



Northeast Missouri Ag Connection

Your local link to MU for ag extension and research information
<http://agebb.missouri.edu/agconnection>

For more information
please contact your
MU Extension Center:

Adair
(660) 665-9866

Audrain
(573) 581-3231

Boone
(573) 445-9792

Callaway
(573) 642-0755

Chariton
(660) 288-3239

Clark
(660) 727-3339

Howard
(660) 248-2272

Knox
(660) 397-2179

Lewis
(573) 767-5273

Linn
(660) 895-5123

Macon
(660) 385-2173

Marion
(573) 769-2177

Monroe
(660) 327-4158

Pike
(573) 324-5464

Putnam
(660) 947-2705

Osage
(573) 897-3648

Ralls
(573) 985-3911

Randolph
(660) 269-9656

Schuyler
(660) 457-3469

Scotland
(660) 465-7255

Shelby
(573) 633-2640

Sullivan
(660) 265-4541

Soybean Cyst Nematode

Soybean cyst nematode (SCN) is the most devastating and yield limiting pest of soybean in the U.S. including Missouri. A recent three year study estimated that soybean cyst nematode caused annual losses of 128.6 million bushels.

Identifying fields with SCN populations is often difficult because low numbers will cause little damage to roots so above ground plant growth and appearance may be normal. Suspect fields usually have plants of different heights, but environmental conditions may make stunting less obvious. When SCN is present and plants are under stress, symptoms such as chlorosis, plant stunting and (in extreme cases) plant death can occur. These symptoms may also occur with nutrient deficiency, herbicide damage and drought stress. The only way to be sure if there is a problem with SCN is to either examine the roots for cysts or test the soil for the presence of eggs. White (or yellow) females on roots are the only visible sign of SCN infection. The females are most often observed 4 to 6 weeks after soybean emergence. Plants exhibiting chlorosis or stunting or even healthy plants in fields that are suspected, can be dug in the field and the roots examined for the presence of white females or young cysts on the roots.

The most accurate way of determining whether SCN is present in a field is to have the soil tested in a nematology lab for the presence of SCN eggs. Soil samples from infested fields should be collected before SCN-susceptible varieties are grown again or once every three years if resistant varieties are grown in a rotation. Soil samples may be taken any time but the ideal time is as close to soybean harvest as possible. Large fields may be subdivided into sections of about 10 acres each and a single sample from each of the different sections submitted for analysis. Collect 10 to 20 soil cores, six to 8 inches deep in a zigzag pattern. Bulk the cores in a bucket and mix thoroughly. Place about one pint of mixed soil in a plastic bag and label it. Store the sample away from sunlight in a cool area until it is shipped to the lab.

In the past, a SCN population was given a race designation. Starting in 2003 the HG Type test was adopted to replace the race test. This test indicates which sources of resistance would be good for the field being tested and which would be poor. Since the genetic sources of resistance are limited in commercially available soybean varieties, it is important to rotate these sources of resistance to delay the buildup of a virulent SCN population. Not all soybean varieties with the same source of resistance have comparable yields, nor do they respond identically to SCN. Use

Continued on next pg.

soybean variety trial data to help select the SCN-resistant varieties that are adapted to your region.

Source: *Wayne Crook, Agronomy Specialist*

Soybean Cyst Nematode Testing at MU

Egg Count - \$20
Plant Parasitic Nematode ID - \$30
Soybean Cyst Nematode HG Race Test - \$100
Modified Race Test - \$75

Details and forms and can be found online
<http://soilplantlab.missouri.edu/nematode/>
Or stop by an extension office for forms.

Soil Testing is a Valuable Tool

Nutrient deficiencies negatively affect a plant's ability to perform at their peak level. Having soil analyzed for soil nutrients is the only way to know what is readily available for the plants growing. Applying too much fertilizer or lime can also have a negative effect on plant growth. Excessive fertilizer is not only a waste of money, excessive nutrients can have a detrimental effect on the environment if they runoff off into surface water or leach through the soil profile into groundwater.

A typical soil test will analyze the sample for phosphorus, potassium, calcium, magnesium, organic matter, pH, cation exchange capacity, and neutralizable acidity. Recommendations for fertilizer and lime are made based on the crops being grown and their expected yield.

When submitting a soil sample for testing, the results are only as good as the sample submitted. It is critical to obtain a representative soil sample to be tested. The top six inches of an acre of soil weighs about 2 million pounds. One soil sample for a 40 acre field represents 80,000,000 pounds of soil.

It is important to collect samples from areas of the field similar in landscape position, cropping history and avoid areas not representative of the majority of the field. The position of the soil in the landscape can affect the soil fertility level. The tops of hills and hill sides tend to be more eroded than the bottom of the hill, thereby having differences in soil fertility, soil

organic matter and other soil properties.

Animal activities have an effect on soil fertility levels. Avoid sampling areas in pastures where animals congregate such as hay feeding sites, water tanks and shade trees. These areas tend to be higher in nutrients from animal urine and manure. The areas adjacent to a gravel road may be higher in pH if dust from the crushed limestone on the road drifts onto the field. Human activities have an effect on soil fertility. Areas near old homesteads may have had manure hauled from the barn lot to the nearby fields affecting the soil fertility for many years. As farm fields have grown larger, fencerows may have been removed, but historical differences in how the fields were treated can still affect fertility.

Use a clean plastic bucket to collect and mix the sample. Travel in a zig-zag pattern across the field to randomly collect soil. When using a soil probe, push it into the ground six to seven inches. Avoid sampling too shallow which can overestimate the fertility of a field, especially in a no-till field or pasture. Discard any plant material on the top of the soil core and any soil more than seven inches deep. Uniform sampling is important to obtain accurate results and recommendations. More care must be taken when using a soil auger to ensure sampling depth is uniform. When using a shovel, make one cut in the ground as deep as the shovel will go, then make a second cut about one inch behind the first, tilt the shovel back and lift out the soil slice. Remove any soil deeper than seven inches and any plant material on the top. Thoroughly mix the soil samples and place one pint of soil in a plastic bag or box.

When submitting samples for testing you will be asked to identify the crops for which you wish to receive recommendations and the yield you would like to obtain. You can also select the buildup period for phosphorus and potassium levels.

Source: *Valerie Tate, Agronomy Specialist*

The Bull in Your Herd

For beef cattle producers, warm weather gets our thoughts turning towards breeding season. Now is the time to start getting your bull herd ready so they are able and ready to breed cows in



a 60-75 day or less breeding season. A breeding soundness exam (BSE) can help one decide what bulls are ready for the breeding season, and those not. Make sure to schedule one with your local veterinarian.

With the current cattle market, there is no room in an operation to have a non-functional bull. A BSE is similar to having an insurance policy for your next calf crop. In addition to a BSE consider testing for trichomoniasis, treating for internal and external parasites, vaccinating and consider DNA testing for herd improvement.

When purchasing a bull, it is important to look at expected progeny difference (EPD) for each bull. If planning to use the bull on heifers, be sure to consider calving ease direct (CED) instead of just birth weight (BW) EPD. Birth weight should not be a major concern if the CED is favorable for calving ease, since CED includes BW in its calculation. A beef cow should be able to deliver a calf 7% of her weight, so a 1400 lb cow could deliver a 98 lb calf. It is really beneficial to pelvic measure heifers prior to breeding season to ensure she is fully developed and capable of carrying as well as delivering a calf.

It is also important to consider growth when looking at selection traits. Weaning weight (WW), yearling weight (YW) and carcass weight (CW) and/or the objective EPD's should be considered when selecting for growth. EPD's are 7 to 9 times better at predicting future progeny growth performance compared to adjusted weaning and yearling weights.

To further utilize EPD's, economic selection indices can be a valuable tool for sire selection. Each breed has a slightly different profit index. Therefore it is important to verify interpretation with the breed association. For example, Angus has a profit index called Beef Value (\$B), which is expressed in dollars per head. The \$B is determined utilizing expected average difference in future progeny performance for postweaning and carcass value compared to progeny of other sires. Another example, is the Hereford breed association's baldy maternal index (BMI\$), which is an index to maximize profit for commercial cow-calf producers using Hereford bulls in rotational crossbreeding programs on Angus-based cows.

When comparing bulls, EPD data can become overwhelming. A good idea is to set acceptable percentile rankings for a future herd sire. A percentile

ranking of 50% indicates the animal is average for that trait in that specific breed. A percentile rank of 10% means it is near the top of the breed. A percentile rank of 90% for a given trait would indicate it is in the lower ranking for growth, milk production, calving ease, carcass traits, and so on depending on trait you are viewing.

EPD's are a great tool to utilize when selecting a bull, but should not be the only deciding factor. Evaluate the physical appearance of the bull, starting with sound feet and leg structure. Temperament (docility) should play an important role in the decision. Docility is a heritable trait that some breeds use as an EPD.

For help understanding the bull selection process, contact your regional livestock specialist.

Source: *Gentrie Shafer, Livestock Specialist*

Health Insurance under the Affordable Care Act

Under the Affordable Care Act (ACA), there are ten essential health benefits that must be covered unless a plan is grandfathered in, meaning no changes in the policy since 2010. The 10 required benefits are:

1. Care before and after your baby is born,
2. Outpatient care—the kind you get without being admitted to a hospital,
3. Trips to the emergency room
4. Treatment in the hospital for inpatient care,
5. Mental health and substance use disorder services: This includes behavioral health treatment, counseling, and psychotherapy,
6. Your prescription drugs,
7. Services and devices to help you recover if you are injured, or have a disability or chronic condition. Includes physical and occupational therapy, speech-language pathology, psychiatric rehabilitation, and more,
8. Your lab tests,
9. Preventive services including counseling, screenings, and vaccines to keep you healthy and care for managing a chronic disease
10. Pediatric services: This includes dental care and vision care for kids.

Continued on last pg. →

The Missouri Health Insurance Marketplace is a new option for individuals, families, and businesses to shop online for health insurance from different companies and plans. You are eligible to buy a qualified health plan from Missouri's Health Insurance Marketplace if you: live in Missouri, are a U.S. citizen or resident lawfully present in the U.S. for the entire year for which you are buying insurance, and are not incarcerated.

To apply to the Marketplace, you need the following: Social Security number for every person in your family applying to get insurance for, W2s or other proof of income (e.g., 1099 or 1040) for every person in your family applying to get insurance for, and Employer information.



Anyone can visit the Missouri Health Insurance Marketplace to learn more, www.healthcare.gov.

If you want to go through the process independently create an account, apply, pick a plan and enroll. If you want additional help enrolling, there are navigators and certified application counselors covering every county that can meet with you one-on-one. The actual enrollment period ends March 31, 2014 for this year, but there are exceptions for enrolling throughout the year. Some of these exceptions include if you lose your current insurance; become a Missouri resident; or have other major life changes. Even though the enrollment date may be past, there is a provision which allows a 60 day uninsured period before penalties are incurred. University of Missouri Extension's role is one of unbiased education.

Source: *Darla Campbell, Ag Business Specialist*

University of Missouri,
U.S. Department of Agriculture
& Local University Extension
Councils Cooperating

*Kent
Shannon*

NEMO Ag Connection is published monthly for Missouri producers. Managing editor: Kent Shannon. Please send your comments and suggestions to the editor, University of Missouri Extension, 1012 N. Hwy UU, Columbia, MO 65203, email: shannond@missouri.edu or call 573-445-9792.

A New Farm Bill – Some Further Thoughts about It

Business Specialists.

Source: *Joe Koenen, Agriculture Business Specialist*

There is still a lot to digest regarding the new farm bill. The following are a few highlights about some of the early things known at this time.

Commodities will undergo some fairly significant changes as the direct and counter cyclical payments will no longer exist. The Average Crop Revenue Election (ACRE) that was not very popular from the last bill will be gone also. This bill will enhance price and revenue protection for producers with 2 new programs ~ **price loss coverage** (PLC) that will protect 55% of a 5-year revenue average, excluding the high and low years. The other is the **agricultural risk coverage** (ARC) which is triggered when actual crop revenue drops below 86% of an historical or benchmark level. Under both programs a base acreage of 85% will be utilized to determine payments. **Disaster programs** are folded into the ARC program with the exception of livestock and tree fruits which will have their own program.

Crop & Livestock Insurance enhances existing programs and the government will continue to supplement the cost of them. Crop insurance will not only be available for **organic producers** but coverage will be adjusted to reflect the higher prices of organic products. The bill approves studies to look into insurance coverage for specialty crops and livestock not currently covered.

Conservation program funding are reduced. **Conservation Reserve Program** (CRP) acres will be reduced by 8 million nationwide by 2018 and will now include grassland acres which were the former Grassland Reserve Program (GRP). Several conservation programs (including some water protection ones not available in our area) will be merged together although funding will be reduced.

Horticulture funding is increased.

The **Farm Bill** contains 12 separate titles and only 4 have been mentioned above. One of the reasons it took so long to come to an agreement were disagreements on where cuts were going to be made, food nutrition programs or farm programs. For further updates please check with your Farm Service Agency (FSA) and University of Missouri Extension Ag