

GRAZING ALFALFA

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Alfalfa has tremendous potential as a pasture plant. The characteristics such as high yields, high quality, persistence, and drought tolerance that make it so valuable for hay and silage production also make it extremely useful for grazing. Properly managed so it has adequate recovery periods after being grazed, it can provide grazing over a six-month grazing season.

Historically, alfalfa requires rotational grazing with 35 to 42 day recovery periods to maintain vigorous stands. This management is based primarily on results from northern states and with different varieties than we have now available. Recent research shows that alfalfa can be successfully managed with much greater flexibility. We have no-till planting methods that reduce risks of establishment and extend land area suitable for alfalfa. There is a need to maximize livestock gains and reduce costs. All of these factors encourage us to use alfalfa more flexibly than in the past.

Understanding how the alfalfa plant grows will help us to select and modify grazing procedures. Alfalfa, unlike grasses, produces the growing point at the top of each stem. Any time an animal or mowing machine removes this growing point, the growth of that stem stops. The growing point for grasses is at or below the soil surface except each spring when plants develop seed heads. Animals grazing alfalfa readily remove the growing point whereas this seldom happens with grasses in the vegetative stage. Regrowth for alfalfa must come from new buds at the crown and from axillary branches that develop on the stem after removal of the growing point. When grazing alfalfa or grasses, enough leaves must be left to permit the plant to manufacture enough food to keep itself vigorous and some extra food to produce dry matter for animals. Thus, never graze alfalfa so close that no leaf area remains. Leaves at the bottom of tall dense alfalfa stands will die. When grazing is delayed until late bud growth stage, cattle graze the tops of the plant leaving stems without leaves. With no leaves to supply food from photosynthesis all new growth comes slowly from crown buds using food stored in the root. Food in roots accumulates only when top growth is tall enough to shade bottom leaves. New alfalfa stem growth must develop from food accumulated in roots or manufactured in green leaves. Thus, if green leaves are grazed off when food root levels are low, the plant is weakened. Alternating grazing with hay making and use of herbicides if needed helps to reduce weed problems.

Grazing of alfalfa, as with other crops including grasses, will always reduce total dry matter yields as compared with properly timed hay harvest. The advantages in the compromise between grazing and hay making are high quality, reduced risk of weather related loss in hay making, low cost due to no harvest, storage, or feeding, rapid gains for special animal classes, possible use as an emergency feed, as well as other factors in specific situations.

Rotational grazing during the year

A typical grazing practice for alfalfa is to turn the animals on the alfalfa about one week before it is ready to cut for hay. Then, using many animals per acre, graze for about six days and rotate the animals to a fresh area. This requires considerable fencing and time for management. Also, much of the alfalfa available for grazing is stemmy and considerable yield may be lost due to trampling. Areas not needed for grazing can be harvested for hay or silage. In situations when growth is slow or during very wet soil conditions, have an "escape" pasture available so animals can be removed from the alfalfa field.

Recent research has shown an alternative grazing method that can provide alfalfa for grazing during longer periods of time, provide higher quality of feed for the animals, and still maintain excellent stands. This allows alfalfa to be used more flexibly than in the past. Grazing alfalfa very early in the season, to coincide with the early growth of the first hay crop, can be an advantage. By grazing what would normally be the first hay cutting, you avoid having to cure the hay during the often unfavorable spring weather conditions. Early alfalfa also provides native pastures early season relief from grazing so that they can support cattle longer into the summer. Begin grazing when the alfalfa plants are about four inches tall. Control animals so that some leaf area remains on the plants, yet the average plant height does not grow above five to seven inches. This would be ideal. Vary the animal density by adding more animals or using an electric fence to confine the animals to a small portion of the field after first grazing thus leaving the remainder of field for making hay. In Blacksburg, cattle began grazing on April 3 and continued grazing until first hay cutting of non-grazed areas on May 17. The regrowth was allowed to develop until a hay crop was made about 40 days later. Allow the alfalfa to grow for at least one hay cutting to retain vigor and competitiveness for weeds before grazing again.

Summer grazing of alfalfa can be used for high quality feed for growing animals if other pastures are limited in growth. If a first hay cut was made in late May, the regrowth could be grazed in June. A second hay cut could be made in early August and the regrowth grazed in late August to mid-September. With a little management, high quality alfalfa can be available all summer by a combination of grazing some second and third cutting alfalfa.

Sheep can also be used for grazing alfalfa but care must be taken not to allow the sheep to remove lower leaves by close grazing, a problem that cattle apparently will not create. There are typically few problems with bloat but precautions should be made by feeding dry hay several days before beginning grazing and possibly having access to bloat prevention blocks.

Creep grazing

A cow will always eat the highest quality growth available to her in the pasture. Her calf has to compete with her for feed. The cow will do quite well on low quality pasture in the summer or when pasture is limiting while allowing her calf access to alfalfa through creep gates. Thus, creep grazing can make a small alfalfa field go a long way.

Judy and Leo Tammi operate the Shamoka Run Sheep Farm near Mt. Sidney, Virginia and have used alfalfa in a forage grazing system. They were recognized for their excellent management by being selected for the VFGC Outstanding Forage Producer Award in the Valley-Blue Ridge area in 1988. Their 350 ewes and lambs are put on alfalfa pasture in April where they stay until weaning at about three months. Stocking rate is at least 100 ewes per acre. At this density, the sheep are rotated out of a paddock anywhere from 3 to 10 days depending on the season. The alfalfa recovers quickly after grazing. Before the alfalfa is grazed again, at least one cutting of hay is harvested. Parasites remaining on each pasture after grazing are minimized by hay harvest. When the sheep return to graze, the pasture is relatively clean of parasites. Alfalfa is their most successful pasture. Once established, they have found that alfalfa can take a lot of abuse. It competes with weeds and grass well and, most importantly for them, it is drought tolerant. They constantly watch for bloat when pasturing alfalfa. Common sense rules apply. Don't put the ewes on alfalfa when their bellies are empty. Don't introduce them when the alfalfa is wet from rain or dew. Don't pull them in and out as a way of controlling consumption as it only encourages them to gorge themselves. Use Bloat Guard Blocks. Keep a bottle of poloxalen (Bloat Guard) handy. Their system of intensive grazing allows them to: harvest alfalfa regardless of weather, maintain a harvest schedule, reduce purchased fertilizer, and reduce competition from winter annual weeds when grazed in early spring.

During the 1989 grazing season, Neuhoff Farms, Inc. at Dublin, Virginia grazed alfalfa with 700 lb steers in an intensive rotational system involving nine paddocks of approximately seven acres each or a total of 63 acres. Cattle were removed at approximately four-day intervals from May 4 when grazing started until late November when cattle were removed from the alfalfa. The 63 acres provided grazing for the entire period except for six days in August when grazing was shifted to an adjacent fescue/red clover pasture to allow regrowth to catch up with the needs of the cattle. The cattle received no other feed or pasture for the entire grazing period. Bloat Guard blocks were supplied to the cattle for the first three weeks of grazing and again in late fall when frost began occurring. In between these two periods, cattle received a free-choice VMS mineral containing rumensin. No cases of bloat were observed throughout the trial.

Initially, 125 head or two steers per acre of alfalfa were allowed to graze each seven acre paddock for about four days. This resulted in a stocking density of 17.9 steers per acre. After 103 days (August 15), 56 steers were removed from the study and shipped to a feedlot to be finished. Based on weights taken at that time, it was estimated that daily gains during the early part of the trial were about 2.0 lbs per head per day. The 56 steers that were moved to the feedlot weighed 908 lbs on August 15.

The 69 remaining steers were somewhat lighter, probably weighing around 850 lbs in mid-August. These steers were allowed to continue to graze the alfalfa until November when they were removed from pasture and went directly to slaughter. The average shrunk weight of the cattle at the plant before slaughter was 963 lbs.

The quality grades of the 69 cattle were 10% choice, 80% select and 10% standard. The appearance of the steer carcasses was excellent with only one of 69 having a markedly

yellow colored fat. This is always a concern of packer buyers regarding pasture fed cattle, but on the whole, these steer carcasses did not exhibit this problem.

In summary, alfalfa is a truly versatile species worthy of serious consideration as a high quality, persistent, and drought tolerant pasture plant. Certain management guidelines must be followed to assure its persistence and productivity, but these are relatively simple to understand and to include in the overall grazing program on each farm.