

Innovations in Agriculture implements by Mr. Karthikeyan

Mr. Karthikeyan (49) is running his own lathe in Kumbakonam town and he is manufacturing many agricultural implements which are unique and useful to the local farmers. He designed many innovative design to meet the needs of farmers requirements for cultivating paddy , sugarcane etc. He studied up to 10th standard then , joined diploma in Automobile engineering. He didn't complete the course due to family circumstances. He jointed a private company dealing with bulldozer for Eight years. He developed skills in hydraulic mounting in heavy vehicles and able to finish 'E in quick manner. Because of this skill , he under took contract with Hindustan Motors for job work. In 1993 , his father expired and returned to his native place and started contract job work for internal decoration for Mahindra seat van . He introduced kalai shet instead of iron metal for the internal decoration of the seated van during the time few farmers approached him for making small alteration in the existing conoweeder designed by government. Even though he does not experienced in agricultural field He learned quickly the problems faced by the farmers and thought of making alterations. The existing lathe in Kumbakonam are not interasted in doing such work in agriculture implements . Therefore , he started working on the improvement of existing weeder . Like wise , he started designing various implements in order to address the needs of local farmers.

1. Brick cutting machine



In 2006 , he developed manual brick cutting machine , these machine has two models viz. 24 stone cutting model 48 stone cutting model. It cost Rs. 25,000 , Rs. 35,000 respectively . By using one labour the output of bricks cutting will be 3,000 number compared to 1,000 in the conventional method. It takes 5 days for drying and arranging in rows in the conventional method but it is reduced to only 3 days if the brick cutter machine is used. He has show for manufacture 75 numbers and supplied to the local brick kiln units in and around Kumbakonam .

2.Weeding Machine



He developed a weeder for weeding in wetland paddy and fitted unique wheels similar to cage wheel model. He has also patented this model. It is operated with 1.5hp motor imported from china. He wanted to seek government approval for supply order to the farmers on subsidy basis, but he didn't succeed in getting government contract. The same weeder can be used both in dry and wetland and making small adjustment in the weeder. But in the government approved the farmer has to spend Rs. 16,000 – Rs. 20,000 for fitting a extra tool. His weeder cost Rs. 29,000 , while government model cost Rs. 24,500 but extra tools are needed in the case of government model. When the same weeder is utilized for dryland weeding. By using his weeder 1 acre weeding can be completed with in 2-21/2 hours with 2-21/2 litre petrol.

3.Paddy sowing Machine

This machine is exclusively for sowing the seeds in the special paddy nursery where seedlings are raised in by using polythene sheets instead of directly in the field. For planting he developed transplanter and it cost Rs. 3,000 to Rs. 5,000 per machine and 10 acres planting can be completed with the help of 3 labours.

4.Sugarcane chip cutting Machine



He has designed sugarcane chip cutter where the buds alone are removed from the sett and used for rising seedlings in polythene bags. It cost Rs. 3,500 . He has so far supplied 100 – 150 machines to the farmers.

5.Base cutter



The main stem of sugarcane , if it as out at the ground level then side shoot will develop . By observing these phenomena he has designed base cutter for sugarcane. He also experimenting this method in other crops such as gingelly . So that more tillers will emerge.

6.Fertilizer applicator



He developed a fertilizer applicator for sugarcane , Banana and song hum. So that about 20 gms of fertilizer can be placed in the root zone of the crop at 5 inch depth.

7.Sugarcane sheath/old leaves (Sogai) remover



In order to remove the old leaves in sugarcane he developed mechanical instrument with spring steel to strip the leaves in sugarcane. It cost Rs. 250 . So far be supplied 100 sugarcane stripper to different farmers.

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