

Delving Deep Ripper



Example delving deep rippers: Left: with low rake angle flat face tines set at narrow spacing (Image: FarmTech Machinery) ; Right: with additional mixing top-plates fitted (Image: University of South Australia)

Key points:

- Delving deep rippers are high disturbance deep rippers that promote bottom-up lifting of deeper layers to the surface. They require effective rollers to leave a levelled surface finish.
- One brand model (Bednar *Terraland*) can receive optional wide plates bolted to the tine upper-section and designed to maximise the extent of surface boiling and lateral throw. Their impact is to increase the cover of the original inter-row surface from delved sublayers and to increase the extent of top-down backfilling process of the rip-line behind the tine. This effect is maximised at a higher speed of operation.
- Work rate of a 6m wide delving deep-ripper operating at 500mm depth and 6-7 km/h vary in the range of 2.8-3.2 ha/hr with an approximate contractor cost of \$170-180/ha.
- The extent of surface amendment mixing is thus typically limited to the rip-line backfilling process while the inter-row zone gets buried under, rather than mixed with, sublayer soil.
- A dual cross-ripping pass increases the uniformity of distribution within the profile at double the operating cost per ha. The 2nd pass can be done a few seasons down the track.
- Delving deep rippers require higher drawbar power than low disturbance deep rippers due to the steeper rake angle and wider tine face, typically set at a narrower spacing and also the large extent of soil movement.

Further information:

GRDC factsheet:

<https://grdc.com.au/resources-and-publications/all-publications/factsheets/2022/ripping-technology-national-factsheet>

