

AUGUST 2017 AGRONOMY UPDATE

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Green Peach Aphid and Beet Western Yellows Virus Quick notes

Early sown crops are more prone to BWYV

BWYV does more damage when it infects the crop in the early vegetative stage when the plants are young.

Canola crops with a robust nutrition package had more resilience / tolerance to BWYV in 2014

Crops without insecticidal seed treatment (Gaucho / Poncho / Cruiser) will definitely have much earlier invasion by GPA.

Some varieties appear to exhibit BWYV more than others, and Clearfields show different symptoms to TTs

Limiting the spread of BWYV may be of benefit to susceptible pulse crops such as lentils

Recommended treatments for GPA

Firstly we need to recognize that historic use of pirimicarb (*Pirimor/ Aphidex*) on GPA in our horticultural regions means there is close to 100% resistance with this product. (Whereas pirimicarb is still active on RWA). Synthetic pyrethroids are also 100% resistant, but organophosphates (dimethoate and chlorpyrifos) are considered moderately resistant.

Paraffinic oils are registered for suppression, however viscous vegetable oils will give a similar result

Do we spray immediately?

Not necessarily- predator insects are probably keeping aphid multiplication in check, especially if neighbouring pulse crops have not had insecticides sprayed on them. However, we only need a 40kg/ha yield response to pay for Transform

Spray technique

Transform is partially systemic in the xylem (water conducting tissues) and has some translaminar action. It still requires a high water rate (100L) and Wetter 1000 for leaf retention. Transform is considered friendly to beneficial predator insects.

Same applies for oils with coverage requirement. Some GPA will reside under the leaf and be somewhat protected, but the winged adults will very vulnerable to oil treatments.



Product	Rate	Activity	Cost (\$/ha)	Action	Beneficials
Transform WG	48g/ha + N.I.S.	Control >90%	16	Systemic	Safe
Chemtrol	2L/ha	Suppression 75%	6	Contact	Safe
Infiltrator	2.4L/ha	Suppression 75%	10.80	Contact	Safe
Dimethoate	350mL/ha	Suppression ?%	2.80	Systemic	Destructive

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Pearson's Grain and Transport
Swan Hill Stockfeeds

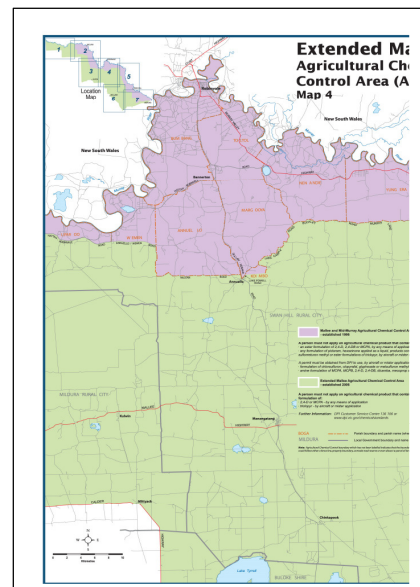
Phenoxy herbicide use in August

The Mallee Agricultural Chemical Control Area restrictions come into force on August 1. The use of chemical products containing iso-octyl ester MCPA (eg. LVE 570, Tigrex) cannot be used east of the Calder Highway.

We can utilise **Amine 625** at 60% of full label rates provided cereal crops have two tillers and a mainstem. Typically 600-800mL/ha will control turnips and mustard with excellent crop safety; Victory can be added for fleabane and skelo control, Dicamba can be added for hard to kill legumes (up to first node and watch high temps).

Zintrac is compatible with Amine 625, and mixes with Victory and Dicamba.

Amine 625 is non-volatile, however physical drift management is still important (including nearby canola). Refer to GRDC drift management guidelines.



Extended Mallee ACCA in depicted in green



Disease management in pulses

Whilst July has been dry overall, the series of light showers has promoted the release of spores from old pulse crop residues.

For example **PBA Hurricane XT** has a foliar rating of MR for asco and MS/MR for botrytis. The minimum coverage will be a mancozeb or chlorothalonil with the second grass spray, a carbendazim prior to canopy closure, and a chlorothalonil at the commencement of podding to prevent seed staining.

Talk to us about a *preventative* fungicide programme, as well as timely crop monitoring for leaf assessments.

Vetch Brownout

Very shortly vetch will add 500-1000kg/ha dry matter, giving us a reserve of nitrogen for two years and ground cover over summer. Historically a glyphosate/ 2.4-D or Victory / Metsulfuron mix has been employed. Metsulfuron does help with residual activity on caltrop and heliotrope, but we may need to keep the door open for TT canola if canola prices rise.

Be aware there is a 34 month plantback for TT canola and previous IMI use; in this case we can still use met, but we would need to order Clearfield canola seed very early (September-October).

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Missed topdressing? Reach for UAN 32

Understandably some people held back from topdressing until a decent rain improved yield potential.

Most cereal crops have finished tillering (first node), and some early sown **Scepter** wheat crops are at the second node. We can sustain the secondary tillers and increase head size with a shot of nitrogen, and a very effective way to do this is an application of **UAN 32** liquid N.

UAN is a soluble mixture of urea and ammonium nitrate. Having the ammonium nitrate component has double benefits as it is immediately available to the plant via the leaves, and is not volatile.

There are always concerns about leaf effects, and the quick summary is;

1. Bronzing is a very temporary and non-injurious response to a slight loss of leaf water
2. Leaf spotting can vary in severity from very minor to moderate spot burns. Spotting is associated with the ammonium nitrate component (also UAS can do this) as AN is viscous with a high salt index
3. Leaf burn on leaf edges and tips by the rapid uptake of the urea component. This is usually at high rates and warm air temperatures.
4. Using some water (20L) reduces leaf effects
5. Leaf effects can persist for a couple of weeks. So long as the relative area and severity of the effects are minor, the improvement in overall leaf area at flag leaf emergence is highly profitable

Streaming nozzles are desirable for reducing leaf bronzing, however at low product rates and cool temperatures (<26C), flat fan nozzles are fine.

We can combine fungicides and UAN32 very effectively in the one application- we often avoid EC formulations such as propiconazole as the oily solvent leads to a little more leaf burn. Many years ago we would see more dramatic effects from UAN + Tilt EC or UAN + Bayfidan EC than Bayfidan WP formulations.

We can reliably use tebuconazole and **Prosaro** as they are SC (suspended concentrate) formulations without oil. These will be very common mixes for Spartacus CL barley (net blotch) and Scepter wheat (stripe rust).

Trace elements- UAN 32 is only partially compatible with zinc sulphate, although adding water in the mix improves nozzle blockages. **Zintrac** and **Coptrac** are fully compatible with UAN, and is a magnificent curative for rhizoctonia and yellow leaf spot.

In short, there are many growers chasing yield as grain prices increase because the higher yields reduce the overall cost of growing and harvesting each tonne of grain. We use lower rates in the Mallee (40-60L/ha), so flat fan nozzles are ok for applying UAN or UAS so long as we work around the temperature restrictions.

Talk to us at SHSF for UAN 32 or UAS supply- either delivered direct to farm, or pick up in our yard, bulk or shuttles.

Should rains continue, topdressing can recommence as normal- urea is still available ex-Geelong or Murray Downs

Shop: 50 332880 Doug: 0418 527849 Brett: 0438 324591

The Green Revolution

The Green Revolution article is to make us all aware of the advances in crop breeding that increase our profitability. The breeding is somewhat invisible to us, but in fact there have been great genetic gains via improved yield traits and defensive traits.

Prime examples- Frame wheat (boron tolerance plus adaption to sandy soils), dwarf barleys, semi leafless field peas, new generation conventional lentils, Hurricane IMI tolerant lentils, improved ascochyta resistance in chickpeas (remember the challenges with Dooen?).

There have been massive gains with canola. The reason is the wide diversity in germplasm with **brassica napus** in Canada and Europe, contributing to early vigour and plant architecture leading to flower density. There has also been the novel incorporation of blackleg genes from **brassica sylvestris**.

We then select for early maturity out of those genetic accessions, then incorporate herbicide tolerance and screen the progeny in our harsh climate to select elite commercial material.

Here is a snapshot of yield progress in 8 years, expressed as the relative performance of Clearfield canola hybrids in the Mallee NVT trials over 5 years

NVT Mallee data 2012-2016

Hybrid	Year of release	Comparative yield in 1.0t/ha bracket	Comparative yield in 1.5t/ha bracket
43Y92	2018 (?)	145%	117%
44Y89	2015	123%	108%
44Y84	2010	105%	105%
Hyola 474CL	2011	106%	100%
43Y85	2010	90%	98%

43Y92 is an exciting prospect for next year- it has been in NVT for a short time, so the comparative yield may change down the track. However, the breeding companies use the old and current varieties as checks in the evaluation trials, so invariably the replacement represents a yield improvement for the same crop inputs.



44Y89 (left) and **Banker CL** (right) at Piangil late July. Both are replacements for 44Y84. **Scepter** wheat averaged 280 kg/ha more than **Yitpi** over the last 5 years of NVT trials

