

# DEVELOPMENT OF AGRICULTURE IN ASSAM DURING 1991-92

## Introduction :

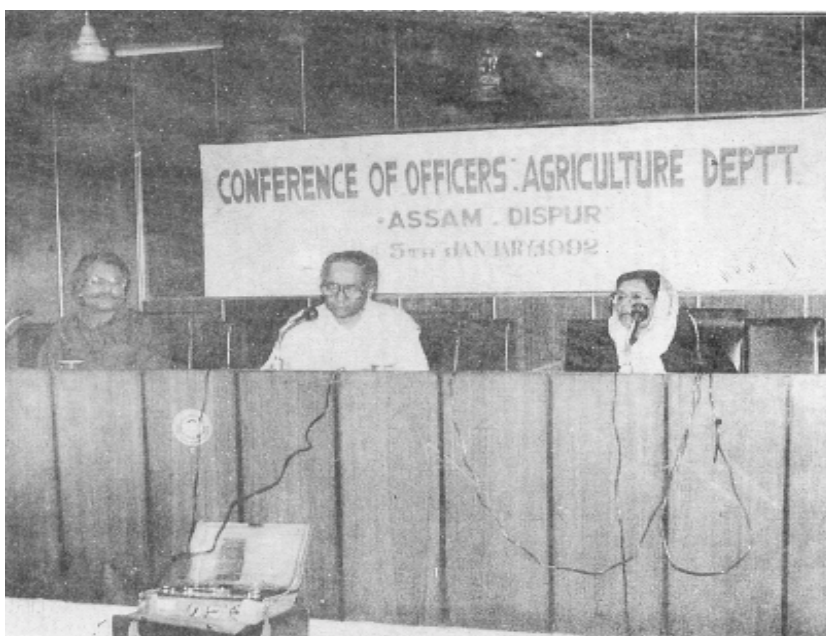
The economy of Assam largely depends upon agriculture. The socio-economic condition therefore, is based upon agricultural production. It is factually true, that the development of agriculture has to be resorted to input support and supply for the growth of crop production. These factors as have been identified as for instance are highly yielding strains, chemical fertilizers, irrigation, crop protection and advancement of loan for agricultural activities for. These apart, healthy marketing facilities, flood control, management in drought evading measures are more relevant.

A regular annual feature, the brings devastation to crop is flood havoc. In the year 1991-92 also Assam has experienced three floods and as a result, these damaged crops covering an area of 3.5 lakh hectares.

## Brief review of Agril. Development during 1991-92

### Rice Production

Despite this major hurdle, along with other, Assam has made a stride in rice production in the year 1991-92. It may be mentioned here that 70% of the total cultivable land is occupied by the rice cultivation. As such in Assam Agriculture, rice production play a major role. Her total cultivable land is 35 lakh hectares. The average annual production of rice in the States is 27 lakh Metric tonnes upto the year of 1989-90. But in the year 1990-91, the State had produced 32.7 M.T. due to higher percentage production of 1313 kg/hectare against 1147 kg/hectare in the previous year. This State has achieved 31.85 tonnes on rice 1991-92.



### Oil Seeds & Pulses Production

Citation of higher production may be made here in case of oilseed production also. In 1985-86, oilseed production of the State has been 1.4 lakh tones and achieved 1.9 lakh tones production in 1990-91. The State will be able to produce 2.1 lakh tones in 1991-92. Then against the pulse crops covered 1.2 lakh hectares yielding 53 thousand M.T. in the year 1990-91. Against these figures in 1991-92, pulse covered an area of 1.25 lakh hectare and production 60,000 M.T.

## **Fertilizer use**

Another sticking feature is the increase amount of fertilizer use by the farmers during recent years. In 1990-91 per hectare use of fertilizer is 11.4 kg in form of NPK showing more use in rabi crops upto 25 kg/hectare.

Whatever has been done and achieved is largely due to introduction of extension services to the farmers of the State. The authority has made its effort to connect village panchayat level Co-operative Societies (G.P.S.S.) as distribution centers for different inputs to farmers by launching a scheme called Special Sub Project. 300 nos. of G.P.S.S. have already been covered under this scheme and another 200 nos. of village panchayat Co-operative Societies will be connected in 1992-93 for this purpose.

To reach the self-sufficiency mark in production of high yielding varieties of rice and mustard seeds during the 8<sup>th</sup> Five Year Plan period, the Department of Agriculture has started a five year seed production scheme.

## **Agril. Growth Centre**

A door step input supply system has also been introduced by the Government in every agricultural subdivisions where required amount of inputs are made available to the farmers through one window. These are called "Agricultural growth centers" and will cover the whole State to provide all sorts of inputs to farmers within their easy reach. 39 nos. of agricultural growth centers are already existing and 12 nos. more will be completed during the current financial year.

## **Multiple Cropping**

In the meanwhile, scheme are undertaken to popularize "Multiple cropping system" among the farming community. Through this effort, the crop intensity is augmented to 145% in 1991-92 against 140% in the previous year. In this direction, special emphasis have been given to "Multi-storied cropping" method also and it is expected that 150% of crop intensity will be derived. Through these efforts, modernization in agriculture in undertaken in all the schemes adopted for 1992-93. To populariase the new cropping strategy, for growing three consecutive crops on same plot of land, massive demonstration programme has been taken up 5130 hectares, starting with current sali paddy (H.Y.V.) as State target of 50,000 hectares extension programme for adoption of multiple cropping is also being implemented successfully throughout the State.

## **Field Management Committee (FMC)**

In a bid to involve, every farming family of the State in scientific method in agricultural production co-operatively, a large number of Pathar Parichalana Samittee (Field Management Committee (F.M.C.)) have been organized throughout the State. It reaches the remote corners of the State. This system has already given a new dimension and impact among the cultivators. There are also model F.M.C. where farmers are seen advancing towards to get benefit in an organized manner for higher production. Now, there are as many as 4915 nos. of registered F.M.C. of which of 74 nos. are model F.M.C's organization of more of F.M.C's is in progress and the achievement targeted by the end of the current year is 7,000 nos.

## Horticulture Development

There is enough scope for development of horticulture in the State. It is more so in its potentialities. The state has already observed a "Horticultural Year" during 1991-92. Horticultural crops like Coconut, Citrus, Black pepper, Banana, Papaya etc. have now been given priority with supply of improved planting materials of these crops. For popularization of horticultural crops, several training camps and seminars etc. has been organized in different stages. As many as 75,000 nos. of Coconut of Coconut seedlings of improved varieties has been distributed during this. Year. More than 450 hectares has been covered with this crop in the State with the contribution of the Coconut Development Board, which has offered subsidy of Rs. 5,43,941.00 to 2066 nos. of farmers for growing of improved Coconut in their homestead of farmers. In the next year, over 3,44,000 nos. of Coconut have been sown in different nurseries. The horticulture development scheme also provides opportunities for the unemployed youth farmers.

In case of citrus and banana growers, farmers and trained – up to select and cultivate improved varieties from their own orchards. They are also supplied with planting materials. Even among the



students, it is envisaged to popularize these crops in institutional camps. Black peeper cutting and distributed all over the State and it is found that a large number of families have now adopted this spice crop in their homesteads.

For higher production of vegetables and flowers, steps have been taken to grow in commercial line also. To impart training in preservation is also undertaken.

### National Watershed Development Project

The National Watershed Development Project for rain fed area (NWDPR) is a new concept. It has been now introduced in an earnest effort in the state. In order to preserve and develop land and water which are the basic resources of production of farmers the whole State is being delineated in the different watershed. Considering the importance of watershed development, The State Govt. with assistance from the Govt. of India has launched an ambitious programme of NWDPR with total outlay of Rs. 24 crores for 5 years with effect from 1990-01.



## Major Schemes at a glance

### (1) Rice Production

More than 90% of the total foodgrain is rice. In order to boost up production of rice an Integrated Programme for Rice Development (IPRD) and Special Food grains Production SFPP (STW) have been kept in 1992-93 with a budget provision of Rs. 851.00 lakhs and Rs. 250.00 lakhs respectively.

The programme under the centrally sponsored schemed IPRD during 1992-93 is proposed to be taken up with the following components –

1. Distribution of Bullock drawn Agril. Implements at 50% subsidy (max. Rs. 100/-)
2. Proposed distribution of Power Pumps at 50% subsidy (max. Rs. 5000/- each) – Proposed.
3. Distribution of Power Tiller at subsidized rate (Rs. 12,000/- each.)
4. Organisation of Field demonstration of herbicides use rainfed RPT and Low Cost RPT.



The area and production target of rice during Kharif and Rabi 1992-93 are given below –

<b>Kharif</b>	<b>Area ('000 hect.)</b>	<b>Production ('000 MT)</b>	
i) Autumn rice (Ahu)	620	* 548 (.)	525
ii) Winter rice (Sali)	1808	* 2703 (.)	2600
Total Kharif	2428	* 3251 (.)	3125
<b>Rabi</b>			
1) Summer rice	190	* 302 (.)	225
Total Kharif and	2618	* 3553 (.)	3350

Rabi :

\* Target recommended by working group of Planning Commission

(.) Target recommended by Ministry of Agriculture

## **(2) Oil Seed Production**

There has been an increasing trend in the oil seed production in the State. The increasing trend in production of oil seed was maintained in the subsequent years as given below :

<b>Year</b>	<b>Production (lakh MT)</b>
1985-86	1.72
1986-87	1.85
1987-88	2.02
1988-89	2.04
1989-90	1.88
1990-91	1.90
1991-92	2.10 (anticipated)
1992-93	2.40 (Target)

In view of these encouraging trends the objectives of the VIII plan is to achieve Self Sufficiency in oil seeds production. In order to sustain the efforts for increasing of oil seeds, suitable schemes have been taken up in 1992-93 viz. (i) seed production programme Rs. 244.00 lakhs under centrally sponsored to be shared between central and state Government 75%, 25%

## **(3) Pulse Production**

Assam has around 0.6 percent of the area and contribution about 0.5 percent of pulse produced in the country. However, the production and productivity of the crop in the state has been stagnating over the last two plan period. This can be attributed to the acidic condition of the soil and adverse climatic condition like prolong monsoon and non-availability of improved seeds in time and difficulty in storing, because of high humidity.

To over come this, national seed agencies like NSC/TDC/SFCI shall have to construct condition Godown and advance stocking of pulse seeds to ensure timely availability. Since pulse sowing time is restricted due to weather condition, relay cropping of pulses with paddy in Rabi season and extension of area under summer Moong and Black gram is being popularized. Of late Rajmah, a new pulse crops has been introduced and it has been found to have yield potentiality of 2-3 MT/Hec. Efforts are being made to increase production of pulses, suitable schemes have been taken up under state sector – Development of Pulse Rs. 30.00 lakhs and under central sector National Pulse Development Project Rs. 19.50 lakhs to be shared between and state Govt. on 66.36% / 33.64%.

Year wise production of pulses during 7th Plan and Adhoc Annual Plan of 1990-91 and 1991-92 and target for 1992-93 are given below :

<b>Year</b>	<b>Production (lakh MT)</b>
1985-86	0.69
1986-87	0.63
1987-88	0.63
1988-89	0.52
1989-90	0.54
1990-91	0.53
1991-92	0.76 (Anticipated)
1992-93	0.84 (Target)

#### **(4) Sugarcane Development**

Sugarcane is one of the main cash crop in Assam grown in the Kharif season. On an average in a year, the area coverage under Sugarcane crops is around 38.75 thousand ha. However, a total of about 21 thousand ha. of sugarcane is cultivated in the three Mill Zone area of Assam. It is mostly grown under rainfed conditions and facing stiff competition from other cash crops grown under similar topographical and agro climate condition.

The area, production and average yield of Sugarcane during the years are given below :-

Year	Area (100 ha)	Production of Cane (lakh tonne)	Av. yield Kg/ha.
1990-91	35.80	15.22	42510
1991-92	45	20.00	45000
1992-93	46	21.50	46739 (Target)

In order to increase the area and production of sugarcane, a development scheme has been undertaken by the state Government to revitalise the sugarcane cultivation in the Mill Zone Areas.

#### **Fibre Crops**

##### **(5) Cotton Development Programme**

Cotton is one of the minor crops in the state with a very limited coverage confined to the hill districts. Only about 3,000 hect. of area is covered annually under the crop. The scheme for Cotton Development is implemented with a budget provision of Rs. 7.00 lakhs during 1992-93. The area production and productivity of the crop during last 4 years are given below :-

Year	Area (hact.)	Production (bales)	Productivity
1887-88	2942	1372	79
1988-89	2453	1444	79
1989-90	2328	1087	79
1990-91	2150	998	79

(180 kg. = 1 base)

##### **(6) Jute Development**

The State has immense potentiality to increase the area and production under jute crop. However, the farmers in particular this crop considering the remunerative prices offer to them from time to time.

The state production of jute during 1991-92 is 8.67 lakh bales against an area of 1.01 lakh hectare. In view of this productivity of this crop, the Government of India has sponsored Special Jute Development Programme with 100% assistance in 9 districts covering 31 nos. blocks. Since the inception of this scheme, the productivity per ha in the identified blocks has raised to 2815 kg/ha against the state average of 1537 kg/ha during 1991-92 with total production of 6.26 lakh bales under this scheme in the reference year.

## **(7) Agriculture Engineering**

Agricultural Engineering has a crucial role in the productivity and production of various crops. This is particularly true in case of farm mechanisation under which land development, land preparation, sowing, weeding, threshing etc. are involved. Agricultural Engineering, therefore, forms a part of the Agricultural science for increasing productivity and production.

### **i. Land Reclamation and Custom Hire Services of Agricultural Machineries**

The new cropped area in the state is about 27 lakh hectares of which about 7.0 lakh hectares are covered under Rabi crops. The Rabi season being free from natural calamities the area under Rabi Crop can be increased to about 14 lakh hectares provided quick land preparation through mechanisation supported by adequate irrigation facilities can be arranged.

The department with limited 191 nos. of Tractors performed double harrowing tillage in 12,000 hectares of land during 1991-92. Further, 498 nos. of power tillers were distributed to farmers during 1991-92.

### **ii. Distribution of Improved Implements**

During the year 1991-92, 9013 nos. M.B. plough, 1004 nos. paddy weeder, 250 nos. dry land weeder, 87 nos. wheel hoe and 8040 nos. of small implements were distributed to the farmers.

## **(8) Installation of Shallow Tube Wells**

The potential for installation of STW's have been estimated to about 5,45,000 nos. in the State. As against this, 46,000 nos. have been installation upto 1990-91. The department installation 561 nos. of STW and distributed 580 nos. of pump sets during 1991-92. Besides, 373 nos. and 353 nos. of pump sets were also supplied to farmers under S.C.C.P. and T.S.P. schemes respectively during 1991-92 at subsidised rates. During 1992-93, the target for installation of STW 7480 nos.

## **(9) Agricultural Credit**

Gaon Panchayat level Multipurpose Co-operative societies in plain Districts and LAMPS in Hill areas (PACS) are providing agricultural credit to the farmers both in cash and kind. The kind component comprises of seeds, fertilizers, pesticides etc. The agricultural credit is routed through the above agencies by the Assam Co-operative Apex Bank Ltd. and Commercial Banks. The Assam Agro-Industrial Development Corporation, the Assam Seeds Corporation and STATFED are the agencies entrusted with the job of supplying fertilizer and seeds.

The PACS (GPSS /LAMPS) are being provided with financial assistance for construction of godowns including retail counters. More than two-third of the PACS are proposed to be assisted with financial accommodation from National Co-operative Development Corporation and State Government in phased manner. For boosting the credit support to the farmers through Co-operative, 300 Asstt. Inspectors of Agriculture have been posted in 300 identified GPSS to work as Additional Secretaries to look after dispensing of Agricultural Credit exclusively. The Target of disbursement of Agricultural credit for short term purpose has been proposed to the extent of Rs. 800.00 lakhs for the year 1992-93.

The position of disbursement of credit for the last three years is shown hereunder.

1989-90	Rs. 143.20 lakhs
1990-91	Rs. 207.72 lakhs
1991-92	Rs. 135.65 lakhs
1992-93	Rs. 800.00 lakhs (Target)

### **(10) Horticulture Development**

Horticulture is fast emerging as an important area of extension and development in the State. There are immense scope for development of horticulture in Assam. yet its growth over the years remain somewhat slow. It is by and large practised as non-commercial enterprise by the farmers in their homestead and orchards. The Department has already undertaken promotional activities to boost up production of Fruits and Vegetables from the current year 1992-93. Action is taken to formulate a project on "Integrated Dev. of Horticulture in Assam" with external assistance during the Eighth Five Year Plan.



For a population of 2.23 crores in the State the total requirement of Fruits Vegetables are 5.59 lakh M.T. and 19.38 lakh M.T. respectively per annum. The annual production of Fruits is 8.10 lakhs M.T. and Vegetable 15.5 lakhs MT in year. The State is therefore marginally surplus in production of fruits. It is therefore proposed to step up production plan for self sufficiency as well as surplus for external market.

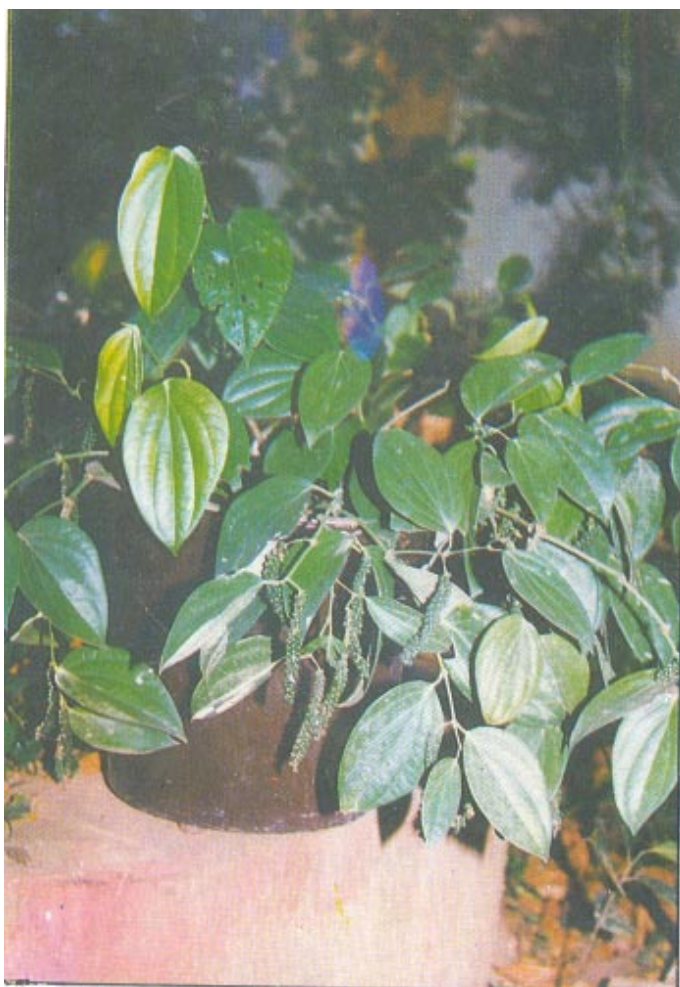
The following are the State Plan, and Central Sector schemes which are implemented by the Department for Development of Horticulture for 1992-93

## State Plan Schemes

1. Development of Progency Orchard.
2. Development of Horticulture, Vegetable Crops.
3. Development of Citrus & Pineapple.
4. Integrated Horticulture Development.

## Central Sector Schemes

1. Integrated Programme for Development of spices.
2. Production of Fruits.
3. Integrated Development of Tropical & Arid Zone Fruits.
4. Development of Arecanut.



**The Physical target under Horticultural crops is given below :**

Crop	1992-93	
	Area under Crops (in hac.)	Production Target
1. Banana	35423	4,85,130 (MT)
2. Coconut	10330	8,00,53,000 (Nos.)
3. Arecanut	10330	75,195 (ton)
4. Pineapple	-	1,95,180 (ton)

### (11) Tribal Sub Plan

The objective is to provide assistance to the Tribal community who are still below the poverty line and to motivate them to switch over to modern agriculture from traditional farming practices so as to improve their economic condition. Demonstration, adaptive trial, minikits, study tour, subsidy on agriculture inputs like seeds, fertilizer, pesticides, implements and machineries are included in the programme Rs. 620.00 lakhs has been earmarked for the scheme during 1992-93 as against Rs. 404.00 lakhs during 1991-92.

### (12) Schedule Cast Component Plan

The Scheme includes input distribution as subsidised rate, farmers training, study tour, horticultural development, supply of Agriculture implements and machineries at subsidised rate. Upliftment of economic condition of S.C. farmers through economic assistance by implementing the above mentioned scheme. An amount of Rs. 300.00 lakhs is approved for 1992-93 as against anticipated expenditure of Rs. 220.32 lakhs during 1991-92.

### Physical Target and Achievement for 1991-92 & Target for 1992-93 under TSP and SCCP Agriculture Sector :

Scheme	1991-92	(Unit)	No. of families benefited
1	2	3	4
1. T.S.P.	84,548	80,578	85,730
2. S.C.C.P.	83,605	81,910	84,000

### (13) Agricultural Marketing and Quality Control

The Scheme under this programme are marketing of Fruits and Vegetables Development of Market Intelligence, Development of Regulated Market, Jute Grading and Bailing, Quality Control Lab (Agmark) and Cold Storage. The schemes aim at ensuring remunerative price to be growers through transport subsidies and market intervention. For development the regulated market, grants in aid are given to Assam State Agricultural Marketing Board. Provisions are there to train Jute Growers for proper grading of Jute fibres to fetch better price. 4 (four) Agmark Laboratories are under the department for checking of quality of commodities like mustard oil, spices, honey, flour, Ghee etc. 3 (three) more Agmark Lab. were commissioned during 1987-88, three Cold Storage at Guwahati, Howly and Bokakhat has already established and two of them are



functioning. During 1992-93 three more Cold Storage are proposed to be established in large quantity vegetable growing places. Fund allocation for Agril. Marketing for the year 1992-93 is approved at Rs. 117.00 lakhs against anticipated expenditure of Rs. 97.00 lakhs during 1991-92.

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#### **(14) Field Management Committee (FMC)**

##### **An endeavour for Integrated Agriculture Development and Employment Generated Schemes**

In view of the overall economic development of the farmers, the Deptt. of Agriculture has given new thrusts to organise and develop FMC by integrating all farm system like crop production, Forestry, Animal Husbandry, Minor Irrigation, Poultry, Sericulture, Fishery, Horticulture into one coordinate system and thereby proposed to cover all the 22,500 villages of the State towards the end of the 8th Five Year Plan.

To make the FMC more active and well organised, thrust will be given for providing machinery and equipment with maximum subsidy from all the Department Schemes/ Projects.

Out of the 4915 nos. FMC so far organised in the State, 2263 nos. alone organised during 1991-92. More than 1,25,000 nos. farmers have been directly involved in this scheme and generated employment to nearly 14,50,000 nos. educated unemployed rural youths indirectly. To attract more farmers, particularly the rural educated youths, nearly 74 nos. model FMC have been organised in all districts of the State and likely to cover more model FMC during this year.

Besides that, steps have been taken to involve the deptts. of Cotton Industries, Khadi Board, Adult Education etc. for making the members of the FMC aware of modern technologies in these field too.

#### **(15) State Government's Agricultural Planning for Hill Areas Development**

Nearly 58,600 tribal families in the two Hill districts continues to be dependent in 'JHUM' cultivation. Considering the dimension of this problem and ecological implications the Government has viewed for the rehabilitation and economic development of Jhumias during 8th Plan period. On the contrary, scarcity of land for settled crop production needs for diversification of agriculture giving more attention on productivity per unit area of horticultural cash-crop, plantation crop etc. As a matter of fact, compact area development approach has been undertaken to increase coverage under special Jhum Control Programme.

During 8th Plan Period it is proposed to extent coverage to 13% of the Jhumia Families on the number of households etc. in respect of the proposed compact area and Mini compact areas and 7108 nos. of families were identified under this scheme for around development.

##### **Distribution of Sprayers**

The Department distributed 9165 nos. and 4064 nos. of sprayers under T.S.P. and S.C.C.P. schemes respectively at subsidised rates.

The annual procurement of pesticides made by the Department alone is sufficient to cope with problems of pest and diseases.

##### **Seed Production Programme**

Non availability of quantity seeds in abundant quantities within the state has been a retarding factor in raising productivity and production of various crops in Assam. Almost the entire requirement of wheat jute, pulse and vegetable seeds are procured from outside the state. Even in case of traditional crops like paddy and mustard, the state is not self sufficient in seed production. The gap is substantially

reduced between the requirement and production of seeds of various important crops since 1990-91. To achieve self sufficient in seeds specially Rice and Rape and Mustard all the land and other infrastructural resources that are available in the departmental seed farm (52 nos.) seed farmers of the Assam Seed Corporation (12 nos.) and AAU are being utilised for production of certified seeds. Accordingly provision has been made under the scheme of seed farm and nurseries for Rs. 147.00 lakhs during 1992-93. Production programme of seeds (Rice & Mustard) through Registered growers is continuing since 1984-85.



Seed Production Programme and procurement of certified seeds (from outside) during 1992-93 are given below :

Crop	Production (in qtls)	Procurement from outside (in qtls.)
1. Paddy	67000	Nil
2. Wheat	Nil	65000
3. Rape & Mustard	7900	Nil
4. Soybean	600	150
5. Jute	1900	1100
6. Maize	Nil	450
7. Black Gram	320	640

## Inputs Management

### Fertiliser

Although the fertilizer consumption during 7th Phas has increased but the level is much below the National average. The present percentage consumption in Assam is around 11.4 kg/hac. against the National Average of 50 kg/ha.

Therefore a scheme namely Input Delivery System with a provision of s. 350.00 lakhs have been taken up to increase the consumption of fertilizer as well as production of Agriculture products during 1992-93.

The increasing trend in fertilizer consumption is given below :

Year	Kg/ha.
1985-86	4.7
1986-87	4.9
1987-88	6.8
1988-89	7.4
1989-90	6.5
1990-91	11.4
1991-92	10.5
1992-93	15.0 (Target)

For increasing fertilizer consumption the following strategies have been proposed -

1. Providing transport subsidy and inventory carrying cost to the dealers for taking up fertilizer business.
2. Opening of more retail outlets and to organise mobile sale.
3. Providing 50% subsidy to SC/ST farmers.
4. Advance stocking of fertilizer in different areas (Buffer stocking)
5. Providing managerial subsidy to the extent possible to the institutional agencies for the opening sale points.
6. Increasing credit flow to enable the farmers to purchase fertilizer.
7. Increasing soil testing and fertilizer recommendation facilities for beneficial and economic use.

Fertilizer consumptions during 1991-92 and target for 1992-93 are given below -

Year	N	P	K	Total
1991-92	27665	15647	13888	57200
1992-93	30432	17212	18277	62921

### Plant Protection

Assam climate being warm and humid, large varieties of harmful insect pests and diseases attack agricultural crops throughout the year. Measure to control pests and diseases are important to prevent crops loss. Therefore schemes viz. pest surveillance, Plant protection campaign, Quality control (pesticide) have been included with a financial involvement of Rs. 83.00 lakhs during 1992-93 under state sector.

The demand and consumption of pesticides during last three years and area treated are shown below

Year	Pesticides demand (MT in Tech. grade)	Consumption (MT in Tech. grade)	Area treated (in hect)
1989-90	652	585	6,541,508
1990-91	675	590	658,112
1991-92	735	595	5,63,702
1992-93	700	650 (Target)	7,82,600 (Target)

### Selection of Land

- (i) Flood free
- (ii) Loamy to clay-loam soil.
- (iii) Soil P.H. above 5.5.
- (iv) Rainfed
- (v) Mono cropped Sali land.

### Target

- (i) Per VLEW Eleka - 20 hectares
- (ii) Per district - 2,000 hectares
- (iii) State - 50,000 hectares

## Employment Generation

The State Govt. has given more stress on giving the Self Employment to the Educated Unemployed Youth through several Department Schemes / Projects than that of the regular employment creation. The Department has created employment avenue during the period of 1991-92 are given below along with the creation of employment avenue to the unemployed youth.

(A) Indirect / Self Employment (Through different schemes/ projects)	17,037 nos.
(B) Target for 1992-93	25,000 nos.

### Physical Target under Different Crops During 1991-92

Crops	Unit	Physical target 1992-93
1	2	3
1. Rice	Lakh tonnes	33.50 (35.53 was recommended by working group) (33.50 Ministry of Agriculture recommendation)
2. Wheat	"	1.29
3. Maize and other cereals	"	0.23
4. Pulse	"	0.84
Total Food grains	"	35.86
5. Oil Seeds	"	2.40
6. Sugarcane	"	21.50
7. Jute & Mesta	Lakh bales	11.16
	Lakh tonnes	0.67
8. Improved seed production cereals		
9. Oil Seed	"	0.08
10. Jute	"	0.019
11. Improved Seed distribution		
12. Consumption of Fert (NPK)	000 mt.	62.22
13. Consumption of Pesticides	Lakh tonnes	650.00
1. Pineapple	'000 T	185.18
2. Banana	"	485.13
3. Coconut	'000 nos.	80053
4. Green Gram	300	650
5. Pea	1200	4900
6. Arhar	63	87
7. Rajmah	Nil	1200

## Multiple Cropping

### Objectives

- a) To introduce multiple cropping system in monocropped land.
- b) To increase cropping intensity.
- c) To bring about rapid improvement in production of crop and income.
- d) To generate additional men-days and to remove atleast partially concealed under employment and unemployment.

In the State of Assam the intensity of cropping at present is 145 as against the cropping intensity 138% in the beginning of VIIth Five Year Plan. in the 1st Year of VIIIth Five Year Plan much emphasis will be given to raise the cropping intensity upto 150%. The total net area under Rice in Assam in a normal year is around 18.00 lakh hect. of which 6 lakhs hect. is double cropped (Ahu & Sali) and rest single cropped Sali rice (12.00 lakh hect) being most dominant. The mono cropped land holds prospect for increasing production of rice and rabi crops through vertical and horizontal growth.

The new cropping system calls for judicious selection of rice varieties adjustment of sowing time with a view to harvest the crop by middle of October or so. To grow second crop the most important factor is quick land preparation. Mechanisation is therefore, critical Agril. Engg. input for success of multiple cropping system in the state.



The important guiding principal in selection of Rabi Crops in the short duration and quick maturing varieties with low requirement of moisture, oil seed like M-27, TS-29 and Pulses like Pea and Rajmah fit well in the programme.

Possibility of growing 3rd crop like summer Moong will be introduced after harvest of pulses and Oilseed under the programme.

### Achievement During 1991-92

Name of Programmes/ Projects/Schemes	Items of Physical achievement	Unit	Target proposed	Physical target achieved	Remarks
1	2	3	4	5	6
1) Food Grains Crops (production)	i) Rice	Lakh tonnes	33.70	31.85	Production du to 3 waves of floods
	ii) Wheat	"	1.22	1.05	
	iii) Maize and other cereals	"	0.22	0.20	
	iv) Pulse	"	0.81	0.60	
Total Food Grains :			35.95	33.70	
2) Commercial Crops	i) Oil Seeds	"	2.38	2.10	
	ii) Sugarcane	"	21.00	18.00	
	iii) Jute & Mesta	Lakh bales	11.05	9.79	
3) Improved Seed Production	i) Cereals	Lakh tonnes	0.61	0.33	
	ii) Oil Seeds	"	0.10	0.02	
4) Improved Seeds distribution	i) Rice	"	0.92	0.92	
	ii) Wheat	"			
5) Manures & Fertilizers (NPK)	Consumption of Fertilizer	"	0.57200	0.35521	
6) Plant Protection	Consumption of Pesticides	"	0.006	0.006	
7) Horticulture crop production	i) Pineapple	Lakh tonnes	1.66	1.50	
	ii) Banana	"	2.00	0.88	
	iii) Coconut	Lakh nos.	2.50	1.20	

## Strategies

In view of various constraints and in consideration of the potentiality and past performance, targets, have been fixed up which are considered feasible for 1992-93.

The main strategies to be adopted are as follows :

1. Extension of area under Rabi Crops particularly Rabi Rice.
2. Development of Minor irrigation in general and ground water development in particular with emphasis in STW/ LLP programme through institutional Finance.
3. Buffer stock of fertilizer and seeds.
4. Single window system of delivery of agricultural inputs including credit at the door steps of the farmers.
5. Better facilities for increase of fertilizer consumption.
6. Increasing cropping intensity through double and multiple cropping. It is proposed to advance the harvesting of sali crop in October using long / medium duration HYV to be followed by pulse & Oilseed from October to January and then a third crop of summer pulse from February to April.
7. Mechanisation of Agriculture.
8. Custom services.
9. Better watershed management.
10. Post harvest facilities particularly for 'Autumn Rice' and Horticultural produces.
11. Timely plant protection measures.
12. Increasing area under Horticultural crops including vegetables.
13. Better marketing facilities.
14. Regular monitoring of plan schemes.
15. Self sufficiency in certified seed production to the extent possible in respect of paddy/ oilseed and reduce the import of Jute seeds.
16. Development and transfer of technology on Agro climatic basis.
17. Increase in productivity of all crops in general and wheat in particular.