

Studies on the Fertilizing Cultivator for Orchard

Te-Chou Tseng and Yung-shun Lin¹

Abstract

A cultivator mounted with three-point hitch was equipped on the rear of fertilizing cultivator used for sugar apple orchard. By operating the hydraulic oil pressure control system, the cultivator might be moved horizontally to one side about 60 cm or under the trees canopy when it was used. The fertilizer applicator was fixed to a frame which was mounted on the machine. It could load 160 kg fertilizer each time, and the fertilizer could be mixed with soil plowed by cultivator. The frame might be removed from the machine so that it could do other works. The speed of the plowing was 0.8-1.0 km/hr and the plowing depth reached 7~10 cm and the operation on simultaneous plowing-and-fertilizing only took 7.3 hours per hectare. From the analysis of different areas operated with the fertilizing cultivator, we could know that farmer got better economic efficiency if he managed more 3 hectares, and he could saved 64% investment of fixed cost per unit area when he operated more than 10 hectares.

Key wards: Orchard, Sugar apple, Fertilizer device, Cultivator.

¹Assistant and Assistant Engineer of Taitung DAIS .