

Regulatory Services News

Vol. 49, No. 1

Feed – Fertilizer – Milk – Seed – Seed Testing – Soil Testing

Spring 2005

New Regulatory Specialist Green River Area

Gayle Singleton joined the Division of Regulatory Services as a full time Inspector in the Green River Area of western Kentucky in January. Gayle will be conducting feed, fertilizer, and seed inspections within Caldwell, Crittenden, Daviess, Hancock, Henderson, Hopkins, Ohio, McLean, Union, and Webster Counties.



Gayle Singleton,
Inspection Staff, Green River Area

Gayle has a B.S. in Agriculture from Western Kentucky University and an M.S. degree in Agriculture from Murray State University. She comes to the Division from the UK Cooperative Extension Service in Crittenden County, where she served as a 4-H Agent for seven years. We welcome Gayle to the Division of Regulatory Services.

*S. McMurry
Inspection Program*

Director

Eli Miller
cemiller@uky.edu

Feed Program

Steve Traylor - Coordinator
straylor@uky.edu

Fertilizer Program

David Terry - Coordinator
dterry@uky.edu

Feed-Fertilizer Laboratory

Mel Bryant - Coordinator
mbryant@uky.edu

Milk Program

Chris Thompson - Coordinator
cthompso@uky.edu

Inspection Program

Steve McMurry - Coordinator
smcmurry@uky.edu

Seed Regulatory Program

David Buckingham - Coordinator
dbucking@uky.edu

Seed Testing Laboratory

Cindy Finneseth - Coordinator
cfinnese@uky.edu

Soil Testing Program

Frank Sikora - Coordinator
fsikora@uky.edu

What's inside....

2004 Poundstone Award Winner - Debra Sipe	2
Poundstone Award History	2
Protecting the Commonwealth with BSE Inspections	3
On the Trail of Ammonium Nitrate	4
Seasonal Planning for Milk Haulers	6
pH Trivia	7
Division Service Awards	7
Certification and Certified Seed Classes	8
Asian Soybean Rust Concerns for Seed Producers	9
Seed Permit and Registration Reminder	9
Kentucky Quality Dairy Producer Award	10
Feed & Fertilizer Lab Update	10
Labeling Direct Fed Microorganisms	11
KY Feed and Grain Meeting Announcement	14

UK

UNIVERSITY
OF KENTUCKY

College of Agriculture
Division of Regulatory Services

Debra Sipe 2004 Poundstone Award Winner

It is appropriate that we annually recognize an outstanding Regulatory Services staff employee with the Poundstone Award. This award is for the employee that has demonstrated outstanding service to the Division and has contributed to its positive image through interaction with others in the Division and our clientele. This includes the employee's participation in Divisional activities above and beyond regular job requirements, recognition for outstanding work from both inside the Division and from related professional and service organizations, and the employee's participation in activities which would contribute to their professional development. The employee's work ethic, attendance, and punctuality are also considered. This award has special significance since a committee comprised of co-workers selects the winner.

Debra Sipe, the 2004 Poundstone Award recipient, has worked at the University of Kentucky for thirty-one years. She began her career at UK in the feed and fertilizer laboratory. Her current duties include the testing of approximately 2000 feed samples annually. Tests conducted include vitamin A, crude fat, acid hydrolysis fat, crude fiber, and acid detergent fiber. Additionally, she assists the milk laboratory in preparing the monthly milk check sample program and is certified to conduct direct microscopic somatic cell counts on milk.

Debie has made presentations at the AOAC Northern Section meeting and Southern Association. Recently, she collaborated on method for determining fiber using Ankom instrumentation. Debie has chaired the Regulatory Services Safety Committee since 1983. Her efforts have been outstanding in promoting safety in the workplace with special emphasis on laboratory safety. Debie Sipe was one of only five UK employees recently honored by the UK Committee on Environmental Health and Safety for her efforts to promote safety. The UK Safety Award is to honor individuals that have improved safety at the University of Kentucky. Debie was recognized for several safety initiatives including coordinating a monthly inspection of eyewash units, emergency showers and emergency exits.

Debie was honored in December at a luncheon for Regulatory Services employees. As the recipient of the fifth annual Poundstone Award, she received a \$300 award and a plaque for her office. Her name was also inscribed on a perpetual plaque that is on display in the lobby of Regulatory Services. The Division is especially pleased to honor Debie for her outstanding service.

*E. Miller
Director*



Bob Kiser, service lab supervisor, and Debie Sipe, 2004 Poundstone Award Winner

History of the Poundstone Award

The Poundstone Award was created to honor an outstanding employee of Regulatory Services. The award is named in honor of Bruce Poundstone, who was Director of Regulatory Services for many years. He was nationally renowned for his leadership and innovations in the feed, fertilizer and seed regulatory arena. He was founder of the Feed Microscopy Association, started the AAFCO Feed Control Seminar, and was a participant in the development of the GMP

continued on page 15

Protecting the Commonwealth with BSE Inspections

The Division of Regulatory Services' (DRS) Feed Program in cooperation with the Food and Drug Administration Cincinnati District is responsible for several components for preventing amplification and establishment of Bovine Spongiform Encephalopathy (BSE), often referred to as "mad cow disease". The Division has expended considerable time and efforts to educate and inspect feed manufacturers and allied industries in the Commonwealth of Kentucky. The Division's efforts were first initiated in 1997 when the FDA prohibited the feeding of certain bovine derived proteins to other ruminant animals.

FDA's enforcement plan for the ruminant feed regulation includes education, as well as inspections, with FDA and state agencies taking compliance actions for intentional or repeated non-compliance. State regulatory agencies conduct over 70% of the inspections for FDA under contract, letter of memorandum, or other informal agreements. The DRS contracts annually with FDA to conduct a specific number of BSE and Good Manufacturing Practice inspections of feed manufacturers, ingredients suppliers, and allied industries in the Commonwealth. Since 2001, the DRS has conducted over 498 BSE related inspections under contract with the FDA to determine compliance with the BSE/Ruminant Feed regulations. The most recent inspection data for all firms inspected can be found on FDA's database website (<http://www.accessdata3.fda.gov/BSEInspect/>).

Although the Division has a contract with FDA to conduct a number of BSE inspections in the Commonwealth, the Division inspectors routinely visit manufacturers and feed dealers in the state. A larger majority of the firms are inspected under state authority at least three to four times a year during routine visits. During these routine visits, the Division inspection staff conducts informal BSE inspections and they are trained to identify potential problems and inquire about the BSE

status of the firm. The inspection staff of the Division is one of the best trained and competent inspection staffs in the nation. All of the Division inspectors attend periodic training on this and other feed related issues. All members of the inspection and training staff attended the last national BSE training event sponsored by FDA in September 2002.

Although not specifically mandated by FDA, the DRS has a very active feed label review aspect built into their system. The importance of proper labeling is one of the key components of relaying information to the feed dealer, animal producer and all consumers. Annually, employees of the Division conduct over 10,000 label reviews for compliance with the required caution statement (Do not feed to cattle or other ruminants) on products sold, offered for sale or distributed in the state. Another important component of the program involves field related monitoring and inspection of labels and other related activities.

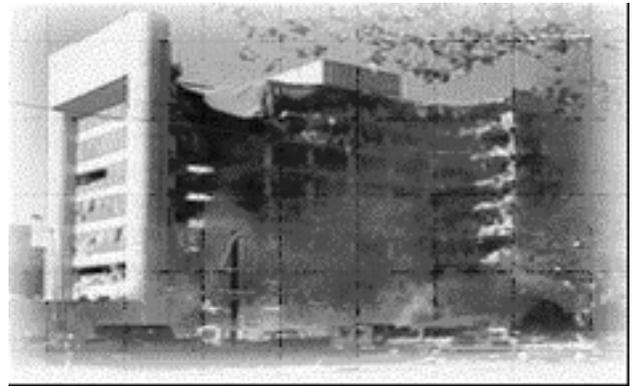
The compliance rate of Kentucky firms with the BSE regulation is extremely high and the number of firms in compliance has increased over the last six to seven years. During the 2001 and 2002 inspection years, four Kentucky firms initiated voluntary recalls of products that were found not to be in compliance with the regulation. Since that time there has not been a single recall of products in the Commonwealth of Kentucky. In contrast, the trend on the national level has seen the number of compliance actions increase. We strongly believe that the early educational and inspectional efforts of the Division play a large role in the high compliance rate with the regulation. As a general trend, both on the national and state level, the number of firms handling prohibited proteins has significantly decreased along with the number of products containing prohibited proteins. In the Commonwealth, there are now less than ten manufacturing firms identified as handling and processing prohibited proteins.

continued on page 14

On the Trail of Ammonium Nitrate

In November 2004, I stood near the site where on the morning of April 19, 1995, Timothy McVeigh parked a rented Ryder truck with explosives and, at 9:02 a.m., a massive explosion occurred which sheared the entire north side of the Alfred P. Murrah Federal Building killing 168 people. The explosive was a mixture of about two tons of ammonium nitrate and diesel fuel.¹

The terrorist use of a widely available and valuable fertilizer caused widespread concern and calls for legislation limiting or even prohibiting its production. The question logically arises as to how to prevent such misuse and yet make ammonium nitrate (AN) available for legitimate use as a fertilizer and a controlled legitimate explosive.



History of Ammonium Nitrate

“Ammonium nitrate was first synthesized by Johann R. Glauber in 1659 when he combined ammonium carbonate and nitric acid, but the ultimate power of the explosive was not discovered until the end of World War I. Throughout the war, ammonia synthesis plants were built and used in Germany to supply the country with explosives. The plants were able to form ammonia by using the Haber-Bosch process. At the end of the war, a large surplus of ammonium nitrate was left when the first ammonia synthesis plant was closed down. A huge pile of the compound was stored in an open field; in attempts to break apart the pile for removal, explosives were drilled into holes in the pile. Contrary to what was expected, the whole mound detonated with a blast of 4,500 tons, killing 600 people. There have been two other famous incidents where ammonium nitrate was the source of great destruction: Texas City and Oklahoma City.”²

The Ammonium Nitrate Explosion of Texas City

On April 16th 1947, a French freighter named the SS Grandcamp attempted to dock in Texas City, Texas on the Galveston Bay. The ship was making a delivery of AN fertilizer when the deck of the ship caught fire. Oblivious to the dangers of AN, the crew continued to dock. Later that morning, the freighter exploded creating a tidal wave that enveloped the shore and an explosion at kiloton scale. Many refineries that were located on the waterfront also caught on fire and continued to burn for 6 days after the explosion. It was estimated that a total of 567 people were killed, but it is believed that this number underestimates the total amount of casualties from this incident.



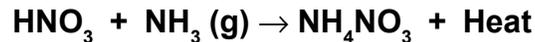
In the investigation following the explosion, it was determined that the AN had been “waterproofed” with an organic wax which sensitized it resulting in a powerful explosive that was triggered by the fire.

All the explosions before 1950 involved actions that were inherently unsafe and have subsequently been banned. Since 1950 there has been no accidental explosion of fertilizer grade AN as used in the trade. There were explosions in the US in 1973 and in France³ in 2001 involving “off-grade” product. The lessons learned in the accidents in the early years of

AN production resulted in manufacturing and handling practices that produce an excellent fertilizer that is intrinsically safe. The other explosions of AN have been the result of misuse or mishandling of the product.

Current Production and Use

Ammonium nitrate is now made by reacting ammonia gas with liquid nitric acid. The chemical reaction is:



The finished product is basically produced in two forms: (a) high density prills for fertilizer use and (b) low density for industrial use primarily for explosives. AN is an excellent nitrogen fertilizer and is predominantly sold with a total nitrogen content of 34% with equal percentages of readily available ammoniacal and nitrate nitrogen. It is easily handled and little or no volatilization of N occurs upon application to the soil surface. Its use as a direct application material went from about 600,000 tons in 1945 to about 2.8 million tons in 1970 and had declined to about 1.6 million tons in 2003 which was about 6.5% of all N fertilizer materials used in 2003^{4, 5}. In 1989 ammonium nitrate-fuel oil (ANFO) and related products accounted for 96.6% of the total industrial explosive market of 2.3 million tons⁶

Ammonium Nitrate Regulatory Situation

There is no federal regulation of ammonium nitrate as a fertilizer. The US Department of Transportation classes it as an "Oxidizer" and containers and transportation vehicles must have the "Oxidizer" placard in place. The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) regulates it as an explosive. As of January 2005 two states, Nevada and South Carolina, have passed legislation that regulates the sale of AN by placing certain regulatory requirements on both the seller and purchaser; and, Oklahoma is in the process of approving such legislation.

A bill was recently introduced in the US House of Representatives (HR 5140) by Representative Maurice Hinchey of New York that would put in place a federal program that would regulate the storage and handling of AN.⁷ The fertilizer industry through The Fertilizer Institute (TFI) issued the following statement: "The fertilizer industry is keenly interested in Congressional efforts to establish a uniform federal system for securing ammonium nitrate from those with criminal intent, and the introduction of this legislation is a first step in a welcome dialogue on this issue. TFI has met with Rep. Hinchey's staff and is working closely with agricultural and security leaders in Congress to investigate options for keeping ammonium nitrate safe and available for use in American agriculture."⁸

What Can We Do NOW In Kentucky?

First, we (both fertilizer regulatory officials and the fertilizer industry) must take seriously the threat of terrorists to use AN as an explosive. As discussed above the product itself is safe and useful to farmers as a fertilizer, but in the hands of a terrorist it can be very destructive.

Second, there is help for all dealers who store and handle AN. TFI developed an AN awareness program in the wake of the Oklahoma City bombing entitled: "Be Aware for America," and "Be Secure for America".

Recently TFI updated this program to: "America's Security Begins with You"

continued on pg. 12

The Necessity of Seasonal Planning for Milk Haulers

Careful year-round planning is essential for success in practically every aspect of the dairy industry. Producers set forth plans in conjunction with other farming practices such as their breeding, calving and feeding programs. Processors plan with consideration being given to issues such as plant maintenance and anticipation of customer demands. Preparation and planning is also critical for you as a milk hauler, especially prior to the spring flush.

We have already been teased with a few warm days in recent weeks. This means that extended periods of warm weather; lush, green pastures; and the greatly anticipated spring flush are almost upon us. Milk production can increase by as much as 20% when the flush hits full swing!

Farm bulk tanks are filled much more quickly with this tremendous production increase. When this occurs, every other day producer pick-ups can quickly become every day pick-ups. Some producers may have such an increased milk volume that they may even need to be visited more than once per day. This increased milk volume will also inevitably result in milk trucks being filled to capacity at a more rapid rate. As this occurs, it is very likely that your bulk milk pick-up route will need to be adjusted.

Make sure you have a plan in place to account for increased milk volume in the spring. Regularly communicate with your producers to stay informed about other factors that could potentially impact milk volume and stay alert as the milk volume increases on each farm. Route adjustments should be made prior to the overfilling of any farm tank or the overfilling of your truck tank. Failure to prepare for these situations inevitably result in hasty decisions being made that often have a detrimental impact on milk quality and producer payments.

One of the most difficult milk hauling dilemmas in the springtime surrounds the topic of partial pick-ups. Partial pick-ups typically occur when a hauler attempts to squeeze every last drop of milk onto his truck. In this case, attempting to squeeze all of a route onto a truck often results in the last producer pick-up of the day being a partial pick-up. **If this occurs, you or another hauler must return to the farm prior to the producer's next milking and completely empty the farm tank.** The farm bulk tank must be completely emptied so it can be properly cleaned and sanitized prior to the next milking. History reveals that whenever a partial pick-up occurs, it is very problematic for a hauler to return to the farm and properly complete the milk pick-up. The Pasteurized Milk Ordinance (PMO) specifically addresses partial pick-ups and any exceptions regarding this practice. The appropriate segment of the PMO is quoted at the bottom of page 13.

There are several concerns regarding partial pick-ups of producer's milk.

1. Partial pick-ups are difficult to accurately weigh,
2. Partial pick-ups are difficult to accurately sample,
3. Partial pick-ups can have an effect on milk component test averages (resulting in inaccuracy), and
4. Partial pick-ups prevent producers from being able to properly wash and sanitize their milking systems.

Residual milk will cling to the sides of the bulk tank after the milk level is lowered as a result of the partial pick-up. This residual milk cannot be

continued on pg. 13

A pH Test? Trivia on Acidity

What is pH?

pH is the commonly used measurement for acidity. We measure soil pH to determine if a crop is going to be adversely affected by a pH that is too low. Lime may be recommended to get soil pH up to 6.2 for most agricultural crops.

The use of the term "pH" is common now in our vernacular in describing acidity, but one-hundred years ago, the pH scale did not exist. The use of the term pH was suggested by a scientist named Sorensen in Denmark in 1909.

Why is the lower case "p" and upper case "H" used to define acidity?

The use of the capital letter H is obvious to a chemist since the term reflects the concentration of hydrogen ions (H^+) which is what makes the acidity. The lower case "p" is not so obvious to a chemist without knowledge of foreign languages. Although Sorensen does not specifically state his reason for using "p", many claim it comes from the German word "potenz" which means power or concentration. Therefore, pH is the power or concentration of hydrogen ions.

*F. Sikora
Soil Testing Program*

Division Service Awards

Our Division is blessed with talented employees who perform their work in an outstanding manner. It takes well-trained and qualified individuals to conduct the inspectional activities, laboratory testing for the seed, feed, fertilizer, milk and soil programs, and perform the various administrative activities necessary for successful programs. Each year the College of Agriculture recognizes employees for years of service based on five year increments. Recently, the Division presented service awards to the personnel listed at right.

*E. Miller
Director*

5 Year Recognition

Anne Harper, Milk Lab
Charity Wentzel, Seed Program

20 Year Recognition

Kent Von Lanken, Seed Testing Lab
Rick Wells, Soil Testing Lab

30 Year Recognition

Bob Kiser, Feed and Milk Labs
Henry Spencer, Auditor
David Terry, Fertilizer Regulatory Program

35 Year Recognition

Ellen Marshall, Feed and Fertilizer Lab

Certification and Certified Seed Classes

Seed offered for sale can generally be divided into two categories. These categories are certified seed and uncertified seed. Sometimes there are misconceptions about whether a seed lot is certified or uncertified. The majority of seed that is sold in Kentucky is uncertified. Tobacco seed and canola seed are the only seed kinds that the Kentucky seed law requires to be certified.

The official certifying agency for Kentucky is the Kentucky Seed Improvement Association. Anyone can become a member of the Kentucky Seed Improvement Association by following the certification regulations. Crops that are grown for production of a certified class of seed must follow the process required by the certification regulations. These crops undergo field inspections, must be processed at approved processing facilities, have to be tested by an approved laboratory, and all through this process specific records must be maintained. Labeling of certified classes of seed is controlled by the seed certification agency.

Four classes are recognized in seed certification. These are commonly referred to as classes of certified seed. These classes include breeder seed, foundation seed, registered seed, and certified seed. **Breeder** seed is seed that is directly controlled by the originating plant breeder, institution or firm, which supplies the source of seed for increases of foundation seed. **Foundation** seed is the progeny of breeder seed and is handled to maintain specific genetic purity and identity. Foundation seed can be the source of registered or certified seed. **Registered** seed has to be the progeny of breeder seed or foundation seed and is handled to maintain genetic purity and identity. Registered seed is one of the sources of the certified class. The **Certified** class has to be the progeny of breeder seed, foundation seed, or registered seed, and cannot be the seed source of additional production of certified seed except under certain circumstances.

This classification may seem to be a bit confusing at first, but if you examine these classes, you realize that the order from the highest class to the lowest class of certified seed is breeder seed, foundation seed, registered seed, and certified seed. The lower classes usually must be sourced from a higher class of seed. The seed-certifying agency may determine that the foundation class of seed will be used to produce the certified class for a specific variety of a certain seed kind. Bad crop years or other circumstances may prompt the certifying agency to allow production of certified seed from the certified stock that exists, but this does not usually happen.

Labeling of the certified classes of seed is controlled by the certifying agency. In most circumstances, the approved processing facility is responsible for attaching the correct labeling on the certified class of seed prior to the seed lot being removed from their premises. Labeling of the certified classes of seed can only be accomplished by these facilities or under the supervision of an agent of the seed-certifying agency.

The labeling approved by, and at times provided by, the certification agency should have certain information on the seed label. This information includes the seal of the certifying agency, the kind and variety of the certified class of seed, the certification class, in some cases a label number, and some certifying agencies also require a guaranteed analysis. The registered classes are usually printed on a white tag, the registered class is usually printed on a purple tag, and the certified class is usually printed on a blue tag. Don't be fooled by imitations that are printed on these colors of printing stock. Printing the words "certified seed" on the tag does not necessarily mean the seed is certified either. The certified tag will have, at a minimum, the seal of the certification agency, the name of the kind and variety, and the lot number of the seed.

continued on pg. 13

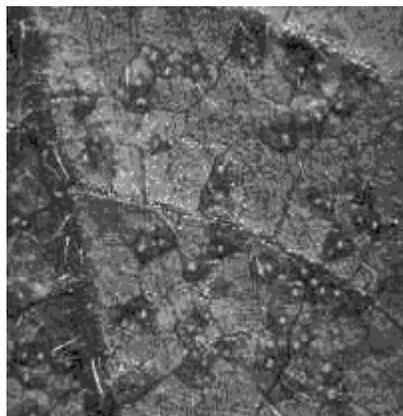
Asian Soybean Rust Concerns for Kentucky Seed Producers

In 2004, the United States Department of Agriculture (USDA) confirmed the presence of Asian soybean rust in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, South Carolina and Tennessee. The causal organism, *Phakopsora pachyrhizi*, infects soybeans, other edible beans and leguminous weed hosts. This disease has the potential to be quite destructive and management decisions by seed producers this growing season will be very important.

This pathogen is not seed-borne and it is unlikely that the fungus will be transmitted on leaf debris. However, if a high percentage of inert matter is present in a seed lot – especially in the form of pods and stems – the pathogen could be transmitted via traditional seed channels.

Environmental conditions will affect establishment of soybean rust. The fungus will need wet leaves to infect plants and reproduce. This can, however, occur over a wide temperature range (59-84°F). If the disease establishes in a field, the grower may first notice a bronze cast to plants, followed by defoliation. Foliar lesions may not be easily recognized and can appear similar to other diseases including brown spot, bacterial blight, bacterial pustule and downy mildew.

Scouting and management decisions will be necessary as this disease can dramatically impact seed production and quality. Production costs may also increase due to management decisions. UK Extension specialists Don Hershman, Jim Herbek, Chad Lee, Tim Stombaugh, Scott Shearer and Sam McNeill are scheduling grower meetings to discuss this disease, management options and their research with controls and scouting. UK specialists are also participating in the USDA's national soybean rust surveillance and monitoring system.



Soybean Rust leaf lesions
(from www.uky.edu/soybeanrust)

It will be important to work closely with your local county agent and our university specialists to confirm the identity of soybean rust and to develop a management plan for production fields. Additional information is available on UK's Soybean Rust Website: (www.uky.edu/soybeanrust) and the USDAAPHIS (www.aphis.usda.gov) website. To get the latest information available on this disease, visit these sites often during the growing season for disease updates and recommendations.

C. Finneseth
Seed Testing Coordinator

Reminder - Renewal of Seed Permits and Registrations

Any firm labeling agricultural, vegetable, flower seed, or combination seed, mulch and fertilizer products must obtain a permit. Also, dealers that sell seed in containers of 40 lbs. or more need to register with the Seed Regulatory Program. More information about permit and registration categories and necessary applications are available online at www.rs.uky.edu/seed/permits.htm.

Kentucky Quality Dairy Producer Award

The Dairy Products Association of Kentucky (DPAK) will be presenting the Kentucky Quality Dairy Producer Award at the Kentucky State Fair's Dairy Recognition Dinner in August. Last year's dinner was the highest attended dairy dinner on record and the awards ceremony was a great success. The purpose of the award is to recognize the Kentucky dairy producer who best portrays the production of high quality milk.

The 2005 award's criteria are to be based on producer data derived from April 1, 2004 through March 30, 2005. All nominees are required to possess valid permits from the Cabinet for Health Services, Milk Safety Branch throughout this period. Nomination forms should be postmarked or delivered to DPAK no later than June 15, 2005.

Applications may be submitted by producers themselves or by professionals who serve the dairy industry such as dairy field representatives, veterinarians, extension personnel, milk haulers and others. These individuals should work closely with producers to help ensure the accuracy of the information reported on the nomination form. Copies of the nomination form can be obtained at the Regulatory Services Milk Program web-site <http://www.rs.uky.edu/milk/index.html> or by contacting David Klee, Executive Director of DPAK at (502) 867-7843.

Now is the time to start thinking about who you feel will be a good candidate for this prestigious dairy producer award. Be sure to nominate the Kentucky dairy producer who you feel best exemplifies the production of high quality, wholesome milk!

*C. Thompson
Milk Regulatory Coordinator*



Feed and Fertilizer Analytical Laboratory Update

GC Upgrade

The GC is used to measure Atrazine™ and Simazine™ in soils. This upgrade included software and hardware revisions. Previously, the PC-instrument communications were "one-directional," meaning the instrument required frequent supervision and input from the operator. Now, once samples are placed in the instrument, it can basically operate unattended.

Lachat Demo

In early March, Lachat-Hach™ will be demonstrating one of their new products at Regulatory Services. A similar instrument is currently used to measure Phosphate and Potash in fertilizer materials. Advances in technology and configuration allow this new product to process samples nearly twice as fast as older models. Additionally, this instrument is capable of performing automated analysis of Chloride, Ammonium, Nitrate, and Urea.

Continued on page 15

Products Containing Direct Fed Microorganisms

How do I label products containing direct fed microbials and when do I have to guarantee them?

Let's start with the first question -- How do I label products?

According to the AAFCO Official Publication Regulation 9(b)4, the commercial feed has three direct fed microbial requirements. First, the ingredient(s) should meet the particular AAFCO fermentation definition. Second, the label should contain the statement "Contains a source of live (viable) naturally occurring microorganisms." Finally, the label guarantee should be consistent with Regulation 4(g), which can be broken down into two subparts. The units for the guarantee are colony forming units per pound or per gram depending on the directions for use. A parenthetical statement should follow the guarantee, listing each species in order of predominance.

So what does all this mean?

They say a picture is worth a thousand words and they would be right if it's a picture of an example abiding to all of the above mentioned regulations. Here are two examples to accomplish the same goal.

Example 1:

Total microbial count minimum 1,000,000 CFU/lb
(*Lactobacillus acidophilus*, *Bifidobacterium thermophilum*,
Bifidobacterium longum, *Enterococcus faecium*)

Example 2:

Total Microbial count.....2X10E6 CFU/lb
Lactobacillus acidophilus.....8X10E5 CFU/lb
Bifidobacterium thermophilum.....6X10E5 CFU/lb
Bifidobacterium longum.....4X10E5 CFU/lb
Enterococcus faecium.....2X10E5 CFU/lb

Running through the check list:

All direct fed microorganisms are listed under the AAFCO definition.

We assume the statement "Contains a source of live (viable) naturally occurring microorganisms." is listed some where on the label.

The guarantee contains the necessary required information in the correct order.

Now to the second question -- When am I required to guarantee direct fed microbials?

This question is easier answered by understanding when I am not required to have a guarantee. According to AAFCO, guarantees are not required when the commercial feed is intended for a purpose other than to furnish these substances or they are of minor significance relating to the primary purpose of the product and no specific label claims are made. So, to answer the second question, a microbial guarantee is necessary when claims are made with respect to a product that contains direct fed microbials or when the intended use of the product is a principle source of direct fed microorganisms.

Tracy Burden

Feed Registration Specialist

Ammonium Nitrate

continued from page 5

The campaign urges everyone who handles ammonium nitrate to:

- Implement security plans,
- Maintain records of all sales of AN and
- Alert law enforcement officials of suspicious activity utilizing a toll-free hotline (800) 800-3855 operated by ATF.

“America’s Security Begins with You” campaign materials are available on a complimentary basis upon request from TFI. Please contact TFI via telephone at (202) 962-0490 or via e-mail at: informationtfi@tfi.org to order posters, brochures and window stickers.⁹

This TFI program has been endorsed by the Department of Homeland Security and joins existing program co-sponsors of the ATF and the Association of American Plant Food Control Officials.¹⁰

Third, Go out and secure your facilities NOW and begin training your personnel NOW. It may cost a little but a delay could be immensely more costly.

Summary

Late in 2004 in eastern Missouri a television reporter rented a U-Haul truck and went to three fertilizer retail outlets to purchase some AN. At two of the locations he was able to purchase the fertilizer even though he had a truck with an out of state license, did not have his driver’s license, paid for the fertilizer in cash, did not offer any reason for the purchase, and did not produce any identification.¹¹

DO NOT LET THIS HAPPEN IN KENTUCKY!

Start Today:

- Identify your customers**
- Report suspicious requests**
- Keep records**
- Alert law enforcement officials**
- Plan to prevent an incident**
- Develop a security plan**
- Request “Be Secure America” from TFI**

References:

- ¹ <http://www.oklahomacitynationalmemorial.org/>
- ² <http://web1.caryacademy.org/chemistry/rushin/StudentProjects/CompoundWebSites/2001/AmmoniumNitrate/history.htm>
- ³ <http://www.uneptie.org/pc/apell/disasters/toulouse/nh4no3.html>
- ⁴ Terry, D. L. “Commercial Fertilizers 2003”, Association of American Plant Food Control Officials, Division of Regulatory Services, University of Kentucky, Lexington, KY 40546.
- ⁵ Hargett, Norman L. ,”Fertilizer Summary Data 1970”, TVA, NFDC, Muscle Shoals, AL.
- ⁶ Martinott, Robert T. “Explosives, Behind the Bang” , Today’s Chemist, Vol. 4, No. 2 April 1991, American Chemical Society, 1155 16th St., NW Washington, DC 20036.
- ⁷ <http://thomas.loc.gov/> (Search for HR5140 in the 108th Congress) Also look at <http://uscode.house.gov/download/title_18.php> for the Title 18 USC CHAPTER 40 - Importation, Manufacture, Distribution and Storage of Explosive Materials that HR5140 would amend.
- ^{8,9,10} <http://www.tfi.org>
- ¹¹ AgriBusiness Association of Kentucky, “ABAK News”, December 2004, 512 Capitol Ave. Frankfort, KY 40601, www.kyagribusiness.org

D. Terry
Fertilizer Regulatory Program

Seed Certification

continued from page 8

The purpose of seed certification is to provide an orderly means of maintaining and making available to the public high quality seeds and propagating materials of superior plant varieties that are grown and distributed in a way that insures genetic identity and purity. Most states have official seed certification agencies. These certification agencies establish the procedures and standards that must be followed to produce, process, label, and distribute certified seed in their state. Labeling standards for the classes of certified seed kinds are usually more stringent than the minimum standards established by state seed laws. Most state seed laws do not allow certified classes of seed to be distributed into their state as certified seed if the standards of the certifying agency responsible for the seed are lower than their state certifying agency.

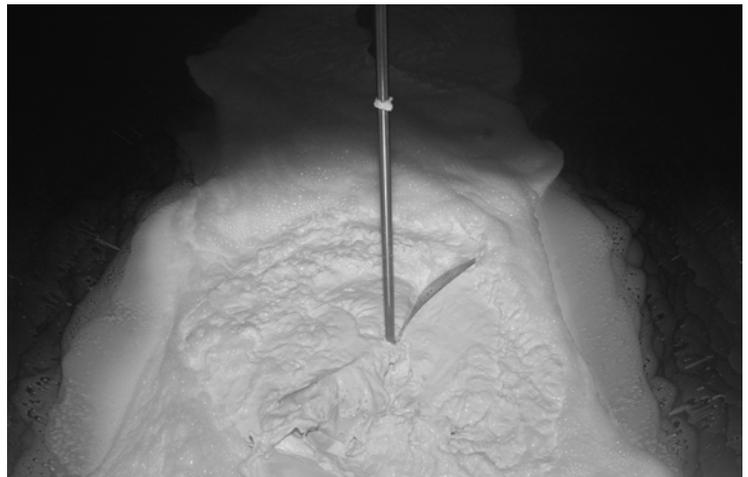
*D. Buckingham
Seed Regulatory Program*

Milk Haulers

continued from page 6

properly cooled and elevated bacteria growth will occur. This situation has the potential to cause two serious problems. First, the bacteria count for this producer's next farm pick-up will be elevated. Additionally, residual films remaining after the partial pick-up will consist of fat and protein. These organic films can be very difficult to clean and can lead to long-term bacterial problems for the producer.

The springtime is a hectic time for everyone involved in the dairy industry, including the milk hauler. Stressful situations such as overfilled farm tanks and milk trucks can be avoided with careful planning. Being faced with the decision to make a partial pick-up is a situation that should not occur with proper a plan in place. Don't short-change your producers. Plan ahead for the upcoming spring flush!



The farm bulk milk tank must be completely emptied to enable the tank to be cleaned and sanitized prior to the next milking.

*C. Thompson
Milk Regulatory Program*

**(From the 2003 PMO Item 10r. 3) There shall be no partial removal of milk from milk storage/holding tanks by the bulk milk hauler/sampler, except partial pickups may be permitted when the milk storage/holding tank is equipped with a seven (7) day recording device complying with the specifications of Appendix H. or other recording device acceptable to the Regulatory Agency, provided the milk storage/holding tank shall be clean and sanitized when empty and shall be emptied at least every seventy-two (72) hours. In the absence of a temperature-recording device, partial pickups may be permitted as long as the milk storage/holding tank is completely empty, clean and sanitized prior to the next milking. In the event of an emergency situation, such as inclement weather, natural disaster, etc., a variance may be permitted at the discretion of the Regulatory Agency.*

BSE Inspections

continued from page 3

Of that total, the majority of the Kentucky firms handling and processing prohibited proteins are the renderers, single-specie feed processing facilities or pet food manufacturers.

The types of firms that were initially targeted were higher risk firms, which included animal rendering operations, feed mills, protein blenders, pet food manufacturers, and animal feed distributors. Kentucky has approximately 225 feed mills and ingredients suppliers within the Commonwealth. In 2001, all of the known facilities in the Commonwealth were inspected for compliance. Since that time, the Division and/or FDA have inspected over 40% of the firms on an annual basis. The targeted firms include all firms that were identified as handling prohibited proteins at the last inspection and approximately 33% of the firms that did not handle prohibited proteins for surveillance inspection. Most firms have been inspected at least three times during the past seven years. Other firm types that have been inspected include pet food salvagers, feed and ingredient transporters, and ruminant feeders. The FDA through an agreement is the lead agency for inspection of animal rendering operations and protein blenders in the Commonwealth.

Through cooperative efforts of the DRS Feed Program and the FDA Cincinnati District office the assignments are reviewed at least quarterly

through periodic meetings and other communication tools. The feed program staff of DRS and FDA has an excellent working relationship. These types of cooperative efforts extend past the FDA and DRS link. This office and FDA have an open and active line of communication and dialogue with other federal and state agencies that share common interests in the protection of the food supply.

The future goals for enhancement of BSE feed inspection program include incorporating the Federal BSE regulation in the Kentucky Commercial Feed Regulations. Continuation of a proactive inspection based programs for non-traditional sectors of the feed and other allied industries (i.e., pet food salvagers, transportation sector, etc). Provide training on up-to-date BSE information to our inspection staff, coupled with educational efforts for feed manufacturers and dealers, extension personnel and consumers on the new or existing regulations.

In closing, the Division of Regulatory Services has been very active with the educational and inspection based programs in the Commonwealth for over seven years. The inspection and educational programs implemented by the Division for surveillance and enforcement of the ruminant-to-ruminant feeding ban is one of the highest priorities of the Division.

*S. Traylor
Feed Regulatory Program*

Kentucky Feed and Grain Meeting Announcements:

March 24-26, 2005 Kentucky Feed and Grain Annual Meeting, Louisville, KY

July 22-24, 2005 Kentucky Feed and Grain Summer Meeting
and Pesticide Applicator Training - KY Dam Village State Park

Poundstone Award

continued from page 2

concept for feed manufacturing. Mr. Poundstone was a distinguished leader in the Association of American Feed Control Officials, the Association of American Plant Food Control Officials and the Association of Southern Feed, Fertilizer and Pesticide Control Officials. The Regulatory Services building is named in his honor.

Previous Poundstone Award Winners:

Sue Stone - 2000

Ellen Marshall - 2001

Ed Hill - 2002

Beth Nichol - 2003

**Thank you to the organizations
that provided support that made
the 2004 Poundstone Award
possible:**

AgriBusiness Association of Kentucky

Dairy Products Association of Kentucky

Kentucky Feed and Grain Association

Kentucky Seed Improvement Association

Lab Update

continued from page 10

Se Investigation

Selenium (Se) is a difficult element to measure, especially at low levels, in feed mineral premix materials. In fact, few regulatory labs have the capability to provide Se analysis. Our efforts center on digesting samples in a microwave then measuring Se by emission spectroscopy. Numerous premixes have been selected to analyze and we are working with another regulatory lab to validate results.

Reference Information Website

Melton Bryant attended the mid-year Association of American Feed Control Officials (AAFCO) meeting in Memphis, Tennessee. William R. Krueger, Director of the Minnesota Department of Agriculture Laboratory Services Division reviewed a new agriculture laboratory web site under development. The goal of the National Food and Agriculture Laboratory Committee (NFALC) is to create a "committee that helps develop a community with a collective voice for the nation's State Agriculture Control Laboratories engaged in the regulation and control of agriculture and food production." You can learn more about this at the new web site: www.nfalc.org. This will be a very valuable web site for the control labs around the nation when all the resources are identified.

*James Bartos,
Feed, Fertilizer Laboratory*

UK UNIVERSITY OF KENTUCKY
College of Agriculture

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 cfinnese@uky.edu or by telephone at (859) 257-2785. You can also access Regulatory Services News on the Internet at <http://www.rs.uky.edu>.

Editor: Cindy Finneseth.

The College of Agriculture is an Equal Opportunity Organization

Division of Regulatory Services
103 Regulatory Services Building
Lexington, KY 40546-0275
859-257-2785
www.ca.uky.edu

Division of Regulatory Services
College of Agriculture
University of Kentucky
103 Regulatory Services Building
Lexington, KY 40546-0275

Non-Profit
Organization
U.S Postage Paid
Lexington, KY
Permit No. 51

RETURN SERVICE REQUESTED