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Fall Cutting Management for Alfalfa

Stephen K. Barnhart

Iowa State University, sbarnhar@iastate.edu

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Abstract

Rainfall throughout the growing season put many alfalfa producers behind several weeks for their first, and correspondingly their second, third, and sometimes fourth cuttings. Now in mid-September, producers are trying to decide on their remaining fall harvest options and the possible impact on winter survival of the stands.

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Fall Cutting Management for Alfalfa

Steve Barnhart, Department of Agronomy

Rainfall throughout the growing season put many alfalfa producers behind several weeks for their first, and correspondingly their second, third, and sometimes fourth cuttings. Now in mid-September, producers are trying to decide on their remaining fall harvest options and the possible impact on winter survival of the stands.

The goal is to help keep the forage plants 'perennial'

During the fall weeks, perennial forage legumes and grasses respond to shortening days and cooling average daily temperatures and progress through their gradual "cold hardening" process. The genetics of the variety determines how cold tolerant the plant crown and taproot can be during the winter months. Most successfully winterhardened alfalfa plants can withstand soil temperatures in the crown area to about 0 to 4 degrees F without crown tissue damage. At lower soil and crown temperatures, varieties and individual plants will vary in the degree of cold damage they may experience.

To acquire their potential for winter survival, alfalfa plants should get 5 to 6 weeks of uninterrupted growth to accumulate root carbohydrates and proteins before going dormant for the winter. A 'killing freeze' is about 23-24F for several hours. So it is important to manage fall harvests to give the plants the best chance for strong winter survival.

Fall cutting management strategies

Producer Question: My alfalfa is knee high in mid-Sept, should I cut it now?

Barnhart Answer: My answer will depend on you answer to this question: Will the field be hay next year?

If you say 'No,' I'll answer saying, 'Cut anytime.'

But if you plan for the field to be hay next year, my answer will be based on whether you need the hay. If you don't need the hay, leave the last growth in the field – don't graze in fall or winter. And if you do need the hay, it is best to wait until at or after the killing freeze (23-24 F) to cut. Then leave a 5-6 inch stubble.

Producer Question: But it is difficult to dry hay in October! (True!!!) What is the risk of cutting in mid-Sept.?

Barnhart Answer: If you cut in mid-Sept. the plant will begin to regrow and begin to use what stored carbohydrates they have. The risk comes if this late growth will leave the plants with a relatively low root level of available root stores when the 23-24 F killing freeze comes. Low levels of winter root stores may lead to a greater susceptibility to winter cold injury and to a delayed spring recovery.

Factors, which improve alfalfa, winter survival

Here is a checklist for you to review to see how your summer and fall management has been relative to alfalfa stand vigor and overwintering potential.

- 4" or more of winter-long snow cover
- a winter tolerant variety
- 2 or 3 summer cut harvest systems with good regrowth between cuttings
- 5-6 weeks of uninterrupted growth during September and October
- All of the last growth of the season is left in the field (no cutting or grazing) – if you did take a late fall cut or grazed, you left a 5 to 6 inch stubble.
- Management of insects (potato leafhoppers) during the growing season
- Good levels of available potassium in the soil
- Young stands – or older stands with no root or crown disease

Steve Barnhart is a professor of agronomy with extension, teaching, and research responsibilities in forage production and management.

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