

Disaster Recovery



Agronomy

Fall forage management for '93 and implications for '94

Nearly every step along the way during the 1993 haying season has been off schedule. About the only producers on time were those who harvested first cut hay in late May. Even they had trouble keeping on schedule for the remainder of the year. Cool temperatures, cloudy skies and frequent, heavy rainfall interfered with nearly everyone's cutting schedule and harvest success. Late summer days improved conditions somewhat. Producers are asking about the condition of hay stands and what they should do this autumn to salvage or maintain them.

Hay stands have been stressed

From the last spring frost, through the cloudy days, to the potato leafhopper feeding and months-long saturated soils, forage plants have been under some degree of physiological stress. Grasses should respond well to the relatively normal autumn conditions, but the forage legumes such as alfalfa and red clover have been weakened and may not recover completely. While most plants will recover to a relatively healthy state of regrowth by late summer, the long-term effects of stem, crown and root diseases are not yet known. Legume plants with severe crown and root diseases probably will not survive the winter.

Management practices to improve your success

Allow for a fall recovery period. Perennial forage plants, both legumes and grasses, must accumulate an adequate level of carbohydrates during

autumn to survive the winter and regrow vigorously in spring. Ideally, these plants should be given 4 to 6 weeks of uninterrupted growth through September and early October to allow for recovery of plant vigor. A management goal should be to have the plants at the highest level of carbohydrate accumulation at the time of the killing freeze, which stops all growth for the season: et.al. temperatures at 23 to 26°F. for several hours. In mid-Iowa, the average killing frost for forage growth occurs in mid-October. The least-risk management is to avoid any harvest during the latter two-thirds of September and early October.

Untimely autumn harvest, one which interrupts this 4 to 6 week accumulation period, may result in a reduced level of carbohydrate accumulation and possibly an attempt by the plant to regrow very late in the season using needed carbohydrates in the process. Neither condition is desirable.

Nearly every producer will have a hay field at harvestable height in mid- to late September and is likely to have a week when drying conditions are ideal. Do they cut or wait until a time nearer to the killing freeze? This is not an easy decision. The answer may depend upon:

- 1) The need for good quality hay. The most conservative management is to let the growth stand through the winter.

- 2) Whether the field will be kept for hay in 1994. If not, the stand can be cut anytime.
- 3) Whether the stand has been under significant stress. This year, it would be best to wait until nearer the killing freeze.
- 4) How long it has been since last cut. If the field has had 5 to 6 weeks of regrowth, it will likely tolerate an ill-timed autumn harvest better than a field with only 28 to 30 days of regrowth.

Autumn Fertilization. Few fields received an annual fertilizer topdressing this year because the fields were too wet. Late summer or early autumn is a good time to fertilize the hay meadows with needed phosphorus and potassium. Plants will take up these nutrients during their autumn growth. Research in the upper midwest has shown that alfalfa fields with high soil and plant potassium levels have better winter survivability. Avoid fertilizer trips over the field if soils are wet. Also, even though manure is a good source of plant nutrients, the extra trips over alfalfa fields may be damaging. The nitrogen in manure can lead to undesirable grass and weed growth in alfalfa meadows.

Prospects for 1994

Alfalfa winter survival often is better when plants develop dormancy under gradual cooling temperatures and with average or dryer soil conditions. Snow cover is desirable for insulation from low temperatures and prevents short mid-winter breaks of dormancy. With the extended periods of stress throughout the 1993 season, stands may be more vulnerable to winter injury.

It will be good management to begin checking fields in early-to mid-March for signs of recovery. Look for plant vigor, uniformity of regrowth and overall stand density. Also, dig 10 to 20 random plants in each field, both healthy and unhealthy ones, to assess the general health of the root systems. This early scouting is important so that you can make early, informed decisions about the need for reseeding. Mid-March to Mid-April is the target spring seeding time. Be prepared.

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