

Perennial Ryegrass Staggers 'Grass Staggers'

The endophyte (*Acremonium lolii*) that grows in many perennial ryegrass pastures produces a neurotoxin responsible for the condition known as Perennial ryegrass staggers. This condition affects sheep and cattle of all ages grazing ryegrass dominant pastures during Summer and Autumn. The fungus (and therefore the neurotoxin it produces) is concentrated in the leaf sheath, stem and seed head of the pasture, so heavily grazed pastures or pastures in seed will have a higher concentration of toxin and a higher risk of causing staggers. Unfortunately this fungus grows within the plant and is not visible without a microscope so affected pastures cannot be easily identified.

The typical grass staggers syndrome occurs within 7-14 days of grazing toxic pastures. Clinical signs are usually more severe when animals are placed under pressure (e.g. being moved, yarded or in the dairy).

Clinical signs:

- Leg and body stiffness and reluctance to move
- Trembling of head and skin muscles and jerky limb movements
- Swaying when standing and a tendency to fall over leading to collapse with spasms
- Once no longer under pressure, a rapid recovery with no residual neurological effects usually occurs
- Prolonged exposure to the neurotoxin can cause permanent neurological damage.

This endophyte is present in many ryegrass pastures because it has positive effects on pasture yield and persistence. In addition to the neurotoxin it produces other chemicals that protect the pasture from a variety of insect predators, including Argentine Stem Weevil. Seed companies currently offer endophyte modified varieties of ryegrass (plus AR1) which do not cause staggers or other associated animal health problems.

Treatment and Control:

There is no known antidote for the neurotoxin that causes grass staggers and no evidence to support claims that the use of fertilisers, application of salts or minerals to the pasture or drinking water will prevent or cure staggers. Therefore controlling this condition involves minimising the amount of toxic pasture ingested. This can be achieved with grazing management (keep ryegrass pastures leafy and avoid heavy grazing pressures in Summer and Autumn), supplementary feeding (with mixed pastures, silage or grain to dilute the amount of toxin ingested) and removing affected stock from toxic pastures. Recovery should occur within 2-14 days post removal (depending on the level of endophyte in the 'non-toxic' pastures the animals are removed to).