

RP210 – Tailored nutrient and farm management solutions for the Herbert catchment area (Herbert RP161)

Milestone Report #8

Milestones	Outputs and other deliverables that make up this milestone	Milestone Key Performance Indicators	Submission date for outputs and deliverables	OGBR review of milestone (date)
Milestone 8 Collect and collate grower data through the grower survey, undertake soil surveys and undertake farm inspection for year 2 growers. Benchmark A and P2R data to be collected Develop crop & nutrient plans for 'new' year 2 growers Submit MERI report	Benchmark A P2R data NMP MERI report	All farms benchmarked (Benchmark A collected) Farm inspections conducted P2R data submitted Nutrient management plans delivered MERI report approved	30 September 2020	31 October 2020

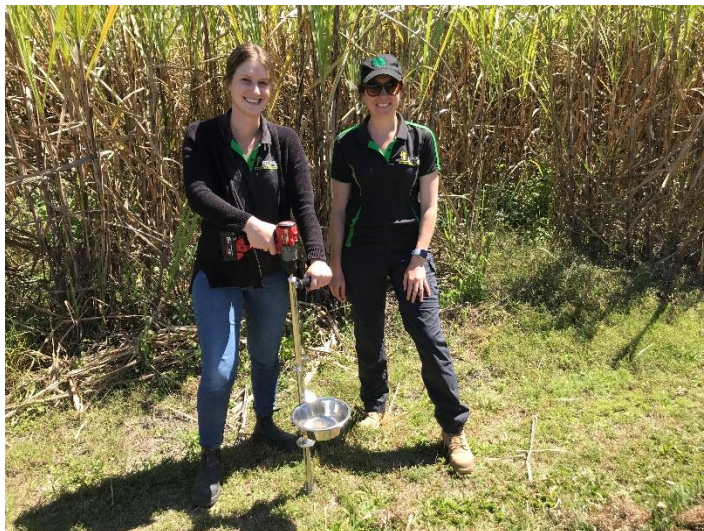
Collect and collate grower data through the grower survey, undertake soil surveys and undertake farm inspection for year 2 growers.

- Grower Surveys
 - Grower surveys have been completed for 51 farms transitioning from 2019 to 2020 (Yr 2), and 33 new farms that joined the project in 2020 as Yr1 farms
 - The intake of 2020 Yr1 farms grew from 31 to 33 since the previous report with the addition of 2 new farms to the new Yr1 cohort.
 - These 2 extra farms were accepted into the project so as to increase participation from growers in a sub-district of the Herbert that has previously had low representation in the Herbert RP161 program.

- Benchmarking (including P2R data capture), grower agreements and general farm assessments were conducted by staff during visits with growers

- Soil Surveys

- Most soil surveys for Yr 2 growers were completed in late 2019 through early 2020, with the remaining few carried out mid-year.
- This was a marked improvement in sampling time, primarily due to the learnings of growers with regard to the benefits of early soil sampling and application of ameliorants
- 2020 (Yr1) growers completed soil sampling of fallow blocks prior to completion of their NMP.
- A Yr2 project grower requested a second soil analysis of a block that was EM mapped and strategically sampled in December 2019, in order to gauge the effectiveness of the subsequent ameliorant application in January 2020.
- Results indicated a significant improvement in pH and other soil constraints (sodicity) after only 4 months.
- This outcome will be used by staff at future Farming 4 CASH® workshops as a tool to encourage earlier, strategic application of ameliorants.
- After trialling Nutrient Advantage online soil analysis platform, HCPSL has opted to switch to the online Soil Mate platform.
- There were several reasons for this change, including functionality, ease of use, storage and access of data, as well as the ability to apply multiple supplier fertiliser and custom blends to nutrient recommendations.



- Farm Inspections

- Despite COVID restrictions, staff were still able to assess farms and grower management practises, which was particularly important for the 33 new farms.
- Aside from inspecting fallow blocks and conducting soil surveys, staff also inspected fertilising equipment and discussed other farming aspects such as variety, weed and pest management.

Benchmark A and P2R data to be collected

- Benchmarking

- Benchmarking was conducted for all 84 project growers early in 2020.
- Similar to 2019, benchmarking included P2R and social indicator questions, along with the full farm management questionnaire to assist staff to assess current farming practises, constraints to production, particularly soil constraints, as well as all other factors that can be assessed to make potential improvements to productivity, profitability and environmental outcomes.

- P2R data

- P2R data has been collected and is currently being entered into Collector
- A de-identified summary will also accompany this report as a separate document

Develop crop & nutrient plans for 'new' year 2 growers

- 2020 NMPs (Yr 2 Growers)
 - Extra 2 farms were added to 2020 Yr1 growers taking from 31 to 33 growers
 - NMPs were developed for all 33 new growers and 51 existing growers
 - All NMPs included an N & P budget and have been delivered to growers
 - NMPs are continuing to be 'tweaked' if and when requested by growers, with refinements primarily involving changes to fertiliser products and rates to ensure they match recommendations and stay within the prescribed N & P budget
- An excerpt from all NMPs will accompany this report as evidence of completion of all 84 farm NMPs.

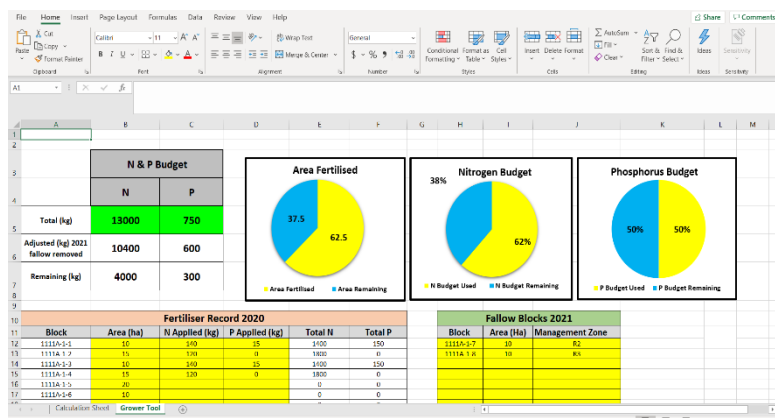
Submit MERI report

- Refer to separate MERI Report

General Activity Updates

Project Planning

- Staff Meetings
 - Project staff continue to meet regularly (typically fortnightly) to discuss project activities, progress and potential improvements.
 - Staff also meet with WTSIP and other HCPSL Soils & Water team members on either a fortnightly or monthly basis. These meetings facilitate multiple project updates and discussion around ways to enhance delivery of extension tools and services.
- Farming 4 CASH Workshops
 - Project staff have held several planning meetings to map out and develop the next round of Farming 4 CASH® workshops.
 - A full workshop planning meeting was held on 25th September 2020 will be with Dr Andrew Wood from Tanglewood Agricultural Services to finalise activities to be delivered for the planned November 2020 workshops (18th & 19th November).
 - The basis of the upcoming Farming 4 CASH® workshops will be on how growers can refine their nutrient applications based on Six Easy Steps and the following topics
 - Legume Fallows & Nitrogen
 - Mill by-products & Phosphorus
 - Tools and methods to improve soil sampling and manage soil constraints
- Google Earth Training
 - Due to changes in Qld Globe the intended training provider can no longer provide a training workshop for project growers
 - Project staff member Shannon O'Brien is currently working on alternative training delivery model that can be delivered by project staff in a one-on-one or small group environment
 - Training will also include the functionality and use of the N & P budget tracking tool developed by HCPSL staff.



- Digital Story Telling
 - Project staff Shannon O'Brien and Ellie McVeigh recently completed a Digital Storytelling Workshop
 - The learnings and skills attained by these staff will be put to good use through creation and use of digital learning tools such as videos and podcasts
 - Several videos are already being worked on and the podcast concept will be developed more in early 2021
 - This form of grower engagement attracts interest and provide learnings and



knowledge transfer to younger grower, as well as partners and other family members other than the primary farm manager.

- Connecting with other family members, other than the primary farm manager is important as it often establishes discussion within the family group on how farming activities can be improved.
- Media packages specifically for Herbert RP161 will be submitted for approval prior to use

Weed Management & Spray Equipment Calibration

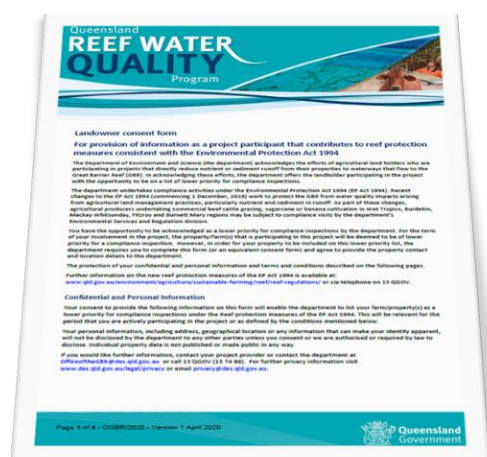
- Aside from nutrient management advice and calibration of fertiliser equipment, staff have also been providing advice on weed management
- Advice has been provided to project growers, as well as several growers outside of the project, on setup and calibration of spray equipment
- Through this extension work staff have been able to connect with growers outside of the Herbert RP161 project, as well as develop their own skills through practical applications, such as calibration spray equipment.



Above-Right: Herbert RP161 staff Ellie McVeigh and Shannon O'Brien developing their skills in calibrating spray equipment during a training exercise.

Participation in On-ground Grower Demonstrations

- During August and September, after completion and delivery of Herbert RP161 NMP plans, several staff had the opportunity to participate in establishing on-ground grower demonstration plots
- Demonstrations included variety, nutrient and herbicide management demonstrations and trials, which will be visited by growers later in 2020.
- These grower demonstrations and trial plots provide project staff with the opportunity to develop their own knowledge and skills, and build capacity within the local region, as well as connect with growers outside of the Herbert RP161 project



Compliance Low Priority Agreement

- HCPSL Project leader Adam Royle has been working with Jeff Ikin (OGBR) to establish an agreement for Herbert RP161 growers to become a part of the compliance low priority listing
- An agreement is now in place and project staff will start to engage with project growers who wish to be a part of this agreement.

General Nutrient Management Advice

- Project staff have had the opportunity to extend their nutrient management advice to several growers outside of the Herbert RP161 project.
- While not able to offer full nutrient management planning and services, staff have had the opportunity to discuss fertiliser

recommendations with grower based on their soil test results, which HCPSL provides through their soil sampling service.

- This has provided staff with the opportunity to extend the benefits of soil testing and promote the objectives of the Herbert RP161 project to non-participating growers.
- It has also assisted staff to hone their own skills provide opportunities to connect with growers outside of the project

General Learnings & Observations

- Capacity Building
 - By participating in activities outside of the project, such as grower demonstration, weed manage and herbicide equipment calibrations and connecting with growers outside of the project, staff are expanding their personal learnings and development as agricultural extension providers
 - These learnings and experiences assist in providing capacity in regions when the Herbert RP61 project ceases and in doing so supports ongoing efforts in providing growers with sound agronomic advice and environmental stewardship

- Soil Sampling

- Staff had a visit from Carla Atkinson from Wilmar sugar to demonstrate the Ground Probe soil sampling tool
- Staff were interested in the equipment's ability to collect multiple soil sub-samples and its ability to sample in compacted ground.
- Limitations arose however when sampling clay soils as the internal auger became clogged and inoperable.
- Staff will continue with current soil sampling equipment but will continue to investigate alternatives as they arise.



- Beyond June 2021

- HCPSL and Herbert RP161 staff held informal discussions with David Defranciscis to investigate opportunities to extend the Herbert RP161 project for a further 12 months (past June 2021).
- HCPSL is interested in extending the project past June 2021, however, in order to secure staff and capacity to deliver project outcomes, is seeking a more formal indication as to the likelihood of funding being available beyond the current contract.

- N & P Budgeting and associated tools

- HCPSL and project staff continue to develop and improve delivery and functionality of NMP and associated tools, such as the N & P budget tracker
- The N & P budget tracker is a simple excel file that staff and growers can use to track fertiliser applications in relation to N & P budget
- After feedback and staff team meeting discussions, the N & P budget tracker tool is now being developed to include a variety x disease component, which will further assist growers to make the right choices for improving productivity, profitability and improve environmental outcomes at the same time.

- HCPSL Board Presentation

- During the August HCPSL Board meeting project and HCPSL soils and water team members were asked to present the new NMP, with N & P budgets included.
- The HCPSL directors were very impressed with the complexity and development of the tool used to develop an NMP and congratulated staff under all projects, including Herbert RP161 for the standard of work being delivered.

