

B-130: Designing a ridger attachment for a two wheel tractor

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The ridgers available in the Sri Lankan market have several shortcomings such as high cost, poor performance, requirement of skilled operator and technician and difficulty in setting and adjustment under different soil types. A spiral type ridger with a ridger former and a rear caster wheel driven by the PTO power of the 2 wheel tractor was designed to overcome such practical constraints. The ridger was tested with two soil types under two moisture levels.

The best results (height & width of the ridge: 35 cm and 40 cm respectively) were obtained from the weed free, Reddish Brown Earth soil under field capacity with the ridger former. The same between row spacing (50 cm) was received in all the cases. The height of the ridge in dry soil (RBE) was less than 15 cm and higher than 15 cm in soils (RBE) under field capacity. In RBE the width of the ridge in dry soil was less than 35 cm and was higher than 35 cm in soils under field capacity. Soils under field capacity were given better height and width of the ridge in all the cases. The effect of weed on the height and width of ridge was less important than the moisture levels of the soil.

Newly designed ridger has adjustable height and base of the ridge, easy operation and higher efficiency. Ability to use even in a small space, durability due to being a PTO type, endurance of spare parts are advantages to name a few.