

# Consider small grains for forage alternative

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We're short of good hay for our cows this year because of last year's rainy weather. And we're short of money because of lower milk prices over the last 10 months and in the foreseeable future.

This means we've got to maximize silage feeding—corn silage in particular. But for optimum herd health and production, we still need some hay or haylages from alfalfa, grass and/or small grain crops.

At least that's the situation we face with the University of Delaware dairy herd. Our high milk producers usually need extra fiber in their rations. This is best supplied by hay crops—especially if they're cut fairly mature. Well-matured corn silage may test 24 percent fiber in the dry matter, but well-matured alfalfa-grass haylage can test 32 percent fiber, while well-matured barley or rye haylage may test as high as 38.

We may not need fiber, however, under certain conditions, such as when silage is coarsely cut and the grain ration is buffered. In which case we can save money by cutting small grains in an immature stage to maximize their protein content and so reduce the amount of protein we must supply from commercial grain rations.

Normally, well matured rye, barley, oats or wheat have about 9 percent protein in the dry matter. But if cut in the immature stage before plants head out of the boot stage, small grain crops can easily test above 20 percent protein and as high as 27 percent dry matter.

Cut, wilted and made into well preserved haylage, such immature small grains can help you realize considerable savings by reducing dairy grain supplement requirements back to at least 16 percent protein.

Similarly, if the weather allows

pasturing your herd on small grain fields, you can cut cash costs for supplements considerably and even save on silage.

When pasturing cows on small grains, be sure to use short-time strip rotations, because in the spring fields usually aren't dry and firm enough to allow the cows on permanent pasturing. It's best to use mobile electric fencing so you can open up different field strips, allowing only one to two hours per day of intense grazing.

If you planned wisely last year and planted some small grains, now's the time to give them a

fertilizer boost with some liquid manure, for example, or spread some poultry manure on them. (Check with your county extension agent for information on manure loading rates and tips on spreader calibration.)

Once the manure has washed in well after some rain and the spring sun has grain plants off to a good start, put up your electric fence—a single strand will usually suffice—and start strip-grazing cows. They'll milk very well, since the small grain forage is high in protein. Just be sure to give them sufficient energy supplements,

such as high-moisture corn, to balance the ration.

If you can't pasture your small grain forages, get your storage cutting and filling gear ready to turn them into high-quality haylage before grain heads out of the boot stage. This won't give you the highest yield per acre, but it will be the most nutritious haylage you can get per pound of feed—probably 65 percent TDN plus high protein.

Waiting for small grains to head into the milk or dough stages increases dry matter content and energy yield per acre, but this more mature forage will be very

high in fiber, due to straw development. Thus it will support only mediocre milk production and require high protein and energy supplementation in the herd ration.

In this part of the country we often get spring rains just when small grains (rye and barley) ought to be cut for haylage or hay. This delays cutting and the result is haylage with a low nutrient content. So start planning NOW for an EARLY CUTTING date, just to be on the safe side and to maximize the financial benefits from your small grain forages.

## Conservation tillage

LEBANON — Conservation tillage is a type of non-inversion tillage that leaves protective crop residues on the surface throughout the year. We commonly think of conservation tillage as it relates to no till or a combination of chisel and/or disk.

Conservation tillage has many benefits. First the protective residue mulch left on the surface protects the surface soil particles from detachment from the explosive energy of the raindrops.

Consequently, water has greater time to infiltrate into the soil surface, thereby increasing the moisture-holding capacity of your soil.


This also results in cleaner surface runoff from your fields. Conservation tillage also increases the soil tilth and reduces further runoff due to the increased roughness of the soil surface.

To be effective at least 2,000 pounds per acre of corn residue should be left on the surface after planting.

"If most of the corn stalks are incorporated into the soil, the soil surface is not protected from erosion, water infiltration into the


soil surface is decreased resulting in more dirty runoff and soil tilth is reduced," according to Randy McCormack, Soil Conservationist with the U.S.D.A. Soil Conservation Service in Lebanon, PA.

For more information or recommended protective amounts of crop residue for conservation tillage, contact SCS at 272-4618.



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