Bermudagrass

Cynodon dactylon

Bermudagrass is a bluish-green, perennial sod grass having both rhizomes and long stems or runners that take root at the nodes. The internodes are flattened.

The seed head has three to six purple spikes and resembles a bird's foot. Along one edge of the seed are hairs visible only with a microscope.

Many varieties and hybrids of bermudagrass have been planted throughout the state.

Distribution and habitat

This plant or its hybrids are found in all regions of Texas. It is the most important warm-season perennial grass planted for improved pastures in the state. Regions: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Toxic agent

The toxic agents in bermudagrass are not known. Two of the toxic syndromes associated with this plant are related to fungal growth.

The first syndrome, bermudagrass staggers, results from an unknown tremorgenic mycotoxin produced by an endophyte (a fungus within the plant). Seen only in cattle, the staggers syndrome may result from the consumption of the stable toxin in hay or from pastures, usually in the fall.

The second syndrome produces liver damage and secondary photosensitization when the grass being grazed has a heavily moldy thatch beneath it.

A third disease, fog fever or pulmonary adenomatosis, occurs when extremely lush bermudagrass is grazed. This grass contains unusually high levels of the amino acid tryptophan, which is converted by rumen microbes to the lung toxin 3-methyl indole.

Livestock signs

Bermudagrass staggers is similar to dallisgrass staggers except that there is less hyperexcitability. Signs become pronounced upon exercise and there may be:

- Head bob
- Muscle tremors
- Incoordination
- Collapse when forced to make rapid movement
- Inability to regain feet
- The condition worsens if the animal is assisted.

The staggers syndrome is reversible, and most cattle recover unless there is a fatal accident.

Animals with liver damage caused by bermudagrass have photosensitization. Those with fog fever have severe breathing difficulty, and can die from lack of oxygen.

Integrated management strategies

Remove cattle with staggers from the toxic hay or pasture, supply them with feed and water and allow them to remain as quiet as possible. Complete recovery may take up to 3 weeks.

Hay and grass in the pasture should be destroyed.

Place animals with secondary photosensitization in shade, feed them sun-bleached hay having no green color and treat them symptomatically. Feeding monensin, a feed additive that shifts the population of rumen microbes, may prevent fog fever problems.

Vacate pastures causing the problem for 14 days.

Seed head ↗

Whole plant ↓