

The Adapt Project NEWSLETTER

SEASONAL UPDATE | JUNE 2022

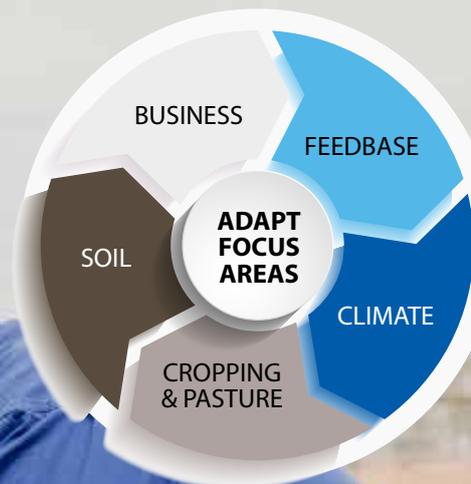
The importance of soil testing explained

Dual purpose cereal trials

Tropical pasture species on farm

The secrets to
LAMB SURVIVAL

Oestrogenic clovers
IMPACTING FERTILITY



Local Land Services



National Landcare Program



Meet OUR AG TEAM

Dual purpose cereal trials	2
Lamb survival guide	5
New pre-emergents	6
Leaf disease in forage oats	7
Big Tech Conference + Field Day	8
The value of soil testing	10
Phosphorus and lime demos	11
Oestrogenic clovers	13
Tropical pasture demonstration	15
The Adapt Project	16



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Dual purpose cereal trials

Dual purpose cereals are known to be a good option for mixed farmers in the Central West, to reduce risk as well as potentially increase gross margins. Agronomically dual purpose crops can be an advantage as early sowing can help with weed competition and grazing can be an added weed control opportunity.

We collaborated with NSW Department of Primary Industries to sow two dual purpose cereal trials in April 2020. The data from these trials will help producers select the appropriate variety for their production system. The trials were located at Bogan Gate and Purlewaugh and included 18 varieties of winter cereals including oats, wheat, barley and triticale.

Both trials were treated with a pre-emergent herbicide, there was very little in crop weed pressure, with a few isolated plants needing to be chipped out. All varieties were

sown with MAP and urea, then top-dressed in August, after they were grazed.

Dry matter cuts were taken in June and August and trials harvested in December.

Both trials yielded reasonably well for both dry matter and grain yield. The oat varieties, Genie and Wizard yielded above average at Purlewaugh and slightly below average at Bogan Gate in the first cut. The second cut of these varieties was lower than other species at Purlewaugh and was too low to warrant a cut at Bogan Gate. It is worth mentioning that these varieties had already gone reproductive at the time of first cut and should have been grazed three to four weeks earlier. Neither of these varieties are bred for grain production, so it is understandable that grain yields are low.

RGT Planet barley was also jointing at the time of the first

cut. At the Purlewaugh trial it was the highest dry matter producer at the time. RGT Planet was not so impressive at Bogan Gate due to the trial being sown onto barley stubble and a heavy net blotch disease burden resulting in reduced growth. However, due to favourable growing conditions, the barley was able to re-tiller and still produce reasonable dry matter at the second cut, which it was again at jointing. Grain yield was surprisingly good given the grazing pressure and timing, particularly at Bogan Gate.

Urambie barley had very poor establishment, possibly due to seed quality. There was not enough dry matter to measure the first cut, but the plants present were still grazed. The existing plants compensated for the lack of competition and a second cut and a reasonable grain yield was achieved.

RGT Accroc is a very prostrate



The dual purpose cereal trial is one of several on farm demonstrations as part of The Adapt Project which aims to help producers adapt to changes in climate and markets.

Dual purpose cereal trials *continued*

Grain yield was the highest in the Purlawaugh trial and third highest at Bogan Gate.

Dry matter results for the wheat varieties were fairly uniform, with Bennett, EGA Wedgetail, Illabo, Kittyhawk and Naparoo all doing well. Grain yield varied between variety, with Bennet, Illabo and Longsword doing well.

Kokoda triticale was a standout for the second cut dry matter and had reasonable first cut dry matter and grain yield. Endeavour triticale

increase in dry matter production at first cut without limiting grain yield.

Cutting dates are set on the variety EGA Wedgetail's growth stage. The time of the first cut was too late for the grazing oat varieties Genie and Wizard as well as RGT Planet. For these varieties to produce optimum dry matter production, they would need to be grazed earlier to keep them vegetative.

The time of second cut was held

grazed the paddock. This may have benefited the triticale varieties, as they were slightly later than the wheat varieties.

RGT Planet is not a dual purpose variety and was included because many producers had RGT Planet seed and were planning to treat it as a dual purpose/ grazing option as oat seed was very short that year. Although it actually performed reasonably well, it may not have been the case if it was not for the favourable

Earlier sowing dates with appropriate grazing management, could lead to an increase in dry matter production at first cut without limiting grain yield.

had the highest grain yield at Bogan Gate.

Sowing date for the trial is later than when producers would normally be sowing some of these varieties. Producers in the Purlawaugh area would ordinarily be sowing oats and some dual purpose wheat varieties in late February to early March if the season is suitable. Earlier sowing dates with appropriate grazing management, could lead to an

up one week due to wet weather. This may have reduced grain yield, particularly in some of the faster maturing varieties such as RGT Planet, but also in the winter wheat varieties, some of which had the first node and developing grain head clearly visible in the stem, although they were not removed at grazing. We could have held off doing the second cut and graze, but decided that given livestock prices, many producers would have

season. RGT Planet went to head three times throughout the season, having to re-tiller twice. This may not have been possible if the finish was tighter.

Thanks to the Redden and McPherson families, who let us plant the trials on their farms and to DPI for sowing the trials, for the use of the drying rooms and running the statistical analysis, particularly Peter Matthews and his team.

For a comprehensive look at this article, scan the below QR code.



MENTAL HEALTH & WELLBEING TIP: Establishing routines helps to maintain balance with a good diet, regular physical activity and sleep patterns.



Seeds for Success PODCAST



Have you tuned into Seeds for Success yet? Hear stories from locals just like you on production, pest management, genetics, getting through the tough times and what they're doing on their place. With 42 episodes under our belt, we are proud that Seeds For Success has had over 10,000 downloads since we launched in September of 2020, with each episode averaging 480 listens. Listen in...



Lamb survival guide

Improving the reproductive performance of Australian ewes and increasing lamb survival is more important than ever for maintaining and rebuilding flock numbers, with our region and many others across the state still recovering from the impacts of drought., improving the reproductive performance of Australian ewes and increasing lamb survival will be more important than ever for maintaining and rebuilding flock numbers.

On average 20 – 30% of Australian lambs have been found to die in the first few days since birth (Hinch and Brien 2014). We are in the final stages of producing a Lamb Survival Guide as a comprehensive resource covering all aspects of flock management to improve lamb survival rates. On average 20 – 30% of Australian lambs have been found to die in the first few days since birth (Hinch and Brien 2014). With 41 million breeding ewes in Australia,

77% Merino and 23% non-Merino (MLA & AWI 2020), improving lamb survival in Australia will provide a huge financial benefit to the Australian sheep industry.

Improving lamb survival from birth to weaning can be done through a sequence of events that begins prior to joining. A successful outcome requires active management of breeding ewes during the entire reproduction cycle, and critical genetic selection in both ewes and rams for optimal lamb survival.

Active management includes routine condition scoring, pregnancy scanning and wet and drying ewes at marking. These key steps will provide the necessary information to manage the annual reproduction cycle, select the best performing ewes and rams for your breeding flock and identify the key ASBVs to genetically improve lamb survival.

To receive early notification when the guide is available email sue.street@lls.nsw.gov.au.



MENTAL HEALTH & WELLBEING TIPS: Stay connected to your family, friends and community, and consider reducing/limiting alcohol use.

NEW PRE-EMERGENTS RISE TO THE CHALLENGE

By Tim Bartimote | Cropping Advisor



Our 2021 pre-emergent herbicide demonstrations showcasing control of annual ryegrass (ARG) in wheat found newly available herbicides performed well on both sites, maintaining effective control even after 10 weeks and multiple germination events.

Over the last couple of years, we have been working with producers to find ways to tackle ARG in cropping systems. Recently, there have been major developments in the form of new pre-emergent herbicide products. These can be applied prior to sowing wheat, among other crops, to control ARG. As part of integrated weed management approach, this demonstration aimed to determine how these new products fared against what was already available.

Sites were established near Parkes and Narromine. Nine different herbicide treatments and a control for comparison were applied. This

was replicated four times at each location. A commercial variety of ARG was first introduced in each plot at establishment rates of 150 plants/m² and 100 plants/m² at Narromine and Parkes respectively. This was to maintain consistent weed pressure across the demonstration. Treatments were then sprayed on each plot. After which the sites were sown down to

herbicides to control ARG in wheat performed well on both sites in this demonstration, maintaining effective control even after 10 weeks and multiple germination events. A 15-week count was scheduled as part of this demonstration, which unfortunately was unable to be completed due to COVID limitations during 2021. This would have been insightful, as differences

Paddock history and the use of a commercial ryegrass variety had a significant impact on results.

wheat in the second week of May. The only exception was the second Mateno Complete treatment, which was applied when the wheat was at 3-4 leaf. ARG pressure was then measured at each site, at five and ten weeks after sowing. These results then underwent statistical analysis to identify if there were any significant differences ($P < 0.05$).

Lessons Learnt Newly available

can already be observed between the five and 10 week counts. Some products failed to sustain their effectiveness while others continued to perform.

Paddock history and the use of a commercial ryegrass variety had a significant impact on the results of this demonstration. This explains the outstanding performance of trifluralin, with both sites containing



MENTAL HEALTH & WELLBEING TIP: Reflect on what is good, and don't forget to have a laugh!

barely any stubble, which would normally tie up this herbicide. Additionally, since the ARG had no prior exposure to trifluralin, there was no impact from Group 4 (D) resistance. This demonstrates the potential of this herbicide on farms where prior use has been minimal and why it's important we steward chemicals well, to avoid developing resistance. The rate applied was also robust and if a major weather event had happened prior to wheat emergence, crop damage would have been likely, which is something to bear in mind.

When considering pre-emergent herbicides, it is important to continue to maintain the habit of rotating chemical groups. This helps to maintain the longevity and effectiveness of products long into the future. With chemical resistance on the rise, and the significant amount of time it takes to develop new products, now more than ever this practice is worth prioritising. This demonstration highlighted that there are a few herbicide options, from different chemical groups, which will continue to provide significant control of ARG long into the season.

For more information about integrated weed management or pre-emergent herbicides contact your local agronomist or our Local Land Services ag team.



MENTAL HEALTH & WELLBEING TIPS: Plan to take a break, rest is important for both physical and mental health.



Dealing with leaf disease in forage oats

With the substantial amounts of rainfall received in the last two months and the relatively warm weather across the region, there is an increased risk of leaf disease development in forage oat crops across the Central West. Even now, reports of disease are coming in, particularly in the lower parts of the crop canopy. Therefore, it is beneficial to think about what strategies might be needed to maximise production in a season with high disease pressure.

Risk of Disease Various fungal pathogens which affect oats, like crown (leaf) rust (*Puccinia coronata* var. *avenae*), thrive in environments where there is consistent rainfall and warm temperatures. These leaf diseases limit green leaf area, therefore, quantity and feed value can be reduced if not controlled. The early part of the growing season has been ideal for repeated rust infection events, causing increased early disease development in oat crops and the

number of spore spreading events. Yet, the last few weeks have seen a reduction in average temperatures, likely slowing down the lifecycles of these pathogens and the expression of symptoms on plants. Being aware of this, producers should be looking for those early infection events, particularly in the bottom of the crop canopy, to identify the potential disease pressure in a paddock.

At the same time, keep in mind that this high disease load is much like a ticking time bomb. As cooler temperatures slow down disease development, pathogens and symptoms won't appear as readily. This doesn't mean that the rust has disappeared but is slowly ticking away.

Come late July, and an increase in average temperatures, producers may be surprised to see these rust populations explode and express vividly in oat crops. Leading to reductions in biomass production and potentially in feed quality



Phil Woodhill, Brad McRae and Luke McConochie at the Big Tech Field Day

Big Tech Big Ideas: Where to start in ag-tech?

Hundreds of Central West farmers and ag industry professionals caught up on current and future agricultural technologies at the Big Tech Big Ideas field day and conference.

Held in Trangie and Dubbo the two-day event presented everything from walk-over-weighting of livestock to remote water monitoring, satellite pasture mapping, precision spraying, soil moisture monitoring and linking various data systems together.

Big Ideas Conference keynote speaker Meat and Livestock Australia's Digital Agriculture Program Project Manager John McGuren gave an overview of digital technologies investigated through MLA's digital demonstration farms and advised producers to think about what problem they are trying to solve.

"What do you need the technology to do?" Mr McGuren said.

"Is it going to reduce labour, is it going to make your operation more efficient, is it being able to remotely monitor your pastures, livestock or water?" he said.

"It's important to consider the return you should expect from the investment in technology.

"This includes looking at what it currently costs you to do the tasks you want to apply technology to versus the costs and benefits."

"Remote water monitoring, satellite-enabled pasture management tools and connected weather stations are reasonably straightforward economically and have practical applications right now.

"If you're interested in some of the more emerging technology consider the problem you are trying to solve and whether it can potentially link into other data on your farm and can you create value in sharing information between systems such as livestock and pasture or infrastructure and water points.

"It has to improve your work by making it more productive, safer, more enjoyable and providing piece of mind."

David Quinlan runs Angus cattle and merinos between Tooraweenah and Mendooran and attended the field day and conference and said he had learnt a lot from the event.

"There are lots of solutions here," Mr Quinlan said.

"I was interested in technology

around water, technology around getting better information on animal weights and gains and how drone technology was developing," he said.

"I was pleased to be able to get information on pasture maps and now we're thinking more about how we implement this technology to improve performance on farm."

Ag Team Leader Neroli Brennan oversaw the events and said she was pleased with how they ran.

"There were some fantastic discussions that took place across the two days and it's been a great opportunity to showcase what is available to help solve problems and improve operations on farms.

"We have enjoyed being able to showcase some of the local talent operating in the ag tech space as well and are looking forward to holding some smaller events across the region to help producers understand how technology could assist in their operations."

This event is supported by Central West Local Land Services through funding from the Australian Government.

Dealing with leaf disease in forage oats *continued*

during that early Spring period.

Control Strategies

There are a few options to reduce disease pressure in forage oat crops. Firstly, select a variety with greater resistance to a disease is an easy lever to pull. This lessens the impact of the infection or reduces the likelihood of infection altogether. Likewise, producers can

be aware that plant diseases have the potential to affect palatability and quality of the forage crop, therefore affecting livestock production. The grazing event should also aim to be extensive enough to remove infected plant material and not just the healthy plant tissue.

With large crops and low stock numbers, strip grazing, or

proactively. Please bear in mind grazing withholds which may differ between fungicide products. Where application is necessary, producers will need to plan ahead. Either to spray sections of large paddocks, as grazing is coordinated with withholding periods. Or prioritising paddocks where grazing is not planned for the necessary amount

Be aware that plant diseases have the potential to affect palatability and quality of the forage crop, therefore affecting livestock production.

reduce the risk of infection from other leaf diseases (e.g. Septoria blotch or Pyrenophora leaf spot) by not planting oats in the same paddock year after year. This reduces the risk of disease from infected stubble or volunteers from last year's crop.

Grazing the crop is a standard management option for controlling disease. Producers should be

similar methods may need to be employed. Be mindful that while this is a low-cost option, results are not immediate. Fungal pathogens will continue to spread during the time it takes livestock to graze to the desired plant height.

In-crop application of fungicides to prevent further infections to other plants or to limit spread up the canopy can also be used

of grazing withholding time. The key timing for application is at Z32 with a second application at Z45-47. This is of higher importance in crops that will be locked up for grain production.

For more information about disease in forage crops and potential strategies for control, contact your local LLS ag advisor.

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MENTAL HEALTH & WELLBEING TIPS: Give someone a smile, compliment or even a hand if you can.



Demonstration highlights the value of soil testing

A demonstration we conducted has shown value of soil testing before adding fertiliser and the potential savings for primary producers across the region.

Four trial sites were established under the project in 2021 in Coonabarabran, Forbes, Tullamore and Nyngan with funding from the Australian Government's National Landcare Program.

Central West Mixed Farming Advisor Southern Rohan Leach said the project helped to show primary producers how soil testing before adding fertiliser could save money.

"The Nyngan site is a great example of why we soil test before any planned fertilisation," Mr Leach said. "We would have expected this site to be low in soil fertility

and therefore highly responsive to phosphorus and lime.

"However, with the soil test results indicating high soil fertility, this paddock would have been better left unfertilised, as little productivity gains were possible through fertilisation," he said.

Each site had a control, a prescriptive rate based on the soil type and paddock history and a soil test response rate based on the results of the soil test for the site.

"In our sites around the region, we saw some great visual response to phosphorous and lime," Mr Leach said.

"In particular, we were pleased to see the increase in productivity from the sub clover in our sites.

"We already know that lime and phosphorus underpin the growth

of four pastures in the Central West, but it is great to be able to see these on-farm demonstrations and how they react in our environment, year to year."

While the planned field walks for the sites were cancelled due to COVID, there is still plenty to gain from the demonstrations, Mr Leach said.

"We are planning to monitor these sites for the next few years to see what long term changes the fertiliser application will reveal."



MENTAL HEALTH & WELLBEING TIP: Accept a hand if it is offered.

Phosphorus and lime demonstrations

By Rohan Leach | Mixed Farming Advisor



Tullamore demo site: Brilliant sub-clover growth observed in fertiliser treatments

Since the drought broke at the start of 2020, land values have risen drastically off the back of interest rates and good commodity prices. This leads to the question of do producers' purchase or lease more land, or improve the productivity of current land managed? Our Adapt project looked at one facet of this question: improving soil fertility.

Phosphorus (P) is an essential nutrient for healthy root and shoot growth. Adequate P nutrition for the plant results in early seedling vigour and better root development. This allows for better uptake of soil moisture and nutrients, leading to more robust plants.

The pH of a soil affects the availability of P for plants. Acidic soils of pH less than 5 (CaCl₂) tend to increase the concentration of aluminium and iron which binds to P molecules, decreasing P availability. Therefore, the use of lime is also important when considering fertility in our Central West (CW) farming systems.

Fertiliser Demonstration Sites The project included several demonstration sites across the CW: Coonabarabran, Nyngan, Tullamore and Forbes. They were situated on a variety of soil types, but mostly red soils suspected to be lacking in fertility. P and lime were applied to see if there was an observable difference in plant dry matter (DM) compared to a nil treatment.

The first step in setting up the sites was to assess the soil fertility through soil testing. These tests were undertaken in early April 2021. The soil samples were segmented into different layers; 0-5cm, 5-10cm and 10-20cm, to give us a picture of soil fertility at different depths. Once the results were back in, several different treatments were applied to small strips of the demo paddocks at the end of April.

The treatments, seen in Table 1, included a Control or nil treatment, a Prescriptive Rate or district average and a Soil Test Response rate. The Soil Test Response treatment was formulated with the help of the soil test results, with fertiliser rates calculated to deliver precise nutrient levels as per pasture requirements. A combination of lime and Single Super Phosphate (SSP) were used according to the treatments. Additionally, at the Nyngan site, gypsum was used as a fertiliser source to supply sulphur.

In order to get an idea of pasture DM growth, pasture cages were set up on the different treatments. These cages stopped livestock from grazing a particular patch and gave a good visual indication of DM production.

Results As thought, most of the soils were low in P, with an acidic pH. The Forbes and Coonabarabran sites were particularly low in fertility. Interestingly, the



MENTAL HEALTH & WELLBEING TIPS: Ask for support, and try not to judge yourself.

Table 1: Fertiliser rates for each treatment and demonstration site

Location	Prescriptive Rate		Soil Test Response	
	Lime (t/ha)	SSP (kg/ha)	Lime (t/ha)	SSP (kg/ha)
Connabarabran	2.5	100	1	150
Nyngan	0	125	0.8	125*
Tullamore	2.5	125	2.4	250
Forbes	2.5	125	3.3	250

* The Nyngan site did not require P and so sulphur was supplied in the form of gypsum

Nyngan site, which had never been fertilised in its history, nor been cropped or cultivated, was highly fertile with a neutral pH.

Visually, the greatest responses were observed at the Forbes (Figure 1 & 2) and Tullamore (Figure 3) sites. These sites both contained high sub-clover content which responded well to the SSP. Conversely, the Connabarabran site had little visual difference, as legume content was much lower due to seasonal factors and the perennial speargrass, which was the main species present in the pasture, was dormant during the cooler periods.

Implications While the planned field walks for these sites were unfortunately cancelled, there is still plenty to gain from these demos. We are planning to monitor these sites for the next few years to see what long term changes the fertiliser application will reveal.

The Nyngan site is a great example of why we soil test before any planned fertilisation. We would have expected this site to be low in soil fertility and therefore highly responsive to P and lime. However, with the soil test results indicating high soil fertility, this paddock would have been better left unfertilised, as little productivity gains were possible through fertilisation.

As this was only a demonstration project, dry matter cuts were not taken, as without replication they would not have been reliable. The Forbes and Tullamore sites provided large visual increases in pasture DM production. At the Forbes site in particular, the fertilised treatments providing an estimated 30-50% more DM compared to the control. To put this in perspective, for roughly \$125/ha (annualised) in fertiliser and lime, 2-3 tonnes more of DM per annum could be grown. This is consistent with figures from Leech et al. (2019) that found an average cost of \$37.25 per tonne of DM produced from the application of SSP.

These figures can help producers determine whether purchasing more land or increasing productivity, on land currently managed, is more cost effective. For further advice on fertilising your pastures or soil fertility please contact Rohan Leach (0417 021 795) or your local Ag Advisory member.

Further Reading: Leech F.J., Richardson A.E., Kertesz M.A., Orchard B.A., Banerjee S. & Graham P. (2019) 'Comparative effect of alternative fertilisers on pasture production, soil properties and soil microbial community structure'. Crop and Pasture Science 70(12) 1110-1127.



Figure 1: Forbes demo site: Left - No Treatment, Right - Soil Test Response Treatment



Figure 2: Forbes demo site: Left - Prescriptive Rate, Right - Control



MENTAL HEALTH & WELLBEING TIP: Practice self-care by making time to do something you enjoy.



Oestrogenic clovers

By Sue Street | Livestock Advisor

Transforming pastures

Bob Freebairn runs a busy agricultural consultancy business while also running his own farm with his wife Sue at Coonabarabran.

Bob has a wealth of knowledge on managing light soils, tropical grasses, and dual-purpose cereals - and has been credited with transforming agriculture in the Central West of NSW, particularly around Coonabarabran.

In this episode of the **Seeds For Success** podcast, Bob shares some valuable lessons from his long career, including his work with the Department of Ag, and how he's worked with farmers to help make productive changes on-farm. He also shares his vision for the future of agriculture and how he believes there's an untapped commercial potential in native grasses.

Callen Thompson sat down with Bob as he shared his 55 years of experience and his hopes for the future of agriculture.



Oestrogenic clovers have been known to cause fertility issues in ewes across Australia. Usually found in old clover cultivars, and when the plant material is green, isoflavones act similar to that of natural estrogens.

These isoflavones are responsible for a variety of symptoms in sheep including lowered ewe fertility, increased difficult births, prolapse of the uterus, udder development in maiden ewes and wethers and urethral blockages in wethers. As the plant senesces or 'dies off' the isoflavones break down and the plant material is safe. Hay and silage cut from paddocks containing high levels of oestrogenic clover can be problematic, particularly if it has been cut and cured at the ideal time, and the plant material has kept its colour (Bennett et al. 2019).

Types of oestrogenic: Oestrogenic clovers have been known to cause fertility issues in ewes across Australia since the 1970's. Usually found in old clover cultivars, and when the plant material is green, isoflavones act similar to that of natural estrogens.

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Types of oestrogenic infertility: Oestrogenic clover can cause two types of infertility: permanent and temporary.



RAMHP HAS COORDINATORS BASED ACROSS NSW WHO PROVIDE KNOWLEDGE & SUPPORT FOR THOSE WITH MENTAL HEALTH CONCERNS.

Oestrogenic clovers *continued*

Permanent, also known as 'clover disease', is caused by grazing these oestrogenic clovers over a long period of time, approximately two years. The reproductive disorders caused by permanent infertility are:

- increased dry ewe percentage
- unexpected low lambing percentage, due to a temporary decline in ewe fertility
- increase in uterine prolapse
- increase in vaginal prolapse
- increase in ewe and lamb mortality at birth
- In severe cases loss of fertility, udder development in maiden ewes and wethers
- Enlarged bulbo-urethral glands and urethral blockages in wethers (MLA 2021).

Meanwhile, temporary infertility occurs when sheep graze oestrogenic clovers just before or at time of mating. These clovers suppress the oestrus cycle and can also affect sperm transport. Temporary infertility can be resolved if sheep are removed from the oestrogenic clover after 4 to 6 weeks (Foster 2021).

What clover causes reproductive issues? There are a number of old sub clover cultivars that contain high levels of oestrogenic compounds. They tend to be older cultivars, usually sown from the 1930's to the 1960's. These high oestrogenic clover varieties are: Dwalganup, Geraldton, Dinniup, Yarloop, and Tallarook (only present in high rainfall areas).

If these cultivars have been identified in your pasture, you will need to assess each paddock to assess the prevalence of the problem clover. Oestrogenic clovers may only be a percentage of your clovers, which will affect the overall risk of your paddock. The safety of your pasture is assessed in percentage of problem (oestrogenic) clover in paddock. It is assessed at three levels: Safe = 0 – 20%, Moderate = 20 – 40%, Potent = > 40%

These cultivars will become a problem if they contribute 20% or more of your pasture biomass (Foster 2021). There are a number of ways to help manage pastures and livestock, if you have high oestrogenic pastures:

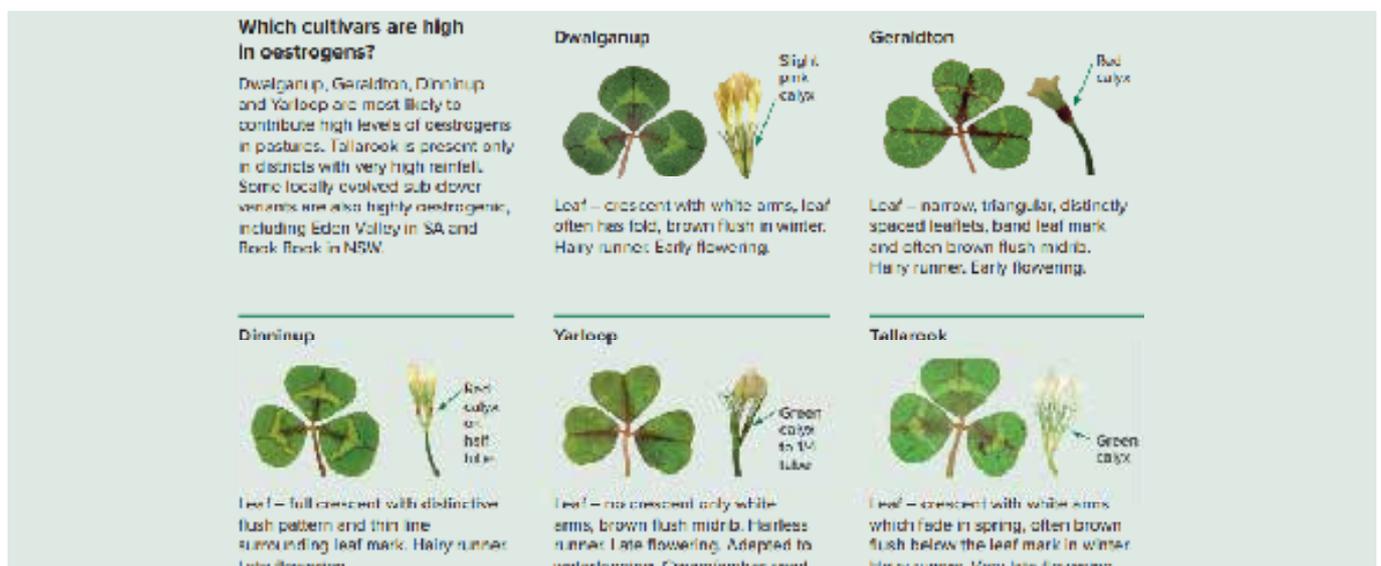
Livestock management

- Manage the type of stock grazing the affected paddock/s; don't graze young ewes or lambs; limit grazing by wethers to avoid high exposure; rams are not thought to be affected; cattle may be affected, but likely to be rare
- Paddocks with less than 20% clover are likely to be safe
- Delay joining ewes until at least six weeks after the clover has senesced and ensure ewes are in condition score 3
- Test pasture hay and silage for oestrogens, and if levels are high avoid feeding to ewes
- Check ram health pre-joining and aim for 3% rams at joining
- Consider culling adult ewes scanned not pregnant as they are likely to be permanently infertile (Bennett et al. 2019)

Pasture management:

- The best management is through pasture renovation. This can be done in a number of ways:
- Dilute feed containing oestrogenic clover
- Try and reduce the clover seed bank by use of cropping for several years
- If considering sowing clover, choose a well-adapted, recently released low oestrogen variety
- Think about buying certified clover seed if renovating pasture (Bennett et al. 2019; Foster 2021)

Although oestrogenic clover could be a reason for your fertility issues in your ewes, remember to consider other reasons for poor lambing results.



SCAN ME



Tropical pasture demonstration

Producers in northern New South Wales have been using introduced tropical grass in their production systems for many decades. Species like premier digit grass, bambatsi panic and Rhoades grass have been shown to increase production while providing good ground cover and drought tolerance.

As we move into a changing climate, with an increase in summer dominant rainfall, producers in central west NSW are looking at options to fit tropical pasture species on their farms.

Tropical grasses only grow in summer in the central west, going dormant in winter. Species that do not go dormant are not suitable for sowing in areas that receive frosts. They are a C4 plant which means they are able to grow a significant amount of dry matter and are tolerant to hot dry conditions, unlike some of the introduced temperate pasture species commonly sown. Tropical grasses have a wide range of soil types they can grow on, with species such as premier digit tolerant to acidic soils and bambatsi panic suited to alkaline soils, even

those susceptible to water logging.

Tropical pastures have their best fit in areas that have been cropping areas, which may be unproductive due to soil constraints, slope or location. Paddocks can be sown to tropical to get good ground cover quickly and may never have to be farmed again. There are paddocks in the north of the central west region that are over 30 years old. Tropical pastures can provide a large bulk of feed in summer months. Feed quality can be lower than some commonly used temperate species, but if managed well, they can produce very reasonable weight gains.

To integrate tropical species into our production systems in the central west, there is a number of research questions we still need to answer, like time of sowing and species selection. NSW Department of Primary Industries is doing research at a number of sites within the central west, including Trangie and Condobolin. To compliment these trials we have sown demonstration sites at Bogan Gate, Lake Cargelligo and Gulargambone in the north of our region.

Field walks conducted at each site have given producers the ability to see what is working in their environment. It is also an opportunity for producers and their advisors to learn how to identify different species while discussing species suitability, paddock preparation and establishment with LLS and DPI staff. Producers have been able to speak to growers already growing tropical pastures and share knowledge and experience.

The trials have been running for over 16 months, but it is too early to make any decisions on varieties as yet. Persistence is one of the key factors when selecting a tropical grass, and as yet we can't say that one variety has greater persistence as they have not been growing for long enough and have not experienced adverse environmental conditions such as drought.

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The Adapt Project

NLP2 Outcome 6
Adapt Project
2021-22

The Adapt Project is a five year project carried out by the Ag Team to up-skilling Central West producers to adapt to changes in climate, landscape and markets of their changing environment.

It includes the podcast, field days, workshop and trial sites and resource development. From Prograze courses, live animal assessment workshops, farm business skills workshops, tropical grass trials and fertiliser trials to new ag tech innovation field days just to name a few!

The Adapt Oroject is now in its fourth year of providing stakeholders, producers and advisors with the skills and knowledge to increase their capacity of agricultural systems to adapt to significant changes in climate and market demands for sustainable production. With two key adapt focus areas; Soils, to better understand capacity, potential, management

strategies and soil health to reduce climate change impacts and increase soil sustainability and productivity. The second is Cropping and Pasture to improve variety selection of pastures and crops based on landscape, soils and changing climate, integration of new species and management techniques.

The Adapt Project is funded by the Australian Government.

ADAPT FOCUS AREAS

- Business
- Climate
- Soil
- Cropping and Pasture
- Feedbase

To find out more about The Adapt Project visit our webpage and check out what upcoming events are on near you!



12 workshops



4 field days



4 webinars



2 podcasts



6 resource videos



3 trials



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