

Week 6 – herbicide resistance

3 August

The increased use of herbicides over time has resulted in the rapid development of herbicide resistance. The problem is now a widespread threat to cropping systems and good management practices are essential. This week, BCG asked Wimmera and Mallee farmers the following questions:

- 1. Do you suspect that there is herbicide resistance in your area? If so, which weeds and which chemicals?**
- 2. How are you avoiding herbicide resistance on your farm?**



Ross Cook – Hopetoun

Ross and Terri Cook and their son Simon farm west of Hopetoun. They continuously crop their light sand to red Mallee loam soil with 60 percent cereals and 40 percent legumes.

1: “Yes, there possibly could be resistance to herbicides in our area. I don’t know how many people are like me and have trouble distinguishing between resistance and ‘dodgy’ spray jobs.

Trifluralin appears to be losing its effectiveness on ryegrass, but could it be possible that we don’t use it now the way manufacturers meant us to use it?”

2: “I have done resistance testing and will continue to do so. To help postpone resistance I still cultivate sometimes, try and keep good chemical records, and most importantly, listen to local agronomists who are a hell of a lot smarter than me!”



Roy Postlethwaite – St Arnaud

Roy and Joan Postlethwaite farm 1600ha 24km north of St Arnaud. One hundred percent of their land is cropped, with a history going back over 25 years. They have mostly red loam soils on the west side of the Avoca River, with some Wimmera self-mulching soils. Cereals are grown on 55 percent of the property, canola on 20 percent, and legumes on 25 percent (which includes vetch hay that the Postlethwaites class as a crop).

1: “I know that there’s herbicide resistance in our area. Ryegrass is the obvious one. It’s resistant to most of the Group A herbicides, especially the fops like Hoegrass, Verdict and Targa. As for the dims, I have used Achieve which didn’t do much either. But Select still seems to be working quite well at present. It’s mainly the fops that the resistance has really shown up on.

Ryegrass resistance to Roundup is also another danger. We have been getting tests done with Roundup at the Adelaide University. They have been showing signs of resistance developing, but at this stage we cannot see it happening in the paddock. I guess people are using higher rates than they used to, and it is getting cheaper, but with the fear of Group A resistance, people are probably using knockdowns more.

I can’t say for sure that we’ve got resistance with any other weeds. We’re still getting responses from herbicides.”

2: “You can’t avoid it but you can manage it. What we’ve had the most success with as far as management goes, is growing vetch. Vetch is permanently in the rotation now, and is grown every four or five years. That’s the main management tool we are using.

We cut it for hay rather than green manuring it, purely so we’re getting a return from it, and we don’t use any grass herbicides on it. Once the vetch is cut, we spray the paddock before the ryegrass has had a chance to seed, then we stock it fairly heavily with sheep (on agistment) to stop any plants which may have escaped the

spraying. We're getting near enough to 100 percent control this way. I call the sheep my "integrated weed managers."

After the vetch, we usually grow TT canola, which gives another year of fairly good control of ryegrass using atrazine. And doing that you can keep the seed bank down.

Legume crops are often crop-topped with gramoxone when the ryegrass is at the milky dough stage. Last year we had lupins & vetch in adjoining paddocks with similar ryegrass populations. I wanted to crop-top the lupins with gramoxone, but because of the season, there was early and late ryegrass and I couldn't get the timing right to spray, so I did nothing. This year there is a stark contrast in the amount of ryegrass in the canola following the lupins compared to the canola that followed the vetch.

We have also been very fortunate that we have been able to work with the BCG for about the last ten years doing trial work on our property. This work has covered several areas, but its prime focus has been on herbicide resistance."

[Roy and Joan Postlethwaite host the BCG Herbicide Resistance Research site. The Herbicide Resistance Field Day is on 15 September 2005]



Luke Follett – Robinvale

Luke and Teneille Follett and Luke's father Leon, run a cereal and sheep property 27km northeast of Euston. Their 18,500ha consists of mainly sandy loam soil. Eighty percent of their ground is sown to cereals, ten percent to barley and ten percent to oats.

1: "No, I don't suspect that there is herbicide resistance in our area."

2: "We avoid herbicide resistance with a rotation that gives the ground a bit of a spell, and if there is trouble, we just change the Group lettering of the herbicide drums."



John Watson – Berriwillock

John and Allison Watson farm with their son Nick, who is in his second year home, and right-hand man, Andrew van Veen. The Watsons crop about 2500ha of their 3000ha property 12km north of Berriwillock, and run as many Merino ewes as possible. Half of their soils are grey loams and half red sandy loams. Forty percent of the cropping program is wheat, 20-25 percent barley, 15 percent of each of pulses and canola, and 5-10 percent hay.

1: "Yes, mainly ryegrass that is resistant to trifluralin and Group A herbicides like Verdict. There is some fumitory resistance to trifluralin."

2: "To try to minimise soil disturbance, we have gone to direct-drill this year.

Our management has been as much to contain existing populations as well as reduce creation of new populations. We are using combinations of rotations, chemicals and physical means of controlling resistant ryegrass. For example; hay, lentils (desiccated prior to harvest), using Select in canola, double sown barley, fallow, wheat or hay again if necessary. As a spin off, this also helps in controlling brome grass.

Dry years have made it awkward because trying to maintain cashflow in the short-term often compromises total weed control in the long-term.

Small patches are always difficult to control. How messy do you make your cropping program?"