

# No Trees Allowed

## Mixed-Grass Prairie Ecology

**W**hy is the prairie? Why, for thousands of years, have grasslands blanketed Kansas, and not trees? The prairie ecosystem has adapted to conditions that spell doom for most woody plants—low moisture, fire, and periods of intensive grazing. Woody plants store most of their biomass above ground, so fire easily kills tree seedlings that set root among the grasses. On the contrary, prairie grasses and forbs (herbs other than grasses) maintain half their biomass below ground, in deep root systems. In the past, when fire or a herd of hungry bison swept through, prairie species could quickly send up new shoots.

Historically, tallgrass prairie covered the wetter, eastern third of Kansas. Short-grass prairie covered the dry, western third. Here in central Kansas, the two prairie communities mix. Although most native prairie has been converted to crops, you can still see mixed-grass prairie at both the Quivira National Wildlife Refuge and Cheyenne Bottoms.



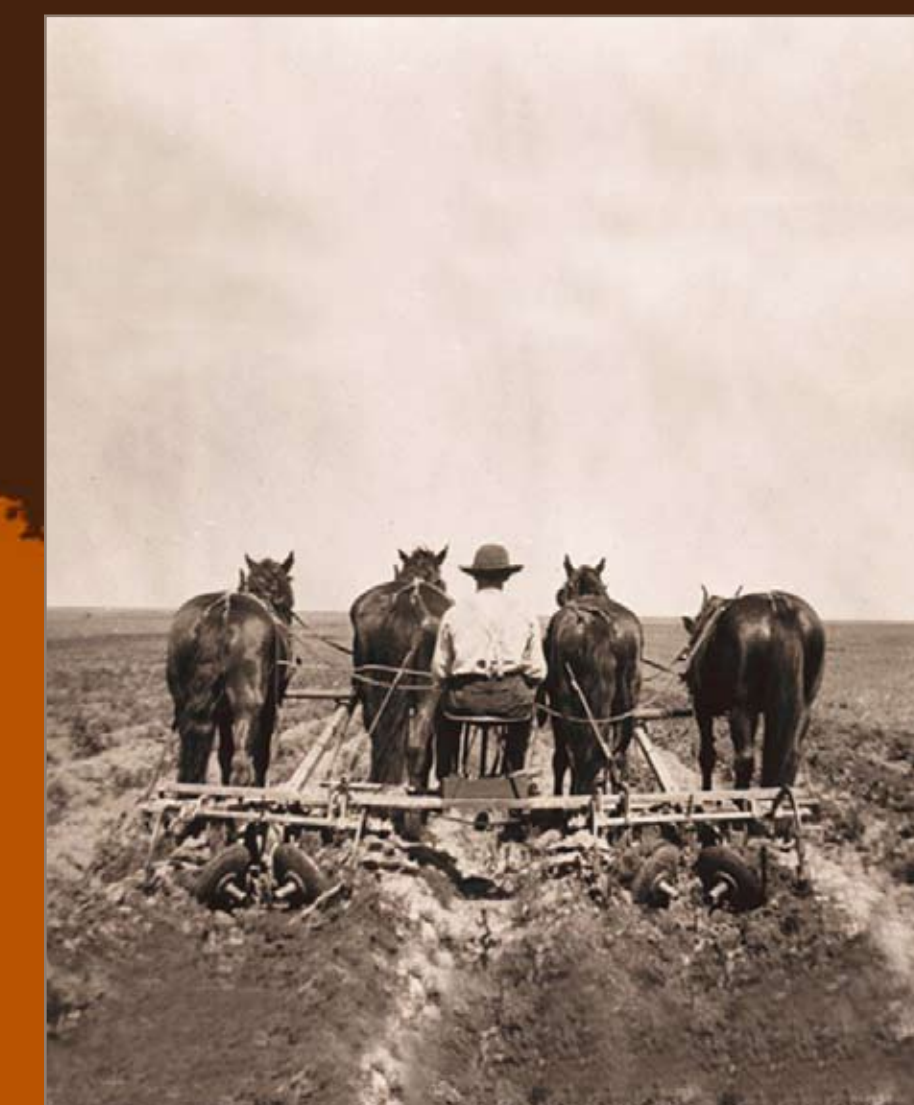
**Prairie Grasses**  
Ted Lee Eubanks



Steel plowing/Kansas State Historical Society



Coyote/Jerry Segraves



Horse-drawn plowing/Kansas State Historical Society

### Great American Desert

During the 1800s, military reports dismissed settlement of the Great Plains, which they called the “Great American Desert.” Invention of the steel plow and advances in farming techniques allowed settlers to homestead this region, which explorer Zebulon Pike had once described as “incapable of cultivation.”

### Conservation Reserve Program

Stable soils, better water quality, more wildlife habitat. These are key goals of the Conservation Reserve Program, which pays farmers to convert highly erosive croplands to native habitat. Along the Byway, farmers have used this federal funding to restore several areas of native grasslands, known locally as “CRP land”.

### Motion and Change

Before the tractor, plowing the thick-rooted prairie sod was backbreaking work. Farmers used a special horse-drawn sod plow to cut and turn the sod. They then cut the overturned sod with an ax, dropped corn kernels into the cut, and closed the cut with the back of the ax.



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