

ASHEEP News



ASHEEP Cattle Field Day Review

May 2018

Newsletter # 49

ASHEEP Cattle Field
Day Review

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of Legume Pastures—
A Review

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The first field day for the season was held on the 8th of March for our cattle producers. We started at John Sharpe's property on Telegraph Rd. John showed us renovated paddocks that were 90% rushes, in some places 9ft high. After removing them by repeatedly burning and slashing John has used summer & winter fodder crops to reduce the regeneration of the rushes. Due to being a one-man show and in the middle of fence reconstruction, the millet in these paddocks were grazed well beyond what they should be however the regeneration after a 25 day rest has been remarkable. Since sowing in Oct 17, the millet has had 64 days grazing to date at a rate of 2.44 head per ha. The paddocks have now been rested for 25 days and are ready for another grazing. There was serradella coming up under the millet as result of a 80mm of rain in Feb which should stick around and provide winter grazing for the stock. John will let the millet go dormant and see what regenerates next year.

It was great to see the paddock and lane way system going up at John's place, as he

said it's taken 10 years for cattle prices to be high enough to free up the capital for this sort of improvement. I'm sure John isn't the only one taking advantage of the good times in the industry.

Peter Gale from Landmark Brindley & Gale shared some data on dark cutting pre and post magnesium supplementation. Off the back of this data Erica Ayers told us that with the increase in crop grazing in the Esperance area means that we are probably pushing the boundaries into Grass Tetany area. Grass tetany is caused by low levels of magnesium in the blood. Older cows with calves at foot during winter and spring (when the pastures are really going) are most at risk. Erica said when grass tetany happens, it does so very dramatically. Simon Fowler said he supplements magnesium in a loose mix of 40% limestone, 40% magnesium and 20% salt. We are hoping to explore this topic more at ASHEEP's AGM & Conference on the 21st of June 2018.

The next stop was Wes Graham who

**Save
the Date**

**ASHEEP
AGM & Con-
ference**

**Esperance
Bay Yacht
Club**

**21st June
2018**

Checking out the Millet at John Sharpe's



ASHEEP Cattle Field Day Review

showed us his newly covered yards. Wes said that due to the very wet seasons over the last couple of years he was losing time and money from putting off loading stock due to the condition of the yards after rain.

Wes said he went with domes due to them not needing support beams in the middle of the yards. Wes will be upgrading the yards underneath them next and this means the yards won't have to be designed around support poles. The sheets of the domes were formed on site out of one flat roll and then crimped & stitched together. The cattle work well and it is much cooler on hot days and, obviously, dryer on wet days.

In the shade of domes Wes told us about the LPA audit we undertook last year. After a phone call from the auditor Wes was sent a checklist. The checklist was mostly about knowing where the physical hazards are on the farm (i.e. old dip sites) as well as managing husbandry risks (taking photos of batch numbers when opening chemical). Keeping in information trial was key, so recording withholding periods, chemical applications on pastures and fodder crops, keeping copies of NVD's. Wes said you need to have a copy of the Welfare standards on hand. They can be found at www.animalwelfarestandards.net.au. For smart phone uses, Agriwebb is a good app for livestock records but the cost can add up when you have multiple users.

The last stop for the day was Theo Oorschot's fodder crop trial at Andrew Middleton's property on Merivale Rd. Out of the varieties in the trial, Theo's pick is Pearler Hybrid Millet. Pearler may seem expensive compared to other varieties but you need to consider the seed size and sowing rate as they can be quite different. There is also no prussic acid in Pearler. When questioned about planting early and late species in the same paddock to have feed at different ends of the season, Theo said it would be better to have one species per paddock. If it's mixed the stock will selectively graze the preferred species to point of pulling it out of the ground while not touching the other. Having one species per paddock means you can manage the grazing pressure much better. Theo's suggestion is putting a late variety in one paddock and an early in the next. Once you've shifted the stock off the early variety and it's beginning to finish you can wipe it out and put something else in, such as winter crop. As for timing of sowing Theo said it's more important that you are planting into moisture rather than based on temperature. Ideally sow in the 1st week of October, but again, only if there's moisture. Thanks to Theo for sharing his knowledge and letting us have a look at your very well presented trial.

Thanks also to John, Peter, Wes & Andrew for providing us with some great stops and topics of conversation.

Standing in Theo's trial, the trial was replicated 3 times, with the group standing in the 'grazed' rep on the left and ungrazed on the right. This paddock was bluegums that were harvested in Feb 2017, the trial was sown November 2017 after a lime application and plenty of fert to quickly build nutrition.





ASHEEP & MLA Legumes in Kikuyu Project Results



Please note, the purpose of this project was to demonstrate proven technology and systems. It is not an in depth, replicated trial so the findings should not be taken as agronomic advice. Please contact one of our many knowledgeable local agronomists to discuss your own situation.

In 2014 ASHEEP received funding from MLA to run a Producer Demonstration Site project to sow alternative legumes into permanent Kikuyu pastures to improve grazing productivity. The project has now ended, and the final report has been submitted to MLA. Here I will go through the findings from the project.

The trial was hosted by the Hoggart family on their property "The Duke" on Orleans Bay Rd, Condingup WA. The site was on deep sand and the initial pasture was a long term stand of Kikuyu with some background sub clover that hadn't been seen for some years.

Within the site the following treatments were applied:

Summer Sown Plots- paddock was grazed heavily and 2L/ha Glyphosate was applied 1st March 2014 and sown on 10th March 2014 to Margurita Serradella enhanced pod 25kg/ha , Avilla Serradella enhanced pod and Bartolo bladder clover unscarified seed 20kg/ha. Kikuyu was suppressed again with glyphosate on 30th May 2014.

Autumn Sown Plots- paddock was grazed heavily up until March, 2L/ha glyphosate applied 13th May 2014 and 30th May 2014 and on 17th June 2014 sown to Margurita Serradella scarified seed 10kg/ha, Santorini Serradella

scarified seed 10kg/ha, Dalkeith sub-clover seed 20kg/ha and Bartolo bladder clover scarified seed 20kg/ha was sown.

A control plot was left unsprayed and unsown, a second control was sprayed but unsown.

The project objectives were to:

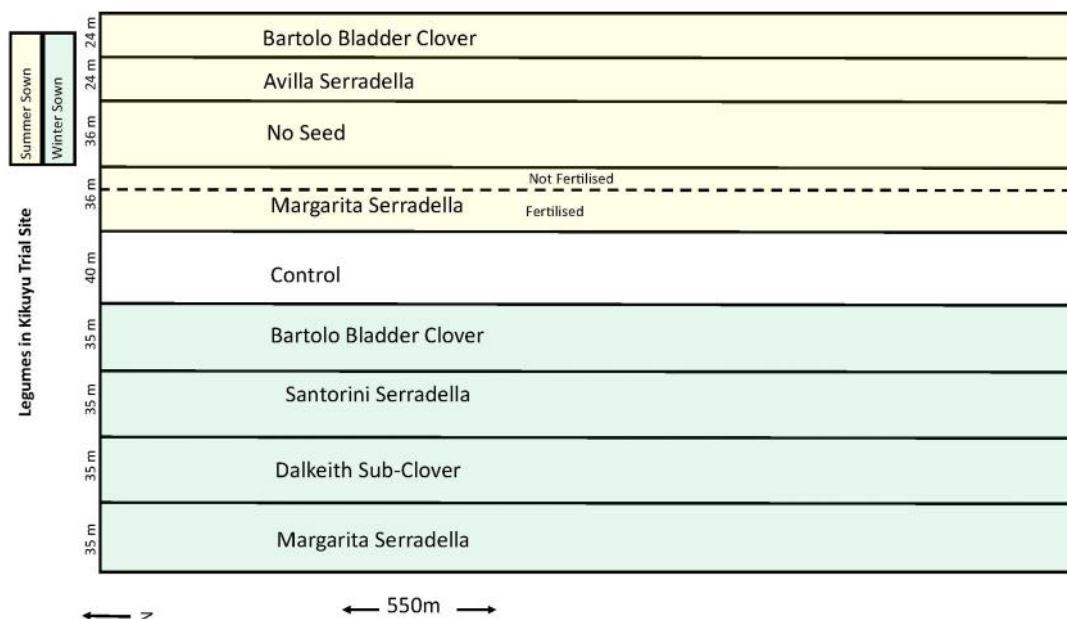
1. Compare summer sowing and conventional autumn sowing as an establishment method when sowing legumes into Kikuyu.
2. Asses the feed production of kikuyu to determine the benefits over time of incorporation of legumes to increase the paddock's stocking rate.
3. Demonstrate management techniques to maintain the legume seed bank for continued legume regeneration.

Project Observations

Summer vs. Autumn sowing

In this project the best performing plots were the Autumn sown Margurita and Santorini serradellas and the summer sown Avilla (Avilla was not Autumn sown). The summer sowing did occur later than preferred due to seed availability and Angelo Loi has advised this may be the cause of the poorer performance of these plots as the hard see wouldn't have had time to break down as it should. As well as this, Kikuyu is a summer active plant and will utilise

the rain that falls in the summer months. This means we had germinating legumes trying to compete with actively growing kikuyu for water & nutrients which is not an ideal situation. The summer sown plots were re-sown in 2015 but still did not perform compared to the 2014 Autumn sown plots. In this scenario summer sowing does not seem to suit the system, however it has been used to great success in many other scenarios around the district.





ASHEEP & MLA Legumes in Kikuyu Project Results



Santorini Serradella was a consistent performer in the trial

Variety performance

Of the varieties Bartolo Bladder Clover was the worst performing, it was included in the trial due to it being a new variety however we have learned that it is not suited to coastal soil types and climates as it is susceptible to powdery mildew, as well as K and P deficiency. When in the right environment Bartolo is suited to summer sowing (with unscarified seed) and is a prolific seed producer, we have seen it go well in other areas .

Both Autumn sown serradellas and the summer sown Avilla persisted to the final year. The Avilla was only found in significant numbers in 2017, the final year. It was not apparent in significant numbers in 2015 or 2016. So, while it was a good performer in the end, it took a few years to get there which is not ideal.

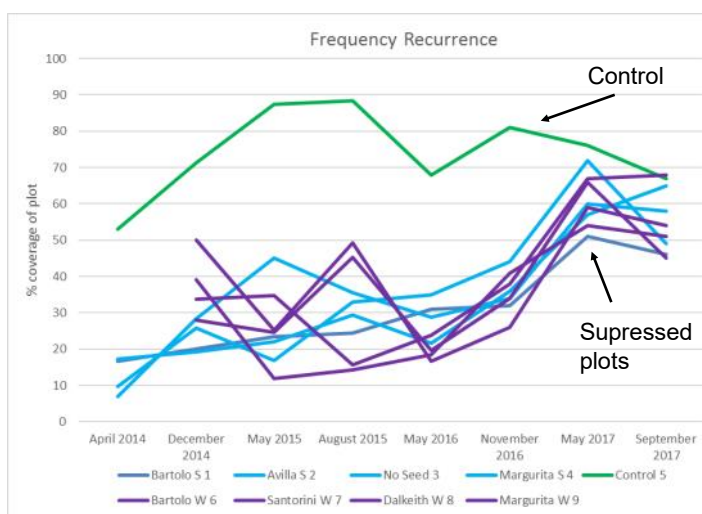
The Autumn sown Margarita and Santorini Serradella both performed well in each year of the trial. The host of the trial, Alan Hoggart was particularly impressed with the performance of Santorini and has established it successfully in several other paddocks on the property using Autumn sowing.

Alan had some left over commercial pasture mix which was sown next to the trial in 2014, out of interest. It was not measured but it was visually observed that some varieties in this mix persisted when it was thought they wouldn't due to not being suited to the environment. The varieties that persisted were Gland, Arrowleaf, Balansa and Crimson clover. This was not explored further due to time and budget constraints of the project however it was an interesting observation.

Kikuyu recovery after suppression

As most people know Kikuyu can survive almost anything and after a couple high doses of glyphosate it came back very well. The glyphosate had a greater effect during active growth of the kikuyu so we saw a better rate of suppression of the summer sprayed plots compared to a lower rate of suppression on the Autumn sprayed plots. Ron Master from Albany DPIRD has shown in other work that a winter application of clethodim to kikuyu can be beneficial for legume establishment.

One important observation was the band of organic matter in the top 10 cm of soil (initially seen in 2015) created by the thatch of the kikuyu had extended to the top 15-20 cm by 2017. In 2015 it was observed that roots of the legumes



Graph showing frequency of recurrence of Kikuyu across the life of the trial. This is a measurement of how many live kikuyu plants are present in each plot. By May 2017 the kikuyu in the suppressed plots has nearly returned to unsuppressed levels seen in the control plot, this indicates a resilience to chemical suppression



ASHEEP & MLA Legumes in Kikuyu Project Results



Profile of deep soil cores taken in 2017 showing the organic matter band at 10cm

were predominately restricted to this 10cm band, with tap roots growing sideways rather than down into the sand below. We were not able to find a reason for this at the time other than to speculate that the white sand below was potentially inhospitable due to soil acidity, aluminium toxicity and compaction. This shallow root depth is not ideal as it makes the legumes susceptible to moisture stress during dry spells when the top 10cm dries out. In the plots where the kikuyu was suppressed it was observed that this band of organic matter had become gradational and reached a depth of 15-20cm by 2017. This could be due to the decay of the dead kikuyu plants and the freeing up of the top soil. This was supported by the soil tests which

showed a higher level of organic carbon in the 2017 results compared to the 2014 results.

Kikuyu roots were found at a depth of 70cm when deep core soil samples were taken. This shows what a valuable plant it can be by taking advantage of moisture and nutrients at depths that other pasture plants will not reach.

Changes in grazing patterns of the stock on the trial were observed but there was no significant difference in feed quality of the kikuyu between plots.

Pests

The efficiency of kikuyu as a weed suppressant was demonstrated during the trial. Once the Kikuyu was suppressed this gave the weeds (mainly silver grass in

this situation) a great opportunity to come through. The learning was that it is important to manage the seed bank, to get a good seed set of your legumes in the first year (keep sheep off it when flowering and setting seed) to compete with both the kikuyu and other grass weeds. This is where the hard seeded varieties have an advantage as their seed break down pattern will mean you should have a good seed bank for many years if managed correctly.

Native budworm will badly effect seed production of serradella, particularly Margurita, if not controlled. During key periods (when the plants began to pod) the trial was swept for native budworm and a pesticide was applied if numbers were above recommended thresholds.



Bud worm damage to serradella pod. The bud worm chews out the seed pods.

We would like to give a huge thanks to Alan & Bec Hoggart for allowing ASHEEP to use their property for this trial and for their time to get it established and maintained.

Thanks also to MLA for supporting our group and this project.

For more information contact ASHEEP Project Officer Anita Chalmer projects@asheep.org.au

Herbicide tolerance of pasture legumes– Revisiting past trial results

This information is taken from the final report of GRDC project number DAW31 titled 'The Impact of herbicides on pasture legume species- a summary of scientific trial results across 8 years' by Christiaan Valentine and David Ferris. A pdf can be found here <http://grdcfinalreports.cerdi.edu.au/DAW00031>

In 2007 Christiaan Valentine and David Ferris of the Northam Department of Agriculture (Now DPIRD) summarised 11 different field trials carried out between 1997 and 2005 to determine the impact of herbicides on a selection of pasture legume species. Here we will revisit the results.

The 11 trials were located across the wheatbelt and over a range of soil types from pale sand to heavy loams. Trial site locations include Miningew, Goomalling, Dowerin, Quairading, Beverly, Dowerin, Dongara, Northampton and Northam. At each location the trial was sown using a cone seeder and sprayed with the herbicide treatment either immediately after sowing (PSPE) or at the 3-6 leaf stage. (Post E) The impact of the herbicide on pasture production was measured visually 6 weeks post the PSPE herbicide application. The trial was not grazed. The below tables summarise the results.

Results are expressed as a percentage of the unsprayed control 6 weeks after the PSPA herbicide application. So, 50% indicates that the treated plot had half of the biomass of the control plot 6 weeks post herbicide application. Shading indicates a result greater than 70% (so less than a 30% reduction in biomass). **Please note this is not agronomic advice and some herbicides listed here are not registered for the legume plants they have been used on. Consult the label for details on registrations, plant backs, rates and spraying conditions. Or ring one of the many experienced agronomists we have in Esperance.**

Table 1

Table1.

Tim- ing	Gr- oup	French Serradella (Cadiz ^A)	97	97	99	00	01	02	03	03	05	Avg
		Herbicide	Be	Mi	Go	Do ¹	Do ¹	Dg	Nh	Qu	No	
PSPE	B	Spinnaker [®] 200 - 250 mL					89	82	93	83	95	88 (5)
	C	Diuron [®] (500ai) 400 - 750		100		37	63	32				58 (4)
	K	Kerb [®] 500 mL						83				83 (1)
	K	Dual Gold [®] 500 mL					81	88	90		98	89 (4)
Post emergent	B	Broadstrike [®] 25	95	97	96	78	74	72	98	90	87	87 (9)
	B/C	Broadstrike [®] 25g + Diuron (500ai) 100 - 200 mL	85	72		76	68	68	72	62	41	68 (8)
	B	Raptor [®] 40 - 50 g					64	87	98	90	89	85 (5)
	B/C	Raptor [®] 15-22g + Bromoxynil [®] 370 - 750 mL					74				95	86 (2)
	B	Spinnaker [®] 250 - 300 mL		95	92	57	64	57	88		74	75 (7)
	C	Bromoxynil 1500 - 2000 mL			85	81	61	58	76	80	89	76 (7)
	C	Simazine (500ai) 500-1000 mL	75	45	83	73	40		92	41		64 (7)
	F	Brodal [®] 150 mL					47			94		71 (2)
	F/C	Jaguar [®] 500 mL	85	35	54	52		17	74	42		51 (7)
	F/I	Tigrex [®] 400 - 500 mL	50	45	44	21	30	18	3	36	39	32 (9)
	I	2,4-D [®] (625ai) amine 500 mL								30		30 (1)
	I	MCPA [®] (500ai) amine 750 mL					23		31	54	33	35 (4)
K	Kerb [®] 500 - 1500 mL		100		91			98			96 (3)	

The hard seeded French serradella cultivars Erica^A and Margarita^A were included in trials at Northampton and Quairading in 2003. Both cultivars displayed similar tolerance to Cadiz^A with the range of herbicides tested. Cadiz^A displays reasonable tolerance to Spinnaker[®] (PSPE), Broadstrike[®] and Raptor[®], but is very sensitive to simazine, Jaguar[®], Tigrex[®] and phenoxy herbicides. Note the response of Cadiz to diuron and simazine is highly variable between sites and years.

Herbicide tolerance of pasture legumes– Revisiting past trial results

Table 2.

Tim-ing	Gro-up	Yellow Serradella (Charano ^A + Yelbini ^A) Herbicide	97	99	00	01	03	03	Avg
			Mi ^a	Go ^a	Do ^{1a}	Do ^{1a}	Nh ^b	Qu ^a	
PSPE	B	Spinnaker [®] 250 - 300 mL	90		83	77	94	78	84 (5)
	C	Diuron (500ai) 400 - 750 mL	95		61	54			70 (3)
	K	Dual Gold [®] 500 mL			77	83	75		78 (3)
Post emergent	B	Broadstrike [®] 25 g		85	77	54	88	76	76 (5)
	B/C	Broadstrike [®] 25 g + Diuron (500ai) 100 - 200 mL			80	48	63	69	65 (4)
	B	Raptor [®] 25 - 45 g				75	85	73	78 (3)
	B/C	Raptor [®] 22 g + Bromoxynil 750 mL				78			78 (1)
	B	Spinnaker [®] 150 - 300 g	100	77	48	67	78		74 (5)
	C	Bromoxynil 1500 - 2000 mL		77	77	65	70	75	73 (5)
	C	Simazine (500ai) 500 - 1000 mL	65	72	57	56	72	45	61 (6)
	F	Brodal [®] 150 mL				25		71	48 (2)
	F/C	Jaguar [®] 500 - 550 mL	60	42	26	35	60	36	43 (6)
	F/I	Tigrex [®] 400 - 500 mL	50	31	28	23	37	32	34 (6)
	I	2,4-D (625ai) amine 500 mL						62	62 (1)
	I	MCPA (500ai) amine 750 - 1000 mL		18	30	22	36	49	31 (5)
	K	Kerb [®] 500 - 1500 mL	100		94		94		96 (3)

The yellow serradella cultivar Santorini^A was also trialled in 1997 and 2000, and showed similar tolerance to the range of herbicides as Charano^A and Yelbini^A. In general yellow and French serradella responded similarly to the herbicides tested.

Table 3.

Tim-ing	Gr-oup	Biserrula (Casbah) Herbicide	97	99	00	00	01	02	03	05	Avg
			Be	Go	Do ¹	Do ²	Do ¹	Dg	Nh	No	
PSPE	B	Spinnaker [®] 200 - 300 mL			15	69	61	55	69	54	54 (6)
	C	Diuron (500ai) 750 mL			37	63	37	53		77	53 (5)
	K	Kerb [®] 500 mL						69			69 (1)
	K	Dual Gold [®] 500 mL			85	67	73	73	49	98	74 (6)
Post emergent	B	Broadstrike [®] 25 g	10	7	13	16	3	3	1	0	7 (8)
	B/C	Broadstrike [®] 25 g + Diuron (500ai) 100 - 200 mL	10		26	15	3	0	0	0	8 (7)
	B	Raptor [®] 40 - 50 g					36	30	56	19	35 (4)
	B/C	Raptor [®] 15 - 22 g + Bromoxynil 370 - 750 mL					76			62	69 (2)
	B	Spinnaker [®] 250 - 300 mL		49	10	17	32	22	30	18	25 (7)
	C	Bromoxynil 1500 - 2000 mL		65	70	75	62	65	70	73	69 (7)
	C	Simazine (500ai) 600 - 1500 mL	90	89	80	83	24		73	19	65 (7)
	F	Brodal [®] 150 mL					52				52 (1)
	F/C	Jaguar [®] 500 - 550 mL	80	51	52	51	37	30	50		50 (7)
	F/I	Tigrex [®] 400 - 500 mL	45	53	48	47	21	54	33	81	48 (8)
I	MCPA (500ai) amine 750 - 1000 mL	35	23	14	28	26	32	25	24	26 (8)	
K	Kerb [®] 500 - 1500 mL			91	72			65		76 (3)	

Mauro^A biserrula was trialed in 2005 and generally showed similar tolerance to Casbah to the range of herbicides evaluated.

Biserrula appears to be sensitive to most of the herbicide options tested, and was particularly sensitive to Broadstrike. It has consistently shown reasonable tolerance to bromoxynil.

Biserrula appeared to have useful tolerance to simazine at rates <750 mL but impacted on herbage production in 2001 and 2005 when rates greater than 1000mL were used. Interestingly Mauro^A appeared to be more tolerant of simazine in 2005 at Northam (see Crop Update 2006 article) but this requires further evaluation.

Herbicide tolerance of pasture legumes– Revisiting past trial results

Table 7.

Timing	Group	Subterranean Clover (Dalkeith)	97	99	00	01	03	03	04	05	Avg
		Herbicide	Be	Go	Do ¹	Do ¹	Nh	Qu	No	No	
PSPE	B	Spinnaker [®] 200 - 250 mL				82	65	77	83	74	76 (5)
	C	Diuron (500ai) 500 - 750 mL			78	52				85	72 (3)
	K	Dual Gold [®] 500 mL			84	88	61		96	94	85 (5)
Post emergent	B	Broadstrike [®] 25 g	85	88	76	62	62	74	90	82	77 (8)
	B/C	Broadstrike [®] 25 g + Diuron (500ai) 100 - 200 mL	75		55	67	46	67	66	44	60 (7)
	B	Raptor [®] 45 - 50 g				66	83	73	91	74	77 (5)
	B/C	Raptor [®] 15 - 22 g + Bromoxynil 370 - 750 mL				73			80	86	80 (3)
	B	Spinnaker [®] 250 - 300 mL		91	68	74	76			71	76 (5)
	C	Bromoxynil 1500 - 2000 mL		52	87	64	53	81	87	73	71 (7)
	C	Simazine (500ai) 600 - 1000 mL	90	82	63	36	58	77	96		72 (7)
	F	Brodaf [®] 150 mL				67		89			78 (2)
	F/C	Jaquar [®] 500 - 550 mL	80	53	53	51	55	63			59 (6)
	F/I	Tigrex [®] 400 - 500 mL	90	87	46	47	57	67	80	73	68 (8)
	I	2,4-D (625 ai) amine 500 mL						56	78		67 (2)
	I	MCPA (500ai) amine 750 - 1000 mL	80	61	60	55	59	69	71	75	66 (8)
	K	Kerb [®] 500 - 1500 mL			93		80				87 (2)

Table 8.

Timing	Medic	97	97	99	00	04	04	Avg	00	02	03	04	Avg
	Herbicide	Be	Be	Go	Do ^c	No	No		Do	Dg	Nh	No	
PSPE	Spinnaker [®] 200 - 300 mL				40	19	18	26 (3)	46	36	94	32	52 (4)
	Diuron (500ai) 750 mL				87			87 (1)	78	50			64 (2)
	Kerb [®] 500 mL									62			62 (1)
	Dual Gold [®] 500 mL				83	79	92	85 (3)	72	68	83	97	80 (4)
Post emergent	Broadstrike [®] 25 g	90	85	80	82	70	63	78 (6)	74	73	98	69	79 (4)
	Raptor [®] 40 - 50 g					66	55	61 (2)		67	98	82	82 (3)
	Spinnaker [®] 250 - 300 mL			62	67			65 (2)	73	60	76		70 (3)
	Broadstrike [®] 25 g + Diuron (500ai) 100 - 200 g	90	95		80	57	60	76 (5)	94	57	71	49	68 (4)
	Raptor [®] 22 g + Bromoxynil					50	70	60 (2)				73	73 (1)
	Bromoxynil 1500 - 2000 mL			29	28	37	24	30 (4)	21	22	64	29	34 (4)
	Simazine (500ai) 600 - 800 mL	95	95	79	93	100	96	93 (6)	93		76	96	88 (3)
	Jaquar [®] 500 mL	55	65	29	25			44 (4)	29	32	63		41 (3)
	Tigrex [®] 400 - 500 mL	75	95	48	32	63	51	61 (6)	57	39	55	59	53 (4)
	2,4-D (625ai) amine 500 mL					17	9	13 (2)				38	38 (1)
	MCPA (500ai) amine 750 - 1000 mL	55	75	26	29	30	25	40 (6)	26	22	55	34	34 (4)
Kerb [®] 500 - 1500 mL				87			87 (1)	66		86		76 (2)	

Other cultivars evaluated include Orion sphere medic, Caliph^A barrel medic and the hybrid disc/strand medic Treador^A. Trial results have shown that cultivars of the same species, e.g. the burr medics Santiago, Cavalier^A and Scimitar^A perform similarly, but some variability can exist between species.

ASHEEP South Africa Tour

A couple of spots have opened up on this year's South Africa tour. The tour will go from the 18th-28th of August and cover the Western Cape, starting and finishing in Cape Town. The group will see mixed livestock and cropping farming systems and trials. John Howieson will be coming along and showing us the origin of Lebeckia. We will also be going to one of the biggest field days in the Western Cape, the Riversdale Farmers Day. There will be a couple of days for site seeing as well. The tour is being led by Dr Johann Strauss from the Western Cape Department of Agriculture. Neil Ballard and John Howieson are joining the trip so we won't be short of pasture experts! Please let Emma know if you are keen to come along as soon as you can as numbers are very limited.

A few of the towns we'll be visiting on ASHEEP's 2018 South Africa Tour.



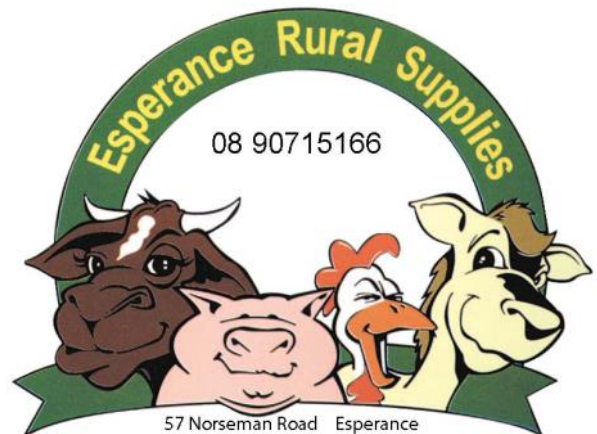
Somerset West, 50km from Cape Town



Constantia, Wine Region near Cape Town

ASHEEP's Newest Gold Sponsor

ASHEEP would like to welcome their newest Gold Sponsor Esperance Rural Supplies. Greg Hard and the team have been long time supporters of the group and it's great to see their support go to the next level.



ASHEEP Worm Club

Putting Wormboss into Practice

A project funded by Australian Wool innovation



Project Outcomes

ASHEEP has secured funding from AWI to run a worm club over the next 2 years. The goal is to identify regional trends in worm burdens and drench resistance and promote the use of Wormboss practices to farmers in our region. This will be achieved by offering subsidised worm egg count tests to 30 ASHEEP members who would be prepared to then do a complete Drench Resistance Test. From these 30 members, 15 will be identified as suitable for further drench resistance testing. This will identify levels of resistance to drench groups including ML (mectins), LV (clear), BZ (white), monepantel and closantel.

The 40 participants will have their WEC results entered into a central database. This information will be used to alert members to rising burdens or changes in worm type in the Esperance region through seasonal updates in newsletters and e-news. All test result information will be kept anonymous and any data published will be bulked, no identifying data will be used.

How to get involved

ASHEEP can offer a \$162 subsidy for members to have WEC tests completed by Swans Vets in Esperance. That will cover the cost of approx. 5 tests (one test per mob, one bulk count of 15 samples per test). This offer will initially be limited to 30 members on a first in, best dressed basis. Participants will have to submit their test results to ASHEEP for entry into a central database. As mentioned, all data will be kept anonymous. They will also have to be willing to complete a drench resistance test if selected. The lab work will be conducted by Dawbuts in NSW who are covering that cost (drenches & tags will be at your cost). ASHEEP staff will assist with the collection of samples and treatments. Please see the [WormBoss website](#) for further information on both the [drench resistance testing](#) and [worm egg count testing](#).

If you want to be part of the ASHEEP worm club please contact Emma Graham on 0457 937 774 or eo@asheep.org.au

Phosphorus-efficient pastures Project

Delivering high nitrogen- and water-use efficiency with reduced fertiliser-costs of production across southern Australia

Funding

This project is supported by funding from the Australian Government Department of Agriculture and Water Resources as part of its Rural R&D for Profit programme, Meat and Livestock Australia, Dairy Australia, Australian Wool Innovations Ltd, and the participating research organisations and farmer groups

Research Team Leaders

Richard Simpson (CSIRO), Richard Hayes (NSW DPI), Megan Ryan (UWA), Sue Bochma (NSW DPI), John Howieson (Murdoch University)
Farming Group Participatory Research Network: Monaro Farming Systems, Tablelands Farming Systems, Bookham Agricultural Bureau, Central Ranges Grasslands Society, Purlawaugh NSW Farmers, Boggabri Grazing Group, ASHEEP, Southern Dirt

Project Aim

This project aims to reduce the phosphorus (P)-dependence of Australian temperate pastures by expanding the use of high yielding pasture legumes that have lower fertiliser-P requirements.

Phosphorus is the primary nutrient input that drives legume growth and nitrogen fixation in the pastures of southern Australia. It underpins high productivity and profitability. However, P-fertiliser costs have doubled since 2000 and a tightening in future supply seems inevitable. Both factors are expected to lead to a steady increase in the fertiliser-costs of production.

It is estimated from previous

research (Simpson et al. 2014) that it will be feasible to develop pasture systems that require ~30% less P fertiliser annually by promoting and developing the use of pasture legumes that yield better in low P soils and have lower 'critical' soil-test P requirements for maximum yield than the mainstream species and cultivars used presently across southern Australia.

The project builds on research that has shown that P accumulation in a grazing system soil is significantly reduced when it is managed at a lower soil test P concentration (Simpson et al. 2015), and on work that has identified high-yielding pasture legumes with lowered P requirements (Sandral et al. 2015). Together, these innovations mean that low-P grazing systems are now within reach. The novel pasture systems will also reduce the risks of P loss from agriculture to the natural environment and will reduce input costs.

ASHEEP Involvement

ASHEEP has two trial sites located in Grass Patch & Neridup. The sites were chosen for their sandy, low nutrient soil profiles. The sites were sown to Serradella in 2017 and will be treated with low, medium and high rates of P fertilizer to determine the effect of these treatments on Serradella production.



Brad Nutt from Murdoch sowing the Neridup site to serradella. Each year for 3 years low, medium and high rates of P fertilizer will be applied and the serradella production response will be measured.

*Early bird closes
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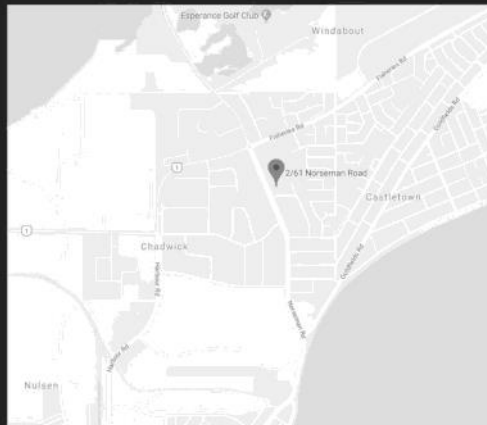
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ASHEEP is a member of the WA Shearing industry which entitles our members to access the benefits of the WASIA. Some of the WASIA benefits that are available to ASHEEP members include-

- Use of WASIA Website to advertise and find shearing & training events, employment opportunities
- Access to direct Prime Super support and assistance relating to your superannuation funds;
- Discount Personal Accident, Illness, House and Motor Vehicle Insurance – McKenna Hampton;
- Access to Legal Services with at preferential rates;
- Membership & Shoprite Card – Access to

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- Some Professional Services (dental, optical);
- Travel Services;
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<http://www.wasca.asn.au/>

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