



REGULATORY SERVICES NEWS

UNIVERSITY OF KENTUCKY – COLLEGE OF AGRICULTURE

FOURTH QUARTER 2001

FEED ♦ FERTILIZER ♦ MILK ♦ SEED ♦ SEED TESTING ♦ SOIL TESTING

Cindy Finneseth – New Seed Lab Coordinator

Cindy Finneseth assumed the position of Seed Testing Specialist with Regulatory Services effective September 1. She received a B.S. degree in Agriculture majoring in horticulture and a B.S. in Communications & Information Studies majoring in journalism.



Welcome Cindy!

She also earned a M.S. degree in Plant and Soil Science from the University of Kentucky. Her graduate research involved development of plant propagation systems including tissue cultures, cutting and seed propagation for the North American pawpaw. This research resulted in the publication of several scientific papers and presentations. Cindy has experience as County Extension Agent for Horticulture in Franklin County and Staff Horticulturist in the Department of Horticulture at UK. She was most recently employed as Program

Coordinator in the Department of Biology at UK.

Cindy will be responsible for overall management of our seed testing laboratory that is recognized for its expertise in the performance of purity, germination and other testing of grain, tobacco, vegetable and grass seed. The laboratory provides service testing for the Kentucky seed industry and testing of official regulatory samples collected under authority of the Kentucky Seed Law. Cindy joins an excellent and experienced staff of three AOSA certified purity analysts, two germination analysts and a staff associate. We look forward to Cindy working with the seed industry and regulatory program to maintain and enhance the seed testing program.

Eli Miller – Director

DIRECTOR

Eli Miller
emiller@ca.uky.edu

FERTILIZER PROGRAM

David Terry - Coordinator
dterry@ca.uky.edu

MILK PROGRAM

Chris Thompson - Coordinator
cthompso@ca.uky.edu

SEED PROGRAM

Dave Buckingham - Coordinator
dbucking@ca.uky.edu

SOIL PROGRAM

Frank Sikora - Coordinator
fsikora@ca.uky.edu

FEED PROGRAM

Steve Traylor - Coordinator
straylor@ca.uky.edu

LABORATORY

Bob Beine - Coordinator
rbeine@ca.uky.edu

SEED LABORATORY

Cindy Finneseth - Coordinator
cfinnise@ca.uky.edu

INSPECTION PROGRAM

Fred Herald – Coordinator
fherald@ca.uky.edu



What's Inside.....

Retirements.....	2
Soil pH/Seed Report ...	3
Seed/Fertilizer.....	4
Fertilizer & Feed.....	5
Feed	6
Seed Lab & Milk.....	7
Milk	8

REGULATORY SERVICES LOSES TWO GREAT SCIENTISTS**Dr. Alan Thio Retires**

Dr. Alan Thio has retired from his position as a supervisor in the feed and fertilizer laboratory after 31 years of service. He graduated from the University of Indonesia, Bandung, Indonesia with B.S. and M.S. degrees having a major in organic chemistry and minors in pharmacy, serology and clinical chemistry. He obtained his Ph.D from the University of Kentucky in 1957 with a major in organic chemistry. He taught chemistry for six years at the University of Indonesia before returning to a research position in the UK College of Pharmacy.



In 1970, Dr. Thio became supervisor of the pesticide formulation laboratory with the Division of Regulatory Services. When the Department of Agriculture was designated responsibility for administering the Pesticide Law, Dr. Thio established a laboratory for monitoring pesticide residues in feed, fertilizer and soil. He developed an environmentally friendly analytical procedure for triazines in soil using a hot water extraction method. This test is important in assisting farmers in determining if they can plant tobacco following a corn crop where atrazine was used for weed control. Dr. Thio also developed an extremely accurate HPLC method to measure the lysine content of feed. This enabled the Division to allow the guaranteeing of lysine on the feed tag since the feed law requires that guarantees be verifiable by an acceptable laboratory method. His expertise in organic chemistry also extended into the testing of feeds for fly control agents, wormers and other drugs and mycotoxins.

He has authored 17 scientific publications and has been a member of American Chemical Society and Alpha Chi Sigma Chemistry Fraternity. Dr. Thio and his wife, Tatty, will move to Houston, Texas to live near their two daughters. The Division has been blessed with his exceptional talents and service to Kentucky.

Eli Miller - Director

Dr. Bob Beine Retires

Bob Beine, Chemical Laboratory Coordinator, is retiring from U. K. after 28 years of service. Bob will not be quitting work as he has accepted a position as Director of the Louisiana State University Agricultural Laboratory in Baton Rouge. Bob started with Regulatory Services in the feed and fertilizer laboratory running protein and nitrogen analysis. In 1976 he was promoted to supervisor of the feed lab. In 1984 he assumed the position of Coordinator of the Regulatory Services Laboratory.

Bob's goal was for the Regulatory Services laboratory to be state of the art in feed, fertilizer and soil analysis. He applied his math and chemistry skills and interest in electronics and computers to make Kentucky the first state feed and fertilizer lab to interface lab balances and in-lab computers. He designed and hand wired the lab's first computers long before PC's existed. Bob remains an active member in

several national associations. He was elected President of the Central Section of AOAC International and the Association of Southern



Feed, Fertilizer and Pesticide Control Officials. Bob was Chairman of the AAFCO Collaborative Check Sample Program and Chairman of the AOAC Subcommittee for Lab Automation. He chaired the Local Arrangements Committee for the 2001 annual meeting of the Southern Association in Louisville.

Bob was born in Atlanta, Georgia. He graduated from Albany High School in Albany, Ga. He received his B. A. degree from Asbury College in Wilmore, KY and his Ph.D. from the University of Kentucky with a major in Organic Chemistry.

Bob and his wife, Jo Jo, will be moving to Baton Rouge where he will start his second career. We congratulate him on his new position and express our appreciation for his exceptional service.

Eli Miller - Director

Get your soil pH up

One of the most important factors for maximizing crop yields is making sure the pH of the soil is at the right level. Some factors, like soil water, are not easily controlled. However, maintaining soil pH at the proper level can be conducted easily at a rather inexpensive cost.

Well, what is soil pH? The soil pH is a measure of the soil's acidity or alkalinity. A neutral pH value is 7. Values below 7 indicate an acid soil. Values above 7 indicate an alkaline soil. Most soils in Kentucky are acidic with soil pH below 7. Most major crops in the state do not do well in acidic soils because aluminum becomes toxic to plants under acidic conditions. Soil pH should be raised to a value between 6 and 7. The target pH to shoot for depends on the crop being grown. For tobacco, the soil pH should be 6.6. For alfalfa, the soil pH should be 6.8. For corn, soybeans, and pastures without alfalfa, the soil pH should be 6.4.



Getting your soil tested at a soil test laboratory will help you determine whether or not your soil pH is too low. If the pH is too low, you can add lime at the recommended rates to get the pH up. At the University of Kentucky soil-testing laboratory, a buffer pH is measured in the soil in addition to soil pH. The buffer pH is a measure of how much residual acidity is in the soil and is used to estimate how much lime is needed to get to the target pH.

Lime does not work in soil as quickly as fertilizer. If you have fields that have low pH, now is the time to add lime to fields where crops will be planted next spring.

Limestone is not very soluble in soil and needs time to do its job of raising soil pH. You should not add lime right before planting in the spring and expect the lime to do its job of getting the soil to the target pH for that year's crop. Also, do not expect a one-time application of lime to raise soil pH and keep it there forever. Many natural processes occur in soil that causes soil pH to gradually decline. High application of nitrogen fertilizer also causes a decline in pH. A good rule of thumb is to test your soil every 3 years to see if your soil pH is at the level it needs to be.

Check with your local County Extension Office to have your soil tested to get your soil pH up.

Frank Sikora – Soil Testing Coordinator

Seed Program

Stop Sale Release Procedure

Occasionally, the procedure for the proper release of stop sale orders issued on seed lots that have been found to be in violation of the Kentucky Seed Law needs to be addressed. This reminds everyone of the importance of obtaining a proper release from a stop sale order. A review of these procedures as we finish our fall season may be helpful.

Stop sale orders come from two sources. Our field inspectors issue orders in the field when their inspection of seed stock at wholesale or retail locations indicates the seed lots are in violation of the Kentucky Seed Law. As a rule, these violations involve seed lots that are out of test date, mislabeled, or are being distributed by companies that do not have labeling permits. The remaining stop sale orders are issued from our office after our laboratory has determined the lot is not within tolerance of the guarantees stated on the seed analysis tag. ☐

Stop sale orders issued by our inspectors are issued to the location where the violation has been noted and a copy of the order is sent to our office. Stop sale orders from our office are issued to the location where the

(SEED continued on page 4)

(SEED- continued from page 3)

sample was obtained. A copy of the order is also sent to the inspector in that area and the seedsman who processed the seed lot.

A prevalent cause for the issuing of field stop sale orders needs to be addressed in more detail. Seed found to be out of test date will have a stop sale order issued on the lot. The primary responsibility for resolving this violation falls to the dealer where the seed is located. A new germination test is required to resolve this violation. Dealers should check their seedstock and obtain a new germination test for lots that are not within the required 9 month test date period. Labeling must be changed to reflect the new test date in order for the stop sale order to be released.

Seed that has been placed under a stop sale order cannot be legally offered for sale, sold, or removed from the premises until a proper release has been obtained. A stop sale order protects the consumer, the seed dealer, and the seedsman.

Stop sale orders should be responded to on a timely basis. Most violations can be corrected by re-labeling the seed lot. A timely response assures that the dealer will still have the opportunity to market a properly labeled product.

The process for obtaining a release from a stop sale order is neither complicated nor time consuming. After a violation has been corrected, a release can be obtained by requesting a release by phone, fax, or mail. A copy of the corrected labeling and the signed release request can be faxed to Regulatory Services for verification and immediate release by return fax.

Questions or assistance with obtaining a release from a stop sale order can be made by contacting our office at (859) 257-7363.

David Buckingham – Seed Coordinator



**ANNUAL REPORT
Regulatory Bulletin No. 285**

**ANALYSES OF OFFICIAL FERTILIZER
SAMPLES**

July 1, 2000 - June 30 2001

Regulatory Bulletin No. 285 is now available at:
<http://www.rs.uky.edu/fert/fertreg>

The bulletin presents the results of analyses of 3,394 official samples taken between July 1, 2000 and June 30, 2001 by Regulatory Services' Inspectors. The samples represent approximately 68,000 tons or about 8% of the 872,000 tons distributed in Kentucky during this period. One of the goals of our inspectional staff is to take samples representing between 5 and 10 % of the fertilizer

distributed in the state and to take the samples in approximately the same proportion as distributed in bags, bulk, or liquid. Of the 68,000 tons sampled, 10% was bagged, 68% was bulk, and 22% was liquid.

Our 10 inspectors use AOAC sampling procedures and tools and are trained to conduct inspections in a professional manner. Nine of the inspectors have assigned geographical areas and one is assigned state wide responsibilities for specialty products.



David Terry – Fertilizer Regulatory Program

KENTUCKY FERTILIZER TONNAGE REPORTING

Recent Reports

We publish tonnage reports monthly, semiannually, and annually. The latest include June, July, and August 2001 monthly; January-June 2001 semiannual; and, July 2000-June 2001 annual reports. Each of these reports plus those from January 2001 are viewable on: <http://www.rs.uky.edu/fert/fertreg>

Tonnage Reporting

We are still encouraging companies to report to us electronically using the UFTRS Standard Text File format. The file format is standard across the US where the regulatory program is using the Uniform Fertilizer Tonnage Reporting System (UFTRS). This file structure is available for downloading from our website or by calling (859) 257-2668. We also have a free DOS program that allows a registrant to enter their data and produce the electronic file.



D. L. Terry, Fertilizer Regulatory Program



2002 AAFCO OFFICIAL PUBLICATION

The Official Publication of the Association of American Feed Control Officials is an essential reference manual for many individuals involved in the feed and pet food industry. This manual contains up-to-date information on the following:

- Model law and regulations for commercial feed, pet food and recycled animal waste State, FDA and Canadian feed control contacts with address, telephone and fax number
- Approved feed ingredients and their definitions

- Regulatory requirements for distributing feed products in each state
- Medicated feed labeling guide
- Analytical methods reference and analytical variations
- AAFCO committees and industry liaisons
- Proceedings of the most recent AAFCO annual meeting
- Canine and feline nutrient profiles and protocols
- Feed labeling requirements and labeling guide

The 2002 Official Publication is available at a cost of \$50. Orders and payment can be sent to:

Sharon Senesac, AAFCO Assistant Secretary-Treasurer
 P.O. Box 478
 Oxford, IN 47971
 Phone (765) 385-1029, Fax (765) 385-1032
 E-Mail: sharon@localline.com

Steve Traylor, Feed Coordinator

LABELING OF LASALOCID CONTAINING PRODUCTS

In response to inquiries from industry, the Office of Surveillance and Compliance within the Food and Drug Administration issued a memorandum to provide clarification, regarding the use of Lasalocid in pre-ruminating cattle. The current regulation 21 CFR 58.311(e)(1)(xv) required the veal-calf warning "*A withdrawal period has not been established for lasalocid in pre-ruminating calves. Do not use in calves to be processed for veal.*" on the labels of milk replacer powder containing Lasalocid. The regulation, at the present time, does not require the veal-calf warning on all dry feeds. In other words, the only animal feeds that would require the warning statement would be milk replacer type products; therefore, the warning statement is not required for other animal feeds. The other labeling requirements for the use of lasalocid are still in effect.

Steve Traylor, Feed Coordinator

Definition of Natural

The Association of American Feed Control Officials (AAFCO) recently accepted the definition for the feed term “natural”. The accepted definition of natural is a feed or ingredient derived solely from plant, animal or mined sources, either in its unprocessed state or having been subject to physical processing, heat processing, rendering, purification, extraction, hydrolysis, enzymolysis or fermentation, but not having been produced by or

subject to a chemically synthetic process and not containing any additives or processing aids that are chemically synthetic except in amounts as might occur unavoidably in good manufacturing practices.



AAFCO recommends and supports the following guideline for use of the term “natural” in the labeling of commercial feeds, pet foods, and specialty pet foods:

1. In the AAFCO-defined feed term “natural,” the use of the term “natural” is only acceptable in reference to the product as a whole when all of the ingredients and components of ingredients meet the definition.
2. In the definition, the use of the term “natural” is false and misleading if any chemically synthesized ingredients are present in the product; however, AAFCO recommends that exceptions be made in the cases when chemically synthesized vitamins, minerals, or other trace nutrients are present as ingredients in the product, provided that the product is not a dietary supplement and that a disclaimer is used to inform the consumer that the vitamins, minerals or other trace minerals are not natural.

AAFCO recommends that an acceptable use of the disclaimer would be stated as follows on the product labeling:

- a. The disclaimer, such as “Natural with added vitamins, minerals, and other trace nutrients (include the items as appropriate to match the chemically synthesized ingredient(s)),” is juxtaposed with the term “natural”; and
 - b. The disclaimer appears with the largest or most prominent use of the term “natural” on each panel of the label on which the term appears, in the same style and color print and at least one-half the size of the term “natural”; and
 - c. All other ingredients and components of ingredients in the product meet the definition of the AAFCO-approved feed term “natural.”
3. If the disclaimer that is juxtaposed with the term “natural” is used only to identify in generic terms those vitamins, minerals and other trace nutrients which are not natural, AAFCO recommends that the disclaimer should not be construed as a nutrient claim which would warrant vitamin and mineral guarantees. However, if the disclaimer makes reference to a specific nutrient (e.g., “with added calcium”), a guarantee would be warranted.
 4. AAFCO also recommend that exceptions be made when the term “natural” is used only in reference to a specific ingredient (e.g., “natural cheese flavor”), even though the product as a whole may not meet the definition of the AAFCO-defined feed term “natural,” and that the reference does not imply that the product as whole is “natural”.



*Steve Traylor, Coordinator
Feed Program*

Seed Lab Update

To improve services provided by the seed lab, we have created a website with on-line forms and requests. The site also includes other valuable information such as descriptions of the tests we offer with prices and reporting information. Eventually, sample results will be available on-line using private passwords assigned to each customer. Visit the seed lab web at:



<http://www.uky.edu/Agriculture/RegulatoryServices/seed>. Any comments or suggestions about our services are welcome. Feel free to contact Cindy Finneseth, Seed Lab Coordinator, at (859) 257-2785 or cfinnese@ca.uky.edu.

Cindy Finneseth – Seed Lab Coordinator



Milk Program

Laboratory Requirements

The primary goal of Regulatory Services' Milk Program is to provide a fair and equitable marketplace environment for all producers, processors and handlers involved in Kentucky's dairy industry. A key component in the milk marketing system is laboratory testing. Observing proper procedures in laboratories is critical to ensure proper producer payments and to ensure accurate billing when milk moves between processors and/or handlers. All labs that potentially test Kentucky producer's samples for payment are required to be licensed by Regulatory Services. Likewise, lab personnel who actually perform these tests are licensed too. There are a number of licensed laboratories that do not test milk for payment purposes. These labs choose to be licensed as a means to establish credibility and to assist in their overall quality control programs.



License applications can be obtained by contacting Regulatory Services.

A new tester will be issued a 120 day Temporary License to Test Milk. This allows the new tester an adequate amount of time to train and to become knowledgeable of proper lab procedures. Prior to the expiration of the temporary license, the tester will take a written examination. Upon scoring a minimum of 70% on the exam and demonstrating appropriate lab techniques to a Regulatory Services representative, a License to Test Milk will be issued.

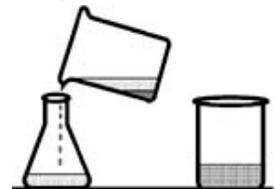
There have been a significant number of changes in the Milk Program over the past few years. A review of lab requirements along with some suggested lab quality control procedures may be helpful at this time.

First, the basics.

Licensed laboratories are subject to have their facilities, equipment and procedures evaluated by Regulatory Services during normal business hours. Labs that are not open during customary business hours are required to provide Regulatory Services with an advanced schedule. Inspections are usually conducted at times that will cause the least disruption to a lab's normal activities. During inspection visits, lab personnel are encouraged to utilize their normal, everyday procedures. Do not employ additional procedures or steps just because a visitor is present.

In addition, Regulatory Services will provide check samples to licensed laboratories for test result comparisons and monitoring purposes. A licensed tester at the laboratory shall test each sample for the appropriate components using an approved method for which both the tester and lab is licensed.

The results are to be returned to Regulatory Services within three (3) working days of receipt of the samples. A comparison report will then be provided to the laboratory. The licensed laboratory is also responsible for returning all check sample shipping containers and equipment to Regulatory Services.



(MILK continued on page 8)

(MILK continued from page 7)

Key areas of consideration for laboratories and testers.

Sample storage: A refrigerator or other appropriate storage area should be available to maintain sample temperatures in a temperature range of 0.5-4.4^oC (33-40^o F). Milk samples should always be stored in a manner to protect the sample's integrity (prevent leakers and cracked vials). The sample storage area is required to be monitored on a daily basis. This can be accomplished with a recording device or by a licensed person maintaining a daily log.



Samples: Producer samples tested for components are to be analyzed within 72 hours (unless preserved). Grade A producers are required to have a minimum of five (5) actual tests per month. Manufacturing grade producers are required to have a minimum of three (3) actual tests per fifteen (15) day period.

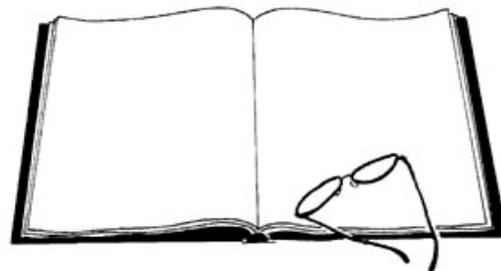
Records and documentation: Labs testing components for pay purposes should have an established, written policy concerning "wild tests". "Wild tests" should not be used for pay purposes. Additionally, all lab records should be kept on file for at least two years. These include:

- Equipment records: For electronic equipment, this includes records for maintenance, daily performance checks, and calibrations.
- Test records: Actual records of tests used for pay purposes.
- Special test records: These include retests and other special tests and should be specifically identified.

Lab procedures, facilities and equipment:

It is important that all testing be performed in accordance with approved procedures. Currently the references for these procedures are "Official

Methods of Analysis of AOAC International", Volume II, Chapter 33, 17th Edition, 2000; and "Standard Methods for the



Examination of Dairy Products", 16th Edition, 1992. Procedures found within these documents have undergone rigorous evaluations and are recognized to be scientifically sound.

"Standard Methods" also outlines the requirements for laboratory facilities and equipment. The laboratory area should generally be designated solely for analytical and related activities. Proper attention should be given to items such as ventilation, lighting, work and storage space, utilities, and cleanliness. A sacrifice relating to any of these items can increase the potential for problems in areas such as analytical error and lab safety.

Lab equipment should be kept in good repair and if appropriate, be monitored with a maintenance schedule. It is important that equipment be used only for purposes for which it was designed. Only properly trained personnel should use highly specialized equipment and instruments.

Questions....

This article briefly comments on a few main considerations for licensed laboratories and testers. If you are interested in obtaining additional related information or if you need license applications, contact Chris Thompson by phone at (859) 257-2785 or by e-mail at cthompso@ca.uky.edu.



Chris Thompson – Milk Coordinator



FIELD INSPECTOR CONTACT LIST

<u>Inspector</u>	<u>City</u>	<u>Territory</u>	<u>Phone Number</u>
Dewey Coffey	Faubush	Quicksand, Lake Cumberland, Wilderness Trail	(270) 866-4475
John Flood	Cadiz	Purchase, Pennyrite	(270) 522-5546
Freddie Herald	Salvisa	Bluegrass	(859) 366-4117
Bob Hickerson	Lawrenceburg	Statewide Milk Coverage	(859) 257-2785
Brad Johnston	Cub Run	Mammoth Cave, Barren River	(270) 524-3460
Noel Johnston	Munfordville	Lincoln Trail	(270) 524-9585
Steve McMurry	Shelbyville	Louisville, Northern Kentucky	(502) 633-1356
David Mason	Mays Lick	Licking River, Northeast Kentucky	(606) 763-6806
Donald Penn	Danville	Statewide Specialty Products	(859) 936-1653
Terry Prather	Lancaster	Bluegrass, Quicksand	(859) 792-2315
David Troutman	Calhoun	Green River	(270) 273-3459

UPCOMING MEETINGS

FEED – Kentucky Feed & Grain Association
 February 21-23, 2002
 Brown Hotel, Louisville, KY
 For information, call Buena Bond at (859) 254-0294

MILK – KAMFES
 Milk related sessions: February 20-21, 2002
 Executive West Hotel, Louisville, KY
 For information, call Dale Marcum (502) 564-3340





Regulatory Services News is published quarterly for the milk, feed, fertilizer and seed regulatory programs and the seed and soil testing program. It is provided free to persons interested in these programs.

Editor: Chris Thompson

Design and Artwork: Nell Manuel

The College of Agriculture is an Equal Opportunity Organization.

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

