

CCS HAU Regional Research Station, Bawal

Impacts of Projects sanctioned during 2013-14

Promotion of castor based cropping system for raising farm income in South West Haryana

Castor (*Ricinus communis* L.) is an important non-edible oilseed crop of India and the country holds a premier and dominant position in its production and supplies. Being hardy crop, it can be grown under rainfed conditions and thrives well on a variety of soils and climatic conditions. However, it responds positively to irrigation and fertile soils also. Castor can find respectable place even in non-traditional areas of the country including parts of Haryana state (Hisar, Bhiwani, Sirsa, Mahendergarh, Mewat and Rewari districts) because of consistently increasing cost of cultivation and decreasing water availability under other cropping systems. Sole castor has not only potential to compete with traditional cropping system in south western Haryana but have edge due to additional income from the intercrops in it. If vegetables, that too that of early season are taken as inter crops then additional income may be received. Results have shown that castor performed better under irrigated conditions in leveled field having reasonable fertility rather than undulating field with sandy and poor soils under rainfed conditions.

On the basis of results achieved at Regional Research Station and farmers fields through demonstrations it has been observed that castor with intercrops gave higher monetary returns than sole crops under irrigated conditions. Farmer are adopting wider row spacing to adjust the requirement of intercrop of his choice and the economics of the system shall be comparable or even better than sole castor and any other existing cropping system of the region. In district Mewat, near Tauru, the vegetables like methi (leaf), Palak and mustard (sarson saag) were taken as intercrop with castor. The temperature was high at normal sowing time (last week / second fortnight of September). Therefore, these vegetables grown as sole crop by other farmers either failed (due to unusual higher temperature) or yielded poor quality produce not fit for marketable or fetched less price. However, the intercropped vegetables with castor not only survived but performed better and fetched higher rates due to good quality and early harvesting. This was due to favorable microclimatic conditions in castor fields. Farmers are quite happy and enthusiastic and see scopes for other vegetables like coriander (leaf), raddish and carrot as well in this system.



A very good crop of methi grown for vegetable (Leaf) purpose is ready for harvest and to be sent in the market.



Farmers sharing their experiences and happiness after harvesting and selling the methi crop at village Kaliyaki in Mewat. The methi crop fetched very good price (upto Rs 65/- kg).

Promotion of Zero tillage technology for wheat (*Triticum aestivum*) crop in Rewari district of South- West Haryana

Wheat crop was sown with zero tillage (ZT) on 42 and 80 ha at fields of 105 and 200 farmers of 12 and 17 villages in 2013-14 and 2014-15, respectively of Bawal and Khol blocks of Rewari district. The quantum of increase in grain yield of wheat by adoption of zero tillage technology ranged from 1-2.5 q/ha during 2013-14 and 1-3.0 q/ha during 2014-15 at different locations in comparison to conventional tillage.

Besides this the technology resulted in net savings of Rs.3500/- per ha to be incurred on different field preparation operations. Thus the zero tillage technology proved very efficient in reduction of cost of cultivation and thereby increasing net returns to the farmers of Rewari district of Haryana state. During 2014-15, Trainings and Field Days could not be organized; and only few inputs were provided to farmers to encourage them for adoption of ZT as installment of 14.70 lacs was not released as per draft for 2014-15 (2nd year).

Strengthening of Seed Production Programme at CCSHAURRS, Bawal

Infrastructure and facilities have been created/strengthened at RRS, Bawal for quality seed production. Five hundred quintals of quality seed of different *Rabi* and *Kharif* crops like wheat, mustard, barley, moong bean and cluster bean is being produced at RRS, Bawal and distributed to 2500-3000 farmers of the south west Haryana and adjoining Rajasthan. The productivity has been increased due to availability of quality seed.

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Promotion of castor for crop diversification and higher system productivity in South- West Haryana

We have provided them with best of Hybrids with scientific knowhow and recommended package of practices through literature, demos, trainings, field days and Kisan Mela etc and 15 castor threshers have been given to the farmers in new areas through our KVKs. The farmers were also being guided for marketing of their produce. As such there is no cash crop in southern Haryana which can give more returns than guar and mustard. Cotton some times give good returns that too in very less area in southern Haryana. Whereas, Castor has given good returns over few years in the demonstrations conducted under RKVY project. During 2016-17 castor has crossed the barrier of gross income of Rupees 1.0 lac per acre. Sh Raj Kumar of village Jadthal, Distt Rewari harvested 24 qtl castor seed from one acre and sold it Rs 4325 per quintal.

In Sirsa and Hisar districts farmers have realized that castor can be grown under irrigated conditions in place of guar and little area of cotton may be given to castor. Sh Shiv Kumar from village Choudhariwali has sown castor in 11 acres and mungbean was taken as inter crop. He has got more than 60 qtls of mung from these 11 acres at an average of about 11 qtls/ha and he is

expecting very good harvest of castor too. In Sirsa and Hisar the farmers are now following most of the recommended package of practices and this is the result of RKVY project under which a number of trainings and Kisan Mela/Field days were conducted for transfer of improved technologies of castor production involving Scientists from KVKs and officers from Deptt of Agriculture in 7-8 districts for South West Haryana.



Castor +mung at farm of Shiv Kumar Vill – Choudhariwali Distt Hisar
2017