

High Performance Mānuka Plantations PGP Programme

Quarterly Progress Report; October to December 2014 (Quarter 2 2014/15)

Executive Summary

There are six projects / objectives in the High Performance Mānuka Plantations PGP Programme.

Work was progressed in the following areas during Quarter 2 2014/15:

Objective 1: Determine the key environmental factors which influence plant growth, flowering, nectar yield and nectar quality through controlled greenhouse trials

- The experimental work for this Objective is now completed; a PhD thesis is being written up.
- In controlled experiments conducted over three years of PhD studies, genetics is showing to be the main influencer of flowering (flowering time and duration), nectar yield and quality. This is a significant finding as the Programme has access to proprietary mānuka genetics. The influence of genetics will be studied further under Objectives 2, 3 and 4.

Objective 2: Determine the effects of site, microsite and stocking rate on growth, flowering, nectar yield and quality through field trials

- Since the start of the programme in April 2011, 350 hectares of trial mānuka plantations have been established across 8 sites on marginal land in the North Island. A further trial site will be planted in the 2015 calendar year.
- Data on flowering period and floral density was collected in Q2 alongside nectar samples. Nectar samples will be analysed for sugar composition and DHA content in Q3.
- Work on the attractiveness of different mānuka selections to bees, impact of scale insects, and the impact of mycorrhizal associations is continuing.

Objective 3: Determine further the effects of environmental and genetic variables on nectar yield and quality.

- Large-scale experimental work to determine the effect of water deficit on plant growth, nectar quality and volume and flowering patterns has begun.

Objective 4: Evaluation of mānuka for companion riparian and irrigation shelter planting

- Four riparian trials have been planted over 21 hectares in Hawke's Bay (2), Wairarapa (1) and Southland (1). The plots are being monitored for establishment.
- The irrigation/shelter trial site in the Canterbury region has been prepared with planting planned in Q3.

Objective 5: Development of a Predictive Model

- Recruitment of a research officer is underway with an appointment expected to be made in Q3.

Objective 6: Programme Management

- A refinement of financial management and reporting processes is being implemented.
- A proposal for a programme website has been developed.

Recent and upcoming events

An Open Day at Limestone Downs in February 2015 featured the mānuka plantation trial at this property.

A Mānuka and Profitable Marginal Land Use seminar and field visit is planned for 6 May 2015 in Napier, run by Woodnet in partnership with the Hawke's Bay Regional Council. The PGP programme will be featured.

<http://woodnet.co.nz/wp-content/uploads/2015/03/Manuka-Seminar-Programme.pdf>