

## Alfalfa Management in Seeding Year

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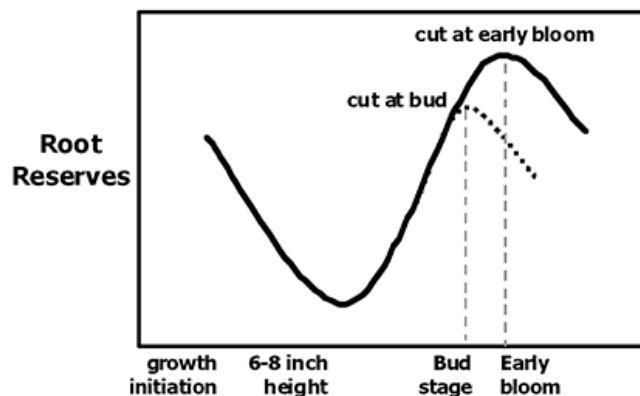
During the year of establishment, alfalfa seedlings need a high level of energy reserves in order to persist through the winter. For spring seeding which are made without a companion crop, two harvests can generally be made the first year, provided there are adequate rainfall and optimum levels of soil nutrients.



For production, consider forage quality when selecting a harvest schedule. Most harvest schedule decisions include date of cut, stage of maturity, interval between cuts, and cutting height. The interval between the stage of maturity, yield, forage quality, and persistence is frequently used to decide when to harvest alfalfa.

### **First Harvest Seeding Year**

The first harvest in the seeding year is when alfalfa is seeded in the spring and one to two cuttings are planned in the same year. The first harvest can be made before flowers begin to appear, but waiting for the alfalfa to flower will ensure greater energy reserves in the roots. Generally, alfalfa will reach this stage of development between 60 and 70 days after emergence. Harvesting delays during this stage will cause large reductions in quality and decline in total yield over the season, because fewer harvests are possible.



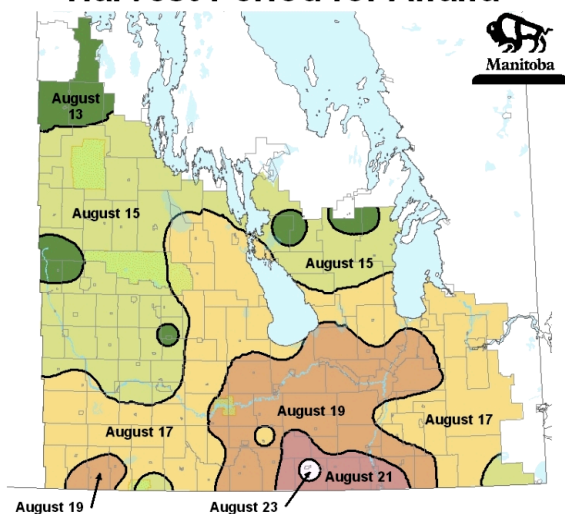
**Figure 1.** Example of alfalfa root storage at some stages of development. University of Georgia College of Agriculture and Environmental Sciences

## Second Harvest Seeding Year

The second harvest should be before the third week of August (Figure 2) to ensure an adequate storage of energy reserves for winter, or it could possibly be delayed until after the first killing frost in the fall. Although newly established alfalfa stands are generally more winter hardy than older stands, leaving stubble of 4-6 inches after the late fall cutting is a good management practice that can help trap snow and provide good insulation.

Some key aspects to harvest alfalfa include good root development and plant vigor. If the alfalfa stand looks vigorous and the roots are well developed, spring cutting can be made at bud early bloom. However, if plants are relatively small and poorly developed, it might be better to wait until mid-bloom stage before harvesting (Figure 1).

## Beginning of the Critical Fall Harvest Period for Alfalfa



For alfalfa to gain hardiness for winter survival, it requires an adequate growth period after the final fall harvest. Based on work by Bootsma and Suzuki (1985), a climatic criterion was used to estimate the start of the critical fall harvest period. Alfalfa requires an average of 450 growing degree days (base 5C) to accumulate before the end of the season. Harvesting after this date may reduce winter survival. 30-year averages (1971-2000) were used for this assessment.

**Figure 2 Critical Harvest Periods Manitoba**