fertility level of the soil. Compost is very useful organic manure. In addition to

major nutrients, it also supplies vital micro – nutrients to soil. It improves the water holding capacity of the soil. Its use ensures availability of nutrients to the plants over a longer period of time. Temperature fluctuation in the upper layer of the soil are minimized which help in better root development. All these factors help in increasing the crop production.

However, a large number of farmers still do not adopt recommended methods of preparation and conservation of rural compost resulting in production of manure of poor quality and lesser in quantity. Therefore, in order to educate the farmers about the importance and utility of production and conservation of rural compost on scientific lines and improving its quality & quantity, rural compost work was carried out in the State under Non-plan Scheme during the year under report. There was a provision of one compost Inspector each for 64 blocks of the State under this Scheme. However, with the help of staff provided under other schemes of the Department of Agriculture, rural compost programme was carried out in whole of the State.

Composting of urban waste is a sound system from the point of view of sanitation as well as supply of rich organic matter to the soil. In order to achieve this objective, all the Municipal Committees/Municipal Corporations/Notified Area Committees in the State were advised to conserve urban waste property and supply town compost to the farmers at reasonable rate.

Under the rural compost scheme, Rs. 24.79 lac was allotted during 2009-10. The expenditure incurred was Rs. 22.77 lac. The district wise rural compost production is given in Table-I. The physical achievement of this programme during 2009-10 is as under:-

S. No.	Component	Unit	Target	Physical Achievement	Remarks
1	Compost samples taken	Nos.	1200	229	Only 228 samples were analyzed by PAU, Ludhiana
	Quantity of rural compost	Lac tones	307	297.35	
3	Demonstrations held	Nos.	-	3972	
4	Celebration of compost fortnight	Nos.	1	1	
5	Exhibitions Arranged	Nos.	-	3295	

viii) Green Mannuring for maintaining soil fertility

Green Mannuring is one of the effective way of increasing and maintaining the fertility of the soils at a relatively low cost. Farmers are, therefore, advised to adopt green manuring on a large scale. During 2009-10, the achievement of area coverage under green manuring was 1,84,447 hectares against the target of 1,75,700 hectare. The district wise targets and achievements of green manuring during 2009-10 are given in Table – I.

TABLE – I

S. No.	District	Production of Rural Compost (lac tonnes)		Area Coverage under Green Mannuring (Ha.)	
		Target	Achievement	Target	Achievement
1	Amritsar	12	12.71	6250	6145
2	Bathinda	15	14.63	8500	12600
3	Faridkot	15	17.00	10100	9890
4	Fatehgarh Sahib	15	13.50	8100	8600
5	Ferozepur	20	23.00	13600	13900
6	Gurdaspur	20	21.40	9500	9510
7	Hoshiarpur	18	18.08	8800	10370
8	Jalandhar	20	18.55	14500	13515
9	Kapurthala	19	19.08	9200	9200
10	Ludhiana	19	17.20	8000	11472
11	Mansa	15	15.94	9350	9590
12	Moga	15	12.50	8100	8000
13	Mohali	14	9.50	6600	9590
14	Sri Mukatsar Sahib	15	12.11	8200	5670
15	S.B.S.Nagar (Nawanshahar)	15	14.82	9400	8057
16	Patiala	15	14.70	10000	10546
17	Ropar	10	10.00	5000	5150
18.	Sangrur	15	14.81	6600	7210
19.	Tarantaran	10	7.82	7500	6842
20.	Barnala	10	10.00	8400	8590
	Total	307	297.35	175700	184447

To promote the area under green manuring 1017 quintals of Dhaincha seed is distributed in farmers by incurring Rs. 54.96 lac out of sanctioned amount of Rs. 60 lac during 2009-10.

(B) Supply of Seeds for better Productivity

The use of certified seed as well as quality seed is one of the basic input which increases the production and productivity of the crop. The details of distribution of certified seed during 2009-10 is as under:-

Crop	2008-09(Qtl)	2009-10(Qtl)
Paddy	115299	155962
Maize	32718	27523
Cotton	8230	6965
Kharif Pulses	1426	1910
Wheat	917963	1259742
Rabi Oilseeds	802	753
Gram	1576	1516
Barely	5936	7237

(C) Supply of Pesticides

The need based applications of pesticides ensures control of pests & diseases. These are supplied to the farmers by the manufacturers through their dealers network in the state. 5745 MT of (technical grade) pesticides were consumed during 2009-10 against 5760 MT of the previous year.