



CAN I HARVEST ALFALFA THIS FALL?

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After a very dry early summer that limited alfalfa yields, abundant (too abundant in some cases) late summer rainfall brought alfalfa productivity back in line. Can/should we harvest that abundant growth? Historically, we avoided harvesting alfalfa after September 1, but in recent years have been less cautious, with good reason.

More detailed perspectives on fall cutting can be found on-line at

www.extension.umn.edu/cropenews/2005/05MNCN45.htm

www.extension.umn.edu/cropenews/2002/02MNCN38.htm

www.uwex.edu/ces/forage/pubs/Late-Summer-Cutting-Management-of-Alfalfa.pdf

But let's review a few of the key factors most relevant to this year.

Stand Health and Stem Density. Alfalfa stands need a minimum of 40 stems/ft² to be productive, and preferably more than 55 stems/ft². Healthy roots/crowns produce more shoots (stems) which drives yield. The fixed costs of alfalfa hay/haylage production are too great to limp along with marginal stands. Thus, older stands and/or stands that are weak/thin are often good candidates for fall cutting since they generally should be terminated after this growing season anyway. Dig up some plants and examine them. Healthy roots are bright white on the inside from crown to tip. Stands with significant signs of root decay are unlikely to produce well next year, so should be fall-harvested if the forage is needed. Consult the WI-MN publication at <http://learningstore.uwex.edu/pdf/A3620.pdf> for more details and photos.

Climatic factors. Drought slows alfalfa growth before it slows photosynthesis. Thus, drought-stunted, flowering alfalfa that had/maintained decent leaf area likely stored away a good supply of root reserves important to regrowth and winter hardiness. However, severely stunted alfalfa with little leaf area and/or significant leaf drop may not have been able to store reserves. Also, winter hardening is a gradual process influenced by changes in temperature

and daylength as we progress into and through fall. Water-logged soils are not conducive to good winter hardening, and obviously quite conducive to rotting, so should not be fall harvested.

Feed supply. If your inventory of high-quality forage is low, risks associated with fall cutting become less important.

Timing of the fall cut. Data continue to mount supporting the concept that timing of the fall cut matters little as long as other factors favor fall-cutting tolerance. Farmer experience must agree, as I have noted more and more September cutting in my travels over the last several years. However, for the risk-averse, either avoiding a fall cutting or waiting until mid October may be better options. Waiting until mid October minimizes the chances of significant regrowth and root reserve depletion after cutting. But don't be concerned about waiting for an alfalfa-killing frost (around 20°F) before harvesting. That approach risks significant leaf loss and unfavorable curing conditions.

Previous cutting frequency. Stands cut more frequently are at greater risk of winter injury if cut during the fall. Thus, when other factors favor fall-cutting tolerance, a third harvest during fall is rarely risky, a fourth harvest during fall can be somewhat risky, and a fifth harvest during fall can carry considerable risk. Key to enhancing winter survival is allowing at least one crop to mature to mid-bloom. Thus, stands of fall forage that have previously been cut at pre-bloom stages should be well-flowered if fall harvest is considered.

Recent North Dakota data. Working with two alfalfa varieties in replicated plots at Fargo, Dr. Dwain Meyer showed a 3-year total yield gain of 3.6 ton/acre by taking a fourth harvest in fall for three consecutive years compared to just three harvests per year. A key aspect of his 4-cut system was that the fourth harvest was taken when alfalfa plants attained either 40-50% bloom or 2-3 inches of new shoot growth from the crown; corresponding to Oct. 7,

Sept. 28, and Sept. 13 in 2004, 2005, and 2006, respectively. There was little to no evidence of winter injury each spring through 2007.

Alfalfa-grass mixtures. Mixtures are good candidates for fall cutting. Grasses such as orchardgrass and tall fescue have good fall growth, and grasses in general improve snow catch and insulation and reduce heaving potential.

Other factors to consider are detailed in the articles cited earlier. For example, while there are no research data substantiating the benefit of uncut strips perpendicular to

prevailing winter winds and < 20' apart, or of leaving a taller (>6") stubble to help catch insulating snow cover, anecdotal evidence suggests these practices may reduce fall harvest risk. Winter survival is a complex process influenced by many factors. But in general, fall cutting is often a good option for healthy, well-managed alfalfa stands.