

A brief note on
CROP DIVERSIFICATION PROGRAMME

After a tremendous performance for about three decades since the mid-1960s, the agriculture sector in Punjab is facing many challenges. Slow down in agricultural growth, falling profitability in farming, reduction in employment elasticity of agriculture sector, fall in the ground water table (primarily due to rice), increasing nutrient deficiency in the soils including the micronutrients and insect-pest/diseases attacks are the major issues afflicting the Punjab agriculture. There is a decline in real farm income due to near stagnation in productivity of rice and wheat. The capacity of the production system is not only shrinking, due to swallowing of the most fertile lands for non-agriculture uses, but its factor productivity is also declining due to multiple problems as highlighted above.

The concerns vis-a-vis the need to diversify agricultural economy of the state were raised with central government who on their part examine these issues in detail and a State specific Programme primarily aimed for diversifying crop economy was initiated in the State during 2013-14. Crop Diversification Programme (CDP) is currently being implemented in the State with sharing pattern of 60:40 between Centre and State Government as a sub-scheme of Rashtriya Krishi Vikas Yojna. With the permission of State Government, the requisite funds allocated by GoI are distributed to various implementing agencies for execution of the approved interventions.

2.0 Objectives of the programme:

The primary objective of this programme is to reduce area under paddy by demonstration and promotion of improved production technologies of alternate crops like maize, cotton, pulses, poplar etc. For this, apart from provisioning of subsidized seed and other inputs for these crops, financial assistance on various machinery and equipment needed for mechanized cultivation was provided to the farmers. In addition, to restore soil fertility and productivity, and to improve irrigation efficiency, interventions like laying of underground pipeline system for irrigation on farmers fields, supply of dhaincha seed for green manuring, collection and analysis of soils samples for better nutrient management decisions etc have

been taken up under the programme. There are four main components of the programme :

- ❖ Alternate Crop Demonstrations
- ❖ Farm Mechanization & Value Addition
- ❖ Site Specific Activities
- ❖ Contingency for Awareness training and Implementation

3.0 Brief report on CDP implementation in the state

The implementation of CDP in the State has created numerous opportunities and avenues for the farmers to diversify and enhance their farm economy. The basmati production during kharif 2015 was 32.46 LMTs, though lesser than kharif 2014 but was still 40 percent higher than the production during 2013-14. The area under basmati had risen to over two lac hectares during the last two years. Likewise, the area under Maize had also increased by 22 percent during the last two years. Maize crop is considered the major alternate to paddy. Due to higher moisture content in the maize seed, the maize crop in the state was facing serious marketing problem. In order to overcome this hitch, 7 Community Maize drying Centres have been established with support from this programme. The operation of these dryers is solely for the welfare of the farmers and no financial benefits are being drawn. However, for efficient marketing of maize, it has been felt that a central agency at par with FCI or NAFED should be earmarked for arranging procurement of maize grain in State mandies.

Likewise, financial assistance for the purchase of much needed implements for the successful cultivation of alternate crops like maize harvesting combine, maize shellers, multi crop threshers, bed planters etc has been extended (See Annexure below). In the last three years, a total of **45938** such implements have been distributed to the farmers/societies at subsidy. Under Site specific activities component, Under Ground Pipeline System (UGPS) on more than **8973 hectares** has been laid for on farm conservation of irrigation water.

The adoption of high density planting technology (HDP) under cotton demonstrations has contributed in improvement in the yield of cotton. To motivate the farmers to adopt this nascent technology, the department laid out 887 hectares

and 580 hectares of demonstrations under HDP system during 2015-16 and 2016-17, respectively. The provision of mechanical picking has helped in overcoming the problem labour shortage and also reduces the cost of picking. The services of pre-cleaner system were provided in case of mechanically picked cotton in which trash content is about 15% as compared to 4% in hand picked cotton.

Maize has been the mainstay of this programme. During 2015-16 as well, the cluster demonstrations on 33030 hectares were laid on farmers fields for exhibition and promotion of maize crop. Under Agro-forestry, as per the approved work approved programme of 400 plants/ ha of poplar and 800 plants/ha of Eucalyptus, clonal poplar and clonal Eucalyptus plants equivalent to 17250 hectares have been distributed to the farmers since the year 2013-14.

Annexure: I Subsidy provision for some implements distributed under CDP
(See Approved Action Plan 2016-17)

| S N | Implement/Machine | Subsidy |
|------------|---|-------------------------------------|
| 1 | Power Operated Spray Pumps | 40% subsidy limited to Rs 0.08 lakh |
| 2. | Battery/ Power Operated Sprayers | 40% subsidy limited to Rs 0.03 lakh |
| 3. | Power Weeder | 40% subsidy limited to Rs 0.15 lakh |
| 4. | Seed Drill/ Zero Till Drill / Spatial Zero till Drill | 40% subsidy limited to Rs 0.35 lakh |
| 5. | DSR Drill-cum-planter/ Zero till Multi Crop Planter | 40% subsidy limited to Rs 0.50 lakh |
| 6. | Raised Bed Planter/Ridge Planter | 40% subsidy limited to Rs 0.35 lakh |
| 7. | Rotavator | 40% subsidy limited to Rs 0.50 lakh |
| 8. | Laser land Leveller | 40% subsidy limited to Rs 0.50 lakh |
| 9. | Multi-crop Thresher / Maize Thresher | 40% subsidy limited to Rs 0.50 lakh |
| 10. | Maize Sheller | 40% subsidy limited to Rs 0.50 lakh |
| 11. | Sub Soiler | 50% subsidy limited to Rs 0.50 lakh |
| 12. | Power Harrow / Rotary Plough | 50% subsidy limited to Rs 0.50 lakh |
| 13. | Happy Seeder | 40% subsidy limited to Rs 0.50 lakh |

Crop Diversification Programme

The Punjab State: The details of area diverted under various kharif crops

| S. No. | Crops | Kharif 2012-13 | | Kharif 2013-14 (Year of Inception of CDP) | | Kharif 2014-15 | | Kharif 2015-16 | |
|--------|-----------------|----------------|-----------------------------|--|-----------------------------|----------------|-----------------------------|----------------|-----------------------------|
| | | Area | Increase from previous year | Area | Increase from previous year | Area | Increase from previous year | Area | Increase from previous year |
| | | (000 hac) | | (000 hac) | | (000 hac) | | (000 hac) | |
| 1 | Basmati * | 458 | - | 559 | 101 | 862 | 303 | 763 | -99 |
| 2 | Maize | 129 | - | 152 | 23 | 163 | 11 | 165 | 2 |
| 3 | Kharif Pulses** | 10 | - | 10 | 0 | 15 | 5 | 15 | 0 |
| 4 | Cotton*** | 481 | - | 446 | -35 | 450 | 4 | 398 | -52 |
| 5 | Sugarcane | 83 | - | 89 | 6 | 100 | 11 | 110 | 10 |
| | Total | 1161 | | 1256 | 95 | 1590 | 334 | | |

* Viz-a-viz launch of the program in 2013-14, the State Government waived 7% local taxes for purchase of basmati. This has helped to attract more buyers to our mandies. The State has sought the approval of Gol for inclusion of basmati in the Crop Diversification Plan

**Soybean demonstrations laid: 97 hectares in 2015-16 and 300 hectares in 2016-17

*** For increasing productivity of cotton crop and to reduce dependence on labor, the demonstrations of High Density Planting were laid on 560 hectares, 870 hectares and 580 hectares during 2014-15 , 2015-16 and 2016-17, respectively. Due to inclement weather and incidence of white fly, area under cotton decreased during 2015-16