

Sustainable Vegetable Systems



EVIDENCE: Milestone 1

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30th September 2020

Reporting period: 1/07/20 - 31/8/20



Activities

Workstream 1 – Controlled experimentation to quantify nitrate leaching

Objective 1: Literature review

The New Zealand Institute for Plant & Food Research (PFR) is currently undertaking a literature review, this report is expected to be delayed until 30 October 2020, this delay from 30 September 2020 is due to significant PFR resource being allocated to the development of Objective 2 and setting up trial sites.

Objective 2: Controlled experiments

This objective is on track, PFR has focused resources and activity on setting up the trials for the coming year. This has involved significant scoping of the activity required and has included consulting with the Technical Working Group (TWG) on crop rotations and practices. Essential monitoring equipment has been ordered, however as this is being imported internationally has been delayed due to COVID-19. This delay was expected and discussed with the Programme Management team and MPI prior to contracting. It is expected that planting will be delayed and differ from that planned in the Business Case.

At PFR Lincoln wheat is currently being grown and monitored, this was planted as part of the pre-existing project PNZ-79, which will be superseded contractually by SVS. This rotation is expected to be followed by broccoli or cover crop (rye grass/oats). The final rotations are still being finalised however, Lincoln's 2nd rotation begins in October 2020 with pak choi, followed by silver beet and fresh potatoes. The Hawke's Bay trial sites will be set up by 30 November 2020 with trials due to begin in March 2021, this is a delay from the planned activity, due to the previously mentioned delay in trial equipment and finalisation of rotation plans.

The TWG suggested rotations are currently being reviewed by PFR against the science requirements and budgets.



PFR and other project team members met on the 11th August in Lincoln. Pictured here looking at the trial site sown in wheat.

Workstream 2 – Regional on farm monitoring

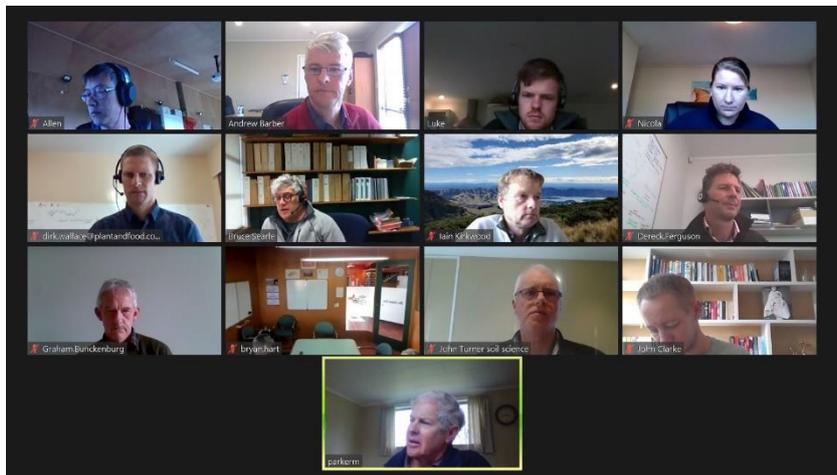
Objective 1: Monitor on farm nitrogen balance

Objective 1 is on track with the TWG established for both Workstreams 1 and 2.



Growers at the 9 regional monitoring sites have all been engaged with and are currently working through site selection. The idea is to monitor from the same part of the paddock throughout the 4-year project. Therefore, getting the site selection right is important from the outset.

The TWG has been meeting weekly for an hour to refine the soil and plant sampling protocols. PFR scientist's Dr Bruce Searle and Dr Hamish Brown have been involved to ensure data collection is suitable for utilisation in Workstream 3.



Objective 2: Modelling design and development

Activity will begin once data collection is underway.

Workstreams 3 Farmer facing tool(s)

Objective 1: Modelling communities of practice

The modelling community of practice idea is in development. This will be one of the key project outputs as it looks to increase the industries nutrient modelling capabilities. A group of professionals with modelling qualifications will workshop vegetable growing simulations. Knowledge will be built off this hands-on process that can be used directly in Overseer or other nutrient budgeting tools. In conjunction with PFR a subject matter expert is being approached to support this community of modellers and to do some initial modelling to help identify modelling gaps.

Objective 2: Modelling design and development

Activity will begin following the PFR literature review (WS1 – Obj. 1), social scientist input (WS4 – Obj. 1) and the gaps review in WS 3 – Obj. 1.

There have been initial discussions with Overseer and other nutrient projects to ensure awareness and alignment of work programmes. A scan of tools has included the German tool N Expert, and preliminary discussions on what tools need to deliver. This will also form part of PFR's review in WS1 and 4.

Objective 3: Model delivery and implementation

Activity will begin once model design and development is underway/complete.

Workstream 4 – Developing a change landscape

Objective 1: Understanding a change landscape

PFR social scientist Toni White has been engaged by the Workstream 4 management team. She will begin scoping the project following the workshop on 4th November 2020.

Objective 2: Extension activities

A dissemination leadership team has been established. Several video conference meetings have been held. The next meeting is face to face on the 4th November with the wider Workstream 3 & 4 team.

This first workshop will be held amongst the project delivery participants in Wellington. Participants include PFR, PNZ, HortNZ, and external parties such as NZGAP and LandWISE who have concurrently running work with nutrient elements. Workstream 3 modelling is the main delivery element that growers will see, hence the importance of insuring these two workstreams are well connected. Presentations at this workshop include workstream 3 & 4 overviews, PFR's social science element, concurrent projects, Workstream 3 modelling, and beginning the discussion on what SVS's dissemination programme looks like and its alignment with Product Group activities.

Activities have focused on a soft project launch including in rural papers, industry websites and radio interviews. A formal launch with Hon Damien O'Connor Minister of Agriculture on the 20th August in Lincoln was postponed due to COVID-19.

PNZ and HortNZ have a process for capturing media activity. A log has been started of both SVS specific and nutrient related media coverage.



Programme management

The project is currently on track with delays expected due to COVID-19 are not envisioned to affect the overall delivery and impact pathway.

Upcoming milestones/activity

Workstream 1: PFR sites established in Lincoln and Hawke's Bay and trials will begin in Lincoln. Literature review to be completed.

Workstream 2: Regional monitoring will continue in Canterbury and begin in the other regions. This will include visits by PFR staff to each of the 9 sites to engage with those doing the regional monitoring and the respective growers.

Workstream 3: Review of current representation of crops in Overseer. Establishment workshop for the modelling community of practice to be completed.

Workstream 4: Workshop and stakeholder analysis underway.

Programme Management: Governance and reporting requirements will be established. PFR contract to be finalised and invoiced.

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