

Harvest decisions dictate alfalfa's value, fate

SITE selection, good soil fertility, and a forgiving growing season are important, but nothing can affect alfalfa quality as much as harvest management. Harvest recommendations have evolved to match growing milk production on today's modern dairy farms.



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Fifty years ago, a high-producing herd of Holsteins was making about 500 pounds of butterfat. Farmers simply didn't need bud-stage alfalfa to feed cows for this



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level of production. Cornell University recommendations for alfalfa were to harvest first cut in early bloom, with second and third harvests at 6- to 7-week intervals.

This almost guaranteed that at least the second cut of alfalfa, and perhaps the third cut, as well, were in bloom by the recommended harvest date. (Midwestern state university agronomists were more aggressive, recommending 35 to 40 days between summer harvests.)

Suggested fall strategies also were more conservative which, when combined with longer harvest intervals, resulted in at least one fewer harvest each year. To see how much things have changed, last year some farmers in northeastern N.Y., next to the Canadian border, harvested alfalfa-grass fields five times, something we wouldn't have dreamed possible in "the old days."

There were benefits to those laid-back cutting schedules. The additional days between cutting resulted in higher yields, longer stand life, and less winterkill. However, the nutrient levels would not satisfy demands of today's productive dairy cows.

Never see blossoms

With today's harvest management on many top dairy farms, it's possible that we would never see alfalfa blossoms from seeding through plow down. That's because

current recommendations are to harvest each cutting of alfalfa in the late-bud stage which in much of the U.S. means at least three and often four or more harvests per season.

Mowing second-cut alfalfa in the bud stage sometimes means harvesting at a 30-day interval or even a few days less than this. The alternative, mowing by the calendar as was once popular, could result in harvesting second cut at full bloom, and if there's any cutting that must be taken prior to bloom, it is second cut. That's because the long, hot days of early summer can result in reduced fiber digestibility and poor herd performance.

An alfalfa stand will probably last longer under more conservative harvest management — 40 to 45 days between harvests — but for second and probably third cuttings, this produces low-quality forage, perhaps suitable for wintering beef cows but not for high-producing dairy cows.

Alfalfa stubble height

Farmers are mowing alfalfa at shorter stubble heights for one major reason: because they can! The rapid — and in some areas, almost complete — adoption of disc mowers and mower-conditioners means less chance of breakdowns if mowing to a shorter stubble height results in scalping of the soil surface. (Not desirable, but it happens.) Disc mower knives are more resistant to breakage than are the knives on sicklebar mowers.

At the same time that disc mowers were taking over on farms, university forage specialists were saying that mowing to a 1- to 2-inch stubble height would result in higher yields with little or no damage to the plant. That's because alfalfa regrows from crown buds, not from the cut stems. The initial regrowth following harvest is from carbohydrates stored in the alfalfa's tap root. Research at Miner Institute found that dry matter yields rose by 10 percent by mowing at 2-inch versus 4-inch stubble height, while quality — as measured by predicted milk production per ton of alfalfa — fell only 4 percent.

However, greater yields must be



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balanced against the tendency for disc mowers to vacuum soil (ash) into the crop. This results in lowered digestibility and raises the potential for increased soil-borne bacteria and spores that can have a negative impact on fermentation. For most producers, cutting pure alfalfa stands at 2-1/2 to 3 inches seems a good compromise. The exception to this would be the final harvest of the season in regions with very cold winters, when little or no regrowth is expected. In this case, it's best to leave 4 to 6 inches of stubble to catch and hold snow which insulates the alfalfa crowns.

Fall recommendations

There's still plenty of disagreement on fall harvest management, even by the "experts." Some agronomists recommend against harvesting alfalfa between early September and mid-October because they want alfalfa to accumulate enough reserves for the coming winter. Other agronomists are more concerned with the length of time between the last harvest in the fall and the prior one, stating that alfalfa can be harvested anytime during the fall as long as the

alfalfa is healthy, growing on a fertile, well-drained field, and there's been 6 to 7 weeks since the prior harvest.

Fall-harvested alfalfa shouldn't be harvested unusually early the following spring, allowing the plant to accumulate enough root reserves. The worst-case situation would be to alfalfa harvested prior to frost; then the crop regrows 6 to 12 inches before a killing frost occurs. Nutrients for this initial regrowth are primarily from root reserves. It would be better to harvest early enough to permit plenty of regrowth or to wait until right after a killing frost. After a killing frost, the alfalfa should be harvested before the next rain because water can quickly leach nutrients from frost-damaged alfalfa leaflets. 🐄

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