

Regulatory Services News

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Feed - Fertilizer - Milk - Seed - Seed Testing - Soil

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Director's Digest- Winter, 2014

As I continue to review the long history of Regulatory Services, I want to concentrate in this issue on our Seed Program. The Seed Program at Regulatory Services also has a history dating back over 100 years. On March 22, 1904, the General Assembly passed an act prohibiting the mixing, adulterating, or misbranding of seeds of orchard grass, Kentucky bluegrass, red clover, mammoth clover, or alfalfa. Those selling such seed with fraudulent intent, would be fined not less than \$25.00 no more than \$100.00 for the first offense, and for each subsequent offense not more than \$200.00 or be imprisoned six months, or both. While inspection and analysis of seeds were to be done by the Experiment Station, no fees were provided in the act.

The different kinds of seed and the various foreign substances in each sample had to be carefully sorted out and counted, so the examinations were very laborious and time consuming. With no fees to cover this work it put a strain on the staff and most samples were collected by experiment station workers traveling over the state for other purposes. Despite defects in the law, its good effects were already apparent by 1907 "in the increased care shown by seedsmen and farmers in buying seeds, and in the smaller number of adulterated samples found by us recently." This note was in a letter from Director Scovell to Governor Wilson. To remedy the defects Scovell suggested to the Governor that at least \$4000 be appropriated yearly for the work, and that the law should be made similar to the pure food law, which released the seller from responsibility only when he had a written guarantee form a wholesaler residing within the state. No relief in either respect was forthcoming, and the Experiment Station carried on as best it could.

Due to this lack of adequate funding for several more years, the work of inspection and analysis could not be properly carried out. A seed testing laboratory was maintained but due to the lack of manpower, nearly all the samples of seed tested were those sent in by seedsmen or others. Taking note of this, "seedsmen both within and outside the state marketed their poor seeds here, and Kentucky became known as the dumping ground for bad seed." Many seedsmen resorted to chicanery in filling seed bags. One such practice was to "stovepipe" the bag. This was done by placing a stovepipe in the center of the bag and filling it with chaff and screenings, then to fill the bag around the stovepipe with good seed and remove the pipe leaving a nest of inferior material in the center of the bag beyond the reach of the small tryer used by the inspector. Another prac-

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tice was to buy chaff from seed cleaning establishments by the carload and shovel-mix the chaff with seed. Still another was the crude method of putting a brick or other heavy object in the center of the bag to increase the weight. All these tricks tended to disappear after the passage of an adequate seed law.

In 1932 the General Assembly finally passed a seed law that was satisfactory to the Experiment Station and funds for enforcement were to be derived from sale of tags or labels and from fees for tests of purity and germination of seeds. This law took effect on July 1, 1932 and at once the seed staff began an educational program to acquaint people with the provisions of the new law. By the end of 1932 they had visited personally with more than 2,000 seedsmen and farmers plus answered by letter or phone about 1,500 inquiries about the seed control program. This theme of education before enforcement has been a constant with Regulatory Services and is one I strongly support.

Our Seed Program today still consists of two parts – regulatory and service. The regulatory program ensures Kentucky farmers and urban consumers of quality seed while promoting fair and equitable competition among seed dealers through inspection and analysis of products found in the marketplace. Highlights of this program for 2013 included:

Conducted 1,230 visits to perform inspections and to sample agricultural, lawn, turf, and garden seeds at Kentucky seed processing, wholesale and retail locations.

Collected and tested 2,078 official seed samples.

Issued stop-sale orders on 259 official seed samples and 179 violative seed lots at seed dealer and seed processor locations.

Cooperated with the USDA-Seed Branch regarding shipments of seed into the state that was in violation of the Federal Seed Act.

Reviewed and issued 229 permits to label agricultural seed and 57 permits to label vegetable and flower seed.

Registered 612 seed dealers and 21 non-certified custom seed conditioners.

Provided training to firms on labeling requirements, retail sales procedures, stop sale release procedures, and record keeping requirements.

Our service program maintains the only certified seed testing facility in Kentucky. This facility handles all official samples collected by inspectors and provides service testing for seed producers, dealers, retailers, research projects and homeowners for a fee. More than 90% of the service samples accepted into the laboratory were submitted by Kentucky firms or individuals. Highlights for 2013 included:

Analyzed 4,225 service samples.

Collaborated with researchers to analyze 33 seed samples.

Supported the equine and livestock pasture management programs in analyzing 185 plant samples for endophytes.

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Analyzed 51 seed samples under the provision that allows one free sample for testing each year from Kentucky residents.

At land grant universities we always talk about the components of research, teaching and service. We are proud that our seed program has been a part of the service wing for over 110 years.

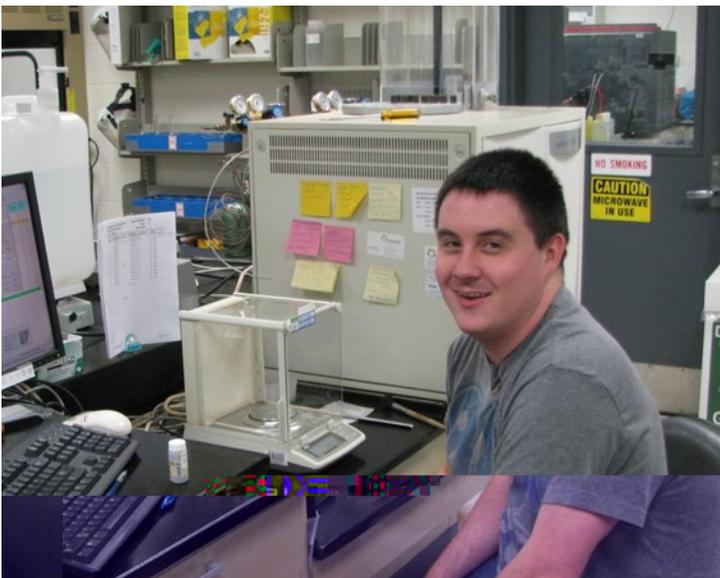
Darrell Johnson, Director

History is from “The College of Agriculture of the University of Kentucky” by J. Allan Smith

New Employees



Jennifer Combs started working in the Feed and Fertilizer Lab as a Laboratory Technician Senior on August 26, 2014. She replaces Jonathan Collett who moved to the Seed Lab. Jennifer is a native of Woodford County and has a B.S. degree in Agriculture from Eastern Kentucky University. She previously worked in the lab at Animal and Food Sciences here at UK. Jennifer and her husband Jarrod live in Salvisa with their children Jody (7) and Jordan (3). They have a farm with beef cattle and she enjoys running which can come in handy when you have cattle.



T. J. Evans began working in the Soils Lab on September 22, 2014. He replaces Karen Cosgrove who moved to the Seed Lab. T.J. is a native of Bath County and has a B. S. degree in Biology from Morehead State University and also did some graduate work at Ohio University in Athens, Ohio. He previously worked in the Biochemistry Department here at UK. T. J. and his wife Jessamyn live here in Lexington. They are expecting their first child in April.

Role and Function of Seed Analysts

In the last issue of Regulatory Services Newsletter, you were introduced to the newest analysts in the seed laboratory. So, I thought that now would be an appropriate time to explain the vital role of the seed analysts.

Trained seed analysts are essential in providing consistent and reliable results to seed growers, brokers, cleaners, wholesalers and farmers. Most training is obtained by on the job training; however there are training workshops and classes made available through seed organizations, such as the Association of Official Seed Analysts, the Society of Commercial Seed Technologists and the Seed Regulatory and Testing Branch. In the past, most seed testing was limited to a purity and germination test. Now, there are many tests run on seed, including seed vigor, tetrazolium testing, seed count, moisture, herbicide assay, endophyte, just to name a few. To be able to perform these tests, the seed analyst must be trained in a wide variety of skill sets to provide reliable results.

On average, the seed analysts must train under a certified analyst for a minimum of 2 years. During their training, they must become efficient in seed identification, seedling/plant biology, and use of microscopes, dividers, blowers, seed counters, and seed germinators. They must learn how to use and apply the “Rules for Seed Testing” that are the rules and procedures for seed testing and the standardization of their interpretation. They have to become familiar with other handbooks that determine how specific seed kinds are tested.

Basically, there are two types of seed analysts in the seed laboratory: the purity analyst and the germination analyst. Each performs specific duties in their specialized area. However, that does not mean that an analyst cannot be trained in both areas. In fact, in our seed laboratory, we have analysts that are trained in both areas.

Purity analysts must be able to identify and/or become familiar with approximately 600 seed kinds, knowing how and when to classify them as crop or weed seed. They must know how to remove the various seed coatings on pelleted/coated seed, so as not to cause damage to the seed. They also must know how to categorize other contaminants that are found in the purity sample, along with determining which seeds are considered noxious in Kentucky and in other states. Germination analysts must know how to identify crop seed and seedlings, to be able to evaluate them as to whether they are normal, abnormal, or dormant. In addition, they also must be able to distinguish between damage caused by insects, disease or mechanical means. Germination analysts also must run specialty tests, which include but not limited to cold test, herbicide assay, and accelerated aging tests.

Once an analyst has completed at least 2 years of training, they then become eligible to take the certification test that is offered by the AOSA/SCST organization. If they successfully pass the test, they are then considered to be a “CSA” in purity and/or germination, depending on the type test that was taken. After earning their certification, an analyst must still continue their education in seed testing by attending a minimum required point system of meetings, workshops, training sessions, and webinars. Failure to do so will result in having their certificate taken away until the analyst has participated and earned enough required points to have their certificate reinstated.

When an analyst becomes certified, they must follow the bylaws of the AOSA/SCST organization to uphold the duties of being an analyst. The analyst benefits by being a member of an approved laboratory and the AOSA/SCST provides training and referee participation, which in turn, provides information to improve

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and update rules for which to test seed. Seed testing is dynamic and rules need to be revised as new issues confront seed testing and seed analysts.

This only covers the basics of what the seed analyst needs to know and learn. There are many very detailed and specific items that the seed analyst has to know to make educated and informed decisions on the seed lots that they test. I am proud to say that the Kentucky State Seed Laboratory requires all of its seed analysts to become certified and the lab to be accredited for seed testing in order to provide the best service possible to Kentucky seedsmen.

Tina Tillery-Seed Service Testing Laboratory

Test your Soil in the Fall

Fall is a good time to collect soil for testing. Fall testing lets you be prepared for the next growing season by providing plenty of time to purchase and apply lime and fertilizer needed. Phosphorus, potassium and lime can be applied in the Fall and will stay in the soil to be available to plants next spring and summer. It is actually advisable to apply lime in the fall because lime needs time to react in soil to increase soil pH before planting. Phosphorus and potassium can be applied in the fall without concern with the nutrients being lost from soil. However, nitrogen application needs delayed to the spring since nitrogen is easily leached from the soil with winter rains. It may be difficult to plan on applying only phosphorus and potassium in the fall and only nitrogen in the spring with mixed fertilizers. Any nitrogen application in the fall should be kept to a minimum.

Turnaround time at the lab is another thing to consider with Fall versus Spring sampling. The UK Soil Testing Laboratories in Lexington and Princeton are very busy in the spring with a multitude of samples submitted which delays results getting to you. The normal turnaround time for the laboratory once samples are received is 2 to 4 business days. During the spring rush in March, the turnaround time increases because of the multitude of samples the labs receive. This past spring was particularly bad for turnaround time because we had a late winter which pushed all the spring samples arriving during a short time period before planting.

You can contact your local County Extension Office for information on soil testing. They will take the sample and submit it to the UK Soil Testing Laboratory. The cost for a routine soil test is \$6 per sample. This is what the UK Soil Testing Laboratory charges the County Extension Office. A County Extension Office may charge a little more than this to cover shipping and handling. Some County Extension Offices charge less than this or offer testing free with the charges paid by other sources. You can find contact information for your local County Extension Office at <http://www.ca.uky.edu/directory>.

Dr. Frank Sikora-Laboratories & Soils Program

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 our office at (859) 257-2785. You can also access Regulatory Services News on the Internet at <http://www.rs.uky.edu>.

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Updates on FDA Regulatory Issues Affecting the Feed Industry

Dr. Alan Harrison – Director Feed and Milk Programs

Food Safety Modernization Act (FSMA)

The Food and Drug Administration is still accepting comments on the proposed Preventative Controls for Animal Food portion of FSMA. The latest revisions were published on September 29 and the comment period is set to close on December 15, 2014. The court-mandated deadline for preventative control implementation is October 30, 2015.

FSMA rules will apply to facilities that manufacture, process, pack, or hold animal feed. In a nutshell, these facilities will be required to have written plans that identify hazards and have plans in place to minimize or prevent these hazards from affecting the safety of the food chain. The latest revisions did consider the extensive comments from the feed industry. From my reading of the rules, it does appear that FDA has rewritten a number of regulations to be more applicable to animal feed and recognizes differences in the production of animal feed versus human food.

Veterinary Feed Directives

In December of last year, FDA announced the implementation of a plan to phase out the use of medically important antimicrobial drugs in food animal production. The plan also includes an increase in veterinary oversight for therapeutic use of the same antimicrobial drugs through the existing Veterinary Feed Directive (VFD) system. FDA uses the term “judicious use” to describe how they view the future of antibiotic use in animal agriculture. The goal is address the issue of antimicrobial resistance while still keeping these drugs available to the industry. Only antibiotic drugs used in the feed and water of food producing animals are affected by the new regulations. Drugs **not included** under the new guidelines include ionophores (monensin and lasolacid), carbadox, bacitracins, and flavomycins. These antimicrobials are not used in human medicine.

As of May of this year, all manufacturers of these antimicrobials have agreed to voluntarily change their labels to withdraw production claims and move from over-the-counter (OTC) to VFD status. The next step is the removal/withdrawal by the drug manufacturer of a production claim from the approved labeling and the FDA is allowing 3 years to complete this process.

Bioterrorism Act Biennial Registration

This information was included in the previous newsletter, but here’s another reminder and some registration tips.

Domestic and foreign facilities that manufacture, process, pack, or hold food, as defined in the Food, Drug and Cosmetic Act, for human or animal consumption in the US must register with FDA. The registration period is October 1 to December 31 of each even-numbered year. This is a renewal of BT registration and it is required. There is no cost to renew through the FDA website and may be accomplished electronically by going to: www.access.fda.gov.

You will need your account ID (3 lower case letters and 4-5 digits), your password (upper and lower case letter plus at least one symbol), and your BT registration number (11 digits starting with a 1). If you have

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not accessed your account within 90 days, you will need to call and ask for a password reset. The busiest call times are early morning and early afternoon.

Bioterrorism Act Biennial Registration- As taken from the FDA website.

Domestic and foreign facilities that manufacture, process, pack, or hold food, as defined in the Food, Drug and Cosmetic Act, for human or animal consumption in the U.S. must register with FDA.

During the period beginning on October 1 and ending on December 31 of each even-numbered year, a registrant that has submitted a registration under paragraph (1) shall submit to the FDA a renewal registration containing the information described in paragraph (2). The FDA shall provide for an abbreviated registration renewal process for any registrant that has not had any changes to such information since the registrant submitted the preceding registration or registration renewal for the facility involved.

This may be done electronic by going to: www.access.fda.gov .

Food Facility Registration User Guide: Biennial Registration Renewal

Once you are logged in to FDA Industry Systems choose "Food Facility Registration" from the list of systems available. From the Main Menu in the Food Facility Registration Module (FFRM) Home (Figure 1) choose "Biennial Registration Renewal."

Figure 1:



The system will display a list of all registrations that are available for the biennial registration. Select the registration; the system will display a review screen (figure 2).

Figure 2:



Only the sections of your registration with an “Edit” button next to it may be updated during the biennial registration renewal.

Once you have reviewed the information and made updates where necessary, choose to Submit Biennial Registration Renewal.

If you do not wish to submit your biennial registration renewal at this time, select the Cancel option.

Your food facility registration has been renewed.

Fertilizer Registration for 2015 in Kentucky

All Kentucky fertilizer registrations and licenses expire on December 31, 2014 and must be renewed to legally sell fertilizer in the state for 2015. Renewal notices to all current Kentucky registrants/licensees will be mailed at the first of December. The renewals list all products registered in the state for 2014, all licenses approved for 2014, and instructions for completing the task. Each company was mailed a current registration/licenses status in July 2014, so renewals will be an update from that report.

BE ON THE LOOK-OUT FOR YOUR RENEWAL NOTICE.

As always, if you have questions
call: 859 257-2785,
FAX: 859 257-9478, or
email: June.Crawford@uky.edu

SURVEY OF COMMERCIAL VALUES OF FERTILIZER NUTRIENTS

Over the next few weeks you will receive or you may have already received a survey to determine the commercial values of fertilizer nutrients. Under the provisions of KRS 250.401, I am conducting a survey to determine the commercial values of the fertilizer nutrients for Calendar Year 2015. This survey is of utmost importance for the Division as well as the retail community of fertilizer sales. The values will be published and used in determining and assessing penalty payments if needed. Due to the fluctuating prices over the past several years it is important that we include as many surveys as possible. Our inspection staff will be asking if you have received and/or responded to this survey. Please note that we want the current retail value of fertilizers in dollars per ton. All information will, of course, be held in strict confidence. You can give the survey to your respective inspector or fax to 859-257-9478 to the attention of Steve McMurry or e-mail to smcmurry@uky.edu.

Last year's values are located on our website below:

<http://www.rs.uky.edu/regulatory/fertilizer/index.php>

Stephen McMurry-Director Seed and Fertilizer program

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RETURN SERVICE REQUESTED

