

# Volume 17, No. 3 Office of the Texas State Chemist

# OTSC Offers Free Inspection Service for Voluntary HACCP Plans

The formation of a Feed Industry HACCP Taskforce by the Association of American Feed Control Officials (AAFCO) in 2007 comprised of representatives from academia, industry, and the regulatory community developed a model standard for the voluntary adoption of HACCP by feed manufacturers. Currently, an estimated 50% of the US feed tonnage is manufactured by firms that have either begun or fully adopted HACCP as a means to assure food safety. The model standard is part of a larger document titled Verification Program for a Voluntary HACCP Plan that provides clarification on how to apply HACCP principles when manufacturing feed. This represents the first such document in the global feed industry and can be applied to the multitude of HACCP schemes developed by feed trade associations in the US, Canada, and Europe. The program also provides the basis upon which competent authorities can provide third party audits "upon request" by firms that do not subscribe to commercial auditing services. The model standard represents a consensus by taskforce participants on how the feed industry should apply HACCP principles, validate a HACCP plan, and verify that it is being followed. The AAFCO

board of directors approved both the standard and checklist in June, 2010. This information is available on the OTSC website at http://www.feedhaccp.org/ brochure/HACCPAuditorManual.pdf

August 2010

**Competent Authority**: Feed Control Officials receiving Feed Industry HACCP and Auditor Training from an instructor accredited by the International HACCP Alliance are equipped to audit HACCP plans. Currently, the Texas Feed and Fertilizer Control Service has 4 field investigators who have received this training. The auditing activity includes validating the HACCP plan and verifying a firm's conformance to the plan and regulatory prerequisites. Upon successful completion of the audit, the establishment or particular product manufactured in conformance with the Verification Program for a Voluntary HACCP Plan will receive a "Certificate of HACCP Plan Conformance." California and Texas feed control agencies will be the first to offer this service to firms licensed to manufacture and distribute feed within their state. States draw upon the same implied authority within their respective feed control act to issue a Certificate of Free Sale and Certificate of GMP Compliance. These services are free of charge for firms licensed with OTSC to distribute feed. Out-of-state inspections require the licensed establishment pay travel and per diem costs.

# OTSC Participation at the AACO Annual Meeting

The Association of American Feed Control Officials (AAFCO) Annual Meeting was held July 31 through August 2, 2010 in Portland, Oregon. The following ingredients have been adopted as official: Dried Fermentation Biomass, Corn Protein Concentrate, Hydrolyzed Roughage, Inulin, Quinoa Seed, Hide glue (Technical Gelatin), Silicon Dioxide, Air Dried Animal Blood Cells (Air Swept Tubular Drying), Hydrolyzed Whole Swine, Yeast Extract and Hydrolyzed Yeast. New definitions that have been accepted as tentative are: Camelina meal extracted, Dried L-Lysine Fermentation Product, Liquid L-Lysine Fermentation Product, Astaxanthin Dimethyldisuccinate

and Paracoccus Pigment. One item the AAFCO Ingredient Definition Committee approved was Biodiesel-Derived Glycerin as an ingredient, the first step in the ingredient definition process. This proposed definition is more restrictive than the Texas



definition for Crude Glycerin from Biodiesel Production (see TX Feed Industry Memorandum No. 5-22) in the feedstock that can be used and the levels of methanol, heavy metals, salt and sulfur allowed in the glycerin.

# AAPFCO 2010 Annual Meeting Review

The Annual Meeting of the Association of American Plant Food Control Officials, AAPFCO, was held in Portland, Oregon, August the  $2^{nd}$  through the  $5^{th}$ .

Several terms and definitions were introduced, amended, or modified, requiring them to be listed as "tentative" for at least a year in the AAPFCO Official Publication:

T-71 – "Slow Release" are fertilizer products that release (convert to a plant-available form) their plant nutrients at a slower rate relative to a "reference soluble" product. Examples of slowrelease products are coated or occluded, which control the release of soluble nutrients through coating or occlusion of the soluble nutrient compounds, water insoluble, or slowly available water-soluble.

T-72 – "Stabilized" products that have been amended with an additive that reduces the rate of transformation of fertilizer compounds, resulting in extended time of availability in the soil. Examples of stabilizing amendments are nitrification inhibitors, nitrogen stabilizers, or urease inhibitors.

T-82 – "Readily Available Nitrogen" – Water soluble nitrogen in either ammoniacal, urea, or nitrate form that does not have slow or controlled release properties.

N-50 – "Distillers Dried Grains" is obtained after the removal of ethyl alcohol by distillation following yeast fermentation of a grain or a grain mixture by separating the resultant coarse grain fraction of the whole stillage by methods employed in the grain distilling industry.

C-15 – "Gypsum, Landplaster, or Crude Calcium Sulfate" is a product consisting chiefly of calcium sulfate with combined water (CaSO<sub>4</sub> • 2H<sub>2</sub>O) and is incapable of neutralizing soil acidity. It may be guaranteed as either CaSO<sub>4</sub> or CaSO<sub>4</sub> • 2H<sub>2</sub>O and shall not contain less than fifty-five percent (55%) CaSO<sub>4</sub> or seventy percent (70%) CaSO<sub>4</sub> • 2H<sub>2</sub>O.

BSC-1 – "Calcium Silicate" is derived from naturally occurring minerals such as Wollastonite or synthetically derived, having the principal formula CaSiO<sub>3</sub>.

BSC-2 – "Potassium Silicate" is derived from a readily soluble solid or aqueous solution having the principal formula of  $K_2O \times SiO_2$ , where x=1 to 3 on a weight basis.

BSC-3 – "Sodium Silicate" is derived from a readily soluble solid or aqueous solution having the principal formula of  $Na_2O \times SiO_2$ , where x=1 to 3.5 on a weight basis.

BSC-4 – "Available Silicon (Si)" is the soluble portion of the total silicon in a fertilizer known as monosilicic acid  $[Si(OH)_4]$ .

T-83 – "Digestate" is the liquid or solid material processed through anaerobic digestion. Labeling Digestate materials shall be designated by prefixing the



name of the feedstock from which it is produced, i.e., cow manure Digestate, biosolids digestate, etc.

N-34 – "Melamine" is a sparingly soluble organic compound of formula C3H6N6 which contains at least sixtysix percent (66%) nitrogen. CAS No. 108-78-1 2,4,6triamino-1,3,5-triazine, triamino-s-triazine)

And, several terms and definitions were presented as Official:

T-81 – "Compost Extract" is the water extract of compost and may contain suspended material. (Official 2010)

N-51 – "L-Lysine Amino Acid" is a free amino acid containing product derived from bacterial fermentation. (Official 2010)

Mn-19 – "Manganese (II) Thiosulfate" is a product composed principally of  $MnS_2O_3$ . It is most commonly available in aqueous solution. (Official 2010)

Additional information can be obtained from the web site <u>http://www.aapfco.org</u>.

## Page 2

### Volume 17, No. 3

## Results From the AAFCO Pet Food Committee Meeting

Roger Hoestenbach chaired the Weight Management Terms and Calorie Working Group of the AAFCO Pet Food Committee. The working group recommended and the Pet Food Committee approved recommendations involving caloric statements as described below. These recommended changes to the Official Publication (OP) pet food section will move forward to the AAFCO Board of Directors for a vote. This Working Group was formed to review a request by the American College of Veterinary Nutrition (ACVN) to require calorie statements on pet food labels revising the AAFCO Model Regulations for Pet Food and Specialty Pet Food Regulation PF9, to also consider the pet food industry's proposed revision of Regulation PF10 for calorie statements on pet food labels with weight management claims, and proposed revisions to the Affidavit for Dog or Cat Food Calorie Content.

Changes recommended by the Working Group proposal:

Regulation PF9. Statements of Calorie Content (a) The label of a dog or cat food <u>shall</u> bear a statement of calorie content and meet all of the following:

(5) B. The claim on the label or other labeling shall be followed parenthetically by the word "fed" when the calorie content is determined in accordance with Regulation PF9(a)(3)B.

(c) Unless required under PF10, a dog or cat food label shall be exempt from the requirement to bear a calorie content statement provided:

(1) The dog or cat food contains no more than 500 kcal ME/kg; and

(2) An affidavit for calorie content to verify compliance with the above maximum calorie content is submitted upon request.

Regulation PF10. Descriptive Terms (c) Weight-related Terms

## (1) "Weight maintenance"

A. A dog or cat food product which bears on its label the term "weight maintenance" shall bear a calorie content statement as per PF9.

B. A claim of "weight maintenance" shall not require additional labeling if the statement of intended use and the nutritional adequacy statement show that the product is intended for the maintenance of adult dogs or cats and the product is consistent with acceptable weight maintenance implications and is not otherwise misleading in any particular. (2) "Weight management" or "weight control" A. A dog or cat food label which bears on its label any claim related to weight, other than "weight maintenance" or those regulated by PF10(a) or PF10(b), such as "weight control", "weight management" or words of similar designation, shall include on the label:

i. A calorie content statement as per Regulation PF9; and ii. A statement of dietary and/or nutritional approach.

B. If the statement of dietary and/or nutritional approach is one of those regulated by PF10(a) or PF10(b), then the labeling must comply with the appropriate requirements of making such statements.

C. If the statement of dietary and/or nutritional approach is not covered by PF10(a) or PF10(b), then the statement of dietary and/or nutritional approach shall:

i. Consist of a statement of intended impact on the animal's weight and the dietary/nutritional approach of the product, supported by sound scientific knowledge and not be otherwise misleading in any particular; and

ii. Be juxtaposed with the largest or most prominent use of the weight related claim on each panel of the label on which the claim appears and be printed in type of the same color and style and at least one-half

the type size used in the claim.

(3) Comparative claims

A. A dog or cat food label which bears on its label a weightrelated comparison claim, shall



in addition to the requirements of PF10(c)(1) and PF10(c)(2) require the following:

i. If the comparative claim is already covered in PF10(a) or PF10(b), then the comparative claim must comply with those requirements as appropriate.

ii. If the comparative claim is other than one regulated in PF10(a) or (b), then the label shall include:

aa. The name of the product of comparison and the quantitative comparison (expressed on an equal unit basis) explicitly stated and juxtaposed with the largest and most prominent use of the weight-related claim on each panel of the label on which the claim appears; and

bb. The comparative statement printed in type the same color and style and at least one-half the type size as the weight-related claim; and

cc. The product support for the comparative claim is consistent with acceptable weight-related implications and is not otherwise misleading in any particular.

B. A comparison between products of different categories of moisture content (i.e., less than 20%, 20% or more but less than 60%, 65% or more) is misleading.

#### **OTSC Quarterly Newsletter**

### Page 4

## Office Updates Aflatoxin Feed Industry Memorandum 5-12



The Office revised Feed Industry Memorandum 5-12 titled "Distribution of Aflatoxin-

Containing Whole Grain and Oilseed in Commercial Channels and Their Use in Mixed Feeds" in response to stakeholder input. Policy statements prepared by the Office clarify their practices and expectations of the regulated community. The Feed and Fertilizer Industry Memorandums assist firms meet the regulatory requirements contained in the Texas Commercial Feed and Fertilizer Control Acts and rules.

During the 2010 grain harvest, OTSC field investigators will observe practices at commercial grain elevators involving crop insurance sample collection and testing. Specifically, OTSC has proposed using crop insurance samples for quality adjustment collected at commercial grain elevators (not field samples) as a means to monitor aflatoxin contamination. The Loss Adjustment Manual (LAM) for crop insurance outlines procedures that are the same as those used by OTSC. This harvest, OTSC will observe these practices to see how closely they conform to the LAM and OTSC procedures. This is not an audit, rather, OTSC field investigators are gathering information to assess the feasibility of this strategy. These results will be reported to the advisory committee at the November 4, 2010 meeting in Amarillo, TX.

Why pursue this strategy? Stakeholders note the discrepancy between grain elevator tests, crop insurance tests from samples collected at commercial grain elevators during harvest, and OTSC results. It would be desirable if a single aflatoxin test could be used due to the variability that exists between tests. The major source of variation results from sampling due to the low level of toxin (e.g. afla-toxin contamination is measured in parts per billion).

What is the benefit of this strategy? The passage of the Food and Drug Administration Amendment Act (FDAAA) in 2007 requires firms to report shipment of contaminated product using an online porthole called the reportable registry. Grain that contains over 20 ppb aflatoxin that is shipped without the appropriate label designating the aflatoxin level and end use, would be considered adulterated and fall under the FDAAA reporting requirement. In an attempt to minimize incidents that are reportable, the Office is working with the grain and feed industry to enable them to achieve full compliance. The use of one aflatoxin test result, generated using approved procedures that are verifiable, is one step toward achieving full compliance and minimizing the regulatory burden imposed by FDAAA. A second step toward achieving full compliance involves redefining exemption status of establishments in Feed Industry Memorandum 5-12 as defined below (Table 1).

# Table 1. Those who must obtain a license, label grain and pay inspection fee

## **1. Farmers/Producers**

A. Exempt from obtaining a license, labeling, and inspection fees when selling to licensed elevators.

B. Subject to obtaining a license, labeling, and inspection fees when selling to feed manufacturers and integrated operations or retrieving grain from a commercial grain elevator for sale.

## 2. Truckers

A. Exempt from inspection fees when selling to licensed elevators and licensed brokers.

B. Subject to obtaining a license, labeling, and inspection fees when selling to feed manufacturers and integrated operations.

## 3. Merchandisers

A. Exempt from inspection fees when selling to licensed elevators.

B. Subject to obtaining a license, labeling, and inspection fees when selling to feed manufacturers and integrated operations.

## 4. Elevators

A. Exempt from inspection fees when selling or distributing to other licensed elevators.

B. Subject to obtaining a license, labeling, and inspection fees when selling to feed manufacturers and integrated operations.

Under the new guidance, all merchandisers (including truckers that purchase and sell grain containing aflatoxin >20 ppb) and commercial grain elevators are obliged to obtain a license with OTSC that handle grain with aflatoxin over the 20 ppb action level. The new policy provides a similar exemption from paying inspection fees as in the past, supported by records that will be reviewed by field investigators. The intent of this change is to ensure full traceability of aflatoxin contaminated grain and correct labeling of the grain. Past inspections of commercial grain establishments by OTSC field investigators reveals

## Continued: Memo 5-12 Updated

an 80% compliance level involving recordkeeping and labeling. The changes in Feed Industry Memorandum 5-12 should facilitate full compliance with labeling and record keeping requirements as well as maintain a level playing field among all firms. The proposed change was first presented to the OTSC advisory committee at the 2009 annual meeting and has been presented at two pub-

# Ammonium Nitrate Regulations

A company that sells or offers for sale ammonium nitrate or ammonium nitrate material requires an annual certificate of registration with the Service. The Texas Commercial Fertilizer Rules, Chapter 65.6, requires that "registration must be renewed on forms prescribed by the Service at the beginning of each fiscal year and accompanied by the fee specified on the form."

Notice of renewal was mailed to existing registrants on June 30, 2010. Prior to a company submitting the renewal forms and specified fee (\$75), the Service must inspect the facility and determine compliance with the following requirements:

- Adequate steps have been taken to secure ammonium nitrate or ammonium nitrate materials against vandalism, theft, or other unauthorized access,
- Establishment and maintenance of ongoing inventory control procedures for the ammonium nitrate or ammonium nitrate material,
- Recorded sales information and documentation including evidence of the display of driver's license or

# Aflatoxin Measurement with LC/MS/MS

The application of ultra-high pressure liquid chromatography separation and mass spectrometry detection (LC/ MS/MS) has yielded a fast and reliable method for meas-



uring aflatoxins  $(B_1, B_2, G_1 \text{ and } G_2)$  in animal feedstuffs. The new methodology allows for the simultaneous measurement of analytes with very different chemical properties in less than

90 min. The high selectivity of the analyzer allows the minimization of sample preparation, facilitating the determination of all aflatoxins without the need to apply sam-

lic meetings hosted by the Texas Grain and Feed Association. Advisory committee members and those attending the meeting have supported this change in exemption status.

other form of identification containing the person's photograph, buyer's personal information and signature, date of the purchase and amount of the purchase on forms prescribed by the Service,

Training and documentation of employees in the laws, rules, policies, and procedures for the sale of ammonium nitrate and documentation of that training are maintained on-site.

The inspections for conformance to the regulations are being conducted by the Feed

and Fertilizer Control Service investigators in July and August, 2010. No company will be issued a certificate of registration for the sale of ammonium nitrate or ammonium nitrate material unless there is 100% compliance with the requirements found in the law, rules, and policies of the Service. All current registrations expire at midnight, August 31, 2010.

ple cleanup. The use of isotope labeled internal standards has led to accurate quantification without the need to use matrix-matched standard calibration because animal feed can be a very complex matrix, as it is often a mixture of different kinds of crops. The method has been validated in four matrices (corn, grain sorghum, dog food and peanut products) and has yielded satisfactory accuracy and precision for analyte/matrix combinations. These results support the applicability of the method to regulatory samples. The Office is using this method to quantify aflatoxins for the 2010 corn and sorghum crop.



## Office of the Texas State Chemist

<u>Mailing Address</u>: P. O. Box 3160 College Station, TX 77841

<u>Physical Address</u>: 445 Agronomy Road College Station, TX 77843

Phone: 979-845-1121 Fax: 979-845-1389 Web: http://otscweb.tamu.edu Protects consumers & enhances Agri-Business through its Feed & Fertilizer Regulatory Compliance Program, surveillance & monitoring of Animal-Human health & environmental hazards, & preparedness planning.

# "Why we verify tonnage reports?"

Section 141.074 of the Feed Control Act and Section 63.074 of the Fertilizer Control Act establishes the authority for the Texas Feed and Fertilizer Control Service to verify tonnage reports.

Each year, the OTSC lead auditor and senior staff accountant conducts an audit of records at some licensed establishments in and outside the state of Texas. The record inspection includes a review of tonnage, annual product fees and incoming ingredients. Tonnage and product registration fees are paid by all firms and the Office wants to ensure that firms are reporting accurately and that they are in compliance with the Feed and Fertilizer Control Acts and rules. Audits conducted cover finished feeds, feed ingredients, pet food, lawn and garden fertilizers and agriculture use fertilizers.

During the course of the audit, sales and tonnage reports are used to verify that firms are reporting the correct amount of tonnage. This approach is used for annual products (less than 5 lbs. only) using product listings and/or sales reports to ensure all annual products are registered with the Office. Incoming ingredients to feed mills in Texas are also verified to ensure all suppliers of products subject to the law are registered and to compare their sales to what they may report in tonnage fees.

Our main goal is to ensure that compliance is obtained and a level playing field is maintained. If it is determined a firm has over reported tonnage, a credit is issued and if the tons reported are less than the audited tons, a firm



must pay the outstanding balance. A similar approach is used for product registration.

It is the agency's goal to continue audits to ensure compliance. Another valuable aspect of the audit section has been to place a face with a name and the voice on the phone.

