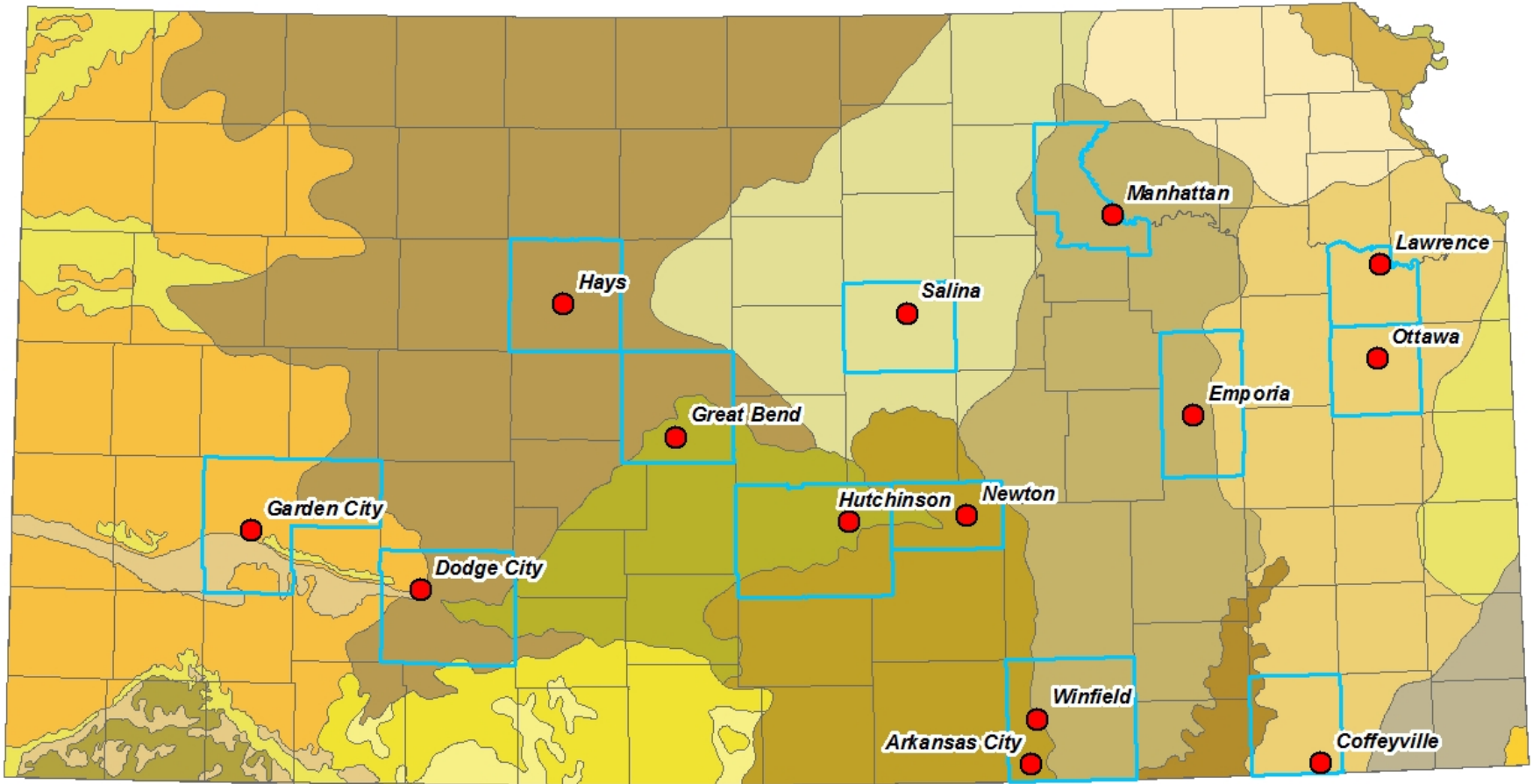
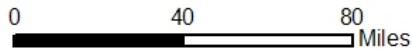
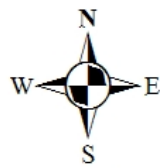


Ohlenbusch, P.D. 1997. *Establishing Native Grasses*, Kansas State University Extension

Zone	Optimum	Acceptable
1	March 25–April 10	Feb. 15–May 1
2	April 1–April 20	March 1–May 15
3	April 10–April 30	March 1–May 15



Eco-Regions



1" = 40 Miles

- | | | |
|-------------------------------|---------------------------------|--------------------------------|
| ● City | ■ Flint Hills | ■ Rolling Cropland and Range |
| □ Study County | ■ Great Bend Sand Prairie | ■ Rolling Plains and Breaks |
| □ County | ■ Loess and Glacial Drift Hills | ■ Rolling Sand Plains |
| ■ Cherokee Plains | ■ Missouri Alluvial Plain | ■ Smoky Hills |
| ■ Cimarron Breaks | ■ Moderate Relief Rangeland | ■ Springfield Plateau |
| ■ Cross Timbers | ■ Nebraska/Kansas Loess Hills | ■ Wellington-McPherson Lowland |
| ■ Flat Tablelands and Valleys | ■ Osage Cuestas | ■ Wooded Osage Plains |
| ■ Flat to Rolling Cropland | ■ Rainwater Basin Plains | |



Eco-Region	Typical Vegetation
Cherokee Plains	Tallgrass prairie and oak hickory woodland in areas of greater relief. Upland areas dominated by hardpan and claypan prairie with little bluestem, side oats grama, varying amounts of big bluestem and Indiangrass, and a variety of forbs.
Cimarron Breaks	Mixedgrass prairie, dominated by big bluestem (on more mesic sites), little bluestem, side oats grama, blue grama, and some hairy grama, with eastern red cedar a dominant tree, especially in sites sheltered from fire.
Cross Timbers	Cross timbers savanna: post oak, blackjack oak, hickory, and eastern red cedar with an understory of tallgrass and mixedgrass species.
Flat Tablelands and Valleys	Sandsage prairie common in sites with sandy or well-drained soils. Floodplain woodlands dominated by plains cottonwood, black willow, and peach leaf willow. Common hackberry, green ash, and American elm locally common, especially in the eastern part of the region.
Flat to Rolling Cropland	Mixedgrass prairie in the north: needle and thread, blue grama, threadleaf sedge, prairie sandreed, and western wheatgrass. Shortgrass prairie to the south: blue grama, buffalograss, and scattered, isolated sites with alkali sacaton, western wheatgrass, and inland saltgrass.
Flint Hills	Tallgrass prairie: big bluestem, little bluestem, switchgrass, and Indiangrass. Largest area of intact, native, tallgrass prairie in the Great Plains.
Great Bend Sand Prairie	Sand prairie bunch grasses: sand bluestem, sand dropseed, and sand reedgrass.
Loess and Glacial Drift Hills	Tallgrass prairie with cottonwood dominated forests along floodplains and oak hickory forests on bluffs.
Missouri Alluvial Plain	Northern floodplain forest: cottonwood, green ash, boxelder, and elm, with lowland tallgrass prairie: big bluestem, prairie cordgrass, switchgrass, and sedges.
Moderate Relief Rangeland	Combination of shortgrass and mixedgrass prairies, with mostly mixedgrass prairie in the north. Shortgrass prairie (blue grama and buffalograss) dominates on upland sites, giving way to mixedgrass prairie (little bluestem, side oats grama) on slopes, more mesic sites along rivers and streams, and also on sites overlain by thicker loess deposits. In the south, largely on Cretaceous chinks, a unique association called the chalk flat prairie, which is a mixedgrass prairie.

Eco-Region	Typical Vegetation
Nebraska/Kansas Loess Hills	Tallgrass prairie: big bluestem, Indiangrass, switchgrass, and little bluestem. Scattered oak hickory forests and some floodplain woodlands along rivers and streams: bur oak, basswood, black walnut, green ash, plains cottonwoods, and willows.
Osage Cuestas	Transitional: mostly tallgrass prairie in the west to a combination of tallgrass prairie and oak hickory woodland in the east. Upland forests dominated by shagbark hickory, bitternut hickory, red oak, white oak, and black oak, with Ohio buckeye, American bladderpod, and pawpaw common understory trees.
Rainwater Basin Plains	Tallgrass prairie: big bluestem, little bluestem, and Indiangrass, with switchgrass in more mesic sites. Floodplain forests are well developed along rivers and streams and are dominated by plains cottonwood, black willow, peach leaf willow, common hackberry, American elm, green ash, and black walnut, with bur oak becoming less abundant westward.
Rolling Cropland and Range	Shortgrass prairie in loess mantled areas with sandsage prairie in areas with coarse textured soils.
Rolling Plains and Breaks	Mixedgrass prairie: big bluestem, little bluestem, blue grama, needle and thread, side oats grama, and western wheatgrass. Some areas of floodplain forests along major riparian corridors.
Rolling Sand Plains	Sandsage prairie: sand sagebrush, sand bluestem, prairie sandreed, and little bluestem. This community type sometimes is called sandsage steppe due to the presence of a dominant shrub, however, sandsage prairie is the name most frequently used in the plains.
Smoky Hills	Transitional from tallgrass prairie in the east to mixedgrass prairie in the west. Some floodplain forests along riparian areas.
Springfield Plateau	Tallgrass prairie species, Oak hickory mixed forest along rivers and streams, with flowering Dogwood on uplands.
Wellington-McPherson Lowland	Tallgrass prairie: big bluestem, little bluestem, and Indiangrass, with switchgrass in more mesic sites. Floodplain forests are well developed along rivers and streams and are dominated by plains cottonwood, black willow, peach leaf willow, common hackberry, American elm, green ash, and black walnut, with bur oak becoming less abundant westward.
Wooded Osage Plains	Mixture of oak hickory woodland and tallgrass prairie with a greater concentration of hardwood forest. Much like 40b, but Shumard oak, pecan, pin oak, and persimmon a bit more common, especially along the Marais des Cygnes River.

Native Vegetation Resources	
Documents	
K-State Extension Fact Sheet MF-2291	www.oznet.ksu.edu/library/crpsl2/MF2291.pdf
Managing Kansas Grazing lands for Water Quality MF-2086	www.oznet.ksu.edu/library/crpsl2/mf2086.pdf
Websites	
Kansas Native Plant Society	www.kansasnativeplantsociety.org
Tallgrass Prairie Center	www.tallgrassprairiecenter.org/
Kansas Wildflowers and Grasses	www.kswildflower.org
Natural Resources Conservation Service (NRCS)	www.nrcs.org
Grown Native	www.grownative.org
Nurseries	
Sharp Brothers Seed Company (Healy, KS)	www.sharpseed.com
Hamilton Seed (Elk Creek, MO)	www.hamiltonseed.com
Junilee Native (Gardner, KS)	www.jubileenative.com
Feyh Farm Company (Alma, KS)	www.feyhfarmseed.com
Star Seed (Beloit, KS)	www.gostarseed.com/
Outside Pride	www.outsidepride.com/resources/states/kansas.html