Farm Views

Farmers Tax Guides Available

The extension office has received a supply of the 2001 Farmers Tax Guides. Interested persons can pick these up at the extension office at 444 Cherrycreek Road in Lincoln. These guides, along with many other tax publications and notices can also be found on the IRS website. To access the IRS website, point your web browser to: http://www.irs.gov/forms_pubs/pubs.html (TD)

Renting Livestock Facilities

From time to time, someone will inquire at the extension office about establishing a fair rental price for a livestock facility. While the Extension office, in no way, is in a position to set rental rates or judge what is fair to both parties, there are some guidelines that have been presented by farm management specialists at the university that can be used as a guideline.

For both the owner and tenant, determining a fair rental price for livestock facilities such as hog barns or feedlots should include consideration of alternatives available. For example, the owner should consider whether the facility will be in use or sit idle if not rented. If the owner had planned to use the facility for his or her own operation, annual rent equal to 18 percent of the current asset value is considered a good rule of thumb. This amount should cover depreciation, interest, normal repairs, taxes and insurance. On the other hand, if the facility will remain idle if not rented, annual rent equal to 10 percent of value may be satisfactory. This generally will cover cash expenses such as repairs, taxes and insurance and the loss of value due to use or depreciation. For example: Using these guidelines, a hog barn valued at $25,000 would have the rent set between $2,500 to $4,500 per year.

The prospective tenant meanwhile should consider other alternatives for renting or building facilities. For example, would the building cost (amortized over the useful life of the facility), plus ownership costs (repairs, taxes and insurance) of constructing a similar facility be more or less expensive than the rental price? The answers to such questions will help determine if the asking price is reasonable.

Probably the hardest thing to do when using this method is setting a fair market value on the facility in question. Normally, one would expect the value of partially or fully depreciated facilities to be somewhat less than the replacement value. One good approach is to estimate how much the facility would add to the value of the property if the property was sold. (TD)

Fertilizing Crop Land With Biosolids

An Educational Workshop about Lincoln's Biosolids Program

Thursday, Feb. 28

Please preregister for this workshop by Feb. 25 with Karen Wedding by calling 441-7180.

Meet at 3:30 p.m. at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln, and travel to the Theresa Street Wastewater Facility at 4 p.m. for a tour. Educational program is back at the Lancaster Extension Education Center from 6–8:30 p.m.

At this biosolids workshop you will learn:
- how wastewater is processed and made safe for application.
- how regulations determine application rates and locations.
- how GPS and GIS technology is used in Lincoln's Biosolids Program.
- how you can reduce your out-of-pocket fertilizer costs.
- biosolids improves soil tilth, especially on poor or eroded soil.
- biosolids increases organic matter and water holding capacity.
- biosolids usually increases crop yields for several years after just one application.

Safely Feeding Moldy Hay Requires Observation

Photo by University of Nebraska Institute of Agriculture and Natural Resources

All hay contains mold, but when the mold becomes noticeable decisions must be made about whether or not to feed it to livestock. Noticeable mold, detected by sight and smell, usually makes hay less palatable, which can result in lower intake or animals refusing to eat the hay.

Other problems, including illness in animals, can occur from the toxic byproduct, mycotoxins, which mold fungi produce. Not all molds produce mycotoxins and the amount produced is unpredictable, making the decision to feed moldy hay burdensome. Mycotoxins are generally impossible to detect. Expensive lab tests can be conducted, but they are time consuming and usually specific for only one type of mycotoxin.

Direct negative affects from moldy hay also are difficult to document because they affect livestock differently. Horses may be the most sensitive to mold among livestock. Mold spores often contribute to respiratory and digestive problems such as colic or heaves in horses. Cattle are less affected by mold, but certain molds can cause mycotic abortions or aspergillosis, a fungal infection. Humans also can be affected by mold spores. The spores cause a condition called farmer's lung where fungus grows in lung tissue. People need to avoid breathing in mold spores.

The best solution is to use common sense and minimize feeding moldy hay to more sensitive animals like horses or pregnant cows. This requires good observations. Look for respiratory difficulties and off-feed or feed refusal. Sometimes uncoordinated or odd movements can be a sign of sensitivity. Mixing moldy hay with other feedstuffs can sometimes dilute problems, but be careful that the animals are not sickened by tricking them into eating bad hay that they normally would refuse. (TD)

SOURCE: Bruce Anderson, Ph.D., forage specialist, NU/IANR

Fertilizing with Phosphorus

The extension office receives several calls each spring asking about proper phosphorus fertilizer application timing and methods. Many times, questions stem from a misunderstanding of the differences between how phosphorus and nitrogen react in the soil and how each are measured by a soil test.

Although nitrogen can be applied in various forms initially, eventually all nitrogen is converted to nitrate in the soil. Nitrate is not attracted to clay or other particles in the soil and remains in the soil solution (dissolved in the soil water) where it can be utilized by plants. Post growing season tests for nitrate nitrogen (NO_3-N) in the soil test are measuring all of the available nitrogen in the soil.

Phosphorus fertilizer, on the other hand, is completely water soluble (completely plant available) when manufactured, but it does not remain this way very long after it is applied to the soil. This process of available phosphorus being made unavailable to plants is called "phosphorus fixation." Tests which estimate the amount of phosphorus that is available for uptake by plants are only measuring a small fraction of the total phosphorus in the soil.

Nebraska soils are generally well supplied with phosphorus. Total phosphorus contents average about 4,700 pounds of Phosphate (P_2O_5) per acre for each foot of soil. Assuming a root zone of six feet, most Nebraska soils contain about 28,000 pounds of total phosphorus as P_2O_5. If our crops could use all of this phosphorus, we would have a 500 year supply for growing 150 bushels of corn per acre per year. Unfortunately, only a very small amount of this total phosphorus supply is available each year because it must undergo weathering before it becomes available to plants. Even with 28,000 pounds of total phosphorus present in the root zone, phosphorus may be deficient for maximum crop yields. Our problem is to determine the amount of phosphorus available to a crop and then use phosphorus fertilizers most effectively to maximize economic crop returns.

Soil test values are based on lab tests which use chemical processes to extract phosphorus from the soil sample. The result of these extraction techniques are reported as a concentration of available P_2O_5 expressed in parts per million (ppm or mg/kg). Several different chemical tests are used to extract phosphorus. The proper test for a given soil sample depends on the chemical properties of the soil, especially free lime and soil reaction (pH). In all cases, the tests themselves would have no value unless they were associated with field studies by soil scientists who correlate test data with yield response to phosphorus fertilization.

Phosphorus is only slightly mobile in the soil. Generally speaking, plant roots must be in contact with the soil phosphorus in order to extract it from the soil. Therefore, phosphorus must be present in the soil where plant roots are active and growing. This means that phosphorus applied to the soil surface will not be utilized well by most plants because plant roots don't grow on the soil surface or in the upper inch or two of the soil profile because the soil surface tends to dry out quickly.

For annual crops, such as wheat, corn, milo or soybeans, the most efficient way to apply phosphorus is to apply it in a band at the time of planting. An alternative is a broadcast application before planting when it can be incorporated into the soil. Generally, band applications of phosphorus fertilizers require only one-half the rate of phosphorus per acre to achieve the same yield results as broadcast and incorporated applications because the more concentrated band is not converted to unavailable forms (fixed) as quickly.

Topdressing phosphorus can be effective for perennial crops such as alfalfa and bromegrass. These crops have very vigorous crowns from which many fine roots originate, thus phosphorus uptake can occur from the upper portion of the soil profile. Make applications in early spring when crown growth is most active and soil surfaces tend to be moist.

On new alfalfa plantings, if the soil pH is neutral (pH 7.0 or below), a common practice is to apply triple the annual rate of phosphorus fertilizer and incorporate it into the soil prior to seeding. This should be effective for three to four years for alfalfa growth. For high lime soils, with high rates of phosphorus fixation, annual or every-other-year topdress applications are suggested for alfalfa.

For more information, see "Using Phosphorus Fertilizers Effectively," (NebGuide G82-601-A) (TD)