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**MEDIA RELEASE**

**DEEP RIPPING DEMONSTRATION PUTS AMELIORATION METHODS TO THE TEST**

Six different deep tillage machines were put to the test in front of 50 farmers at Kielpa recently to address production constraints caused by sandy soil conditions.

With sandy soils making up between 40-50 per cent of cleared farming land on the Eyre Peninsula, it continues to be one of AIR EP’s key focus areas.

AIR EP Executive Officer Naomi Scholz says sandy soils present considerable challenges to production on the EP, with farmers grappling to find the best equipment and techniques for optimal soil management.

“Putting six farmer-owned deep ripping machines in the paddock together allowed us to compare how different machines perform in addressing production constraints in different parts of the landscape, and it certainly created a lot of interest,” she said.

The event was initiated by Tuckey Ag Bureau members, after several local farmers purchased deep tillage implements to address productions constraints on their properties, each with slightly different configurations.

The farmer-owned machines demonstrated at Kielpa included a Grizzly plough, Lienert engineered delver, Bednar “shallow delver”, Agrow plough ripper with topsoil inclusion plates and Farmax spader.

Local Department of Primary Industries and Regions research scientist Brett Masters identified moderately water repellent surface soils, acidic surface and subsurface layers, infertile bleached A2 horizons and shallow layers of high soil strength. Subsoil clays at between 10 and 40 cm below the soil surface were dispersive with increasing lime levels at depth.

“Clay delving is a well-established technique for ameliorating production constraints on sandy soils in the region and has proven to be effective on sandy soils which have clay B horizons within reach of the delving tyne,” Mr Masters said.

“However, on shallow duplex soils, there have been instances where too much clay has caused issues post-delving.

“This site aims to demonstrate the types of responses that might be expected from addressing production constraints as they exist at different points in the landscape, using different types of commercially available machines. To ensure the best response from deep tillage machines, it is important to identify each constraint and think about the capability of the implement you are planning to use to address this.”

Lime applications were required to address severe surface and subsurface soil acidity (4.4-4.7 CaCl2) at the site. Although there was some potential for some of implements to bring change soil pH by lifting alkaline subsoils clays, the quantity of clay brought to the surface varied considerably between machines, with some implements not designed to mix the soil and some not intended to reach the clay at all. As a result, surface lime was applied across the whole site the day before the demonstration at around 1.8 t/ha.

A similar demonstration was also established under the project at Kyancutta, where a range of deep mixing implements were used to address layers of high soil strength and improve production on a typical Kyancutta/Warramboo yellow sand.

For more information on the demonstrations, watch the short clips on AIR EP’s [YouTube channel](https://www.youtube.com/@ag_eyre).

This project was led by AIR EP, through funding from the Australian Government’s *Future Drought Fund* and the Grains Research & Development Corporation and is supported by the SA Drought Resilience and Adoption Hub.

Look out for more sandy soils masterclasses to be held on the EP later this year. Until then, join the [Managing Southern Region Soils](https://www.facebook.com/groups/662458081583150) group on Facebook.

For more information, contact AIR EP Executive Officer Naomi Scholz on 0428 540 670 or Brett Masters on 0428 105 184.

**What is AIR EP?**

AIR EP is a farmer-driven organisation, focused on applying research and the extension of agricultural technologies and innovation here on the Eyre Peninsula.

AIR EP is the result of a merger between the Eyre Peninsula Agricultural Research Foundation (EPARF) and the Lower Eyre Ag Development Association (LEADA) farming systems groups, who had been effective in providing local RD&E outcomes for the EP over the past 15 years.

By joining forces, AIR EP has created efficiencies in administration and operations, and provides a stronger face for regional RD&E to future funders, partners, members, and supporters.