Regulatory Services News

Vol. 58, No. 2 Feed - Fertilizer - Milk - Seed - Seed Testing - Soil

Summer 2015

Director's Digest- Second Quarter 2015

Regulation of livestock feeds in our Division was authorized under the pure food law of 1898 but took a back seat to human food control for a few years. Similar to human food, Kentucky's lack of effective controls on livestock feed in comparison to neighboring states led to Kentucky becoming a dumping ground for inferior livestock feed. Many feeds coming into the state were adulterated with corncob meal, rice hulls, corn bran, peanut hulls or sawdust. The practice was so widespread that these inferior ingredients were shipped into Kentucky in carload lots for sale to feed manufacturers. The effect on competition was so great that Kentucky manufacturers had to either fall in line and adulterate their feeds or ship their unadulterated feeds into states where the trade was regulated.

Faced with this situation, the millers of Kentucky were supportive of control legislation. In 1906 the Kentucky Millers' Association, supported by the Southeastern Millers' Association, brought about the introduction of a bill in the Kentucky House to prevent the adulteration of bran, and asked Director Scovell to support getting it passed. He reviewed the bill and transformed it into a bill to regulate the sale of commercial feeding stuffs generally. The law passed unanimously in both houses of the legislature, and became law on June 11, 1906. Scovell called the bill "perhaps the most comprehensive of any in the United States." Regulation of livestock feed was further moved up in priority when administration of the Pure Food Law was removed from the Experiment Station in 1918.

The new law required brands to be registered and licensed, samples to be taken and analyzed, tags and labels to be furnished by the Station, standards and regulations to be prescribed by the director of the Station, fines for violations, fees to be paid by manufacturers on the basis of tons sold or offered for sale, and so on. The work was soon organized as a Division of Feed Control, and Job D. Turner was placed in charge. In addition to duties as head of the Feed and Fertilizer Department, Turner was one of the organizers and first secretary of the American Association of Feed Control Officials (AAFCO). Under his guidance, the Feed Control Division became one of the outstanding departments in the nation. Mr. Turner died suddenly in 1946 and was replaced by Bruce Poundstone who served until 1971. The current Regulatory Services building is named after Poundstone.

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One interesting feature adopted by the Experiment Station was the use of three different types of tags to represent different classes of feed. A manila tag printed in black ink was to be used on straight feeds such as those made from wheat or corn products only. Second, a manila tag with red ink was to be used for mixed feeds such as those made from two or more different grains such as corn and wheat, or corn, wheat, and oats. A yellow tag was used for feeds containing a substance of little feed value such as cottonseed hulls, oat hulls, chaff, peanut hulls or corncob meal. This aided greatly in the education efforts of the Division and consumers could recognize at a glance the general quality of a feed by the tag. The term "yellow-tag feed" soon came to signify a feed of low quality.

It has been 109 years since passage of the original feed law but our feed program continues to protect the livestock and pet food consumer and also help assure a level playing field for the manufacturers that sell in our state. Some accomplishments from 2014 are shown below:

Collected 3,024 official and 133 unofficial samples that resulted in 20,347 lab analyses.

Samples collected included 1,002 pet food samples for analysis.

- Under our contract with FDA for the 2014-2015 fiscal year, inspectors will conduct a total of 79 inspections for compliance with the ruminant to ruminant feed ban including 28 inspections of medicated feed mills for compliance with current Good Manufacturing Practices.
- At the end of 2014, there were nearly 18,500 feed products registered for sale in Kentucky with approximately 3,000 of these products approved in 2014.

Analyzed and reported 41 feed samples from quality control programs.

Used 47 different approved analytical methods in providing results.

Darrell Johnson, Director

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

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 and sign up for Regulatory Services News on the Internet at http://www.rs.uky.edu.

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Regulatory Services Personnel Changes

Retiring Employee



Beth Nichol will be retiring from the seed lab in May of 2015. Beth began working at Regulatory Services in 1993 and has held a few different positions but has spent most of her time in the germination lab. We appreciate all she has contributed to our Division in 22 years of service and wish her the best in her retirement.

Beth and her husband Keith recently finished building a home on Herrington Lake and her immediate plans after retirement are to finish landscaping around the house and possibly do a little fishing.

New Employee



Dr. Solomon Kariuki started work on March 1 as our Laboratory Manager in the Feed and Fertilizer Labs. He replaces Bob Kiser who retired at the end of 2014. Solomon comes to us from the Soil and Plant Tissue Testing Lab at the University of Massachusetts. He is a native of Kenya and did his graduate work at Oklahoma State where he received M.S. degrees in both Agriculture Economics and Plant & Soil Science plus a Ph.D. in Soil Science.

Solomon is joined in Lexington by his wife Sarah Dillon and children Adaline (7), Belinda (3) and Theodore (1). He has a lot of experience in chemical analysis and we look forward to his contributions in running our lab accurately and efficiently.

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Feed Sampling - How Labs Use Analytical Variations in Decision-Making

G. Alan Harrison, Coordinator Feed/Milk Programs

Sharon F. Webb, Director Quality Control

Under the authority of Kentucky Feed Law (KRS 250.581), our inspectors collect samples of commercial feeds offered for sale as feed or for mixing in feed. These samples are analyzed in our lab in Lexington and the lab results are compared to guarantees on the feed label.

For each nutrient tested (or analyte), there are 3 possible conclusions: 1) the sample passes or the analyte concentration meets the guarantee, 2) the sample is in violation because the analyte concentration is lower than the guarantee (a deficiency), or 3) the sample is in violation because the analyte concentration is greater than the guarantee (an excess). For each analyte, there is an acceptable range or tolerance of concentration. Within the tolerances = no violation. Outside the tolerances = violation. These ranges/tolerances are defined by the regulatory program and this is where analytical variations come into play.

There are a number of sources of variation that surround the analytical analysis of a feed product sample collected for comparison to label guarantees. These include 1) formulation, 2) mixing of the feed, 3) settling or separation, 4) sampling, 5) splitting and grinding of samples, and 6) laboratory analysis. The true analytical variation is made up of variation associated with subsampling and laboratory analysis. The tolerances we use are based on the AV's from the Association of American Feed Control Officials (AAFCO). These analytical variations allow for the inherent variability in laboratory analyses, based on statistics from the AAFCO Check Sample Program (our lab is one of the cooperating labs) and do not include any variance from manufacturing or sampling.

How does the University of Kentucky Regulatory Services use these AV's in decision making? Each year in our annual feed report, we publish our own AV's for each nutrient we test for in our lab. These are the lower and upper tolerances that we use to determine if a sample meets its nutrient guarantees. For example, if a product guarantees 20% crude protein on the label, the sample analysis for crude protein must be between 19.4% (3% lower) and 30% (50% higher). If the lab finds less than 19.4%, a violation for a crude protein deficiency will be issued. If the lab finds greater than 30%, a violation for a crude protein excess could be issued. It is important to note that these tolerances are set to account for lab variation (true analytical variation), splitting and grinding, and sampling variation. Sampling variation can never be eliminated but every effort is made to minimize this through the use of proven sampling techniques.

Complete cat and dog foods are evaluated differently from livestock feeds and ingredients, at least as far as mineral analyses are concerned. When pet foods are sold in KY and these products claim to meet AAFCO pet food profiles, we compare the analyzed mineral profile to the established AAFCO profile for the appropriate animal and life stage. All profiles have minimum mineral requirements and some have maximums as well. In this situation, the tolerances are national standards set by AAFCO but these are further adjusted by the lab to include sample variation. Current tolerances used in our lab were established in 2008.

Beginning the later half of 2015, we will make some slight adjustments to our current tolerances for complete cat and dog foods. With the implementation of a new lab software system, we will be able to set the tolerances of each product based on label moisture guarantees. Current AAFCO AV's will then be applied the profile ranges. This will allow for a more equitable evaluation of the mineral content of cat and dog foods. The cur-

Continued next page

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rent system allows a wider tolerance for mineral content of wet foods than dry foods and this will be corrected. Practically speaking, the most obvious impact of this change will be more violations in wet dog food for excessive calcium and phosphorus. These changes have very minimal changes on dry dog and cat foods and will not affect livestock feed or ingredients. Though the changes in mineral tolerances will need to coincide with our new lab software, we will not issue violations based on these new tolerances until January 1, 2016.

How To Set Up Company Accounts in KY's Version of USA Plants

June Crawford

The Division has a new system which allows for companies to directly submit labels for consideration for registration, review payments, and to also review seed samples. This tutorial will walk you through the steps to create your company account, and the steps to login.

First, go to: <u>https://ukrt.rs.uky.edu/USAPlants/SecurityLogin.aspx</u>

This will take you to the log on screen below.

| https://ukrt.rs.uky.edu/USAPlants/Secu Yahoo Mail K Division of Regu | rityLogin.aspx latory Bureau of Prant Industry Burea | au or Plant house | |
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| | UKAG LEARNING DISCOVER SERVICE USAPlants Homepage Logon / Register | | |
| | | of Regulatory Services Forgot Password Forgot your Password? Retrieve it Here! Frequently Asked Questions | |
| | | Home | |

Before you can submit a product for consideration, you must register the account. To do that, choose the "Register" button.

| https://ukrt.rs.uky.edu/USAPlants/Maint/SecurityNewUser.aspx Yahoo Mail | nt Industry 📄 Bureau of Plant I | dustry | |
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| uкAg | LEARNING DISCOVERY SERVICE | Division of Reg | gulatory Services |
| USAPlants Homepag | e Register User | | |
| Logon / Register | Please refer to the dire USAPlants ID:* Pin ID:* Email Address:* First Name:* Last Name:* Phone:* New Password:* Confirm Password:* | Save Back | formation: Need Help? Need Help? Need Help? |
| | | Home | |
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Here you fill in all the required information.

The "USA Plants ID" is the six digit number assigned to your company. You can find that on your renewals for 2015, or, you can email our office to get it (june.crawford@uky.edu).

- Your Pin ID is the four digit number assigned to the company, again, you can find it on your renewals or can email our office to get it.
- The "New User Name" is whatever you choose for your company. Most generally use their company name.

Email address is the address you wish to use for any information that will be returned to your company.

First and last names are generally of your registration representative.

- Phone is the contact phone number
- The password is one that you set up for your company. No one but the company will have access to that password. Should it be forgotten you can retrieve it using the "Forgot Password" button on the log in page.

Once all the information is filled in, choose "Save" and your account will have been created.

Using Your New USA Plants Account

On the log in page (<u>https://ukrt.rs.uky.edu/USAPlants/SecurityLogin.aspx</u>) use your user name and password to log in.



This will take you to your home account screen. It should look something like this:

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If your company registers for fertilizer, feed and/or seed, all of those accounts will be shown in this area. Choose the link you need to work under. That link will take you to the home screen of your company in that program (Fertilizer, Feed or Seed).

For instructions on how to register a fertilizer product online go to the following link: <u>http://www.rs.uky.edu/regulatory/fertilizer/</u>

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The Documents That Trapped Poor Southern Farmers in a Dangerous Form of Debt – Timothy Johnson

| \$ 99.00 | Commerce | Athons, Ga., Ver 20th. 1929 19 |
|--|--|---|
| On | or before October 1st, 19 29 | I promise to pay HODGSON COTTON CO., or ord |
| Kine | ty Nine & no/100 | Dolla |
| Value rece | ived. This note is given for | or sacks of Nitrate Soda |
| sach | s of 9-2-3 Red Star Guano | 30 sacks of 9-3-3 Fretiliser |
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| which are her is given by pa paid, and ten fertilizer furni hands fertilized matter of pays Exemption or | by guaranteed by payment to the stand- peer if this mode is not paid on or before event sitornay's fees for collecting an shad by them to make the same. I bere with this manure shall be held in trust orest and time given, we, whether maker Homestend ander the laws of this State | and of analysis branded on each mark, and it is understood that no other warre re maturity. I agree to pay eight per cent, per ansum intervent from maturity w mm. In consideration of the interest of said payne in my crop, by reason of , by covenant and agree that all cotton and corm grown during the present year by me for said payne until this debt is paid. And in further considerations of or enderser, hereby waive and renounce for cormitives and families all rights |
| 1 | WITNERS | Gipen under my hand and seal |

Courtesy of Hargrett Rare Book and Manuscript Library / University of Georgia Libraries.

A commonplace of Southern rural life in the late-19th and early-20th centuries, these long-forgotten promissory documents, nicknamed "guano notes," are among the most unique forms of debt in American history.

In the mid-19th century, Peruvian bird dung known as "guano" was prized as a fertilizer more powerful than common manure. In the South, the name stuck even after the South American guano deposits ran out in the 1870s, and "guano" became shorthand for a variety of commercial fertilizers that were essential on cotton and tobacco farms after the Civil War. Former slaves and poor white sharecroppers found themselves farming on land so exhausted that obtaining fertilizer was the first step in raising the year's crops each spring. If a farmer was short on cash—and most were—he would have to sign a guano note.

Beholden to landowners and merchants for their livelihood, sharecroppers fought to eke out a living amidst a landscape of inequality and insecurity. Fertilizer promised to help them grow better crops, but guano notes made sure this promise had many strings attached. Almost every guano note carried a pernicious stipulation: Anyone who failed to pay back their fertilizer debt by the agreed-upon date waived legal protections on their homes, personal property, and livestock.

In his autobiography, the Alabama tenant farmer Ned Cobb emphasized that obtaining each season's fertilizer was essential to succeeding as a farmer. At the same time, Cobb learned that signing a guano note thrust black farmers like himself into a vulnerable position—his landlord used fertilizer debt as one of many tools to keep his tenants in debt and dependent. Even though fertilizer promised a better harvest, guano notes helped ensure that merchants, rather than farmers, would profit.

Timothy Johnson studies environmental history at the University of Georgia and is currently a fellow at the Chemical Heritage Foundation.

http://www.slate.com/blogs/the_vault/2015/01/22/ history of farm debt guano notes used as promissory documents.html Regulatory Services News Division of Regulatory Services College of Agriculture, Food and Environment University of Kentucky 103 Regulatory Services Building Lexington, KY 40546-0275



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