Capacity to Deliver

LP003-004

Drought forewarning

Hovells Creek Landcare Group

Using new technologies to track approaching drought and respond with better management decisions

The issue

With droughts predicted to be more extreme under a changing climate, we wanted to be able to give our members more tools to be able to see when the weather is trending towards dry times and to respond with informed management decisions. There is a range of new technologies available to do this.

The solution

We were funded by the Australian Govenment's Future Drought Fund to make new technologies and training available to members, including:

- Installing two new soil moisture probes that are now part of a suite of probes across the south-east of NSW. They are currently being calibrated but will eventually give data that is publicly available on the Local Land Services *Farming Forecaster* website. This was also supported by LLS in-kind help.
- Running workshops and one-on-one training on how to use CSIRO's GrassGro software.
- Having a large part of the Hovells Creek valley aerially mapped for high-resolution threee-dimensional data.
- Running workshops on soil chemistry and ecology

The impact

The soil probes provide localised soil moisture data as well as predictive information about pasture growth and livestock performance.

The GrassGro software allows farmers to build farm plans and model different management scenarios for approaching drought, eg feeding, agistment, selling etc. It also allows farmers to optimise stocking rates at all times, and to do profit analysis, enterprise comparisons and analysis of post-drought or non-drought restocking opportunities.

The 3D mapping provides detailed information including waterflow across the landscape, potential places for earthworks to mitigate erosion and wetland rehydration, number and height of trees and shade percentage per paddock, legal boundaries, real fence lengths and distance to water per paddock for stock.

By using all this information, farmers can build a picture of approaching drought and model different responses before actually doing them.

Learnings

The technologies are new and complex. It took one-on-one follow-up training for farmers to be able to build and effectively use farm plans. Having the 3D mapping done is a first step and follow-up analysis will also need the support of good training to be really useful.
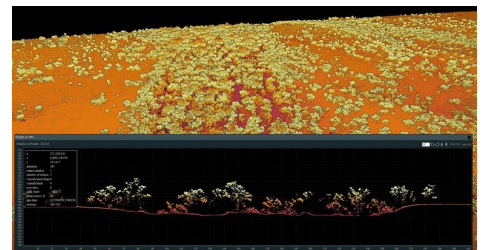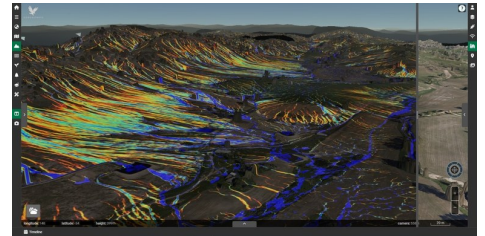
Key facts

- New technologies for farmers
- Training to use them
- Better ability to predict drought
- Ability to model management responses

Project Partners

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