

# Ways to prevent pyridine damage

By HUGH FRITH

THE Australian Pesticides and Veterinary Medicines Authority (APVMA) has registered more than 200 pyridine herbicides designed to kill broadleaf plants while leaving pasture grasses unaffected.

Pyridine herbicides include those containing aminopyralid, clopyralid, picloram, fluroxypyr or triclopyr and combinations of these. The problem with these poisons is the herbicide remains active in mulch cut from sprayed pastures and in manure from animals that have grazed on sprayed pastures until the chemicals are broken down by microbes. Aerobic micro-organisms give fastest breakdown.

And, as the APVMA regards the person who sprays the herbicide to be the "end user of the product", it is not required to warn the public that adding affected manures or mulches to garden beds can damage plant growth for up to 24 months. Tomato, potato, capsicum, chilli, eggplant, lettuce, sunflower, beetroot, silver beet, spinach, carrot, parsnip, parsley, strawberry and all legume plants are particularly susceptible to damage from these herbicides.

The pyridine herbicides most likely to cause damage are those containing the persistent aminopyralid (two registered products), clopyralid (62 registered products) and picloram (60 registered products).

**To prevent pyridine damage:**  
 ■ Use only aerobically composted manures on gardens.

Aerobic composting requires



Hugh Frith, developer of Bioweed, at Alton Downs last month.

weekly turning or stirring to ensure the process is carried out by microbes that require oxygen. Ideally, as the composting process begins, the internal temperature of the heap should reach 60 degrees. Breakdown of these herbicides will be extremely slow in heaps that are not well aerated.

Mulch registered for use in organic farming and gardening – for example, BFA-registered input – does not contain any herbicides and is safe to use. Mulches from unregistered sources are high-risk because materials are dried and baled, preventing aerobic microbe activity.

■ If you are unable to purchase registered manures or mulches and your supplier is unable to confirm the products are from herbicide-free paddocks, test the safety of the product by sowing seasonally suitable peas or beans in pots containing

registered potting mix with the uncomposted manure mixed through it or covered with the purchased mulch. Keep the test pots well fed and watered to eliminate stress.

**Symptoms of damage:**

- Poor germination or death of seedlings;
- Twisted, cupped, elongated or fern-like leaves; and
- Twisted growth and misshapen pods.

If you find manure is affected, take care to ensure good aeration during composting. If mulch has been affected, use it on beds you can leave fallow until aerobic microbes in topsoil break down the herbicide or, if space is limited, compost it aerobically. The only safe compost is compost registered for use in organic farming or gardening – the most common symbol indicating this is BFA's "Bud" logo.

## Where to go

■ YOU can find Australian product names of these herbicides on the APVMA's Public Chemical Registration Information System (PUBCRIS) page. This is at [services.apvma.gov.au/PubcrisWebClient/welcome.do](http://services.apvma.gov.au/PubcrisWebClient/welcome.do). Under Product Type, select Herbicide, then type aminopyralid, clopyralid or picloram in the Active Constituent panel. Click Search.  
 ■ YOU can find BFA-registered inputs at [bfa.com.au/PrimaryProducers/OrganicFarmingInputs.aspx](http://bfa.com.au/PrimaryProducers/OrganicFarmingInputs.aspx). This update was first published on the BFA Organic School Gardens website, [organicschools.com.au](http://organicschools.com.au)



SCIENCE IN ACTION: Producers listen as Hugh Frith explains the Bioweed concept during the Alton Downs field day.

Picture: CONTRIBUTED

## Going green on weeds

ALTON Downs Hall has hosted a Healthy Soils Group field day with Hugh Frith of Certified Organics.

Mr Frith spoke to more than 50 producers about the importance of understanding weed control practices.

The session was organised by Mick Alexander, of Grazing BestPrac, to assist landholders in sourcing options for weed control without damaging the environment or health.

"In the past two years there has been a lot of negative comment about the role of many commonly used products, such as glyphosate, that are used in nearly every backyard and on nearly every farm except those that are organically certified," Mr Alexander said.

"Science has come a long way in the past decade and now things that were thought to be safe products are no longer safe in many countries. This new weed control product is part of best practice in the future."

Mr Frith said that, in many situations, products that previously worked well were not able to control weeds as they once did and were requiring higher rates to do the job.

"Some of these products may also have an impact on the environment and on human health that was not earlier known," he said.

"We have been searching for an alternative for many years and now

Bioweed is proven to control most broadleaf weeds and most grasses."

Mr Frith explained the differences between Bioweed and chemical-based products used for decades.

"Bioweed is a biologically based product that is safe for the environment and is highly effective on most broadleaf weeds and grasses at younger stages of growth.

"Most chemicals are also more effective if the plants are smaller.

"Our products are approved organically by the BFA and NASA to be used on organic farms and can be used to control most weeds, although we are interested in evaluating Bioweed in central Queensland conditions on specific weeds, such as giant rat's tail grass, lantana and rubbervine," Mr Frith said.

"Bioweed is not a systemic product, such as glyphosate, that translocates through the plant and acts as a false phosphate but, instead, it strips the outer layer off the leaf and stops the photosynthetic pathway from working. Therefore, we need to wet the leaf well to have a good kill."

■ Certified Organics is working with Grazing BestPrac to find producers seeking an environmentally friendly product to control weeds. Phone Cathe on 07 4938 3919 for information.

## Opening the window to spray opportunities

A NEW guide could help growers avoid the worry of spray drift when applying pesticides.

Making the most of a short window of opportunity to control pests and diseases safely and efficiently in crops is often a challenge for grain growers.

Graeme Tepper, of MicroMeteorological Research and Educational Services, said this opportunity may be further shortened by unsuitable weather.

He said growers and spray applicators must be able to identify good or bad weather conditions at a local scale and react almost immediately. Mr Tepper has produced a new GRDC guide to assessing weather conditions, called Weather Essentials for Pesticide Application.

He said the booklet aimed to help those applying pesticides to understand, observe and interpret local weather conditions and micro-climates.

■ To download the guide, visit [grdc.com.au](http://grdc.com.au). Copies can also be ordered via GRDC's Ground Cover Direct on free phone 1800 11 00 44.

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