



# 4 TIPS FOR UTILIZING FESCUE PASTURE

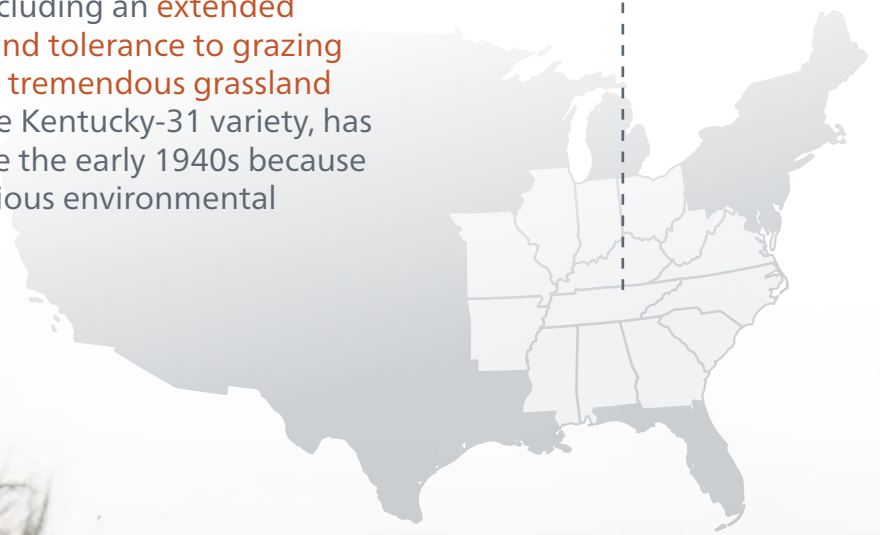


**Altech**<sup>®</sup>

# 1 UNDERSTAND THE BASICS OF FESCUE

Tall fescue (*Festuca arundinacea*) is one of the most important cool-season grasses in the United States, grown on nearly 35 million acres of the southeastern part of the country. Its agronomic virtues, including an **extended grazing season, pest resistance and tolerance to grazing pressure, have made tall fescue a tremendous grassland resource.** Tall fescue, primarily the Kentucky-31 variety, has been planted across the U.S. since the early 1940s because of its excellent growth under various environmental stressors.

**35**  
MILLION  
ACRES





## Endophyte-infected tall fescue

**Endo = Inside**

**Phyte = Plant**

An endophyte is a fungus that grows between cells as a plant matures. This fungus lives in the seed of the infected plants in high concentrations and produces alkaloids that protect the plant from drought, heat and plant-eating animals, including insects. The endophyte is contained in the plant and can only be transmitted through the seed. While these alkaloids can be toxic to livestock, studies have shown that the endophyte has no negative effect on the host plant's survival.

Maximizing the grazing value of tall fescue has always meant striking a balance between its nutritive value and the presence of ergot alkaloid toxins. Toxins produced by the endophytic fungus

*Acremonium coenophialum*, which grows symbiotically with tall fescue, have a wide range of health implications for grazing animals. The toxins restrict blood flow to the extremities, which limits the animal's ability to control its body temperature during the hot summer months, leading to heat stress and, eventually, damaged tissues.

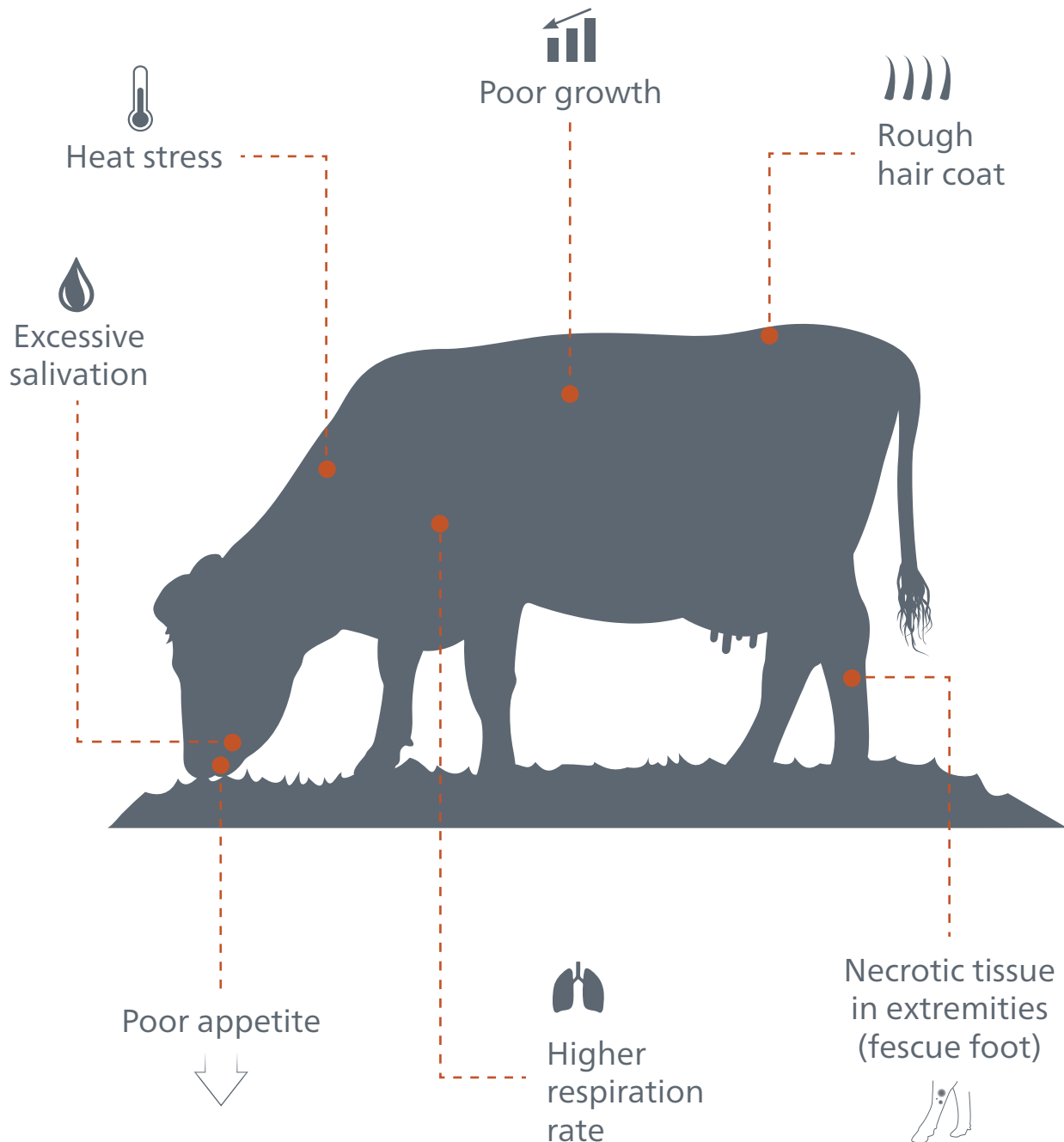
## Why we keep using tall fescue

While the endophyte toxins adversely affect animals, it is the symbiotic relationship between plant and endophyte that gives fescue its agronomic advantages. The endophyte stimulates plant resistance to disease and insects and improves the ability to tolerate drought and grazing pressure. This impact on plant metabolism improves the vigor of growth, increases the rate of establishment and makes the stand more hardy.



# 2 KNOW THE SYMPTOMS OF FESCUE TOXICITY

## Visible symptoms:



## Non-visible symptoms affecting profitability:

**Lower** reproductive efficiency;  
increased abortions

**Decreased** weight gain

**Decreased** intake

**Reduced** fertility  
rates in bulls

**Reduced** milk  
production

**Higher** body  
temperature

Vasoconstriction, **reducing**  
blood flow to extremities



# 3 QUANTIFY THE RISK OF FESCUE TOXICITY ON YOUR OPERATION

The likelihood of cattle consuming infected tall fescue can vary greatly depending on the weather and alkaloid concentration. The signs most readily apparent to producers include reduced feed intake (up to 50 percent) and weight gain, decreased milk production, reduced reproductive efficiency, tissue necrosis and a rough hair coat. Collectively, this range of conditions is known as “fescue toxicosis.” The decrease in productivity caused by fescue toxicosis has been estimated to cost U.S. beef producers more than \$2 billion per year due to reduced growth, diminished reproductive efficiency and market discrimination because of unthrifty appearance (Kallenboch, 2015).

## At a glance: What could fescue toxicity cost you?

Symptom	Scenario	Example (based on 100-cow herd)	Your cost
Reduced conception rates	46% reduction in conception rates	Current: 85% With 46% reduction: 45.9% (45.9 X calf value)= <b>\$45,454 loss</b>	
<i>Conception rates can be reduced by as much as 46 percent in animals grazing endophyte-infected tall fescue (Burke et al. 2001).</i>			
Reduced calving rates	19% fewer calves	Current: 80% With 19% reduction: 15.2 calves (Calf value X 15.2)= <b>\$17,670 loss</b>	
<i>Calving rates are also seen to decline by 19-41percent in cattle grazing infected fescue (Porter and Thompson, 1992).</i>			
Reduced weaning weights	19 lbs. lower/calf	Current: 75 calves With 19lbs lower/calf (19lbs X \$1.55)=\$29.45 X 75 Calves= <b>\$2,208.75 loss</b>	
<i>Weaning weights decreased by 19 pounds (Smith, et al., 2012).</i>			
		<b>Total: \$65,332.75</b>	<b>Total: _____</b>

\*\$600 cow carrying cost = \$60,000 annual cow carrying cost

\*CME board price (03/21/19) = \$1.55/lb.

\*750-lb. weaning weight

\*Calf value = \$1.55 x 750 = \$1,162.50/calf





# 4 SUPPORT CATTLE GRAZING ON FESCUE PASTURE

- Endophyte-free varieties are available but have reportedly been less productive in some climates than the endophyte-infected varieties.
- If possible, remove cows from toxic pastures 30 days prior to breeding season and 30 days following.
- Align breeding seasons to avoid heat stress associated with fescue toxicity. Aim to have cows calving in early spring and get them exposed to the bull before the hot summer months. Fall breeding is also favorable for avoiding the effects of fescue toxicity.
- Monitor/treat for parasites in cattle using an anthelmintic. High worm loads can be exacerbated by fescue toxicity, increasing stress and negatively impacting performance.
- Utilize rotational grazing. Cattle should not be allowed to graze mature fescue. If cattle are forced to graze mature growth, the pasture must be mowed or clipped to limit seed head growth.
- Interseed fescue with other grass or legume varieties, like clover, to dilute the consumption of fescue.
- Watch for nitrate and prussic acid poisoning in drought-stricken areas. When in doubt, have forages analyzed before grazing.
- Utilize **FEB-200** 30-60 days before spring grass growth to help support gut health and nutrient absorption, optimize average daily gain and minimize symptoms of heat stress from grazing fescue pastures.



For more information on fighting fescue toxicity in your area, contact your local Alltech sales manager.



**Brent Lawrence**  
Georgia  
blawrence@alltech.com  
352.212.6240



**Bill Soden**  
Arkansas/Missouri  
wsoden@alltech.com  
870.582.1150



**Sam Bates**  
Tennessee/Kentucky  
sbates@alltech.com  
615.603.1047



**Zach Postin**  
Tennessee/Kentucky/Indiana/Ohio  
zpostin@alltech.com  
859.553.4669



**Malarie Robins**  
North Carolina/South Carolina/Virginia  
mrobins@alltech.com  
336.681.5146

