

The Study of the Fertilizer Spreader for Orchard

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Abstract

The orchard fertilizer spreader includes main machinery and fertilizer applying machinery assemblies. The main machinery is four-wheel drive, four-wheel veer with a 12 ps diesel engine. The fertilizer applying machinery assemblies include fertilizer box (capacity 400kg), transport machinery, and spread machinery. Fertilizers can be spreaded to right and left side at the same time as the orchard fertilizer spreader traveling between crop rows. The maximum spread width is 6 meter each side. Adjusting the angle of the spear plate of spread machinery, we can control the position of spread fertilizers and spread evenly under the canopy. The transport chain in fertilizer box has low and high speed in order to fit different kinds and usage of fertilizer application for farmers. The fertilizer usage is 400kg at high speed and 200kg at low speed. The working efficiency of the orchard fertilizer spreader is 20 minute/ha and save 93% working time require by manpower (working efficiency 5 hour/ha).

Key words: Orchard, Chemical fertilizer, Spreader

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