Tractor drawn modified planter for sugarcane settlings

A two row tractor drawn planter for sugarcane settlings was developed by ICAR-Sugarcane Breeding Institute, Coimbatore in collaboration with ICAR-Central Institute of Agricultural Engineering, Regional Centre, Coimbatore to mechanise the transplanting of the sugarcane settlings raised in portrays.

The planter consists of mainframe which can be attached to standard three-point hitch arrangement of a tractor and the metering mechanism, operator’s seat, furrow openers, soil openers and furrow closers are mounted on the main frame with necessary supports. It is equipped with adjustable arrangement for altering row to row spacing 90, 120 and 150 cm, plant to plant spacing of 30, 45 and 60 cm and depth of planting from 2.5 to 7.5 cm.

The transplanter will take 7, 5 & 4 hours at the spacing of 90, 120 & 150 cm, respectively for completing the planting in one hectare area. The missing of settlings is around 3 to 4 per cent at a working speed of 1.4 km/h. The plant establishment was more than 95%.
The cost of the planter is Rs. 1,10,000. The savings in labour is 80 % and savings in cost of planting is 47.45 % when compared to conventional planting method. The cost economics showed that the cost of planting/hectare was Rs. 7750/- with the tractor mounted sugarcane settling planter while it was Rs. 14750/-. The savings in cost of planting is Rs.7000/- per hectare. The breakeven point was 72 hectare/annum and the payback period was 2.91 year for the sugarcane settling planter.

This technology has been commercialized to M/S. Rohit Krishi Industries, Pune, Maharashtra on non-exclusive non-transferable license condition in 2017. This planter has been demonstrated to large number of farmers, cane industry personnel during Kisanmela, Seminars, demonstration programmes and various training programmes in Tamil Nadu and Haryana.