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Reduced-lignin alfalfa can extend harvest timing

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Researchers collected forage samples from alfalfa cultivars with and without the reduced-lignin trait to characterize the changes in forage digestibility as the crop matured during individual growth cycles across two years in six states. Photo by Mark Sulc.

Erratum

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The constituents of plant cell walls, such as lignin, limit the feeding value of alfalfa since they are not digestible by ruminant animals. To increase fiber digestibility, farmers must harvest alfalfa before yield is maximized to obtain forage with lower levels of lignin.

New alfalfa cultivars with reduced lignin (RL) concentration in stems have been developed recently. However, it is still unclear how long we can extend harvest intervals with RL alfalfa while maintaining acceptable forage digestibility.

In an article recently published in *Crop Science*, researchers report on multi-state studies from six states where changes in forage digestibility of RL and non-RL cultivars were measured across two years. They found that the RL cultivar was consistently greater in forage digestibility than non-RL cultivars within each growth cycle, but the rate of change in digestibility was similar for all cultivars.

Compared with non-RL cultivars, RL alfalfa was able to extend the time interval when it is possible to harvest forage with adequate fiber digestibility for animals with high energy requirements by an average of 8 to 11 days. The extent of that longer harvest interval that was possible varied from 2 to 20 days, depending on environmental conditions.

Dig Deeper

Adapted from Sulc, R.M., Arnold, A.M., Cassida, K.A., Albrecht, K.A., Hall, M.H., Min, D., … & van Santen, E. (2020). Changes in forage nutritive value of reduced-lignin alfalfa during regrowth. *Crop Science*. **https://doi.org/10.1002/csc2.20366**."

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