

Native Hay Meadow Management

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A significant amount of the native grass acres in Butler County are used for the production of native hay. This not only has economic value, but fortunately, managing a prairie for hay is also one of the best ways to maintain its biodiversity and ecological value. The below average growing conditions of this year may tempt some people to delay harvest or cut at a lower height, but the management recommendations should be followed for long term plant health.

Harvest date is the most important factor in hay meadow management. Timing of the hay cutting will affect protein content, yield, and re-growth. Nutritional quality peaks early in the growing season and then drops off rapidly after the first week of July. However, at the time of peak nutritional quality, yield is lowest. It then increases as the warm-season grasses put on their maximum growth in June and July. The best compromise between quality and yield is to harvest in early to mid July. Delaying harvest into August or September does increase yield, but the forage quality will be much lower and the plants will be weakened going into winter, reducing yields as much as 50% the following year. Native prairies should not be cut twice in one season, no matter how much the vegetation re-grows after the first cutting.

Cutting height is also important to long-term hay yields. In a normal year, prairies should be cut at a height of three to four inches, which leaves sufficient stubble for re-growth and soil cover. In a dry year, five to seven inches is more appropriate. The goal is to leave enough for the plants to rebuild carbohydrate root reserves before frost. Litter on the ground also conserves soil moisture and protects against erosion.

Fertilizing is not recommended for native hay meadows. Nitrogen fertilizers may increase hay growth slightly during the year of application, but cause long-term problems. Nitrogen causes rapid growth of undesirable cool-season grasses, which can become invasive. Other weedy species can proliferate with fertilization. The desirable native grasses and forbs don't respond well to fertilization. Overall, the benefits of fertilization do not justify the expense.

Most of the herbicide use on prairie hay meadows is the result of the mistaken belief that the prairie's broadleaf plants, or forbs, are "weeds" that need to be eradicated. In fact, most forbs are valuable plants that play an important role in the prairie ecosystem. Invasive species are the only plants that need to be controlled on a prairie. Even then, herbicides should not be broadcast-sprayed. The herbicides will harm non-target broadleaf plants, and it can take decades for them to recover and some species may never return. Instead, spot-spray noxious weeds such as sericea lespedeza. Some woody plants may occur in areas that don't get mowed every year, and they may require spot herbicide applications. If you do use herbicides, apply only those labeled for the target species and for use in hay meadows. Pay particular attention to the waiting period between spraying and hay harvest. .

Fire can control many unwanted species on a prairie if there is enough fuel to carry a fire. Cool-season grasses such as fescue and brome will be suppressed if the prairie is burned in the spring when they are growing most rapidly. The best time to burn in order to control cool-season invaders is when the new growth of big bluestem and Indian grass is 1 to 2 inches tall. Woody plants along edges and in ravines can be controlled with fire.