

Performance Evaluation of Farm Mechanization Scheme in Karnataka

Department of Agriculture

Executive summary

Farm mechanization is an important element of modernization of agriculture. Farm productivity is positively correlated with the availability of farm power coupled with efficient farm implements and their judicious utilization. Agricultural mechanization not only enables efficient utilization of various inputs such as seeds, fertilizers, plant protection chemicals and water for irrigation but also it helps in poverty alleviation by making farming an attractive enterprise. The Department of Agriculture and Cooperation is following multi-pronged strategy for promoting Farm Mechanization.

Farm mechanization means the use of machines and technology in the agriculture sector. The use of tractor, tube-wells and plant protection measures are included in the farm mechanization. So in the farm mechanization the use of machinery is greater as compared to the labour. Agricultural mechanization plays a vital role in sustaining and improving agricultural productivity. It enables farming operations more efficient, improves the timeliness of operation, increase cropping intensity and minimizes hard labour in the field. On the other hand, traditional corn farming practices are inefficient, laborious and expensive in terms of production cost.

Farm mechanization is vital for increasing the efficiency of agricultural operations, reducing the cost of production and improving the farm economics. It also comes in handy in reducing the drudgery of farm work when the farm labour is becoming increasingly scarce. In recognition of these advantages a Centrally Sponsored Scheme for Farm Mechanisation was introduced in the year 2001-02. It provided for 25 per cent subsidy. In

the year 2002-03 the State Government has hiked the subsidy to 50 per cent by contributing 25 per cent as its share.

The scheme acquired popularity, because of increasing demand, even if the central grants are exhausted, the state continues to support the 50 per cent subsidy from its own resources. Farm Mechanisation Scheme has since become an integral part of *Rashtriya Krishi Vikasa Yojana* (RKVY) and is implemented in Mission mode. Under this arrangement, 50 per cent of the cost is provided as subsidy for buying farm implements whose cost is less than Rs. 5.00 lakhs and 40 per cent subsidy if the cost is more. However, 90 per cent subsidy is provided to the Scheduled Caste/ Scheduled Tribe farmers. During the year 2011-12, an amount of Rs. 12717.28 lakhs was spent on these subsidies.

Objectives

1. To examine the nature, distribution and socio-economic dimensions of beneficiaries under farm mechanization scheme
2. To study the adoption and utilization of machineries by beneficiaries
3. To analyze economics of use of different farm machineries in terms of labour, productivity, production and farm resource use and their efficiency.
4. To assess the impact of farm mechanization at farm level as well as state level in terms of production, productivity, income and employment in farming households in general and SC/ST and small / marginal farmers in particular.
5. To make demand/need/requirement analysis of different farm machineries in different districts
6. To identify the socio-economic and technical constraints in adoption and utilization of farm machineries by beneficiary farmers and

implementation of scheme by other stake holders like machinery manufacturers, officials, etc.

7. To suggest measures for making the scheme much more effective.

The results of the present study would be useful in finding out the facts in the existing situations in the selected regions about mechanization and its impact on income and employment in agriculture. It would help to save a farmer's time, labour charges and somehow increase in productivity. Also help the planners and policy makers in identifying the problems in the mechanization of farms and to find out possible remedies for the same.

This study is conducted in seven agro climatic zones of the State viz., North Eastern Transitional zone, North Eastern Dry zone, Northern Dry zone, Central Dry zone, Southern Dry zone, Eastern Dry zone, and part of hilly zone. The data for the study have been collected for the year 2011-12 and 2012-13 from three categories of farmers. Further the data were collected by paying visits to the farmers and the particulars were obtained.

Since, there is a variability in agro climatic zones to other zone the adoptability/ usage practices of machineries were changed.

The source of data is a primary source from beneficiaries, non beneficiaries and control and secondary sources from official levels. All the data were generated by personal interview with the respondent beneficiaries, non-beneficiaries and control and detailed discussion with officials at taluka, district and State level, manufacturers and distributors.

For interviewing the beneficiaries, the detailed schedules designed considering the terms of reference and objectives of the study were made use for taluka and districts level. These schedules

were canvassed among the beneficiaries, non-beneficiaries and control farmers at taluka and districts followed by discussions.

The data so generated were analyzed for getting the desired results. The data collected through these investigations were analyzed on the computer and compiled in simple tabular form. The statistical tools, such as the total numbers, averages, percentages, ratios and Garrett Ranking were used to arrive at the desired results.

Findings of the study

1. More number of SC/ST farmers could able to purchase the farm machineries with the support of farm mechanization scheme as compared to non-beneficiary farmers.
2. Non-beneficiary farmers had better knowledge and skill in maintenance of machineries than the beneficiary farmers.
3. Utilization of machineries among the beneficiary farmers was more as compared to non- beneficiary farmers with regard to leveller blade, power tiller and blade harrow, disc harrow, mould board plough, seed cum fertilizer drill and utilisation of machineries among the beneficiary farmers was less as compared to non- beneficiary farmers with regard to cultivator, diesel pumpset, plant protection equipment, cage wheel, multi-crop thresher, rotovator and chaff cutter.
4. The machineries utilised efficiently by both beneficiaries (SC/ST and other category farmers) and non-beneficiaries efficiently on their own.
5. The crop production was higher on the farms of beneficiary farmers compared to the farms of control farmers.

6. Employment and income generated was relatively high by use of leveller blade, power tiller, blade harrow, disc harrow, mould board plough, seed cum fertilizer drill among beneficiary farmers compared to non-beneficiaries farmers.
7. Non supply of spare parts by suppliers of machineries under farm mechanization scheme during warranty period and difficulty in adjusting margin money were major constraint for beneficiary farmers.

Suggestions/Recommendations

- 1) There is a need to conduct more number of trainings and exhibitions to create awareness about machinery, its usage and also subsidy schemes at village level demonstration by the Department of Agriculture.
- 2) In order to have more successful implementation of farm mechanization scheme in Karnataka, Government may increase the subsidy amount to general categories of farmers.
- 3) The procedure of availing subsidy by the beneficiary farmers may be simplified for the better performance of the scheme.
- 4) Government should undertake the supply of machines at right time so that more number of farmers will be attract towards the scheme there by more benefits will be accrued to the farmers.
- 5) According to the farmers need/demand, Government may also supply machines other than the machineries supplied under subsidy scheme.
- 6) The availing of repair service at village level is lacking and hence the Department of Agriculture should encourage establishment of service units especially among rural youths, which will facilitate in adoption of Hi-tech farm machinery at farmers level.
- 7) The machinery supplied under subsidy scheme in some cases not suited to the capacity of tractor especially the rotovator and hence there is a need to supply the proper machinery which match with capacity of tractor.
- 8) In the opinion of the farmers some of the implements/ machines supplied are of poor quality viz., cultivator, and leveler blade and hence there is a need to ensure the quality of machine after supply by the Department which will help in proper use of machines.