

Wave disk cultivator

What does the machine do?

The wave disk cultivator is used to break up lumps in the soil before planting. The machine aims to produce a fine tilth and allow a better soil-sett contact to be achieved. This helps cane germination in low and reduced tillage farming systems.

Some growers on very light sandy soils have found the machine useful for stool destruction and for the incorporation of soybeans.

Where is it used?

The machine is mostly used after initial ripping or disking to produce a fine tilth. The machine is zonal in operation and only cultivates the area which is to be planted. The machine is often used in conjunction with preformed beds.

Growers who have formed beds prior to the wet season have found the machine helpful to break up soil crust and prepare the beds for planting after the wet season.

What are the benefits?

The wave disk cultivator has a very low power requirement and a very high work rate. It works best at higher speeds with some growers finding speeds of 15+ kilometres per hour a suitable operational speed.

The high work rate coupled with a low power requirement leads to very low fuel usage per hectare.

What are the cautions?

The machine works best in friable soils and will struggle to produce an acceptable tilth in heavy clay soils. For heavy soils, a zonal rotary hoe may be a better option.

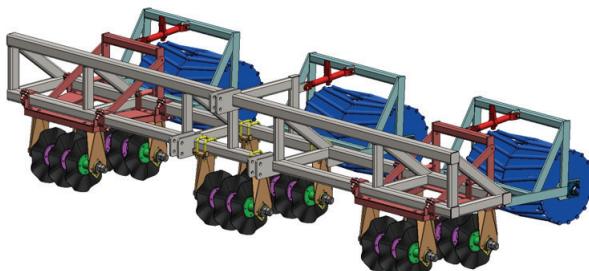
How is it constructed?

The wave disk machine is constructed on a frame similar to a ripper frame with gangs of disk mounted under the frame.

The SRA trial machine has three disks on the front gang with 200 mm between disks and four disks on the rear gang also with a spacing of 200 mm. This configuration gives a working width of 800 mm. Both single row and three row machines have been constructed.

The disks used on the SRA machine are 24 inch wave disks with a large 50 mm wave. Various disk diameters and wave sizes are available but results showed that the largest disk with the biggest wave produced the best tilth over a range of soil types.

Several growers have manufactured their own machines by modifying existing equipment. New machines are available from Hodge Machinery.



Above: Drawing of machine.



Above: Single row wave disk machine.



Above: 3-row machine in operation.