

## Studies on the Riding mower for orchard

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### Abstract

The 16 HP diesel engine orchard mower install the mowing part in front of the machine. The mowing device of orchard mower can move to right side by 30 centimeter. The mowing width of orchard mower is 95 centimeter at a time. The orchard mower can use high-speed third gear (16 km/hr) to travel to the field, and can use high-speed or low speed first and second gear to perform cutting weeds. The orchard mower can use low-speed first gear (2.0-2.5 km/hr) to get enough power to work in the tall weed field. The orchard mower is four-wheel driving and four-wheel steering, and the radius of turn is 1.8 meter. In the orchard, the orchard mower can run smoothly and promote the cutting efficiently.

The orchard mower has the centrifugal-type knife, and the limit rotational speed is 3,100 rpm. The power of orchard mower is from P.T.O shaft. The orchard mower can use manual operation by hydraulic pressure to move right side by 30 centimeter to perform cutting work between the fruit tree and under the canopy.

**Key words:** Orchard, Riding mower, Horizontal moving device

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