DIRECTOR’S DIGEST

In the last issue I mentioned the great team of people leading the efforts at Regulatory Services. Those leaders are supported by an exceptional team of office personnel and laboratory analysts. These team-oriented people perform major work for our programs in providing support for many products purchased by Kentuckians. We have rather diverse experience and length of service among our employees. Some are rather new and others have been with us for more than 35 years.

Personnel and financial records are handled by Pat Baber and Connie Williams. Calls to our office and incoming mail are handled by Annie Simmons and sometimes by Carol Filbin. Carol also handles data entry for incoming samples and analysis which is verified by Charlene Vest. Margaret Thomas handles much of the paper work associated with inspection fees. Tony Benge is the leader of our efforts in data entry and management. He is also part of the programming team, which includes Shannon Shields and Kellye Gaither, to improve data handling and management. Philip Dickson works with our Regulatory Services website to keep it updated and user friendly. Henry Spencer is the person that travels throughout Kentucky reviewing sales records of agribusinesses selling regulated products.

The feed and fertilizer analytical laboratory has two chemists, Melton Bryant and Sharon Webb, who lead our analytical efforts beginning at sample entry and continuing through reporting of completed analytical data. David Tompkins supervises many efforts in this laboratory. Paul Wilson handles much of the sample entry and sample

Continued on page 2
preparation for later analysis. He is assisted by Gary Coleman who also handles mycotoxin analysis. Garland McKee handles analysis of available phosphate and potash, and sulfur in fertilizers. Wayne Ingram handles some potash analysis, working in sample preparation and ordering supplies for the laboratory. Lancao Zhang is the person doing analysis of micro-nutrients in fertilizers and minerals in feed samples. Ellen Bishop determines nitrogen in fertilizers and crude protein in feeds. Debra Sipe performs analysis of crude fiber, fats and Vitamin A in feeds while assisting in the milk laboratory.

The milk laboratory performs butterfat content, somatic cell evaluations, and solids content that is supervised by Bob Kiser and assisted by Kristen Brock. This laboratory sends out milk control samples to the 21 laboratories testing milk for Kentucky producers. Bob is also the person handling antibiotic analysis in feed samples. Operations in the soil testing laboratory at Lexington are supervised by Danna Reid. Analytical support for both routine and optional soil tests is provided by Diane Hunter, Chip Zimmer and Kristen Hansen. The soil testing laboratory at Princeton is under the supervision of Paula Howe. She works with Ed Hill and Debbie Morgan in handling routine analysis of about 15,000 soil samples each year.

A specialized analytical section provides most final results for many of samples from the feed and fertilizer lab, and most samples from the Lexington soil testing lab through the use of two inductively coupled plasma (ICP) units. This equipment, operated by David Harover and Keith Erny, completes analysis for more than 50,000 samples each year.

Our seed laboratory, supervised by Tina Tillery, completes germination and purity testing on over 8000 samples each year. Germination testing is handled by Beth Nichol and Janice Zimmer. Purity determinations are made by Tina Tillery, Kent Von Lanken and Nining Sundeto.

Many of our employees have special credentials or certifications to handle the type of analysis or determinations they perform on samples coming to the laboratories. The commitment of our employees to this type of work is exceptional, and a high priority of the Division has been to provide opportunities for our employees to maintain these special qualifications. Methods used by our laboratory personnel are known as “official methods” or well-accepted for a particular analysis and are updated as newer equipment is put in place. This is part of our commitment for assisting Kentucky businesses to maintain quality products for sale.

B. Thom
Director

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**College of Agriculture H1N1 Influenza (Swine Flu) Resources**

The University of Kentucky College of Agriculture has established a Swine Flu resource page. It is located at:

http://www.ca.uky.edu/flu.php

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2008 Seed Bulletin Available

The Annual Seed Inspection Report (2004-2008) is now available. This report summarizes regulatory inspection and laboratory activities over the past year as well as a five-year history. Printed copies will be mailed to all registered dealers and all County Extension Offices. Copies are also available from the Seed Regulatory Program. Contact David Buckingham (dbucking@uky.edu or 859-257-2785) for a printed report. The document is also available on the College of Agriculture’s website (www.ca.uky.edu/agc/pubs/).

Table 1 is a five year cumulative report of all samples taken and the number found to be mislabeled as a result of laboratory analysis. Table 2 is a summary of analysis of official samples taken during 2008 which were found to be mislabeled after laboratory analysis. Table 3 is a summary of field issued stop sales issued by members of our inspection staff during routine inspection of seed stock being offered for sale across the state.

D. Buckingham and C. Finneseth
Seed Regulatory and Testing Programs

Annual Report
Analysis of Official Fertilizer Samples

Regulatory Bulletin No. 305 for analysis of official fertilizer samples from July 2007 thru June 2008 is now available. If you would like a copy please call us at 859-257-2785 and ask for June Crawford or Steve McMurry and we can assist you. This bulletin as well as archived editions are also available at the following website.

http://www.rs.uky.edu/regulatory/fertilizer/annualbulletins.php

S. McMurry
Fertilizer Regulatory Program

D. Buckingham and C. Finneseth
Seed Regulatory and Testing Programs
Calculating Fertilizer Cost

With tough economic times, everyone is trying to figure out how to cut costs while maintaining productivity. An important cost to consider in farming is fertilizer. The essential first step to consider how much fertilizer you need is to take a soil sample from the field and send it to a laboratory for testing. The University of Kentucky offers soil testing if you submit your sample to any of the County Extension Offices. The soil is tested in the lab and a recommendation for nitrogen, phosphorus, and potash will be made based on the crop to be grown.

A calculator is available on the web that will allow you to determine the cost of fertilizer based on nitrogen, phosphorus, and potash recommendations from a soil test. The calculator is called Mult Fert Econ and can be found on the internet at:

soils.rs.uky.edu/calculators.php

In addition to the nutrient recommendation in pounds per acre, you enter total number of acres, cost of fertilizer in dollars per ton, and any additional side-dress nitrogen to be added. An amount needed for each of the fertilizers in pounds per acre and a cost for the fertilizer in dollars per acre will be calculated. A total cost for the whole field is also calculated. You can enter up to three different options in nutrient recommendations and compare the costs from the different options. When entering fertilizers such as urea, DAP, and muriate of potash, a calculation of fertilizer needs will exactly match nutrient recommendations. When entering fertilizers with multiple nutrients, such as 9-23-30, there may be a surplus or deficit for a particular nutrient. The calculator will also allow you to enter animal manure as a fertilizer which contains multiple nutrients.

If you have any questions on soil testing or the fertilizer cost calculator, feel free to contact your local county extension agent. County contact information can be found online at: http://www.ca.uky.edu/county/. They can offer advice on your best options for fertilizing your crops.

F. Sikora
Soil Testing Program
Milk Program
Annual License Renewals

Licenses issued by Regulatory Services’ Milk Program expire on June 30, 2009. All licensees (milk handlers, laboratories, transfer stations, testers, and sampler-weighers) should receive a renewal notice and application by early June. If you do not receive a renewal notice by June 15, 2009, please contact our office to request an application or you may obtain one from our website at www.rs.uky.edu.

It is important for all licensees to submit their application and fee to Regulatory Services promptly. License fees for renewals that are past due are subject to a penalty fee. If you have any questions, you may contact us at (859) 257-2785.

C. Thompson
Milk Regulatory Program

Association of American Feed Control Officials
and
Kentucky Feed Regulation

The Association of American Feed Control Officials (AAFCO) began in 1909 at a meeting in Washington D.C. by a group of state control officials. Job D. Turner, as Head of the Feed Division, represented Kentucky at this initial meeting. The regulation of feedstuffs in Kentucky had started by law on June 11, 1906. At this time, most states were actively developing a system for feed regulation to protect the consumer, manufacturer, and dealer. State control officials and feed industry recognized the need to have uniform model bills and regulations that states could adopt. Today, these model bills and regulations serve as the foundation of Kentucky’s Commercial Feed Law and Regulations.

The initial purpose and function of AAFCO was to prepare a collective response to industry questions. A uniform feed bill was prepared to provide fair and equitable definitions, regulations, a process for accepting new feed definitions, and the establishment of proper labeling requirements. These efforts provided a more consistent set of regulations that reduced the regulatory impact on industry. In addition to these efforts, AAFCO now promotes safe, effective, and useful feed. AAFCO provides a forum for expressing opinions, presenting facts, holding discussions and ultimately establishing policy. Even though AAFCO is not a regulatory agency, it develops models for regulatory entities. The international community monitors these models for feed regulation.

AAFCO membership eligibility includes governmental entities charged to regulate the production, labeling, distribution, and sale of animal feeds and livestock remedies. This provides a wide range of personnel, such as

Continued on pg. 10
Testing for Endophytes in Grasses

**en·do·phyte** \(\text{en-də-fīt}\) : an organism (such as a bacterium or fungus) living within a plant

Endophytes are everywhere, but the most notorious are *Neotyphodium* spp., which can be found in forages and turfgrasses, including tall fescue, ryegrass and fine fescues. Infection has benefits – improved plant vigor, drought and insect resistance – but also disadvantages as the fungi can produce toxic substances (alkaloids) that can harm animals feeding on the grasses. The University of Kentucky Seed Testing Laboratory routinely tests seed and tiller samples to determine the presence of endophytes.

**Why Sample and Test for Endophytes?**
Most of the current tall fescue pastures and lawns found in Kentucky are endophyte-infected; however, it may be desirable to have an endophyte-free planting. Endophyte-free seed is fairly commonly available. When shopping for seed, you may also see endophyte-enhanced seed available for purchase. In order to retain maximum endophyte viability, seeds should be stored at cool temperatures (about 40°F).

**When Should I Sample?**
Seed can be tested at any time of the year. Tiller samples should be collected when the fungus is most likely to be actively growing and present in the tillers. This is when plants have been growing well for at least a month. In Kentucky this is usually late-April to early June and again in October and November.

**How Do I Collect Samples?**
Samples should represent the seed lot or area of concern. At least 100 seed are required for testing and for field samples, it is critical that samples collected be representative of the field or area at large. Each sample should contain several live tillers, crown tissue and some roots. Samples should be taken randomly and adequately cover the area. For details regarding sampling, contact your local County Extension Agent or refer to PPA-30 Sampling for the Tall Fescue Endophyte in Pasture or Hay Stands.

**How Are Samples Tested?**
Endophyte presence is not obvious by just looking at seed. Infection levels can be determined in the laboratory by special methods used to examine seed or tillers sampled from growing pastures or lawns. The two procedures are: a direct microscopic exam (Fig. 1) or an immunoblot assay (Fig. 2). The grass species and number of seed or tillers to be tested will determine the method used.
How Do I Submit a Sample for Testing?
If tillers were collected from more than one stand or area, mark each group with a unique name for identification. Place each set of samples inside its own plastic bag and loosely seal. After collecting, place samples with a cold or freezer pack in a sturdy, plastic-lined box or cooler and take them to your local county Extension office or send overnight express directly to the testing laboratory.

Note: Refrigerated storage after sampling is best, but it is especially important that you do not let the container sit in the sun or get too hot. Deliver or send the specimens early in the week for arrival in the lab before the weekend.

A sample submittal form or a note clearly identifying the sample and number of individual clumps or plugs should accompany each sample sent to the lab. Enclose the letter or form inside the package or box, but outside the plastic. Samples should be mailed to:

Seed Laboratory
Division of Regulatory Services
103 Regulatory Services Bldg.
University of Kentucky
Lexington, KY 40546-0275.

Multiple samples can be included in the same box as long as individual samples are clearly marked.

How Will I Get My Results?
We can call, email and fax reports as well as mail a copy of the results. Our report will indicate only the percentage of infection and no recommendations will be included. Exam results are reported to the person who submitted the sample with a copy to the County Extension Agent when requested. You are welcome to consult with your County Agent to discuss infection levels and management options, depending on your needs.

How Much Does the Test Cost?
A fee is necessary to partially cover the cost of lab testing. Charges are $35 for 100 seeds or 1-50 tillers and $60 for 51-100 tillers. Payment can be included at sample submission or a billing statement of charges will be mailed after the laboratory analysis is completed. Checks should be made payable to: UK Division of Regulatory Services.

Where Can I Find More Information?
For more information regarding sampling and management, contact your local County Extension Office. Information is also available on the UK Forages webpage www.uky.edu/Ag/Forage. For questions about testing and sample submission, contact the Seed Testing Laboratory by phone (859-257-2785), online (www.rs.uky.edu) or by email (Cindy.Finneseth@uky.edu).

C. Finneseth
Seed Testing Program

Fig. 2. An indirect exam, the immunoblot assay to detect endophyte-infected tillers. Presence of the endophyte is confirmed when specific proteins are stained. The dark, circular spots indicate the tiller is positive for endophyte. Seeds are tested in a similar way.
Resolution of Seed Stop Sale Orders

There are two types of seed stop sale orders. Orders issued on site by the seed inspector and those received usually by mail after a sampled product does not meet the guarantees stated on the seed analysis tag. Both types of Stop sale orders require action to comply with the provisions of the Kentucky Seed Law. Although both require similar action, an explanation of procedure for both types of stop sale order will be discussed.

On site orders issued by the inspector
Most on site stop sale orders are issued because the germination test date has expired. The dealer is responsible for maintaining the test date, and it is illegal for a dealer to offer expired test date seed for sale. Most seedsmen (The name of the seedman is on the tag) will supply new labeling for the lot if they have a current test. Some seedsmen have company reps that will relabel their products. Regardless of who relabels the product, the lot number of the replacement label must be the same as the original lot number. The following steps should be taken:

1. Remove the product from the retail sales area. The order prohibits the product from being offered for sale until the violation is corrected.

2. Identify the product in such a manner that it will not be put back on the retail floor or removed from the store until the violation has been addressed.

3. Notify the store manager of the stop sale order and file the order in a way that it will not get lost. The release request for the order is on the bottom of the form and must be signed by store management or responsible personnel when the request for release is submitted.

4. Determine if the product is to be relabeled, returned to the seedman, or disposed of.

5. If the product is to be returned or disposed of, fill in the bottom of the stop sale order requesting a release from the order. Fax the complete order to 859-257-7351. Be sure to sign the order. Do not remove the product from the storage area until you receive the signed release back from the Division of Regulatory Services. The signed release permits removal of the product.

6. If the product is relabeled to correct the violation, make sure the new labeling has the same lot number. After relabeling is accomplished, fill in the bottom portion of the stop sale order and fax it along with a copy of the new label to 859-257-7351. Do not put the product back on the sales floor until you are in receipt of the signed release.

7. File and keep a copy of the signed release.

Field-Issued Stop Sale Order
Stop sale orders received by mail
Stop Sale Orders received by mail are usually the result of an analysis of a sample being out of tolerance of one or more of the product guarantees stated on the seed analysis tag. These orders will have a cover letter stating the nature of the violation, a copy of the official laboratory analysis, and a stop sale order. The bottom portion of the stop sale order is a request for release form. The following steps should be taken:

1. Remove the product from the retail sales area. The order prohibits the product being offered for sale until the violation is corrected.

2. Identify the product in such a manner that it will not be put back on the retail floor or removed from the store until the violation has been addressed.

3. Contact the seedsman and request labeling to correct the violation. The seedsman is mailed copies of the same notification that the seed dealer is mailed. The seedsman is responsible for the guarantees that have been stated on the seed analysis tag, not the seed dealer. The seed dealer is required to remove the product from the retail sales floor and may choose to return the product to the dealer rather than relabel the product. If the product is relabeled, the lot number of the new label must be the same as that of the original seed analysis tag.

4. A release from the stop sale order must be obtained prior to product being either offered for sale after relabeling is accomplished, or the product being returned to the seedsman or disposed of. The request for release is on the bottom portion of the stop sale order. Complete and sign the request for release and fax to 859-257-7351. The product can be moved when the completed release is returned to the dealer by the Division of Regulatory Services. The seed program coordinator will grant release if the labeling sent with the request corrects the noted violation. If the product is to be relabeled, be sure to fax a copy of the new label with the release request.

5. If an order is received and the product was sold prior to receipt of the notification, the stop sale order should be signed and faxed to the same number with a statement to the effect that the seed lot was sold prior to receipt of the notice.

6. File and keep a copy of the signed release from the order.

Stop sale orders should be addressed as quickly as possible. Most stop sale orders that are issued on site or from our office are issued for labeling violations that can be corrected by relabeling the seed lot. Faxing the request with copies of the corrected labeling is a much faster process than mailing the request. If you have questions about this process, please call our office at 859-257-2785. We will be happy to provide assistance.

D. Buckingham
Seed Regulatory Program

Office-Issued Stop Sale Order
KY Feed Program and AAFCO  
*continued from pg. 5*

heads of experiment stations, laboratory employees, and research workers, to develop a model for feed regulation.

Kentucky and other governmental agencies of North America benefit from the collective efforts of the members of AAFCO. The AAFCO 2009 Official Publication (1) provides the purpose and function of the Association. It states:

“many unite to explore the problems encountered in administering such laws, to develop laws, to develop just and equitable standards, definitions and policies, to be followed in enforcing such laws to promote uniformity in such laws, regulations and enforcement policies, and to cooperate with members of industry producing such products in order to promote the effectiveness and usefulness of such products.”

AAFCO provides support for members in a variety of ways. For example, the annual Feed Administrator’s Seminar provides an opportunity for training and discussion. Kentucky was instrumental in the startup of this seminar, sponsoring and hosting the seminar in the Lexington area for the first 33 years.

Feed manufacturers, industry organizations, other regulatory control official groups, scientific associations, and industry consultants contribute to the efforts of providing a thorough and science-based approach for feed safety and nutritional value. The breadth of this involvement provides AAFCO the knowledge and experience to support and protect consumers and industry.

The Association will meet this year in Washington D.C. where the creation of AAFCO and the first and many subsequent meetings took place. The 2009 AAFCO Annual Convention and centennial celebration begins on July 31. Kentucky is contributing to this meeting. Over the years, Kentucky and its Feed Program has significantly contributed and benefited from its active involvement with AAFCO.

Presentation of the numerous ways Regulatory Services has interacted with and supported AAFCO will appear in the next newsletter. In addition, some of the benefits and assistance that have been realized by these interactions will be reviewed. The plans and some of the agenda for the Annual Convention will be reviewed. Please visit AAFCO’s web site for meeting updates.

*M. Bryant, Analytical Laboratory  
F. Jaramillo, Jr., Feed Program*

Announcements

FIELD DAY
JULY 23, 2009
8 AM - 3 PM
UKREC - PRINCETON, KY
Tour agricultural plots, ornamental plants, & orchards
Visit Educational/Commodity Exhibits
Demonstrations on family and consumer science topics
Youth activities

University of KY Research & Education Center
1205 Hopkinsville Street
Princeton, KY 42445
Phone: 270-365-7541 X260

For more information, contact: Your county Cooperative Extension Service Office or the Research & Education Center, (270) 365-7541, Extension 209

Visit the web site at: http://ces2.ca.uky.edu/wkrec

Kentucky Meat Goat Field Day—June 4
Hosted by Berea College, Berea, KY
http://ces3.ca.uky.edu/robinsonstation/

UK Turf Field Day—July 9
Spindletop Research Farm, Lexington, KY
http://www.uky.edu/Ag/ukturf/

Kentucky Grazing Conference—Oct. 29
UK Research & Education Center, Princeton, KY
http://www.uky.edu/Ag/Forage/

Electronic Delivery of Regulatory Services News
To reduce printing, paper and postage costs, Regulatory Services News is now available for electronic delivery to your email address.

If you are interested in receiving the quarterly newsletter in the electronic form, please visit the Division’s website at www.rs.uky.edu, navigate to the Newsletter page and submit your contact information.

Newsletter editions dating to 2001 are also available online.
Regulatory Services News is published quarterly for the feed, fertilizer, milk and seed regulatory programs and the seed and soil service testing programs of the Division of Regulatory Services. It is provided free to persons interested in these programs. For subscriptions or address changes, contact Cindy Finneseth either by email at Cindy.Finneseth@uky.edu or by telephone at (859) 257-2785. You can also request electronic delivery and access past issues of Regulatory Services News on the Internet at http://www.rs.uky.edu.

Editor: Cindy Finneseth.

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