

REDUCE LODGING IN ALFALFA TO PRESERVE YIELD AND QUALITY ALFALFA

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Count yourself blessed, or just plain lucky, if you are an alfalfa grower who has never had to harvest a lodged alfalfa crop. Harvesting a lodged crop may not be as difficult in alfalfa as in some other crops, but there are yield and quality penalties to pay in a lodged alfalfa crop.

When can lodging be a problem in alfalfa? It tends to be more of an issue:

- During periods of lush growth—heavy spring growth is most susceptible
- When heavy rains or wind impact the crop
- When harvest is delayed
- When heavy amounts of manure have been applied



Yield reduction from lodged alfalfa equates to ½ ton per acre lost yield for every six inches of unharvested stem length left in the field, assuming a good stand of alfalfa. It can be tempting to adjust cutting height or cutting disc angle to 'pick up' lodged alfalfa when mowing. It can be especially tempting when lodging occurs in heavy lush growth that you just hate to leave behind in the field. What can you do? Go ahead and make adjustments if needed, but take care to set your cutting mechanism to avoid scuffing the soil surface and kicking up dirt onto the forage. Here's why...

Soil contamination can occur during mowing, especially when mowing a lodged hay crop. Modern disc mowers can mow a lodged crop faster than a sickle bar mower, but the amount of soil disturbance by disc mowers can be greater. Disc angle, knife shape, mower height settings and soil surface roughness are all factors in the amount of soil contamination during forage cutting. You can gauge the amount of soil contamination in forages by measuring ash content.

Excess ash content of forages has gained recent notoriety, and for good reason. Based on research and forage laboratory results, recent articles in forage publications suggest that ash content in alfalfa exceeding 8% of dry matter is largely due to soil particles included in harvested forage. Low-level soil contamination of hay and haylage is probably inevitable, so keeping ash levels less than 10-11% has been suggested as a reasonable goal.

Feeding forage with high ash levels is like feeding more dirt, and dirt in your ration won't make milk. Furthermore, excess ash in the forage analysis of purchased hay probably amounts to fairly expensive dirt. Whether you've experienced ash content exceeding these levels or not, you might wish to keep soil contamination in forages to a minimum.

A common misconception is that lodging resistance in alfalfa leads to less digestible forage, but that is not the case. Stems of the lodging-resistant types arise from the crown in a more vertical fashion instead of spreading out and away from the crown before growing upward. This more upright stem architecture confers more resistance to lodging.

Choosing lodging-resistant varieties can save your crop from yield loss caused by lodging and help maintain forage quality of the harvested crop. Some varieties with lodging resistance include Pioneer brand variety 54Q14, a high-yielding, high-forage-quality type with Relative Forage Quality (RFQ) that exceeds another conventional variety highly touted for digestibility over the past three years. Other high-yielding varieties bred for lodging resistance include Farm Science Genetics 403LR, and SW5912Y, available from S&W. If you seek to avoid or reduce high ash content in forages, consider selecting lodging-resistant varieties as part of your management approach.

There's another positive forage quality connection to lodging resistance. In addition to harvestability advantages, the lodging-resistant characteristic helps avoid long unharvested stems that reduce yield in the current cutting and continue to mature and dilute forage quality if harvested in later cuttings. Overall yield of subsequent cuttings can be adversely affected too, since regrowth in lodged alfalfa often arises from less vigorous axillary buds along the unharvested stem, slowing regrowth from more productive crown buds.



This Michigan variety strip trial shows lodged alfalfa in the variety at right. A Pioneer lodging-resistant variety is on the left. Lodging can leave long trailing stems in the field following cutting, contributing to yield loss in the current harvest and quality dilution of subsequent harvests. (Photo courtesy of Dann Bolinger)