


Konza Prairie

Long Term Ecological Research

THE ESSENTIAL ROLE OF **FIRE** IN TALLGRASS PRAIRIE

Understanding the ecological importance of fire in grasslands is an important area of research at the Konza Prairie LTER site. Grasslands are the natural vegetation in about one third of the Earth's surface. They contribute significantly to our world's agricultural productivity and provide essential ecosystem services such as supplying clean water, purifying the air, and preserving biodiversity—all of which contribute to the well-being of human society.



The high productivity of these grasslands allows for the rapid build up of fine, combustible fuel in the form of dead grass (detritus), and so fires were widespread and common throughout the history of the prairies.

While lightning was probably the main source of grass fires historically, today we use fire as a tool to manage and preserve the tallgrass prairies. Fire removes accumulated plant detritus and allows for the vigorous regrowth of grasses and wildflowers, which enhance the productivity of the prairie. Fire also limits the spread of woody plants that would otherwise displace the grasses and forbs that are characteristic of tallgrass prairies. Thus, our research is highlighting the importance of fire in preserving and maintaining tallgrass prairies and other productive grasslands around the world while enhancing the ecosystem services they provide.

Website: <http://www.konza.ksu.edu/>

Our research is demonstrating the essential and beneficial role of fire in maintaining the integrity and functioning of grasslands. Although fire can be a destructive force in some ecosystems, historically, fire has been an important natural element of many grasslands, from arid desert grasslands to lush tallgrass prairies, such as North America's tallgrass prairie, and it remains an important tool for the preservation of these grasslands today.

Tallgrass prairies occur in the transition zone between wetter forests to the east and arid shortgrass prairies and desert grasslands to the south and west. The tallgrass prairie includes some of the most productive grasslands in North America, and is home to a diverse group of plants and animals, including the North American bison.

