

# DEVELOPMENT OF AGRICULTURE SECTOR

## INTRODUCTION

District Tarn taran came into existence only in year 2006-07, when state government declared tarn taran as new district and eight out of sixteen block of Amritar had come in Tarn Taran district. This is a Border district having mainly paddy-wheat rotation. This chapter deals with the various aspects of Agriculture development and requirements.

## PRESENT STATUS OF PRODUCTIVITY, POTENTIAL, CONSTRAINTS AND STRATEGIES

Wheat in *Rabi* and paddy in *kharif* occupy 85 % and 80 % respectively of the net area sown in the district. The highest yield of wheat obtained in the district was 4855 kg/ha in 1999-2000 but declined to 4183 kgs / ha in 2006-07 and fluctuated later on at a level far lower than the highest achieved once. The major reasons had been the deterioration of soil health and ground water resources, besides low replacement of seed and inadequate of seed treatment, etc.

In case of rice also, there was a stagnation of yield 4000 kg per hect. for a long period. It picked up lately and surpassed the 4662 kg / ha mark in 1999-2000. It decreased to 4352 kg / ha in 2006-07. Rice is a very high water consuming crop for which water use efficiency measures need to be implemented effectively. Conserving the grossly scarce water resources in the district and improving the nutritional status and soil health should be accorded top priority.

Maize used to be an important crop, since long, Its area was mostly substituted by rice because of low productivity and less profitability of maize. But now with the introduction of new hybrids, which have better productivity and profitability, area under maize is expected to be increased. This crop can be planned for sustainability of natural resources in Tarn Taran.

Cotton also used to be an important crop in Tarn Taran once, but no longer now. However, with the introduction of Bt varieties of cotton for the last 3-4 years, it is catching up once again and will be better for conserving water. However, the quality of seed distribution of Bt cotton needs to be meticulously attended to. The insect-pest problem in case of cotton would continue to be a serious constraint but can effectively be tackled by using Integrated Pest Management (IPM) technologies.

Though the yield potential of different crops is very high in Tarn Taran but it is not being fully exploited in most of the crops. The level of exploitation of potential yield is still very low in case of pulses and oil seeds. Also the present yields in case of many crops are far lower than the maximum already achieved once. This is too serious for a major crop like wheat. There should be a strategy that at least the maximum yield exploited once is maintained.

Table-30

Percent area, yield, potential yield and maximum yield, Tarn Taran

	Crop	Potential yield Kg / ha	Realized yield Kg / ha	Gap Kg / ha	% of potential exploited	Maximum yield	
						Year	Kg / ha
1	Paddy	5000	3898	1102	77.96	1999-00	4662
2	Maize	4940	3250	1690	65.79	2005-06	4564
4	Moong	1112	800	312	71.94	2003-04	800
5	Arhar	1482	1195	287	80.63	2006-07	1195
6	S cane	8028	6000	2028	74.74	2002-03	6495
7	Wheat	5187	4135	1052	79.72	1999-00	4855
8	Sarson	1976	1057	919	53.49	1990-91	1127

There are general problems of deterioration in the soil-health due to over-exploitation of natural resources, indiscriminate use of fertilizers and pesticides, etc. The technology is available but major efforts and system need to be put in place. The irrigation water is mostly through tube wells and the water table is going down at an alarming rate. All out efforts and investments are needed to improve water use efficiency.

There are 30.9 % small farmers in the Tarn Taran district; another 39 % are below 4 ha. Their economic position is very fragile. The problem needs to be addressed in its multi-facet forms. The capital intensive high-income, high-value activities like net house cultivation of vegetables through capital subsidy and taking up enterprises like commercial dairy, poultry, etc. on these farms need special coverage.

Thus major constraints limiting the growth of productivity of agriculture are

#### Soil-health

- Deteriorating soil health and loss of fertility.
- Emergence of the deficiency of micro-nutrients.
- Formation of impermeable layer in sub soil.
- Lack of proper incorporation of crop residues.

### Water resources and use-efficiency

- Persistent decline in the ground water level
- Saline deeper ground water
- Increasing cost of pumping the ground water
- High cost on conversion of the centrifugal pump sets based tube wells into submersible pump set based tube wells.

### Seed replacement and treatment

The seed replacement rate is quite low; it is the main factor in limiting the productivity growth in wheat. Currently it is around 10 per cent but the ideal norm is 25 per cent.

- Low proportion of treated seed in the total seed used in crop production.

### Adoption of high value crops

- Lack of area or crop specific markets
- Market gluts in peak seasons
- Fruit deformation and insect/pest attack
- Technology dissemination

### Technology dissemination

- Lack of human resources for technology transfer
- Lack of mobility and communication equipment with the extension staff.
- Lack of the state of art technology dissemination centres/laboratories
- Lack of diagnostic plant clinics

### Institutional/organizational constraints

- Lack of crop-specific farmers' organizations especially for high value crops
- Non-existence of specific commodity markets.
- Lack of initiative of cooperative/group marketing
- Intra-institutional linkages and coordination

### **Land use**

The geographical area of this district is 241449 hectares, out of which 217541 is under cultivation. Of the cultivable area of the district 99.9 % is irrigated. Out of total irrigated area 65% is irrigated by canals and 35% by tubewells. The cropping intensity of the district is 177%.