Spring 2024

Pasture News

Good to see the season turn around

The extraordinarily dry summer and autumn, high livestock numbers and supplementary feeding costs put a lot of stress on growers and farm budgets. Thankfully though, seasonal conditions really have turned around, in part to good winter rain, but also due to some good planning!

Growers in my area typically maintained a practical approach to pasture nutrition. Good fertilizer rates were budgeted for and preserved.

The cold winter we feared didn't happen, probably because winter cloud cover and rain helped moderate air and soil temperatures. Organic matter mineralisation with a mild winter would also have added a bit to soil nutrient availability.

So where to from here?

You'll want to boost those depleted feed reserves by making the most of peak pasture growth rates that normally come in September and October. The late break means that given favourable spring conditions, pasture has the potential to continue to grow well into spring.

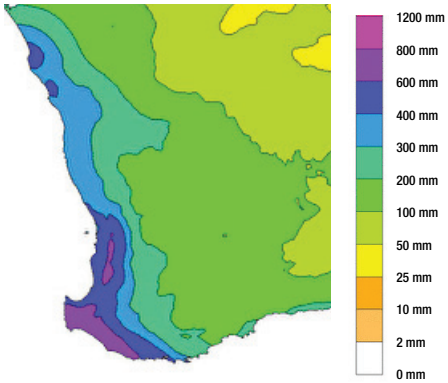
After the two previous years, hay and silage growers are understandably cautious. You may want to 'hedge your bet' a bit. Put some fertilizer out early on some paddocks before locking them up, and some out later.

Whatever the program, don't lose sight of the fact that pasture dry matter will be worth a lot.

Return on fertilizer investment is directly related to the value of what you are able to grow, less the cost of the fertilizer you are applying.

In that regard, fertilizer costs are quite reasonable at the moment. Urea is no longer $1200 and potash is not $1400 any more. Both are less than 60% of those historical highs, making the price of spring fertilizer applications much more reasonable.

Article by Ralph Papalia
Summit Area Manager/Agronomist
Bunbury



Winter rainfall totals from June through to the end of August 2024 (sourced from BOM).

The Summit Fertilizers nitrogen, NS and NKS range

Product	Nutrient content (%)			t/m^3
	N	K	S	
Amsul	21.0		24.0	0.95
MAXam	21.0		24.0	1.01
MAXamFLO	22.0		6.2	1.26
NitroPlus	33.5		12.0	0.85
Sulphate of Ammonia	21.0		24.0	1.07
UreaPlus	37.3		8.4	0.82
UreaS	41.6		4.2	0.79
NKS21	28.8	12.5	5.7	0.88
NKS32	25.6	16.5	5.3	0.91
NKS Spring	22.0	14.0	10.7	0.94
UAN	32.0			1.32
Urea	46.0			0.75

So given you have good pasture composition, don't skimp on the rates. Putting out that extra 20 to 50kg/ha comes at a much lower cost/risk than it did just last season. There's also value in a double rate fertilizer test strip in the paddock, just to see if your pastures are hitting their spring potential.

And don't forget plant analysis. It really comes into its own at this time of year for fine tuning the program. Summit has state-of-the-art soil and plant analysis through our inSITE program. The table (left) shows just some of the Summit spring fertilizer options.

For more information talk to your local Summit Area Manager

SUMMIT FERTILIZERS

Research aims to boost pasture N use efficiency

The Summit Field Research Team measuring dry matter yield from biomass cuts, plant nitrate and total nitrogen levels at the Serpentine pasture site.

In our last pasture newsletter we reported on some research findings from a 2023 Harvey trial aimed at improving nitrogen use efficiency in pasture. Summit has a keen interest in this area because some fertilizer additives have potential to reduce urea losses to the environment through volatilisation and leaching.

This years pasture trial on Geoff Manning's dairy farm at Serpentine has a strong focus on two products that became available to growers in 2024.

These could add significant value to your investment in urea. We want to clarify the optimum use scenarios for these urease inhibitors.

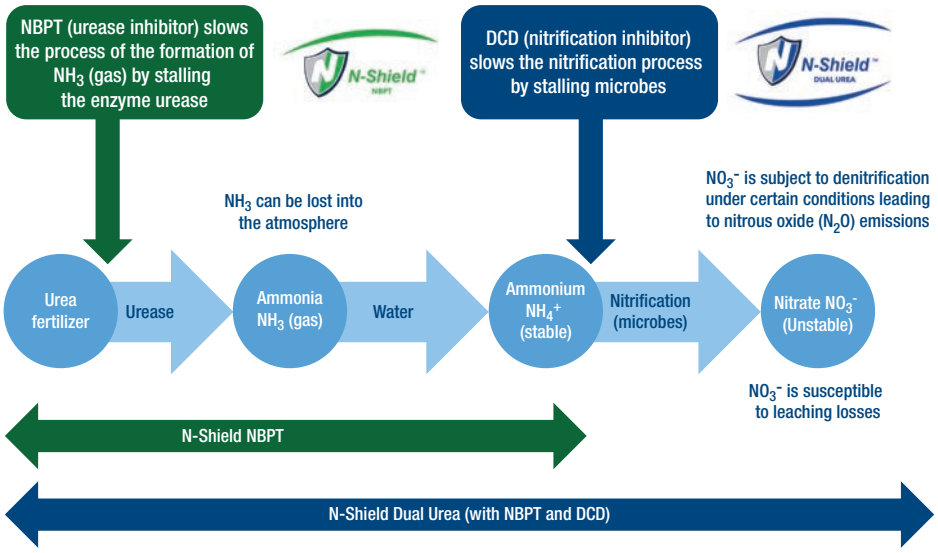
N-Shield NBPT and N-Shield Dual are both designed to optimise nitrogen use efficiency.

N-Shield NBPT

NBPT slows down the conversion of urea to ammonium by inhibiting the enzyme 'urease'. Ammonium gas is an intermediary in that conversion and can be lost to the atmosphere (volatilisation).

N-Shield Dual

N-Shield Dual has all of the protection benefits of NBPT with the added benefit of Dicyandiamide (DCD).



DCD controls the release of nitrogen by maintaining it in the more stable NH_4^+ form for longer.

The addition of DCD to NBPT in N-Shield Dual has the added potential to reduce leaching losses, and could conceivably lead to less frequent N applications at higher rates.

It's a technical subject for sure, but growers should not be overwhelmed because the overriding message is quite simple i.e:

- N-Shield NBPT has the potential to protect urea against volatilisation;
- N-Shield Dual could protect urea against both volatilisation and leaching.

Both products show potential and we feel they need to be further evaluated under WA pasture conditions.

The Serpentine trial

The 2024 Summit pasture trial at Serpentine aims to investigate whether nitrogen use efficiency of urea can be improved. Treatments are:

- Urea
- Urea treated with N-Shield NBPT
- Urea treated with N-Shield Dual

So far, pasture dry matter accumulation has been measured twice (details on next page), followed by mowing to simulate grazing.

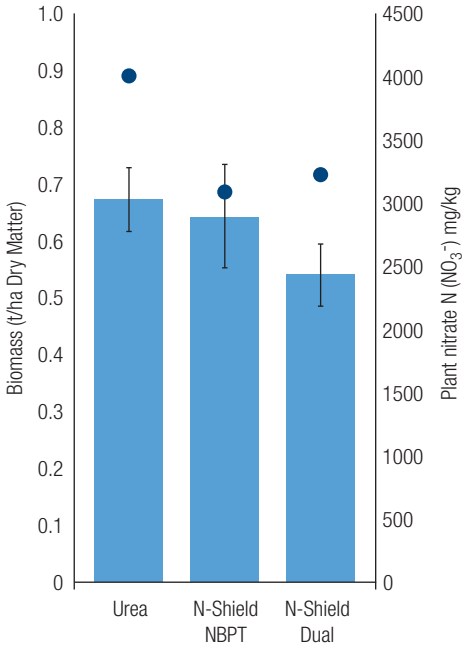


Figure 1. Dry matter yield from biomass cuts (bars) and plant nitrate nitrogen readings (dots) taken from the first cut on 8/7/2024.

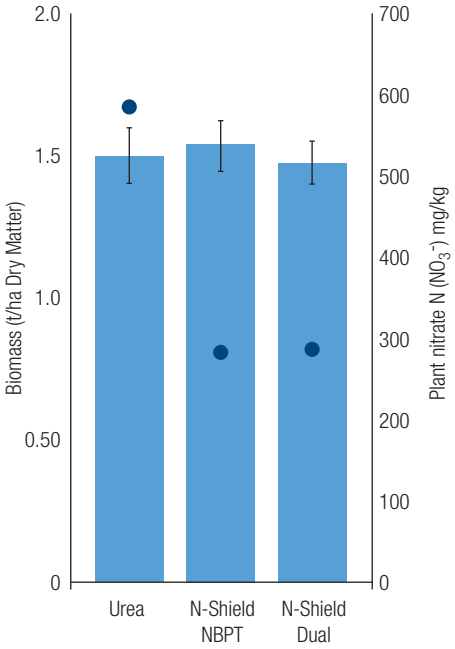


Figure 2. Dry matter yield from biomass cuts (bars) and plant nitrate nitrogen readings (dots) taken from the second cut 06/08/2024.

Summit thanks Serpentine dairy farmer Geoff Manning for providing an excellent site for this nitrogen use efficiency pasture trial.

While it is still early days with the trial and pasture growth rates are yet to hit their peak spring potential, some interesting results have emerged.

Dry matter yield on July 8 (Figure 1) showed there were some differences between the treatments with the two N-Shield products holding the pasture back slightly.

Plant nitrate readings taken from both the first and second cuts (Figures 1 and 2) showed the urea (only) treatment had taken up the most nitrogen. This suggests urea applied without inhibitor had converted to nitrate more quickly, and, N-Shield NBPT and Dual were in fact working to slow down the conversion process.

The second dry matter readings taken a month later showed the treatment yield effects in Figure 1 were no longer present. The biomass cuts on August 6 were not significantly different, even though plant nitrate levels were still higher in the straight urea treatment.

It will be interesting to see what happens from here as warmer weather lifts growth rates further and peak production commences.

Summit Fertilizers Field Research Officer Sam Marsh (above left) shows Regional Sales Manager - Southern WA, Gary Lewis the CropX weather station and soil sensor installed at the Serpentine pasture trial. The availability of this exciting new technology will enable the collection of valuable site-specific data including temperature, rainfall and moisture held within the soil profile. The soil probe also measures soil electrical conductivity and can detect vertical movement of nutrients (such as nitrogen) down the soil profile after leaching events.

Pictured left are Summit Field Research Officers Gary Matten and Isaac Gilchrist (on the mower) in early August. They took biomass cuts and then simulated grazing with mowing.

Ag lime supply for SW growers 'back on track'

Despatches from the Nullaki lime pit are due to re-commence in mid-January 2025, so now is a good time to be thinking about your soils pH and overall health. Summit inSITE soil testing is a great starting point to identify if your soil pH will be improved with a lime application.

Great Southern Lime (GSL) in conjunction with Summit Fertilizers are pleased to announce the re-opening of a new lime source in the Nullaki region, west of Albany.

There have been many hurdles to cross since the initial opening in 2021.

Improvements had to be made to ensure faster dispatch times by cutting out the need for trucks to climb a one-way hill to access the pit. GSL is now storing lime at the bottom of the hill to create quicker turn-around and improve pick-up efficiency.

Despatches are due to commence in mid-January 2025, so now is a good time to be thinking about soils in a holistic way, with the aim of improving overall soil health for next season.

The first step will be to have an accurate idea of background soil traits including soil pH.

Summit offers clients a complete soil analysis service. Included with critical information on nutrient levels are other soil health characteristics such as organic carbon, electrical conductivity, the soil's phosphorus buffering index (PBI) as well as pH.

Mark Ladny, Summit Area Manager Albany West, said all Summit soil samples go to a fully independent laboratory for assessment.

"It's not uncommon for pasture production in my area to be limited by factors of poor soil health, in particular soil acidity, as opposed to low nutrient status. We all understand the importance of improving soil pH and the additional benefits that lime plays in our soils by supplying calcium and acting as a soil ameliorant improving soil structure".

"Some soils I've tested have a pH as low as 4.2. We know that as pH drops and acidity increases, some nutrients become unavailable. As a consequence, there is often a reduction in desirable pasture species such as clover.

"On south west soils, factors such as aluminium toxicity can come into play as the soil becomes more acidic. The result is poor root development and pasture production losses. This is especially the case in spring as plants with underdeveloped roots can't take advantage of moisture deeper in the soil profile. Those pastures just battle to thrive as they should with the rainfall we have.

"A big advantage for my growers with the development of a local quality lime pit will be lower transport costs.

"When budgeting for lime applications, growers need to calculate the total cost per hectare, which should take into account the cost of the lime, cost of transporting lime to the farm and the cost of spreading.

"Particle size distribution and the overall neutralising value are also important factors to consider. Farmers and spreading contractors that applied the lime upon the initial opening were very pleased with the product as it spread remarkably well due to having a very uniform particle size.

"Testing has shown a weighted average neutralizing value of the Nullaki lime to be around 76%.

"So this new pit will allow farmers in the Albany/Denmark area to access a local quality lime product, without the high transportation costs of lime sourced from further afield," Mark said.

Orders can be placed by contacting your local Summit Area Manager.

Getting best 'bang for your buck' with spring N

Fortunately, pastures in my area are looking a lot better than they were this time last year.

We didn't get off to the best start. A dry summer, late break and poor early season livestock prices and the need to hand-feed resulted in growers cutting back on pasture inputs.

That all came together to produce early growth that was typically slow.

It's been followed however by good winter rainfall combined with relatively warm growing conditions. If that continues, pastures have the potential to bounce back nicely.

At this time of year the importance of having sulphur and nitrogen in balance and available to the plant can't be overstated. So if you didn't manage to get enough early sulphur out, for example because you cutback on superphosphate, sulphur is one nutrient to definitely have a look at applying. Sulphur is essential for livestock production and is just as mobile as nitrogen in the soil.

Last spring wasn't great for clover biomass production, let alone N fixation, so it could reasonably be assumed that most pastures are in desperate need of some form of N this spring.

Nitrogen losses from applied fertilizer has been quite topical in the news lately. I've had quite a few clients asking about this given the winter conditions. The three main ways nitrogen can be lost from the soil are:

- volatilisation – loss of ammonia gas from fertilizer applications;
- denitrification – where nitrate is converted to nitrogen gas by soil microbes when oxygen is not present (waterlogged soil), and;
- leaching – loss of N through movement out of the soil profile.

Quite a few factors influence volatilisation rates including soil moisture, temperature, pH, wind, soil clay content, ground cover, fertilizer type and application method (drilled, broadcast or sprayed).

To minimise the risk of volatilisation it's always best practice to put nitrogen fertilizer out in cooler temperatures and just prior to rainfall.

Doing split applications to soils prone to leaching (light sands and low PBI soils) is best practice.

Sulphate of ammonia (SOA) products like Amsul and MAXam significantly reduce the potential for losses to volatilisation in grassy pastures if rainfall doesn't come soon after application. That's because the nitrogen is in ammonium form, which has a lower potential to volatilise compared to urea.

With the risk of denitrification, avoid applying nitrogen to waterlogged soil.

Another question I get at this time of year is, "how much N can I put out while there are livestock in the paddock?"

Many growers still have the situation of high stocking rates and lack of free paddocks to move their stock into. If you can't remove stock from the paddock, to reduce the risk of nitrate poisoning, it's best to apply small rates of N more frequently.

Don't apply any more than 20 units of N at any one time and work on the figure of 1 unit of N/ha per day (or less).

So as an example, 80-90kg/ha of SOA (16.8-18.9kg/ha N) or 35-40kg/ha of urea (16.1-18.4kg/ha N) in one application, would be a good starting point. Reapply in four weeks if follow up rain looks promising.

It will take a while for applied nitrogen to be converted to protein inside the plant. Hence, until you get that production boost, your animals will most likely need another source of protein such as clover or hay.

If you can remove livestock and withhold grazing for a month or so, then rates of 180-200kg/ha of SOA or 80-100kg/ha of urea on pastures with high concentrations of grass species can really pay off.

Apply N and leave stock off the paddock for four weeks, or until the grass has at least three new fully emerged photosynthesising leaves. This will maximise nitrogen use efficiency and achieve the optimal energy/protein ratio in the diet.

Avoiding the spread of N fertilizer near waterlogged areas, sheep camps and areas with poor ground cover is a simple way to reduce N losses and get the 'best bang for your buck'.

Article by Summit Area Manager
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Of course, after the late start we had, we are all hoping for a soft finish to the season.

As we move further into spring and the days get warmer, if the rain continues you'll want to make the most of that opportunity. Hopefully the conditions will allow pastures to bulk up summer feed.

If the scenario emerges where you need to get urea out and it could sit on the soil surface for a while before it rains, it may well be worth considering the option of coating it with N-Shield NBPT to reduce the potential for N volatilisation.

And remember, we are here to help. If growers in my area have any questions on spring pasture nutrition just give me a call.

MAXam – Granular Sulphate of Ammonia

Trial focus on longer-term pasture productivity

Dardanup Rural has set-up a very interesting, multifaceted pasture trial on Matt Brett's dairy farm this year. The trial is investigating selected annual, hybrid and perennial ryegrass varieties and how they perform under different crop protection, nutrition and grazing management regimes.

The focus is on:

- broadleaf and grass weed control, in particular barley grass and winter grass;
- insect management; red legged earth mite (RLEM) and African black beetle (ABB);
- pasture nutrition; seeing how district practice stacks up against what Ralph Papalia (Summit Fertilizers) and Matt Brett would do;
- and grazing management, offered up by Matt's high performing dairy herd.

Supplying background information on the trial detail, Bernie Zahra from Dardanup Rural said, "We are seeing annual grass weeds becoming more dominant in South West pastures.

"They typically have earlier seed set than our desired annual ryegrass varieties, which helps safeguard their survival from year to year. And herbicide options are more limited compared with the common broad-leaf weeds.

"Pre and post-emergent herbicide options are being assessed for their efficacy on grass weeds and also their safety to ryegrass, oats and clover.

"But it's not all about herbicides and within the trial we are looking at the ability of different ryegrass varieties to compete against weeds. Physiological advantages like early vigour and tillering capacity are important to deliver desirable species a competitive edge.

"And we know that having an integrated approach to RLEM and ABB management is equally essential to reduce our reliance on insecticides.

"The options are disappearing, for example chlorpyrifos is likely to be withdrawn from use in pastures, with the APVMA saying a final regulatory decision will be made by late September this year.

"Chlorpyrifos has been a mainstay for ABB control and we need to be prepared for any change.

"This trial includes seeding rates, seed treatments and the use of a perennial ryegrass to offer growers a more robust and integrated approach to pests.

"The perennial ryegrass is of particular interest because it contains an endophyte with activity on ABB. Endophytes are naturally occurring fungi that live between the plant cells in perennial grasses.

"Different endophytes produce compounds which are symptomless in the grass, but can assist with insect control while producing no adverse effects to grazing animals.

"Given perennials can be somewhat difficult to grow in South West WA, we are looking at those which have high winter activity and may aid in insect control," Bernie said.

Growers interested in the trial can contact Bernie at Dardanup Rural on 0429 368 052.

Above. Bernie Zahra from Dardanup Rural and Ralph Papalia from Summit Fertilizers at the pasture trial site in mid-August. Good July and August rains have helped push pasture growth and will hopefully continue well into the peak growth period of spring for some good trial results.

Below. Dardanup dairy farmer, Matt Brett, joins Bernie and Ralph for a quick chat after spreading 200kg/ha of Fodder Max onto his pastures.

Summit welcomes new South West agent

Summit Fertilizers is pleased to announce the appointment of Dardanup Rural Supplies as a Summit agent in the South West.

Summit Bunbury Area Manager/ Agronomist, Ralph Papalia, says he's looking forward to working alongside Dardanup Rural Supplies to help growers in the area.

"Kirk and Emma Reynolds took over the Dardanup business about five years ago," he said.

"I've watched as their business has benefited clients and grown as a result.

"Both Kirk and Emma studied Ag Science at UWA and of course Emma is born and bred in Dardanup, so has a deep connection with the area.

"Bernie Zahra joined their team in 2023. He's added even further depth to their technical service offering, combining a lot of experience with local trials on pasture species and crop protection options aimed at improving grazing productivity.

"The Dardanup Rural Supplies team will strengthen our representation in the area and give Summit Fertilizers clients' access to walk in shop front, on the spot agronomic advice," Ralph said.

As this important partnership between Summit Fertilizers and Dardanup Rural Supplies progresses, it's worth noting major contact details for local growers. For appointments and enquires on operational issues, please continue to contact the:

Dardanup Rural Supplies is focused strongly on the pasture market in the South West, with a particular interest in dairy businesses. This has a strong alignment with Summit Fertilizers and so the partnership provides real strength to customers of both businesses. Pictured above are L-R, Gary Lewis, Summit Fertilizers, Regional Sales Manager - Southern WA, Kirk Reynolds Dardanup Rural, Ralph Papalia Summit Area Manager - Bunbury, and Bernie Zahra from Dardanup Rural.

Bunbury Summit Depot

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For Sales enquiries

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Dardanup Rural Supplies

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- Bernie Zahra - Dardanup
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Major efficiency upgrades for the Bunbury Depot

Plans have been finalised and preparations are in motion to overhaul the Bunbury depot, starting later this year.

One important upgrade for growers and haulage contractors will be the full replacement of both blending drums and hoppers. This investment alone will greatly improve despatch capacity and reliability, and result in a more efficient operating system to minimise delays with out-loading.

We are aiming to minimise inconvenience to growers with the upgrades scheduled to take place during November and December this year.

Summit Fertilizers product range

Pasture & Horticulture	Nutrient content (%)										t/m³
	N	P	K	S	Ca	Mg	Cu	Zn	Mo	Mn	
Irrigation	29.7	4	5	6.3							0.88
Pasture	7.3	18		5.1	7						1.02
Pasture Potash 11	2.5	6.2	32.5	2.3	2.6						1.07
Pasture Potash 21	3.6	9	25	2.9	3.5						1.06
Pasture Potash 31	4.4	10.8	20	3.3	4.2						1.05
Pasture Potash 32	3.1	7.7	28.5	2.6	3						1.07
Pasture Potash 41	4.9	12.1	16.5	3.6	4.6						1.05
Pasture Potash 51	5.3	13	14	3.8	5						1.04
Summit Hort	12.1	4.7	10.5	15.5		1.2	0.04	0.08		0.3	1.09
Super Copper Moly		9		10.9	19.8		0.6		0.06		1.15
Super Copper Zinc		9		10.8	19.7		0.6	0.6			1.15
Super Copper Zinc Moly		9		10.8	19.7		0.6	0.3	0.06		1.15
SuperPasture	3.6	13.6		8	13.5						1.09
SuperPasture Potash 11	1.4	5.4	30	3.7	5.5						1.10
SuperPasture Potash 21	2.1	7.9	21	4.9	7.8						1.09
SuperPasture Potash 31	2.3	8.7	18	5.4	8.6						1.09
SuperPasture Potash 32	1.8	6.8	25	4.3	6.7						1.09
SuperPasture Potash 41	2.8	10.1	13.5	5.9	9.6						1.09
SuperPasture Potash 51	2.9	10.5	12	6.2	10						1.09
Superphosphate		9.1		11	20						1.15
Super Potash 11		4.6	25	5.9	10						1.13
Super Potash 21		6.1	16.5	7.6	13.4						1.13
Super Potash 31		6.8	12.5	8.4	15						1.14
Super Potash 32		5.5	20	6.9	12						1.13
Super Potash 41		7.3	10	8.9	16						1.14
Super Potash 51		7.6	8.5	9.2	16.6						1.14
Fodder											
Dairy	14.5	8	12.5	9.2							1.00
Dairy N	22.1	6	10	6.6							0.94
Dairy S	15.9	6	10	12.6							0.99
Dairy TE	11.7	8.1	12.5	9.9			0.06	0.11			1.01
Fodder Max	30.3		7.5	8.5							0.87
Graze Extra	26.2	3.9	8.5	6.2							0.89
Grass Boost	13.8		17	16							1.00
Hay	13.4	3.2	16.5	12.7			0.02	0.03			1.01
Hay Special	18.5	2.8	16.5	8.4			0.01	0.03			0.97
NKS Spring	22		14	10.8							0.94

Contact your Summit Fertilizers pasture specialists

Harvey, Capel, Dardanup, Busselton, Bunbury, Collie, Augusta-Margaret River, Bridgetown, Manjimup, Donnybrook, Nannup, Pinjarra, Waroona.

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