

# Project summary

## Precision soil mapping in Central Victorian pastures

### Background

The Precision Soil Mapping in Central Victoria Producer Demonstration Site (PDS), funded by Meat & Livestock Australia, was established in 2021 with demonstration sites at four properties owned by members of the Smeaton and Pyrenees BestWool/BestLamb groups. At each site, paired paddocks representative of soil types and pasture species were grid soil-sampled to map the variability in soil characteristics. One of each pair received variable rate applications (VRA) of fertiliser/ameliorants (treatment), and the other a conventional uniform rate (control). The impact of these different approaches on FOO, pasture composition, pasture quality and stocking rates are all monitored regularly.

### Current economic results

From an economic perspective, data is being collected and analysed to answer one main question: What is the likely profit and risk of investing in VRA compared to standard practice application?

An initial assessment of the costs involved in the variable rate approach versus the conventional (soil sampling, spreading, fertiliser/ameliorants) suggest that, so far, it depends very much on the individual paddock (Figure 1). In the two Pyrenees demonstration sites, the VRA paddocks have a higher total cost because of both grid sampling costs and the higher rates that were prescribed as a result. Conversely, for the two Smeaton sites, the VRA approach is at parity with the conventional in one pair of paddocks and is

cheaper overall in the other, thanks to lower prescribed VRA fertiliser rates.

As the project progresses, information on the value of extra pasture growth and nutritional composition will be incorporated into a more complete cost/benefit analysis.

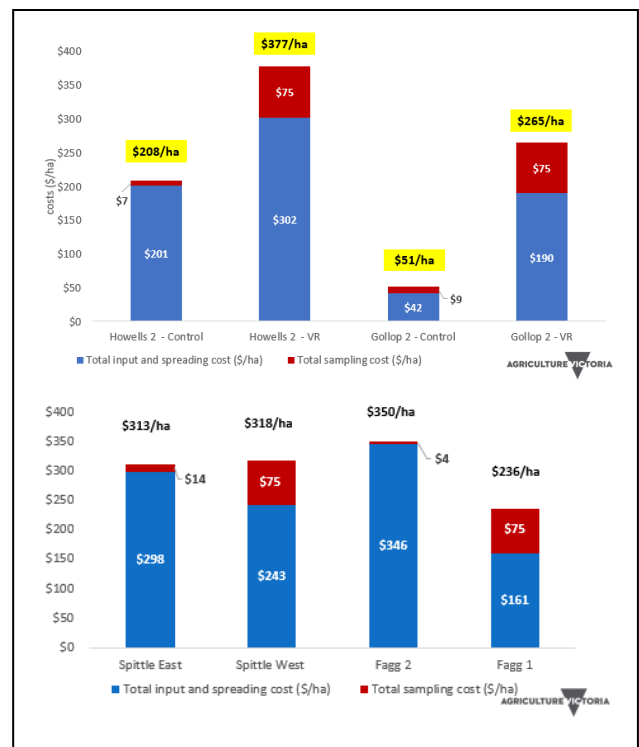


Figure 1: Cost per ha for Pyrenees (top) and Smeaton (bottom) demonstration paddocks

## Next steps

Paddock monitoring activities will continue until the end of this year when another round of soil sampling will be completed across all sites. The changes to soil conditions will be compared to see if the VRA has successfully reduced the level of variability. These answers will be combined with a complete economic analysis and shared at a field day in early 2024 and a series of case studies and reports that will highlight the relevant outcomes for local farming systems.

## Acknowledgments

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