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Producing High Quality Hay and Haylage

Warm spring weather is rapidly approaching. Pastures and hay fields will soon be greening up and starting their rapid spring growth. It is not too early for producers to begin thinking about and preparing for hay and haylage harvest.

Forage maturity at harvest is the key component to producing hay with high nutrient content and setting the stage for adequate re-growth after hay harvest. Best nutrient quality is achieved when cool-season grasses are harvested shortly after boot stage.

Forage moisture is also key component to quality hay or haylage. For hay production, moisture should not exceed 22% for small square bales or 18% for large round or large square bales. Leave the windrows in wide swaths. This maximizes solar drying capacity, speeds the shutdown of plant respiration, and can reduce drying time by up to 50 %. Consider conditioning the hay which can reduce drying time by 30 to 50 %. Tedding should be done at about 50 % moisture. Any drier, and excessive leaf loss could occur.

In order to conserve higher quality forage, many producers are turning to haylage or baleage. This reduces drying time and allows for more timely harvesting of hay fields. Moisture is also the key to successful haylage production. Forage should be wilted to 50 to 60% moisture before baling. These moisture levels provide the best environment for fermentation and quality forage preservation. Baling at 70% moisture or greater results in the production of butyric acid and other harmful byproducts. Baling at 50% moisture or less relies on oxygen exclusion for preservation.

Bales should be made as dense as possible and wrapped as quickly as possible after baling. Re-cutters on the baler should be considered to reduce particle size which helps reduce oxygen-caused spoilage. When utilizing in-line tube wrappers, produce bales of uniform size and density to ensure adequate contact between the bales and plastic wrap. This avoids large air pockets in the tube that can result when adjacent bales differ in size. Bales should be wrapped with four to six wraps of plastic in order to ensure adequate oxygen exclusion. Bales should be wrapped as soon as possible after baling in order to achieve adequate fermentation. Holes in the plastic should be patched as soon as possible to reduce spoilage.

Bales or in-line tubes should be stored on a well-drained site close to feeding areas. Haylage should be fed within one year of wrapping for best quality.

To summarize, quality haylage is produced when forage is cut at optimum maturity, baled between 45 and 65% moisture, formed into dense bales, wrapped as soon as possible after baling, and holes in the plastic wrap are patched promptly. Many Extension offices have hay moisture testing equipment that can be used to test moisture in windrows or bales. Contact your local Extension Center for availability of the equipment.

Source: *Gene Schmitz, Livestock Specialist*

Watching the Crop

Crop and livestock producers alike can benefit from a working knowledge of the USDA reports that track crop progress through the growing season. The following is a roundup of the key reports for corn and soybeans that provide clues about the new crop and therefore move markets.

Prospective Plantings and Acreage
The Prospective Plantings report is the first official forecast of the annual acreage tug-of-war. It is released at the end of March and remains the benchmark of planted acres until the Acreage report comes out at the end of June. Both reports rely on farmer surveys in the first half of the month. Your responses matter.

Corn planted acreage is currently forecast at 89.2 million acres, down for the third year in a row. The 2012 actual planted corn acres of 97.2 million set the recent record—the highest since 1936. The current estimate for soybean planted acres is up 0.9 million acres from last year and sets a new record at 84.6 million acres. Expect the markets to react if the June Acreage report deviates much from these markers.

WASDE
Each month the USDA releases the 40 page World Agricultural Supply and Demand Estimates report (WASDE, pronounced waz-dee') which gives the current supply


USDA United States Department of Agriculture
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World Agricultural Supply and Demand Estimates
Office of the Chief Economist | Agricultural Marketing Service, Farm Service Agency | Economic Research Service, Foreign Agricultural Service
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and use balance sheets for the major crops and livestock products. This is probably the most watched report through the growing season and for good reason. It combines the global market intelligence of all the relevant USDA agencies into a standard supply and use table, including an estimate of the farm price for the marketing year. Serious market watchers have learned how to interpret the components of the balance sheet.

The first balance sheets for new crop corn and soybeans are released in May. At that time 2015 production will be estimated using the prospective planted acres and yield estimates generated by a statistical trend model that adjusts for weather. Yield forecasts for June and July continue as model estimates. Abnormal weather will give the markets and yield estimators fits.

The August report is especially watched because it gives the first USDA estimates of corn and soybean yields based on actual in-field measurements. Several private firms will estimate yield through the summer in anticipation of the August report.

It would be a good business practice to watch the WASDE reports and observe how the market behaves leading up to and shortly after the release dates of May 12, Jun 12, Jul 10, Aug 12, and Sep 11. Find current releases at http://www.usda.gov/oce/commodity/wasde/

Crop Condition and Progress
This weekly report summarizes how crops are progressing in the different growing regions, as observed by assigned reporters. The first report is available in April and continues through harvest.

How to access
Crop reports are free online. With the exception of the WASDE, all of the above reports can be found at the USDA-NASS site, http://www.nass.usda.gov/. Go to the section labeled "follow NASS" to set up a free e-mail subscription.

Source: *Brent Carpenter, Ag Business Specialist*

Reducing Errors in Herbicide Applications

As herbicides and combinations of herbicides become more numerous, there are greater chances of errors and off-target chemical drift in herbicide applications. Herbicide tolerant crops have been developed that allow certain non-selective or broad spectrum herbicides to kill weeds without injury to the crop. The use of non-selective herbicides on tolerant crops presents special challenges to insure crops without the trait are protected from accidental mis-applications and off-target movement.

The University of Arkansas Cooperative Service is promoting "Flag the Technology" program. This program consists of placing color-coded bicycle flags or similar markers at field entrances or other conspicuous locations to indicate the use of different herbicide technologies. The system, which is gaining popularity in the Midwest, can make a difference between a healthy crop and a damaged or dead one. Missouri agricultural retailers who make custom applications are beginning to use the system.

When an applicator pulls into a field to make an herbicide application, the flags help to assure them that they have the correct chemical in their tank to match the traits in the field. Also, they might be able to look at fields across the road, and if there are different colored flags in nearby fields, then applicators may reconsider before spraying in windy conditions.

Preferred flag size is a minimum 11in X 17in for maximum visibility on a 8ft X ¼ in fiberglass pole.

1. RED flags signify conventional varieties with no herbicide technology traits. Extreme caution.
2. WHITE represents the Roundup Ready Technology that is tolerant to glyphosate herbicide.
3. BRIGHT GREEN indicates the Liberty Link Technology. This technology is tolerant to glufosinate (Ignite) herbicide
4. BRIGHT YELLOW is the color chosen for Clearfield technology. This technology is tolerant to imazethapyr (Newpath) and imazamox (Beyond).
5. TEAL is the color that indicates tolerance to both 2,4D and FOP (Accase) herbicides or the Enlist® technology. The white stripes indicattolerance to glyphosate. For Enlist cotton and soybean fields, a green flag should be added to denote tolerance to glufosinate (Liberty).
6. BLACK indicates tolerance to dicamba herbicide or Xtend®. The black and white checks indicate tolerance to both dicamba and glyphosate (Roundup). A green flag should be added for cotton to denote glufosinate (Liberty) tolerance.

The flag method is gaining significance because of the crops with new herbicide-resistance traits entering the marketplace. Farmers and agricultural retailers who make herbicide applications to large acreages, deal with multiple employees and apply multiple products will find the program of great value.

Source: *Joni Harper, Agronomy Specialist*

Plant Diagnostic Clinic

Services and Fees:

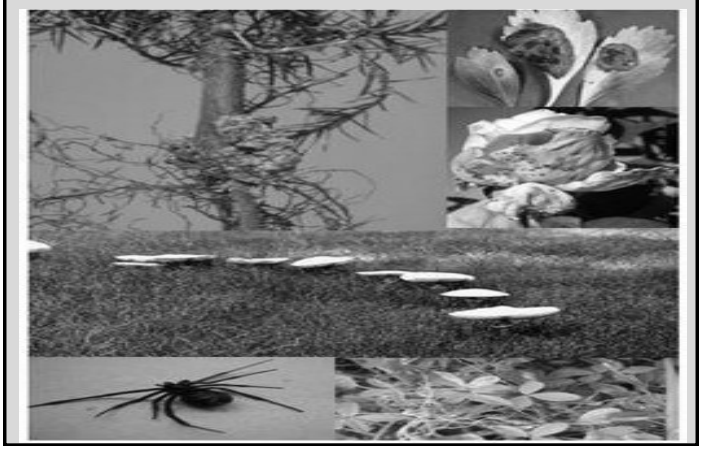
Plant Disease Identification
($15 per sample)

Turfgrass Disease Identification
($15 per sample-homeowners, $25/commercial, $50/golf)

Plant/Weed Identification
($15 per sample)

Insect/Spider Identification
($15 per sample)

Contact information:
Phone: 573-882-3019
Website: plantclinic.missouri.edu



Potash Expensive but Necessary Expense

This past growing season numerous soybean fields have exhibited potassium (K) deficiency. As potash prices have climbed many producers have cut back on applications. So, even if we experience a good growing year, these K deficient fields are not going to yield their full potential.

A 120 bushel corn yield removes 35 pounds of potash. Forty-five bushel soybeans remove 65 pounds of potash. If you are rotating the two crops and only applying before the corn, you'd have to apply 100 pounds of potash just to replace what was removed. If the soil needed potash to build up the K level or the yields were higher than expected, even more would be needed.

If producers are converting pastures or hayfields to crops, these may be very low in K and will need large amounts applied to produce good crop yields. The low level of K is related to the crop removal rate. For example, three tons of fescue hay remove 100 pounds of potash. Thus, it is not surprising to find old hay fields that are nearly depleted of available K.

How do you know if your soil has an sufficient level of K? A soil test. A soil test will tell you where your K levels are and if you need yearly potash applications to get your fertility back in shape.

Source: *Pat Miller, Agronomy Specialist*