

## January 2019 Agronomy News

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### Seed orders now being taken for:

Lentils- *PBA Hallmark XT*  
Vetch- *Timok*  
Wheat- *Beckom, Razor CL Plus etc.*  
Barley- *RGT Planet, Fathom*  
Canola- *44Y90, 43Y92, 43Y23RR, 43Y29RR Bonito, Stingray*  
Medic- *Parabinga, Paraggio, Sultan SU*  
**All subject to availability**

### 2018 observations

Stubble retention- moisture conservation value very noticeable this year.  
Soil type- the sandhills yielded surprisingly well  
Frost- severe events in August and September caused stem damage in cereals and foliar dessication in pulses.  
Kord CL Plus- the hunt is on for a replacement

### **Crop Diseases:**

More crown rot, late stripe rust, bacterial blight in field peas exacerbated by frost, ascochyta mutations in chickpea mean less resistance.

### **Summer rain:**

The last pair of rain events have varied widely; 20-190mm. The breakdown of IMI residues will be relative.

### **Rotations:**

Spartacus paddocks may need to have Spartacus resown on them for IMI residues and volunteer barley. If so, rhizoctonia. Loose smut and net blotch will need to be managed

### Seed treatments

**Evergol Energy** is a new formulation from Bayer AgroSciences to replace *Evergol Prime*. They have reduced the penflufen concentration and added prothioconazole and more importantly, metalaxyl to pick up crown rot and improve rhizoctonia suppression. Use rates are 1.3-2.6L/t, or \$71-142/t.

**Rancona Dimension** has been a great value for money product for suppression of rhizoctonia and crown rot in cereals, whilst also controlling loose smut in Spartacus CL barley. Use rates of 3.2L/tonne is \$123/tonne. 800mL controls loose smut for \$31/tonne

**Evershield** remains the go-to product for field peas, lentils and chickpeas at 2.0L/tonne. Especially active on black spot in peas.

**Imidacloprid** at 1.2L/tonne was brilliant last year at controlling Russian Wheat aphid for many weeks.



**New lentil variety- PBA Hallmark XT**



A new Clearfield tolerant medium red lentil was formally released this year. We have been watching this one (CIPAL 1422) in NVT and Southern Pulse agronomy trials for the last 3 years.

PBA Hallmark XT is a logical replacement for PBA Hurricane XT. The Ultima NVT has been plagued with frost over the last two years, but observing all Victorian and SA Mallee NVTs shows a 5% yield advantage.

Hallmark shows a height advantage over Hurricane, and noticeable better winter growth vigour

Variety	Market	Asco foliar	Botrytis	Relative yield (%) 5 years Mallee NVT
PBA Hallmark XT	Medium red	MR	R/MR	105
PBA Hurricane XT	Small red	MR	MR/MS	100
PBA Jumbo 2	Large red	R	R/MR	109

Some farmers are taking the longer-term view that they need to bulk up legume seed in 2019 for the following year.

We are taking orders now for **PBA Hallmark XT**- be quick!

**Mid maturity wheats- fight against frost**

This list is the pick of longer maturity wheats suitable for late April/ early May sowing. **Beckom** is probably the pick of them with high stable yields, CCN resistance and boron tolerance. **Sherriff CL Plus** has no 2017 NVT data, but the 2016 results show consistent 7% yield advantage over Kord CL plus over the Pinnaroo, Ultima and Kyalite sites. Sherriff has a weak root disease package, so it probably needs to follow a legume or canola break crop.

Variety	Maturity	Grain quality	Comments
Beckom	Mid	AH	Very susceptible to septoria
Cutlass	Mid-late	APW	Yellow leaf spot MSS
Trojan	Mid late	APW	
Estoc	Mid late	APW	
Sherriff CL Plus	Mid late	APW	Moderately susceptible to CCN Very susceptible to crown rot No boron rating yet

**PEARSONS**

Pearson's Grain and Transport  
Swan Hill Stockfeeds

### Summer weed control

With the rain event on 13-14/12 we expect to have boomsprays rolling prior to Christmas, and as it turns out, for a time after. Summer rains have touched a fair area in northern Australia, so triclopyr supplies will be tight.

Brett has secured a small volume of exceptionally priced amitrole, so this will be excellent for double knocking with Optical Spray units mixed with paraquat

#### **Optical Spray Technology**

There will be quite a bit of double knocking for fleabane and thistles, to follow up broad scale spraying.

Certain products covered by APVMA permit 11163 glyphosate, Sprayseed, triclopyr, metsulfuron, clopyralid

Products with registrations for use with OSST; amitrole, paraquat, 2,4-D amine, fluroxypyr, Tordon 75-D, Alliance.



A new fleabane seedling- December 2018

#### Double knocking

Hard to kill summer weeds such as fleabane, whip thistle, sow thistle and any surviving melons from a broad field spray application will require a second knock. Easy (and therefore fast) to kill weeds such as heliotrope, caltrop, volunteer cereals lose colour or die off in a matter of days after boomspraying.

The hard to kill survivors will remain green and can be picked off with either a broad spray of paraquat, or an Optical Spot spray with paraquat + amitrole, or paraquat + triclopyr. Using OSST contractors is viable up to 30% weed cover, due to the savings in lower chemical use.

#### Optical spot spray technology contracting

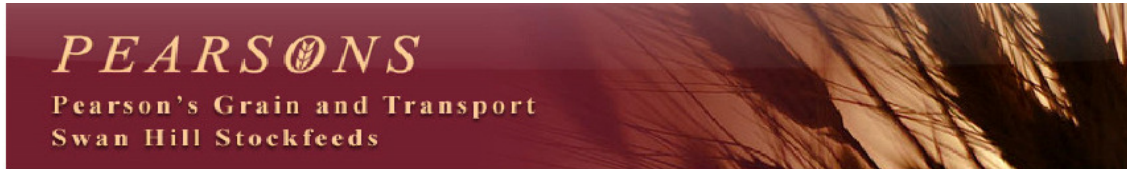
Optical spot spray technology (OSST) uses infrared and visible red spectrum imagery to fire pulses of concentrated spray on individual weeds. Water rates can be manipulated from 100-140L/ha of the actual pulse for weed coverage and dust management.

#### **Damien Healy (WEEDit) 0428 568893**

Damien runs a 4000L, 36m Croplands WEEDit. Rates around \$300/hr + GST + fuel. Working ground speed 10-16km/hr

#### **Coby Pearce (WeedSeeker) 0439 154909**

Coby runs a Landcruiser drawn Weedseeker. Rates start from \$9.50/ha including fuel.



## Predicta B root disease soil testing- new diseases added



Dr Alan McKay (SARDI) has now expanded the disease list for the **Predicta B** soil DNA test. The tests work by measuring the amount of specific pathogen DNA as a percentage of the weight of the soil/stubble sample.

The new diseases are reported in a new section at the bottom of the report as they have not yet been fully calibrated against potential yield loss- however they are a very informative guide to assist crop choices. The new diseases under evaluation include common root rot, Pythium, yellow leaf spot, ascochyta in chickpeas and phytophthora root rot. This means there is additional value over and above what the Predicta B gave us previously.

Some very interesting and important trends came out of last years' testing;

Crown rot- more common now in the southern region under direct drill farming. Barley is a bad host, but not necessarily showing as much yield loss as wheat

*Rhizoctonia*- multiplies (sometimes "explosively" all through the growing season right up to spring. Multiplies effectively even through cold and dry periods of the growing season

*Pratylenchus neglectus*- Scepter and Scout were the highest multiplication (7x and 6x respectively)

*Pratylenchus thornei*- Grenade CL one of the highest multipliers

Given we are likely to chase the 2019 season with a high proportion of cereal, using the Predicta B will be essential for many situations; eg. Barley on barley, Scepter wheat on Scepter wheat, third cereal in a row.

A Predicta B test is \$235 + GST- bear in mind there is a different soil probe and sampling procedure to nutrient testing.



## Grazing crop stubbles- think about it now

As soon as headers pull out of barley stubbles, the sheep will be going in with urgency. As we do so, we should also think about what we need to achieve, and put some rules in place so we don't cost ourselves.

1. Protect the soil. Should we bare the paddock out and cause erosion, it could be ongoing for many months- the effect on next years' crops and subsequent ones could be catastrophic
2. Meet livestock outcomes. This is best summarised quickly as managing the sheep for an economic outcome, and maintaining a health standard, which are both closely linked

Protect the soil- we need 40-50% ground cover (about 1.5t/ha stubble) to prevent erosion. Cereal stubbles this year are lighter than normal (about 1.5t/ha on medium to heavier country right now), and more nutritious so the sheep will eat more. It will be tempting to get the best out of the stubbles, but at potentially great cost with loss of soil and poor crop performance on scalded sandhills next year.

Meet livestock outcomes. A freshly harvested barley crop of 2.0t/ha on light ground may leave up to 100kg/ha grain on the ground (25 grains in a 31c x 31cm quadrat). However, the last 40kg/ha of grain is unobtainable (10 grains in a quadrat), so at that point sheep lose condition quickly as they wander around trying to find grain. Prior to this happening, either supplement with grain in a feeder or spread lupins/peas, or move them to another paddock.

Health issues-

Pulpy kidney

Hopefully the ewes received a booster vaccination of 3 in 1, 5 in 1 or 6 in 1 at shearing to raise the immunity to enterotoxaemia. Some of the barley crops on heavy ground will be short and leave quite a number of grain heads behind after harvest- this access to a high grain density all of a sudden can be a pulpy kidney risk.

Vitamin E

For those of us old enough to remember 1982, there was a sheep condition some referred to as "dry summer disease". Sheep were fed on a predominantly oat grain diet for most of the summer. Most affected were lambs and hoggets, and they showed ill-thrift progressing to inability to walk or stand, and then death. We now know this to be Vitamin E deficiency. Green feed is rich in Vitamin E, whereas dry feed has very low levels and grain has practically none. Older and bigger sheep can store reasonable quantities of Vitamin E in the liver for metabolising in tough times. Lambs and hoggets don't have the same liver capacity, nor the background time to have accumulated Vitamin E.

**An injection of Vitamin ADE at the nominal cost of 30 cents a head would prevent this issue.**

**Late summer and early autumn- we will discuss this in a later newsletter. The challenge will be maintaining a condition score 2.5-3 on ewes on a diminishing standing feed base and quality. By then the farm will be looking quite bare. That's were a stock containment area and including hay as a fibre source is valuable.**

**Take home messages: Maintain 50% soil cover, maintain ewe condition score 2.5-3, supplement or move on when residual grain is 40kg/ha**



**Vetch update**

The extended dry period has cleaned out the stocks of 2016 and 2017 vetch and medic hay, leaving a deficit of protein hay going into the 2019 autumn and winter.

This will offer price support for vetch hay in 2019 at the very least. There is a scarcity of Timok and Volga seed, and growers are forced to use older, less productive varieties such as Rasina and Morava.

Forward thinking hay producers will source fresh parent seed of Timok and Volga to set themselves up for the next few years.

New variety- **Studentica** will be released in the Spring of 2019. It is a very early flowering selection from Blanchefleur. With its fast winter growth it will most likely be adopted as a sheep grazing option. Product evaluation research results just posted.

	Waikerie 2016 August 15 cut (t/ha)	2015 SA trials state av. Hay yield (t/ha)
<b>Studentica</b>	4.81	3.09
<b>Morava</b>	3.69	-
<b>Rasina</b>	3.96	2.86
<b>Timok</b>	3.75	3.15
<b>Volga</b>	4.21	3.06

Data courtesy Pasture Genetics/ NVIP



**What's pushing faba bean prices?**

There is some chatter about faba beans, especially given they are trading at \$800/t. The long-term average is \$300/t, and the most recent high was \$600/t.

Several unique conditions have lined up to create this market force; dry conditions in the UK, France and Baltic states has drastically lowered global production of faba beans. The dry in Australia needs no more mention, but also the renewed Egyptian political stability has shored up its currency and increased her capacity to pay.

Egypt usually imports around 500,000 tonnes of beans,

New varieties: **PBA Marne** is a conventional early flowering type with more reliability in low rainfall areas. **PBA Bendoc** is an IMI tolerant mid-flowering variety. Both varieties have a yield advantage over Samira and Fiesta VF in sub 2.0t/ha areas. Unfortunately, parent seed for both are sold out, following unprecedented interest from traditional faba bean growing areas

Hot tip: Most Australian beans hit the water in March; bean seed coat colour deteriorates with age, so prompt shipping is important.

**Drought continues in India's north-east**

The New Indian Express (28/12) details the ongoing dry affecting the Indian rabi (winter) crop. The Indian government has declared drought over the rabi crop, with 134 administrative districts showing 49% less rain than average. Also importantly the final monsoon event should have happened by end of December- all of which lends support to the wheat and pulse market.

**Getting paraquat to work**

Paraquat (and to a lesser extent amitrole) is our rotational tool for glyphosate.

Extracting good results with double knocking sowthistle with paraquat is essential in preventing resistance developing to both glyphosate and 2,4-D, as is the case in the Northern wheatbelt. As a side-note Those guys up there had warning signs of glyphosate and 2,4-D resistance developing in sowthistle by what is called "rate creep", where over a series of years it took increasingly higher rates of herbicides to kill any given stage of weed size. Weed survivors typically looked sick or brown, but then recovered enough to flower and set seed.

Tip 1: *Increase water rates.* Paraquat is a contact product, so coverage and therefore water rates are totally different to glyphosate mixes. These are the label application details:

Weed size	Water rate
Seedling weeds up to 2 cm high	100L/ha
Weeds 2-5 cm high	150L/ha
Weeds 6-10cm high	200L/ha

Our fruitgrowing neighbours have been successfully desiccating large weeds with paraquat and Sprayseed with appropriate water rates and product rates for many years

Tip 2: *Add surfactant:* The amount of surfactant in today's paraquat is minimal. Use either Wetter 1000 @ 100mL/100L or if temperatures are above 28C, use Infiltrator or Bio-Aid oil at 500mL/100L to increase droplet retention as well as reducing evaporation.

Tip 3: *Night spraying increases activity:* Best results from night spraying at lower temperatures and higher humidity. Avoid inversion layers as paraquat can still burn leaves and fruit if significant off-target deposition were to happen

Tip 4: *Safety first:* Use appropriate PPE, not forgetting eye protection and breathing mask

**Spray or not to spray- Picking inversion layers**

Radiation inversions are common most nights in inland areas with flat terrain. They are extremely risky for elevating pesticide particles up to a high laminar flow which can travel in a different direction to the surface wind direction once the inversion layer actually breaks down

***Watch for these signs:*** Cumulus clouds (puffy, cotton wool clouds) that form during the day collapse later on

Dust from vehicles on unsealed roads or sheep in paddocks hangs in the air or moves slowly sideways as a mass.

Distant or faint sources of noise become very audible