

Crop Problems 2005

Season Recap

2005 was not an easy year – it started off brilliantly with very good summer rains (1 in 30 year event) in the southern and central Mallee. The Wimmera did get some rain but nothing like the Mallee. Then it stopped raining until the second week in June - there were dire predictions in the media about the season, some learned scientists were even arguing that cropping in our area was not sustainable! Many people took heed from the negative predictions regarding the season and did not sow much crop dry. Sowing started in earnest in the middle of June and by mid July most of the planned cropping area was sown.

August and September were generally dry months (except for parts of the Mallee which seemed to get a dream run this year). Those who did sow dry got their crop in on time but some suffered from the dry conditions in September. Later sown crops were more resilient to dry conditions at this time as they were not as advanced. It started raining again on September 29 and October was an above average rainfall month – follow up rains in early November gave late sown crops a bit of boost. The unusually cool conditions in October (no temperatures over 28 degrees were recorded) were perfect for finishing off crops – it surely was a very mild finish to the season.

Main Crop Issues

1. Crop yields

Pulses

It was the best pulse crop year for a long time! Field pea crops yielding close to 4t/ha have been reported from the Mallee – this is unbelievable especially since wheat yielded closer to 3t/ha on the same farm. Similar stories in the Wimmera for lentils and chickpeas. Pulse crops really responded to the late soft finish – pulses do a lot of growing late in the season and if it is cool and moist they keep flowering and setting seed.

Canola

Canola crops were very mixed and oil contents were very low. Canola is a crop that needs to establish early to yield well – in many cases canola followed the expected pattern, late sown – slow growth over winter – poor yield. However, some crops performed surprisingly well – it is not clear how or why. The reason why the oil content was low is another mystery. We always argue that in years with a tight finish the protein content goes up and oil goes down – this year it was a soft mild finish and the protein content should have gone up but it did the opposite. Could the massive load of Rutherglen bugs have been responsible? Could the very high level of infection of blackleg have been responsible?

Wheat and Barley

Generally the central and northern Mallee had a good cereal year – the rain in September certainly helped. Many farmers grew 3 to 4t/ha of wheat and 4 to 5t/ha of barley. The southern Mallee and northern Wimmera was a different story, August and September were dry and for those crops grown on soils with sub-soil limitations the crops hit the wall in late September and many paddocks were on the soil Crop Lower Limit (Wilting Point) for about a two week period before the rain in late September. This occurred close to flowering and many crops aborted flowers and there was no grain set at all. These crops did not show the typical ‘tipping’ that we see in wheat when the season has a dry finish – heads that looked ok from a distance but there was little grain in these heads on closer inspection! It was thought that there could have been a

confounded problem with low Copper as well, although grain samples taken at harvest from suspect paddocks and tested for micronutrients all showed acceptable levels of Copper. For the Wimmera and those cropping soils which do not have severe subsoil limitations, the crops just made it through September and when the rains came in late September and October these crops responded accordingly and finished off as expected with 3 to 4t/ha yields.

2. Diseases

Stripe rust was the main disease in wheat this year. Once again the main strain of stripe rust was the WA strain and we have been lucky not to have mutations of this strain complicating management decisions. We first saw stripe rust in earnest in early September and in those areas where the disease established and crops were sprayed early the yield responses were impressive. For those that sprayed late it would have been better to keep the money in the safe – late spraying after full rust development and the crop was in the grain fill stage showed little benefit. There are several articles in this Manual which address the issue of managing stripe rust. The main message is to know crop growth stages, start inspecting crops from GS31-32 (first-second node) and be vigilant when your crops get to GS37 (flag leaf emergence).

Crown rot was a problem in some paddocks and it is a confounding disease because it does not appear to follow a strict rotational sequence. Some had massive problems with crown rot to the extent that 20 to 30% of heads were affected, whilst other paddocks in the same wheat variety and in similar rotations had little or no problem. It appears that some diseases, notably Take-all and possibly *Pratylenchus* and Crown rot, appear to be strongly associated with a paddock or part of a paddock rather than necessarily a rotation. The findings of the long-term monitoring of the Systems site at Birchip suggests that Take-all in particular, was linked to particular areas in the site and did not change in level, as measured by the soil DNA test, much between seasons or previous crop type.

Canola in the Wimmera got hammered by blackleg this season. Blackleg spores are released on the first rain from old stubble and infect new growth. This year the break came in early June and the blackleg spore release coincided with canola germination – there was plenty of opportunity to infect newly emerged crops. Jockey helped a little in suppressing the disease but plenty of Beacon crops treated with Jockey had a massive amount of damage from blackleg late in the season with 50% of the stalks infected. It is a timely warning to growers to grow only canola varieties with blackleg rating 7 or better – especially in the Wimmera. If we have another late start to the season, expect blackleg to be a problem again.

Pulses got off lightly this year – besides the normal diseases such as low levels of *Ascochyta* in lentils and beans etc there were no real problems. Some chickpea growers were caught out by *ascochyta* affecting the older, less resistant varieties, but generally regular spraying kept the disease under control. The new varieties with better resistance ratings are looking good. The resistance of these new varieties mean some will require more sprays than others- know the recommended management program of your new variety before sowing.

3. Weeds

There really is only one problem and it is herbicide resistance. This year saw another large increase in the number of paddocks with Group A resistant ryegrass and also an increase number of cases of Group A resistant wild oats. Mataven also had several failures with wild oat control – whether this was resistance or problems with application is not known as yet.

A report from SA found that up to half of paddocks surveyed in the Mid-North had ryegrass resistant to trifluralin. This is a very worrying result especially since so many farmers now rely on trifluralin for ryegrass control. There are several articles in this manual that deal with herbicide resistance management.

Timely summer weed control again resulted in better crops the following year. The BCG summer weed trial showed a 0.5 to 0.7t/ha yield increase where summer weeds were controlled. There are plenty of anecdotal examples in paddocks throughout our region where this was the case (or even bigger differences). It was such a waste of the rains over the last summer to feed heliotrope rather than your crops and your profit.

4. Specific Problems

Melanism

Crop: Drysdale wheat in the Nhill district. Approximately 10% of the paddock affected with little grain set.

Symptoms: it looks like ‘Glume Blotch’ or *Septoria nodorum*, but the crop also had a purple-brown discolouration on the stem (directly below the head and also below and above the 3rd node), the affected area on the stem was very weak and soft.

Diagnosis: Melanism is a reaction to the Sr2 gene (stem rust resistance gene) which produces melanin in the glumes and stem of some wheat varieties (such as Hartog, Dollarbird and Drysdale). The melanin builds up in the glumes and causes death of the glume and pinching/shrivelling of the grain.

Melanism is not often seen and occurs mainly in years with high radiation and humidity. There are no remedial actions a grower can take except to not grow wheat varieties which exhibit this physiological problem – the benefit of growing wheat with the resistance gene Sr2 to stem rust must be weighed up against the potential losses incurred by melanism.

Flag Smut

Flag smut was observed on one farm in the Wimmera. It has been a long time since we have seen flag smut! It is usually only found in third world countries. It just shows how important seed dressings are. Flag smut spores are carried by the wind and live in the soil – those farmers near where the flag smut was found will have to use seed dressings this year! It pays to keep your eyes open.

There is no doubt that we will not have a dream run in 2006 – but let us plan for a good cropping year, keep an eye on costs and let us hope prices improve.