

## QUARTERLY PROGRESS SUMMARY: April – June 2015

### A New Vision for Pastoral Agriculture through Seed and Nutritional Technology Development

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#### Summary of progress during this quarter

- Good progress is being made on all projects, with milestones progressing towards their desired outcomes.
- We continue to see promising results with our Biological Seed Additive (BSA) seed treatment in trials. BSA treatments are yielding significantly higher dry matter yield, compared to that of bare seed for both perennial ryegrass and forage brassica. New BSA strains are also producing better results than the BSA strains in our original formulation. Early indications are that BSA can be successfully delivered as a seed coating using PGW Seeds current commercial seed coating.
- Sheep grazed on the ryegrass containing AR-X endophyte have continued to show no adverse animal health problems despite summer conditions that provided toxic effects in sheep grazing the standard endophyte control. Data analysis from these grazing trials confirmed that to date AR-X does not cause heat stress. The nucleus ryegrass crop with AR-X endophyte sown in March 2015 remains on track for harvesting in summer 2015/16.
- Our new hybrid brassica pre-nucleus crop has been harvested and we are now in the seed production phase. This new brassica has shown improved water-use efficiency and resistance to three infectious strains of clubroot. Delivery of a herbicide tolerant kale is ahead of schedule and we are increasing seed for further testing.



Photo 1 – Regal kale control on the left and right (dying) and HT-C progeny rows unaffected in the middle (all rows sprayed with Telar herbicide).

## Key highlights and achievements

- Progress on the development of BSA as a commercial seed treatment, with good storage results and good compatibility with other components of current commercial seed treatment. BSA has shown good performance in situations where there is disease pressure or drought stress with dry matter yield increases. BSA has improved seedling establishment in 50% of trials and a significant dry matter yield improvement in a third of all pasture trials.
- The replacement nucleus seed crop has been sown for our perennial ryegrass with AR-X endophyte that has improved bioactivity. This elite selection has shown excellent agronomic performance, outperforming more than 100 other entries across 8 locations in New Zealand.
- Demonstration of the improved water-use efficiency, clubroot resistance (100%), and improved agronomic performance of our new hybrid brassica across a range of regional sites.
- The first seed increase for our new brassica hybrid has been successfully harvested and a nucleus increase has been sown in Canterbury.

## Upcoming

- Seed coating experiments with the existing and several new strains will begin on selected lines.
- The first assay for AR X endophyte viability in ambient storage trials will take place in July 2015.

## Investment

<b>Investment period</b>	<b>Industry contribution</b>	<b>MPI contribution</b>	<b>Total investment</b>
During this Quarter	\$302,656	\$404,696	\$707,352
Programme To Date	\$3,014,804	\$2,823,851	\$5,838,654