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Special Report

13 Facts About Fescue Toxicosis

Round broodmares grazing on lush pastures might make an idyllic picture, but danger could lurk in the grass. Fescue toxicosis can cause gestational complications and potentially kill both mares and their unborn foals; however, tall fescue itself isn't behind the disease. Rather, a specific chemical produced by a fungus that can live within the tall fescue plant is the culprit. The fungus benefits the plant but is devastating for pregnant mares that graze on pastures or eat hay or bedding containing infected tall fescue. In this special report, you'll learn more about this disease, its cause, prevention, and available treatment.

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Microscopic alkaloid-producing endophytes in pastures containing tall fescue could threaten the health of your mare and her future foal.

1 Tall fescue is one of the most widely grown perennial grasses in the world and covers approximately 37 million acres in the United States alone, according to the University of Kentucky. **TheHorse.com/164765**

2 An endophyte (a fungus that lives within a plant) infects certain tall fescue varieties and produces the alkaloid ergovaline, which can be toxic to grazing animals. **TheHorse.com/129393**

3 The endophyte has a symbiotic relationship with tall fescue: The plant provides the endophyte a place to thrive while alkaloids make tall fescue insect-resistant, as well as drought and grazing tolerant. **TheHorse.com/138059**

4 Endophytes live between the plant's cells. **TheHorse.com/156234**

5 Researchers have found that ergovaline, causes vasoconstriction in all classes of horses; however only broodmares appear to be negatively affected by this. **TheHorse.com/156234**

6 In a natural setting, endophyte infection is passed from a parent plant to one it produces; an endophyte-free plant cannot become infected through endophyte exposure. **TheHorse.com/156234**

7 Pregnant mares consuming endophyte-infected tall fescue are at risk of developing fescue toxicosis. **TheHorse.com/161327**

8 Nonpregnant mares consuming endophyte-infected tall fescue can experience extended luteal function and decreased breeding efficiency. **TheHorse.com/156234**

9 One theory is that decreased blood flow to the uterus plays a role in fescue toxicosis. **TheHorse.com/161327**

10 Clinical signs of fescue toxicosis in mares include prolonged gestation; abortion or stillbirths; dystocia (difficult birth) due to the continued foal growth during prolonged gestation; an abnormally thickened and/or retained placenta; and hypogalactia or agalactia (poor or no milk production, including colostrum, the essential first milk that transfers antibodies from mare to the foal during the first hours of life). Fescue toxicosis can also cause mare mortality. **TheHorse.com/138059**

11 Domperidone is a pharmaceutical available to help reduce the adverse effects by preventing ergovaline from inhibiting prolactin release and, thus, agalactia. **TheHorse.com/115843**

12 In December 2010, the U.S. Food and Drug Administration (FDA) approved the first product (domperidone in a gel formulation) for the "prevention of fescue toxicosis, a disease that can cause serious reproductive problems in horses." According to the FDA and the product manufacturer, domperidone administration blocks ergovaline's toxic effects at a cellular level. Once daily oral administration is reportedly both safe and effective based on laboratory and field studies. **TheHorse.com/164794**

13 While the tall fescue endophyte can be bad for grazing animals it help plants thrive, so tall fescue without the endophyte struggles to compete against other grasses. Because of this, researchers are looking at alternative horse-pasture grasses with novel endophytes that won't produce the alkaloids that put mares at risk for fescue toxicosis. A University of Kentucky study found no adverse effects on pregnant mares grazed on pastures including one such novel endophyte fescue. **TheHorse.com/164590**

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Watch our two-part lecture about **fescue toxicosis** from Drs. Jamie Matthews and Karen McDowell, both of the University of Kentucky, which is how now available on *The Horse's* **Vet On Demand: Equine Veterinary Seminars** — on your schedule!

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