



सत्यमेव जयते

**Crop Diversification Program in  
Haryana, Punjab & Western Uttar  
Pradesh**

**Sustainable agriculture with increased  
productivity & profitability**

**2013-14**

**Government of India  
Ministry of Agriculture  
Department of Agriculture & Cooperation  
Crops Division  
Krishi Bhavan, New Delhi-110 011**

## **Guidelines for Crop Diversification in Original Green Revolution States**

The Finance Minister in his budget speech for 2013-14, has provided an amount of Rs 500 crores for Crop Diversification in Original Green Revolution States to divert the area of water guzzling crop i.e. paddy to alternate crops from ensuing kharif season 2013-14 .

### **Background:**

Crop Diversification refers to a shift from the regional dominance of one crop to regional production of a number of crops, to meet ever increasing demand of cereals, pulses, vegetables, fruits, oilseeds, fibres, fodder, grasses etc. It aims to improve soil health and to maintain dynamic equilibrium of the agro-ecosystem. In the instant case, crop diversification is intended to promote technological innovations for sustainable agriculture and enable farmers to choose crop alternatives for increased productivity and income.

The concerns relating to diversification of rice-wheat cropping systems area in the country came to fore when yield levels of these two most important food crops experienced stagnancy and net profit accruals showed diminishing trend. The problem got further aggravated due to depletion of water table in North-West plains zone comprising Punjab, Haryana and West Uttar Pradesh. Thus, dwindling ground water resource in these States due to excessive withdrawal of water for irrigation led to impurities in the water-a cause of attendant crop health effects. Accordingly, these concerns were *interalia* examined in detail by the Committee of Secretaries (CoS) nine (9) major States comprising three (3) rice-wheat cropping systems States namely; Punjab, Haryana & Uttar Pradesh, two (2) rice dominant States namely; West Bengal & Bihar and four (4) other States namely; Andhra Pradesh, Karnataka, Maharashtra and Rajasthan. The Committee concluded that the Original Green Revolution States were facing problem of stagnancy in yield and over-exploitation of ground water resources which call for immediate diversification in crops through promotion of technological innovations in order to enable farmers to choose appropriate crop alternatives.

The continuous cultivation of water guzzling crops like paddy due to frequent flood irrigation has resulted into depletion of ground water in the original Green revolution States namely; Punjab, Haryana and Western Uttar Pradesh. The continuous cultivation of rice wheat cropping system has witnessed the stagnancy in crop yield, infestation of weeds, contamination of ground water, incidence of pests-diseases and deterioration of soil health. Therefore, it is essential to diversify the area from paddy to alternate crops not



only to improve soil fertility and arrest depletion of ground water but also to enhance the farm income.

The following objectives are expected to achieve through implementation of Crop Diversification Programme in the Original Green Revolution States namely; Punjab, Haryana and Western Uttar Pradesh.

1. To demonstrate and promote the improved production technologies of alternate crops for diversion of paddy cultivation;
2. To restore the soil fertility through cultivation of leguminous crops that generates, heavy biomass and consume lesser nutrient intake crops.

### Coverage

The programme is to be implemented in 3 states namely Punjab, Haryana and Western Uttar Pradesh. The notified over-exploited and critical blocks based on recommendation of Central Ground Water Board of major paddy growing districts of each state would be identified for implementation of Crop Diversification programme. At least 5% of area under paddy in indentified blocks would be diverted towards alternate crops during 2013-14. State-wise normal area, % share in the total area and area of paddy to be diverted is given as under:

Sl.	CDP States/	Rice area ('000' ha) (QE:2011-12)	% share of respective state rice area to total all states three rice area	Targeted area of paddy for diversion ('000' ha)
1	Punjab	2759.2	50.25	140.00
2	Haryana	1194.0	21.75	60.00
3	West Uttar Pradesh	1537.2	28.00	80.00
<b>Total</b>		<b>5490.4</b>	<b>100</b>	<b>280.00</b>

### Crops and activity covered

In order to divert area to other alternate crops, it is proposed to motivate the farmers for cultivation of maize, kharif pulses ( arhar, mungbean, urdbean, cluster bean ), oilseeds (soybean, til), poplar based agro-forestry system ( cultivation of rabi and kharif inter-crops), it is also proposed to provide the assistance to the farmers for land development, farm mechanization, establishment of agro-based food processing units for value addition and marketing support to generate additional income and restore soil fertility.



## Allocation of funds

In order to implement the proposed programme on Crop Diversification in Original Green Revolution States to divert 5% area of Paddy to other alternate crops fitting in the prevalent wheat-paddy cropping system. An amount of Rs.500.00 crores is earmarked under the programme under RKVY funds for the year 2013-14. State-wise allocation of funds is based on the five year average total area of paddy in the state and % area of paddy to be diverted towards alternate crops. State-wise and Component-wise tentative allocation of funds is given as under:

Sl. No	State	% share of respective state to total rice area of all three states	Allocation of funds (Rs. In crores)					Total
			Alternate crops Demonstrations (60%)	Farm Mechanization & Value addition (23%)	Site specific activities (15%)	Contingency for awareness training, Implementation and Monitoring etc (2%)	Incentives for implementation of programme (10%)	
1	Punjab	50.25	134.70	51.63	33.67	4.50	0	224.50
2	Haryana	21.75	59.10	22.65	14.77	1.98	0	98.50
3	West UP	28.00	75.30	28.86	18.82	2.52	0	125.50
4	National level		0.00	0.00	0.00	1.50	0	1.50
<b>State Total</b>		<b>100.00</b>	<b>269.10</b>	<b>103.14</b>	<b>67.26</b>	<b>10.50</b>	<b>0</b>	<b>450.00</b>
<b>National level</b>		<b>0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>50.00*</b>	<b>50.00</b>
<b>Grand Total</b>		<b>100</b>	<b>269.10</b>	<b>103.14</b>	<b>67.26</b>	<b>10.50</b>	<b>50.00</b>	<b>500.00</b>

\* The amount is earmarked as incentive which will be disbursed to any state depending on the performance against the indicators developed by NCAP irrespective of their entitled allocation.

## Implementation of programme

### National Level

In order to implement & monitor the programme of “Crop Diversification in Original Green Revolution States”, a **Central Steering Committee (CSC)** would be constituted under the chairmanship of Secretary (A & C). The composition of CSC is as under:-

- |   |  |                  |
|---|--|------------------|
| 1 | Secretary (A&C), Department of Agriculture & Cooperation, Ministry of Agriculture, Krishi Bhavan, New Delhi-110 001.                     | Chairman         |
| 2 | Additional Secretary (Seeds & RKVY), Department of Agriculture & Cooperation, Ministry of Agriculture, Krishi Bhavan, New Delhi-110 001. | Member           |
| 3 | Agriculture Commissioner, Department of Agriculture & Cooperation, Ministry of Agriculture, Krishi Bhavan, New Delhi-110 001.            | Member           |
| 5 | DDG (NRM), ICAR, Anusandhan Bhavan, New Pusa, New Delhi-110 012  | Member           |
| 6 | Joint Secretary (Crops), Department of Agriculture & Cooperation, Ministry of Agriculture, Krishi Bhavan, New Delhi-110 001.             | Member-Secretary |

CSC will meet the quarterly basis and review & monitor the implementation of the scheme. CSC will also be responsible for addition, deletion & modification of the ongoing activity of the programme.

A national level team will also be constituted in Crops Division under the chairmanship of Joint Secretary (Crops) to deploy officers/ staff within the department and on contractual basis comprising of One Joint Director/Assistant Director, One Consultant, One Technical Assistant and One data Entry Operator and One MTS will be placed in the team to look after day to day work for monitoring and implementation of the programme.

#### **State Level**

A state level committee (SLC) would be constituted under the chairmanship of Secretary, Agriculture of the state with the following constituents

- |  |                  |
|--|------------------|
| 1. Secretary, Agriculture                            | Chairman         |
| 2. Director, Agriculture                             | Member secretary |
| 3. Representative of Forest Department               | Member           |
| 4. Director Research of State Agriculture University | Member           |
| 5. Representative from DAC                           | Member           |

The SLC of “Crop Diversification in Original Green Revolution States” will be fully responsible for approval of district specific programme, implementation and monitoring of programme in the state. Each state will create a cell at state level to look after day to day work for implementation and monitoring of the programme at state and district level from available manpower under ATMA/ Extension functionaries.

#### **District Level**

The scheme is proposed to be implemented through State Department of Agriculture in the identified districts in a cluster approach. A Programme Management Group (PMG) would be constituted under the chairmanship of Additional Collector/ Chief Development officer (CDO) of the district with the following constituents:

- |  |                  |
|--|------------------|
| 1. Additional Collector  | Chairman         |
| 2. District Agriculture Officer (DAO)  | Member Secretary |
| 3. Representative of Forest Department   | Member           |
| 4. Representative of Department of Food Processing<br>State Agriculture University | Member           |
| 5. Representative of KVK (Crop Production)   | Member           |

PMG will be fully responsible for identification of beneficiaries for cluster demonstrations of alternate crops to paddy and collaborate with other stakeholders for implementation of programme at field level.



## Pattern of assistance for Activities

### (i) Cluster Demonstrations

Cluster demonstration units (one unit=10 hectares) of identified alternate crops in each district will be organized through identified beneficiaries groups by State Department of Agriculture. One progressive farmer will be designated as group leader for organization of cluster demonstration. Honorarium of Rs.2000/ per cluster demonstration of 10 ha will be provided in one time basis for organization of cluster demonstration. Assistance @ of Rs.10000 per ha for Maize, kharif pulses ( arhar, mung bean, urd bean, cluster bean ), oilseeds ( soybean, til) and Rs.10000/- per hectare for poplar based agro-forestry system for sole crop. The financial assistance of Rs 10000 per hectare expect poplar based agro-forestry system will be given in the form of Rs. 5000 for critical inputs including honorarium & other activities, Rs.2500 for land development and Rs.2500 for marketing support . An amount of Rs. 5000/- per hectare for inter-cropping of pulses and wheat will be provided to the farmers in the terms of critical inputs for organization of demonstrations. District Programme Management Group (PMG) will be responsible for arrangement of critical inputs for organizing cluster demonstrations. All critical inputs will be ensured by the State Department of Agriculture (SDA) well in advance before the sowing/transplanting of the crops. State will decide crop specific cluster demonstrations as per the availability of quality seeds of identified alternate crops. **Crop & component-specific pattern of assistance is given as under:**

(Rs./ha)

S.N.	Components	Crops	
		Maize , kharif pulses ( Arhar, mungbean, urd bean,) cluster bean, oilseeds and Bsamati (directed seeded)	Eucalyptus ( water logged conditions only ) Poplar/ based agro-forestry system for sole
A.	Cost of Critical inputs(seeds, micronutrients, seed treating chemical & P.P chemical etc	4500	9500
	Production technology & publicity materials	150	150
	Honorarium & mobility to group leader of cluster demonstration	200	200
	Visit of GOI/State officials for hiring of vehicle or POL	150	150
	Sun -total	5000	10000
B.	Land development Charges*	2500	-
C.	Marketing Support ( store bin etc)**	2500	-
D.	Inter crops with poplar (critical inputs)	-	5000
	<b>Grand -Total</b>	<b>10000</b>	<b>15000</b>

\* & \*\* Land development charge and marketing support will be paid to the farmers in cash to support the losses incurred due to diversion of area from paddy to alternate crops.

**(iv) Farm mechanization, processing and value addition**

In order to create sustainability in diversion of paddy area to alternate crops, the necessity of farm machinery, agro-processing and value addition is of immense importance. An amount of 23 % of total state allocation is earmarked for farm machinery, processing and value addition items. The crop specific farm machinery will be provided to the farming community (group of 10 farmers) on custom hiring basis. An assistance @ of 50% cost of machine limiting to Rs. 25000/- for Maize sheller, Rs.5.00 lakh for portable maize dryer, Rs. 3000 for powered sprayer, Rs.25000 multi-crop thresher, Rs. 2.0 lakh for portable cleaner cum grader for pulses and Rs. 10.00 lakh maize processing unit etc.

**(v) Site Specific activities**

An amount of 15 % of total state allocation is earmarked for site specific activities. The identified site specific activities to promote alternate crops should be included in the action plan to be submitted by the respective state.

**(vi) Incentive for implementation of programme**

An amount of 10 % of total state allocation is earmarked and kept at central level for incentive to the state for implementation of the programme through diversion of paddy area to alternate crops as per target fixed. The amount will be released separately after monitoring and evaluation of the programme by designated agency i.e National Centre for Agricultural Economics and Policy Research (NCAP).

Indicators are to be developed by NCAP for assessment of implementation of the programme at state, districts & individual.

**(vii) Awareness trainings, implementation and monitoring**

**a) Awareness trainings**

State Departments of Agriculture would organize awareness trainings of farmers for diversification of paddy to other alternate crops for additional income generation, restoration of soil fertility, agro-processing, value addition of crop produce to make farming as a profitable enterprise. The State Department of Agriculture would develop training material with help of other line departments like Forest and SAUs. Assistance @ of Rs. 5000/- for a group of 50 beneficiary farmers of cluster demonstration would be provided for awareness training program.



b) In order to effective implementation and monitoring of the programme at state and district level, and encouragement of effective implementation of the programme in the state & district level, funds @ 2% of the total state allocation is earmarked for awareness trainings , implementation & monitoring of the programme. Out of which an amount of Rs.2.00 lakh for state level and Rs.2.00 lakh per district is to be incurred for publicity, organization of review meetings, implementation & monitoring visits, contingencies etc.

**Submission of Action Plan**

Tentative allocation of funds for the year 2013-14 has been decided based on the number of districts and area proposed under crop diversification in each state. The state would prepare the action plan for implementation of CDP and submit to Ministry of Agriculture before implementation of the programme at field level.

**Release of funds**

Funds released mechanism would be on the same lines as being followed as under regular RKVY scheme.

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