

# ALFALFA FOR SUMMER GRAZING

*Roy Burris and Garry Lacefield*

Extension Beef Specialist and Extension Forage Specialist  
University of Kentucky  
Princeton, KY

Alfalfa is most commonly used as a hay crop in the United States. However, with proper management, it can be utilized as a grazing crop with very good results. Liveweight gains per acre are quite high for grazing beef cattle with total season gains of 500 to 800 pounds per acre being reasonable. The authors realized 732 lb/acre of gains on 16 acres of alfalfa in 1991, with beef steers at Princeton.

## Reasons to Graze Alfalfa

Alfalfa makes excellent growth during the summer – Most cool season grasses, like fescue, can almost be dormant during the hot summer months. Alfalfa can make excellent growth during that period of time and is drought tolerant due to its deep root system. Alfalfa can add high quality grazing when cool-season grasses won't support adequate gains, especially for stocker cattle.

Reduced machinery costs – Over 40 percent of the cost of producing alfalfa for hay is machinery and equipment. Many producers, especially with small herds, could graze alfalfa without making any large investment for the long term.

Lower fertilizer costs – Eighty percent of the plant nutrients which are ingested are returned to the soil under grazing conditions. However, manure distribution may not be uniform due to concentration around water points and shade.

## Obstacles of Grazing Alfalfa

Additional fencing – Alfalfa should be grazed rotationally. However, this can usually be accomplished mostly with temporary fencing – like polywire.

Attitudes – Producers must develop a “grazing” mindset to take care of details. Our experience has been that isn't nearly as hard as it seems once producers get comfortable with the management requirements.

Stand decline – Short grazing duration with a long rest period is essential. Mimic hay harvesting with the animals. Use a “sacrifice” paddock with good grass sod when fields are wet and muddy.

Fear of bloat – The fear of bloat occurring when grazing pure stands of legumes is prevalent. But the actual occurrence can be minimized or eliminated with management and bloat-control products.

## **Requirements for Grazing Alfalfa**

### *Establishing the Stand*

Requirements for establishing an alfalfa stand for grazing are the same as for hay. A thick, healthy, and productive stand has the greatest potential for animal performance and production per acre. Although purestands can be grazed successfully, alfalfa/grass mixtures have advantages in grazing situations. Alfalfa/grass pastures may minimize bloat and reduce the amount of hoof damage and soil erosion. Alfalfa can compete well with cool-season grasses with adequate fertilization and rotational grazing.

### *Maintaining the Stand*

Stands of alfalfa are best maintained under grazing when stresses from insects, diseases, and weeds are minimized. In general, practices that result in long-lived stands under hay management will have the same result under grazing. While grazing returns significant amounts of plant nutrients to the soil, it is important to continue soil testing to determine fertility needs. Dung and urine spots are often concentrated where animals congregate, so nutrients returned in dung and urine are unevenly dispersed.

## **Choosing a Variety**

Significant advances have been made in the development of alfalfa varieties that are more tolerant of grazing conditions. Alfalfa varieties selected under grazing pressure will better tolerate hoof traffic and allow more flexible grazing schedules than hay-types while maintaining thicker stands. The University of Kentucky has done several studies to document persistence and tolerance to abusive grazing in alfalfa varieties. The grazing tolerance trait provides a safety net or insurance against stand damage from overgrazing. Any variety for grazing should meet the same requirements for yield and disease resistance that would be expected in a hay variety.

## **Rotations (Graze-Rest)**

Research has shown that rotational grazing is better than continuous grazing for yield, quality, and stand persistence.

General recommendations are to graze a paddock for one week and allow four to six weeks for plants to recover before grazing again. First growth grazing in spring is determined by weevil infestation, plant growth stand, and the need to establish the rotation to manage yield, quality, and plant persistence. Considerable flexibility exists in the grazing time, but plants should not be grazed for more than a week. If they are grazed for longer periods, new shoots developing from crown buds will likely be damaged. Stocking density should be heavy enough to remove growth in five to seven days or less.

## **Number of Paddocks**

Dividing the alfalfa field into smaller paddocks is necessary for rotational grazing. You need enough paddocks to permit proper grazing management but few enough to meet individual management resources.

Begin with a minimum of five individual paddocks. Having this number allows you to rotate animals to a new paddock each week with a four-week recovery. During peak growth, you may need to cut one or more paddocks for hay or silage to maintain high-quality grazing in the rotation. In times of slow growth, you may need to further divide one or more paddocks to permit longer recovery periods.

## **Stocking Rate**

Stocking rate is the number of animals grazing over an area during the grazing season. Stocking density is the number of animals grazing an area at a particular time. Past experience with productivity can give a good estimate of how many animals a given area will support (carrying capacity).

Alfalfa has the yield potential to support a high stocking rate. On good, productive stands, stocking rates of 1500 to 3000 pounds of animal liveweight per acre are generally suggested. Adjustments can be made based on stand productivity, animal needs, experience in grazing management, and risk levels a producer is willing to assume.

## **Bloat Precautions**

No management practice can ensure that bloat will not occur. However, its likelihood can be greatly reduced when grazing alfalfa. The following suggestions can reduce the risk of cattle bloat:

- Grow grass with alfalfa.
- Provide grass hay or grain during the first week or two of grazing alfalfa.
- Feed Rumensin®.

- Feed bloat-preventing compounds,
- Do not turn hungry cattle into an alfalfa field, especially when plants are wet from dew.
- Do not graze immature alfalfa or alfalfa/grass.
- Provide salt and minerals.
- Observe cattle closely when turning in for the first time.
- Observe cattle closely during cool, cloudy, and rainy weather for signs of bloat.
- Do not graze alfalfa for three days following a killing frost (below 24°F).  
The harder the frost, the greater the risk for bloat during this brief period.

### A Case Study

The following data came from a field trial which we conducted on 16 acres of alfalfa which was divided into 8 paddocks with a sacrifice area of fescue. Grazing began on May 1 with 52 steers averaging 626 lbs. The 32 heaviest calves were sold on July 17 and 15 calves were added on July 25. Two pounds of supplement (containing poloxalene, salt-minerals and corn) were fed daily. Overall gain was 732 lb/acre. Results indicated that grazing alfalfa could be a viable economic alternative to marketing alfalfa as a hay crop.

<b>Performance of Steers Grazing Alfalfa-1991 PERIOD</b>					
	5/1 -6/4	6/4 – 6/17	6/17 – 7/17	7/18 – 8/27 (7/25 – 8/27)	8/28 – 10-1
Calves, no	52	48	48	20 (15)	34
Days	34	13	30	41 (33)	34
Gain/hd, lb	35.2	53.5	28.6	126.4	44.8
ADG, lb	1.04	4.10	0.95	3.36	1.31
Gain/acre, lb	114.4	160.5	85.8	276.6	95.1
(Overall 732.4 lb/acre)					

