

Estancia Production with ArkShield® Protection!



Estancia Tall Fescue with ArkShield® Technology

Estancia with ArkShield® is the latest generation forage tall fescue with the addition of a beneficial endophyte.

What is Estancia Tall Fescue?

Estancia tall fescue is the result of years of laboratory and field research by the University of Arkansas in cooperation with the University of Missouri. Estancia is a medium maturing, high yielding tall fescue with excellent seedling vigor.

What is ArkShield®?

ArkShield® is a patented smart endophytic fungus that lives inside Estancia Tall Fescue seed and plants in a mutually beneficial relationship protecting the grass from disease, insects and environmental stresses like heat and drought. ArkShield® is natural and desirable in forage grasses and has no known negative effects on livestock. The ArkShield® endophyte makes Estancia a more productive and persistent perennial forage grass.

Estancia with ArkShield® Quality Assurance:

Estancia is packaged in a 25 lb. sealed foil bag to reduce air, heat and moisture transfer into and out of the bag that helps to ensure the viability of the seed and the live ArkShield® endophyte. Estancia with ArkShield® has both a guaranteed analysis tag ensuring the seed purity and germination, as well as a sow-by date ensuring the viability of the live endophyte.



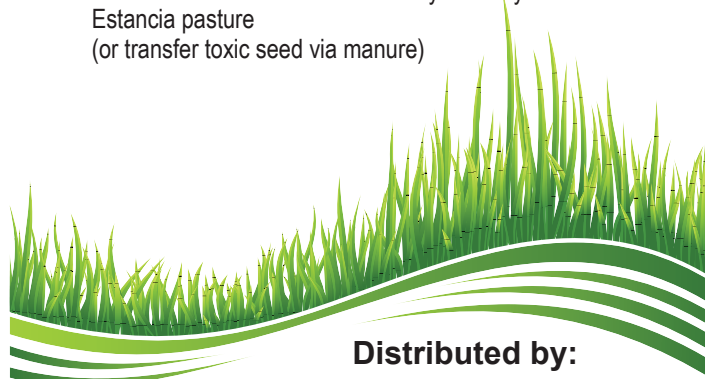
www.mtviewseeds.com



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Planting Guide for Estancia Tall Fescue

- Closely graze or harvest existing toxic fescue
- Spray stubble with a non-selective herbicide
- Test soil and follow soil test recommendations
- Plant a cover-crop
- Graze/Harvest break-crop (don't transfer toxic fescue seeds in manure to break-crop forage)
- After useful life of the break-crop, spray out with a non-selective herbicide
- No-Till drill Estancia in September to November in the Southern states and August to September or March to May in the Midwestern and Northeastern states
- Seed Estancia at 20-25lbs per acre
- Fertilize as recommended
- Estancia can be planted with other species such as alfalfa, red or white clover and grasses
- Don't graze or harvest seedling pasture the first winter
- Be sure not to feed toxic fescue hay in newly established Estancia pasture (or transfer toxic seed via manure)

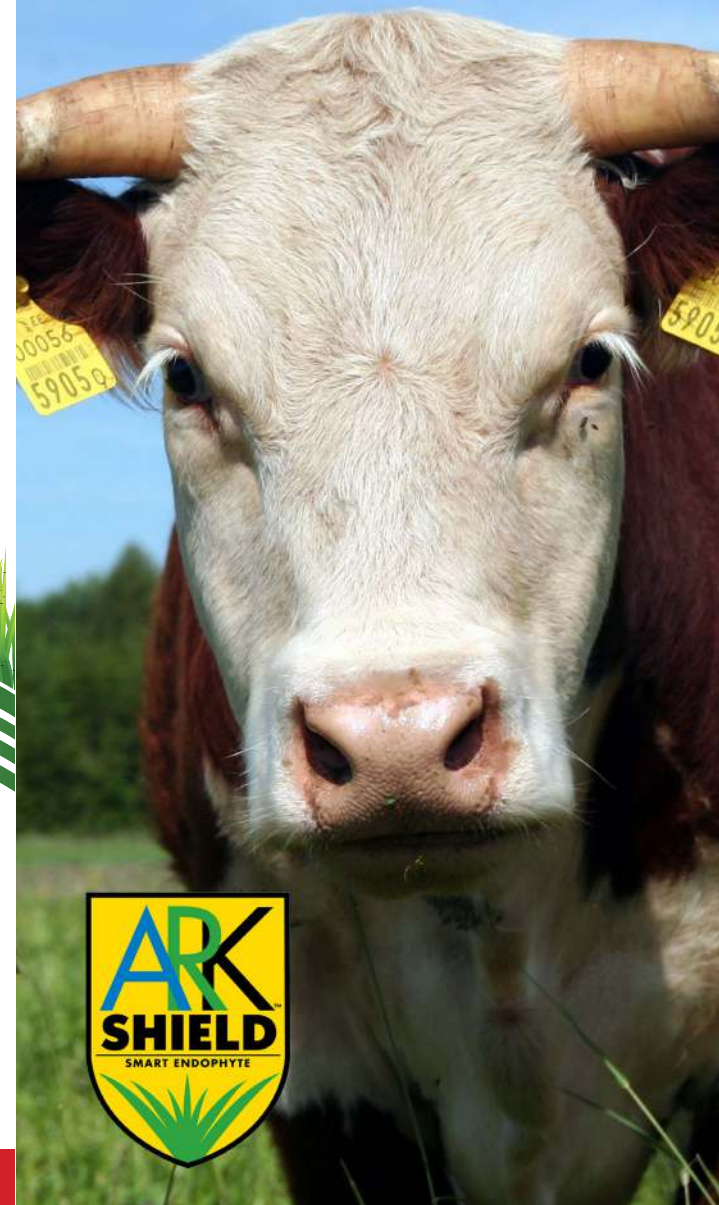


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ArkShield Technology is protected by
US patent No.7,465,855 B2 & No. 7,553,654 B2.



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Put your pasture to work!

Two factors that dramatically impact the profitability of a cow-calf operation are calving rate and weaning weight. Improvement to these production factors will increase the pounds of calf that can be marketed within a given calving season or year. Lower pregnancy rates, calving rates and calf weaning weights have been observed in many research studies in cows and heifers grazing toxic fescue.

Combining cow and calf performance data, year-round grazing of toxic fescue could be costing cattle producers more than \$250 per head in lost revenue based on the Arkansas Beef Improvement Program's reported annual direct costs of maintaining beef cows.



**AMERICAN GROWN,
AMERICAN OWNED.®**

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Estancia Tall Fescue Production

Estancia Tall Fescue produces tons of nutritious, palatable, high-quality forage that results in healthier cows, heavier weaning calves and improved steer and heifer weight gains. The recent trial conducted at Mississippi State University shows Estancia to be a top producer of dry matter.

Mississippi State University (2012) Total Dry Matter Yields (tons/acre) of Tall Fescue Varieties at two locations (Holly Springs and Starkville)		
Variety	Holly Springs	Starkville
Estancia with ArkShield	6225	10810
K-31	6098	10232
BarOptima PLUS E34	5510	9540
Max Q	5423	8550

Calf performance while grazing tall fescue pastures containing either the wild-type toxic endophyte (E+) or a non-toxic novel endophyte (Estancia).*



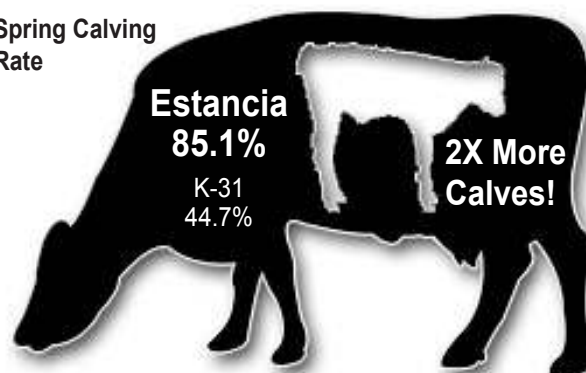
ArkShield® Smart Endophyte Protection



ArkShield's Smart Endophyte protects the Estancia forage from disease, insects, heat and drought stresses that result in a more persistent perennial pasture without negatively affecting cattle performance or calving rates.

Cow performance while grazing tall fescue pastures with either the wild-type toxic endophyte (E+) or a non-toxic novel endophyte (Estancia).*

Spring Calving Rate



2014 University of Kentucky Tall Fescue Report Seedling Vigor sown Sep. 7, 2012 (Lexington, KY)	
Variety	Seedling Vigor Oct. 16, 2012
Estancia with ArkShield	3.4
K-31	3.5
BarOptima PLUS E34	2.4
Max Q	1.8

2014 University of Kentucky Tall Fescue Report Yield (tons DMY) sown Sep. 7, 2012 (Lexington, KY)	
Variety	2-Year Total
Estancia with ArkShield	11.47
K-31	10.59
BarOptima PLUS E34	12.24
Max Q	11.19

* Arkansas Animal Science Department Report 2007

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