

Onion Grass Management

Originating from South Africa, Onion Grass (also known as Guildford Grass) (*Romulea rosea*) is a perennial herb that looks like a grass, grows like an annual, and can spread rapidly on farm land. The plant not only produces abundant seed, but also corms underground to survive the hot and dry summers in Mediterranean environments of temperate Australia.

Note: this is not the same as Onion weed or Nut Grass (rarely seen in pasture, mainly undervine).

Causes

The two main causes of onion grass infestation are autumn bare ground and lack of competition from desirable pasture species. Prevention involves managing pastures to maintain above 70 per cent ground cover and maximising growth during autumn and winter.

Make sure you have a high proportion of desirable perennial species (grasses, legumes, herbs) in the pasture, maintain good soil fertility and use rotational grazing to maximise growth and persistence of perennials.

Onion grass does not respond to fertiliser as many other plants do. A glasshouse experiment revealed that the herbage yield of onion grass did not differ significantly when various rates of fertiliser were applied.

Non herbicide control methods

Summer cultivation to expose and desiccate corms provides some control, deep rip soil if compacted. Onion grass is highly sensitive to close defoliation. Cutting to one centimetre above ground at three to five week intervals reduced onion grass corm mass by 70 per cent, seed pod density by 100 per cent and plant density by 60 per cent compared with the non-defoliated control.

Cutting to five centimetres above ground also reduced onion grass corm mass by 58 per cent, seed pod density by 94 per cent and plant density by 35 per cent. Cutting at flowering only considerably reduced seed pod numbers (90 per cent), and corm mass to a lesser degree (27 per cent), but did not affect onion grass plant density.

These results suggest that more intensive grazing in the field has the potential to reduce the corms and seed produced by onion grass, and consequently the density of onion grass. However it should be noted that grazing of onion grass may cause fibre balls in the stomachs and bowels of cattle, horses and sheep. It is also suspected of causing infertility, abortion and paralysis or romulosis in sheep, and may be caused by a leaf spot fungus (*Helminthosporium biseptatum*) associated with Onion Grass.

Herbicide control methods

Chlorsulfuron, metsulfuron, glyphosate, imazapyr and imazethapyr provide reasonable control in various cropping situations. In pastures, late applications of glyphosate provides some suppression and imazethapyr can provide control in legume pastures.

It is important that spraying is conducted at the point that the old corm is exhausted and the new corm is developing approximately six to eight weeks after onion grass has emerged. This will permit enough chemical to be absorbed by the new corm to kill it.

Onion grass is very susceptible to fungus spot and rust on the leaves in July and August and this is therefore not a good time to apply foliar herbicide to it. Spraying at flowering can get rid of flowers and seeds but not corms.

Risk to clover

Products containing metsulfuron-methyl are likely to kill clover species for the remainder of the season after spraying and may effect the clover population in subsequent years. Use of a wick-wiper or rotary wiper for application of this chemical to onion grass can help to protect pasture in some situations.

Risk to native vegetation

If applied inappropriately, herbicides, particularly metsulfuron-methyl may affect beneficial native plants other than native grasses.

Management in crops and new pastures

Sow a crop or annual grass pasture the year prior to establishing a perennial. If more onion grass emerges after sowing, spray six weeks after the onion grass germinates with an appropriately registered metsulfuron-methyl herbicide.

Note: controlling onion grass prior to spring sowing is often difficult. Products containing metsulfuron-methyl may have an applicable plant-back period usually ruling out spring pasture establishment after spraying in winter. Spraying with a knockdown herbicide in spring to remove the onion grass prior to sowing may not prevent the onion grass from germinating the following year.

Source: DJS Growers Services South Australia / Herbiguide