

## **QUARTERLY PROGRESS SUMMARY: July - September 2015**

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

---

#### **Summary of progress during this quarter**

- Good progress is being made on all projects, with milestones on track.
- We have run a series of trials to assess the effectiveness of new cold-tolerant BSA strains in comparison with the original wild-type strains. These strains have been assessed individually and in combinations to determine the most effective mixture. Work on delivering BSA as a seed treatment with viable shelf-life has shown satisfactory complementarity with existing formulations and polymers.
- Sheep grazed over winter on our Italian ryegrass with AR-X endophyte have shown excellent liveweight gains and no adverse animal health issues. In addition our nucleus seed crop of our first product with AR-X endophyte has established well and is on track for harvest later this year
- We have identified new endophytes with anti-fungal activity and the best of these are being increased for wider evaluation and animal safety testing.
- Our new supplementary crops continue to exceed expectations with a 5ha nucleus crop of our new hybrid brassica well established and due for harvest this summer. This hybrid has been evaluated in 5 regions over the past year with significant yield advantages over Goliath rape in all regions. Yield advantages over Goliath of more than 4,000 kg DM/ha have been achieved 120-140 days after sowing. We have shown excellent progress with our new herbicide tolerant kale which is also undergoing seed increase for multi-site testing in 2016.



Above: New Brassica hybrid seed production field

## 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. The animal safety trials have shown strong animal performance without any adverse animal health problems.
- The first assay for AR X endophyte viability in ambient storage trials took place in July 2015.
- 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.
- HT-C Kale is proving tolerant to Telar herbicide and is now being increased for agronomic evaluation.

## Upcoming

- A final decision on whether BSA is a viable commercial option will be made in the next quarter.
- Seed coating experiments with the existing and several new strains will begin on selected lines.
- The level of secondary metabolites in our improved feed conversion efficiency project will be known.

## Investment

Investment period	Industry contribution	MPI contribution	Total investment
During this Quarter	\$354,713	\$307,730	\$662,443
Programme To Date	\$3,369,517	\$3,131,581	\$6,501,097