



# FORAGE FACTS

*Publication Series*

## GRAZING WHEAT PASTURE

### INTRODUCTION

Wheat pasture is a valuable source of high-quality forage, typically available in late fall, winter, and early spring, when other forage sources are low in quality and quantity. The crude protein content of wheat pasture commonly ranges from 20 to 30 percent. The stocking rate during fall and winter ranges from 250 to 500 pounds of live animal per acre, depending on growing conditions. During the spring, stocking rates usually can be increased to 500 to 1,000 pounds of animal per acre to utilize the lush growth. Average stocker gains commonly range from 1.5 to 2.5 pounds per day.

#### CULTURAL PRACTICES

**Planting Date.** Early planted wheat has the potential to produce excellent fall growth if adequate soil moisture and temperature allow rapid germination and emergence. Producers generally plant wheat two to three weeks earlier than usual if it is to be grazed. Grazing can begin four to eight weeks after planting when there is 6 to 12 inches of growth.

Disadvantages do exist if wheat is planted for pasture too early. The incidence of diseases such as wheat streak and barley yellow dwarf mosaics may increase, which would reduce forage production. Early planted wheat serves as a host, especially for wheat streak, allowing the disease to spread to later planted fields. Early planting also encourages heavy Hessian fly infestations.

**Planting Rate.** Producers interested in early fall grazing generally increase planting rates by 50 to 100 percent, depending on the planting date and soil moisture.

In irrigated fields and in eastern Kansas where rainfall is higher, seeding rates commonly are 90 to 120 pounds per acre. In dryland areas of western Kansas, seeding rates should be no more than 50 percent above those of wheat planted for grain. In central Kansas, recommended seeding rates for wheat pasture are 75 to 120 pounds per acre.

**Fertility.** Adequate amounts of all essential plant nutrients especially nitrogen, phosphorus and potassium, are necessary for maximum forage production. Wheat used for grazing will remove more soil nutrients than the wheat grain crop. Nitrogen is usually the most limiting nutrient associated with wheat forage production.

Wheat forage containing 25 percent crude protein will have 80 pounds of nitrogen in each ton of dry matter. A general recommendation is to increase nitrogen rates by 30 to 50 pounds per acre for wheat as forage.

A band of starter fertilizer, near or in the seed furrow, containing no more than 20 pounds per acre nitrogen and from 30 to 60 pounds per acre phosphorus, has significantly increased forage production in Oklahoma studies and is recommended in Kansas. If soil pH is 5.1 or less, use of starter fertilizer is highly recommended. Selection of an aluminum tolerant wheat variety is also advised on low pH soils.

#### NUTRITIVE VALUE OF WHEAT PASTURE

Wheat forage provides succulent and highly nutritious feed for cattle and sheep. The forage is palatable; high in protein, energy, and minerals, and low in fiber. The high moisture content of wheat forage sometimes makes meeting the daily dry matter needs of grazing livestock difficult. To improve animal performance, producers should offer dry, high quality forage or grain in addition to the wheat pasture.

The crude protein content is particularly high, usually between 20 and 30 percent, and sometimes above 30 percent. Properly managed wheat can be an effective protein supplement for livestock simultaneously grazing or consuming other lower quality feedstuffs.

Stage of maturity influences chemical composition of wheat. In vitro dry matter digestibility decreases from 80 percent or more during the vegetative stages of fall and early spring to less than 60 percent by the soft dough stage. The major decline occurs by the heading stage. Crude protein also declines rapidly, dropping from 25 to 30 percent for vegetative wheat forage to 12 to 15 percent by heading and 9 to 10 percent by the soft dough stage.

### GRAZING MANAGEMENT

In Kansas, most grazing occurs during late fall and early winter and again in spring, with animals removed early enough (before jointing) to allow good grain production. Depending on rainfall and stored soil moisture, wheat pasture is generally available for 120 to 150 days. Grazing cannot begin until the plants have adequate root development to prevent damage by grazing animals. Ordinarily, wheat is available for grazing between October 15 and November 15.

Studies in Kansas indicate that grazing appears to have little effect on grain yields when fertility is adequate, grazing is not too heavy, and livestock are removed before the first hollow stem.

### LIVESTOCK MANAGEMENT

Both stocker cattle and mature animals can effectively utilize wheat pasture. Because of its high nutritive value, stockers and fall-calving cows can utilize the forage most profitably. Both continuous and rotational grazing systems are acceptable for stocker cattle. The primary advantage of rotational grazing is better utilization of available forage. It reduces spot grazing and may result in 10 to 15 percent increased animal gain per acre.

Optimum stocking rates vary considerably from year to year, depending on many climatic and manage-

ment factors that influence wheat forage yields. Recommended fall and winter stocking rates often range from 250 to 500 pounds of animal per acre (1 to 2 acres per stocker, depending on weight). Spring stocking rates usually are 1.5 to 2.0 times greater than for fall (0.75 to 1.3 acres per stocker, depending on weight), although rates as high as 1,400 pounds of animal per acre (2.5 stockers/acre) have been noted in some research trials during late spring graze out.

Providing some drier feed may offset possible animal digestive problems—including bloat—that result from the succulent, laxative wheat forage. High quality hay, silage or grain is helpful. To avoid overgrazing and damage from trampling, it is best to provide an area (preferably grass) near the wheat pasture for water, salt-mineral, supplemental feeding, and animal loafing. Remove animals from the pasture during extremely wet weather, particularly on fine-textured soils. During periods of extreme cold—about 15°F or less—remove animals to prevent injury to plants.

### GRAZING PROBLEMS

Two potential problems when grazing wheat pasture are bloat and grass tetany. To aid in preventing bloat, do not put hungry cattle on lush pasture. Bloat potential is greatest during the three- to four-week periods of lush growth in the fall and early spring. Feeding Bloat-Guard (poloxalene) in a dry or liquid energy supplement, molasses block, or mineral supplement is the most effective procedure to prevent bloat. Feeding high-quality grass hay, silage and/or grain with Rumensin or Bovatec also will minimize the bloat potential.

Tetany is characterized by a low blood magnesium level in livestock. It occurs more often in older cows nursing young calves, but may affect stockers as well. The easiest prevention is to provide 6 to 8 percent magnesium in a palatable, free-choice mineral supplement.

### OTHER PUBLICATIONS

Wheat Pasture in Kansas (C-713)

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