

DEVELOPMENT OF AGRICULTURE SECTOR

DEPARTMENT OF AGRICULTURE

The Department of agriculture is engaged in transmitting the latest farm technology to the farmers. In order to disseminate the latest farm technology on crop production, Soil & water management, plant protection, efficient use of inputs and farm machinery, training camps, seminars and farmer field schools are organized at district, block and village level to train the farmers.

Objectives

The main aim of the department is to transfer the technology from lab to field through extension functionaries for sustainable agriculture. The department is playing a vital role to keep abreast the farmers about latest technical knowhow and motivate the farmers to adopt international standard to enter and compete in the global market.

Main functions of the department

- ▶ Imparting training to the farmers about latest technologies developed by research institutes for the production of different crops.
- ▶ Monitoring the supply and quality of agricultural inputs like seeds, fertilizers, pesticides, irrigation water, machinery and equipment etc.
- ▶ Monitoring the soil and crop health in the field and promote integrated pest management(IPM)
- ▶ To popularize the minimum use of pesticides and to control the environment pollution with adoption of integrated pest management (IPM).
- ▶ Diversification of areas from traditional crops to oilseeds and pulses crops, sugarcane, maize, cotton etc.
- ▶ Implementation of beneficiary oriented schemes for economic upliftment of farming community e.g. contract farming, bee keeping, vermiculture etc.
- ▶ Promotion of Resources Conservation Technologies (RCT) for Natural Resource Management.
- ▶ To promote judicious use of irrigation water through better on farm water management and to monitor the water level behaviour and its quality.

Challenges

- Declining arable land area and soil health
- Decreasing quantity and quality of water
- Mounting pressure of Globalization
- Climate change
- Uncertainty of rainfall
- Stagnation in productivity of main cereal crops

Strategies for Agriculture development

The present Punjab Government Policy is to boost the production and productivity of the agriculture sector, increase the net income of the farmer and insuring food security with

employment generation. Gurdaspur is predominantly an agriculture oriented district and majority of the population depends on agriculture for their livelihood. The soil of the district is suitable for growing different types of food crops and oil seeds. There is potential scope for increasing the production and productivity of food crops and oil seeds by adopting new technology and package of new practices. In order to bring change in the farming system and to increase farmer's income, the department is implementing several agriculture development schemes.

Some new schemes are proposed to contribute to growth in agriculture with higher outlay for the XI five year plan. Requirement of the funds for the XI five year plan is estimated at Rs . Scheme wise requirement of budget for the plan is given in the annexure. Sector wise proposed scheme and budget requirement is given as under

Agriculture Department

Capacity building of farm women and Youth

Farm youth is a backbone of future farming system: They are not taking interest in farming. To create interest in youth regarding farming, there is need to aware them about new techniques of farming on various issues e.g. Farm Mechanization, Repair of agri. Implements, Plant protection, Judicious use of fertilizer, IPM, INM, IDM, IWM etc. To provide training for farm youth regarding repair and maintenance of new machinery, it is proposed to train at least one youth per village per year at the cost of Rs 400/- per day which include refreshment, and honorarium for guest lecture. Budget requirement for this purpose is given in table no.4.1 at s. no. 1

Farm labour is an important arm of farming in villages: They also need training on repair and maintenance of plant protection equipment, safe use of pesticides and concept of Integrated Pest Management. It is proposed to train 20 farm labours per block per year at the cost of Rs. 300/- per day per person including honorarium for guest lecture. It is also proposed to provide at least one safety plant protection kit to every trained farm labour. Budget requirement for this purpose is given in table no.4.1 at s. no. 2

Training to farm women on post harvest Technology and value addition

To train farm women regarding post harvest technology, dairy farming, value addition and marketing aspects of value added products. It is proposed to train at least 10 farm women per block per year at a cost of Rs 300/- per day per head including boarding and honorarium to external trainer. The details are given in 4.1 at s.no.3

Integrated Farming System: To motivate the farmers for adoption of integrated farming system approach, there is need to demonstrate such Integrated Farming System which include agriculture, Horticulture, Sericulture Animal Husbandry, Bee Keeping, Back yard poultry and fishery in a limited area that provide food grains, fruits, vegetable, honey, milk and milk products and fish in addition to the financial benefits to resource poor farmers. So, it is proposed demonstrate at least 2 Model farms for Integrated Farming System approach at the cost of Rs. 50000/. The details are given in table 4.1 at s.no.4

Promotion of Bee Keeping: Bee keeping is the third most important agricultural subsidiary occupation in the district. Bee keeping plays an important role in increasing the income of farmers. Bee keepers are facing so many problems e.g. Attack of European fowl brood , Varova mite, wasp, lack of flora due reduction in area of oil seed crop and deforestation. Farmers need to facilitate by providing subsidy on Bee hives @ 50% subsidy so that more and more young farmers can be motivated to adopt bee keeping. It will also help in generating self employment opportunities in the district. Proposal of bee keeping is given in table no. 14.1 vide s.no. 6

Agricultural Marketing: In Gurdaspur district crops, fruits and vegetable crops are produced in large quantity. But due to lack of grading and processing system, farmers are fetching low price in the market. If AGMARK facilities are provided, they could be benefitted certainly. In case of turmeric, processing and marketing, Replica printing is the main problem because farmers hesitate in packing their produce. The main requirement of the district for better marketing are providing cold storage facilities, adopting electronic machine, AGMARK facilities, Waxing of fruit, honey and spices processing plant, Replica printing of AGMARK. In view of these requirements, the budget requirement for XI five year plan is given in table no.4.1 s.no.15

Plant Protection Measures: During the twenty years, there is drastic increase in the use of various farm chemicals (Insecticides, Pesticides, Fungicides, Weedicides) to achieve the desired results in crop production. Ultimately, this imparts in the increase of pollution and determined effect on ecosystem. To decrease the load of these various chemicals; it has become necessary to use them judiciously.

By using seed treatment techniques, there is decrease in disease intensity in different crops and ultimate chemicals load decrease in the post emergence period of the crop. Though IPM is advocated for pest control in rice, it is mostly dominated by chemical control where insecticides are used. Thus, there is a pressure on eco system, leading to frequent occurrences of pest outbreaks and diseases. In this context it is worth while to review the ecofriendly practices for managing insect pest and diseases. Integrated pest management involves all the components that can reduce the pest populations below the economic injury level. Similarly if we control the termites and rodents by applying proper techniques at proper place and stage, we can minimise the damage by them in different crops. By applying all these plant protection techniques, there will be increase in the production of different crops by 5.0%-10.0% and impart valuable addition in the total GDP of the state in the next five years. Budget Proposal given in the table No. 14.1 at s.no. 9

Farmers Training Programme at district , block, and village level: For providing training to the farmers regarding latest techniques it is proposed to train 78950 farmers by organising farmers training camps at village ,block and district levels in the next five years and for this purpose a sum of Rs 25.35/- is required which is given table no. 4.1 at s. no.11

Promotion of Agro Tourism: This is one of the fastest growing tourism activities. Indians and International visitors are very interested in the history of the Punjab, since most of the people come from an agricultural ancestry. They want to learn more about what their great grand parents or grandparents did for a living. This is great opportunity to get back to the rural roots. Agri Tourism offers tourists' entertainment, farm tours, where they would be told about the cultivation of Rice, Wheat, Maize, Sugarcane, Pulses, Oil seed, Bee keeping, Dairy farming,

Poultry, fruits plantation. Guests can visit dairy farm, milk collection centres , goat farm , emu (like ostrich bird) farm , or get an insight into how silk is produced and raw jaggery and sugar is made. It would also include evening entertainment, Punjabi programmes such as Bhangra, Gidhand folk songs. They can also play some of the forgotten rural games like gilli danda, gotya and Kabbadi. Tourists can also go for the village sightseeing tour, speak to villagers, understand the working of gram panchayats, visit village school and talk to children to know their quality of life, understand their expectation from urban friends. Agri Tourism is however not all about staying in a village and relishing the food, this is an opportunity to be close to where the 75 % of Indians live. “One of the best things about staying on a farm is that guests can contribute to the place through their involvement,” Our idea is to make tourists live life like a villager, right from milking the cow, ploughing the field, bathing in a well to climbing a tree and plucking fruits. For promotion of agro tourism, it is proposed to facilitate farmers by providing Rs 10 Lakh per Agro tourism spot and total 10 such spots will be established during the next five year plan with total amount of Rs. 50 lakh as given in table 4.1 s.no.12

Farm Mechanization

Agricultural Mechanization is a assured input like other inputs for increasing the production and productivity. Mechanisation is viewed as complete package of technology to insure timely field operation for increasing the productivity and saving the cost of labour, reducing the crop losses and to improve the quality of the produce. To ensure sustainability of agriculture by conservation of natural resources like water, soil health and environment, it is very much essential to popularize the new technologies like paddy transplanter, multi crop raised bed planter, precision laser leveller and manipulation of crop residue into the soil. To promote these inventions, it is necessary that the farmers are provided some assistance in acquiring newly developed improved agricultural machinery. It is not possible for the individual farmers to purchase these. It is therefore, proposed to provide these implements to farmers @ 50% of this cost of machines so that all type of implements required by the farmers can be provided. The small farmers can use these implements by paying nominal charges necessary for the upkeep of these machines. This will ensure greater use of the machines by reducing the cost of operation and will eliminate the necessity of individual farmers owning their machine for limited use. There is an urgent need to establish **Farm Machine Service Centres** at block/village level. So it is proposed total fund requirement of Rs 1822.50 lakh during the next five year which is given in table no.4.1 at s.no.16.

Farmers Training facilities block level

There is no any training institute in the district as well as block level with any agriculture as well as allied departments except KVK which resulted in lack of proper dissemination of latest farm techniques to farmers. For providing training facility to farmers at block as well as at district level it is proposed that 14 training centres will be establish at block level with renovation of (Farmer information and Advisory centres) with the total amount of 350.00 lakh FIAC given in table no. 14 Beside this it is also proposed that farmers will be trained in different farm techniques at block level training institute with total cost of 127.20 lakh given in table no.15

Promotion of System of rice intensification / direct seeding method of rice

Overall, the productivity per hectare in the District has stagnated in recent years. Ground water resources in the district have taken a sharp dip, while the area under agriculture is declining due to urbanization, industrialization and other factors. So there is need for techniques of rice cultivation that can produce more yield with less water -- and with fewer other inputs to enhance profitability, which has also taken a sharp decline.

The System of Rice Intensification (SRI) for rice cultivation produces greater grain yield compared to commonly-used conventional methods of rice cultivation in Punjab with better utilization of natural resources. Less water (by 40-50%) is required for irrigation, and soil health is improved by activating microbial activity in the soil due to higher aeration and more provision of organic matter. For promotion of SRI ,it is proposed an expenditure of Rs 75.00 lakh given in table no.4.1 ,serial no.5 .

Benefits of SRI in future

- increase yields by 15-25% and reduction in water requiremet by 40 – 45%
Lower costs of production by 10-20%, because purchased inputs are not needed;
- Farmers do not need to spend money or go into debt to improve productivity;
- The environment will be enhanced by reducing water off takes or extractions for agricultural purposes, and soil and water benefit from less chemical application;
- Rice plants will be more resistant to damage from pests and diseases, and also to water shortages and to lodging from rain or wind.
- Milled rice per bushel of paddy will increased because of less unfilled grains and less breakage during milling, also less chalkiness.
- Farmer income will enhanced because there is more output with less expenditure, e.g., seed requirement will reduced by 65-70%.

Strengthening of Soil testing lab:

In the early days of agriculture producing plentiful crops in the district was primarily a matter of preparing of seed bed, cultivating and harvesting. Today the situation is different .The high fertility of our soil has gone down and the average yield of crops are lowest in the Punjab. To maintain successfully high crop production in the face of declining soil fertility, farmers should know the basic facts of plant food requirement and the capacity of the soil to produce it and also what goes in soil. For this purpose testing of oil is must. Based on the result of soil test, farmers are advised to apply fertilizer accordingly. 5 soil testing labs are working in the district.