

Spading & Deep Ripping Demonstration

NATIONAL LANDCARE PROGRAM SMART FARMS SMALL GRANTS - AN AUSTRALIAN GOVERNMENT INITIATIVE

BACKGROUND

A paddock at Western Flat was spread with 250 t/ha of clay that was incorporated in the top 15cm, overcoming water repellence. Two strips of 500 t/ha were applied and an Imants Spader + Deep Ripper was used to test clay incorporation and decompaction when operated at different ripping and mixing depths.

TREATMENTS

- 1) No-tillage Control
- 2) Rip 30cm and Spade 10cm
- 3) Rip 40cm and Spade 30cm

RESULTS

Soil strength was measured in August 2022 using a digital penetrometer. Penetration resistance exceeded the critical threshold of 2,500 kPa at 35cm in the Control, and was substantially improved by ripping to 40cm and spading to 30cm (Figure 1).



Image 1. Imants spader with deep ripper tines for enhanced deep tillage.



Image 2. Treatments were applied to plots 10.5m wide, as seen here on the left.

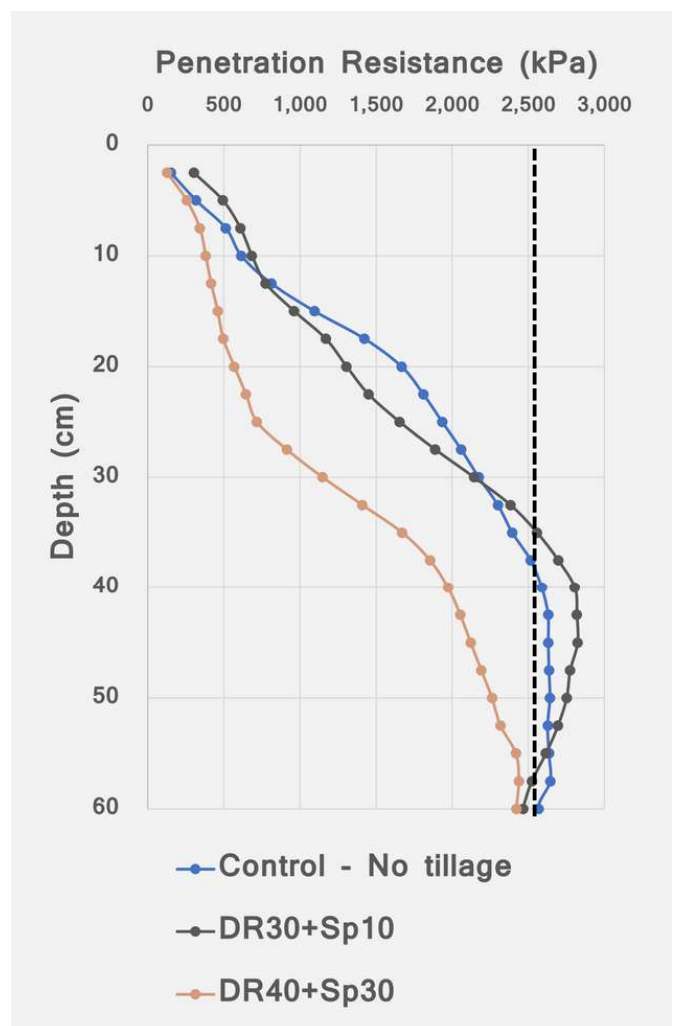


Figure 1. Deep ripping and spading reduced soil strength after clay spreading.