

# Increasing The Winter Survival Rate Of Alfalfa

**BLUE SPRINGS, MO.**

**W**hile the harvest of corn and soybean is underway, perennial crops such as alfalfa begin the cold-hardening process. Producers can increase the ability of plants to withstand cold temperatures by implementing several key strategies, said a University of Missouri Extension agronomy specialist.

"First, a four- to six-week fall rest period is recommended for alfalfa stands," said Julie Abendroth.

During the fall, alfalfa plants prepare for winter survival and spring re-growth by storing carbohydrates in the crowns and roots. Plants continue to accumulate root reserves until a killing freeze (23 to 24 degrees F or colder for several hours) stops seasonal growth. Plants that have accumulated adequate root reserves do well in the winter months and during spring re-growth.

It's important not to allow a late cutting or grazing of alfalfa fields during the fall or winter months. Fall re-growth should be left to stand in the field," Abendroth said.

"Interestingly, winter survival rate is directly

tied to potassium," she said. "Plants are more susceptible to winter kill if the soil-test potassium level is lower than recommended."

Prior to applying potassium or other nutrients, test soil pH to determine whether a lime application is necessary. Increasing soil pH will boost the overall nutrient-uptake ability of plants.

Abendroth recommends producers implement these management strategies to improve alfalfa winter survival:

- Maintain good levels of available potassium in the soil.
- Select an alfalfa variety with good cold tolerance.
- Allow good re-growth between cuttings.
- Allow four to six weeks of uninterrupted growth during the late fall.
- Allow all of the last growth to remain in the field.

The MU Extension guide "Alfalfa" (G4550) is available online at <http://extension.missouri.edu/explore/agguides/crops/g04550.htm>.

△