Autumn/Winter 2021

Pasture News

Planning decisions after a highly productive season

As South West producers gear up for another season, it's time to fine tune early pasture and crop nutrition plans. The major feedback from many growers over summer has been just how good last season was. Pastures and crops kicked on with mild weather along with prolonged spring rainfall.

It is now worth remembering last year's high production, as it has clear nutrition and management implications for the coming season.

2020 started with anticipated good prices for farm produce and relatively lower fertilizer cost. Many growers decided to go that little bit extra with their fertilizer rates and we saw the benefit of that on the back of a good season.

Information sourced from BOM (below) shows 300 to 400mm of rainfall was common throughout the South West last winter.

Because we had such an extended dry period leading into the 2020 winter (spring/summer/autumn), our soils had dried out significantly and could easily absorb that amount of rainfall.

Without the effects of waterlogging plant roots established well because they were not impeded by lack of water or oxygen. They explored the soil profile and readily picked up soil nutrients.

From September through November, up to another 300 mm of rainfall combined with favourable mild spring conditions ensured plants continued to grow. Well fertilized pastures and crops didn't finish the season prematurely, utilising the moisture that was there. In the spring of 2020, warm moist soils were able to release a lot of nutrients held in organic matter.

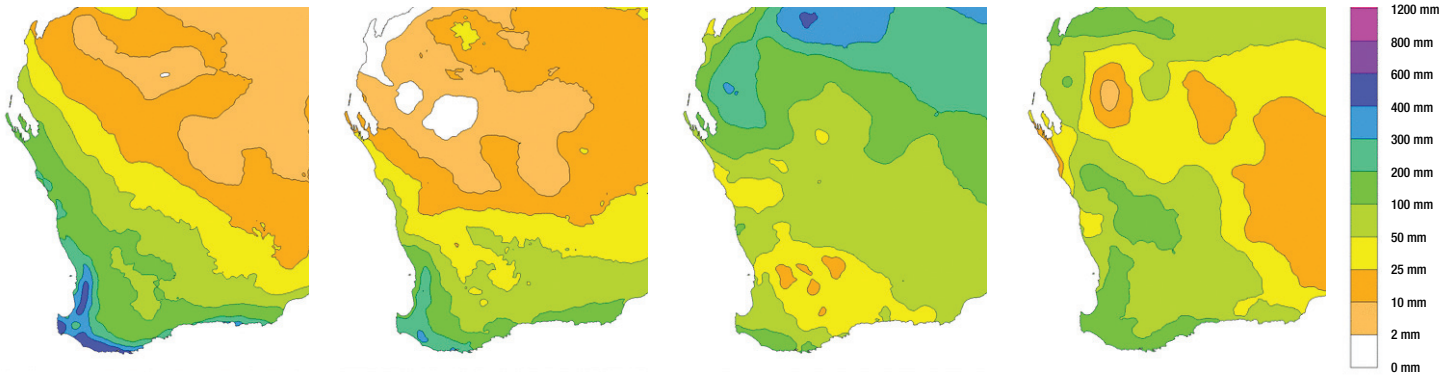
Over summer good rainfall between December and February has promoted some sensational irrigated and even dryland kikuyu pasture, which has carried animals in good condition into autumn. Kikuyu loves the warm humid weather.

Rainfall conditions in March and April in the South West have also been kind with more than 100mm soaking many soils to depth. For dryland pastures in particular, summer and autumn rainfall will have some management implications.

Growers need to be careful with seed viability. A lot of moisture can reduce the seed viability of self-regenerating pastures. Resowing may be necessary to establish high quality dense pasture at the beginning of the season. For example, we've had issues on some areas with sub-clover with a low percentage of hard seed germinating with rains, only to die off.

So, monitor early pasture density. If you are going to fertilize for high growth potential, that potential can only be realised if you have good establishment of desirable pasture species. Look at pasture and crop management as a total package, nutrition, weed control, insect control and seedling density.

Ralph Papalia
Business Manager/
Agronomist
Bunbury Depot



Winter 2020 *Spring 2020* *Summer 2020/21* *March and April 2021*

Above is the Bureau of Meteorology rainfall data for 2020 and early 2021.

For more information talk to your local Summit Area Manager

SUMMIT FERTILIZERS

Plan to replace at least what was removed last year

Last year many South West growers grew big tonnages of silage and hay that would have removed significant amounts of nutrients from those paddocks. Those growers should make note of some key nutrition messages for the coming season.

Monitoring with Summit inSITE soil and plant analysis should be a critical part of the program this season to see what trends are developing. Summit soil tests to date have revealed that phosphorus levels have generally been depleted, as would be expected, as the more you grow and export, the more you are going to take out of the soil.

It is important to monitor phosphorus as it is such an important component of growth, and is also one of the more environmentally sensitive nutrients in the Peel and Geographe areas. We want pasture and crop production targets to be achieved without causing any nutrification issues.

Growers should consider where they want to be in the production curve. Do they want low, medium or high production, and how are they going to achieve that without causing issues with nutrification of waterways.

Because there is so much potassium bound up in silage and hay, potassium is another key macro-nutrient that would have been depleted by last season. Given that potassium usually makes up between 1 and 2% of hay and silage dry matter, if 6 tonnes is harvested, between 60 and 120kg of potassium per hectare has been removed.

In South West soils, organic carbon levels are typically between 3 and 6% in the top 10cm of soil and it is here that you find most of the soils microbial activity. It's the most important zone for nitrogen and sulphur mineralisation events and with good summer and autumn rainfall, warm, moist soils should already have released significant amounts of nitrogen and sulphur.

Fortunately, we haven't had a lot of leaching rain events to date. However, on some of the lighter soil types where mineralisation had already occurred, there may have been some leaching brought about by the significant rain that happened in early April.

Leaching would have taken some of that valuable source of nitrogen and sulphur below the root zone of small seedlings that are just establishing. Growers should observe those areas in particular and apply starter nitrogen and sulphur if required.

Summit Fertilizers Agronomist and Business Manager for the Bunbury Depot, Ralph Papalia (right), discusses autumn and winter pasture nutrition with Dardanup dairy farmer, Warrick Tyrrell.

Overall, with good soil moisture reserves across the region and attention to key nutrients like phosphorus and potassium, South West farms will potentially be well setup for a very good start. And, don't forget the importance of Summit's inSITE soil and plant analysis package.

Soil testing over summer and autumn is a good thing to do, especially now. Growers can look at their organic carbon levels and get a snapshot of ammonium and nitrate at the time of testing. If those sites had rain a month or so prior to sampling, the soil has remained warm and moist, and you don't have good nitrogen readings, applying fertilizer would be beneficial.

In the coming months, inSITE plant testing will become increasingly important for identifying micro-nutrient deficiencies, especially in view of the fact that growers are producing more and therefore re calibrating nitrogen, potassium and phosphorus levels.

If you have nutrition in balance in winter, that will better enable you to take full advantage of a good spring. That's because productivity in spring really is determined by the health and growth of the pasture or crop up until that time.

If you have strong plants with healthy leaves and deep root systems that fully explore the soil, you'll have a reserve of carbohydrates for your plants going into spring.

Table 1. Approximate nutrient removal (kg/t)

	N	P	K	S	Ca	Mg
Cereal hay	20	2	12	1.5	12	3
Mixed hay	25	3	20	2.5	9	4

Fine tuning nutrition to suit the farm and the season

For Dardanup dairy farmers, Warrick and Emma Tyrrell, a clear production focus is on how they can make the most efficient use of their land. Seasons can vary. They can be good or not so good, short or long. Nevertheless, the focus remains the same which is to maximise the given seasonal conditions to grow and utilise as much paddock-grown feed as possible.

As a general rule, few would disagree with Warrick that wherever possible, home-grown fodder is the cheapest way to supplement feed to livestock and keep feed costs down.

Warrick and Emma's dairy supports about 300 milking cows. The majority of their 120ha milking platform is rainfed pasture, but includes about 30ha of irrigation. Their dairy produces milk all year round and calving happens in spring and autumn.

Their operation also has a runoff block. This land is used to support grazing and later in the season is mostly locked up for hay and silage production to supplement the dairy feed supplies. It is a high production, well managed system according to Summit Fertilizers Agronomist, Ralph Papalia.

"Fodder production potential obviously varies with the season," says Warrick. "We generally get plenty of rain in the middle of winter when we can't necessarily take advantage of it. It is those shoulder ends of the season in autumn and spring where we really need good rainfall and that is exactly what happened last year.

"We had an average start in autumn, which was good, because we haven't had an average start for a while. An average break in this area is around the 22nd of April. There was good rainfall in July and August, without the soil getting too water-logged and healthy follow-up falls in October and November which was really excellent.

"On the runoff block the strategy is to maximise fodder production. Feed conservation through hay and silage is important to our system and moved back to the dairy as required.

"Because the runoff block is grazed and then cut for silage or hay every year, pastures are re-seeded in autumn, typically with annual ryegrass, Persian clover, and oats for early feed and to stop the soil from blowing while the pasture is establishing.

"After sowing it will generally get an autumn application of a well-balanced NPK fertilizer like Dairy N or Graze Extra. Paddocks on the runoff block can then be grazed two or three times, providing they are pushed along with applications of Summit products like Fodder Max or Graze Extra every 30 to 40 days.

"By August we tend to give it about 250kg/ha of Summit NKS32 and then if there is time before it's cut for silage it might get another 200kg of NKS32. That is what we did last year, and it really contributed to the higher yields.

"The season has to do the right thing to get two applications of NKS32.

"Then, last year, that was followed by Fodder Max. Because of the extended rainfall after it was cut for silage, we were able to get a hay cut off it as well. But you do not always get that nice long window to do that, obviously."

Ralph said last year's results were very pleasing for Warrick and Emma. Following three separate grazing's, paddocks on their runoff block yielded close to 5t/ha of silage, followed late in the season with a hay cut of about 2.0t/ha.

"They have been soil testing with Summit for a long time. Initially, Warrick was testing pretty much every paddock, but with a good history behind us now we can be more selective, testing representative areas on the farm.

"The fertilizers and rates he has been using have been tailor-made to the test results and we are trying to maximise production, of course taking into account seasonal conditions," Ralph said.

Good rainfall in early April after some useful summer rain events has afforded 18-month-old heifers (above left) on Warrick Tyrrell's runoff block some excellent early grazing. These heifers are due to calve in August/September and are in great condition. By mid April, Warrick had worked up land and re-sown pasture for the 2021 season. A healthy stockpile of fodder grown in 2020 (in the background above right) has added a good deal of feed security for the months ahead.

Quality products make life easier

This year, the situation for many South West producers is that summer and early autumn rains have boosted soil moisture reserves, hopefully setting the season up for what will be high production potential.

Which fertilizers you use and how much you put on should be related to the intensity of your livestock production, and take into consideration other aims you have and what your soils need.

You should start with inSITE soil testing to determine N, P, K and S levels in the soil. All these elements should be there in the right balance before the weather gets too cold. Consider also monitoring plants in-season for trace elements such as copper, zinc and molybdenum and apply where necessary.

For example, maybe you want to fertilize your pasture to increase nitrogen fixation and build the soil up (assuming you have a legume component of more than 30%). Or, if the grass content is more than 70%, you might consider nitrogen to boost pasture growth.

Whatever the situation, Summit Fertilizers can help.

Summit offers the widest range of high quality pasture fertilizers in Western Australia. Quality products make life easier and end up returning you more dollars. Uneven fertilizer spreading for example, caused by poor product quality, results in irregular, patchy growth and wasted fertilizer.

Summit superphosphate has even granule size and minimal dust, leading to excellent handling, allowing you to achieve a more uniform spread.

Another great handling product is Summit SuperPasture. A well granulated even fertilizer, SuperPasture, which has a higher phosphorus concentration, provides freight and handling savings.

SuperPasture has both quick acting and sustained release forms of sulphur for extended sulphur availability to plants. It is an ideal fertilizer for wetter winters and areas of paddocks that are hard to access when wet.

Complementing the range, Summit Pasture combines even higher levels of phosphorus with a sulphur top up, potentially delivering even greater freight and handling savings.

All these products can be purchased containing potash or trace elements including selenium.

Summit fodder and pasture fertilizers

Product	Typical analysis (%)					Bulk density (t/m³)
	N	P	K	S	Ca	
Dairy	14.6	8.0	12.5	9.3		1.00
Dairy N	22.2	6.0	10.0	6.7		0.94
Superphosphate		9.1		11.0	20.0	1.15
SuperPasture		13.6		10.5	17.1	1.11
Summit Pasture		18.2		10.0	14.2	1.07

Insightful results

When it comes to insightful soil and plant analysis results, why, when and where samples are taken really comes down to what you are trying to achieve. This could be troubleshooting a specific area, monitoring soil fertility over the longer term, or a combination of both.

Either way, Summit's inSITE soil analysis and plant testing program is an essential part of a comprehensive fertilizer strategy that makes the most of the season and minimises the risk to the environment.

Summit inSITE soil testing can quickly identify the specific macro-nutrients and other soil chemical properties that are constraining production and could be limiting growth.

Plant analysis is especially useful as often there are no visual signs of a nutrient deficiency (hidden hunger) early on. Unlike soil testing, which predicts how much of each nutrient is likely to be available, plant testing reflects what's actually available to the root system which can help to fine tune the fertilizer strategy.

Key benefits of Summit Fertilizers inSITE plant analysis are:

- Independent laboratory.
- Rapid turnaround times.
- Wide range of nutrients measured.
- Our staff are trained in the best plant sampling techniques.
- Customer owned data can be viewed on SummitConnect.

For more information on Summit inSITE, growers should talk to Chloe, Mark or Ralph, details below.

Contact your Summit Fertilizers pasture specialists

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