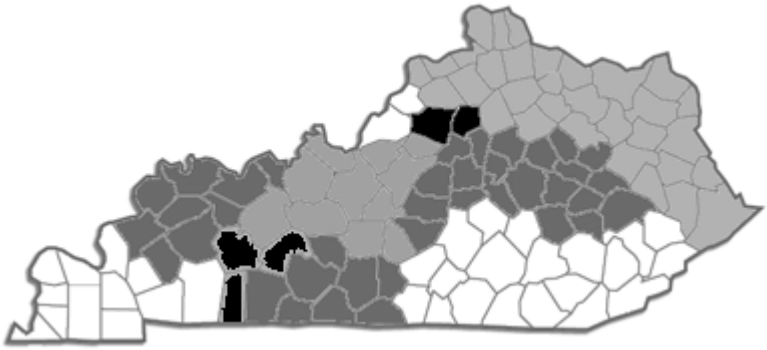
Regulatory Services News

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

Third Quarter 2004

Inspection Staff Territories

The inspection staff is strategically located across the state to carryout responsibilities to promote industry compliance with consumer protection laws administered by the Division. Their primary duty is to visit manufacturing plants, processing facilities, storage warehouses and retail sites to collect official samples of feed, pet food, fertilizer, milk and seed. While visiting these firms inspectors also review records and offer assistance in improving operations to achieve compliance with the laws.



Mark Barrow inspects firms in Todd, Muhlenburg and Butler Counties. Tracy Burden conducts feed inspections in Jefferson and Shelby Counties. Dewey Coffey covers the Quicksand, Lake Cumberland and Wilderness Trail areas. John Flood is assigned to the Purchase and Pennyrile areas. Brad Johnston inspects locations in the Mammoth Cave and Barren River areas. Noel Johnston covers the Lincoln Trail area. David Mason visits firms in the Licking River and Northeast areas of the state. Steve McMurry conducts inspections in Franklin and Anderson Counties. Terry Prather covers the Bluegrass area and part of the Quicksand region. David Troutman inspects locations in the Green River area.

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Milk Inspection

Mark Barrow and Bob Hickerson inspect milk handlers, sampler-weighers, transfer stations and licensed milk testers. Bob focuses on activity in the eastern half of the state and Mark focuses on the western part of the state.

Specialty Product Inspection

Mark Barrow and Jesse Whitehouse inspect specialty products in the areas of feed, fertilizer and seed. Jesse focuses on locations east of I-65 and Mark focuses on firms in the western part of the state.

S. McMurry, Inspection Program

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USDA and FDA Strengthen Safeguards Against Bovine Spongiform Encephalopathy

On July 9, 2004, Human Health and Services Secretary Tommy G. Thompson and Agriculture Secretary Ann M. Veneman announced actions being taken to further strengthen existing safeguards that protect consumers against the agent that causes bovine spongiform encephalopathy (BSE, also known as "mad cow disease"). To allow interested parties and stakeholders the opportunity to comment on the additional regulatory and policy measures under consideration, USDA's APHIS and FSIS, along with the FDA, developed an advance notice of proposed rulemaking (ANPRM) that includes several additional actions the federal government is considering regarding BSE. The advance notice of proposed rulemaking will allow the public the opportunity to provide their input.

The ANPRM also requests comment on the following measures related to animal feed, which is regulated by FDA:

- removing specified risk materials (SRM's) from all animal feed, including pet food, to control the risks of cross contamination throughout feed manufacture and distribution and on the farm due to misfeeding;
- requiring dedicated equipment or facilities for handling and storing feed and ingredients during manufacturing and transportation, to prevent cross contamination;
- prohibiting the use of all mammalian and poultry protein in ruminant feed, to prevent cross contamination; and prohibiting materials from non-ambulatory disabled cattle and dead stock from use in all animal feed.

FDA has reached a preliminary conclusion that it should propose to remove SRM's from all animal feed and is currently working on a proposal to accomplish this goal. Comments on these issues raised in the ANPRM are due to FDA next month.

S. Traylor, Feed Regulatory Program

Head Scab on Wheat Seed

Fusarium head blight (FHB), also known as head scab, is caused by different species of *Fusarium*. In Kentucky and neighboring states, the disease is caused primarily by *Fusarium graminearum*. The disease is present every year, but the effect on seed crops varies, primarily due to inconsistent environmental conditions and, thus, disease pressure from year to year. The fungi that cause FHB infect seed of wheat, as well as barley, rye and triticale. Infection occurs during flowering; bleached heads, or portions of heads, may be noticed in fields as the seed crop matured. Infected seeds are often recognized by a shriveled, chalky appearance and seed coats may have a pink discoloration. Infections can cause lower grain yields and reduced test weights. Poor quality seed lots may require significant cleanout and seed treatment with a fungicide to obtain an acceptable germination percentage. An additional problem with infected grain is the production of mycotoxins, especially deoxynivalenol or DON, which can restrict use of diseased grain as a feed source.

FHB was at epidemic levels in many wheat fields during 2004. As a result, more than 75% of the wheat samples submitted to our lab have been infected with Fusarium species to varying degrees. Seed counts per pound have ranged between 12,000 to 19,000, with an average of nearly 13,900 seed/lb. Average germination of untreated seed lots submitted this summer is 65%, with lots ranging from 34% to 97%.

Fungicide seed treatments can have a substantial effect on limiting the impact of seed-borne Fusarium on seed germination. Thus, as a courtesy this season, we have been treating lots and reporting both untreated and treated test results to producers. In some lots, seed treatment increased germination dramatically (10-20%). In other lots, however, a marginal effect (1-5%) or no effect was seen. On average, germination after seed treatment has been 84%. In the lab we use a Raxil-Thiram product, but there are other fungicides labeled for use on wheat. Prior to applying any seed treatment consult the product label and follow all label directions. Note, dead seed or healthy seed not infected by Fusarium will not respond to fungicide seed treatments. Either or both of these situations may account for the differential response we have seen when treating wheat seed lots this summer.

A less expensive alternative to seed treatment can be to re-condition the seed lot to remove light, “scabby” seed. Growers may be tempted to use infected seed and adjust planting rates to achieve a better stand. This is a very risky thing to do unless you are certain that untreated seed germination is near the 84% average. Increasing seeding rates of low germination seed is unlikely to result in acceptable wheat stands. When possible, seed lots with germination below 80% should be avoided.

To gain the most information about a seed lot, have it treated and test for both treated and non-treated germination at the same time. This allows comparison of results to make management decisions based on effect and cost of treatment. If requesting this paired test, please submit enough seed for two tests (2-3 lbs.) and clearly mark the sample for treated and untreated germination tests. Cost of the two tests is $14.00. Samples can be mailed to the Seed Laboratory, Division of Regulatory Services, 103 Regulatory Services Bldg., Lexington, KY 40546-0275 or can be hand delivered. We are located on campus across from Commonwealth Stadium on the corner of University and Alumni Drives. For more information about submitting seed and available tests, please visit our website at www.rs.uky.edu or call (859) 257-2785.

For additional information about FHB and production control methods, refer to the Extension publication *Head Scab of Small Grains in*

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SOIL TESTING FOR ALFALFA

After cuttings of alfalfa are made this summer, consideration should be given to getting a jump start on assessing soil fertility in the alfalfa fields. Alfalfa is a heavy consumer of nutrients. A four and a half ton per acre of alfalfa hay removes 243 pounds of N, 54 pounds of phosphate, and 225 pounds of potash. Since alfalfa is a heavy nutrient consumer and it is a high-valued crop, annual soil testing is recommended in these fields. With the wet weather we have experienced, the soils should not be too dry and hard to sample after the summer cuttings. Getting your soil tested now will allow plenty of time in planning for fertilizer and lime application in the fall or early spring.

Your local County Extension Office can provide you with information on how best to conduct soil sampling. You take the sample to your County Extension Office and they send the sample to the soil test laboratory in Lexington or Princeton. You will get a report from the County Extension Office after testing is completed. The report will advise you how much fertilizer and lime is required to maintain a good crop.

The soil test report will not advise nitrogen application because alfalfa makes its own nitrogen from the air with the aid of bacteria growing on the roots. However, alfalfa does not manufacture its own phosphate and potash. Therefore, these nutrients have to be added in fertilizer. If you have a soil test phosphorus value below 60 lbs/acre or a soil test potassium value below 450 lbs/acre, these nutrients need to be applied to the field. Boron is another nutrient that should be applied at a rate of 2 lbs/acre every other year. The soil test report will also advise whether or not lime needs to be applied. Alfalfa does not grow well with low soil pH. The target soil pH for optimum alfalfa growth is 6.8. If the soil pH is 6.6 or less, you will be advised how much lime should be applied.

Your local County Extension Agent can help you with any questions you may have on testing the soil in your alfalfa fields to maintain high yields.

F. Sikora, Soil Testing Program

Summer Inspector's Conference

The summer inspector's conference was held in July at Dale Hollow State Park. This time allows the program coordinators and inspection staff to review the past year and set priorities and goals for the coming year. Presentations were made to the group from Carol Heppe, FDA District Director, Cincinnati District and Diane McDaniel, Special Assistant to the District Director about our involvement with FDA in conducting BSE inspections.

S. McMurry, Inspection Program

Front (l-r): Steve McMurry, Brad Johnston, Noel Johnston, Tracy Burden, Dewey Coffey, Jesse Whitehouse.
Back (l-r): Dave Troutman, Mark Barrow, Bob Hickerson, Terry Prather, John Flood, Dave Mason

Head Scab *(continued from page 3)*

Kentucky, PPA 38, available online at http://www.ca.uky.edu/agc/pubs/ppa/ppa38/ppa38.pdf. For an overview of the most recent FHB management strategy, consult: http://www.ca.uky.edu/ukrec/newsltrs/News03-5.pdf . For a discussion on the impact of crop rotation and tillage effects on FHB, check out: http://www.ca.uky.edu/agcollege/plantpathology/PPAExten/PPFShtml/ppfagsg9.htm

C. Finneseth, Seed Testing Program

Seed Test Dates

Each year our inspection staff performs hundreds of inspections across the state. The purpose of these inspections is to assure that seed stocks offered for sale are labeled to comply with the provisions of the Kentucky Seed Law. The most common violation encountered by our inspectors each year is seed offered for sale with an expired test date.

Seed offered for sale is required to have a test date not more than 9 months old, exclusive of the month the seed was tested. The Kentucky seed Law specifies that it is the dealers responsibility to maintain the test date. The dealer should check incoming shipments for a valid test date to assure that the seed is in date at receipt.

Expired test date violations are most commonly noted in the lawn-turf market. Expired test dates are not encountered at traditional agricultural dealers with nearly the frequency as in the specialty area. Lawn-turf products are most commonly offered in large discount type mass market chain stores, hardware chain stores, and other similar retailers. Inspection of these facilities began on a routine basis in 1997. Progress has been made in this area and that progress is continuing, but the issue is still a problem.

This market is serviced by a very small number of seedsmen that have nationwide distribution into these markets. These seedsmen maintain a germination test for most of their stock in distribution and commonly furnish updated labeling for their products that have been held over past the test date. Some of these seedsmen employee representatives to assist the chain store retailers in maintaining the test dates and stocking. Products can be relabeled with a test date sticker if the sticker also has the lot number on the sticker.

Test dates are very simple to check. The following chart can be used to check your test dates to make sure your product is in date.

Month tested	**Germ test expires 1st day of**
January (1)	November (11)
February (2)	December (12)
March (3)	January (1)
April (4)	February (2)
May (5)	March (3)
June (6)	April (4)
July (7)	May (5)
August (8)	June (6)
September (9)	July (7)
October (10)	August (8)
November (11)	September (9)
December (12)	October (10)

Please check your seed stock for the test date. The test date is your responsibility to maintain if you are in the retail market. Expired test date products should not be offered for sale.

D. Buckingham, Seed Regulatory Program

Milk Hauler Activities Impact Milk Quality

The importance of milk quality cannot be overemphasized. Milk of high quality is necessary for the production of quality dairy products for our consumers. Processors desire a high quality milk supply to improve shelf life and dairy product flavor. Producers strive for high quality milk as a matter of pride and to earn quality premiums. In fact, the production of the highest quality milk possible should be a top priority for every dairy industry professional, including milk haulers.

The milk hauler's job is important! Milk haulers observe many different types of dairy producer facilities and over time, become experts at evaluating milk quality. Additionally, milk haulers see dairy producers more often than any other dairy professional. Because of this, a good, open line of communication between the hauler and producer is imperative. Even small bits of information provided to producers by haulers can go a long way towards eliminating potential milk quality problems.

A discussion of key items and concerns for milk haulers and how haulers can impact milk quality follows.

Sanitation, equipment and supplies.

At the beginning of each day, the milk hauler should evaluate each of these items to ensure he can properly perform his activities. Cleanliness establishes the image of sanitation and professionalism. A clean, neat, well-groomed appearance coupled with good hygiene help to create a positive image for the dairy industry and also heightens the confidence others have in the ability of haulers to do their job.

Likewise the maintenance of a clean, sanitary truck can re-enforce a positive image for the dairy industry. Even though the milk receiving station may use CIP (clean-in-place) equipment and may assist haulers in cleaning their trucks, maintenance of a clean, sanitary truck is the responsibility of the hauler. Each truck should be properly washed, sanitized and labeled with an appropriate wash tag prior to being used for farm milk pick-up.

Milk haulers use a wide variety of equipment and supplies to perform their job. Equipment and supplies should be examined each day prior to picking up milk. This is especially important if more than one hauler operates a truck. Arriving at the first farm for milk pick-up only to discover that necessary equipment or supplies are missing will result in delays and potential problems. Necessary equipment and supplies for milk haulers include:

- An ample supply of approved sample containers,
- A properly insulated sample case with ice and water,
- A floater or rack to be used for securing sample containers,
- A waterproof pen for recording information on sample containers,
- An approved sample dipper stored in an approved sanitizer fluid (with sanitizer test strips),
- A spray bottle containing sanitizer for sanitizing the milk tank outlet valve,
- A good supply of single service towels,
- A calibrated thermometer,
- A watch to properly time farm tank agitation, and
- An adequate supply of bulk milk tickets and an ink pen for transcribing records.

A conscientious milk hauler will thoroughly evaluate his appearance as well as his truck, equipment and supplies at the beginning of each day.

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The 13th Element[1]
"The Sordid Tale of Murder, Fire, and Phosphorus"

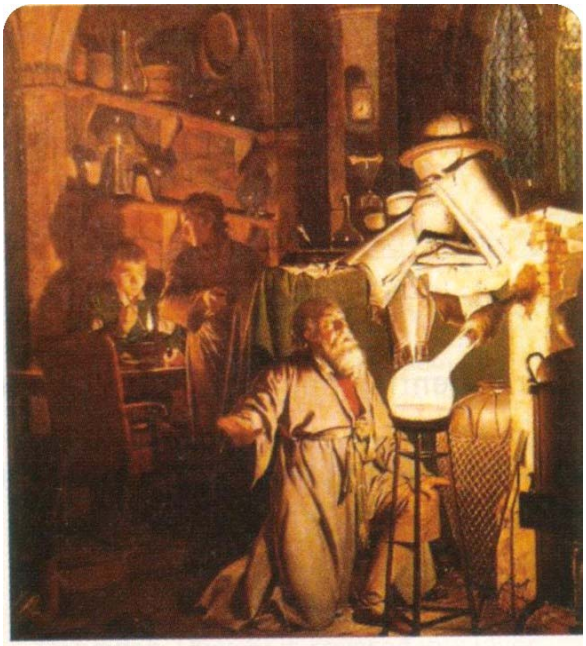
The Beginning

In Hamburg Germany in about 1669 an alchemist was searching for the philosopher's stone. This mythical compound would turn lead or any other base elements into "Gold". The discoverer of this "magical" compound would become immediately wealthy. He was working day and night experimenting with the "golden stream", urine, by first evaporating it into a sticky, foul smelling mess and then heating it to a very high temperature. Suddenly, from the mess that had been glowing red hot, a liquid condensed at the end of his test tube that glowed an errie pale-green. He collected the liquid in a flask and stoppered it to prevent its loss. It solidified but to his fascination it continued to glow. It was the first isolation of "white phosphorus". The alchemist was Henning Brandt and he could hardly have known what he had accidentally discovered. He kept it a secret for about six years hoping to become rich turning lead and other substances into gold. When this did not happen, he revealed his discovery to some friends and the "genie was out of the box". While the compound which became know as "phosphorus" did not turn lead into gold, it would later enrich many but also would cause misery and death to many.

It was named from two Greek words: *phos*, which means "light" and *phore* which means "to bear". At one time any material that glowed in the dark was called phosphorus, it was later restricted to the element first seen by Henning Brandt.

Early Use

Brandt who had spent his own money and most of his wife's in search of the philosopher's stone was eager to earn some money from his discovery. He entered into a contract with a Daniel Kraft who went around Europe demonstrating the "luminescence", the "magic", of this new compound. His audiences included most of the crowned heads in Europe including the court of St. James in London. Brandt agree to furnish the



MAGICAL Joseph Wright's "The Alchemist in Search of the Philosopher's Stone Discovers Phosphorus."

phosphorus and Kraft would do the demonstrations. Brandt was the silent partner in this "magical" business. However, after a short while Kraft began to take credit for the material and did not mention Brandt at all which cause a rift in the partnership. Because of this scheme by Kraft, Brandt's name was missing from the early accounts of use of phosphorus. Brandt was rescued from obscurity by a man named Gottfried Wilhelm Leibnitz, a historian, who in 1677 had attended a Kraft phosphorus demonstration and, when he asked Kraft where he had secured the material, Kraft would not say. By chance Leibnitz made a trip to Hamburg and heard that a local was dabbling in making phosphorus. Through Leibnitz, Brandt was hired by the Duke of Hanover to make phosphorus and subsequently the historian Leibnitz kept good records of the Brandt's activities. Brandt's name was missing from the early records of phosphorus making and only through Leibnitz's detailed notes do we know of Brandt.

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Phosphorus *(continued from page 6)*

Alchemy to Chemistry

No lesser a person than Robert Boyle also dabbled in and initially was an alchemist and was in on the first production of phosphorus. He is credited with being the founding father of chemistry and his study of gases led to "Boyle's Law" still studied in classrooms today. He also is cited as the person who broke away from alchemy and established "chemistry". Boyle had witnessed one of Kraft's phosphorus demonstrations which sparked his interest in the chemistry of this newly discovered element.

It was the thirteenth element to be isolated in its pure form. The others in the order they were discovered are; C, S, Cu, Ag, Au, Fe, Sn Sb, Hg, Pb, As, and Bi. Boyle's work with phosphorus was published after his death in 1694. It included how to manufacture phosphorus as well as his "ground-breaking" research into its properties, the very first experiments in "chemistry".

Some Early Uses

Soon after its discovery phosphorus was used as a medicine to cure skin complaints, colic, asthmatic fever, tetanus, apoplexy, gout, and impotence. The fact that it was extracted from urine and glowed on its own was seen as evidence that phosphorus was the "flame of life". Elemental phosphorus is completely useless as a medicine and in fact actually very harmful. Never the less, it was prescribed and used up into the 20th century.

In the early 1830's the first friction matches were invented. They were adopted immediately and made it easy to start fires intentionally and unintentionally. Later "phosphorus" matches or lucifers were outlawed because their manufacture causes harm to the factory workers. The phosphorus caused deterioration of the workers' bones and teeth.

Phosphorus Comes Home

During World War II, the allies decided to strike a blow to Nazi Germany by bombing some of its major cities. Hamburg, Germany's second largest city was chosen. It was called operation Gomorrah. For eight days RAF bombers rained incendiary phosphorus bombs on Hamburg. It burned and destroyed thousands of buildings, houses, factories; and, killed thousands of people. So the city in which phosphorus was discovered was practically destroyed by phosphorus.

The Ultimate Evil-Power for Good

Nerve gas is a type of phosphorus compound. The Germans had developed it and stockpiled it but Hitler declined to use it. After World War II research into nerve gasses was continued. Several were patented in 1960, the most deadly being VX. All the nerve gasses have a phosphorus-sulfur bond. There are many documented cases of murders where a person was poisoned with phosphorus.

Out of this research came the organo-phosphate (OP) pesticides including malathion, diazinon and glyphosate. These and similar OP's increase crop production and result in low food costs.

The Supreme Ruler

DNA is made of 5 elements: C, H, O, N and P. Phosphorus is also the central element in adenosine triphosphate (ATP). Of these elements phosphorus has the potential to be the most limiting. "Life can multiply until all the phosphorus has gone and then there is an exorable halt which nothing can prevent"[2]. With the discovery that phosphorus was an essential plant nutrient extensive research has been done on

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Phosphorus *(continued from page 8)*

phosphorus reactions in soils, plant uptake, and plant metabolism. This also spurred a search for phosphate ore to make phosphate fertilizer. The development of this industry is another topic to be covered later.

Summary

Phosphorus was discovered accidentally; however, it has been intentionally used for both good and evil. Let's hope its future is good.

[1] A review of the book by John Emsley, John Wiley & sons, Inc. New York, 2000.
[2] Asimov, Isaac, 1989, The relativity of Wrong, quoted by Emsley, p 235

D. Terry, Fertilizer Regulatory Program

AOSA Certification in Seed Laboratory

Cindy Finneseth completed certification requirements for the Certified Seed Analyst (CSA) in purity and germination. She was awarded the honor by the Association of Official Seed Analysts after completing a written exam and practical evaluation to demonstrate proficiency at the Arkansas State Plant Board in Little Rock, Arkansas.

Each eligible analyst in the UK Seed Lab is certified as a CSA. The program is an excellent tool to standardize analyses across laboratories as well as a means to monitor analyst proficiency. The Seed Lab now has five AOSA certified Germination Analysts and four certified Purity Analysts.

Milk Haulers *(continued from page 5)*

Maintenance of a good line of communication with dairy producers.

One of the milk hauler's most important responsibilities is determining if milk is acceptable for pick-up. A careful examination of the milk's appearance, odor and temperature should be performed at each farm prior to hooking up the truck's transport hose. Slight changes occurring with milk in the bulk tank may be normal and may be attributed to seasonal conditions or the herd's diet. But even the slightest change in the milk's appearance or odor can have ramifications in regards to milk quality and should always be discussed with the producer.

Properly operating milkhouse equipment is also essential for the production and maintenance of high quality milk. The hauler should notify the producer of any concern regarding milkhouse equipment and supplies. Producers should then feel obligated to address these concerns in an effort to maintain milk quality and to assist the hauler in properly performing his job.

Each producer's milkhouse is expected to provide a few basic necessities. Basic milkhouse necessities that can be overlooked include:

- Adequate lighting visual examination of the milk,
- A hand-washing sink with soap for washing hands prior to sampling or measuring milk,
- Single service towels for drying hands and for use when obtaining milk measurements, and
- A water hose of adequate length for rinsing the tank outlet valve, the bulk tank and the milkhouse floor.

Malfunctioning farm bulk milk tank equipment should be readily detected as the milk hauler performs his routine activities. The items listed below are some of the most common symptoms or signs of equipment problems observed with farm bulk milk tanks:

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Milk Haulers *(continued from page 9)*

- Improper tank temperature. Acceptable milk is stored in a temperature range of 32° to 45° F. The ideal storage temperature is around 36° F. A properly operating bulk tank should be able to cool milk during the milking process in a reasonably short period. Additionally, after the milk is cooled, the bulk milk temperature should remain relatively stable. Wildly fluctuating temperatures can be an indication of an improperly working cooling unit or an agitation problem. Floating ice particles or ice in the bottom of the bulk tank are also an indication of an improperly functioning cooling unit. Milk haulers should always remember to verify the accuracy of the bulk tank thermometer with a calibrated thermometer at least monthly. Record this verification on the producer's barn chart.

- Excessive foaming. Foam can be caused by the drop pipe leading into the bulk tank being too short, by an air leak in the milking system or by the tank agitator running too fast. Tanks with continuous excessive foam problems should be promptly addressed. Foamy tanks are difficult to accurately sample and measure and the producer's milk quality tests can be detrimentally impacted by excessive foam.

- Tank agitator speed. Some problems associated with improperly working tank agitators have already been mentioned. All tank agitators should be working at the proper speed. Malfunctioning agitators will not allow milk haulers to obtain a representative milk sample and will not allow the bulk tank's cooling system to properly operate.

- Tank outlet valve. The tank outlet valve can be a potential source for detrimental bacteria. It should be carefully examined prior to hooking up the truck hose. Leaky valves should be thoroughly washed and sanitized prior to hooking up the hose and unloading the milk.

The milk hauler should carefully examine the empty tank for any unusual conditions after the milk is unloaded from the bulk farm tank. The hauler should always make a note of any unusual conditions observed on the bulk milk ticket and promptly notify the producer of these conditions.

Summary

Key attributes of an exceptional milk hauler include being a professional who takes his/her responsibilities seriously by:

- Maintaining a clean and neat appearance,
- Operating a clean and sanitary truck,
- Utilizing appropriate equipment and supplies at all times,
- Following proper procedures, and
- Maintaining a good open line of communication with dairy producers.

C. Thompson, Milk Regulatory Program

Feed and Fertilizer Chemical Laboratory Updates

Paul Wilson, Lancao Zhang, Ann Harper, Debie Sipe, Bob Kiser, James Bartos and Mel Bryant attended the 62nd Annual ASFFPCO (Association of Southern Feed, Fertilizer and Pesticide Control Officials) meetings in Nashville, Tennessee. These meetings are an excellent opportunity for individuals from various state regulatory as well as commercial testing laboratories to interact. Several individuals at UK Regulatory Services serve on committees and are active in ASFFPCO. Workgroups dedicated to current topics and the opportunity to attend several presentations are some of the benefits of these meetings. For example, one session was dedicated to a better understanding of BSE (Bovine Spongiform Encephalopathy), with representatives from FDA, USDA and the American Feed Industry Association. Another presentation focused on the DOT Fertilizer Transportation Rule and Homeland Security. Other sessions were dedicated to current topics of interest and research. For example, James Bartos gave two oral presentations. One talk focused on *Data Acquisition and Spreadsheet Development for Various Gravimetric Determinations* and another talk on *Non-nutritive Metals Digestion and Determination in Commercial Fertilizer Materials*. UK Regulatory Services has played a proactive role in determining whether any commercial fertilizer products contain unsafe levels of non-nutritive metals. Approximately 100 people were in attendance at these meetings. After the meetings, Mel Bryant and James Bartos toured the Tennessee Department of Agriculture's laboratory testing facilities.

Front row (l-r): Debie Sipe, Melton Bryant, Katie Coffey, Gwen Terry, Dave Terry.
Middle row (l-r): Eli Miller, Pam Coffey, Linda Wilson, Lancao Zhang, Steve McMurry, Noel Johnston, Carolyn Johnston
Back ro (l-r): James Bartos, Bob Kiser, Paul Wilson, Anne Harper, Steve Traylor, Mark Barrow, Dewey Coffey, John Flood

The lab added a new instrument to replace an old unit that is no longer serviceable. The LECO Truspec™ Nitrogen Analyzer will be used for determining nitrogen in fertilizers and protein in various types of feed materials. The system is also used for slow release nitrogen analysis of fertilizer products. This computer controlled unit provides several new features, including self-diagnostics to help the lab staff perform maintenance and reduce repair costs.

Debie Sipe and Bob Kiser are conducting a collaborative study with other state and commercial labs comparing the traditional method to a modified new method for fiber analysis, using the Ankom equipment. Nationally, many Ankom fiber units are is use, and it is certainly an honor to be recognized for expertise with their equipment and to be asked to participate.

James Bartos, Regulatory Specialist
Bob Kiser, Milk and Feed Supervisor

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