

Fescue in the Horse's Diet

By Bayer Equine Connection

Minimizing the Risk to Your Horse's Health

Tall fescue is a grass which grows on approximately 35 million acres of land in the United States. As many as 700,000 horses may graze fescue pastures or be fed fescue hay each year.

What many owners may not realize is that there are some significant health risks associated with horses eating endophyte fungus-infected (EI) tall fescue. Some of these problems can be minimized with careful management of horses and pastures.

ENDOPHYTE-INFECTED FESCUE

Recognize first that it is not the fescue grass itself that is toxic to the horse, but rather an endophytic fungus known as *Acremonium coenophialum* which lives within the plants and seeds. When the horse ingests the grass, it is steadily poisoned by the endophyte.

Endophyte-infected (EI) fescue grass will look perfectly healthy and nutritious to the eye. The only way you will know if your pasture grass or hay is infected is through laboratory analysis.

Because of the horse's extreme sensitivity to the toxin, fields with as little as 5-10% infection rates can pose potential hazards to broodmares and foals.

PROBLEMS IN THE HORSE



The most significant problems associated with endophyte-infected fescue relate to the horse's reproductive performance. They include:

- Lower Conception or Breeding Rates
- Abortions
- Prolonged Pregnancy (normal gestation averages 342 days)
- Foaling Difficulty (dystocia)
- Thick or Retained Placentas
- Lack of or Poor Milk Production (agalactia)
- Higher Rates of Newborn Foal Death
- Increased Risk of Laminitis

Other less significant reactions to the endophyte-infected fescue may be loose feces or diarrhea and more profuse sweating.

Research in cattle has demonstrated that EI fescue also reduces growth and body condition. A similar effect could occur in horses.

MANAGEMENT PRACTICES

While research shows that horses seem to be able to rid their systems of the endophyte toxin and recover from its ill effects in as little as 30-45 days, a good rule of thumb is to remove broodmares from endophyte-infected fescue 60-90 days prior to foaling.

Replace the forage with a balanced ration that includes high quality hay, grain and supplements. If you live in an area that produces fescue hay, make sure you are not inadvertently buying hay from an endophyte infected field. The toxin can remain in fescue hay for several years after it has been cured and baled.

To dispel any doubts, choose a different variety of grass hay or feed a legume such as alfalfa. Even if a producer is advertising endophyte-free (EF) fescue hay, it would be prudent to have the hay tested before purchasing and feeding it.

ENDOPHYTE-FREE FESCUE

To eliminate the problems associated with endophyte-infected fescue and livestock production, researchers have developed endophyte-free (EF) tall fescue seed. Unlike some fungi, *Acremonium coenophialum* is only spread via infected seed. If a field is established using endophyte-free seed, it should remain that way unless contaminated by seeds from infected fescue.

When replanting a pasture, it is extremely important that all infected plants and seeds be destroyed prior to sowing. Seeds may remain viable in the soil for a year or more. Discuss the best methods for eliminating stands of infected fescue with an agronomist, toxicologist or your county extension agent. It is generally recommended that an interim crop, such as an annual forage or row crop, be grown for at least one season before replanting fescue.

If you choose to replant fescue, make sure the seed is certified as fungus-free.

OTHER MANAGEMENT CONSIDERATIONS

If it is impractical to replant your endophyte-infected fescue pastures at this time, it will be especially important to heed these management practices:

- Have your pasture tested to determine the level of infection.
- Renovate the pasture by incorporating a legume such as alfalfa or clover.
- Mow fields prior to the development of seed heads to keep the level of infection in check.
- Remove horses from EI pastures in conditions of extreme heat or drought.
- Remove broodmares from EI pastures 30 days prior to breeding and 60-90 days prior to foaling.
- Keep accurate records of breeding and anticipated foaling dates.
- Notify your veterinarian if your mare has been grazing EI fescue prior to foaling.
- Monitor the mare closely during late pregnancy.
- Contact your veterinarian if impending signs of birth, including udder development, relaxation of vulva and muscles around the tailhead fail to develop within the expected timeframe.
- Attend the birth.
- If mare fails to show signs of normal birth progression, contact your veterinarian immediately.
- Keep mares and foals off of EI fescue until after weaning to prevent agalactia (poor milk production).

ONGOING RESEARCH

Tall fescue is the most widely grown forage grass in the country, and much of it remains infected with the *Acremonium coenophialum* fungus. While research has revealed a lot about the endophyte's effects on horses and livestock, scientists will continue to tackle the problems associated with feeding EI fescue.

Veterinary treatments are being developed to offset abnormal pregnancies, difficult births, and poor milk production. Further studies will perhaps reveal other concerns relating to growth, development, body condition and performance and what can be done to prevent them. Until then, it is important to analyze your pastures and manage your horses according to what you find.

If you have any questions or concerns, contact your veterinarian or a qualified equine nutritionist.