

## **Programmes implemented by Engineering Section**

Farm mechanization has an important role in enhancing production and productivity of agriculture and hence in achieving the desired growth rates in agriculture. Farm mechanization is an essential input in modern agriculture. It helps in improving utilization efficiency of other inputs, safety and comfort of agriculture worker, improvement in quality and value addition of the produce thus making agriculture more profitable and attractive. The future food requirements of the country will be fulfilled only if production is enhanced which requires raising more crops in a year, thus limiting the turnaround time. Increased production will require more use of agricultural inputs and protection of crops from biotic stress. This will require greater engineering inputs, thus, needs introduction of high capacity, precision, reliable and energy efficient equipment.

The programmes/ schemes being implemented by engineering section are as below:

**(a) Rashtriya Krishi Vikas Yojana (RKVY)- Crop Diversification Programme**  
**Component: Farm Mechanization and Value Addition Component**

In order to create sustainability in diversion of paddy area to alternate crops, farm mechanization is of immense importance. Keeping this in view agri machinery as approved by Government of India was provided on subsidy to the farmers in state.

**(b) Promotion of Agricultural Mechanization under RKVY**

This programme is replacement of Promotion of Agriculture Mechanization programme hitherto being run under Macro Management Work Plan (MMWP). Under this programme financial assistance is provided to farmers for purchase of newly developed farm machinery such as Automatic/Semi automatic potato planter, Potato Digger, Straw Reaper, Tractor Operated fodder harvester cum mobile shredder, Self Propelled reaper binder, Self propelled fodder harvester and Paddy straw chopper shredder

**(c) Programme for Setting up of Agri. Machinery service Centers (AMSC's) under RKVY**

In the Punjab State "Farm Machinery Banks" in the form of Agri. Machinery service Centers are being set up under RKVY wherein subsidy @ 40% of the cost of equipments is being provided to the Primary Agricultural Co-operative societies through PSFC. These agri-service centers provide custom hiring services to the small and marginal farmers to save them from the debt burden of owing the costly agricultural machinery. The programme is being implemented by the department through Punjab State Farmers Commission.

**(d) Promotion of Technology to stop burning of straw under RKVY**

To overcome the problems caused by burning of crop residues esp. Paddy straw a project is being implemented in the state under RKVY. Under the project straw management equipments namely; disc mower/chopper, gyro rake, baler were provided to the farmer on subsidy @ 50% of the cost.

**(e) Sub Mission on Agriculture Mechanization**

The increase the availability of farm power and to give further impetus to mechanization "Sub Mission on agricultural mechanization" is being implemented in the state. Under the submission the following components are proposed to be implemented in the state:

- Promotion and strengthening of Agricultural mechanization through Training Testing and Demonstrations
- Post Harvest Technology & Management
- Financial assistance for procurement of equipment
- Establishment of Farm Machinery Banks for Custom Hiring
- Establishment of Hi-tech, Hi-value custom hiring centres

**(f) Intensification of Farm Mechanization:**

To accelerate the balanced development of mechanization of farm operations, it is necessary to create awareness amongst the farmers about the newly developed agri machinery. This shall lead to adoption of newly developed machinery. Farmers are being provided with knowledge for proper selection, optimum utilization and adoption of new machines. To provide a cheap source of fuel and fertilizers to the farmers the department is promoting the adoption of bio gas plants under this scheme. The field staff provides the technical inputs to the farmers for installation of new bio gas plants. After care and maintenance of already installed bio gas plants is one of the major areas where technical assistance and training is provided to the farmers under the programme.

**(g) Minor Irrigation Scheme**

Tube well section of Department of Agriculture, Punjab implements the scheme "2702- Minor Irrigation-03 maintenance-103-Tubewell (2) Non Plan" in various areas of the State to study the availability of ground water, its consumption in agriculture, design standard tube well, install tubewells at farmers' fields and to make farmers aware of the latest technology in the sphere. Following work is being done in the state under the scheme:-

1. To install standard tube wells on farmers' fields in the state on custom basis at very competitive rates to check the private boring companies from exploiting the farmers.
2. To ensure assured irrigation, digging of custom bores is taken up in the inaccessible areas where no concrete information is available on the quality of underground water and where private boring companies do not take up drilling work.
3. To design the screen/filter of tube wells for lasting & efficient use of tube wells by analyzing the strata obtained during boring.
4. To develop the defunct tube wells not in working condition with the help of air compressors so that the tube wells can again be used efficiently.
5. To develop the newly installed tube wells by the farmers, so that their working efficiency is increased i.e. more area is irrigated by tube wells with lesser input of energy.
6. To advise the farmers in the state on proper selection of motor and pumping set so that overall pumping efficiency improves. To guide the farmers for maintenance and proper upkeep of the pumping motor sets and diesel engines.