

Old World grasses, New World problems



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Brian Obermeyer, Nature Conservancy of Kansas, checks a Chase County pasture. The blonde grass is an Old World bluestem, which could overtake native grasses and offer little to cattle and wildlife. **Michael Pearce** - The Wichita Eagle

BY MICHAEL PEARCE
The Wichita Eagle

Correction: Rancher Bill Edwards is from Olsburg. An earlier version of this story listed an incorrect city.

Rancher Bill Edwards is fighting an enemy that threatens to overrun his Flint Hills pastures, robbing his cattle of nutritious grasses and leaving the meadowlarks, box turtles, bobwhite quail and other wildlife in the same native prairies without suitable habitat.

Edwards, 60, of Olsburg, is holding his own against an invasive species called Old World bluestem grasses, but what he sees on other property has him worried about the future.

"When you drive from Manhattan to Cottonwood Falls, you can see it about 100 percent of the time," Edwards said of the about 55 miles through the heart of the Flint Hills. "A lot of it is in the ditches, but it's moving out into the pastures."

The spread of the Old World bluestems also has some of the Midwest's top grassland and conservation experts equally worried.

"There are invasive species that are just a nuisance, and then some that are real problems. These are real problems," said Brian Obermeyer, Nature Conservancy of Kansas. "The bad thing about (Old World bluestems) is that they release a chemical that is toxic to other plants."

That means we could end up with prairies that are largely dominated by one species of plant that offers little to livestock and almost nothing to wildlife.

Experts say the continued spread of the invasive grasses could have a huge impact on Kansas' estimated 15.5 million acres of grazing lands and the state's beef industry valued at about \$7.75 billion in 2013, according to Kansas Livestock Association.

It could be even more devastating to wildlife.

"Once they start to take over a landscape, it eliminates the beneficial plants, like forbs and grasses that provide seeds, fruits and bugs – things like prairie chickens and other grassland birds feed on," said Ron Klataske, Audubon of Kansas director. "It's a huge threat to wildlife. Huge."

Where it spreads, it also could wipe out vibrant wild flowers which are drawing increased numbers of tourists to Kansas prairies.

The Old World varieties should not be confused with Kansas' native species of big and little bluestem grasses, which provide food to livestock and food and shelter to wildlife.

Introduction gone wrong

Kansas is currently home to two main species of Old World bluestem grasses – Caucasian and yellow. Both were originally imported to America from Europe, Africa and Asia in the early 1900s by agronomists hoping for something better than what was supplied by Mother Nature.

Karen Hickman, Oklahoma State University professor of natural resource ecology and management, said the Old World bluestems remain popular in parts of the southern U.S. as a forage for livestock. The plants grow well in dry areas where little else grows, and left with no other options, cattle will eat the plants.

Hickman said the Old World bluestems have been popular because the initial seed is relatively cheap, it grows fast and produces a lot of seed to support itself. As well as by seeds, the plants can spread by runners atop the soil, and roots beneath the soil that sprout new plants.

"It's over taken a lot of the native landscapes in western Oklahoma and western Texas," Klataske said. "It's now about the only plant in those areas. It's certainly contributed to the decline in several wildlife species, like lesser prairie chickens."

Old World bluestems have been in Kansas for at least 100 years, said Hickman, who researched the grass' negative impacts on wildlife in the 1990s. It was planted in places left desolate by the Dust Bowl of the 1930s and drought of the 1950s. Walt Fick, a Kansas State professor of range management, said it was often planted under the federal Soil Bank program of about 60 years ago, when farmers were paid to take croplands out of production. Some fields are still planted to the grasses because cut at the right time, it can make good hay. When the hay is hauled to other pastures, it often contains grass seed, allowing the invasive grass to spread.

Obermeyer said the inexpensive, quick-growing grasses were probably purposely planted by highway and road departments in ditches and medians for many years. From there, it easily spreads.

Kansas cattle will normally only feed on the invasive plants for a couple of weeks before it's no longer palatable. Instead, cattle prefer native grasses and plants that stay tender for months and give better weight gains.

Most parts of Kansas now have the grasses, though it's particularly bad in the Flint Hills and the Red Hills west of Medicine Lodge.

"The jury is still out on where it's going to get hit the worst," said Obermeyer, "but no place is it going to be good."

Randy Rodgers, a retired Kansas Department of Wildlife, Parks and Tourism upland bird biologist, said the problem has become noticeably worse over the past five years. Old World bluestems did well during the drought of about two to five years ago and easily out-competed native prairie plants that suffered from the dryness.

"It was like the stuff just exploded," said Rodgers, of Hays. "I've never seen anything else like it, that will completely take over an area and not allow native vegetation to grow. It's been pretty scary to watch."

The fight is on, and not easy

Compounding the problem, Rodgers said, is that many land managers can't identify the grasses, which often don't stand out amid native prairie to the casual eye. It is most identifiable in the fall, when Caucasian bluestem stands out as shiny blonde patches against the brown and russet colors of native plants.

Jane Koger, a Chase County rancher, has been concerned about Old World bluestems in her pastures for several years. It's only been within about the past year that she's heard of workshops trying to educate landowners and conservationists about the potential problems.

Obermeyer, who has worked with Koger on her property, said one of the keys is to be able to locate patches of Old World bluestems when they first appear in an area, when they're the most easily handled. Killing Old World bluestems has never been easy, or inexpensive.

Several days a year Edwards puts on a backpack sprayer with Round-Up or a similar kill-all herbicide and patrols his pastures from horseback. If the Old World grasses have been long established, it may take repeated sprayings to kill any plants that rise from seeds deposited through the years.

K-State's Fick has been doing research on what will work on the Old World plants, with much of the research on Koger's ranch. He's seen some recent success with Arsenal and similar herbicides that seem to kill the Old World bluestems without being fatal to native grasses. But the results don't come cheap.

Fick said just the cost of the chemical, not including the tools and labor needed to apply it, can run up to about \$30 per acre.

"That's not too bad of a cost if you're only spraying small patches," he said. "But if you're talking about some larger areas, it runs into a lot of money. It also may take repeated spraying, and then there's the cost of reseeding if that's needed. At least on small spots mother nature will fill those back in with good grass."

Obermeyer said he and others hope the Legislature will soon declare the Old World bluestems noxious weeds.

As well as drawing attention to the problem, such a listing would probably open programs to help landowners with control methods and cost. It could also force governments to eradicate the plants from ditches and public lands.

"That's about what's going to have to happen," Koger said as she walked one of her infested pastures. "It just has to happen. You can look out here and see how much it has expanded in just the past five years. We have to get on top of it, soon."

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OTHER PROBLEMATIC INVASIVE SPECIES IN KANSAS

Zebra mussels arrived in the U.S. about 25 years ago in the bilges of ships traveling to the Great Lakes, and got into Kansas about 12 years ago. They can clog intake pipes for water plants and cost millions of dollars annually to control across the nation. Their sharp shells can make swimming and wading hazardous and painful.

European starlings have been in Kansas and the U.S. for over 100 years, and were imported by a New Yorker who liked a reference to the birds in one of Shakespeare's writings. Starlings compete with native birds for nesting areas and food, and gathering in large flocks can damage some crops.

Asian carp include silver and bighead carp, both of which were imported into the U.S. about four decades ago by aquaculturalists. The fish escaped into nearby rivers and streams. As well as out-competing native fish, silver carp frequently jump as a power boat passes sometimes injuring boaters.

Sericea lespedeza was planted in southeast Kansas in the 1930s, on lands left barren by strip mining. It has since spread to most of the state, where it often out-competes desirable native vegetation and does little for livestock and wildlife.

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