

# Ecological Restoration Brief

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## TXSER Members Collaborate on Invasive Species Research

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King Ranch bluestem (*Bothriochloa ischaemum*), also known as KR, yellow, or Old World bluestem, is a non-native species that has invaded many grasslands in Texas. Cultivars in our region were originally introduced from Asia to “improve” degraded pastures, particularly during drought. As with many introductions, KR bluestem establishment was originally perceived as a success because the amount of forage increased and it was easier to bale and market than diverse native grasslands. On the flip side, KR bluestem has relatively low forage value and it has invaded thousands of acres of native grassland.

Controlling KR bluestem in native grasslands has been difficult. Prescribed fire during the winter, traditionally the most common time to burn, appears to favor KR bluestem compared to native grasses. Growing-season fire, especially when the grass is about to bloom, can reduce the amount of KR bluestem temporarily but, in most cases, it re-invades quickly.

Through funding from Bob Ayres and Shield Ranch, three TXSER members—Kelly Lyons (Trinity University), Matt McCaw (City of Austin), and Charlotte Reemts (The Nature Conservancy)—are collaborating on an experiment to evaluate restoration as a KR control technique. They are testing which native species provide the highest rates of KR suppression and whether planting or seeding native grasses can decrease re-invasion.



Trinity University student planting native grasses.  
Photo credit: Kelly Lyons



**Test plot. Trinity University students planting seedlings.  
Photo credit: Kelly Lyons**

established on three sites: City of Austin Water Quality Protection Lands, TNC's Barton Creek Habitat Preserve, and the private Shield Ranch. At each site, the grasslands were burned and then planted or seeded with combinations of native species: big bluestem, little bluestem, sideoats grama, yellow Indiangrass, and diverse native seed mixtures. The four grasses were chosen based on experiments conducted by Kelly Lyons and her

students, which tested the effects of competition between grass seedlings of various species. Planting was completed by Kelly's enthusiastic students in February. Now the hard part starts: waiting for the plants to grow. We plan on collecting data for at least 2 years and will report the results at future TXSER conferences.

**The Society for Ecological Restoration, Texas Chapter promotes ecological restoration as a means of sustaining the diversity of life on Earth and re-establishing an ecologically healthy relationship between nature and culture.**

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