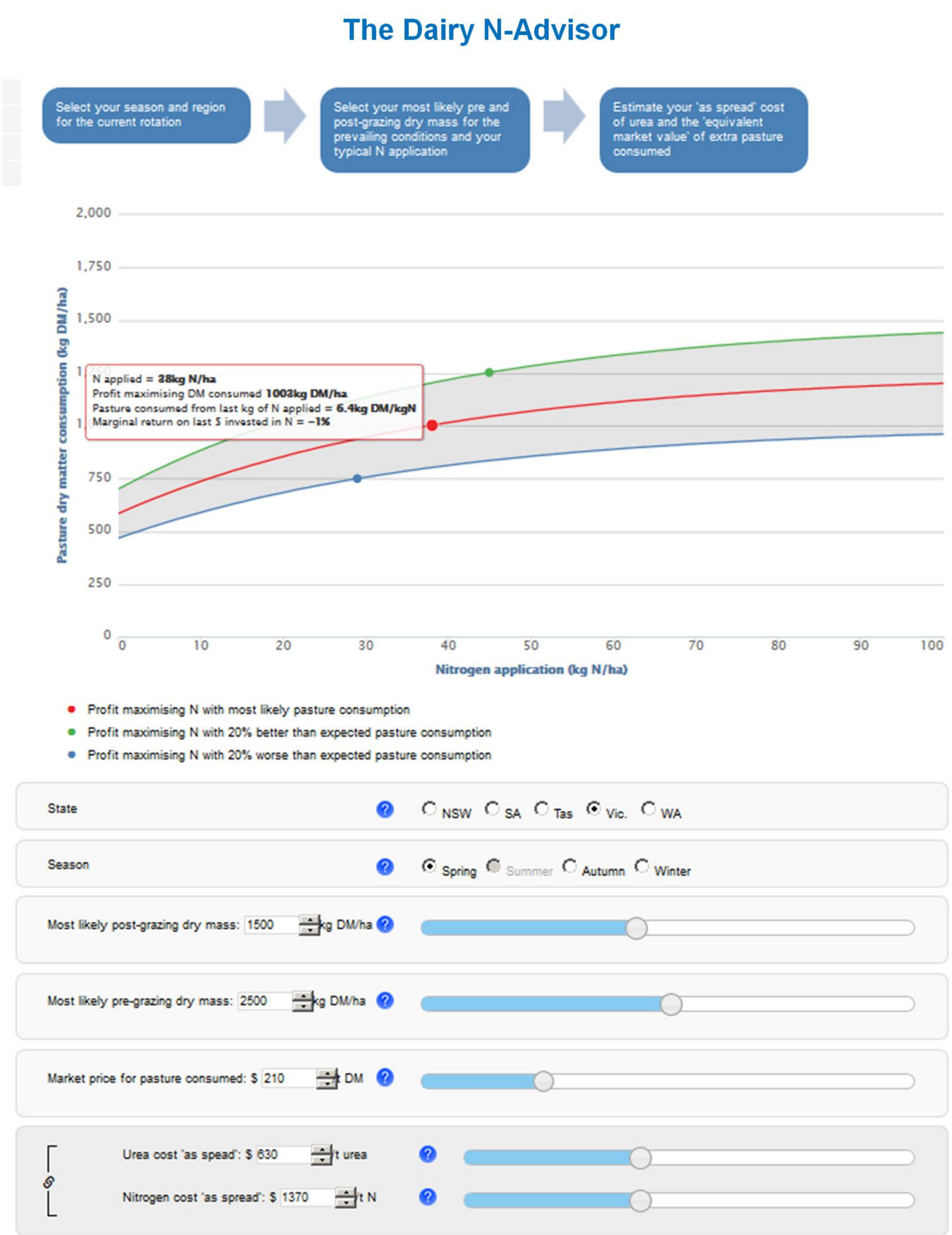
The ‘Dairy Nitrogen Fertiliser Advisor’

An on-line tool to improve the profitability of nitrogen fertiliser use on dairy pastures

Kerry Stott[1], Matthew Cox[1], Murray Hannah[2], Cameron Gourley[2], Bill Malcolm[1]

A new web-based application called the ‘Dairy Nitrogen Fertiliser Advisor’ is presented in this poster. The N-Advisor is based on a comprehensive meta-analysis of nearly 6,000 nitrogen (N) fertiliser experiments undertaken across Australia over the past 40 years. It uses profit-maximising principles to inform the decisions of dairy farmers and their advisors when they are considering how much N to apply to a particular paddock for a particular grazing rotation.



- Dairy farmers with their advisors can use the N-Advisor to determine the most profitable nitrogen fertiliser application.
- The farm-specific information required is their ‘best bet’ on pasture growth and consumption in a particular paddock for a particular grazing rotation - just as they estimate currently, but without the benefit of research information about the response function showing diminishing marginal returns to the nitrogen input.
- Risks and errors in estimates of the production response are considered by varying expected pasture consumption by ±20%, and seeing how this affects the profit-maximising N application.
- The N-Advisor enables users to perform ‘what-if’ analyses, exploring the effect of changing the cost of N fertiliser, or the value of the dry matter consumed. The ‘replacement cost’ method is used to determine the value of pasture, based on the market price for an equivalent amount of metabolisable energy.
- The return to marginal capital invested in extra N is shown on the response function, enabling the use of more N to be weighed up against other uses of capital in the farm system.

The N-Advisor tests the intuition and judgments that dairy farmers and their advisors use currently in making their decisions about applying N. It provides information about pasture production and profitable N use with sufficient rigour and relevance to add value to their decisions. It is accessible on the VRO website at http://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/nitrogen-advisor

[1] Agriculture Victoria, 32 Lincoln Square North, Carlton, Victoria 3053 Australia. Kerry can be contacted at: kerry.stott@ecodev.vic.gov.au
[2] Agriculture Victoria, 1301 Hazeldean Rd, Ellinbank, Victoria 3821 Australia

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