

Clinical signs of annual ryegrass toxicity (ARGT)

[Animal Health Disease Surveillance and Control - Annual Ryegrass Toxicity \(ARGT\)](#)

Signs of ARGT may appear as soon as four (4) days or as late as several weeks after animals are introduced to toxic paddocks. Occasionally clinical signs appear sooner than four (4) days. This can result from the ingestion of toxins prior to introduction to the paddock in which the outbreak occurs. Stock grazing paddocks containing annual ryegrass in districts where losses have been reported should be inspected at least once daily from October onwards to minimise losses.

Signs of ARGT are brought on by stress or activity, so when inspecting mobs they should be moved briskly for 100 to 200 metres. Animals affected by ARGT will fall behind the mob, show an unco-ordinated gait, stop and often fall over. Animals that fall over will convulse, typically throwing the head back with stiff legs. Convulsions may last for 15 seconds to 3 minutes. If the animal is left undisturbed it may appear to recover, regain its feet and rejoin the mob. Animals remaining down for long periods and exhibiting severe convulsions may die. Intermittent appearance of clinical signs is a feature of this disease.

When affected animals are found the mob should be immediately moved quietly to a 'safe' paddock with good water, safe feed and shade. Animals may continue to show clinical signs for up to 10 days after being moved off the toxic paddock (with peak deaths often occurring at four days). Not all animals that develop clinical signs will die.

For further information, contact your local veterinary officer or Dr Jeremy Allen on (08) 9368 3466.

How twist fungus reduces ARGT risk

The twist fungus (*Dilophospora alopecuri*) is carried into ryegrass by attaching itself to the same nematode that carries the bacterium. The fungus:

- hinders the movement of the nematode and reduces its ability to invade ryegrass; and
- restricts the growth and reproduction of nematodes and bacterium in ryegrass.

The fungus is fast growing. Once inside the ryegrass, the fungus colonises the seedhead and may cause it to become twisted, giving the fungus its common name. In the process, it limits nematode and bacterial development.

How to order the twist fungus inoculum

Twist fungus inoculum is available from Biological and Resource Technology Pty Ltd who distribute the twist fungus under license to the Department of Agriculture and Food . The Order Form can be downloaded from Biology and Resource Technology's website at www.argt.com.au

Order Forms must be received by Biological and Resource Technology before the end of February for delivery of the inoculum in that year. Orders received after February will be filled in the following year.

Completed Order Forms should be posted or faxed to:

Biological and Resource Technology Pty Ltd -
PO Box 1006,
Bentley Delivery Centre,
Western Australia 6983
Fax number (08) 9313 7356

Field application of fungal inoculum

The fungal inoculum is easy to apply in the field and any machinery capable of spreading solid materials can be used. Fertiliser spreaders and air seeders have been used successfully.

Key points to field application of inoculum:

- Field application should be carried out within three months of receiving the inoculum. In general, field application is best done before the end of June. It is too late to apply the fungus if tiller elongation has commenced in the ryegrass;
- The inoculum must remain on the surface of the soil to be effective. The fungus produces spores that are spread by rain, so it must not be buried.
- Application bands should run across the slope to assist spread by surface water flow.
- The inoculum should not be mixed with fertilisers at application. The recommended dilutant materials are dry sand, grain seconds (wheat, barley etc.) or vermiculite.
- It takes three to five years for the full effect of the fungus to be realised at the recommended minimum application rate.

Details of application, including paddock selection, application timing and rate of application are provided in the [Field guide for using the twist fungus \(*Dilophospora alopecuri*\) inoculum](#) (64KB pdf) Farmnote 22/2002.

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