

Sugarcane Cutter Planter: A success story

Sugarcane, among sweeteners, is the only cash crop occupying about 4.0 million hectares in the country. Of this, about fifty per cent is under ratoon. The planting of this crop is conventionally done through country plough or ridger requiring 30-35 labourers/ha for undertaking various planting operations. These include sett cutting, furrow opening, application of fertilizers in furrows, seed treatment, dropping of cane setts in furrows, application of insecticide, soil covering over the setts in furrows and planking. Non-availability of man power in sufficient number during these days of labour crisis and also planting being a time consuming process, it poses problems before sugarcane growers having 90-92 per cent of the plant area under spring and summer planting. Under these conditions, the germination of buds gets adversely affected due to loss of soil and sett moisture. Keeping this in view, the Indian Institute of Sugarcane Research, Lucknow designed and developed a cutter planter through which one can plant 1.50-2.0 hectares with the help of 4 labourers in a day, performing all the planting operations in a single pass. Since these planting operations are done simultaneously, there is no loss of soil and sett moisture resulting thereby 8-10 per cent higher germination. This implement is operated with 35.0 HP. Tractor.

To popularise this, training-cum-demonstration under Institution-Village Linkage Programme was organised at the Institute. Farmers although appreciated the implement showed apprehension about the yield claimed because of cane being planted comparatively at higher row to row distance (75.0 and 90.0 cm.) against usually followed spacing of 40 to 50 cm. Six demonstrations were conducted at farmers' fields under IVLP Programme.

To evaluate the performance of cutter planter, germination, yield and net profit were taken into consideration. A comparative statement regarding performance of sugarcane planting through country plough, ridger and cutter-cum planter on germination, yield and net return is given below.



Sugarcane planter in operation



Sugarcane field planted by cutter planter

Comparative performance of various implements on germination, yield and net return

Particular	Country plough	Ridger	Cutter planter
Planting cost (Rs./ha)	2550	2450	1200
Germination (Per cent)	36	35	42
No. of shoots (000/ha)	281	282	292
No. of millable cane (000/ha)	104	105	111
Yield (t/ha)	72	73	76
Gross return (Rs./ha)	68400	69350	72200
Production cost (Rs./ha)	26369	26251	26369
Net return (Rs./ha)	42031	43099	45831
Benefit-cost ratio	2.59	2.64	2.73

Two types of cutter planters i.e. ridger and disc types, are available. The ridger type cutter planter is used in a well prepared soil while disc type cutter planter can be used immediately after harvest of wheat or rabi crops enabling sugarcane planting 5-6 days earlier than the normal practices.

The cutter planter not only obviate 50-60 per cent of the planting operation cost but also enhances the cane yield by 6 to 7 per cent due to proper placement of cane setts, fertilizers and insecticide in the furrows.

Impressed with the performance in terms of reduced planting cost and higher yield in the demonstrations, the demand of cutter planter among the farmers is increasing day by day. A few sugar factories particularly the D.S.M. Rauzagaon, Faizabad and Balrampur Sugar Mills, Hydergarh, Barabanki have started planting sugarcane through cutter planter in their sugar mill areas. The Institute is receiving regular supply orders for this implement from many sugar mills and farmers of the country.