Ravensdown PGP Programme Quarterly Progress Report

Contract reporting period: July-September 2016

PSG Meeting Date: 26/10/16

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Summary of progress during this quarter

Quarter 1 of the 2016/17 year involved planning for the upcoming spring 2016 sampling across the programmes southernmost research farm, Moana Station located in Otago. This sampling involves a resumption of a planned sampling event which had to be postponed due to dry autumn 2016 conditions. In addition the sampling will also involves the programme first validation exercise which is designed to test the robustness of early remote sensing calibrations (to produce predictions of soil fertility remotely). Research farms provide the baseline data to develop remote sensing calibrations. The programme has eight research farms representing a range of geographical areas across New Zealand.

To date approximately 7,165 soil and 6,935 plant tissues plant tissue samples have been collected. This represents the most comprehensive dataset taken in New Zealand for the purpose of developing remote sensing technology to improve the identification of nutrient requirements across NZ hill country. Results relating pasture nutrient levels to sensing data continue to suggest very robust calibrations are achievable. The relationships with underlying soil fertility is now the current focus of the programme.

Ravensdown continues to see an increasing uptake of its generation two aerial spread technology, Intellispread™ enabling more precise aerial fertiliser applications to hill country. This is a closely aligned programme which has been developed by Ravensdown and not funded by the PGP programme. This system enables a prescription map to be loaded into the aircraft and the map drives the opening of the planes hopper with the aim to deliver the prescribed amount of nutrients to different parts of the farm. These aircraft will again be employed on the four focus farms during 2016/17. Focus farms are where the end to end system (remote sensing, decision support and generation two aerial spread technology) are incorporated into the farming system.

Key highlights and achievements

- Completion of planning for the spring data collection which includes the first validation sampling.
- Establishment of focus farm committees of the additional focus farms (Moana and Bog Roy Station) entering the programme in the 16/17 year.

Upcoming

- Complete the first sampling event aimed to validate (test) remote sensing calibrations.
- Review the latest generation of remote sensing calibrations.

Investment

Investment period	Industry contribution	MPI contribution	Total investment
During this Quarter	$0.18m	$0.18m	$0.36m
Programme To Date	$2.93m	$2.93m	$5.86m