Winter 2022

Fertilizer News

Late nitrogen applications - managing the risk

Given that many crops are now well advanced and a lot of the nitrogen (N) was applied up to 3 to 4 weeks earlier than usual, the question growers need to be asking themselves is; what are the benefits of further N applications?

Nitrogen usage budgets are set for a specific yield potential in the planning phase prior to seeding and further application timings allow farmers to 'play the season'.

Trials over the years have shown that applying more N early sets up the crop for maximum yield, therefore this 'earlier application of a significant portion of budgeted N' is absolutely the correct thing to do.

With a lot of the growing season still to play out, there is of course a risk of crops running short of N and yield potential and/or protein not being realised.

It's a tricky scenario for growers to manage because we all know what happens if the crops are set up early, but the 'rainfall tap' is turned off sooner than we like. Conversely, we also know what happens when we turn off the 'nutrition tap' too early and the season continues into a soft finish.

So, the real question to be answered is; are you prepared to take the risk of going for it now, especially considering record high grain and fertilizer prices?

Targeting N for grain protein in particular is a very hit and miss proposition. We know that once a plant finishes stem elongation, the N gets redirected to produce protein over yield. The problem with this in a good season is that plants will have 5+ tillers (rather than 1-3), with the first tiller at flag leaf, the next 2 at late elongation and the next 2 early elongation.

When we do our crop inspections we predominantly focus on the main tiller and think that the application of 16kg N/t grain yield to increase protein by 1% is a pretty easy decision. But what invariably happens is the plant uses that extra N to make the 3rd, 4th and 5th tillers yield, with resultant grain still low in protein.

I find that plant sampling, whilst a good tool in certain situations, isn't as useful in a season like this; unless you have unlimited N strips (similar to Summit Fuel Gauges) for comparison.

Most plant tests will come back N deficient and that masks most of the other deficiencies that you are trying to identify. Remember that plant test results indicate whether a deficiency is present or not, but it's up to you to determine a rate you're comfortable with.

If N deficiencies become obvious at this time of year, you will still get responses to yield and/or protein, if you have the resources available and are willing to take the risk.

An early break to the season is great for setting up high yield potential, and also eases the logistical and mental stress on the agricultural industry. When we are faced with a high-risk scenario due to input prices and hungry crops, unfortunately that stress can quickly return.

The ability to find extra money in the budget to maintain yield potential really is a risk that only the farmer can make, especially when the end of the season is unknown at this point in time.

By Brett Beard
Area Manager: Moora
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Inside this issue!

New Summit Fertilizers App now available

We are excited to announce that we have developed a new Summit Fertilizers App which is now available on the Google Play and Apple App store platforms.

By downloading the free-to-use App customers signed up to SummitConnect will be able to login to their account on-the-go. We've designed the app for optimal viewing of SummitConnect on mobile and tablet devices, and the user-friendly interface allows the app to be easily navigable, with everything you need to know about your business with Summit in the one place.

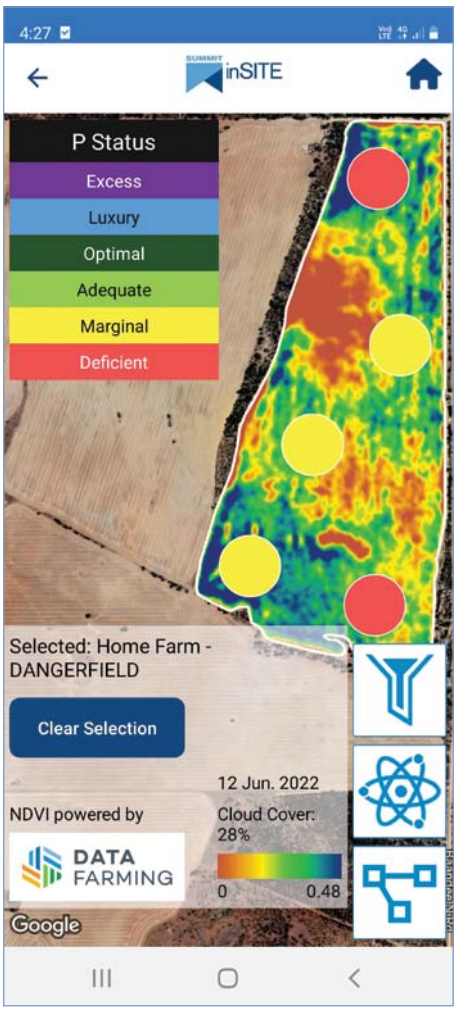
On the Summit Fertilizers App you can view your:

- Orders - see details of all your orders with Summit, including collection month and payment terms.
- Collections – keep on top of individual fertilizer collections and download loading and weight dockets.
- Transactions - review your payments, credit limit, monthly statements and download your tax invoices.
- inSITE Soil & Plant test history and recommendation reports.
- Summit trend maps – get a visual interpretation of soil test results across different depths and growing seasons, so you can see how your farm is tracking over time. We've also integrated freely available NDVI biomass satellite imagery through our partnership with DataFarming.

The Summit Fertilizers App also contains a range of useful tools and information, such as product analysis data, nitrogen and liquid fertilizer calculators and our liquid fertilizer and pesticide compatibility checker.

It is a complete replacement of the previous Summit Fertilizers App, which has now been discontinued. To download the app, simply search for Summit Fertilizers in either Google Play (for Android users) or the Apple App store.

If you're a Summit customer and you haven't signed up to SummitConnect yet, getting started couldn't be easier – get in touch with your local Area Manager to register or call our Customer Support Centre on (08) 9439 8999.



Additions and territory changes for the southern team

David Hull joined Summit Fertilizers in March 2022 as the Area Manager for Narrogin and surrounding shires, and Brett Coxon has taken over the Lake Grace area.

David is well known to local growers and has a proven commitment to working alongside them, helping to improve their farming practices and productivity.

After graduating from The Western Australian College of Agriculture – Morawa and gaining on-farm experience, David worked in the rural merchandise industry for 24 years.

He brings to Summit a wealth of agricultural knowledge and experience. His most recent position prior to his current role with Summit was as Branch Manager for Elders in Pingelly.

David covers the shires of Beverley, Brookton, Pingelly, Wickepin, Kulin (West), Narrogin, Cuballing and Wandering.

David Hull,
Narrogin Area Manager

Brett Coxon,
Lake Grace Area Manager

Brett joined Summit back in 2013 and is an experienced member of the Summit Area Manager team.

He is a Fertcare accredited advisor and enjoys getting involved in Field Trial work and Summit Fuel Gauges.

Having switched regions, Brett is looking forward to a new challenge and getting to know his new customer base in the Lake Grace, Kent and Dumbleyung shires.

Organisation FERTCARE®

Our long-term commitment to R&D continues

By Dr Mark Gherardi
Summit Fertilizers Field Research Manager

Summit's Field Research team has been hard at work establishing the 2022 field trial program.

For the past four years, Summit has been contributing to a large GRDC co-invested project advancing the understanding of nitrogen (N), phosphorus (P) and potassium (K) in modern cropping rotations. The aim is to improve knowledge and nutritional approaches to maximise and sustain profits in contemporary farming systems. We have also been involved in the Department of Water and Environmental Regulation uPtake project, revisiting P requirements and best practice nutrient management in pasture systems.

Look for communications and outcomes from these significant projects over the coming 12 months.

Moving on from the field work components of these projects now allows us to focus on our internal research program that improves the service and recommendations of best use of Summit's fertilizer products in the local soils and conditions on your farms.

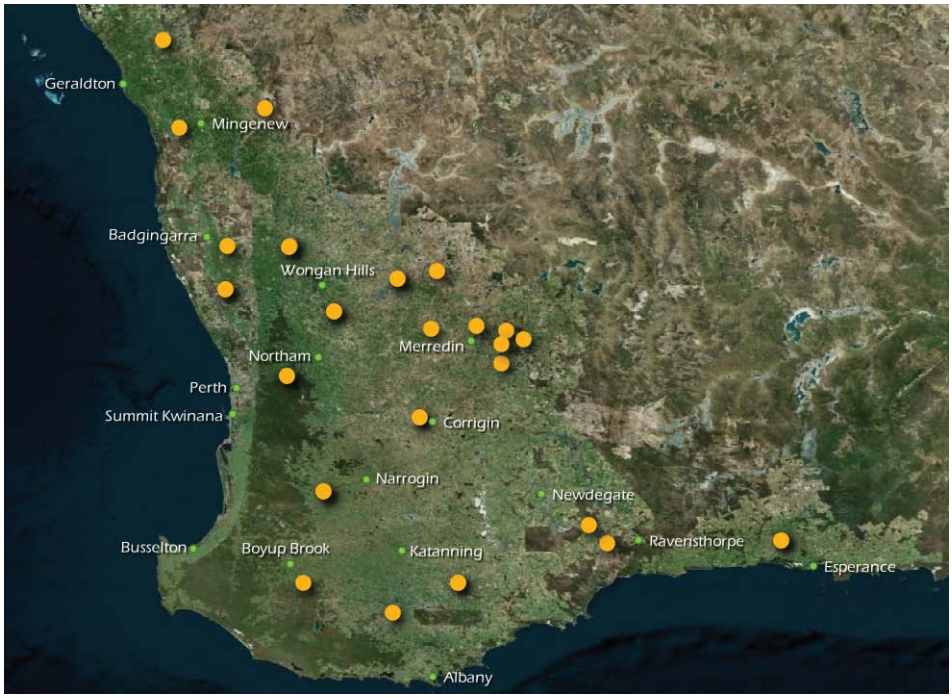
Our industry-leading P requirement and time of sowing work, presented at the 2021 GIWA/GRDC Research Updates (scan QR Code) is being extended to barley crops in high rainfall and high PBI gravel soils.

Experiments investigating residual nutrients and re-supply after both high-yielding crops and in areas where frost devastated the 2021 crop have been sown.

Continuing to push the limits of high-end yield in canola, we are looking at how P and N strategies might be complimented by compost addition where nearby sources are available.

Trace element work in the southern part of the state continues with more Mn supply studies in conjunction with P rates.

Our long-term P and K dynamics experiments to understand nutrient build-up to run down in relation to cropping sequence and soil nutrient pools are ongoing in a number of areas. The popular local rate-response trials continue to make our nutrient requirement models better and provide local benchmarks that growers can use for making fertilizer decisions with confidence in challenging times.



Over the past 7 years, Summit Fertilizers has conducted close to 230 trials across the state. This season 26 trials are in the ground (locations shown above - some of which have more than one trial). Many ideas for the trials program come from our Area Managers, who work closely with growers to identify local crop nutrition issues. Depending on the season, trials field walks usually start in August. All growers are welcome to attend.

A special 'thank you' must go to all our co-operating growers hosting field trial sites on their farms this year. Without a site, there is no trial and no insight gained into local crop requirements as the practise of modern farming continues to progress.

Successful field trials take a significant amount of time and hard work. Having such helpful, diligent and careful hosts make the Field Research team's job so much easier.

Scan the QR code for an overview of our P requirement and time of sowing research.

As part of our research program, we will also be testing some different brands of telemetry-enabled rainfall and weather stations directly adjacent to some trial sites. Utilising either 3G/4G, Telstra IoT or satellite connectivity, the stations should enable precise location-specific data collection to be accessed on-the-fly from a remote login. Data can also be shared with local growers to assist them in decision making and complement the existing networks of weather data collection sites.

P and K trials underway on the south-coast

Thanks to the co-operation of Kogody Farming Co (Dalyup) and Waddikee Farms (Daybreak Cropping), Summit has been able continue valuable long-term nutrition work on phosphorus (P) and potassium (K) in the south-coast region.

This season two trials, one measuring P response and the other K response have been installed at Dalyup. These experiments aim to improve our knowledge of long-term nutrient build-up and run-down in soil reserves relative to cropping sequence.

They will measure responses to P and K in crop rotations over time and compare how varying input and removal of P and K over the seasons add up to long-term compounding effects on yields and soil reserves. It is big picture, sustainable cropping research.

In addition, two sites north-west of Ravensthorpe on Waddikee Farms will measure PxK interactions on different soil types and wheat varieties. It will be interesting to observe how yields and gross margins vary across the different sites and should help to improve our nutrient requirement models and provide local benchmarks that growers can use for making fertilizer decisions in future years.

Kogody Farming trials - Dalyup

Last year was the first for the long-term Dalyup P and K trials, which were sown to canola. This year they have been sown to Scepter wheat at 85kg/ha on the 18th of May. Each plot has received the same fertilizer applications as last year, as follows:

Long-term P trial (SUM21.02.22)

- MAPSZC-Vigour blend as P source
  P rates of 0, 9, 12, 18, 24 & 30kg/ha

Long-term K trial (SUM21.01.22)

- SOP as the K source
  K rates of 0, 15, 30, 45 & 60kg/ha

Contact Nick Donkin

Daybreak Waddikee Cropping Trials - Ravensthorpe

Sown on May 17th the nutrition design of both these P x K response trials is the same, however they were sown to different wheat varieties on different soil types.

As part of 2022 south coast trials program, Summit has installed a weather station at Dalyup and another two at each of the Waddikee trial sites. Nick Donkin (left) and Tim Donkin (right).

SUM22.04 was sown at Daybreak's main farm, West River, to Scepter wheat at 85kg/ha. The soil type at this site is classified as sandy duplex soil.

SUM22.05 was sown at the Dunn Rock Farm to Hammer wheat at 90kg/ha. The soil type is a deeper sand.

Both Ravensthorpe trials have a similar design i.e.

- A MAP-MAPSZC blend was used as the P source with P rates of 0, 8, 16 and 24kg/ha.
- The K source was MOP applied at sowing. An in-season MOP top-up is planned for the K45 treatment because the decision was made to not band more than 30kg K/ha at seeding. K rates are 0, 15, 30 and 45kg/ha.

Contact Tim Donkin

High yielding canola NxP requirements, plus or minus compost

SUM22.14 - The Lakes

To date there has been limited nutrition work on canola in high rainfall zone gravel soils east of Perth. We need to better understand what the yield potential of this soil type is and what the limiting nutrients are (phosphorus (P) in particular in high PBI gravels). Nitrogen (N) requirement also needs research, in particular for nutrient hungry hybrids grown on very wet, leachable soils.

A composting plant within reasonable proximity to this trial site enabled the opportunity to test the additional benefit of applied compost and its economic viability.

Thanks to Neil Diamond for allowing Summit to use his property Aburn Park, just north-east of The Lakes for this trial.

2.8kg/ha of Pioneer 45Y28 canola seed was dry sown on May 9th. At the time there was subsoil moisture and it rained three days later.

The sites loamy sandy gravel soil is relatively deep compared to normal hills gravels and soil testing down to 30cm was a reasonably easy task.

Treatments for this trial include N from 0 up to 280kg/ha (applied in 3 week intervals) and three P treatments of 0, 20 and 40kg/ha. For each treatment there is +/- 5t/ha compost spread and incorporated by sowing.

If the trial goes well, yield and oil content will be measured.

Contact Brayden Noble

Checking residual N availability to wheat after canola

SUM21.22.LT22 - Goomalling

After pushing nitrogen (N) rates in hybrid canola in 2021, the same Goomalling trial site provided an ideal opportunity for 2022.

In 2021, canola responded to N rates up to 120kg/ha, with up-front applications yielding higher.

This year, Summit has a trial on the same site to see if there is any residual nitrogen left over that is available to the following wheat crop.

If it can be shown that unused N is carried across and available to the following cereal crop, it would give grower's more confidence to apply higher rates in canola - to take advantage of higher yield potential in the event of an above average rainfall season.

Thanks to Ashley and Steven Lord for allowing Summit to continue this work on Lord Farms. The site is 15km north of Goomalling.

Last year's plots were re-marked and dry sown on May 6th to 90kg/ha of Scepter wheat. A single, standard 'farmer practice' nutrient rate has been applied across the trial.

Throughout the season plots will be tissue tested to monitor for any additional N uptake. NDVI readings will be taken to measure any biomass differences during the season.

Contact - Brayden Noble

Canola yield reached a trial high of 3.0t/ha when 160kg N/ha was applied up-front last season at the Goomalling site. The trial also included a 200kg/ha N treatment. So, will the higher N treatments have residual N left over and available for this season's wheat crop? Time will tell. Aimee Tyson (left) and Scott Thomson (right) of Central Ag in the trial last year with Summit Area Manager Brayden Noble.

N and P nutrition after frost damage and profitable barley

SUM22.17 - Bencubbin

Growers in Tracey Hobbs' area received some heavily frosted crop damage last season. The question many have asked is "what nutrients are left in the paddock, and if so, are they available to the following crop?"

Tracey Hobbs Kellerberrin Area Manager

Tracey wanted to better identify the current crop's nutrient requirements following a season like the last one.

Consequentially, she has a Summit NxP rate trial in conjunction with Kobus Marais on the property of Tony Sachse of Sachse Farming.

Soil at the Bencubbin site is a sandy loam. The trial was sown to Hammer wheat on May 10th.

SUM22.16 - Doodlakine

With high input costs across the board, Tracey wanted to better understand the nutrition requirements for maximum gross margins in Buff barley. This Intergrain variety is quick-maturing and acid soil tolerant, so could have a good fit for her area.

Buff barley in the Doodlakine trial (pictured above on May 28th) was sown on April 28th. Contact Tracey Hobbs or Kobus Marais for more information on these eastern trials.

Tracey's NxP (+/-) K trial is at North Baandee, Doodlakine, on Geoff Ryan's property.

Shedding light on P and Mn responses in forest gravels

SUM22.24 - Tenterden

With the expansion of cropping and a push to improve overall farm productivity in the Southwest, there has been increasing interest from growers into how to more accurately predict phosphorus (P) responses in forest gravel soils. Historically, the industry has relied on:

- the Colwell P extraction test; in conjunction with:
- a phosphate buffering index (PBI) value; and,
- gravel content,

to determine the best P rate to achieve optimum yield potential.

This process has proven to be of limited value in evaluating overall P status for forest gravel soil types, in particular when bulk density is not known and because gravel content can often be overlooked.

It has been proposed that for soil types of this nature the Diffusive Gradients in Thin Films Phosphorus Test (DGT-P) may be more accurate in determining phosphorus response.

Thanks to the co-operation of Jason Watterson of Watterson Estate, Mark Ladny has a Summit trial at Tenterden that will gain long term data and help to redefine the DGT-P critical values of forest gravels.

This in turn should aid grower decision making in the future.

In this trial, P rates range from 0 to 50kg/ha. Also included are (+/-) manganese (Mn), as part of Summit's research into Mn deficiencies in forest gravel soils.

Mark's trial was sown on May 25th to 90kg/ha of Scepter wheat with good moisture and sowing conditions.

Contact - Mark Ladny

In mid-June, Summit Area Manager Mark Ladny (left) and Tenterden farmer Jason Watterson inspect the P x Mn trial which aims to improve P and trace element decision making for growers.

PBI, Colwell P and Diffusive Gradients in Thin Films Phosphorus Test (DGT-P)

PBI

Phosphorus Buffering Index, or PBI, is an estimator of the soil's ability to bind P. Soils with a high PBI require more P, because more of what is applied becomes bound to soil particles.

PBI is related to the number and type of 'exchange' sites in the soil, which ultimately comes down to soil texture and composition.

Clay soils have smaller particles which means a larger surface area, and more sites for P adsorption.

Higher levels of certain compounds in the soil, such as iron oxides and aluminium oxides also cause P to bind to soil particles more strongly. The soil can rapidly capture P added by fertilizer and render it unavailable to plant roots.

Colwell P

For a long time, Summit has offered the Colwell P test as a measure of the amount of P available for plant uptake. With the Colwell P test however, values can be somewhat independent of the soil's ability to bind phosphorus.

Hence, a Colwell P test should always be interpreted in association with a PBI test. This can be problematic as these methods have been shown to overestimate available P on certain soil types, including calcareous or acidic soils, or where iron or aluminium are present in high concentrations.

Summit Fertilizers's partnership with independent soil and plant analysis laboratory APAL, offers an alternative procedure called DGT-P, to gauge plant-available soil P.

DGT-P

DGT-P is a more recently released P test offered by Summit inSITE. It differs from more conventional soil extraction methods in that it mimics the action of plant roots. An iron oxide gel disc is placed on a saturated soil sample. The gel acts as a sink, binding forms of P that are able to diffuse through the soil solution and through an additional gel membrane, just like a cell membrane in root uptake. The amount of P bound to the gel is then measured. An advantage of the DGT-P test is that the inherent properties that govern P availability in the soil will determine the test result, so testing for a second correcting factor (such as PBI with Colwell P) is not necessary.

Aiming to maximise grower returns in a high cost year

Brett Beard has three large scale replicated Summit trials in his area this season (including a trial at Miling shared with Saritha Marais).

Thanks again go to Rohan Marriott for allowing Summit to continue to use an area on his Badgingarra farm for a long-term potassium (K) trial. This trial started in 2020 with the aim of testing various K scenarios with muriate of potash (MOP) and sulphate of potash (SOP).

MOP contains a higher concentration of K, and is normally the most cost-effective source of K for farmers. SOP still contains a high concentration of K, but also contains sulphur, which is essential for protein production in plants. Another advantage is that SOP has a lower salt index compared to MOP.

SUM20.02.LT22

Brett's K trial aims to compare the two K sources with regards to both short-term effects (yield and profit) and long-term effects on yield, profit and on soil health and nutrient reserves.

In its 3rd year, the trial has been sown to lupins in 2022 and will likely run over a total of 5 years.

Most K trials only compare results for one season, so it will be interesting to see what happens over a longer period of time and in different crops.

P rate and N timing trials

Brett said the design for the nitrogen (N) timing and phosphorus (P) rate trials at Regans Ford and Miling are similar.

Both have been sown to wheat. The main objective is to determine how to optimise N and P use in a year such as this, when budget considerations are the main determinant factor, as opposed to maximising production.

These trials include an investigation into the possibility of delaying nitrogen application to reduce up-front risk and catch up when the season improves.

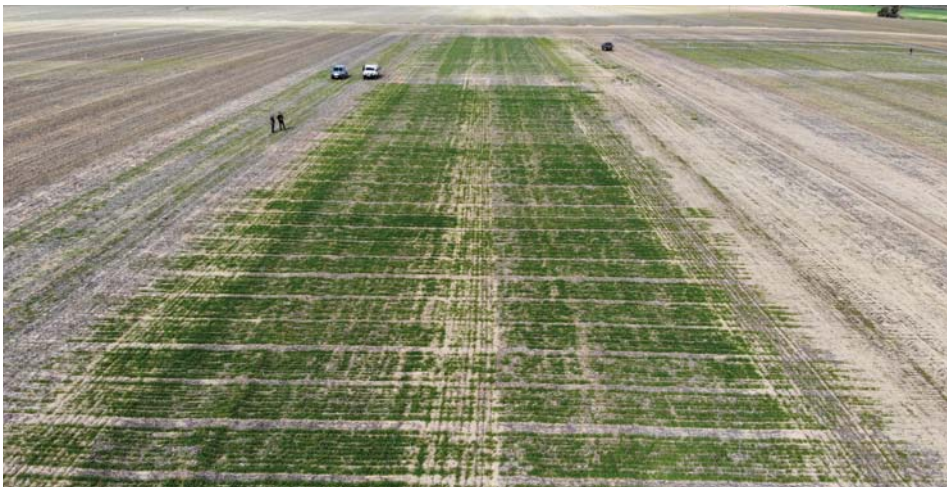
The Miling site is at the Liebe Group's main trial site (thanks to the Reynolds family).

The Regans Ford site is part of West Midlands Group main trial site (Lawson Grains).

Contact - Brett Beard

When Summit Area Manager, Brett Beard (left), discussed trial protocols and fertilizer strategy with Badgingarra farmer Rohan Marriott in early 2021, the entire industry faced a completely different scenario to what has unfolded in 2022. According to Brett, it highlights the need to continue nutrition research with gross margins that are up-to-date with current circumstances.

Brett Beard uses a hand held GreenSeeker on plots in his Miling trial site in mid-June to record early biomass results.



While growth responses were already visible by mid-June at the Miling site, Brett said it won't mean much until harvest yield, grain quality and up-to-date gross margins are done.

Barley P x sowing time trial west of Williams

SUM22.02 - Williams

In 2021 Summit had a Scepter wheat trial at Bannister. Supported by a decile 10 growing season rainfall, grain yields were high. Yield was significantly influenced by phosphorus (P) rates up to 50kg/ha, ranging from 2.98t/ha when no P was applied up to 5.22t/ha with the application of 50kg P/ha.

Under 2021 growing season conditions and fertilizer input costs, profits increased with increasing P rates up to 50kg/ha, which had a gross margin of $1560/ha, exceeding profits from the nil P control by 59%.

Diffusive Gradients in Thin Films Phosphorus Test (DGT-P) also provided a much more indicative response predictor than Colwell P in the high PBI soil at the Bannister site.

Many farmers in Dennika Reynolds' area have high yield potentials, but high PBI soil types. Her trial this year at Williams aims to further advance our research into P requirements in these unique soils.

Dennika has a P x time of sowing trial in Maximus barley on Hal Klug's farm approximately 20km west of Williams.

It will be particularly interesting to see how barley responds to P rates and the 3 sowing dates: April 20th, May 16th and June 8th in a high PBI soil in this high rainfall zone.

The 6 P rates are 0, 10, 20, 30, 40 and 50kg/ha, banded at sowing with 82kg/ha of seed.

Dennika Reynolds,
Williams Area Manager

The soil type is a high PBI (150+) forest gravel and the paddock was sown to canola in 2021.

Throughout the season NDVI readings will help determine biomass accumulation.

Contact Dennika Reynolds

Dennika Reynolds' P x time of sowing trial in Maximus barley on the property of G & GM Klug & Co, west of Williams. Going from top right to left is the April sown block (a buffer plot then incremental P rates from nil up to 50kg/ha), then the May sown block (lighter green (Buffer, P0-50)) and then the June sowing (only 1-2 leaf). Then April, June and May blocks as you go further - right to left. The April sown treatments had already received UAN by this stage. Visual inspection to-date has shown big growth differences between P0 and P10 in the April sowing, reinforcing the importance of P. P30 and above with the early timing is also showing great results. Will the later sown crops catch-up or show the same growth trends? Only time will tell. Local growers should keep in contact with Dennika.

The impact of nutrition on seed nutrient accumulation and retained seed performance

SUM20.25.LT22 - Boyup Brook

Rylington Park at Boyup Brook is fully on-board with Chloe Turner's desire to investigate how in-season crop nutrition impacts on seed quality for subsequent crops.

Chloe (Summit Area Manager Kojonup), said the last significant research she could find into the nutrition affects on seed performance in the area was done back in the early 1990's. Clearly a lot has changed over the past 30 years and it is timely to have more up-to-date information to guide growers on the current best practice for growing retained seed.

Chloe hopes her trial results can generate information that would lead to practical steps growers could implement to achieve better seed quality, rather than making an 'after thought' decision at harvest.

Starting in 2020, her trials have been designed to extend over multiple years.

In 2020, levels of phosphorus (P) from 0 up to 32kg/ha were applied, either without, or with incremental levels of trace elements The original crop was Planet barley sown on a loamy sand soil type.

Growing season rainfall that year was 527mm, 54mm above the long-term average, resulting in high yields and a significant response to P. Yield increased from 3.66t/ha for the 0P/ha treatment up to 7.77t/ha for the highest P treatment.

Grain from each treatment was harvested, analysed and retained.

Summit trial SUM20.25.21a in 2021 again received varying levels of nutrition using the retained seed from the same 2020 treatment harvest. SUM20.25.21b at the same site received a basal rate of fertilizer across the retained seed treatments to replicate farmer practice and assess the performance of varying seed nutrition levels. For more information on the 2021 trials growers should contact Chloe.

This year's trials at Rylington Park were sown late (June 8th), using seed retained from the 2021 loading trial.

What is interesting with this years trials is that they were sown into moist, but cold, gravelly loamy sand with a high PBI (327 in the topsoil to 418 in the subsoil). The trials are a replicated plot design similar to last year.

Not withstanding any unforeseen circumstances, germination counts, NDVI readings, grain yield and quality (1000 count seed weights) and treatment gross margins will shed new light on seed nutrient accumulation and performance.

Contact Chloe Turner

2022 trial seeding at Rylington Park into moist but cold soil on June 8th.

The above photo of Chloe Turner at end of 2020 in the Rylington Park trial showing stark contrast in crop growth and development with P treatments. Seed was retained, analysed and sown in 2021.

The push to better understand PxK dynamics

A visual response to potassium on windrows.

Summit's long-term commitment to phosphorus (P) and potassium (K) research is far-reaching. The image above shows a very visual growth response to K on the windrows. Not all K deficiencies are this obvious though.

While it's still widely accepted that most heavy WA soils have adequate reserves of naturally occurring K, the list of deficient or marginally deficient soil types is expanding.

Sandy soils in higher rainfall areas are renowned for their K deficiency, as K is poorly held and subject to leaching.

Duplex soils too started showing responses to K in the 1990's and are now widely suspect throughout the central and southern wheat-belt.

In more recent times growers have identified the need for research into K status in loamy soils. It seems cropping intensification and grain removal is unearthing more K deficiencies in soils that were never thought to be deficient.

Our ever evolving farming practices are having an impact too.

Minimum tillage tends to concentrate K in decomposing organic matter in the topsoil which can deplete reserves at depth.

Changing farming systems mean we need to continue our research aimed at better understanding nutrient build-up and run down in relation to cropping sequence and soil nutrient reserves.

This season, Summit has PxK trials right across the grain belt. Growers should contact their local Area Manager for more details.

Will applying K make better use of P?

SUM22.23 - Corrigin

Neville Turner has been a great supporter of Steve Cooke's trial program. The Corrigin farmer has been working in with his local Summit Area Manager and again offered up a great site for this season.

Steve Cooke
Corrigin
Area Manager

According to Steve, the aim of the 2022 trial is to see if applying different rates of potassium (K) improves nitrogen (N) uptake and the efficiency of applied P.

"Neville wants to see if we applied a lower rate of P and some K, will there be better return from the NPK package?" said Steve.

"Neville has seen responses to increasing P rates. He now wants to know if adding K to a lower rate of P will give him a better gross margin.

Contact Steve Cooke

Corrigin farmer and trial site host Neville Turner.

Adding to the inSITE knowledge bank with PxK trials

SUM22.25 - Borden

Andrew Wallace
Albany (east)
Area Manager

Andrew Wallace is seeking to add value to local inSITE recommendations for his area with a Summit phosphorus (P) x potassium (K) rate trial at Borden.

Andrew says conducting trials over many years is the only way to improve nutrition knowledge on how local crops and new varieties will respond to added nutrients.

It's all about consolidating trial results, validating data and continuing to fine tune recommendations generated by the inSITE model," he said. "This trial on the farm operated by Freddy Gaze and son in law, Kyle Bailey, looks to record response to P and K in this high yielding cropping region."

Scepter wheat was sown in this trial on March 23rd in ideal seeding conditions. The soil type is a quartzy river sand over heavy clay.

The wheat was sown into canola stubble and the previous canola crop yielded close to 2t/ha.

In this trial P rates range from 0 to 24kg/ha. K rates range from 0 up to 60 kg/ha.

Contact - Andrew Wallace

SUM 22.08 - Mingenew

Juliet McDonald,
Coorow
Area Manager

Paul Flanders, Manager of Daybreak Cropping Erregulla, is keen to understand what he can do to ensure consistently high yielding crops on paddocks with ameliorated soils.

Juliet McDonald's trial at the property is designed to look at P and K supply in wheat. One aim is to see how much of the nutrients within the 30cm of ameliorated soil is available.

Summit Field Research Officer Sam Marsh, making a crop assessment and taking plant counts in late June in Andrew Wallace's Borden PxK trial.

Summit Fertilizers Field Research Team members Mark Gherardi (left) and Jack Pages-Oliver (centre) take time out to discuss trial details with Paul Flanders from Daybreak Cropping Erregulla.

Results from a similar trial in very wet seasonal conditions last year were nonconclusive. However, this year has seen less rainfall and so, it will be very interesting to see the effect of a drier soil profile on the plant roots ability to explore the soil and take up P and K. P rates in Juliet's trial range from 0 up to 18kg/ha and K rates from 0 to 60 kg/ha.

Split plots have been used in this trial. Two rates of Nitrogen (N) will allow NxP and NxK effects - within the same trial - to be observed, as well as possible implications for grain protein and screenings.

N rates are planned to be 100 and 150kg N/ha. The moderate rate supplied at seeding and early post. The higher 150kg/ha N rate will receive an additional post application of 50kg N/ha.

Wheat in this trial has been sown into stubble from a high yielding lupin crop in 2021.

Paul is watching the split N treatments with interest to compare against his N applications this season.

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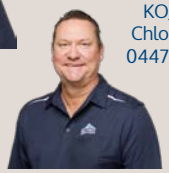

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