

EXECUTIVE SUMMARY

Krishi Yantra Dhare is one of the flag ship programmes of the Department of Agriculture, introduced subsequent to earlier experience of providing 50% subsidy to purchase farm machinery before 2014. However, farm machinery was made available to the farmers on hire basis through custom hire service centres. The same would be funded to purchase the approved machinery through a set of guidelines. Grants available from Rashtriya Krishi Vikas Yojana (RKVY), a Government of India initiative, was used to establish such custom hire service centres under the scheme of Krishi Yantra Dhare. The scheme was developed and implemented by the Karnataka State Department of Agriculture with specific guidelines aiming for welfare of farmers, specially marginal and small.

The Rashtriya Krishi Vikasa Yojana (RKVY) was initiated in 2007 as an umbrella scheme for ensuring holistic development of Agriculture and allied sectors on the recommendations of National Development Council (NDC). The major focus of the scheme was to rejuvenate agriculture sector so as to achieve 4% annual growth in the sector. RKVY will be a State Plan Scheme with 100% funding from Government of India. The Custom Hire Service Centres in Karnataka were established under RKVY funding.

The Department has started the Custom Hire Service Centres (CHSCs) to provide the required farm machinery to the farmers on hire basis for carrying out timely field operations, resulting in improved productivity and income. The establishment of CHSCs was started in 2014-15 by inviting tenders from interested service providers. As per the Notification, in 2014-15 only two service providers namely, Sri Kshetra Dharmasthala Rural Development Programme (SKDRDP) with 164 centres and Indian Society of Agriculture Business Professionals (ISAP) with 11 centres were established. Subsequently, in 2015-16 and 2016-17, 4 more service providers, VST tillers, John Deer, Kala and M & M have established 160 centres. A total of 335 CHSCs were functioning during the evaluation period 2014-15 to 2016-17.

The evaluation of Krishi Yantra Dhare was taken up to study functioning of these centres and the impact on productivity and farmers' income including moisture conservation and timeliness of farm operations. The study covered 3675 beneficiary farmers and 105 non-beneficiary farmers from 10 agro-climatic zones of Karnataka encompassing 6 service providers. Non beneficiary farmers from villages serviced by CHSCs were considered as control farmers for comparison to quantify the benefits gained by the beneficiaries. The

primary data has been collected from the sample farmers and CHSCs using pre-tested questionnaires. The secondary data were obtained during the discussions with service providers, Department officials and other stakeholders during 20 Focus Group Discussions carried out in different districts across 10 agro climatic zones. Data collected was analysed using simple qualitative and quantitative techniques considering evaluation approach, before and after receipt of the benefit and with (beneficiary) and without benefit (control).

The major findings and recommendations are presented below:

Major findings

- The results of evaluation indicated that most beneficiary farmers (97%) used tractors/ tillers for land preparation using the equipment like M B plough, cultivator and rotovator. Other important operations popular with the farmers are threshing of grains, sowing respectively, using thresher (or multi-crop thresher) and seed-cum-fertilizer drills. Other different equipment stocked by CHSCs were not used intensively.*
- Majority of the farmers (91 %) have expressed satisfaction over the services given to them by CHSCs, as they could take up the operations timely, resulting in reduced cost of cultivation and improved net income. Further, most farmers have expressed opinion to continue CHSCs in future with a greater number of equipment such as M B plough, rotovators, tractors and harvesters.*
- Results indicated that awareness of the farmers about the functioning of CHSCs varied in the range of 20% (for example, CHSCs like Jayapura in Mysuru taluk, Nayakanahatti, Challakere taluk) to 100% (CHSCs like Hedegonda-Kaginele in Byadagi taluk, Jajur in Arasikere taluk) depending on the keenness of CHSC to create awareness.*
- In general, the performance of CHSCs managed by SKDRDP was far superior than those managed by other service providers, because such centres derived the support from SHGs formed by SKDRDP for overall development of agriculture and rural development as well as micro finance to farmers. The popularisation of CHSC activities and even booking of machineries were being done by SHGs spread over entire jurisdictional area through a network of small farmers' groups overseen by supervisor.*

- *The productivity of cereal crops like paddy, ragi, jowar, maize, was increased respectively by 5.25 %, 23.3%, 11.2 % and 8.7% as a result of using farm machinery from CHSCs. The productivity of pulses like redgram and Bengal gram was increased by 40.2% and 18.8%, respectively. Similarly, the productivity of oilseeds like sunflower and groundnut was increased by 7.9% and 18.4%, respectively. In case of other crops like, cotton, sugarcane, mulberry and horticultural crops the productivity was respectively improved by 9.6%, 7.9%, 21.5%, and 9.4 %. The improvement of productivity of these crops was due to the use of farm machineries from CHSCs.*
- *On an average, beneficiary farmers were able to reduce their labour cost by Rs. 1750 /acre and improve their net income in the range of Rs. 436 (other oilseeds) to Rs. 19959/acre (Horticultural crops) depending on type of crop due to adoption of farm mechanisation as compared to non-beneficiary farmers, depending on type of crop. The farmers were able to record net return to cost ratio in the range of 1.53 (ragi) to 6.87 (Bengal gram) for various important crops grown.*
- *As a result of adopting farm mechanisation, positive association was established between extent of using farm machines/ equipment (M B plough) and the soil moisture conservation, as well as between productivity and soil moisture conservation.*
- *Adopting farm mechanisation also resulted in improvement of area under cultivation within the overall limits of total land holding of individual farmers irrespective of category of farmers. The overall improvement across the zones was 4.00 acres to 4.87 acres due to intervention of CHSC which works out to an increase of 21.52%.*
- *Majority of the beneficiary farmers have expressed satisfaction about the service as indicated by 61.2% farmers expressing in favour of the service. However, the service providers want to discontinue the services once the contractual period ends up. The reasons for their dissatisfaction were many, important being method of supplying the equipment, erratic and delayed release of subsidy under slab 1 and 2 and uncertainty of ownership of machines/ equipment after the contract period, besides, poor infrastructure facilities for safe storage of equipment, which has resulted in rusting of machinery*

Major Recommendations:

- *The hiring of machines and equipment should be offered to marginal and small farmers in general and SC/ST farmers on priority at the rates lower than market rates. CHSCs need to be financially compensated by the Government to cover the difference between offered hire rates and market rates.*
- *Department should popularise the use of equipment and availability at CHSC.*
- *DIC should fix the hire charges based on fuel prices, labour wages, rent and depreciation once a year.*
- *CHSCs should be free to purchase machineries/equipment based on the survey from the empanelled suppliers as per the rate contract in order to add required number of machineries/equipment.*
- *Service providers should be encouraged to establish CHSC in every hobli – duly considering the maximum distance between any CHSC and village should not be more than 10 Km or in the alternative, CHSCs should aggregate the demand in far off villages to facilitate stocking of machines/ equipment temporarily in such villages to reduce the overhead cost of transportation for which CHSC should be compensated.*
- *Government should provide required infrastructure facilities in Raita Samparka Kendras or Department farms for safe storage of machinery.*
- *A provision of Rs. 1.00 lakh/centre annually is to be provided to meet repair and other expenses.*
- *A minimum regular staff for each CHSC should be – Manager, Computer operator, Group-D worker and Driver on contract basis, besides, provision to take additional drivers- depending on the necessity in season.*
- *The ownership of the machinery and equipment should rest with CHSC after the life period of concerned machinery/ equipment.*
- *To cover more farmers in the service area there is a need to conduct more awareness campaigns, field demonstrations, publicity through village wall posters, mass media, newspapers and local Self-Help groups (SHG) for better access to CHSC benefits.*