



PADDY PLANTATION MACHINE

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It is a specialized transplanter fitted to transplant rice seedlings onto paddy field. Mainly two types of rice transplanter i.e., riding type and walking type. Riding type is power driven and can usually transplant six lines in one pass. On the other hand, walking type is manually driven and can usually transplant four lines in one pass. Although rice is grown in areas other than Asia, rice transplanters are used mainly in East, Southeast, and South Asia. This is because rice can be grown without transplanting, by simply sowing seeds on field, and farmers outside Asia prefer this fuss-free way at the expense of reduced yield. Rice transplanters were first developed in Japan in the 1960s, whereas the earliest attempt to mechanize rice transplanting dates back to late 19th century. In Japan, development and spread of rice transplanters progressed rapidly during the 1970s and 1980s.

MAIN COMPONENTS

- A seedling tray like a shed roof on which mat type rice nursery is set;
- A seedling tray shifter that shifts the seedling tray like a carriage of typewriters; and
- Plural pickup forks that pick up a seedling from mat type nursery on the seedling tray and put the seedling into the earth.

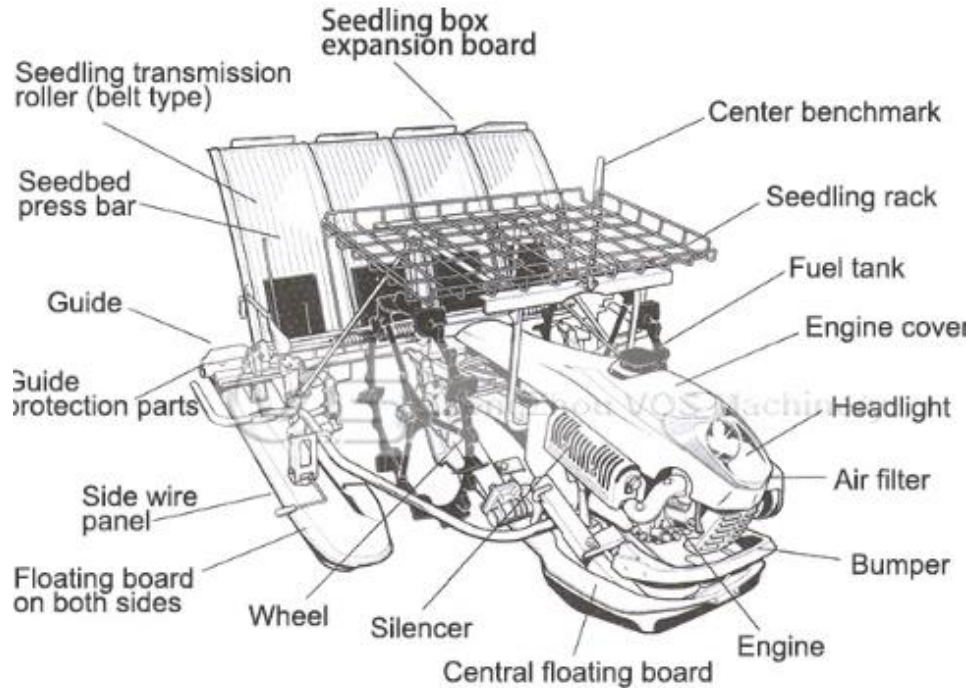
CONSTRUCTIONAL DETAILS

Machine transplanting using rice transplanters requires considerably less time and labor than manual transplanting. It increases the approximate area that a person can plant from 700 to 10,000 square metres per day. However, rice transplanters are considerably expensive for almost all Asian small-hold farmers. Rice transplanters are popular in industrialized countries where labor cost is high, for example in South Korea. It is now also becoming more popular in South Asian countries because, at transplanting time, labour shortage is at peak levels.

The rice transplanter consists of prime mover, transmission, engine, float, lugged wheels, seedling tray, seedling tray shifter, pickup fork and pickup fork cleaner. It is a walk behind type rice transplanter using mat type nursery and it transplants the seedling uniformly without damaging them. The planting depth and hill-to-hill spacing can be adjusted. Automatic depth control helps in maintaining uniform planting depth.



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The machine has safety clutch mechanism, which prevents break down of planting device from the impact against stones in the field. For operation, the machine is transported to the field and mat type nursery is loaded in the tray of the transplanter. The machine is put in transplanting mode and operated in the puddle field. The performance of the transplanter is checked within 2-3 m of travel for transplanted seedlings for hill-to-hill distance, depth of placement and number of seedling per hill. If the transplanting is in order the machine is operated in normal transplanting operation.

ADVANTAGES

- Reduces man power
- Provide quality work
- Less time consumption