

Storage Methods to Reduce Loss of Hay Quality

Tom Dorn
UNL Extension Educator

Hay is selling at a premium this year so it is especially important to minimize losses from spoilage and to maintain nutrient quality. Hay stored outside will be damaged by rain, snow, wind and ice. If possible, store hay inside or cover it with a canvas or plastic tarp. The average round bale that is stored out in the weather loses about one-fourth of its original nutrients during storage.

For instance, do you usually line up round bales so the twine sides touch each other? Or stack your bales? If so, extra spoilage will occur where these bales touch because rain, snow and ice will gather in these spots instead of running off. Round bales butted end-to-end, cigar-like, usually have less spoilage because there are no "valleys" to collect moisture.

It may seem remote when



The best way to store round hay bales is butted end-to-end in north-south rows on open ground (not next to fences or trees).

you are putting up hay in the heat of summer, but think about where snow tends to drift before deciding where to store bales in the field. Prevailing winter winds are from the north or northwest in eastern Nebraska. Placing hay next to fence lines or trees can result in their being engulfed in snow

drifts later on.

Even when placed on open ground, round bales in east-west rows often have drifts on the south side. As snow melts, it soaks into the bales or makes the ground muddy. Plus, the north side never gets any sun, so it's slow to dry. Bales that are oriented north and south will



Avoid storing round bales side-by-side. This creates "valleys" which can collect rain, snow and ice.

cause fewer drifts to form next to the bales and the hay will dry more quickly because the sun and prevailing winds will hit both sides of the row.

Most important is the bottom of your bales. Always put bales on higher, well-drained ground so water drains away from them. Besides

placing them on higher ground, if possible, place the bales on a bed of crushed rock, on railroad ties or on pallets to keep the bottoms dry. This will also reduce problems getting to your hay or getting it moved due to snow drifts or mud. Just a little pre-planning can save valuable hay and frustrations this winter.

Grain Stubble Rental Rates

Tom Dorn
UNL Extension Educator

Occasionally, we get a question about "fair" rental rates for grazing stubble fields. Several factors should be considered when setting a rental rate. One factor is what it costs the landowner to allow the stubble to be grazed. The most obvious cost is associated with the loss of plant residues and the nutrients they contain. If the land is being grazed, some of the carbon, nitrogen and other minerals contained in the leaves and shucks will be utilized for animal growth and maintenance are lost from the plant/soil system.

An advantage to grazing over machine harvesting and removal of the forage is that much of the nutrient content in the stubble is returned to the field in the manure, which actually is more readily available for next year's crop than if left undisturbed.

Stubble has a value as a feed and could be considered a part of the income stream from the crop; just as the grain is a part of the same income stream. The landowner would naturally try to maximize his return from both the grain and the stubble given the opportunity.

A benefit to the land owner is the reduction in voluntary crop plants next season which would require additional expense and management to control.

Looking at the other side of the ledger, what benefit will come to the animal owner as a result of grazing the stubble. Obviously, the rate the animal owner can pay should not exceed the cost he/she would incur if alternative feed sources were used, including any differences in labor, management, fuel and depreciation on vehicles and machinery.

A "fair" rental rate, is a rate



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that more than covers the land owner's costs and contributes to his income stream from the crop, but does not exceed the value of the benefits to the animal owner.

Given the variability between fields and weather conditions, probably the fairest way to rent stubble fields is to pay on a head-per-day basis. That way, the amount the renter pays is more or less based on the amount of feed available and on the openness of the weather.

The question comes down to what will the market bear, considering the alternative feed sources available and the demand for forages for cattle producers.

One way to arrive at a compromise is to make a comparison in the cost per head per day to feed alternative forages as opposed to renting stalks. For example, let's assume a cattleman can buy good (but not great) quality alfalfa (16.8% crude protein and 55% TDN on a dry matter basis) for \$85 per ton. He would need to feed 28.4 pounds of this hay per head per day to meet the protein and energy requirements of his herd of mature (1,100 pound) pregnant cows in the middle third of pregnancy. At this price per ton, the cost

of the hay consumed per cow would be \$1.21 per day. (The cost of vitamins and minerals is not considered as this would likely be the same whether the animals were fed hay or they were grazing stubble). The cost of providing drinking water is also not considered here, but differences in the costs incurred ought to be taken into account.

It would seem that a fair rental rate would need to be something less than the \$1.21 per head per day that would be incurred by feeding hay, minus additional cost incurred to transport the animals to the stubble field, extra mileage to look after the cattle, etc. incurred by the cattle producer while utilizing the stalks as compared to feeding the animals at home.

A final consideration must be mentioned. Stubble fields can be quite variable in terms of pounds of stover per acre and in terms of the amount of grain left in the field. There can also be much variability on how well animals utilize the residues that are present in the fields due to weather factors. In addition, the condition of fences and the availability of water can vary greatly from field to field, making some fields more desirable than others from the renter's point of view.

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University of Nebraska-Lincoln Extension presents a series of programs, entitled Acreage Insights-Rural Living Clinics, targeting acreage owners and specifically designed to provide knowledge and skills to better manage a rural living environment.



Organic Production

Thursday, Nov. 8, 7-9 p.m.
Lancaster Extension Education Center
444 Cherrycreek Road, Lincoln

Small scale production of organic vegetables, livestock and other crops is becoming more popular each year with acreage owners as well as farmers market producers. This program will be an overview of organic production. We'll be discussing vegetables, livestock and other crops, along with basic production, marketing opportunities and how to become certified as an organic producer.



**Clinic is \$10/person advanced registration;
\$15/person at the door**
Preregistration deadline is 3 working days before clinic.

For more information, contact Sarah Browning at
(402) 727-2775.

REGISTRATION FORM

Acreage Insights: Rural Living Clinic "Organic Production"

Lincoln—Nov. 8

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone _____

\$10/person advanced registration

Preregistration deadline:
3 working days before clinic.

Amount enclosed \$ _____

Number attending _____

Mail completed registration form and check (payable to UNL Extension) to:
UNL Extension in Dodge County
Acreage Insights
1206 W. 23rd St.
Fremont, NE 68025