

Self-propelled wetland direct rice seeder

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Costs Rs.10,000 to seed a hectare

A self-propelled riding type wetland direct rice seeder has been developed for sowing pre-germinated paddy seeds in puddled fields by Agricultural Engineering College & Research Institute, Kumulur, Tamil Nadu Agricultural University. The seeder can be operated by a 4.4 hp horizontal type air cooled four stroke single cylinder diesel engine. The gear boxes used in this machine are taken from the transplanter of riding type machine. Rubber moulded iron lugged wheels are used as ground wheel.

Chain and sprocket

The ground wheels are fitted at both end of the axle. The ground wheel drive is transmitted to the countershaft fitted at the rear side of the lower frame through chain sprocket arrangement. An opening is made in the upper part of the seed drum for storing the pre-germinated seeds at the time of operation. Funnel and seed disc with cup feed is placed inside the seed drum for effective dropping of seeds from the seed drum to the field. The eight seed drums are bolted to the "L" angle in order to prevent rotation of the drums during operation. The spacing between seed drums is adjustable from 250 to 300 mm. The funnel receives the seeds from the cup and the seeds are dropped on the puddle soil by gravitational force. Float is made of PVC and placed in between the two wheels of the machine for leveling the puddle field.

Adjustable

The rear end of the float is attached to "L" angle of the seed drum with the help of a chain for automatic depth adjustment according to the field. The seeder is an eight row machine and is capable of sowing pre-germinated seeds at 1.92 ha/day. It is priced at Rs.90,000. The cost of seeding by this machine is Rs.635 per hectare. The machine is capable of sowing pre-germinated rice at 9 kg/hectare. Cost of manual transplanting comes to Rs.7,000/hectare whereas for machine transplanting it comes to Rs.10,000/ha inclusive of seeds.

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