

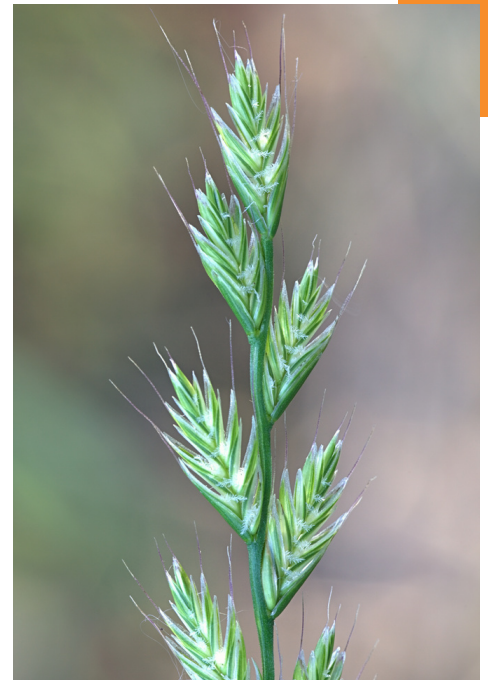
Weed Fact Sheet



Annual Ryegrass Challenges

Identifying Features: Annual ryegrass (*Lolium rigidum*) is hairless and has bright green, narrow leaves which are shiny, especially on the back of the blade. It has a wide ligule and long auricles, and the emerging leaf is folded. The base (below ground) is often reddish purple, and seedlings exude a clear sap when crushed.

Management and Impact: Many growers have introduced hay into the rotation as another option in the management of herbicide-resistant weeds. Its distribution has increased northward and westward in New South Wales to become a serious problem in winter cropping. In the majority of cases, the inclusion of ryegrass in cereal hay has little effect on domestic hay quality. Annual ryegrass has known resistance to the Group 1 and Group 2 post-emergent herbicides and is widespread. Annual ryegrass toxicity (ARGT) is caused by toxins produced by the bacterium *Rathayibacter toxicus* that infect the seed heads of ryegrass and can be a risk to livestock if ingested. Testing for ARGT bacterial contamination in export hay and straw is compulsory.



Wild Oats Management

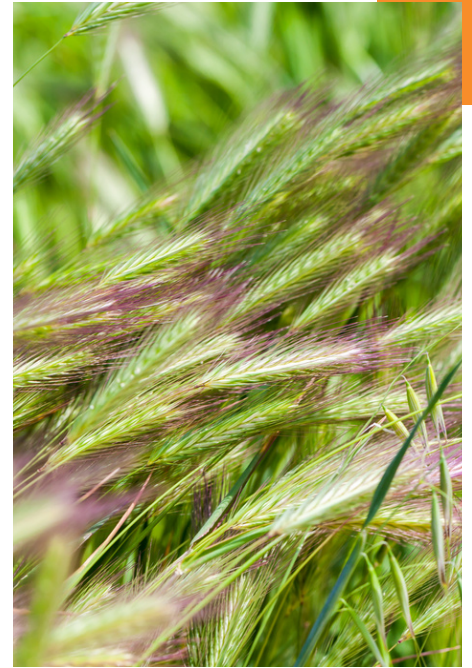
Identifying Features: Wild oats have a large ligule with no auricles, and the leaves tend to be hairy with a slight bluish hue. The emerging leaf is rolled. Wild oats, in the seedling phase, can be confused with all *Bromus* species which have tubular leaf sheaths and hairy leaves and sheaths.

Management and Impact: Wild oats are the most important winter cropping weed in northern New South Wales and southern Queensland, second to annual ryegrass in most of the southern region. They compete vigorously for nutrients and water, and those that emerge before or at the same time as the crop are more competitive than those emerging later. Most competition with the crop occurs in the first six weeks following cereal crop emergence. Left uncontrolled, wild oats have been shown to cause wheat yield losses as high as 80 per cent. The tactics of manuring, baling, and silage are normally used to manage wild oats when there has been a massive control failure in crop. Growers should be conducting herbicide resistance testing to know which herbicides are still effective in each of their paddocks.

Barley Grasses

Identifying Features: Barley grass can be confused with other grasses such as brome grasses (*Bromus* spp.), wild oats (*Avena* spp.), and volunteer cereals in early stages of development. Small barley grass seedlings can be identified by looking for remnants of the seed, which can often be found attached to the root system.

Management and Impact: Barley grasses are commonly a problem in low rainfall cropping environments where cereals are grown in long succession and dry sowing is routinely practised. They may rapidly germinate after rainfall, giving barley grasses the potential to act as a 'green bridge' for cereal root diseases like take-all (*Gaeumannomyces graminis* var. *tritici*). They are major hosts of the disease, with possible yield losses up to 80 per cent under ideal conditions. Barley grasses tend to be more dominant in the winter rainfall (southern) areas of the cropping belt. They flourish on a wide range of soil types, particularly in lightly grazed, fertile, ley pasture paddocks. Barley grass seeds are a problem in hay, causing eye injuries to livestock and reduced liveweight gains.



Brome Grasses



Identifying Features: Brome grasses, at the seedling stage, may be confused with wild oats (*Avena* spp.) because both possess hairs on the leaves and stems and have large ligules and no auricles at the base of the leaf blade.

Management and Impact: Brome grasses germinate quickly after the autumn break, causing significant problems of reduced tillering in cereals. The ability to shed a large proportion of seed before crop harvest is another characteristic that makes brome grasses a major weed.

Turnip Weed Impact

Identifying Features: Turnip weed (*Rapistrum rugosum*) grows to a height of 1 m and is covered in short, stiff hairs. The upper leaves have a petiole, and the flower petals are yellow with dark veins. Turnip weed is difficult to distinguish from other brassica species until pods form. Pods are 5 to 10 mm long and consist of two segments. The lower segment is 2 to 5 mm long, often with no seeds, while the upper segment is globular, wrinkled, and ribbed with a conical beak, usually containing a single seed. The pods do not split upon ripening.

Management and Impact: Turnip weed has shown in trials to reduce barley yields in southern Queensland by an average of 8 per cent and wheat yields by an average of 17 per cent. High turnip weed contamination within hay is also known to reduce livestock intake and taint the meat of animals grazing the hay, this can cause the rejection of the milk or carcasses at the abattoir. Turnip Weeds can also make it difficult to get an even moisture reading through the windrow and into the bales.

