

Ravensdown PGP Programme Quarterly Progress Report

Contract reporting period: October-December 2017

PSG Meeting Date: 12/2/18

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Summary of progress during this quarter

All three spring 2017 validation remote sensing surveys were completed during this quarter. The purpose of the validation surveys is to test the robustness of remote sensing soil fertility predictions against physical soil fertility tests. The analysis of these surveys will be completed in the third quarter of the current financial year but initial results look promising. The programme has collected the most comprehensive fertility dataset in New Zealand hill country and there are still many more aspects to investigate for improvements to the relationships already established.

The programme also successfully completed aerial surveys of two of the focus farms (Patitapu Station – Wairarapa and Ohorea Station – Manawatu-Wanganui) which included the use of a newly adopted supplementary camera system working in parallel with the existing hyperspectral camera which enhances the robustness of the remote sensing estimates of soil fertility.

Two fertiliser applications have been applied using leading edge variable rate equipped aircraft (Intellispread™) based on plans developed directly from aerial surveys. The Intellispread™ equipped aircraft are also available for commercial fertiliser applications where the fertiliser plans have been derived conventionally from soil tests.

Key highlights and achievements

- Completion of three spring 2017 validation remote sensing surveys.
- Presentations from outcomes from the programme to the International Tri-conference for Precision Agriculture 2017 and the New Zealand Grasslands Association Conference 2017 highlighting decision support for incorporating hyperspectral data into variable rate fertiliser plans for NZ hill country and a case study of the economics of a variable rate fertiliser strategy for a NZ hill country farm.

Upcoming

- Completion and evaluation of the autumn 2018 validation remote sensing surveys.

Investment

<i>Investment period</i>	<i>Industry contribution</i>	<i>MPI contribution</i>	<i>Total investment</i>
<i>During this Quarter</i>	\$0.221m	\$0.221m	\$0.442m
<i>Programme To Date</i>	\$3.856m	\$3.856m	\$7.712m
