Public Abstract

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Title:Managing Fescue Toxicosis Through Forage Canopy, Limestone Application, and Novel Endophytes

Tall fescue when endophyte infected produces ergovaline and other alkaloids responsible for fescue toxicosis, a livestock disorder. Cultivars re-infected with endophytes that do not produce toxic ergot alkaloids, referred to as "novel endophytes," have been used to alleviate the symptoms of fescue toxicosis. This research includes a series of experiments with the overall objective of identifying management practices that reduce fescue toxicosis in order to provide recommendations to Missouri farmers. The first experiment examined the distribution of ergovaline and total ergot alkaloids throughout the vegetative canopy of tall fescue, and concluded that toxin concentrations are highest in the bottom of the plant. The second experiment documented that applying limestone decreased ergovaline concentrations. The third experiment evaluated cattle preference among novel endophyte-infected tall fescue cultivars. This experiment concluded that one cultivar was grazed more frequently.