



Association of American Feed Control Officials

**2016 AAFCO Midyear Meeting  
Committee Reports**



**January 18–20, 2016**

**Wild Dunes Resort**

**Isle of Palms, South Carolina**





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# Association Business Meeting Minutes

2015 AAFCO Annual Meeting

August 3, 9:52–10:10 a.m., Denver, Colorado

- 1.) Richard Ten Eyck, President, called to order the Business Session of the association at 9:52 a.m.
  - A) Certificates of Appreciation were given to the Feed Administrators Seminar Host Committee: Kristen Green, Alan Harrison, Darrel Johnson, and Jennifer Godwin.
- 2.) Mark LeBlanc states the AAFCO Board of Directors approved the following Committee Reports: Collaborative Check Sample, Current Issues and Outreach, Education and Training, Enforcement Issues, Feed and Feed Ingredient Manufacturing, Feed Labeling, Ingredient Definitions, Inspection and Sampling, Laboratory Methods and Services, Model Bills and Regulations, and Pet Food and Strategic Affairs, and he recommends the same to the membership. I so move. Stan Cook seconds. MOTION CARRIES.

### 3.) **Acceptance of Committee Recommendations**

#### **Enforcement Issues (1):**

##### **Report starts on page 9 of the Committee Report Book**

- 1.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from Enforcement Issues Committee to remove the word “tentative” in the section header on page 280, AAFCO Enforcement Guidelines, in the 2015 Official Publication and recommends the same to the membership. I so move. Judy Thompson seconds. MOTION CARRIES.

#### **Ingredient Definitions 1–5:**

##### **Report starts on page 27 of the Committee Report Book**

- 1.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to publish the following new definitions as tentative in the Official Publication and recommends the same to the membership, with a vote on each separately:
  - a. T6.17 L-Methionine, Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to publish the following new definitions as tentative in the Official Publication. I so move. Bob Geiger Seconds. MOTION CARRIES.

**T6.17 L-Methionine** is a product containing a minimum of 98.5% L-isomer of 2-amino-4-(methylthio)butanoic acid. L-Methionine is produced by *Escherichia coli* K12 fermentation followed by enzymatic conversion to L-methionine. The percentage of L-methionine must be guaranteed. (Proposed 2015)
  - b. T27.9 Deoiled corn distillers dried grains with solubles, solvent extracted, Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to publish the following new definitions as tentative in the Official Publication. I so move. Doug Lueders Seconds. MOTION CARRIES.

**T 27.9 Deoiled corn distillers dried grains with solubles, solvent extracted** is the product resulting from the solvent extraction of oil from corn distillers dried grains with solubles (DDGS) to result in a crude fat content of less than 3% on an as fed basis. It is intended as a source of protein. The label shall include a guarantee for minimum crude protein and maximum sulfur. The words “solvent extracted” are not required when listing as an ingredient in a manufactured feed. (Proposed 2015)
  - c. T93.9 Hydrolyzed Wheat Protein, Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to publish the following new definitions as tentative in the Official Publication. I so move. Ali Kashani Seconds. Dave Phillips, AAFCO Wheat Investigator MOTIONS to table definition to Midyear Meeting 2016. Dan Danielson Seconds. MOTION TO TABLE CARRIES.

**T93.9 Hydrolyzed Wheat Protein** is the product resulting from complete enzymatic hydrolysis of isolated vital wheat gluten and must contain not less than 80% crude protein and not more that 1.5% ash and 6.0% crude fat. (Proposed 2015)
  - d. T96.13 Molasses Hydrolyzed Yeast, Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to publish the following new definitions as tentative in the Official Publication. I so move. Alan Harrison Seconds. MOTION CARRIES.

**T96.13 Molasses Hydrolyzed Yeast** is a concentrated, nonextracted, partially soluble yeast digest. Yeast cells are sourced from the fermentation of molasses for ethanol production. Solubilization is accomplished by enzymatic hydrolysis of whole *Saccharomyces cerevisiae* cells. Salts may be added as processing aids in accordance with good manufacturing practices. It must not contain less than 30% crude protein. (Proposed 2015)

- 2.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to move the definition for T33.19 Hydrogenated Glycerides to Official and recommends the same to the membership. I so move. Chad Linton Seconds. MOTION CARRIES.

**T33.19 Hydrogenated Glycerides** are obtained by hydrogenation of animal fats or vegetable oils. Specifications of animal fats or vegetable oils used to produce the hydrogenated glycerides must meet the requirements stated in AAFCO definition 33.1 (for Animal Fat) and AAFCO definition 33.2 (for Vegetable Fat, or oil), respectively. The specification for tallow must specify insoluble impurities not more than 0.15% to be consistent with BSE feed regulation 21 CFR 589.2000 and 589.2001 and a guaranteed titer above 40°C. The source of the hydrogenated glycerides must be indicated on the label. The hydrogenated glycerides must contain, and be guaranteed for, not less than 90% total ester content, not more than 0.8% unsaponifiable matter, not more than 0.001% heavy metals, and not more than 5 of iodine value. The maximum moisture, maximum insoluble matter, maximum free fatty acids, saponification value, and melting range must also be guaranteed on the label. If an antioxidant is used, the common name or names must be indicated on the label, followed by the words “used as a preservative.” (Proposed 2012, Adopted xxxx)

- 3.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to add *Paenibacillus lentus* to each of the carbohydrase enzyme categories of alpha-Amylase, beta-Glucanase, Hemicellulase, beta-Mannanase, and Xylanase in table 30.1 in the Official Publication and recommends the same to the membership. I so move. Chad Linton Seconds. MOTION CARRIES. (2015 OP page 374)
- 4.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to delete the following tentative definition in the Official Publication 71.30 Mustard Meal, Solvent Extracted, 2015 OP page 422 and recommends the same to the membership. I so move. Stan Cook Seconds. MOTION CARRIES.

**71.30 Mustard Meal, Solvent Extracted\*\*** is the product obtained by grinding the cake which remains after removal of some of the oil by mechanical extraction, and removing most of the remaining oil by solvent extraction. Obtained from the seed of cultivated mustard plants (*Brassica* sp.) (Proposed 1972, Adopted 1973) IFN 5-12-149 Mustard seeds meal solvent extracted Rations should be restricted to cattle and sheep and not contain more than 10% for cattle and 10% for sheep. It should not be fed to lactating dairy cows if milk production is for human consumption because of objectionable taste and/or odor.

- 5.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the IDC to edit the tentative definitions by adding Lentil as an accepted pulse crop to T60.113 Pulse fiber, T60.114 Pulse flour, T60.115 Pulse protein, and T60.116 Pulse starch (2015 OP Page 415-416) in the Official Publication and recommends the same to the membership. I so move. Ali Kashani Seconds. MOTION CARRIES.
- a. **T60.113 Pulse fiber** consists primarily of the outer coverings and/or hull of pulse crops derived from pulse dry milling. Pulse crops include the edible seeds of legumes (excluding oil seeds). Acceptable pulse crops are listed below. The product must contain not less than 23% crude fiber on a dry matter basis. If a conditioning agent is used, the name of the conditioning agent must be shown as an added ingredient. If the ingredient bears a name descriptive of its kind or origin, it must correspond thereto (e.g., pea fiber). (Proposed 2015) Accepted pulse crops: IFN 05-17-726 – Pea (*Pisum sativum* L.); Lentil (*Lens culinaris*)
- b. **T60.114 Pulse flour** is the fraction remaining after removal of fiber from pulse seeds. It is obtained from mechanically dehulled and dry milled pulse seeds. This flour fraction must be free of fiber and/or seed hull/pod, except in such amounts as might occur unavoidably

in good manufacturing practices. Pulse crops include the edible seeds of legumes (excluding oil seeds). Acceptable pulse crops are listed below. The ingredient must contain not less than 20% crude protein and not more than 3% crude fiber on a dry matter basis. If a conditioning agent is used, the name of the conditioning agent must be shown on the product label as an added ingredient. If the ingredient bears a name 416 Official Names and Definitions of Feed Ingredients descriptive of its kind or origin, it must correspond thereto (e.g., pea flour). (Proposed 2015) Accepted pulse crops: IFN 05-17-726 – Pea (*Pisum sativum* L.); Lentil (*Lens culinaris*)

- c. **T60.115 Pulse protein** is the mechanically separated protein fraction free of the fiber and/or seed hull/pod, except in such amounts as might occur unavoidably in good manufacturing practices. It is obtained from dehulled, dry milled and air-classified pulse seeds. Pulse crops include the edible seeds of legumes (excluding oil seeds). Acceptable pulse crops are listed below. The product must contain not less than 53% crude protein on a dry matter basis. If a conditioning agent is used, the name of the conditioning agent must be shown as an added ingredient. If the ingredient bears a name descriptive of its kind or origin, it must correspond thereto (e.g., pea protein). (Proposed 2015) Accepted pulse crops: IFN 05-17-726 – Pea (*Pisum sativum* L.); Lentil (*Lens culinaris*)
- d. **T60.116 Pulse starch** is the fraction remaining after removal of protein and fiber from pulse seeds. It is obtained from mechanically dehulled, dry milled and air-classified pulse seeds. This starch fraction must be free of fiber and/or seed hull/pod, except in such amounts as might occur unavoidably in good manufacturing practices. Pulse crops include the edible seeds of legumes (excluding oil seeds). Acceptable pulse crops are listed below. The product must contain not less than 65% starch on a dry matter basis. If a conditioning agent is used, the name of the conditioning agent must be shown on the product label as an added ingredient. If the ingredient bears a name descriptive of its kind or origin, it must correspond thereto (e.g., pea starch). (Proposed 2015) Accepted pulse crops: IFN 05-17-726 – Pea (*Pisum sativum* L.); Lentil (*Lens culinaris*)

#### **Model Bill 1-3:**

#### **Report starts on page 38 of the Committee Report Book**

- 1.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the Model Bills and Regulations Committee that the revisions proposed by the Pet Food Committee to the AAFCO Dog and Cat Nutrient Profiles as indicated in Attachment A conform to the Model Bill and Regulations and that the AAFCO Board of Directors review the proposal for future consideration of the association membership and recommends the same to the membership. I so move. Doug Lueders seconds. MOTION CARRIES.
- 2.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the Model Bills and Regulations Committee that revisions proposed to Model Regulation PF7 as indicated in Attachment B conform to the Model Bill and Regulations and that the AAFCO Board of Directors review the proposal for future consideration of the association membership and recommends the same to the membership. I so move. Doug Lueders seconds. MOTION CARRIES.
- 3.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommendation from the Model Bills and Regulations Committee that revisions proposed to the tables in Model Regulations PF2(i) and PF3(c) as indicated in Attachment C conform to the Model Bill and Regulations and that that the AAFCO Board of Directors review the proposal for future consideration of the association membership and recommends the same to the membership. I so move. Stan Cook seconds. MOTION CARRIES.
- 4.) Mark LeBlanc states the AAFCO Board of Directors accepted the recommended enforcement dates be inserted into the front of the 2016 OP for Nutrient Profiles as well as changes to PF7 and recommends the same to the membership. I so move. Stan Cook seconds. MOTION CARRIES.

The Pet Food Committee recommends that the revisions to the AAFCO Dog and Cat Food Nutrient Profiles not be enforced until 12 months for new products in development and 24 months for existing products after publication of the revised AAFCO Dog and Cat Food Nutrient Profiles in the print version of the AAFCO OP.

The Pet Food committee also recommends that the revisions to PF7 of the Pet Food Model Regulations for Pet and Specialty Pet Food Under the Model Bill not be enforced until enforcement commences for the revised AAFCO Dog and Cat Food Nutrient Profiles.

Delayed enforcement and implementation of the revised PF7 language for nutritional adequacy statements would allow nutritional adequacy statements on products in the market place to be either verbatim as shown in 2014 OP hard copy, or verbatim as shown in the OP hard copy containing the revised nutrient profiles, until 24 months after publication of the revised nutrient profiles at which time the statement must be as verbatim in the revised PF7.

4.) **Nominating Committee**

The Nominating Committee recommends the following slate for Board of Directors to take office January 1, 2016. Judy Thompson MOTIONS to accept Slate of Officers. Meagan Davis seconds. MOTION CARRIES:

President: Mark LeBlanc (LA)

President-Elect: Ken Bowers (KS)

Secretary-Treasurer: Ali Kashani (WA)

Sr. Director: Dan Danielson (TN)

Sr. Director: Stan Cook (MO)

Jr. Director: Robert Geiger (IN)

Jr. Director: Kristen Green (KY)

Jr. Director: Erin Bubb (PA)

Immediate Past President: Richard Ten Eyck (OR)

This concludes committee recommendations needing membership approval.

5.) **Credential Report**

Number of voting members represented - 35

Number of states in attendance - 43

Number of countries - 5

Number of FDA representatives - 34

Number of life members - 2

Total meeting attendance - 375

Richard Ten Eyck adjourned the business meeting at 10:10 a.m.

Minutes approved August 5, 2015.

## Collaborative Check Sample Program Committee Report

2015 AAFCO Annual Meeting  
August 3, 2015, 1:30–5:30 p.m., Denver, Colorado

### Committee Recommendations

The committee recommends changing the AAFCO CSP units for vitamin E; integrating needs of the Mycotoxin Working Group with the Mycotoxin Program; performing homogeneity testing of material in the Minerals Program; making canned pet food a dog food; preparing promotional PowerPoint for programs; and creating a paid, part-time quality manger position.

### Board Recommendations

The board recommends creating a paid, part-time position for a quality manager to support the AAFCO Check Sample Programs.

### Association Actions

None

### Committee Report

MOTION: “Review and approval of meeting agenda” Not recorded (approved by consensus)—passes

MOTION: “To change the units for vitamin E to IU/kg” Sharon Webb, second: Dorota Inerowicz—passes

MOTION: “Nancy to go to board to hire a quality manager at 10 hours a week/month (part time) to move forward with ISO 17043 accreditation” Sharon Webb, second: Aaron Price—passes

MOTION: “To adjourn the meeting” Ametra Berry, second: Teresa Grant—passes

### Committee Minutes

- 1.) Agenda approved.
- 2.) Regular Check Sample Program Review
  - A) Participation stats—270 labs subscribing and 219 participating labs (less the large client with 100+ labs because they decided to use their own even though they were very pleased with the AAFCO program). Added several tests over the past 6 months—currently 1,381 method codes and 227 analytes. Homogeneity mixer study was performed addressing the addition of medicated premix to finished feed. Data looked good. Suggestions for tylosin for drug, dairy feed.
  - B) Method code updates—Motion to change units for vitamin E to IU/kg passed. [Sharon (UK) made motion, Dorota (IN) seconded]
  - C) Software development update—The subscription process is being updated by FASS.
  - D) Program tweaks and updates—To determine a plan for future samples that contain antibiotics/drugs, an electronic survey will be designed for the participants to take once VFD is finalized so states will know what drugs/antibiotics and their levels to expect. This way the samples will more reflect what is being seen in the market, and states will have comparable QRM that reflect matrix, analyte, and analyte levels. Notification will be sent out in the September sample regarding any changes made.
    - 4 new analyte codes were created for insecticides, 12 for vet drugs/residues, and 2 for mycotoxins (T2 and HT2)
    - 2016 subscriptions will be done online.
- 3.) Pet Food Program Review
  - A) Participation stats—Currently, 65 labs are subscribing and 53 labs participate in the Pet Food Program.
  - B) Program tweaks and updates—third and fourth quarter ingredients; Gina (AOCS) has a source of dried turkey meal or other meat meal; next canned will be dog; suggestions made to include some of the following: citrus pulp or tomato pumice (high fiber), corn sourced protein, barley, or dried cheese product
- 4.) Mycotoxin Contaminants Program (still tweaking!)
  - A) Participation stats—Currently, 37 labs are subscribing and 20 to 30 labs are participating.



- B) Statistical approach modification review—z scores will be grayed out when less than 6 participants are used to report the z score; these results will be compared with the reference lab; >6 uses consensus values
  - C) Integration with working group—dry dog, swine, need something with a measurable AG1 and AG2; then go to horse, beef, and poultry to circulate through the feed types. Horse may offer different mycotoxins, such as ochratoxin in oats.
- 5.) Minerals Program (new program)
- A) Statistical approach (use of calculated spike)
  - B) Data observations—UK and Louisiana agreed to assist with homogeneity testing of a sample. Samples will be sent to Sharon Webb and Mark LaBlanc. Sample 201432/201551 was the sample to be used to get this data.
  - C) Participation and promotion—Currently, 22 labs are subscribing and 14 labs reporting. Fourth quarter will be horse, then cattle, suggestions for kale, peanuts (defatted), or dried milk
- 6.) Samples Acquisition and Distribution
- A) An outline of Bob's issues—not covered
  - B) Volunteer samples—volunteers asked to contact Nancy
  - C) Are we doing a canned product in 2015 or 2016—determined to be dog in 2016
  - D) Any requirement for liquids?
- 7.) Accreditation Progress—Moving forward toward accreditation to ISO 17043: motion passed for Nancy to go to board to hire a quality manager at 10 hours a week to move forward. [Sharon Webb (UK) motioned, seconded by Aaron Price (CN)]
- A) Consultant hire—Matt Sica, trained auditor, was hired to do a gap analysis. This is complete. Technically, we are sound, but we need a management system. FASS can be a part of this.
  - B) Progress to date on SOPs—Document Control, Contract Review, Vendor Approval, and Purchasing: First drafts of these SOPs are complete. Need many additional drafts. Need a virtual office as a document repository; the AAFCO Feed Bin was suggested.
  - C) Nancy comments—May have add-on meeting in the January Meeting of AAFCO to meet with consultant for review.
- 8.) Programs Promotion
- A) We need to create and improve awareness (get the word out!)—Sharon Webb (UK) and Josh Arbough (WV) agreed to make PowerPoint for other AAFCO members to use to get the word spread out for all the CSP has to offer.
- 9.) New Leadership
- A) Chair and vice chair—Team approach until chair and vice chair are filled.
  - B) Nancy comments—We need to figure out roles and responsibilities.

Meeting adjourned at 5:03 p.m. MST. [motion made by Ametra Berry (GA), seconded by Teresa Grant (NC)]

### Action Item Table

Responsible	Item	Action	Timing/Status
Andy and Nancy	Vitamin E units	Change the units for vitamin E from mg/kg to IU/kg	One month
Nancy	Survey on drugs/antibiotics	Survey labs to establish PT needs for drugs and antibiotics	October
Nancy	Homogeneity testing on mineral materials	Arrange for shipment of mineral materials to Sharon and Mark	October
Sharon and Mark	Homogeneity testing on mineral materials	Provide data on mineral homogeneity samples to Andy	November

<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
Andy	Homogeneity testing on mineral materials	Prepare report for January meeting on results of homogeneity tests of mineral materials	January
Sharon and Josh	PowerPoint	Prepare promotional PowerPoint presentation on AAFCO CSP for general use by BOD and members	October–November
Nancy	Add-on meeting	Arrange add-on meeting to Midyear 2016 of parties involved in accreditation implementation	October–January
Nancy	QA manager position	Request approval for a QA manager position from BOD; seek proposals	November

## Education and Training Committee Report

2015 AAFCO Annual Meeting  
August 5, 8:00–10:00 a.m., Denver, Colorado

### Committee Recommendations

- 1.) Encourage committees to identify training needs.
- 2.) Approve proposed AITS course in Tennessee in 2016.
- 3.) State participation as SMEs or other input when association is tasked for future initiatives of FSMA.

**Board Recommendations:** Report accepted on 11/18/15

**Association Actions:** None

### Committee Action Items

- 1.) Coordinate members to participate on the National Feed Training Curriculum (Dave Dressler—lead)
- 2.) Basic Inspector Training Seminar—Alabama to host in October
- 3.) Animal Food Preventative Control Safety Alliance Committee (FSPCA) editorial subcommittee
- 4.) Recruit members for NEHA inspector assessment committee (Judy Thompson—lead)
- 5.) Attend FDA/ORA Food/Feed Training Summit in October
- 6.) Seminar workgroup to develop agenda for 2016 AAFCO Feed Administrators Seminar to be held in Medora, North Dakota.

### Summary of Liaisons from ETC

- 1.) Serve as a member on the Animal Food Preventative Control Safety Alliance Committee (AFPCSA) (Lyons)
- 2.) Serve on the AFSPCA Training Curriculum Editorial Committee (Lyons)
- 3.) Work on the IFPTI Fellowship for Food Protection Re-Development Committee (Lyons)
- 4.) NEHA Inspector Assessment
- 5.) Continue to work on National Feed Training Curriculum (Dave Dressler—lead)

### Committee Participants

**Members Present:** Jim Fear, Judy Thompson, Darlene Krieger, Ken Bowers, Meagan Davis (Vice Chair), Tim Lyons (Chairperson), Kristen Green, Bob Geiger, Jim True, Richard Ten Eyck, Shannon Jordre, Devin Hart, Ed Huffman, Catherine Merrier, Jo Lynn Otero, Tim Darden

**Advisors Present:** Kurt Gallagher, Dave Fairfield, Carlos Gonzalez, Paul Keppy, Craig Kaml

### Committee Minutes

#### Introductions and Agenda Review, Tim Lyons

Announcement and thank you to Jennifer Godwin, who will no longer serve as vice chair of this committee because she is now employed with the FDA.

- 1.) Animal Feed Curriculum Update  
Round table discussion was provided from the working group involved with development of the curriculum. Presentations from Jim Fear providing the overarching scope of the Integrated Food Safety System, followed by Jim True, Catherine Marrier, Devin Hart, Ed Huffman, David Dressler, Mike Davidson, and Shannon Jordre who explained in detail their experiences and work involved in building competencies for feed inspector. All have learned a great deal working with others and see a benefit in the work they have accomplished over time. All feel that this is a tool that they can provide their states to ensure that inspectors develop the knowledge to be successful feed inspectors. They also pointed out that the framework can be delivered so that inspectors' knowledge base is the same across the country.
- 2.) Feed Inspector Training  
Discussion focused on ensuring that the AAFCO BITS and AITS courses meet the curriculum and competency framework that is being developed. A need was identified to work with the Inspection and Sampling Committee (I&S) to ensure those courses are meeting the needs of the states and

consider development of an intermediate course. This discussion will continue with the I&S Committee.

The committee also recognized a question raised: How can states track individual trainings that inspectors complete? Richard Ten Eyke stated that this could be done in the Feed Bin and will provide a training on how to use it.

3.) Assisting State and Local Feed Manufacturers with FSMA Education

FSMA and Animal Food Rules coming soon. Discussion was started as to what can be done to assist state feed manufacturers on the upcoming rules. The committee started by informing them that AAFCO has an Implementation Taskforce in place to assist them. The taskforce will determine where AAFCO has gaps and how to fill them within each committee to provide up-to-date information for regulators to share within their states.

The committee heard from David Fairfield regarding the group he leads for preventative controls.

Meeting adjourned at 10:00 a.m.

**Action Item Table**

<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
Tim Lyons, Jim True	Continue to work with NEHA, IFPTI, FDA on training	SMEs for October training framework	Completed. The next meeting is set for January in Rockville, MD.
Tim Lyons	Microscopy post survey	Survey completed	Completed
Jennifer Godwin	Seminar Committee	Seminar agenda set and registration is ongoing	Seminar is set for April 2015 in Kentucky
Meagan Davis	AITs	AITs was completed in January 2015 in Baton Rouge, LA	Survey completed
Meagan Davis, ETC Leadership	Standard training for midyear	Tabled for 2016	
Nancy Thiex	Sampling analysis for midyear	Nancy set up survey monkey.	Awaiting results
Lyons, Davis, Godwin	NEHA inspector assessment		
Davis, Lyons, Godwin	Labeling workshop		
Davis, Godwin, Lyons	BITS training		

## Feed and Feed Ingredient Manufacturing Committee Report

2015 AAFCO Annual Meeting  
August 3, 1:30–3:00 p.m., Denver, Colorado

**Committee Recommendations:** None

**Board Recommendations:** Report accepted on 10/20/15

**Association Actions:** None

### Committee Participants

**Members present:** Ken Bowers, Bill Burkholder, Bob Church, Stan Cook, Mike Davidson, Tim Darden, Bob Geiger, Jamey Johnson, Ben Jones, Ali Kashani, Darlene Krieger, Doug Leuders, Dragan Momcilovic, Wayne Nelson, Shaness Thomas, Judy Thompson

**Advisors present:** David Ailor, Tomas Belloso, Bill Bookout, Lorri Chavez, David Dzanis, David Fairfield, Matt Frederking, David Meeker, Jessica Meisinger, Richard Sellers, Charles Neece

### Committee Report/Minutes

- 1.) Meeting called to order by Judy Thompson at 1:30 p.m. MT. Members and advisors in the room introduced themselves.
- 2.) The minutes from the 2015 Midyear Feed and Feed Ingredient Manufacturing Committee Meeting held on January 14, 2015, were voted on and approved on April 2, 2015. These were posted to the website. No further action needed.
- 3.) Review of Action Items (see Attachment A for summary of updates)
  - A) Mineral Guidelines Working Group—Bill Burkholder  
Working group has finalized 90% of their revision of the Mineral Guidelines in the current OP including the tables. The one remaining issue is being researched related to selenium in aquaculture. The working group is planning to submit their recommendation prior to the January 2016 meeting.
  - B) Emergency Response Working Group—Darlene Krieger  
The working group has completed much of their charge including:
    - i) reviewing and revising the information on emergency response in the OP (completed),
    - ii) developing a folder in the Feed Bin for states to place any tabletop exercise materials they may have for other states to use (completed), and
    - iii) developing a tabletop exercise (4 hours), which was conducted at the 2015 Feed Administrator's Seminar in April 2015 in conjunction with training on ICS (completed).  
The intent is to use the input received to develop a larger exercise in conjunction with the 2017 Midyear Meeting.
  - C) Feed Preventive Control Alliance Certificate Program Training Material—Mike Davidson  
No new developments to report at this meeting.
  - D) Education and Training Committee Liaison—Ken Bowers and Bob Geiger  
No new developments to report at this meeting.
  - E) AAFCO FSMA Implementation  
Working groups formed to address the items assigned by the FSMA Implementation Task Force. Charge to the working group and deadlines are identified in the Action Item Table in Attachment A.
    - i) Strategy for AAFCO GMPs—Ken Bowers (lead), Bob Church, Bob Geiger, Matt Frederking, Richard Sellers. Charge to working group.
    - ii) Model Feed Safety Program Plan in OP—Judy Thompson (lead), Linda Morrison, Bob Waltz
    - iii) Contaminant and Hazard Lab Strategy—Mike Davidson (lead), Srinu Chigulubadi (FDA) (will need additional working group members)

- iv) Inspector Training for Ingredient Manufacturing Inspections—Judy Thompson (lead), Mike Davidson, Darlene Krieger, David Ailor, Matt Frederiking
- 4.) US Federal Regulatory Update—Dan McChesney
  - A) FSMA
    - Nothing new that was not discussed this morning.
  - B) Veterinary Feed Directive
    - October 1, 2015**  
No changes for most drugs. The current VFD drugs (2-3) are required to meet the new requirements related to format, caution statement, etc.
    - January 1, 2017**  
Many other drugs (100+ as well as combinations) will be converting to VFD drugs. FDA is preparing a letter for drug sponsors and feed industry detailing the strategy to move forward to implementation including new labeling requirements. Labels to be approved in December 2016 on 3 consecutive days: pioneer, generic, combinations. To facilitate undisrupted trade, FDA is proposing that between now and June 30, 2016, that they will meet with all drug sponsors individually to review new proposed labels that will meet the January 2017 requirements. After these meetings, a Memorandum of Conference will be issued that confirms that the label discussed is approved in principle. The expectation is that the drug sponsor will start the process to develop and print labels/bags for January 2017 and that they will manage inventory so products sold after January 1, 2017, will be in the marketplace with the new label. Drug premixes that are in the sponsor's warehouse on January 1, 2017, will be required to be modified (e.g., stickered) to bring them into compliance so that only properly labeled product will be sold after January 1, 2017.  
The animal pharmaceutical industry has requested permission to use transitional labeling, and FDA will formally advise them of their concurrence in the near future. Transitional labels will contain a banner/box identifying the specific claims for that drug that will not be permitted on labels after January 1, 2017, and identifying the new required caution statement. The use of transitional labels will be permitted until the new labels are printed and available and will be permitted to remain in the marketplace after January 1, 2017.  
Questions from the floor about:
      - i) How veterinarians will be ready for October 15, 2015, and January 1, 2017. What are the approved sources of drugs and combinations? Information available in the Code of Federal Regulations, <http://www.fda.gov/AnimalVeterinary/Products/AnimalFoodFeeds/MedicatedFeed/BlueBirdLabels/default.htm>, Blue Bird Labels (June 30, 2016), [www.medicatedfeed.com](http://www.medicatedfeed.com), and Medicated Feed Compendium; all identify the drugs and the combinations approved.
      - ii) How to make sure that the drugs that are needed continue to be available. Possibly, AVMA can be a driver for this? Currently, number of veterinarians writing VFDs is very small. After the deadline of January 1, 2017, a lot more veterinarians will be required to write VFDs.
  - C) Next Steps  
The FDA will also identify the labels for Type B and C medicated feeds that contain VFD drugs that will be permitted in the marketplace after January 1, 2017. Some ongoing questions, e.g., Part 11 (electronic signature) requirements [it is an old document (18 years) from when computers were new so might not be necessary] and issues related to minor species use for some of the drugs (order will not permit extralabel use), still need to be addressed. There are some sectors, e.g., bee keepers, that have flown under the radar using what will in the future be VFD drugs that will need to be informed. Education of livestock producers will also be required.  
FDA is currently doing outreach through the Producer Groups so the word will get out. Major species will be easier to reach than the smaller groups (bees). FDA has also developed materials for feed mills and livestock producers, practicing veterinarians, and veterinary students and has posted them and a Q+A document along with Draft Guidance 120 on their website (<http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM052660.pdf>). FDA is also developing a video on VFDs that should be available in 6 to 8 months. There have also been a couple of webinars hosted by AFIA where

FDA was involved. The transcripts of the webinars are available at <http://feedstuffs.com/vfd.aspx#vFeed>. Another source of information is <http://www.fda.gov/AnimalVeterinary/DevelopmentApprovalProcess/ucm071807.htm>.

Feed industry has issues with label changes and so on and concerns about regulator training requirements, whether there will be a grace period after January 1, 2017, and how long it will be. There are concerns with the capacity of the limited number of bag manufacturers to get things printed fast enough. Poultry industry will also have issues because they do not currently use VFD drugs and many of the new VFD drugs are used in poultry production.

Plan to have a one-day training session on VFDs/Medicated feed labeling for regulators and industry at the AAFCO annual meeting in August 2016.

- 5.) Preventive Control Alliance—David Fairfield (NGFA), Pat Tovey (PFI), Sonya Lambkin (FDA)  
Discussion this morning provided the full state of the work and no further update was required.
- 6.) Canadian Regulatory Update—Judy Thompson  
Judy provided the membership with a regulatory update of the current and planned changes for the Canadian Food Inspection Agency (CFIA) (see Attachment B).
- 7.) ISO/TC 34/SC 17—Management Systems for Food Safety—Working Group 9—Feed Production—David Fairfield  
Work was initiated to develop technical specifications for prerequisite programs for animal feeds to support management systems for those companies using ISO 22000. Animal food requirements will be applicable to animal feed for food producing animals as well as pet food. On paper, the working group includes representatives from 15 countries. Two meetings have been held so far with a total of 9 countries participating. Working Group 9 met in Copenhagen September 2014. At that meeting, the decision was made to use PAS 222 as a seed document. A second meeting was held in Washington, DC, in February 2015. The output of this meeting was distributed to the entire ISO membership for review. The draft was approved by 39 countries (12 countries included comments that they would like considered), and there was one vote for disapproval (Panama). The third (and final?) meeting will be held in Paris October 13 to 15, 2015, to review and incorporate received. If the document is finalized at that meeting, the standard should be published in June 2016. American National Standards Institute (ANSI) is the organization representing the USA. The US Technical Advisory Group includes Henry Turlington (AFIA), Pat Tovey (PFI), Dave Harlan (Cargill), Dave Fairfield (NGFA).
- 8.) Report from the Joint FAO/WHO Expert Meeting on Hazards Associated with Animal Feed—Judy Thompson  
Judy provided the membership with a report on the recent Joint FAO/WHO Expert Meeting held in Rome in May 2015 (see Attachment C). A copy of the draft report is also included for your information (see Attachment D).

Meeting adjourned at 3:53 p.m. MST; there was no other business that required discussion.

#### **Acceptance of Minutes**

On September 9, 2015, Bob Church moved that the minutes be accepted. Motion seconded by Bob Geiger. Minutes were approved by committee members on September 15, 2015, with 12 affirmative and no dissenting votes.

### Attachment A: Action Item Table

Responsible	Item	Action	Timing/Status
Mineral Guidelines Working Group	Review and revise Mineral Guidelines	<p>Working group to develop plan to review and revise Mineral Guidelines in the OP for discussion by the committee.</p> <p><b>Working group members:</b> Bill Burkholder (lead), Jon Nelson, Tim Costigan, Jennifer Kormos, David Syverson, Bill Hall, Dave Dzanis, Roger Hoestenbach</p> <p><b>Update</b> Working group is progressing well, and it is expected that a report will be provided to the committee before the January 2016 Midyear meeting.</p>	Update at January 2016 Midyear Meeting
Darlene Krieger	Strategic plan—Emergency response	<p>Working group to do the following:</p> <ol style="list-style-type: none"> <li>1.) review and revise the information on emergency response in the current OP (completed),</li> <li>2.) develop a folder in the Feed Bin for states to place any tabletop exercise materials they may have for other states to use (completed), and</li> <li>3.) develop a tabletop exercise that could be used at an upcoming AAFCO meeting.               <ol style="list-style-type: none"> <li>A) Tabletop exercise at April 2015 Feed Administrator’s Seminar (completed)</li> <li>B) Larger tabletop exercise to be held in conjunction with the 2017 Midyear Meeting</li> </ol> </li> </ol> <p><b>Working group members:</b> Darlene Krieger (lead), Glo Dunnavan, David Fairfield, Dragan Momcilovic, Tim Darden, Mark Glover, Stan Cook, Tim Lyons</p>	Update at January 2016 Midyear Meeting
Judy Thompson	FSMA Implementation Task Force	<p>Items identified at April 27, 2015, meeting</p> <ol style="list-style-type: none"> <li>1.) By January 2016, determine the path forward for:           <ol style="list-style-type: none"> <li>A) AAFCO GMPS (in consultation with MBRC and PFC)               <ol style="list-style-type: none"> <li>i) Develop a plan for states that have adopted AAFCO’s model GMPs to make the transition to FSMA GMPs.</li> <li>ii) Review the Model Bill and Regulations and propose changes to align with FSMA requirements.</li> </ol> <p><b>Working group #1</b>—Ken Bowers (lead), Bob Church, Bob Geiger, Matt Frederiking, Richard Sellers</p> </li> <li>B) Model Feed Safety Program Plan (in consultation with Linda Morrison (OP Section) and Bob Waltz (Feed Safety Coordinator)</li> </ol> <p><b>Working group #2</b>—Judy Thompson (lead), Linda Morrison, Bob Waltz</p> </li> <li>2.) After FSPCA/FDA conclude their work in this area, determine the contaminants, hazards,</li> </ol>	Ongoing committee updates



Responsible	Item	Action	Timing/Status
		<p>matrix, and action levels and enforcement strategies to provide guidance to LMSC to inform method development priority setting. Integrate collaboratively into current LMSC priorities (in consultation with FSPCA, EIC, ISC, IDC and LMSC).</p> <p><b>Working group #3</b>—Mike Davidson (lead), Srinu Chigulubadi (FDA) ++</p> <p>3.) After FSPCA/FDA conclude their work in this area, determine whether training material for feed ingredient manufacturing from the FSPCA will meet the needs of inspectors for training (in consultation with ETC and ISC)</p> <p><b>Working group #4</b>—Judy Thompson (lead), Mike Davidson, Darlene Krieger, David Ailor, Matt Frederiking</p>	

**Attachment B: Canadian Regulatory Update PowerPoint**

**Attachment C: Joint FAO/WHO Expert Meeting on Hazards Associated with Animal Feed PowerPoint**

**Attachment D: Executive Summary of the Report from the Joint FAO/WHO Expert Meeting on Hazards Associated with Animal Feed (May 12–15, 2015; Rome, Italy)**

Attachments B, C, and D are available on the committee’s web page under Reports/Minutes:  
<http://www.aafco.org/Regulatory/Committees/Feed-and-Feed-Ingredient-Manufacturing>

## Feed Labeling Committee Report

2015 AAFCO Annual Meeting  
August 3, 2015, Denver, Colorado

**Committee/Board Recommendations:** Report accepted on 12/09/15

**Association Actions:** None

### Committee Participants

**Members:** Jenna Areias, Dave Phillips, David Dressler, Tim Darden, Meagan Davis, Richard Ten Eyck, Jan Jarman, Heather Bartley, Al Harrison, Lizette Beckman, Miriam Johnson (phone), and Scott Zier

**Advisors:** Ellen Slaymaker, Chris Olinger, Jan Campbell, Pat Tovey, Marty Smith, Dave Dzanis, Angela Mills, and James Emerson

### Committee Report

- 1.) FSMA update/cGMPs  
Veterinary Feed Directive Rule discussion and the effect it will have on feed labeling. Meagan Davis and Dragan Momcilovic discussed having a workshop or training specific to VFD. There will be a Medicated Feed Workshop to be held in January 2016 at which VFD drugs would be included in the training.
- 2.) Swine Nutrition Panel update  
Miriam Johnson indicated that there was nothing new to the report as the change to remove zinc from the required guarantees was approved in January 2015. Changes need to go to Model Bill and Regulations Committee for inclusion in the model regulations.
- 3.) Non-Pet Food Labeling Guide discussion  
Lizette Beckman and Meagan Davis have been working on updates to the guide and requested assistance with a reviewer. Jenna Areias agreed to participate as a third-party reviewer.
- 4.) Feed Labeling Workshop/Medicated Labeling work group  
The Feed Labeling Workshop has currently been pushed back. Discussed a half-day Medicated Feed Labeling Workshop including discussion of VFD, GMPs, and VFD in August 4, 2016 (Dragan Momcilovic). Additionally, a Feed Labeling Workshop potentially in 2018 was discussed (will have to schedule with Education and Training Committee). The chair formed a work group consisting of Dragan Momcilovic, Angela Mills, Chris Olinger, Dave Phillips, Alan Lowman, and Richard Ten Eyck.
- 5.) Other items
  - A) Discussion of Beef Cattle Nutritional Indicators. Final reviews of NRC completed and are hoping for publication in November/December timeframe. Once complete Megan Davis will chair working group along with Miriam Johnson, and Jenna Areias will accept names from both industry and academia to review required guarantees in the model.

### Action Item Table

Responsible	Item	Action	Timing/Status
Lizette, Meagan, Jenna	Non-Pet Food Labeling Guide update	Liz and Meagan will get updated document to Jenna for review.	????
Dragan Momcilovic	Medicated Feed Labeling Workshop	Dragan and another person will work to put together information for half-day Medicated Labeling Workshop	August 4, 2016
Dave Phillips	Feed Labeling work group	Potential Feed Labeling Workshop; must request date from Education and Training Committee. Workgroup formed.	2018

<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
Meagan Davis, Miriam Johnson	Beef Cattle Nutritional Panel	Review of Beef Cattle nutritional indicators with expert panel after NRC complete.	Update January 2016

## Ingredient Definitions Committee Report

2015 AAFCO Midyear Meeting  
August 4, 2015, Denver, Colorado

### Committee Recommendations

- 1.) Move from tentative to official in the OP for 33.10 \_\_\_\_\_ Distillers Oil, Feed Grade.
- 2.) Move from tentative to official in the OP for 54.33 Bovine Colostrum.
- 3.) Move from tentative to official in the OP for 60.111 Bio Diesel Derived Glycerin.
- 4.) Move from tentative to official in the OP for 60.113, 114, 115, 116 Pulse Definitions including Lentil language.
- 5.) Publish the tentative definition in the OP for T3.2 Dehydrated Alfalfa.
- 6.) Publish the tentative definition in the OP for T3.5 Direct Dehydrated Alfalfa Meal or Pellet.
- 7.) Publish the tentative definition in the OP for T9.10 Poultry By-Product Meal.
- 8.) Publish the tentative definition in the OP for T9.14 Poultry By-Products.
- 9.) Publish the tentative definition in the OP for T9.57 Poultry.
- 10.) Publish the tentative definition in the OP for T9.71 Poultry Meal.
- 11.) Delete the definition of 33.5 Fat Product, Feed Grade from the OP (2015 OP page 380).
- 12.) Publish the tentative definition in the OP for T60.115 (B) Pulse Protein.
- 13.) Publish the tentative definition in the OP for T60.116 (B) Pulse Starch.
- 14.) Publish the official definition in the OP for 73.400 Benzoic Acid.
- 15.) Publish the official definition in the OP for 87.36 Phaffia Yeast.

### Board Recommendations:

- 1.) Move from Tentative to Official in the OP for 33.10 \_\_\_\_\_ Distillers Oil, Feed Grade. **Board Recommends Acceptance**
- 2.) Move from Tentative to Official in the OP for 54.33 Bovine Colostrum. **Board's recommendation to membership is not to approve.**
- 3.) Move from Tentative to Official in the OP for 60.111 Bio Diesel Derived Glycerin. **Board Recommends Acceptance**
- 4.) Move from Tentative to Official in the OP for 60.113, 114, 115, 116 Pulse Definitions including Lentil language **Board Recommends Acceptance**
- 5.) Publish the tentative definition in the OP for T3.2 Dehydrated Alfalfa. **Board Recommends Acceptance**
- 6.) Publish the tentative definition in the OP for T3.5 Direct Dehydrated Alfalfa meal or Pellet. **Board Recommends Acceptance**
- 7.) Publish the tentative definition in the OP for T9.10 Poultry By-Product Meal. **Board Recommends Acceptance**
- 8.) Publish the tentative definition in the OP for T9.14 Poultry By-Products. **Board Recommends Acceptance**
- 9.) Publish the tentative definition in the OP for T9.57 Poultry. **Board Recommends Acceptance**
- 10.) Publish the tentative definition in the OP for T9.71 Poultry Meal. **Board Recommends Acceptance**
- 11.) Delete the definition of 33.5 Fat Product, Feed Grade from the OP (2015 OP page 380). **Board Recommends Acceptance**
- 12.) Publish the tentative definition in the OP for T60.115 (B) Pulse protein. **Board Recommends Acceptance**
- 13.) Publish the tentative definition in the OP for T60.116 (B) Pulse starch. **Board Recommends Acceptance**
- 14.) Publish the official definition in the OP for 73.400 Benzoic acid. **Board Recommends Acceptance**
- 15.) Publish the official definition in the OP for 87.36 Phaffia Yeast **Board Recommends Acceptance**

**Association Actions:** (will consider in January 2016)

### **Committee Participants**

**Committee Members:** Richard Ten Eyck, Al Harrison, Ali Kashani, Brett Groves, Stan Cook, Shannon Jordre, April Hunt, Bill Burkholder, Mark LeBlanc

On phone: Erin Bubb, Steve Gramlich, Jacob Fleig, Mika Alewynse

Life Member: Kent Kitade

**Industry Advisors:** Jonathan Goodson, Jessica Meisinger, David Meeker, Vincent Sewalt, Jason Vickers, David Ailor, Betty McPhee, Leah Wilkinson, Jan Campbell, David Dzanis, Kristi Smedley, Susan Thixton, Jean Hofve, Mollie Morrissette, James Emerson

### **Committee Report**

The meeting was convened at 1:32 p.m. by Chairperson Ten Eyck.

Announced at the end of the meeting: Plan to hold teleconference/webinar meeting at the end of August to cover the topics not covered in today's session because of limited time. All Feed Bin users will be invited to attend. All interested are welcome to join.

The committee and advisors introduced themselves, and the chair asked the gallery if any regulators would like to join the committee.

#### 1.) Definitions to move from tentative to official

- A) 33.10 \_\_\_\_\_ Distillers Oil, Feed Grade  
Ken Bowers moves to ACCEPT; Brett Groves seconds. MOTION PASSES.
- B) 54.33 Bovine Colostrum  
Cat Marrier moves to ACCEPT; Brett Groves seconds. MOTION PASSES.
- C) 54.34 Dried Bovine Colostrum  
Cat Marrier moves to table to next meeting (requested to research change in moisture level proposed by industry representative); Mark LeBlanc seconds. MOTION to table PASSES.
- D) 60.111 Bio Diesel Derived Glycerin  
Erin Bubb moves to ACCEPT; Brett Groves seconds. MOTION PASSES.
- E) 60.113, 114, 115, 116 Pulse Definitions including Lentil language  
Erin Bubb moves to ACCEPT; Mark LeBlanc seconds. MOTION PASSES.
- F) 93.9 \_\_\_\_\_ Wheat Gluten  
Dave Phillips moves to table to next meeting (requested based on a pending work group report); Brett Groves seconds. MOTION to table PASSES.

#### 2.) New definitions, deletes or edits

- A) Motion to publish the tentative definition of "T3.2 Dehydrated Alfalfa" as the aerial portion of the alfalfa plant, reasonably free of other crop plants, weeds, and mold, which has been ground and dried by thermal means under controlled conditions. Its source shall consist of either sun-cured alfalfa hay that has been stored in bales or stacks, or sun-cured alfalfa hay that has been stored in bales or stacks that has been blended with fresh cut alfalfa.  
Erin Bubb moves to ACCEPT; Alan Harrison seconds. MOTION PASSES.  
Discussion: Definition of "dehydrated" was changed recently and "sun-cured" was excluded. This was understood by producers but not by consumers. This T3.2 now includes sun-cured, dehydrated, or blended alfalfa. Several comments were made about whether to create independent definitions for "dehydrated" and "sun-cured" and there were differing viewpoints. A motion to amend the name by inserting "sun-cured" in the name ("Dehydrated sun-cured alfalfa") was offered and ultimately taken back by the maker of the motion.
- B) Motion to publish the tentative definition of "T3.5 Direct Dehydrated Alfalfa meal or Pellet" as the aerial portion of the alfalfa plant, reasonably free of other crop plants, weeds, and mold, which has not been stored in bales or in stacks as sun-cured alfalfa hay prior to being ground and dried by thermal means under controlled conditions.  
Erin Bubb moves to ACCEPT; Brett Groves seconds. MOTION PASSES.
- C) Motion to publish the tentative definition of "T9.10 Poultry By-Product Meal" as consists of the ground, rendered, clean parts of the carcass of poultry, such as necks, feet, undeveloped eggs, viscera, and whole carcasses, exclusive of added feathers, except in such amounts as might occur unavoidably in good processing practices. The label shall include guarantees for

minimum crude protein, minimum crude fat, maximum calcium (Ca), and minimum phosphorus (P). The calcium (Ca) level shall not exceed the actual level of phosphorus (P) by more than 2.2 times. If the product bears a name descriptive of its kind, the name must correspond thereto. It shall be suitable for use in animal food. (Proposed 1985, Adopted 1990, Amended 2000)

Meagan Davis moves to ACCEPT with the amendment to insert “added” between “of” and “feathers”; Mark LeBlanc seconds. MOTION PASSES.

Discussion: Meagan did a considerable amount of research on these definitions and became aware that the definitions, as published in the OP, did not reflect industry practice. The intent of the tentative definitions is to correct this. It was mentioned that this ingredient is not necessarily rendered. The clarification regarding “added” feathers was made because spent hens would be included, and they would not have been defeathered. David Meeker mentioned that the new tentative definitions will work for his constituents in the rendering industry. Some consumer and pet food industry representatives mentioned that they would have liked more consultation and notice of these changes.

- D) Motion to publish the tentative definition of “T9.14 Poultry By-Products” as consists of nonrendered clean parts of poultry such as heads, feet, viscera, and whole carcasses, free from foreign matter except in such trace amounts as might occur unavoidably in good processing practices. If the product bears a name descriptive of its kind, the name must correspond thereto. It shall be suitable for use in animal food. (Proposed 1963, Adopted 1964, Amended 2000)

Meagan Davis moves to ACCEPT; Mark LeBlanc seconds. MOTION PASSES.

- E) Motion to publish the tentative definition of “T9.57 Poultry” as the clean combination of flesh and skin with or without accompanying bone, derived from the parts or whole carcasses of slaughtered poultry, or a combination thereof, exclusive of feathers, heads, feet, and viscera. If it bears a name descriptive of its kind, it must correspond thereto. If the bone has been removed, the process may be so designated by use of the appropriate feed term. It shall be suitable for use in animal food. (Proposed 1978, Adopted 1979, Amended 1995, Amended 1997)

Meagan Davis moves to ACCEPT; Brett Groves seconds. MOTION PASSES.

- F) Motion to publish the tentative definition of “T9.71 Poultry Meal” as the wet rendered or dry rendered product from a combination of clean flesh and skin with or without accompanying bone, derived from the parts of whole carcasses of slaughtered poultry, or a combination thereof, exclusive of feathers, heads, feet, and viscera. The label shall include guarantees for minimum crude protein, minimum crude fat, maximum calcium (Ca), and minimum phosphorus (P). The calcium (Ca) level shall not exceed the actual level of phosphorus (P) by more than 2.2 times. If it bears a name descriptive of its kind, it must correspond thereto. It shall be suitable for use in animal food. (Proposed 1988, Adopted 1992)

Meagan Davis moves to ACCEPT; Mark LeBlanc seconds. MOTION PASSES.

Discussion: The main difference was adding the word “slaughtered.” There were several comments that, for clarity, the AAFCO OP needs to include the definition of “slaughter.” The USDA definition covers poultry slaughter, relevant in this case, and consideration should be given to adding this reference in the AAFCO Official Feed Terms. Mika Alewynse (FDA) mentioned that FDA may be able to check with their regulatory counsel to see if there is an applicable definition for “slaughter” per FFDCA.

- G) Motion to delete the definition of “33.5 Fat Product, Feed Grade” (2015 OP, page 380). Ken Bowers moves to ACCEPT; Mark LeBlanc seconds. MOTION PASSES (6-Y/4-N). (Yes votes: Jacob Fleig, Stan Cook, Shannon Jordre, April Hunt, Alan Harrison, Bill Burkholder. No votes: Brett Groves, Steve Gramlich, Erin Bubb, Mark LeBlanc)

Discussion: This definition seems to be a dumping ground for fats that do not fit any other definition. And some fat products contain impurities unacceptable for use in animal feed. According to AFIA, there are many legitimate products sold under this definition. Tightening the current definition would be a better approach than simply eliminating it, and new language is being proposed, along with the apology that this modified definition was not available earlier. Richard Ten Eyck shared the proposed amended definition. This amended version refers to the fat being suitable for use in animal feed. Sharon Benz said that FDA had asked industry to

propose a few better definitions to cover these products and references the production methods allowed in animal/vegetable/fat ester/hydrolyzed fats/oils, as FDA does not support this catch-all definition. Eric Nelson continued that FDA believes that some companies exploit this definition, and this misuse must stop, although he does not want to bar commerce of the acceptable fat products. David Meeker shared that many renderers use this definition and that thousands of tons per week of these fats are sold and used in animal feed. In NRA's view, fat products sold that contain unsafe ingredients is an FDA enforcement issue and not a definition issue. Most producers are careful about the quality of the products sold into animal feed. Kristi Smedley and Jason Vickers raised the point that if this definition were to be deleted, enormous amounts of valuable nutrients would be wasted and would go into landfill, which would be an environmental issue. Jon Goodson and Jessica Meisinger added that poultry producers depend on the availability of this ingredient; without it, food prices would likely increase.

H) Create Section 40 Human Food Processing By-Products (advisory only no committee action needed). Investigators will be sorting materials from the miscellaneous definitions into here.

I) Motion was made to make a minor edit of

**60.96 Food Processing Waste** is composed of any and all animal and vegetable products from basic food processing or distribution. This may include manufacturing, or processing waste, cannery residue, production over-run, and otherwise un-saleable material. The guaranteed analysis shall include the maximum moisture, unless the product is dried by artificial means to less than 12% moisture and designated as "Dehydrated Food Processing Waste." If part of the grease and fat is removed, it must be designated as "Degreased."

Dan Danielson moves to ACCEPT; Brett Groves seconds. MOTION Failed.

Discussion: Food wastes from grocery stores and other distribution centers are being used in animal feed. Thirty states have affirmed this use, many suggesting this is the best definition for these products. Sharon Benz explained that FDA does not support this change because the name of this ingredient is very broad and FDA did not agree to the definition edit. Therefore, if AAFCO were to amend the definition, it would be a breach of the MOU and would require arbitration. Mr. Danielson noted that he had provided the change to FDA for their review, and Dr. Benz indicated that they did not complete their review of the request. Industry, consumers, and advisors expressed concerns about what exactly is included in this definition. Concern was mentioned regarding whether this ingredient contained packaging debris such as plastics. Responding to the issues raised, Mr. Danielson offered to form a working group to propose a further amended definition to permit this material to be used in animal feed. The Human Food By-Product work group was formed. Lead is Dan Danielson. They will look for alternative definitions or language and report back in January 2016 to IDC.

J) The motion was made to publish the tentative definition of "T60.115 (B) Pulse Protein" as the protein fraction of pulse seeds. It is obtained from mechanically dehulled, dry milled pulse seeds that are further separated through air classification or the addition of water, acid, and alkali. The ingredient may be obtained from pulse seed separated by dry separation, wet separation, or both. Pulse crops include the edible seeds of legumes (excluding oil seeds). Acceptable pulse crops are listed below. The ingredient must contain not less than 53% crude protein on a dry matter basis, and a label shall include a guarantee for minimum crude protein. If a conditioning agent is used, the name of the conditioning agent must be shown as an added ingredient. If the ingredient bears a name descriptive of its kind or origin, it must correspond thereto.

i) Accepted pulse crops:

ii) IFN 05-17-726—Pea (*Pisum sativum* L.)

iii) Lentil (*Lens culinaris*)

Erin Bubb moves to ACCEPT; Brett Groves seconds. MOTION PASSES.

Discussion: Erin explained that this definition contains the new wet separation process, as supported by Roquette and concurred by FDA. The proposal combines the definition of the wet-processed and dry-milled process definitions. In written comment, AGT Foods objected to the inclusion of both the dry-milling and wet-processing in the same definition, as they consider the processing had the potential to modify the nutrient content and result in different potential contaminants. Leah Wilkinson asked if lentils were reviewed for both wet and dry processing.

Charlotte Conway explained that the stated processes were reviewed, but the review was not crop specific. Addition of other pulse crops will be based on the safety of the crop, not on the processing. The accepted pulses were addressed to enable confidence of safety of the ingredient for animals. Additional pulse crops may or may not have safety concerns. Amy Fratus (Roquette) pointed out that every company has different hazard analyses in their HACCP Plans. The pulse protein produced by different processes has a similar amino acid profile, and so a similar protein is being fed to the animal irrespective of process.

- K) The motion was made to publish the tentative definition of “T60.116 (B) Pulse Starch” as the fraction remaining after removal of protein and fiber from pulse seeds. It is obtained from mechanically dehulled, dry milled pulse seeds that are further separated through air classification or through the addition of water. The ingredient may be obtained from pulse seed separated by dry separation, wet separation, or both. Pulse crops include the edible seeds of legumes (excluding oil seeds). Acceptable pulse crops are listed below. The product must contain not less than 65% dietary starch on a dry matter basis, and the label shall include a guarantee for minimum dietary starch. If a conditioning agent is used, the name of the conditioning agent must be shown on the product label as an added ingredient. If the ingredient bears a name descriptive of its kind or origin, it must correspond thereto.

- i) Accepted pulse crops:
- ii) IFN 05-17-726—Pea (*Pisum sativum* L.)
- iii) Lentil (*Lens culinaris*)

Erin Bubb moves to ACCEPT; Brett Groves seconds. MOTION PASSES.

Discussion: An industry speaker advised that a limit of not less than 60% dietary starch would be more representative of this ingredient. Charlotte Conway informed IDC that this is under review. FDA is fine with including separate definitions for wet-milled and dry-milled products if this would be clearer for industry. The Roquette submitted process is not wet milling. These are not modifications to the starch or the protein. Both wet-milled and dry-milled products will fit this ingredient definition.

- L) The motion was made to publish the official definition of “73.400 Benzoic Acid.” The food additive, benzoic acid, may be safely used in the manufacture of complete swine feeds in accordance with the following prescribed conditions:
- i) The additive is used or intended for use as a feed acidifying agent, to lower the pH, in complete swine feeds at levels not to exceed 0.5% of the complete feed.
  - ii) The additive consists of not less than 99.5% benzoic acid (CAS 65-85-0) by weight with the sum of 2-methylbiphenyl, 3-methylbiphenyl, 4-methylbiphenyl, benzyl benzoate, and isomers of dimethylbiphenyl not to exceed 0.01% by weight.
  - iii) To ensure safe use of the additive, in addition to the other information required by the Federal Food, Drug, and Cosmetic Act and paragraph (b) of this section, the label and labeling shall contain:
    - a) The name of the additive.
    - b) Adequate directions for use, including a statement that benzoic acid must be uniformly applied and thoroughly mixed into complete swine feeds and that the complete swine feeds so treated shall be labeled as containing benzoic acid.
    - c) Appropriate warnings and safety precautions concerning benzoic acid.
    - d) A warning statement identifying benzoic acid as a possible irritant.
    - e) Information about emergency aid in case of accidental exposure.
    - f) Contact address and telephone number for reporting adverse reactions or to request a copy of the Material Safety Data Sheet (MSDS). Show citation box.
    - g) (Proposed 2015) 21 CFR 573.210
  - iv) Richard Ten Eyck moves to ACCEPT; Mark LeBlanc seconds. MOTION PASSES.
- M) The motion was made to table the following tentative definition to the January 2016 meeting. The concerns were that because Glucose Syrup is a standardized ingredient, would it be an unwarranted precedent to add it to the OP, and if it is included, it should not be in conflict with the current regulation.

**T87.35 Glucose Syrup** is the purified, concentrated, aqueous solution of nutritive saccharides obtained from edible starch. It shall meet the following specifications: total solids content not less than 70.0% mass/mass (m/m) and reducing sugar content



(dextrose equivalent), expressed as D-glucose, not less than 20.0% m/m calculated on a dry basis. The sulfated ash content is not more than 1.0% m/m (calculated on a dry basis), and the sulfur dioxide content is not more than 40 mg/kg. When derived from corn, wheat, rice, sorghum, or tapioca, the name of the starch will replace the word, glucose (21 CFR 168.120).

Richard Ten Eyck moves to ACCEPT tabling this tentative definition; Brett Groves seconds. MOTION to table PASSES. Mika will look at Canadian definition and the FDA food standard of identity and report back to IDC midyear meeting 2016.

- N) The motion was made to publish the official definition of “87.36 Phaffia Yeast.” The color additive, phaffia yeast, may be safely used in the manufacture of salmonid fish feed in accordance with the following prescribed conditions:
- i) Identity.
    - a) The color additive phaffia yeast consists of the killed, dried cells of a nonpathogenic and nontoxicogenic strain of the yeast *Phaffia rhodozyma*.
    - b) Phaffia yeast may be added to the fish feed only as a component of a stabilized color additive mixture. Color additive mixtures for fish feed use made with phaffia yeast may contain only those diluents that are suitable and are listed in this subpart as safe for use in color additive mixtures for coloring foods.
  - ii) Specifications. Phaffia yeast shall conform to the following specifications and shall be free from impurities other than those named to the extent that such impurities may be avoided by good manufacturing practice:
    - a) Physical state, solid;
    - b) Lead, not more than 5 parts per million;
    - c) Arsenic, not more than 2 parts per million;
    - d) Mercury, not more than 1 part per million;
    - e) Heavy metals (as lead), not more than 10 parts per million; and
    - f) Astaxanthin, not less than 0.4%.
  - iii) Uses and restrictions. Phaffia yeast may be safely used in the feed of salmonid fish in accordance with the following prescribed conditions:
    - a) The color additive is used to enhance the pink to orange-red color of the flesh of salmonid fish.
    - b) The quantity of astaxanthin in finished feed, from phaffia yeast when used alone or in combination with other astaxanthin color additive sources listed in part 73 of Title 21 of the Code of Federal Regulations (21 CFR 73), shall not exceed 80 mg/kg (72 grams per ton) of finished feed.
  - iv) Labeling requirements.
    - a) The labeling of the color additive and any premixes prepared there from shall bear expiration dates for the sealed and open container (established through generally accepted stability testing methods), other information required by 21 CFR 70.25, and adequate directions to prepare a final product complying with the limitations prescribed in paragraph (iii) of this section.
    - b) The presence of the color additive in finished fish feed prepared according to paragraph (iii) of this section shall be declared in accordance with 21 CFR 501.4.
    - c) The presence of the color additive in salmonid fish that have been fed feeds containing phaffia yeast shall be declared in accordance with 21 CFR 101.22(b), (c), and (k)(2) and 21 CFR 101.100(a)(2).
  - v) Exemption from certification. Certification of this color additive is not necessary for the protection of the public health, and therefore batches thereof are exempt from the certification requirements of section 721(c) of the Federal Food, Drug, and Cosmetic Act.
    - a) (Proposed 2015) 21 CFR 73.355

Richard Ten Eyck moves to ACCEPT; Mark LeBlanc seconds. MOTION PASSES.

### Discussion Topics

- 1.) CVM update on ingredient standards—CVM  
Sharon Benz updated the IDC on the FDAAA requirement for the Agency to set ingredient standards for pet food and animal food ingredients. She said that FDA will accept the Ingredient Standards and Definitions from AAFCO Official Publication for those specific ingredients that the

Agency has determined are Food Additives or GRAS substances. FDA will continue its process to conduct research to seek to sort the remaining OP ingredients as GRAS or as Food Additives. This will be an ongoing process. They will publish a regulation about this process in the future. Another regulation will be issued in the future to state that all AAFCO submissions will be treated as Food Additive Petitions.

- 2.) The following Definition Requests are stale. The submitting firm needs to respond to the indicated investigator by August 3, 2015, or the request will be removed without prejudice from investigator consideration. CVM asked the firm for more information 2 years ago or more and has not received a response. The firm will need to send a new request package with all information if they want to pursue the listing after August 3, 2015.

- A) Camelina meal for dairy cattle (Bob)
- B) Algae meal (*Chorella*) as omega 3 source (Erin)

The IDC ran out of time for the remaining topics. Chair Ten Eyck informed the IDC that there will be a webinar scheduled for the end of August 2015 to cover these topics. All interested should register with the Feed Bin and join the ingredient definitions team to receive the invitation to attend.

- 3.) Remaining Discussions

- A) Hemp Industry Feed Ingredients—educational presentation requested—Ali 3 definitions had been proposed. CVM indicated during the investigator meeting that there are health concerns, and the definitions were removed from the meeting agenda.
- B) States doing GRAS determinations. Bring into OP?—Richard, Ali
- C) How do definitions get reflected in pet food company ingredient purchasing specifications—?
- D) Preview and discuss editing 30.1 Enzymes tables—Jan
- E) What does “Feed Grade” mean?—group discussion
  - i) CVM—The substance is of an appropriate grade and suitable purity and is prepared and handled as an animal food ingredient.
- F) Canadian use of the monographs—Kent, Judy Thompson
- G) Form work group to make 4-hour presentation in January on how to submit a definition request and other Definition Process topics. [CVM (2), Industry (3), State (2)] Kent Kitade, Richard Ten Eyck, Leah Wilkinson, Stephanie Adams, Mollie Morrissette, Susan Thixton, STATE, CVM1, CVM2, Project manager: \_\_\_\_\_

The meeting was adjourned at 4:45 p.m.

A webinar was held on August 25, 2015, to discuss the remaining topics. A recording is posted in the Feed Bin/Ingredient Definitions Library. No votes were taken, and the discussion resulted in no recommendations for membership consideration.

## Ingredient Definitions Committee Webinar Report

Webinar Meeting  
November 13, 2015

### Committee Recommendations

Move for a new tentative definition in the OP for T33.20 \_\_\_\_\_ Fat Product, Feed Grade.

**Board Recommendations:** To Publish the tentative definition in the OP for T33.20 Fat Product, Feed Grade. **Board Recommends Acceptance**

**Association Actions:** (will consider on January 18, 2016)

### Committee Participants

**Committee Members:** Richard Ten Eyck, Mika Alewynse, Erin Bubb, Stan Cook, David Dressler, Steve Gramlich, Alan Harrison, April Hunt, Jacob Fleig

### Committee Report

The meeting convened at 10:30 a.m. Central Time by Chairperson Ten Eyck.

1.) New definitions, deletes, or edits

A) Motion to publish the tentative definition of

**T33.20 Fat Product, Feed Grade**—Obtained only from production methods and fat sources described in the definitions for animal fat and/or vegetable fat or oil. Provided the product is safe for use in animal food, the product may not meet specifications in the ingredient definitions for animal fat or vegetable fat or oil. It must be sold on its individual specifications that will include the minimum percentage of total fatty acids, the maximum percentage of unsaponifiable matter, the maximum percentage of insoluble impurities, and the maximum percentage of free fatty acids and moisture. The above listed specifications must be guaranteed on the label. If an antioxidant(s) is used, the common name or names must be indicated, followed by the words “used as a preservative.”

This definition shall be deleted from the Official Publication 12 months after electronic publication.

Jacob Fleig moves to ACCEPT; Alan Harrison seconds. MOTION PASSES.

Meeting adjourned at 11:00 a.m. Central Time.

The recording is posted in the Feed Bin/Ingredient Definitions Library.

## Inspection and Sampling Committee Report

2015 AAFCO Annual Meeting  
August 4, 2015, 8:00–10:30 a.m., Denver, Colorado

**Committee Recommendations:** None

**Board Recommendations:** Report accepted on 10/20/15

**Association Actions:** None

### Committee Participants

**Members Present:** Dan Danielson, TN; Chad Linton, WV; Meagan Davis, LA; Andy Gray, MT; Stan Cook, MO; Jim True, KY; Judy Thompson, CFIA; Brett Groves, IN; Ben Jones, TX; Bob Geiger, IN; Tim Lyons, MI; Bob Church, MT; Kevin Klommhaus, FDA; Wayne Nelson, CT

**Advisors Present:** Tomas Belloso, AFIA; Chris Olinger, NGFA; Jan Campbell, NGFA; Marty Smith, AFIA

**On Phone:** Jacob Fleig, MO

**Guests:** Mark LeBlanc, LA

### Committee Report

- 1.) Welcome and introduction  
Chair Dan Danielson called meeting to order and conducted meeting. He thanked everyone for attending and for all their time spent on the committee.
- 2.) BITS/AITS Update—Meagan Davis  
**2015 BITS**  
Hosted by Alabama Department of Agriculture in Decatur, Alabama, Sep. 29 to Oct. 1.  
Hotel reservation issues are because of hotel renovation. Meagan will notify all attendees when they can make their hotel reservations upon notification from hotel.  
**2016 AITS**  
To be hosted by the Tennessee Department of Agriculture.  
Further information will be provided when available.
- 3.) Training Availability—Gap Analysis  
Work group formed to review available trainings in regard to AFRPS Standards 2 (Training), 3 (Inspection), and 11 (Sampling): Chad Linton, Tim Lyons, Jim True, Bob Geiger, Tim Darden, Meagan Davis, and Kevin Klommhaus.
- 4.) Risk Based Inspections  
Dan Danielson and Darlene Krieger will host a webinar for those who wish to review the FDA MIN-DO Risk Based Analysis ranking system of feed facilities Pilot Project.  
Those who wish to utilize this analysis will be taught how the ranking system works.  
Designated states, yet to be determined, that utilize this ranking system will report back to the committee at Midyear 2016.
- 5.) New Sampling Techniques  
Tim Lyons and Chad Linton will begin work on the inclusion of aseptic sampling techniques in the AAFCO Inspectors Manual.
- 6.) Biosecurity  
AAFCO Inspectors Manual does not discuss biosecurity measures.  
AAFCO OP does provide the “AAFCO Model Biosecurity Protocol—Development Guidance Document,” edited by Roger Hoestenbach (TX).
- 7.) Defensible Samples—GOOD Samples Document  
Item tabled until Midyear 2016 because the document is not available for committee review.
- 8.) Sampling Studies  
Mark LeBlanc (LA) discussed the proposal for sampling studies to validate current sampling methods as well as new methods of sampling.  
Mark and Chad Linton will form a work group to determine priorities, methods, etc.

- 9.) AITS and BITS Prerequisite Requirement Proposal  
 Meagan Davis and Chad Linton feel it necessary to establish certain requirements to attend AITS and BITS to ensure some knowledge of training concepts prior to attending the courses. Meagan will send out the draft guidelines for both prerequisite courses, separating out the guidelines for “How to Host an AITS/BITS.”
- 10.) New Items: Proficiency Testing  
 Lab Methods and Services will be sending out a survey regarding sample proficiency through the Inspection and Sampling Committee.

**Action Item Table**

<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
Chad Linton, Tim Lyons, Jim True, Bob Geiger, Tim Darden, Meagan Davis, Kevin Klommhaus	Inspector Training	Compare available inspector training to AFRPS Standards 2, 3, and 11 and identify any gaps	Midyear report
Darlene Krieger, Dan Danielson	Risk Based Inspection Targeting	Host a webinar that provides info on MDA/MNDO pilot project	Before Midyear
Designated States: TN <b>Need more volunteers</b>	Provide feedback regarding piloting risk ranking project	Pilot the MDA/MNDO model	Midyear report
Chad Linton—will assemble group if needed	Aseptic Sampling	Research and provide guidance to include aseptic sampling procedures in Inspectors Manual	Midyear proposal
Judy Thompson, Brett Groves	Biosecurity	Review AAFCO Model Biosecurity Protocol Development Guidance doc and make recommendation whether, or what, parts should be included in Inspectors Manual	Midyear report
Chad Linton, Mark LeBlanc, Stan Cook	Sampling Studies	Assemble work group to design and conduct feed sampling studies	Midyear project update
Meagan Davis, Tim Lyons or ETC rep?	AITS and BITS Guidelines pertaining to prerequisites for attendees and “How to Host” guidance	Send out draft documents for I&S committee to review	Following approval of minutes

## Laboratory Methods and Services Committee Report

2015 AAFCO Annual Meeting

August 4, 2015, 8:00 a.m. to 5:00 p.m., Denver, Colorado

**Committee Recommendations:** None

**Board Recommendations:** Report accepted on 10/20/15

**Association Actions:** None

### Committee Participants

(C \*Committee members, \*\* Advisors)

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Patty Lucas	Florida Dept. of Ag. and Consumer Serv.	patricia.lucas@freshfromflorida.com

## Committee Report

### Committee Activities

ACTION: agenda approval

MOTION: “Motion to accept the agenda for the 2015 Annual Meeting of the Lab Methods and Services Committee” passes (all in favor)

## Committee Minutes

- 1.) Committee attendees introduced themselves.
- 2.) The Laboratory Methods and Services Committee (LM&SC) membership roster and industry advisor list was reviewed, and Aaron Price indicated new appointments. A. Price reminded Committee Members that they must vote (even if it is only to abstain) or otherwise request that they be removed from the committee. People wishing to be added or eliminated from the list should contact A. Price.
- 3.) FSMA Implementation Task Force update was provided by Theresa Grant. The group is focused on ways to determine if critical control points (CCPs) are correctly identified based on a list of risks and associated levels to be provided.
- 4.) Method Needs Statement update was provided by A. Price. No need for new method needs statements. Survey to be repeated in 2016. FDA is interested in multiresidue methods such as multidrug residue methods. Difficult to find suitably validated methods or labs willing to participate in method validation efforts. It was agreed to request presentations on drug residue analysis methods at the Jan. 2016 meeting and follow up with the formation of a working group. Other potential method needs were focused around protein adulteration (melamine, leather hydrolysate).
- 5.) AAFCO Project Funding Opportunities update was provided by Nancy Thiex. AAFCO had offered around \$50,000 for method validation. Proposals were requested and reviewed, support was awarded, and some of the presentations were a result of this funding. Similar funding may be available in the future.
- 6.) Working Group updates:
  - A) CTC WG—Tom Phillips was absent.
  - B) Tylosin WG—Tom Phillips was absent
  - C) Fat Soluble Vitamins WG—K. Riter reported that 9 samples were sent out in April/May to 11 labs for vitamin A, 8 labs for vitamin E. Data were received from 8 labs. Similar results were obtained with all the vitamin A methods. Issue with “within lab” variation—almost as large as “between lab” variations. It was suggested to grind sample just prior to analysis. Andy Crawford will compile sample size used by the different labs to see if that correlated with the observed variability. Working group to make recommendations as to the next steps.
  - D) Best Practices WG—Sharon Webb reported that the group is currently focused on phosphorus. High P levels are the most challenging. Dry ashing makes P, Ca, Cu, Fe, Mn, and Zn very insoluble in the acid solubilization method. White Paper should be completed prior to January meeting, after which the group will start to tackle another difficult analyte.
  - E) Sugars (mono- and disaccharide) WG—D. Berg reported that he had settled in 50% water/ethanol as the preferred extraction solvent and ion chromatography for the separation and quantitation of the individual sugars present (Dionex ICS 5000 with PAD). Separations and LOQ looked good. Goal is to finalize and subsequently publish the method SLV. It was suggested to include a listing of interferences checked (e.g., sugar alcohols and other sugars) and their retention time relative to glucose.
  - F) Mycotoxin WG—Robert Sheridan reported that the latest extraction solvent mixture suggested by Romer Labs (79% acetonitrile:1% acetic acid:20% water) enabled the extraction of 11 mycotoxins. Although Robert’s lab uses matrix matched standards, there were discussions about the benefits arising from using isotope labeled standards. Discussions followed regarding the sample amount used for the assay. NY used 2 g, and Romer recommended using 25 g. R. Sheridan is currently looking for collaborators and plans to distribute method and reference samples.
  - G) Quality Assurance WG—Gail Hagood reported that the group had completed its task and highlighted the tools available on the AAFCO website.
  - H) Sampling WG—The group has worked successfully for 3 years. The first 12 chapters of the guidelines should be published soon on the AAFCO website, and the next 2 chapters should be completed within the next year. The process includes verifying that the guidelines comply with the recommendations in the “Good Sample Protocol.”
- 7.) FDA Cooperative Agreement:
  - A) Food Emergency Response Network (FERN) update provided by Michael McLaughlin from the Office of Regulatory Affairs, and he explained how it interfaced with FDA’s goal of improving the food defense and food safety systems. FERN is managed by USDA-FSIS and FDA-ORA and currently encompasses 169 labs. FERN labs have been used in FDA’s surveillance



- program (e.g., avocado program; as in fruit juice, absence of radiological contaminants in products from Japan; PAH analysis as part of the Deepwater Horizon oil spill, etc.). New grants available to facilitate the entry of more labs into the program.
- B) Collaborative Check Sample Committee—Thiex reported that the feed program had added a lot of new analyte codes and needed another high NPN sample. The mycotoxin program was in its second year and working well. The mineral program has just started. The program is working on getting accredited to ISO 17043 and hired a consultant to complete a gap analysis. SOPs need to be written, and the committee has recommended the hiring of a part-time (10 hours/month) QA project manager.
  - C) Partnership for Food Protection—Brenda Snodgrass reported that the group was formed in 2004 as a response to a Homeland Security Presidential Directive (HSPD-9). It has a very informative website and has produced a “Best Practices” manual.
  - D) Co-Ag activities led by APHA/AFDO—Yvonne Salfinger reported that APHL had supported many labs toward their journey to ISO 17025 accreditation. She highlighted the resources listed on the APHL website ([www.aphl.org](http://www.aphl.org)) and offered to provide advice and support if contacted.
  - E) The Training Workgroup update was given by Mark Stenske. The group is tasked with working on the curriculum addressing the training competencies outlined by IFPTI for feed laboratories. However, it is currently at a standstill because the program’s value to labs has not been unanimously agreed upon.
- 8.) AFRPS and ISO 17025 accreditation for feed labs update was presented by Theresa Bills. She reported that she had received 21 applications for the Animal Feed Program Standard Cooperative Agreement and that she had funding for 24 labs. A panel will review applications August 10 to 11.
- 9.) Other Topics:
- A) Appropriate Crude Fat Methods for DDGs—Lars Reimann provided a summary of the history behind the review of the appropriate methodology for determining crude fat in DDGs and suggested that due to trade issues, it was time to revisit this issue. He announced that AOCS had initiated a ring test program focused of DDGs and recommended interested parties participate using their method of choice as well as the method recommended by the industry back in 2007.
  - B) Fat extractions of high fat samples using the Thermo Dionex fat extractor—several labs reported low bias when using this extractor compared with other extractors and other methods in general.
  - C) Aflatoxin in Indian corn and Dioxins in Palm oil—Aaron Price provided summaries of CFIA’s findings related to those two events.
  - D) Formation of Laboratory Centers of Excellence among State Labs—Thiex reported that FSMA may drive such consolidation/specialization among state labs. Thiex recommended the formation of a work group to draft a concept paper (Theresa Grant, Robert Sheridan, Aaron Price, Lars Reimann volunteered, may have been others).

### Action Item Table

Responsible	Item	Action	Timing/Status
All	Reviewing committee roster	Review the committee roster and let Nancy or Aaron know if you would like to be added to or removed from the committee.	Prior to next meeting
Fat Soluble Vitamins WG chairs	Method performance study	Review data received and correlate sample amounts used in the analysis with the observed within lab CV.	Prior to next meeting
D. Berg	Method SLV	Complete method SLV. Distribute for comment and submit for publication.	Prior to next meeting
R. Sheridan and Mycotoxins working group	Get collaborators and samples	Identify labs interested in participating in ring trial, distribute method and reference samples.	Prior to next meeting

<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
WG on "Centers of Excellence"	Organize	Draft concept paper for group review.	Prior to next meeting
S. Webb and Best Practices working group	Phosphorus white paper	S. Webb and her group to complete white paper and submit to the group.	Prior to next meeting
A. Price	LM&SC conference calls	Schedule next conference calls of the LM&SC with members and advisors.	End of September, early November, and mid-December

## **Model Bills and Regulations Committee Report**

2015 AAFCO Annual Meeting  
August 4, 2015, Denver, Colorado

**Committee Recommendations:** None

**Board Recommendations:** Report accepted on 10/20/15

**Association Actions:** None

### **Committee Report**

Model Bills and Regulations Committee Chair Doug Lueders called the meeting to order at 4:50 p.m. on August 4, 2015. He welcomed committee members, industry advisers, and guests who were present and reviewed the agenda. He asked if there were any suggested changes to the agenda or additional topics to be brought before the committee, and none were offered.

In addition to Mr. Lueders, committee members in attendance were Ken Bowers (Kansas), Bill Burkholder (FDA), Mike Davidson (California), Bob Geiger (Indiana), April Hunt (Michigan), Ben Jones (Texas), and Richard Ten Eyck (Oregon). There were no committee members participating by phone.

Industry advisers present were Scott Ringger (AFIA); David Dzanis (APPA/ACVN); Jan Campbell and David Fairfield (NGFA); and Angele Thompson and Pat Tovey (PFI).

### **Minutes from Previous Committee Meeting**

Chair Lueders noted that minutes from the January 13, 2015, committee meeting conducted in San Antonio were approved on March 16, posted on the AAFCO website, and included in the 2015 Annual Meeting's General Session packet.

### **Old Business**

Chair Lueders noted the committee had no old business to consider. He also noted that all previous recommendations emanating from the committee's meeting in San Antonio were approved by the AAFCO Board of Directors and the AAFCO membership at the August 3 General Session.

### **New Business**

The committee proceeded to consider new business.

- 1.) It was noted that earlier in the week it was brought to the Chair's attention that the Feed Labeling Committee would be forwarding an updated swine nutrition panel that removed the zinc requirements. This will be addressed electronically before the committee prior to the midyear meeting.
- 2.) FSMA—A working group consisting of April Hunt (chair), Richard Ten Eyck, Leah Wilkinson, David Fairfield, and Patrick Tovey was appointed by the chair to review the AAFCO Model Bills and Regulations for harmonization with the impending FSMA rules. They will draft model language and submit to the committee for concurrence.
- 3.) Model Bills and Regulations—AFIA explained that they found a few discrepancies within the Model Bill while working on state feed law updates in the past year. The Chair indicated that he was also aware of needs for certain editorial changes. AFIA and the Chair will combine their lists and present them to the Committee for consideration.

### **Assignments/Homework for Midyear Meeting**

The committee and advisors were made aware that they should expect some subjects for consideration prior to the 2016 midyear meeting.

### **Adjournment**

Mr. Lueders asked whether there was any other business to be considered by the committee. Given that none was identified, the committee meeting was adjourned at 5:03 p.m. MDT.

On behalf of the Model Bills and Regulations Committee, I respectfully submit this annual report and request acceptance of the report by the AAFCO Board of Directors and the Association Membership.

## **Model Bills and Regulations Committee e-Meeting Report**

e-Meeting

August 27–September 9, 2015

### **Committee Recommendations**

The Model Bills and Regulations Committee (MBRC) recommends that revisions proposed by the Feed Labeling Committee to the AAFCO Swine Nutrient Profile, as indicated in Attachment A, conform to the Model Regulations and that the AAFCO Board of Directors review the proposal for future consideration of the association membership.

**Board Recommendations:** None

**Association Actions:** None

### **Committee Report**

Model Bills and Regulations Committee Chair Doug Lueders called the e-meeting to order at 7:13 a.m. on August 27, 2015. He asked committee members and industry advisers to review the new business item first presented at the August 4 MBRC meeting in Denver. At issue is the Swine Nutrient Profile as revised by a panel of swine nutrition experts and approved by the Feed Labeling Committee.

On August 27, 2015, Tim Darden made a motion to recommend that the revised Swine Nutrient Profile as presented conforms to the Model Regulations and that the AAFCO Board of Directors review the proposal for future consideration of the association membership. It was seconded by Ken Bowers. Chair Lueders called for discussion.

On September 9, 2015, Chair Lueders called for a vote. This e-vote required six (6) aye votes to pass. Aye votes were cast by Paul Bachman, John Breitsman, April Hunt, Tim Darden, Bill Burkholder and Ken Bowers. The motion was announced as passed, and the e-meeting adjourned at 9:43 a.m. CDT, September 9, 2015.

On behalf of the Model Bills and Regulations Committee, I respectfully submit this supplemental report and request acceptance by the AAFCO Board of Directors and the Association Membership.

## **Attachment A: Model Regulation for GA for Swine Complete Feeds and Supplements**

### **Regulation 3. (a) 4 (I) (page 120)**

- I. Required Guarantees for Swine Formula Feeds
  - a. Animal Classes
    - i. Pre-Starter – 2 to 11 pounds
    - ii. Starter – 11 to 44 pounds
    - iii. Grower – 44 to 110 pounds
    - iv. Finisher – 110 pounds to market weight
    - v. Gilts, Sows, and Adult Boars
    - vi. Lactating Gilts and Sows
  - b. Guaranteed Analysis for Swine Complete Feeds and Supplements (all animal classes)
    - i. Minimum percentage of Crude Protein
    - ii. Minimum percentage of Lysine
    - iii. Minimum percentage of Crude Fat
    - iv. Maximum percentage of Crude Fiber
    - v. Minimum and Maximum percentage of Calcium
    - vi. Minimum percentage of Phosphorus
    - vii. Minimum and maximum percentage of Salt (if added)
    - viii. Minimum and maximum percentage of total Sodium shall be guaranteed only when total Sodium exceeds that furnished by the maximum salt guarantee
    - ix. Minimum Selenium in parts per million (ppm)

**Pet Food Committee Report**  
2015 AAFCO Annual Meeting  
August 4, 10 a.m.–12 p.m., Denver, Colorado

**Committee Recommendations**

- 1.) The Pet Food Committee recommends an editorial change to the maximum iodine value and associated references in the AAFCO Cat Food Nutrient Profiles be passed to the section editor for inclusion in the 2016 AAFCO Official Publication. See Appendix A.
- 2.) The PFC recommends the inclusion for clarification purposes of “, including snacks, treats, and supplements,” in PF9(a) be considered by the Model Bill and Regulations Committee (Appendix E).

**Board Recommendations:** Report accepted on 10/20/15

**Association Actions:** None

**Committee Participants**

**Members Present:** Chair Stan Cook (MO), Vice-Chair Kristen Green (KY), Liz Higgins (NM), Jan Jarman (MN), Lizette Beckman (WA), Austin Therrell (SC), William Burkholder (FDA-CVM), Charlotte Conway (FDA-CVM)

**Advisors Present:** James Emerson (US Poultry and Egg), Jessica Meisinger (NRA), Dave Fairfield (NGFA), Pat Tovey (PFI), Angele Thompson (PFI), Angela Mills (NGFA), Leah Wilkinson (AFIA), Jason Vickers (AFIA), David Meeker (NRA), Dave Dzanis (APPA/ACVN), Jean Hofve (PWA), Mollie Morrissette (PWA), Susan Thixton (AFTP)

41 additional regulatory officials, 133 industry representatives, and 11 additional representatives attended the 2015 Annual Pet Food Committee meeting.

**Committee Report**

**Committee Activities**

**ACTION:** Editorial changes required to the AAFCO Cat Food Nutrient Profiles passed by the membership on August 3 to include the maximum iodine value and associated language as intended and passed by the committee previously.

**MOTION:** William Burkholder (FDA-CVM) moved to have the omission of the maximum iodine value for the AAFCO Cat Food Nutrient Profiles and supporting text as displayed on the screen (Appendix A) be presented to the section editor as an editorial change for publication in the 2016 AAFCO OP. Seconded by Liz Higgins (NM). **MOTION PASSED.**

**ACTION:** The PFC accepted the Carbohydrate work Group report, tabled it, and tasked the work group to further consider additional methods as they become available (Appendices B, C, D).

**MOTION:** William Burkholder (FDA-CVM) moved to accept the work group report. Seconded by Liz Higgins (NM). **MOTION PASSED.**

**MOTION:** William Burkholder moved to table the report for future discussion at the 2016 Midyear Meeting. Seconded by Liz Higgins (NM). **MOTION PASSED.**

**MOTION:** William Burkholder moved that the Carbohydrate work group remain in place and remain apprised of the progress of the Lab Services Committee regarding the sugars methodology and consider inclusion of the carb/sugar methods when published. Seconded by Liz Higgins (NM). **MOTION PASSED.**

ACTION: The PFC considered the need to clarify the intent of PF9(a) to indicate applicability of the regulation to treats, snacks, and supplements.

MOTION: Liz Higgins (NM) moved to include “, treats, snacks, and supplements,” in PF9(a) as displayed on the screen (Appendix E).

Seconded by William Burkholder (FDA-CVM). MOTION PASSED.

MOTION: Stan Cook (MO) moved to forward the changes to PF9(a) to the Model Bill and Regulations Committee for their consideration.

Seconded by William Burkholder (FDA-CVM). MOTION PASSED.

MOTION: Jan Jarman (MN) moved to establish a work group to develop guidelines for the use of human grade or human grade ingredient type claims.

Seconded by Liz Higgins (NM). MOTION PASSED.

## **Committee Minutes**

### **Announcements**

The PFC welcomes new committee member Austin Therrell from South Carolina and new advisor Ken Wilson as an alternate for the US Poultry Association.

### **Utilizing the AAFCO Feed Bin**

The committee was advised that the PFC will be increasing use of the AAFCO Feed Bin and that those who wish to participate should be sure to have access. Those not on the committee who are Feed Bin members who would like to be advised of PFC activities should contact Kristen Green to be granted access to the site.

### **Report on Pet Food Product Registration Standardization—Pat Tovey (PFI)**

Results from a 2014 and 2015 survey of state capacities were presented indicating an increase by many respondents in online and electronic capacities. The work group is getting closer to being able to present a model registration program and expressed availability to assist states if interested in developing an online registration system.

### **AAFCO Cat Food Nutrient Profiles Iodine Issue**

William Burkholder (FDA-CVM) indicated that an inadvertent editorial omission of the maximum iodine value in both cat food and a short section with the references to the values was noted in the AAFCO Cat Food Nutrient Profiles passed by the general membership on August 3, 2015. The omissions were displayed on the screen for the PFC and audience (Appendix A). The maximum iodine was originally intended by the AAFCO Nutrient Profiles Work Group and was passed by the Pet Food Committee. These values were inadvertently omitted from the version that was passed to the Model Bill Committee for their consideration. There were no comments against adding this value and supporting references as an editorial change. There were comments from advisors indicating that this change should appear in the Official Publication as soon as possible to prevent confusion of additional changes to the Profiles after publication of the revised Profiles for 2016.

### **AAFCO Talks Pet Food Website—Lizette Beckman, WA Dept. of Agriculture**

Lizette indicated that content has been reviewed and comments and changes recorded and incorporated into the final site that is now available through the Consumers link on the AAFCO homepage. There will be a press release, and the gallery and entire committee was requested to help spread the word about the site. It was noted that this is a living website and that the entire work group should be made aware of any changes or comments that may be required. Richard Ten Eyck requests that states include a link to this new site on their respective websites. The work group will remain active for now to process content comments.

### **AAFCO Pet Food and Specialty Pet Food Labeling Guide Working Group—Charlotte Conway, FDA-CVM**

Sections and revisions from work group members have been received, and the final draft should be ready for review in the next few weeks. The estimated timeline for presentation for a vote to the PFC as a whole is by the end of September with subsequent presentation to the board of directors by the end of October.

### **Pet Food Labeling Workshop—Kristen Green, KY Div. Reg. Svcs.**

The current list of volunteers for the work group: AFIA representative, PFI representative, NGFA representative, Dave Dzanis, Jean Hofve, Angele Thompson, Jessica Meisinger, Denise Terwilleger, Jo Lynn Otero, Stan Cook, Jan Jarman, Natasha Hedin, Kristen Green, Liz Higgins, Lizette Beckman,

William Burkholder, Charlotte Conway, Austin Therrell, Susan Thixton, Bill Bookout. A call for additional volunteers and a limit of 2 volunteers for each organization was presented. The first call is planned to be scheduled for September 17, and smaller subgroups will be assigned and formed for specific topics and activities at that time. Members of the work group were informed that they must have Feed Bin access.

**Tartar Control Claims—Jan Jarman, MN Dept. of Agriculture**

The work group had a conference call and received changes to the language submitted in the January 2015 midyear meeting. The next conference call will be scheduled after this meeting.

**Carbohydrate Working Group—Jan Jarman, MN Dept. of Agriculture**

Jan presented the work group's report (Appendix B) to provide carbohydrate information in the form of NFE on pet food labels. The NFE Regulations and affidavit are listed in Appendices C and D. It was noted that this work group formed some time ago to address the interest in including carbohydrate information on pet food labels. At the time, there were no recognized methods for sugars or dietary starch to support such claims, so the work group focused on providing NFE information. Recently, however, an AOAC method for dietary starch has become available, and a sugars guarantee for mono and disaccharides is anticipated to be submitted to AOAC in August 2015. Nancy Thiex (Lab Services Committee), Jeff Forrest (Agri-King), and Dan Berg (Covance) provided the committee with information regarding the sugars in animal food method.

**Clarification of PF9(a) and Applicability of this Regulation to Treats, Snacks, and Supplements**

Liz Higgins (NM) discussed confusion regarding the applicability of PF9 to snacks, treats, and supplements. It was discussed that it was always the intention of the work group and PFC to have this regulation apply to treats, snacks, and supplements, and there were additional comments that clarification in the regulation would be helpful. Text of PF9(a) was presented on the screen and revised to include “, including snacks, treats, and supplements,” after the words “cat food” (Appendix E).

**Clarification of Items in the Model Regulations for Pet and Specialty Pet Food Under the Model Bill Discussion of “Human Grade” and “Human Grade Ingredients” Claims**

Charlotte Conway (FDA-CVM) provided the committee with information regarding the standard that FDA-CVM utilized to consider “human grade” type claims and explained that the CVM has decided not to continue to preapprove these claims based on resources available and consistency of approach to other similar claims. It was suggested that PFC create a guideline for such claims that could be a reference for state regulators in considering such claims. There was considerable discussion among the committee and audience concerning the legal definition for such claims and applicability of language such as “human grade” and “human edible,” and their status as marketing claims. Susan Thixton indicated that she had presented the committee with results and comments from a petition calling for disclosure of ingredient quality for pet food ingredients. It was moved to form a work group; however, because of time restraints during the meeting, the work group members will need to be appointed after the meeting.

Pet Food Committee Adjourned at 12:05 p.m.

**Action Item Table**

<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
Lizette B.	AAFCO Talks Pet Food	Send comments to FASS prior to publication of website	Completed
Jan J.	Carbohydrate Work Group report	Submit to PFC for consideration	Submitted, PFC tabled 8.15— Completed
Charlotte C.	PF/SPF Labeling Guide revisions	Finalize Labeling guide, complete revisions, and move to PFC vote	Final product anticipated to be ready for PFC consideration in Sep. for a vote for presentation to the BOD in 2015



<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
Lizette B.	AAFCO Talks Pet Food	Send comments to FASS prior to publication of website	Completed
Jan J.	Carbohydrate Work Group report	Submit to PFC for consideration	Submitted, PFC tabled 8.15— Completed
Jan J.	Revised Tartar Control Work Group	Work group to provide revised AAFCO Tartar Control Guidelines to the PFC for consideration before midyear 2016	Language due to PFC in advance of midyear 2016 meeting
Lizette B.	AAFCO Talks Pet Food revisions after activation	WG to consider comments and revisions provided by the public and members for inclusion in the site	Ongoing
Jan J.	Carbohydrate WG	WG to maintain contact with the Lab Services Committee regarding Sugars method and consider inclusion in carbohydrate labeling guidelines	Ongoing
Stan C., Kristen G.	Roll-out of AAFCO Talks Pet Food website	Facilitate press release and roll-out with FASS	Completed 8.25.2015
Kristen G.	Pet Food Labeling Workshop work group formation	Arrange for first meeting of the WG	Sep. 2015
Kristen G., Liz H.	Pet Food Labeling Workshop AAFCO facilitation	Complete and submit workshop information to Education and Training Committee. Make necessary arrangements with FASS regarding general dates and times for reservation purposes.	Oct. 2015
Kristen G.	AAFCO Cat Food Nutrient Profile editorial changes	Provide changes to section editor for inclusion in 2016 OP	Complete— provided to FASS 8.12.2015
Kristen G.	PF9(a) revisions	Provide suggested revisions to PF9(a) to Model Bill Committee	Complete— provided to MBRC 8.12.2015
Stan C.	Formation of Human Grade WG	Assign members for the Human Grade Work Group	Aug. 2015

## Appendix A

### Pet Food Committee

Editorial change including maximum iodine value in the AAFCO Cat Food Nutrient Profiles and associated references.

PFC passed editorial change August 4, 2015. MBC passed January 2015. Membership passed August 3, 2015.

### AAFCO METHODS FOR SUBSTANTIATING NUTRITIONAL ADEQUACY OF DOG AND CAT FOODS

This section contains the minimum testing methods for the substantiation of nutritional adequacy claims, calorie content claims, and procedures for establishing pet food product families referenced in AAFCO Model Pet Food and Specialty Pet Food Regulations PF2, 4, 7, 8, 9, and/or 10. These methods represent minimum requirements. Companies may choose, or may need, to perform additional testing to substantiate their claims.

### AAFCO Dog and Cat Food Nutrient Profiles

#### Introduction

The original Canine and Feline Nutrition Expert Subcommittees convened in 1990 were charged by the chair of the AAFCO Pet Food Committee to establish practical nutrient profiles for both dog and cat foods based on commonly used ingredients. These subcommittees established the “AAFCO Dog Food Nutrient Profiles” and the “AAFCO Cat Food Nutrient Profiles” that appeared in the Official Publication of the AAFCO in 1992 and 1993, respectively. The profiles were reviewed in 1994/95, and updates to the maximum concentrations for vitamin A in dog foods were implemented in 1996.

The National Research Council (NRC) in 2006 updated its published *Nutrient Requirements of Dogs* and *Nutrient Requirements of Cats* in a single publication that combined recommendations for both species.<sup>1</sup> In 2007 the AAFCO Pet Food Committee again formed Canine and Feline Nutrition Expert Subcommittees and charged these subcommittees with the task of revising the AAFCO Nutrient Profiles in consideration of the information in the 2006 NRC *Nutrient Requirements of Dogs and Cats* (2006 NRC). In addition, the subcommittees considered information in the NRC *Mineral Tolerance of Animals* Second Revised Edition, 2005 (2005 *Mineral Tolerance of Animals*).<sup>2</sup> Finally, the subcommittees also reviewed and considered the recommended nutrient concentrations for dog and cat food products as published in February 2008 by the European Pet Food Industry Federation [Federation Europeenne de l'Industrie des Aliments pour Animaux Familiars (FEDIAF)], titled *F.E.D.I.A.F. Nutritional Guidelines for Complete and Complementary Pet Food for Cats and Dogs* (FEDIAF Guidelines) that are roughly the European equivalent to the AAFCO Dog and Cat Food Nutrient Profiles.<sup>3</sup>

The AAFCO Dog and Cat Food Nutrient Profiles were designed to establish practical minimum and some maximum nutrient concentrations for dog and cat foods, formulated from commonly used, nonpurified, complex ingredients. The concentrations differ from minimum nutrient requirements traditionally developed by the NRC Committee on Animal Nutrition. Many of the NRC minimum nutrient requirements are based on research with purified diets and/or highly bioavailable nutrient sources that are not practical to use in commercial dog and cat foods. Therefore, unlike the previous NRC publications *Nutrient Requirements of Dogs* in 1985<sup>4</sup> and *Nutrient Requirements of Cats* in 1986,<sup>5</sup> the *Nutrient Requirements of Dogs and Cats* in 2006 contained 2 additional listings of nutrient concentrations for adequate intake and recommended allowance (RA) in addition to minimum requirements. The concentrations for RAs of nutrients in the 2006 NRC are at least equal to, or greater than, concentrations for adequate intakes and minimum requirements, respectively, and are defined as “the concentration or amount of a nutrient in a diet formulated to support a given physiological state.” When appropriate, the RA takes into consideration the bioavailability of the nutrient. Thus, the Canine and Feline Nutrition Expert Subcommittees of 2007 primarily used the RA in the 2006 *Nutrient Requirements of Dogs and Cats* in evaluating whether revision was needed to one or more of the minimum recommended concentrations in the profiles. Values for specific nutrient concentrations were added or modified where indicated and supported by recent scientific publications, practical experience, or unpublished data.

The AAFCO Dog and Cat Food Nutrient Profiles have been criticized and faulted for not explicitly indicating the apparent nutrient digestibility, sometimes called nutrient availability or bioavailability, required to make the listed concentrations adequate for meeting the animal's daily requirements. When a minimum requirement has been established for a particular nutrient, the expected apparent digestibility to meet the minimum requirement for that nutrient at the recommended concentration listed in an AAFCO Nutrient Profile can be calculated using the formula:

$$\left[ \frac{\text{(minimum requirement)} \times \text{(its apparent digestibility in the diet(s) used to establish the minimum requirement)}}{\text{(recommended concentration in the AAFCO Profile)}} \right] \times 100.$$

In the above formula, the minimum requirement is expressed in the same units as in the AAFCO Nutrient Profile, and digestibility is expressed in decimal equivalents. As an example, the NRC lists the minimum crude protein requirement for puppies to be met by formulas containing 18% crude protein on a dry matter basis with the digestibility of the protein sources estimated to be near 100%. The 2016 AAFCO Dog Food Nutrient Profile for Growth and Reproduction recommends the minimum crude protein concentration of dry matter to be 22.5%. Therefore, the expected apparent digestibility for crude protein in a diet formulated to meet the AAFCO Dog Food Nutrient Profile for Growth and Reproduction is at least 80%  $\{[18 \times (1.00)/22.5] \times 100\}$ .

For nutrients known to be essential, but that lack sufficient data to establish a minimum requirement, the typical digestibility for the nutrient in ingredients and food matrices similar to those used to establish the apparent amount to fulfill the animal's need for the nutrient should be ensured. The 2006 *Nutrient Requirements of Dogs and Cats* discusses average or typical apparent digestibility for such nutrients when explaining how a RA was set. As an example, for adult dogs there is no established minimum requirement for iron, although iron is considered essential for adult dogs. In setting the RA of 30 mg/kg in dietary dry matter for adult maintenance, the NRC subcommittee considered the apparent digestibility of iron to be 20%. However, the explanatory text in the publication notes that measured apparent digestibility of iron in the scientific literature has ranged from close to 100% to less than 10% and is affected by numerous factors such as the specific source of iron, the concentration of other specific minerals or other ingredients in the diet, as well as the iron status of the animal.

The specific example for iron can be generalized to most essential minerals and demonstrates the impossibility that any list of concentrations can invariably ensure that all nutrient requirements are fulfilled in all diet formulas without additional considerations. As stated for the previous editions of the AAFCO Dog and Cat Food Nutrient Profiles, formulating a product according to the Profiles is only one part of a nutritionally sound, scientific development that must consider all other aspects of the product. The fact that a dog or cat food is formulated to meet a specific AAFCO Profile should not deter or discourage the manufacturer from conducting appropriate feeding trials to further confirm and ensure the diet is nutritionally adequate for its intended use.

Indications regarding expected nutrient availability from some ingredient sources are given in footnotes. It is important to read the footnotes to the tables because they contain information critical to many of the recommended concentrations. Additionally, manufacturers must make allowances to nutrient concentrations prior to processing to account for losses during processing and subsequent storage. The recommended concentrations in the Profiles are those expected to be present at the time the formula is consumed by the animal.

The established profiles are the "AAFCO Dog Food Nutrient Profiles" and "AAFCO Cat Food Nutrient Profiles" as the terms are applied in AAFCO model pet food regulations referring to nutritional adequacy. Under these model regulations, dog and cat foods substantiated for nutritional adequacy by reference to the AAFCO Dog and Cat Food Nutrient Profiles for a designated life stage(s) must be formulated to contain at least the minimum concentrations of nutrients specified in the Profiles and, for some nutrients, not more than any maximum concentration listed for that specific nutrient in the Profiles as shown in this section. Products with their nutritional adequacy substantiated by AAFCO Feeding Protocols are not mandated to meet the minimum or maximum concentrations listed in the Profiles. Additionally, snacks, treats, or products intended for intermittent or supplemental feeding only are not mandated to meet the concentrations in the Profiles unless their labeling references the Profiles.

The AAFCO Dog and Cat Food Nutrient Profiles and the AAFCO Feeding Protocols are the only methods recognized by AAFCO for substantiating the nutritional adequacy of "complete and balanced" dog or cat foods. If a product is substantiated by a feeding trial and does not meet the AAFCO Dog or Cat

Food Nutrient Profiles, the label cannot reference the Profiles. An unqualified reference to an AAFCO Dog or Cat Food Nutrient Profile is an implied guarantee that the product contains the minimum concentrations for all nutrients in the profile and no more than any maximum concentration listed for a specific nutrient in the profile.

Minimum and some maximum nutrient concentrations were established in the Profiles for 2 categories: growth and reproduction (gestation/lactation), and adult maintenance. Maximum nutrient concentrations were established for nutrients where the potential for overuse or toxicity is of concern and likely to occur if attention is not paid to the concentrations of those nutrients. The absence of a maximum concentration should not be interpreted to mean that nutrients without a specific maximum content are safe at any concentration. Rather, it reflects the lack of information in dogs and cats on toxic concentrations of that nutrient. Establishing a maximum concentration implies safety below that concentration for long-term consumption and to set a maximum arbitrarily might prove worse than no maximum at all.

The nutrient concentrations are expressed on a dry matter (DM) basis and at a specified caloric density. Diets should be corrected for caloric density as indicated below. Reference to the concentrations of nutrients on a product label in the guaranteed analysis must be expressed in the same units and order as given in the AAFCO Dog or Cat Food Nutrient Profiles. For the purposes of determining metabolizable energy (ME), use the methods specified in Model Regulation PF9.

**AAFCO DOG FOOD NUTRIENT PROFILES  
BASED ON DRY MATTER<sup>a</sup>**

<b>Nutrients</b>	<b>Units DM Basis</b>	<b>Growth and Reproduction Minimum</b>	<b>Adult Maintenance Minimum<sup>b</sup></b>	<b>Maximum</b>
Crude Protein	%	22.5	18.0	
Arginine	%	1.0	0.51	
Histidine	%	0.44	0.19	
Isoleucine	%	0.71	0.38	
Leucine	%	1.29	0.68	
Lysine	%	0.90	0.63	
Methionine	%	0.35	0.33	
Methionine-cystine	%	0.70	0.65	
Phenylalanine	%	0.83	0.45	
Phenylalanine-tyrosine	%	1.30	0.74	
Threonine	%	1.04	0.48	
Tryptophan	%	0.20	0.16	
Valine	%	0.68	0.49	
Crude Fat <sup>c</sup>	%	8.5	5.5	
Linoleic acid	%	1.3	1.1	
alpha-Linolenic acid	%	0.08	ND <sup>d</sup>	
Eicosapentaenoic + Docosahexaenoic acid	%	0.05	ND <sup>d</sup>	
(Linoleic + Arachidonic):(alpha-Linolenic + Eicosapentaenoic + Docosahexaenoic) acid ratio				30:1
Minerals				
Calcium	%	1.2	0.5	2.5 (1.8) <sup>e</sup>
Phosphorus	%	1.0	0.4	1.6
Ca:P ratio		1:1	1:1	2:1
Potassium	%	0.6	0.6	
Sodium	%	0.3	0.08	
Chloride	%	0.45	0.12	
Magnesium	%	0.06	0.06	
Iron <sup>f</sup>	mg/kg	88	40	

Copper <sup>g</sup>	mg/kg	12.4	7.3	
Manganese	mg/kg	7.2	5.0	
Zinc	mg/kg	100	80	
Iodine	mg/kg	1.0	1.0	11
Selenium	mg/kg	0.35	0.35	2
Vitamins and Others				
Vitamin A	IU/kg	5000	5000	250000
Vitamin D	IU/kg	500	500	3000
Vitamin E <sup>h</sup>	IU/kg	50	50	
Thiamine <sup>i</sup>	mg/kg	2.25	2.25	
Riboflavin	mg/kg	5.2	5.2	
Pantothenic acid	mg/kg	12	12	
Niacin	mg/kg	13.6	13.6	
Pyridoxine	mg/kg	1.5	1.5	
Folic acid	mg/kg	0.216	0.216	
Vitamin B <sub>12</sub>	mg/kg	0.028	0.028	
Choline	mg/kg	1360	1360	

<sup>a</sup>Presumes a caloric density of 4000 kcal ME/kg, as determined in accordance with Regulation PF9. Formulations greater than 4000 kcal ME/kg should be corrected for energy density; formulations less than 4000 kcal ME/kg should not be corrected for energy. Formulations of low-energy density should not be considered adequate for reproductive needs based on comparison to the Profiles alone.

<sup>b</sup>Recommended concentrations for maintenance of body weight at an average caloric intake for dogs of a given optimum weight.

<sup>c</sup>Although a true requirement for crude fat per se has not been established, the minimum concentration was based on recognition of crude fat as a source of essential fatty acids, as a carrier of fat-soluble vitamins, to enhance palatability, and to supply an adequate caloric density.

<sup>d</sup>ND = not determined. While a minimum requirement has not been determined, sufficient amounts of omega-3 fatty acids are necessary to meet the maximum omega-6:omega-3 fatty acid ratio.

<sup>e</sup>The maximum of 1.8% is applicable to formulas that may be fed to large size puppies (those weighing 70 pounds or greater as mature lean adults). For other life stages, including non-large size growth formulas, the maximum calcium is 2.5% DM.

<sup>f</sup>Average apparent digestibility for iron associated with recommended minimums is 20% of that consumed. Because of very poor apparent digestibility, iron from carbonate or oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration for iron.

<sup>g</sup>Because of very poor apparent digestibility, copper from oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration for copper.

<sup>h</sup>It is recommended that the ratio of IU of vitamin E to grams of polyunsaturated fatty acids (PUFA) be  $\geq 0.6:1$ . A diet containing 50 IU of vitamin E will have a ratio of  $\geq 0.6:1$  when the PUFA content is 83 grams or less. Diets containing more than 83 grams of PUFA should contain an additional 0.6 IU of vitamin E for every gram of PUFA.

<sup>i</sup>Because processing may destroy up to 90% of the thiamine in the diet, allowances in formulation should be made to ensure the minimum nutrient concentration for thiamine is met after processing.

### AAFCO DOG FOOD NUTRIENT PROFILES BASED ON CALORIE CONTENT

Nutrients	Units per 1000 kcal ME	Growth and Reproduction Minimum	Adult Maintenance Minimum <sup>a</sup>	Maximum
Crude Protein	g	56.3	45.0	
Arginine	g	2.50	1.28	
Histidine	g	1.10	0.48	
Isoleucine	g	1.78	0.95	
Leucine	g	3.23	1.70	
Lysine	g	2.25	1.58	
Methionine	g	0.88	0.83	

Methionine-cystine	g	1.75	1.63	
Phenylalanine	g	2.08	1.13	
Phenylalanine-tyrosine	g	3.25	1.85	
Threonine	g	2.60	1.20	
Tryptophan	g	0.50	0.40	
Valine	g	1.70	1.23	
Crude Fat <sup>b</sup>	g	21.3	13.8	
Linoleic acid	g	3.3	2.8	
alpha-Linolenic	g	0.2	ND <sup>c</sup>	
Eicosapentaenoic + Docosahexaenoic acid	g	0.1	ND <sup>c</sup>	
(Linoleic + Arachidonic):(alpha-Linolenic + Eicosapentaenoic + Docosahexaenoic) acid ratio				30:1
Minerals				
Calcium	g	3.0	1.25	6.25 (4.5) <sup>d</sup>
Phosphorus	g	2.5	1.00	4.0
Ca:P ratio		1:1	1:1	2:1
Potassium	g	1.5	1.5	
Sodium	g	0.80	0.20	
Chloride	g	1.10	0.30	
Magnesium	g	0.15	0.15	
Iron <sup>e</sup>	mg	22	10	
Copper <sup>f</sup>	mg	3.1	1.83	
Manganese	mg	1.8	1.25	
Zinc	mg	25	20	
Iodine	mg	0.25	0.25	2.75
Selenium	mg	0.09	0.08	0.5
Vitamins and Others				
Vitamin A	IU	1250	1250	62500
Vitamin D	IU	125	125	750
Vitamin E <sup>g</sup>	IU	12.5	12.5	
Thiamine <sup>h</sup>	mg	0.56	0.56	
Riboflavin	mg	1.3	1.3	
Pantothenic acid	mg	3.0	3.0	
Niacin	mg	3.4	3.4	
Pyridoxine	mg	0.38	0.38	
Folic acid	mg	0.054	0.054	
Vitamin B <sub>12</sub>	mg	0.007	0.007	
Choline	mg	340	340	

<sup>a</sup>Recommended concentrations for maintenance of body weight at an average caloric intake for dogs of a given optimum weight.

<sup>b</sup>Although a true requirement for crude fat per se has not been established, the minimum concentration was based on recognition of crude fat as a source of essential fatty acids, as a carrier of fat-soluble vitamins, to enhance palatability, and to supply an adequate caloric density.

<sup>c</sup>ND = not determined. While a minimum requirement has not been determined, sufficient amounts of omega-3 fatty acids are necessary to meet the maximum omega-6:omega-3 fatty acid ratio.

<sup>d</sup>Maximum of 4.5 g Ca/1000 kcal ME is applicable to formulas; that may be fed to large size puppies (those weighing 70 pounds or greater as mature lean adults). For other life stages, including non-large breed growth formulas, the maximum calcium is 6.25 g Ca/1000 kcal ME.

<sup>e</sup>Average apparent digestibility for iron associated with recommended minimums is 20% of that consumed. Because of very poor apparent digestibility, iron from carbonate or oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration for iron.

<sup>f</sup>Because of very poor apparent digestibility, copper from oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration for copper.

<sup>g</sup>It is recommended that the ratio of IU of vitamin E to grams of polyunsaturated fatty acids (PUFA) be  $\geq 0.6:1$ . A diet containing 50 IU of vitamin E will have a ratio of  $\geq 0.6:1$  when the PUFA content is 83 grams or less. Diets containing more than 83 grams of PUFA should contain an additional 0.6 IU of vitamin E for every gram of PUFA.

<sup>h</sup>Because processing may destroy up to 90% of the thiamine in the diet, allowances in formulation should be made to ensure the minimum nutrient concentration for thiamine is met after processing.

## Changes to and Rationale for Nutrient Concentrations—Dog Foods

### Caloric Density

The 2007 AAFCO Canine Nutrition Expert Subcommittee (CNES) chose to set the presumed caloric density for dog food products at 4000 kcal metabolizable energy (ME) per kilogram (kg) dry matter (DM) for both the nutrient concentrations per kg DM and the nutrient amounts per 1000 kcal ME in order to be consistent with the presumed caloric density used in the 2006 *Nutrient Requirements of Dogs and Cats*<sup>1</sup> and in the current AAFCO Cat Food Nutrient Profiles. Prior to the 2016 revisions to the Profiles, the presumed caloric density for dog foods was set at 3500 kcal ME/kg DM for nutrient concentrations per kg DM and at 4500 kcal ME/kg DM for nutrient amounts per 1000 kcal ME, although mathematical conversion between the two tables was accomplished using 3500 kcal/kg DM as the caloric density. The presumed caloric density is not a minimum or a maximum content that a product must meet to reference the profile, but it does dictate the factor used to convert between expressions of nutrient content per kg DM versus per 1000 kcal ME and the minimum concentrations of required nutrients in complete and balanced products. Because the denominator for converting from concentrations per kg DM to amounts per 1000 kcal ME has increased from 3.5 to 4.0, values in the per 1000 kcal ME table in some instances may appear less than corresponding values listed prior to 2016 even though DM concentrations may not have changed or even increased slightly. Corrections to amounts of nutrients in formulations differing in caloric density from the presumed value of 4000 kcal ME/kg DM are discussed below.

### Protein

The minimum concentration of protein for growth and reproduction was increased slightly from 22% to 22.5% DM consistent with the RA for growth established by the 2006 NRC.<sup>1</sup> The minimum concentration in the AAFCO Dog Food Nutrient Profile for Adult Maintenance was not changed from the previous value of 18%.

The CNES established minimum recommended amounts for the essential amino acids methionine and phenylalanine consistent with the RA proposed by the NRC in addition to the previous minimum recommended amounts of methionine plus cystine and phenylalanine plus tyrosine. The CNES felt it prudent to include specific minimums for methionine and phenylalanine because although some, or all, of the requirement for cystine and tyrosine can be met from excess methionine and phenylalanine, respectively, the reverse is not true. Some of the previous recommendations for dietary concentrations of essential amino acids in the Dog Food Nutrient Profile for Adult Maintenance (i.e., histidine, lysine, threonine, and tryptophan) were greater than the corresponding RA in the 2006 NRC, and the CNES elected to retain the previously recommended amounts for these amino acids in the current Dog Food Nutrient Profile for Adult Maintenance.

Minimum concentrations of some essential amino acids in the Dog Food Nutrient Profile for Growth and Reproduction were increased, usually to match the NRC RA for growth (i.e., arginine, leucine, methionine, methionine-cystine, phenylalanine-tyrosine, and valine). Although the NRC RA for total crude protein during lactation is essentially identical to the RA for growth (22.0% versus 22.5%), several of the RA for essential amino acids during lactation are greater than the RA for growth. In some cases (i.e., histidine, isoleucine, lysine, phenylalanine, and threonine), the difference was small, and the CNES elected to set the recommended amount in the Growth and Reproduction Profile at the larger NRC RA for lactation. For other essential amino acids (i.e., leucine and valine), the RA proposed by the NRC for lactation is substantially more than the RA for growth, and in the case of leucine and valine, the concentrations are equal to, or greater than, the corresponding RA for the cat during lactation, an obligate carnivore with protein requirements generally greater than those for the dog. The NRC ad hoc committee

indicated that it set the RA based on “lowest concentrations of each of the essential amino acids from digestible protein in commercial dry expanded diets that have been shown to sustain normal gestation and lactation for bitches.”<sup>1</sup> The CNES chose not to increase the recommended concentrations for leucine and valine to those of the NRC RA for lactation based on lack of documented problems with the previous concentrations in the AAFCO Dog Food Nutrient Profile for Growth and Reproduction and the relative disparity in the RA between canine versus feline protein requirements. The CNES did not elect to change the tryptophan concentration in the Dog Food Nutrient Profile for Growth and Reproduction for two reasons. The CNES had access to feeding studies and a publication showing that the minimum requirement for tryptophan in Labrador Retriever puppies was less than the current concentration in AAFCO Dog Food Nutrient Profile for Growth and Reproduction and that the tryptophan concentration of 0.2% DM already provided approximately a 25% safety margin.<sup>6</sup> The CNES was also aware that it was nearly impossible to formulate a product at the minimum protein concentration to contain more than 0.2% tryptophan on a DM basis from typical ingredients without including crystalline tryptophan in the formula.

Insufficient data were available to demonstrate detrimental effects of high protein intake in the normal dog to allow for any definitive maximum concentrations for protein or amino acids to be established. The CNES is aware of the findings regarding excess lysine at some concentration between 2.0% and 4.0% lysine/kg DM to produce depression in growth of puppies and clinical signs associated with arginine deficiency when arginine is present at 0.4% DM, and that FEDIAF has established a concentration of 2.8% lysine in DM as a maximum.<sup>3,7</sup> However, this information was available prior to the establishment of the original AAFCO Nutrient Profiles and did not result in a maximum lysine content being established by the 1990 Expert Subcommittee. Furthermore, the 2007 CNES notes that the minimum recommended arginine content for growth and reproduction is 2.5 times the concentration of 0.4% arginine/kg DM required to produce the noted adverse effects in combination with lysine at more than 2.0%/kg DM.

### **Fat/Fatty Acids**

The CNES increased the minimum recommended amount for total fat in the AAFCO Dog Food Nutrient Profiles by 0.5% to 8.5% for Growth and Reproduction and 5.5% for Adult Maintenance. These concentrations are consistent with the RA for total fat in the 2006 NRC and the FEDIAF Guidelines. The CNES also increased the minimum recommended linoleic acid concentration in the Growth and Reproduction Profile from 1.0% to 1.3% and in the Adult Maintenance Profile from 1.0% to 1.1%, again consistent with the RA in the 2006 NRC. The CNES did not set a minimum recommended concentration for arachidonic acid in either profile but did establish minimum recommended concentrations for some fatty acids in the n-3 (omega-3) series in the Growth and Reproduction Profile, specifically, alpha-linolenic acid at 0.08%, and the combination of eicosapentaenoic plus docosahexaenoic acids at 0.05%, of DM. Because the scientific evidence to date indicates that these n-3 fatty acids are needed for the development of the nervous and visual systems during fetal and neonatal life stages, the CNES did not feel there was scientific justification for setting minimum recommended concentrations for n-3 fatty acids for adult maintenance. A recommendation in a comment to list quantities of alpha-linolenic acid and eicosapentaenoic plus docosahexaenoic acids for adult maintenance as being not determined (ND) was accepted by the AAFCO Pet Food Committee.

The CNES did not establish maximum concentrations for fat or fatty acids despite the NRC listing a safe upper limit (SUL) for total crude fat, linoleic acid, and the combination of eicosapentaenoic plus docosahexaenoic acids. The CNES felt it likely that insufficiencies in other nutrients will occur in a conventional formula before an inclusion of 33% crude fat in DM is reached. Also, although some differences in delayed hypersensitivity reactions were noted in studies cited by the NRC as the basis for setting the SUL for eicosapentaenoic plus docosahexaenoic acids, the 2007 CNES noted that those differences are not unequivocally undesirable or detrimental.<sup>8,9</sup> The CNES did elect to set a maximum for the ratio of the sum of linoleic plus arachidonic acids to the sum of alpha-linolenic, eicosapentaenoic, and docosahexaenoic acids at 30:1 given the modulating effects of n-3 fatty acids on n-6 metabolism and the predominant contribution of these fatty acids to the n-6 and n-3 fatty acid contents, respectively, in conventional dog food formulas.

### **Calcium and Phosphorus**

The CNES decreased the recommended minimum concentration of calcium and phosphorus in the Adult Maintenance Profile by 0.1% to 0.5% and 0.4%, respectively. The current recommended minimum



concentrations are 0.1% more than the RA for calcium and phosphorus on a DM basis for adult maintenance in the 2006 NRC but consistent with the concentrations in the FEDIAF Guidelines. The CNES recommended that the calcium and phosphorus in growth formulas for the large breed or large size dogs (those breeds typically attaining lean adult body weights of 70 pounds or more) be allowed to decrease to 0.9% and 0.75%, respectively, while still being judged to meet the Growth and Reproduction Nutrient Profile. However, based on comments and a publication<sup>10</sup> demonstrating that some diets containing 0.88% to 1.04% Ca on a DM basis (2.2 to 2.6 g Ca/1000 kcal ME) when fed to medium or large breed puppies produced inhibited growth in 10-week growth studies compared to diets containing between 1.3 to 1.8% Ca, the AAFCO Pet Food Committee elected to keep the minimum recommended calcium and phosphorus concentrations in the Growth and Reproduction Nutrient Profile at 1.2% and 1.0%, respectively, for all dog food products that substantiate nutritional adequacy based on being formulated to meet the nutrient content of the Dog Food Nutrient Profile for Growth and Reproduction.

Because of concerns for excess calcium to produce detrimental effects in growing dogs of large and giant breeds,<sup>11-13</sup> the 2007 CNES deemed that additional restriction to the maximum limit for calcium was warranted for large size growth formulations and lowered the maximum calcium concentration to 1.8% DM for these products. The CNES did not believe it necessary to decrease the previous maximum calcium concentration of 2.5% for adult dogs or growing dogs of small or moderate size breeds, and retained the maximum of 2.5% for the adult maintenance products as well as gestation/lactation products and growth products for small and moderate size breeds of dogs. The AAFCO Pet Food Committee discussed and considered the proposal at length for having two maximum calcium concentrations applicable to different products. The Pet Food Committee notes that unless a product's labeling restricts the product to specific breeds, products bearing an All Life Stages claim based on the product being formulated to meet the AAFCO Dog Food Nutrient Profile for Growth and Reproduction should not contain more than 1.8% calcium on a DM basis. The CNES retained the maximum phosphorus concentration of 1.6% DM for both profiles, as well as the minimum and maximum values of 1:1 and 2:1, respectively, for the calcium-to-phosphorus ratio.

## **Other Macrominerals**

### *Potassium*

The 2007 CNES elected to retain the recommended minimum potassium concentration at 0.6% DM for both Profiles. Although the RA in the 2006 NRC and some concentrations in the FEDIAF Guidelines are less than 0.6% DM for potassium, the CNES felt that the potassium concentration did not warrant changing especially given that potential toxicosis of potassium was not a practical concern. Thus, a maximum concentration for potassium was not established.

### *Sodium and Chloride*

The 2007 CNES did not change the minimum recommendation for sodium or chloride in the Growth and Reproduction Nutrient Profile as the values are slightly above the 2006 NRC RA. The 2007 CNES made an editorial increase in the recommended minimum concentrations for sodium and chloride in the Adult Maintenance Nutrient Profile to match the 2006 NRC RA. For sodium the increase was from 0.06% to 0.08% DM and for chloride from 0.09 to 0.12% DM. The recommended minimum concentrations for sodium and chloride in both dog food nutrient profiles continue to reflect the 1:1.5 sodium-to-chloride ratio of salt previously used by the 1990 CNES to justify recommended chloride concentrations. As noted by the 1990 CNES, because palatability and food consumption would decline due to excess sodium before adverse health effects were observed, setting a maximum concentration for sodium was not of practical concern.

### *Magnesium*

The 2007 CNES increased the minimum recommended concentration for magnesium from 0.04 to 0.06% in Adult Maintenance and Growth and Reproduction Nutrient Profiles to match the 2006 NRC RA for adult maintenance and peak lactation, respectively. The 2007 CNES deleted the maximum recommended concentration for magnesium due to lack of data specific to dogs in both the 2006 NRC and the 2005 *Mineral Tolerances of Animals*. The only comment regarding maximum magnesium content in the 2006 NRC was that a SUL for magnesium in the diets of dogs was greater than 1.7% DM.

## **Microminerals**

### *Iron*

The 2007 CNES made an editorial change to the minimum concentration for iron in the Growth and Reproduction Nutrient Profile to make the concentration consistent with a presumed caloric density of 4000 kcal ME/kg DM, which makes the recommended concentration consistent with the RA from the 2006 NRC and the FEDIAF Guidelines for same life stages. The 2007 CNES decreased the recommendation for adult maintenance from 80 to 40 mg/kg DM based on considerations that the RA of the 2006 NRC was 30 mg/kg DM and the FEDIAF Guidelines concentration was 36 mg/kg DM. The 2007 CNES deleted the maximum concentration for iron based on one scientific and one practical regulatory consideration. First, the 2006 NRC indicated that appropriate data for setting a SUL for iron in dog foods are not available. The previous maximum concentration was stated to be based on tolerance data in swine. The 2005 *Mineral Tolerance of Animals* indicated that the listed tolerance of 3000 mg/kg DM for swine needed to be confirmed by long-term studies, and all other tolerances for iron listed in that publication are 6 times less than 3000 mg/kg DM. Second, the implied safety of a maximum concentration presumes some amount of apparent digestibility, and as noted above, the apparent digestibility of iron in any given diet or combination of ingredients can vary from less than 10% to near 100%. Some sources of iron are considered unavailable and used for their technical effects (i.e., color) on the product and not for their nutrient contribution of iron to the animal. Such unavailable sources will still contribute iron to an analytical result for determining product content, and thus a maximum concentration set for available sources of iron might prohibit use of unavailable sources for coloring, whereas a maximum concentration set for unavailable colorants might permit use of unsafe amounts of available sources on the basis of analytical content. Thus, the 2007 CNES elected to delete the previous maximum of 3000 mg/kg DM and not list any other value as a maximum for iron. Manufacturers should note that iron is toxic at some amount greater than the recommended quantities, but the exact amount is unknown for dogs.

#### *Copper*

The minimum concentration for copper in the Adult Maintenance Nutrient Profile was not changed from the previous amount of 7.3 mg/kg DM, the concentration being consistent with that of the FEDIAF Guidelines and slightly more than the 2006 NRC RA of 6.0 mg/kg. The 2007 CNES increased the minimum recommended concentration in the Growth and Reproduction Nutrient Profile to 12.4 mg/kg DM, consistent with the 2006 NRC RA for peak lactation and slightly more than FEDIAF Guidelines and the NRC RA for growth. Because of poor bioavailability, the use of copper oxide as a nutritional source is excluded.<sup>14</sup> The 2007 CNES deleted the copper maximum concentration for many of the same science-based reasons cited above for deleting the maximum for iron content.

#### *Manganese*

The minimum concentration for manganese in the Adult Maintenance Nutrient Profile was not changed from the previous amount of 5.0 mg/kg DM, the amount being slightly more than the 2006 NRC RA of 4.8 and slightly less than the FEDIAF Guidelines of 5.6 mg/kg DM. The 2007 CNES increased the minimum recommended concentration in the Growth and Reproduction Nutrient Profile to 7.2 mg/kg DM, consistent with the 2006 NRC RA for peak lactation and slightly more than FEDIAF Guidelines concentrations and NRC RA for growth.

#### *Zinc*

The 2006 NRC RA for zinc in growth, reproduction, and adult maintenance formulations was less than the previous concentration in the Dog Food Nutrient Profiles of 120 mg/kg DM, and the 2007 CNES decreased the recommended minimum concentration to 100 mg/kg DM in the Growth and Reproduction Nutrient Profile and to 80 mg/kg DM in the Adult Maintenance Nutrient Profile consistent with the 2006 NRC RA and FEDIAF Guidelines concentrations. Both the 2005 *Mineral Tolerance of Animals* and the 2006 *Nutrient Requirements of Dogs and Cats* state there is not enough data available to set a tolerance or SUL for zinc in dog foods. The 2007 CNES elected to delete the previous maximum concentration of 1000 mg/kg DM that was based on the maximum tolerance concentration recommended for swine rations. The CNES noted that the swine tolerance of 1000 mg/kg DM was the greatest concentration for any tolerance for zinc listed in the 2005 *Mineral Tolerance of Animals*.

#### *Iodine*

The 2006 NRC RA for iodine in dog foods is 0.88 mg/kg DM. The FEDIAF Guideline concentrations range from 0.9 to 1.5 mg/kg DM. In considering the basis for these various recommended concentrations, the 2007 CNES felt a recommended minimum concentration of 1.0 mg/kg to be prudent and adequate to support adult maintenance as well as growth and reproduction.

The 2007 CNES revised the maximum concentration for iodine based on the following considerations. Although neither the 2005 *Mineral Tolerances for Animals* nor the 2006 *Nutrient*

*Requirements of Dogs and Cats* established a tolerance or SUL for iodine in diets for dogs, both publications cite data that indicate a commercial formulation containing 5.6 mg iodine/kg diet had adverse effects on thyroid function.<sup>15,16</sup> FEDIAF also notes these studies but faulted the studies for using a diet deficient in calcium, phosphorus, and potassium and fed in excessive quantities. The 2008 FEDIAF Guidelines indicate a maximum concentration for iodine of 11 mg/kg DM when other minerals are within acceptable concentrations and the products are fed in appropriate quantities. The tolerances for iodine in the 2005 *Mineral Tolerances of Animals* that have been established for various species range from 5 mg/kg DM in diets for horses to 400 mg/kg DM in diets for swine. Given that the NRC tolerance for horses is 10 times less than the general maximum concentration of 50 mg iodine/kg DM recommended by AAFCO, the 2007 CNES felt the value of 50 mg/kg DM to no longer be appropriate for setting a maximum concentration for iodine in dog foods. The 2007 CNES acknowledges that additional studies may allow further refinement of a maximum amount of iodine in foods for dogs, but until such data are available, the CNES felt it prudent to adopt the FEDIAF position and set 11 mg iodine per kg DM as the maximum concentration of iodine in dog foods.

#### *Selenium*

The recommended minimum concentration of selenium was increased to 0.35 mg/kg DM in Adult Maintenance and Growth and Reproduction Nutrient Profiles consistent with the 2006 NRC RA for selenium. The 2007 CNES notes there is a difference between added selenium and total selenium content. The approval of food additives for addition of selenium to animal feeds limits the total amount of selenium that may be added to feed to 0.3 mg/kg from all approved sources on an as-fed basis (90% DM feeds), roughly equivalent to 0.333 mg/kg on a DM basis. The recommended minimum concentration of 0.35 mg selenium/kg DM in dog foods is the sum of selenium from all ingredients in the product, both approved food additives used specifically to add selenium to the product, as well as selenium contained as a constituent of other ingredients. As there is generally more than 0.05 mg selenium/kg DM in ingredients used to supply protein and fat to typical pet food formulations, the 2007 CNES believes the limitation of 0.3 mg selenium/kg DM from approved selenium additives will not hinder a manufacturer's ability to meet the minimum recommended concentration of 0.35 mg selenium/kg DM.

Both the 2006 NRC and the 2005 *Mineral Tolerance of Animals* state no data are available upon which to establish a SUL or tolerance for selenium in diets for dogs. Both NRC publications cite the fifth edition of *Trace Elements in Human and Animal Nutrition* published in 1986 for information indicating a dietary concentration of 5 mg/kg DM resulted in toxicity in dogs.<sup>17</sup> The 2007 CNES acknowledges the NRC has indicated in the years since the publication of the first edition of *Mineral Tolerance of Domestic Animals* set a tolerance of 2.0 mg of selenium per kg DM for all species in 1980 that the value has been challenged as an underestimate of the true tolerance for several species, and that during 1980 to 2005 greater tolerances for selenium have been established for some species. Although the true tolerance for dogs may be greater than 2, but less than 5, mg selenium/kg DM, the 2007 CNES believes it to be prudent to retain the maximum concentration for selenium at 2.0 mg/kg DM until such time as empirical data permit a greater and more definitive maximum to be established.

#### **Vitamins**

The 2007 CNES did not believe there were data sufficient to change any of the recommended minimum concentrations for the fat-soluble vitamins or the maximum concentration for vitamin A. The 2007 CNES decreased the maximum vitamin D concentration in consideration of the SUL and maximums set by the 2006 NRC and FEDIAF Guidelines based on the studies conducted by Tryfondidou *et al.*<sup>18,19</sup> The maximum vitamin D concentration was reduced to 3000 IU/kg DM (750 IU/1000 kcal ME), which is 6 times the recommended minimum concentration and 1000 IU/kg less than the amount shown to produce disruption of endochondrial ossification in growing Great Dane puppies. The 2007 CNES noted that the 2006 *Nutrient Requirements of Dogs and Cats* had not established a SUL for vitamin E based on there being no information on vitamin E toxicity in dogs, and so deleted the maximum concentration for vitamin E in the Dog Food Nutrient Profiles. The 2007 CNES increased the minimum concentrations of thiamine, riboflavin, and pyridoxine consistent with the RA of the 2006 NRC. For pantothenic acid, niacin, folic acid, vitamin B<sub>12</sub>, and choline, the 2007 CNES elected to set the recommended concentrations in the AAFCO Dog Food Nutrient Profiles equal to the 2006 NRC adequate intake (AI) recommendation based on indications that the AI already provided a margin of safety above the minimum requirements for these compounds.

**AAFCO CAT FOOD NUTRIENT PROFILES  
BASED ON DRY MATTER<sup>a</sup>**

<b>Nutrients</b>	<b>Units DM Basis</b>	<b>Growth and Reproduction Minimum</b>	<b>Adult Maintenance Minimum<sup>b</sup></b>	<b>Maximum</b>
Crude Protein	%	30.0	26.0	
Arginine	%	1.24	1.04	
Histidine	%	0.33	0.31	
Isoleucine	%	0.56	0.52	
Leucine	%	1.28	1.24	
Lysine	%	1.20	0.83	
Methionine	%	0.62	0.20	1.5
Methionine-cystine	%	1.10	0.40	
Phenylalanine	%	0.52	0.42	
Phenylalanine-tyrosine	%	1.92	1.53	
Threonine	%	0.73	0.73	
Tryptophan	%	0.25	0.16	1.7
Valine	%	0.64	0.62	
Crude Fat <sup>c</sup>	%	9.0	9.0	
Linoleic acid	%	0.6	0.6	
alpha-Linolenic acid	%	0.02	ND <sup>d</sup>	
Arachidonic acid	%	0.02	0.02	
Eicosapentaenoic + Docosahexaenoic acid	%	0.012	ND <sup>d</sup>	
Minerals				
Calcium	%	1.0	0.6	
Phosphorus	%	0.8	0.5	
Potassium	%	0.6	0.6	
Sodium	%	0.2	0.2	
Chloride	%	0.3	0.3	
Magnesium <sup>e</sup>	%	0.08	0.04	
Iron <sup>f</sup>	mg/kg	80	80	
Copper (extruded) <sup>g</sup>	mg/kg	15	5	
Copper (canned) <sup>g</sup>	mg/kg	8.4	5	
Manganese	mg/kg	7.6	7.6	
Zinc	mg/kg	75	75	
Iodine	mg/kg	1.8	0.6	9.0
Selenium	mg/kg	0.3	0.3	
Vitamins and others				
Vitamin A	IU/kg	6668	3332	333300
Vitamin D	IU/kg	280	280	30080
Vitamin E <sup>h</sup>	IU/kg	40	40	
Vitamin K <sup>i</sup>	mg/kg	0.1	0.1	
Thiamine <sup>j</sup>	mg/kg	5.6	5.6	
Riboflavin	mg/kg	4.0	4.0	
Pantothenic acid	mg/kg	5.75	5.75	
Niacin	mg/kg	60	60	
Pyridoxine	mg/kg	4.0	4.0	
Folic acid	mg/kg	0.8	0.8	
Biotin <sup>k</sup>	mg/kg	0.07	0.07	
Vitamin B <sub>12</sub>	mg/kg	0.020	0.020	

Choline	mg/kg	2400	2400	
Taurine (extruded)	%	0.10	0.10	
Taurine (canned)	%	0.20	0.20	

<sup>a</sup>Presumes an energy density of 4000 kcal ME/kg as determined in accordance with Regulation PF9. Formulations greater than 4000 kcal ME/kg should be corrected for energy density; formulations less than 4000 kcal ME/kg should not be corrected for energy. Formulations of low-energy density should not be considered adequate for growth or reproductive needs based on comparison to the Profiles alone.

<sup>b</sup>Recommended concentrations for maintenance of body weight at an average caloric intake for cats of a given optimal weight.

<sup>c</sup>Although a true requirement for crude fat per se has not been established, the minimum concentration was based on recognition of crude fat as a source of essential fatty acids, as a carrier of fat-soluble vitamins, to enhance palatability, and to supply an adequate caloric density.

<sup>d</sup>ND = not determined.

<sup>e</sup>If the mean urine pH of cats fed *ad libitum* is not below 6.4, the risk of struvite urolithiasis increases as the magnesium content of the diet increases.

<sup>f</sup>Because of very poor bioavailability, iron from carbonate or oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration.

<sup>g</sup>Because of very poor bioavailability, copper from oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration.

<sup>h</sup>Add 10 IU vitamin E above the minimum concentration for each gram of fish oil per kilogram of diet.

<sup>i</sup>Vitamin K does not need to be added unless the diet contains more than 25% fish on a dry matter basis.

<sup>j</sup>Because processing and specific ingredients may destroy up to 90% of the thiamine in the diet, allowances in formulation should be made to ensure the minimum nutrient concentration is met after processing.

<sup>k</sup>Biotin does not need to be added unless the diet contains antimicrobial or antivitamin compounds.

#### AAFCO CAT FOOD NUTRIENT PROFILES BASED ON CALORIE CONTENT

Nutrients	Units per 1000 kcal ME	Growth and Reproduction Minimum	Adult Maintenance Minimum <sup>a</sup>	Maximum
Crude Protein	g	75	65	
Arginine	g	3.10	2.60	
Histidine	g	0.83	0.78	
Isoleucine	g	1.40	1.30	
Leucine	g	3.20	3.10	
Lysine	g	3.00	2.08	
Methionine	g	1.55	0.5	3.75
Methionine-cystine	g	2.75	1.00	
Phenylalanine	g	1.30	1.05	
Phenylalanine-tyrosine	g	4.80	3.83	
Threonine	g	1.83	1.83	
Tryptophan	g	0.63	0.40	4.25
Valine	g	1.55	1.55	
Crude Fat <sup>b</sup>	g	22.5	22.5	
Linoleic acid	g	1.40	1.40	
alpha-Linolenic acid	g	0.05	ND <sup>c</sup>	
Arachidonic acid	g	0.05	0.05	
Eicosapentaenoic + Docosahexaenoic acid	g	0.03	ND <sup>c</sup>	
Minerals				
Calcium	g	2.5	1.5	
Phosphorus	g	2.0	1.25	
Potassium	g	1.5	1.5	
Sodium	g	0.5	0.5	
Chloride	g	0.75	0.75	

Magnesium <sup>d</sup>	g	0.20	0.10	
Iron <sup>e</sup>	mg	20.0	20.0	
Copper (extruded) <sup>f</sup>	mg	3.75	1.25	
Copper (canned) <sup>f</sup>	mg	2.10	1.25	
Manganese	mg	1.90	1.90	
Zinc	mg	18.8	18.8	
Iodine	mg	0.45	0.15	2.25
Selenium	mg	0.075	0.075	
Vitamins and Others				
Vitamin A	IU	1667	833	83325
Vitamin D	IU	70	70	7520
Vitamin E <sup>g</sup>	IU	10	10	
Vitamin K <sup>h</sup>	mg	0.025	0.025	
Thiamine <sup>i</sup>	mg	1.40	1.40	
Riboflavin	mg	1.00	1.00	
Pantothenic acid	mg	1.44	1.44	
Niacin	mg	15	15	
Pyridoxine	mg	1.0	1.0	
Folic acid	mg	0.20	0.20	
Biotin <sup>j</sup>	mg	0.018	0.018	
Vitamin B <sub>12</sub>	mg	0.005	0.005	
Choline	mg	600	600	
Taurine (extruded)	g	0.25	0.25	
Taurine (canned)	g	0.50	0.50	

<sup>a</sup>Recommended concentrations for maintenance of body weight at an average caloric intake for cats of a given optimal weight.

<sup>b</sup>Although a true requirement for crude fat per se has not been established, the minimum concentration was based on recognition of crude fat as a source of essential fatty acids, as a carrier of fat-soluble vitamins, to enhance palatability, and to supply an adequate caloric density.

<sup>c</sup>ND = not determined.

<sup>d</sup>If the mean urine pH of cats fed *ad libitum* is not below 6.4, the risk of struvite urolithiasis increases as the magnesium content of the diet increases.

<sup>e</sup>Because of very poor bioavailability, iron from carbonate or oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration.

<sup>f</sup>Because of very poor bioavailability, copper from oxide sources that are added to the diet should not be considered in determining the minimum nutrient concentration.

<sup>g</sup>Add 10 IU Vitamin E above the minimum concentration for each gram of fish oil per kilogram of diet.

<sup>h</sup>Vitamin K does not need to be added unless the diet contains more than 25% fish on a dry matter basis.

<sup>i</sup>Because processing and specific ingredients may destroy up to 90% of the thiamine in the diet, allowances in formulation should be made to ensure the minimum nutrient concentration is met after processing.

<sup>j</sup>Biotin does not need to be added unless the diet contains antimicrobial or antivitamin compounds.

## CHANGES TO AND RATIONALE FOR NUTRIENT CONCENTRATIONS—CAT FOODS

### Caloric Density

The 2007 AAFCO Feline Nutrition Expert Subcommittee (FNES) retained the presumed caloric density for cat food products at 4000 kcal ME/kg DM for both the nutrient concentrations per kg DM and the nutrient amounts per 1000 kcal ME. As discussed below and in the footnotes to the Tables of the AAFCO Cat Food Nutrient Profiles, products with a caloric density greater than 4000 kcal ME/kg should have nutrient concentrations corrected for energy density. Nutrient concentrations in products with energy densities less than 4000 kcal ME/kg should not be corrected.

### Protein

The 2007 FNES did not change the minimum concentrations of crude protein in the Cat Food Nutrient Profiles, the current values being equal to or greater than the corresponding 2006 NRC RA and

FEDIAF Guidelines.<sup>1,3</sup> The FNES made modifications to concentrations for some essential amino acids to bring the recommended concentrations in line with the RA in the 2006 NRC and the FEDIAF Guidelines. Minor increases of 0.02 to 0.04% in amounts of histidine, isoleucine, and leucine were made in the Growth and Reproduction Profile. The amount for methionine and methionine plus cystine was decreased for adult maintenance. Significant increases were made to the recommended phenylalanine and phenylalanine plus tyrosine concentrations to bring the recommendations in line with the RA in the 2006 NRC, which are based on studies establishing the requirements for maximum nitrogen retention and black hair color.<sup>20,21</sup>

Because of work showing an adverse effect of high concentrations of methionine, the maximum concentration of 1.5% was retained.<sup>22</sup> The FNES also set a maximum of 1.7% for tryptophan based on the work of Herwill and the recommendations in the 2006 NRC and FEDIAF Guidelines.<sup>1,3,23</sup>

### **Fat/Fatty Acids**

The 2007 FNES retained the minimum recommended concentrations of crude fat at 9% DM and at 0.02% for arachidonic acid. The minimum concentration for linoleic acid was increased to 0.6% in both Cat Food Nutrient Profiles consistent with the corresponding 2006 NRC RA and FEDIAF Guidelines. Similar to the CNES, the FNES established minimum recommended concentrations for some fatty acids in the n-3 (omega-3) series in the Growth and Reproduction Profile, specifically, alpha-linolenic acid at 0.02%, and the combination of eicosapentaenoic plus docosahexaenoic acids at 0.012%, of DM. The FNES notes that the NRC<sup>1</sup> stated no requirement for alpha-linolenic acid in adult cats had been demonstrated and that although a theoretical argument could be made for the adult cat to require eicosapentaenoic plus docosahexaenoic acids on a similar order of magnitude as arachidonic acid given the low delta-6 desaturase activity in the species, no objective data were available to support the establishment of any required concentrations. Although the FNES did not feel there was scientific justification for setting minimum recommended concentrations for n-3 fatty acids for adult cats, a recommendation in a comment to list quantities of alpha-linolenic acid and eicosapentaenoic plus docosahexaenoic acids for adult maintenance as being not determined (ND) was accepted by the AAFCO Pet Food Committee.

### **Minerals**

The 2007 FNES increased the recommended concentrations for copper in canned formulas in the Growth and Reproduction Nutrient Profile and for iodine and selenium in both Cat Food Nutrient Profiles. The recommended copper concentration in canned products for growth and reproduction was increased from 5.0 to 8.4 mg/kg DM to match the 2006 NRC RA for gestation and lactation.

For iodine the 2007 FNES increased the recommended concentration in the Growth and Reproduction Nutrient Profile to match the 2006 NRC RA and the FEDIAF Guidelines. The recommended concentration of iodine for adult maintenance was increased to match the amount recommended in the FEDIAF Guidelines rather than the 2006 NRC RA in consideration of the findings of Wedekind *et al.*<sup>24</sup> The 2007 FNES also set a maximum for iodine content in cat foods based on the findings of Wedekind *et al.*<sup>24</sup>

The 2007 FNES increased the recommended concentrations for selenium in the Cat Food Nutrient Profiles from 0.1 to 0.3 mg/kg to match the recommendations of the 2006 NRC RA and the FEDIAF Guidelines. The 2007 FNES elected to delete the maximum recommended amount of zinc from the Cat Food Nutrient Profiles noting that the 2006 NRC indicated the safe upper limit of zinc for cats was >600 mg/kg DM for at least short periods of time and that the swine tolerance of 1000 mg/kg DM was the greatest concentration for any tolerance for zinc listed in the 2005 *Mineral Tolerance of Animals*. The FNES retained the recommended concentrations set by the 1990 FNES for all other minerals in the Cat Food Nutrient Profiles.

### **Vitamins and Others**

The 2007 FNES decreased the recommended minimum concentrations for vitamins A and D in the Cat Food Nutrient Profiles based on the 2006 NRC RA. The 2007 FNES increased the maximum concentration for vitamin D in the Cat Food Nutrient Profiles based on the work of Sih *et al.* and the SUL in the 2006 NRC.<sup>25</sup>

The 2007 FNES increased the recommended concentration of vitamin E to more closely coincide with the recommendations of the 2006 NRC and the FEDIAF Guidelines. The recommended

concentration of vitamin K in diets containing 25% or more DM derived from fish was unchanged from previous values consistent with the FEDIAF Guidelines.

Recommended concentrations of thiamine and pantothenic acid in the Cat Food Nutrient Profiles were increased to match the 2006 NRC RA. The recommended concentrations of the remaining water-soluble vitamins and for taurine were unchanged from the previous values, several being equal to or greater than the 2006 NRC RA (riboflavin, niacin, pyridoxine, folic acid, and taurine) with previous recommended concentrations for biotin, vitamin B<sub>12</sub>, and choline being between the 2006 NRC AI and RA.

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### Correcting for Moisture Content

The values given in the Profiles are listed in terms of dry matter (DM). However, the values listed in the guaranteed analysis on dog and cat food labels are given on an “as is” or “as fed” (AF) basis, and values reported from laboratories may be given on either an AF or DM basis. The difference between a value reported on a DM basis versus an AF basis is proportional to the moisture (water) content of the food. The greater the moisture content of a food, the greater the food’s DM values for nutrients would be compared to the corresponding AF values. This discrepancy makes direct comparison between the guaranteed analysis values on a food label and the Profile table values impossible without first correcting one or the other set of values so that both are on an equal-moisture basis.

One method of correcting for moisture is the adjustment of the values listed in the guaranteed analysis or reported from a laboratory on an AF basis to a DM basis before comparing with the Profile values. This is done by dividing each AF value by the proportion of DM in the food [(100 – % moisture)/100]. The examples shown below use the guaranteed analysis values, but these adjustments are equally valid for actual laboratory results reported on an AF basis.

#### Example A1: A Dry Dog Food Making a Growth Claim Moisture-Adjusted Guaranteed Analysis Values

Nutrient	Guaranteed Analysis Values	Dog Food Nutrient Profile Minimum Values for Growth	Moisture-Adjusted Guaranteed Analysis Values	Moisture-Adjusted Guaranteed Analysis vs. Profile Values
Crude Protein:	min. 21%	22.5%	23.3%	OK
Crude Fat:	min. 8%	8.5%	8.9%	OK
Crude Fiber:	max. 4%		4.4%	
Moisture:	max. 10%	0%	0%	
Calcium:	min. 1.1%	1.2%	1.2%	OK
Phosphorus:	min. 0.9%	1.0%	1.0%	OK

Directly comparing the guaranteed values in Example A1 for crude protein, crude fat, calcium, and phosphorus to the minimum values for growth given in the Dog Food Nutrient Profile indicates this food would appear to be deficient. However, this comparison is not valid, because the values for the food are listed on a 10% moisture (90% DM) basis, but the Profile values are given on a 0% moisture (100% DM) basis. To put both sets of values on an equal-moisture basis, the guaranteed values were adjusted to 100% DM by dividing each value by the proportion of DM in the food (0.90). With this correction, it becomes apparent that the moisture-adjusted guaranteed analysis values of the reported nutrients do, in fact, meet the minimum recommended concentrations of the Dog Food Nutrient Profile for Growth and Reproduction.

As an alternative method to converting the guaranteed values to a DM basis, the Profile values can be adjusted to match the moisture content of the food. This can be achieved by simply multiplying each Profile value by the proportion of DM in the food (0.9 in example A1). Such calculations yield the following:

**Example A2: A Dry Dog Food Making a Growth Claim  
Moisture-Adjusted Profile Values**

<b>Nutrient</b>	<b>Guaranteed Analysis Values</b>	<b>Dog Food Nutrient Profile Minimum Values for Growth</b>	<b>Moisture-Adjusted Profile Values for Growth</b>	<b>Guaranteed Analysis vs. Moisture-Adjusted Profile Values</b>
Crude Protein:	min. 21%	22.5%	20.25%	OK
Crude Fat:	min. 8%	8.5%	7.65%	OK
Crude Fiber:	max. 4%			
Moisture:	max. 10%	0%	10%	
Calcium:	min. 1.1%	1.2%	1.08%	OK
Phosphorus:	min. 0.9%	1.0%	0.9%	OK

**Correcting for Energy Density**

The values given in the Profiles presume an energy density of 4000 kcal ME/kg DM. Some dog and cat foods will have energy densities close to this amount. However, many products may have DM energy densities considerably greater than the presumed values. When these more energy-dense products are fed, the dog or cat will require less of the food to meet its caloric requirements. Under these circumstances, the concentrations of the other nutrients in the food should be increased proportionately, so that the dog or cat will receive the needed amount of each nutrient in the smaller amount of food. Therefore, when the energy density of the dog or cat food exceeds 4000 kcal ME/kg DM, the nutrient concentrations should be corrected for caloric content before valid comparisons to the appropriate AAFCO Nutrient Profile are made.

Conversely, products could be much lower in energy density than 4000 kcal ME/kg DM. Theoretically, a lower concentration of the other nutrients should be required, assuming that the dog or cat is allowed, and able, to consume enough of the product to meet its caloric needs and that those caloric needs are typical for the average dog or cat of the specific life stage. Because this assumption does not always hold true, the nutrient content should not be decreased in less energy-dense products, that is, the nutrient concentrations in such products should not be corrected for energy density. In fact, if the food is intended to supply significantly fewer calories in somewhat smaller amounts of food than typically consumed by the average weight and specific life stage of the animal, the concentrations of some nutrients per 1000 kcal ME may need to be increased compared to amounts listed in the tables to ensure the animal is provided adequate amounts of those essential nutrients in the quantity of food containing the targeted consumption of daily calories. Furthermore, unless a product meeting the definition for a “lite” or “low calorie” product as specified in Model Regulation PF10 has successfully passed the appropriate AAFCO Feeding Protocols, the product should not be considered adequate for growth or reproduction, regardless of the concentrations of the other nutrients.

The first step in correcting for energy density is to determine the actual energy density of the food. The determination should be done in accordance with Model Regulation PF9. After determining the energy density of the food, the nutrient values can be converted to a per 4000 kcal ME/kg DM or a per 1000 kcal ME basis and compared to the values in the appropriate AAFCO Nutrient Profile.

**Example B1: A Canned Cat Food Making a Growth Claim:  
Moisture- and Energy-Adjusted Guaranteed Analysis Values**

<b>Nutrient</b>	<b>Guaranteed Analysis Values</b>	<b>Moisture-Adjusted Guaranteed Analysis Values</b>	<b>Moisture and Energy-Adjusted Guaranteed Analysis Values</b>	<b>Growth and Reproduction Cat Food Profile Values per kg DM</b>	<b>Status of Energy-Adjusted Guaranteed Analysis vs. Profile Values</b>
Crude Protein:	min. 9%	36%	32.1%	30.0	OK
Crude Fat:	min. 7%	28%	25.0%	9.0	OK
Crude Fiber:	max. 1%				

Moisture:	max. 75%	0%	0%		
Ash:	max. 2%				
Calcium:	min. 0.25%	1.0%	0.89%	1.0	Low
Phosphorus:	min. 0.2%	0.8%	0.71%	0.8	Low
Energy: <sup>a</sup>	1120 kcal ME/kg AF	4480 kcal ME/kg DM	4000 kcal ME/kg DM	4000 kcal ME/kg DM	

$$^a\text{Energy} = (3.5 \times \text{g Crude Protein}) + (8.5 \times \text{g Crude Fat}) + [3.5 \times \text{g Nitrogen Free Extract}^b (\text{CHO})]$$

$$= (3.5 \times 90) + (8.5 \times 70) + (3.5 \times 60) = 1120$$

$$^b\% \text{ Nitrogen Free Extract} = 100 - (\% \text{ Crude Protein} + \% \text{ Crude Fat} + \% \text{ Crude Fiber} + \% \text{ Moisture} + \% \text{ Ash})$$

A cursory examination of the values listed in the guaranteed analysis compared to the minimum values given in the Cat Food Nutrient Profiles expressed as per kg DM containing 4000 kcal ME revealed that a direct comparison would not be valid. Because the food in Example B1 was 75% moisture (25% DM), the major reason for the discrepancy was likely due to water content. By first dividing the guaranteed values by the proportion of DM (0.25), the moisture-adjusted guaranteed values were derived. Comparing these corrected values with the Profile values, this food appeared to meet the minimums for a growth claim.

However, in this example, direct comparison of the moisture-adjusted guaranteed values with the Profile values was premature. The high DM crude fat content of the food compared to the Profile value (25% vs. 9.0%) was an indication that the food was probably more energy dense than the Profile value of 4000 kcal ME/kg DM. When calculated, in fact, it was found to be 4480 kcal ME/kg DM (1120 kcal ME/kg AF). Therefore a second adjustment to account for the differences in energy density was warranted. This was achieved by dividing each moisture-adjusted guaranteed value by 4480 (the DM energy density of the food) and then multiplying the result by 4000 (the standard energy density). This second manipulation revealed that the energy-adjusted guaranteed analysis values for the calcium and phosphorus were, in fact, below minimum concentrations for growth.

As demonstrated with the moisture correction methods above, an alternative to correcting the values of the food to meet the Profile energy density is correcting the Profile values to meet the food's energy density. Below, each Profile value was divided by 4000, and the result was multiplied by the appropriate value for energy density (1120 in this example).

**Example B2: A Canned Cat Food Making a Growth Claim:  
Energy-Adjusted Profile DM Values**

<b>Nutrient</b>	<b>Guaranteed Analysis Values</b>	<b>Cat Food Nutrient Profile Minimum Values for Growth</b>	<b>Energy-Adjusted Profile Values</b>	<b>Guaranteed vs. Energy-Adjusted Profile Values (Columns 2 vs. 4)</b>
Crude Protein:	min. 9%	30.0%	8.4%	OK
Crude Fat:	min. 7%	9.0%	2.5%	OK
Crude Fiber:	max. 1%			
Moisture:	max. 75%			
Ash:	max. 2%			
Calcium:	min. 0.25%	1.0%	0.28%	Low
Phosphorus:	min. 0.2%	0.8%	0.22%	Low
Energy	1120 kcal ME/kg AF	4000 kcal ME/kg DM	1120 kcal ME/kg AF	

Note that although the energy-adjusted minimum for crude fat calculated out to be 2.5%, a much higher concentration of crude fat (in this case 7%) predefined the higher energy density and dictated the need for energy adjustment in the first place. Because for the most part a higher concentration of crude fat predetermines what the higher energy density will be, the energy-adjusted Profile minimum value for crude fat should always be met and will often be grossly exceeded.

The last method for correcting for energy density is to convert the guaranteed values for the food to a per 1000 kcal basis, and to compare these values with those listed in the appropriate Profile based on Calorie Content. This is accomplished by dividing the AF values in the guaranteed analysis by the AF energy density (1120 kcal ME/kg in this example) and then multiplying the result by 1000 kcal ME/kg. The result is the values appearing in the fourth column of Example B3 below with the conclusion being identical to that reached in Examples B1 and B2 above.

**Example B3: A Canned Cat Food Making a Growth Claim:  
Energy-Adjusted Guaranteed Analysis Values**

<b>Nutrient</b>	<b>Guaranteed Analysis Value</b>	<b>Amount per kg (1000 g) As Fed</b>	<b>Product Amount per 1000 kcal ME</b>	<b>Profile Amount per 1000 kcal ME</b>	<b>Status</b>
Crude Protein	9%	90 g	80.4 g	75	OK
Crude Fat	7%	70 g	62.5 g	22.5	OK
Crude Fiber	1%	10 g			
Moisture	75%	750 g			
Ash	2%	20 g			
Calcium	0.25%	2.5 g	2.2 g	2.5	Low
Phosphorus	0.20%	2.0 g	1.9 g	2.0	Low
Nitrogen Free Extract (CHO) <sup>a</sup>	(8%)	60 g			
Energy <sup>b</sup>		1120 kcal ME			

<sup>a</sup>% Nitrogen Free Extract = 100 - (% Crude Protein + % Crude Fat + % Crude Fiber + % Moisture + % Ash)

<sup>b</sup>Energy = (3.5 × 90) + (8.5 × 70) + (3.5 × 60) = 1120

## Appendix B

Pet Food Committee  
Carbohydrate Work Group Report  
Accepted and Tabled by PFC August 4, 2015

### **Pet Food Committee Carbohydrate Working Group Final Report**

#### **Working Group Members**

Chair Jan Jarman (MN), Dr. William Burkholder (FDA-CVM), Richard Ten Eyck (OR), Angele Thompson (PFI), Dr. David Dzanis (ACVN), Leah Wilkinson (AFIA)

[Note: all page numbers given in the report are from the print version of the 2015 Official Publication.]

#### **Recommendations**

The Working Group recommends the following to the Pet Food Committee (PFC):

- 1.) Add regulations for making statements of nitrogen-free extract (NFE) content and insert them as PF10 in the Model Regulations for Pet Food and Specialty Pet Food following Regulation PF9 on p. 144;
- 2.) Renumber the current PF10 “Descriptive Terms” on p. 145 as PF11, and the current PF11 “Manufacturer or Distributor; Name and Address” on p. 147 as PF12;
- 3.) Add an affidavit for making statements of Nitrogen-Free Extract content, letter it as “(e),” and insert it between pages 195 and 196;
- 4.) Forward Recommendations 1, 2, and 3 to the Model Bills and Regulations Committee to review for compatibility with the Model Bills and Regulations; and
- 5.) Request that the Laboratory Methods and Services Committee (LMSC) ask states and manufacturers to consider “volunteering” their laboratories to participate in AAFCO validation studies for laboratory methods for sugars.

#### **Appendices**

Appendix C contains the proposed regulations for NFE content statements.

Appendix D contains the “Affidavit of Dog or Cat Food Nitrogen-Free Extract Content.”

#### **Working Group Charge**

This Working Group was formed to look at what kinds of carbohydrate content information could be provided on labels and what the requirements would be for providing that information. There is interest from consumers in having carbohydrate information on pet food labels and interest from manufacturers in supplying it.

#### **Carbohydrate Guarantees**

Voluntary guarantees on feed labeling must meet the requirements of Items II and III of the AAFCO Criteria for Labeling Nutritional Indicators (p. 135). Item II states that nutrient indicators (guarantees) must be enforceable, which means they must be verifiable by an established AOAC laboratory method or another recognized method, as required in Sec. 5(a)(3) of the Model Bill (p. 109). Item III states that in order for a nutrient guarantee to provide a “commensurate benefit” to consumers, the cost of state monitoring or industry implementation of the guarantee cannot be too prohibitive. If state or manufacturers’ laboratories cannot accurately determine the concentration of a particular nutrient, a guarantee for that nutrient is not useful to the consumer.

Right now, there are no recognized laboratory methods for determining total carbohydrates in animal feeds, or for some of the carbohydrate fractions that would be present in pet foods. The carbohydrate fractions that have been of most interest are dietary starch and sugars, which are both AAFCO Official Feed Terms. There is now an AOAC method for dietary starch, but a published method for sugars is at least several years away. The working group thought that there would be little benefit in providing just a dietary starch guarantee if no sugar level could also be guaranteed. Without recognized analytical methods, carbohydrate guarantees and labeling claims would be unverifiable and potentially misleading.

#### **Carbohydrate Content Statements**

Model Regulation PF9 describes the method for calculating the calorie content of pet foods. Part of the calculation is the determination of Nitrogen-Free Extract (NFE) content. NFE is the difference between 100% and the percentages of crude protein, crude fiber, crude fat, moisture, and ash. The working group believes that NFE content could be used as an approximation of the carbohydrate content not represented by crude fiber. NFE content statements could provide meaningful and verifiable information about the carbohydrate content of pet foods. Guarantees for NFE could not be given, because there is not a recognized laboratory method for determining its concentration. An NFE content statement could be made, however, similar to the calorie content statement.

Appendix A of this report contains the proposed new regulations listing the requirements for stating NFE content on pet food labels and for making comparative labeling statements about the NFE content of different pet foods. The proposed regulations are structured similarly to parts of PF9 (Statements of Calorie Content) and PF10 (Descriptive Terms) and would be placed between these two regulations as “PF10. Statements of Nitrogen-Free Extract Content.” The current PF10 and PF11 would be renumbered as PF11 and PF12, respectively.

The proposed regulations allow the use of “Low Carbohydrates/NFE” claims only if the NFE content is zero. There is a lack of research on the effects of different amounts of dietary carbohydrates/NFE on healthy dogs or cats. The amount of carbohydrates/NFE that would be considered “low” is not defined, so a claim of “Low Carbohydrates/NFE” would be misleading if the NFE content is greater than zero.

The working group discussed the impacts of the proposed regulations for NFE content statements on the Statement for Uniform Policy and Interpretation (SUIP) # 1, “Nitrogen-Free Extract and Carbohydrate Guarantees.” The policy states that guarantees for NFE and carbohydrates are not considered meaningful for consumers and discourages their use. The working group decided that no revisions to SUIP # 1 will be needed if the proposed regulations for NFE content statements are accepted. The SUIP refers to NFE and carbohydrates guarantees, while the proposed regulations are for statements of NFE content.

Respectfully submitted,

Jan KD Jarman  
PFC Carbohydrate Working Group Chair

## Appendix C

Pet Food Committee  
Proposed Regulations Regarding NFE Content Statements  
Accepted and Tabled by PFC August 4, 2015

### Regulation PF10. Statements of Nitrogen-Free Extract Content

- a. The label of a dog or cat food may bear a statement of nitrogen-free extract content when the label meets all of the following:
  - (1) The statement shall be separate and distinct from the “Guaranteed Analysis” and “Calorie Content” and shall appear under the heading “Carbohydrate Content (calculated)”;
  - (2) The statement shall be declared in terms of Nitrogen-Free Extract (NFE) on an “as fed” basis and must be expressed both as percent of product, and as grams per familiar household measure (e.g., cans or cups) or unit of product (e.g., treats or pieces);
  - (3) NFE is determined by calculation using the following formula:  
$$\text{NFE} = 100 - (\text{CP} + \text{CFat} + \text{CFiber} + \text{M} + \text{A}),$$
where NFE = calculated % nitrogen-free extract “as fed”  
CP = average % crude protein “as fed”  
CFat = average % crude fat “as fed”  
CFiber = average % crude fiber “as fed”  
M = average % moisture “as fed”  
A = average % ash “as fed”; and
  - (4) The percentages of CP, CFat, CFiber, M, and A are the average values of these components in the product as determined by sound scientific methods, such as, but not limited to, scientifically accurate calculations made from the formula of the product or upon chemical analysis of samples representative of the product.
- b. An affidavit shall be provided upon the request of \_\_\_\_\_, substantiating that the nitrogen-free extract content was determined in accordance with the above methodology.
- c. Comparative claims shall be based on relative percentages only, shall not be false or misleading or given undue emphasis, and shall be based on the same methodology for the products compared.
  - (1) A dog or cat food that bears on its label a claim of “Less Carbohydrate (Nitrogen-Free Extract)” or “Reduced Carbohydrate (Nitrogen-Free Extract)” or words of similar designation, shall include on the label:
    - A. The name of the product of comparison and the percentage of reduction in carbohydrate (nitrogen-free extract), expressed on an equal weight basis, explicitly stated and juxtaposed with the largest or most prominent use of the claim on each panel of the label on which the term appears; and
    - B. The comparative statement printed in type of the same color and style and at least one-half the type size used in the claim; and
    - C. A carbohydrate (nitrogen-free extract) statement in accordance with the format provided in this regulation.
  - (2) Statements such as “Low Carbohydrate (Nitrogen-Free Extract)” shall not be made unless the NFE content is zero, and the label bears a statement of Carbohydrate (Nitrogen-Free Extract) content per Regulation PF10(a).
  - (3) A comparison between products in different categories of moisture content (i.e., less than 20%, 20% or more but less than 65%, 65% or more) is misleading.

### Regulation PF11. Descriptive Terms

(a) ...

### Regulation PF12. Manufacturer or Distributor; Name and Address

(a) ...

**Appendix D**

Pet Food Committee  
Affidavit of Dog or Cat Food Nitrogen-Free Extract Content  
Accepted and Tabled by PFC August 4, 2015

**e) Affidavit of Dog or Cat Food Nitrogen-Free Extract Content**

\_\_\_\_\_ Affidavit \_\_\_\_\_ Nitrogen-Free Extract Content Statement for  
(Company Name)

\_\_\_\_\_  
(Product Name)

1. Affiant is the \_\_\_\_\_ of \_\_\_\_\_  
(Title) (Company Name)

and is duly authorized to make and execute this Affidavit for and on behalf of said company.

2. Affiant is familiar with the requirements of AAFCO Regulation PF10 concerning label representations as to nitrogen-free extract content statements on dog and cat food products.

3. The product to which this Affidavit pertains contains \_\_\_\_\_ % NFE and \_\_\_\_\_ g NFE per \_\_\_\_\_ (e.g., can, cup, biscuit).

4. The representations made in this Affidavit are based upon calculations as per Regulation PF10(a)(3), using the following summary data:

- Average crude protein \_\_\_\_\_ %
- Average crude fat \_\_\_\_\_ %
- Average crude fiber \_\_\_\_\_ %
- Average moisture \_\_\_\_\_ %
- Average ash \_\_\_\_\_ %
- Calculated NFE \_\_\_\_\_ %

Weight NFE/unit = \_\_\_\_\_ g (weight of unit) × [\_\_\_\_\_ % NFE/100] = \_\_\_\_\_ g NFE/unit

5. The data substantiating this representation of nitrogen-free extract content are recorded and on file at \_\_\_\_\_ and will be furnished to the feed control official upon request.

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
(Notary Signature)



## Appendix E

Pet Food Committee  
Clarification of Regulation PF9(a)  
Passed August 4, 2015

Revised language appears below in bold and should be inserted on line 13 on page 144 of the 2015 AAFCO Print OP.

### **Regulation PF9. Statements of Calorie Content**

- (a) The label of a dog or cat food, **including snacks, treats, and supplements**, shall bear a statement of calorie content and meet all of the following:
  - (1) The statement shall be separate and distinct from the “Guaranteed Analysis” and appear under the heading “Calorie Content”;
  - (2) ...

**Strategic Affairs Committee Report**  
2015 AAFCO Annual Meeting  
August 5, 2015, 10:00 a.m.–12:00 p.m., Denver, Colorado

**Committee Recommendations**

Report acceptance

**Board Recommendations:** Report accepted on 10/20/15

**Association Actions:** None

**Committee Participants**

**Full Committee Members:** Linda Morrison,\* Paul Bachman, Ken Bowers,\* Richard Ten Eyck,\* Andy Gray,\* Roger Hoestenbach, April Hunt,\* Jamey Johnson,\* Shannon Jordre,\* Ali Kashani,\* Chad Linton,\* Mark LeBlanc (Board Liaison),\* Dragan Momcilovic,\* Jenny Murphy,\* Aaron Price,\* Nancy Thiex,\* Judy Thompson,\* Robert Waltz (Vice Chair)\*

\*Present at meeting

**Finance Subcommittee:** Ali Kashani (Chair), Ken Bowers, Jamey Johnson, Mark LeBlanc, Chad Linton, Richard Ten Eyck, Judy Thompson

**By-Laws Subcommittee:** Ken Bowers (Chair), April Hunt

**Committee Advisors:** Dave Ailor,\* Nancy Cook, Dave Dzanis,\* Bob Ehart, Dave Fairfield,\* Kurt Gallagher, Kristi Krafka, Ed Rod, Richard Sellers\*

\*Present at meeting

**Committee Report**

- 1.) Working Group (Bob, Shannon, Ali, Roger, Ken)
  - A) Procedures Manual Review—Committee coordination processes
    - i) Update and review draft Phase 2 work:
      - a) Revisions have been made and shared with the Committee immediately prior to the meeting.  
ACTION: Committee comments requested back by end of September.
      - b) Discussion on format/content/placement: Explore opportunity to hyperlink procedures manuals material with the core material in By-Laws, Committee Guidelines, Committee Procedures. Hyperlink can be used but preference is to keep separate document as well.
      - c) Content discussion: Make sure placement is reviewed between By-Laws and section that follows (April Hunt). Need to obtain ETC training revisions from Tim Lyons for consideration in either OP or Procedures Manual.
      - d) Will require board approval but not membership. Need to communicate presence of final product on website home page when posted.  
ACTION: WG will re-review and share final draft with Committee by mid-December for committee consideration at January 2016 Midyear meeting.
- 2.) Subcommittee activities
  - A) By-Laws
    - i) Quorum provisions for committees suggestion for discussion:
      - a) For a committee meeting to be considered legal in terms of its governance and incorporation status, there needs to be a quorum. Quorum represents the minimum number of voting committee members who need to be present for a meeting to be convened and decisions to be made. The number defined for quorum will be stated in the organization's by-laws once decided. Generally, quorum is considered to be the majority, or half plus one, but for some of AAFCO's larger committees (20+), this could prove challenging.

- b) When a quorum is present the chair can call the meeting to order. When quorum is not met, a meeting cannot be called to order nor can any decision be made, issues voted on, or minutes taken.
  - c) Recommend a formula that identifies a minimum number of voting members (10?) or 50% + 1, whichever is less. In that way, we can ensure that issues are discussed thoroughly but not run the risk of having to cancel meetings, which industry and regulatory officials are attending at considerable expense.
  - d) Comments: Quorum is generally 50% + 1 (already in electronic voting) and seems prudent. Assess historical attendance at larger committees to determine if 10 is a reasonable number. General opinion favored a minimum of 10 for larger committees. Quorum includes those in person, by proxy, and on the phone. Quorum for formal meetings versus those held outside Annual/Midyear (e.g. conference calls) needs to be clarified (e.g., necessary for formal only). Could distinguish that meeting can be held, but quorum is necessary for voting.  
ACTION: Proposal to be shared with committee by end of September so it can be integrated into Procedures Manual.
- B) Finance
- i) Subcommittee meeting will now precede the SAC in order that their reports can be considered for formal committee action.
  - ii) Subcommittee report for SAC approval (Appendix A)  
MOTION to accept report: Richard; second Judy; MOTION CARRIES.
  - iii) Discussion of online OP influence on financial status: Financial health remains strong.
- 3.) Strategic Plan (SP) Priority Activities 2013-16
- A) Working group (Bob, Jenny, Richard, Linda) report on Integrated Tracking system implementation in Feed Bin.
- i) System demonstrated but no uptake—no update.
- B) Work plan status reviewed, and updates provided for priority activities:
- i) Sound financial planning, more cost-effective operations: Ali
    - a) Budget procedure established and actioned.
    - b) Monthly expenses reviewed and posted in Feed Bin (includes sharing with board). Expect expenses with FSMA to go up.
    - c) Quantitative aspects in order but need to examine qualitative aspects.
  - ii) Revenue Generation Plan: Ali
    - a) All work products have been actioned and are in place. Activity complete.
  - iii) Process for new members: Ali
    - a) Was on hold due to committee member changes—new vice Chair CIOC will be working to address outreach activities.
  - iv) Build leaders with AAFCO background who support AAFCO: Linda, Tim L.
    - a) On hold due to other priorities of committee members.
    - b) Skills were identified but need to consider how to identify potential leaders.
    - c) Could wait for IFPTI leadership curriculum/course development but expect it to be a few years away.
    - d) Association for Executive Leadership (2 day) is being explored for Fertilizer.
    - e) Next steps include course identification and costing. Could use Administrator's seminar.
    - f) Jenny and Tim will seek suggestions and return with recommendations.
  - v) Emergency Preparedness Exercise: Judy
    - a) Small tabletop planning exercise held during Seminar April 2015. Evaluation will be used to improve exercise. Larger exercise in conjunction with 2017 Midyear has been suggested.
    - b) OP emergency section has been reviewed and updated.
    - c) Folders in Feed Bin for states to use for tabletop exercises.
    - d) Updated report will be forwarded.
  - vi) Partnership establishment: Ali
    - a) Actively working with key partner FDA (PFP, 50 state, AFSS), NASDA (outreach FSMA), AFDO (regional).

- b) Reinvigorated USDA collaboration (conference call investigating partnership).
- c) Biggest partner is FDA and work with them will continue to be a priority given PFP, FSMA, etc.
- vii) Support APHL Grant: Nancy
  - a) On target with deliverables, monthly reporting to APHL and regular board reports, annual report completed (posted in the Feed Bin/website).
- viii) Enhanced Communications (6 subelements): Ali
  - a) Board has been actively working to improve communications (meetings, Feed Bin, etc.).
  - b) Leader change with new Vice Chair.
  - c) Need to review and prioritize activities and establish time lines.
  - d) Ali to update and submit report.
- ix) SP leads have not been submitting work plan updates, making transparency a challenge.
- 4.) Committee structure review work group [WG; Mark (lead), Judy, and Richard]
  - A) WG compiled the results from all committees. The report was electronically shared with committee prior to the meeting.
  - B) Recommendation is not to make changes at this time.
- 5.) Strategic Planning 2017+
  - A) FSMA Implementation Task Force (TF) priority activities report reviewed (Appendix B).
  - B) Discussed using current Strategic Plan framework, update it, review status of current priorities, integrate FSMA TF priorities, and identify limited priorities to manage work load and expectations from implicated committees.
  - C) Suggestion is to use committee chairs and board for process to identify priorities for 2017-20 Strategic Plan.
  - D) Suggestion to allocate a full day, use the TF facilitator, and hold it pre-Seminar—Dave Phillips and Jennifer Roland will investigate location.  
ACTION: Organize planning session pre-Seminar 2016 with board and committee chairs to identify SP priorities for 2017-20.
  - E) Confirm committee financial needs from the 2016-17 budget:
    - i) Travel for Strategic Planning for 2016-17.
    - ii) Need to consider leadership training costs likely for 2017-18.
    - iii) Emergency planning costs expected to come from FFIMC.

MOTION: To accept the Strategic Affairs Committee report, subject to minor edits and formatting by Mark; second Bob; MOTION PASSES.

### Action Item Table

Responsible	Item	Action	Timing/Status
Working Group: Bob, Roger, Shannon, Ali and Ken	Phase 2: general review of the Procedures Manual to ensure timely work flow between committees	Additional revisions were shared with SAC immediately prior to August AGM 2015.	SAC comments requested by end of September. WG will re-review and share final draft by mid-December for committee consideration at January 2016 Midyear Meeting.
By-Laws Subcommittee	By-Laws issues	Quorum provision suggestions discussed.	Proposal to be shared with committee by end of September so it can be integrated into Procedures Manual.
Finance Subcommittee	Association financial information	Information was requested on the financial status of the online OP.	Ali provided the information at the August 2015 Annual Meeting. Complete.

<b>Responsible</b>	<b>Item</b>	<b>Action</b>	<b>Timing/Status</b>
Working Group: Bob W. (lead), Jenny, and Richard	Strategic Plan and Priority Action Item tracking and progress updates	Strategic Plan key priorities for 2013-16 completed by board October 2012. Committee Chairs drafted work plans, which were reviewed and accepted by the Board of Directors [with adjustments requested of CIOC (slight restructure and addition of time lines)]. Integrated Tracking system drafted in Feed Bin with FASS support for detail input. SAC chair provided feedback. Exploring both FASS and Feed Bin for tracking. No updates received from SP priority leads to update work plans for tracking purposes. WG expect to have a recommendation for the committee by 2015 August Annual Meeting.	No action.
Strategic Affairs: Mark (lead), Judy, and Richard	Schedule review of committee structure 2 years after implementation to make sure reorganization has been of value.	Proposed work plan presented at August AGM 2014. WG compiled survey the results from all committees and shared the results prior to the 2015 August Annual Meeting.	WG recommended not making changes at this time. Complete.
Strategic Plan 2017-20 (Linda)	Organize planning session pre-Seminar 2016.	Board and Committee Chairs to identify SP priorities for 2017-20. Prepare funding needs for travel.	

## **Appendix A: Finance Subcommittee Report**

2015 AAFCO Midyear Meeting

January 14, 2015, 12:00–1:30 p.m., San Antonio, Texas

### **Committee Recommendations**

- 1.) Post Association's Annual Statements in the Feed Bin for members to view.
- 2.) The current subcommittee structure is working well and members would like the Finance Subcommittee to continue to report to the Strategic Affairs Committee.
- 3.) No need for development of "Dashboard" as this need has been filled by other tools available through FASS.

### **Board Recommendations**

- 1.) Board approved posting of Association's Annual Statements in the Feed Bin for members to view at their January 15 meeting.

### **Association Actions**

Posting completed \_\_\_\_.

### **Committee Participants**

**Members Present:** Richard Ten Eyck, Judy Thompson, Bob Waltz, Mark LeBlanc, Ken Bowers, Jamey Johnson, Doug Lueders, Ali Kashani

**Member Absent:** Chad Linton

### **Committee Report**

- 1.) Meeting called to order by Ali Kashani at 12:30 p.m. CT.
- 2.) Update on investment of AAFCO funds—The subcommittee discussed the investment portfolio and the possibility of moving additional funds from the reserve into the portfolio. It was suggested to inquire with our financial advisor about the possibility and best timing for investing an additional \$100,000.00.
- 3.) Status of "dashboard" development—Very little progress made as it is unclear exactly what information we are looking to illustrate and the required level of detail. With the work being done by FASS, it was determined that the dashboard was no longer required.
- 4.) Committee structure discussion—Discussion of the options for the Finance Committee to report directly to the BoD versus continue as a subcommittee under the Strategic Affairs Committee. Members felt that the current subcommittee structure is working well and the Finance Subcommittee can continue to report through the Strategic Affairs Committee.
- 5.) Discussion of Budget Generating Plan—Discussion of options related to Check Sample Program, meetings, training activities, and monographs as potential sources of ongoing and new revenue in addition to the OP.
- 6.) AAFCO budget in general (monthly financial statements, invoices, etc.)
  - A) Discussion of association's budget and development of documents to track the association's financial status and activities were discussed. No required changes to fiscal reports were identified.
  - B) It was recommended that the chairs should be encouraged to submit plans for their committee activities as funds are available to conduct needed activities. This can be done during chair meetings and by e-mails when the secretary-treasurer sends budget generation plans during the month of December.
  - C) Discussion about transparency with membership, regulated parties, and the public regarding AAFCO's finances. After a thorough discussion, the subcommittee recommended that the association's annual statements be posted in the Feed Bin for members to view.
- 7.) Meeting adjourned at 1:30.

(This report was voted electronically and accepted by the majority of the members.)

## Appendix B: FSMA Implementation Task Force Report

April 27, 2015

### Task Force Participants

**Members Present:** Tim Lyons (ETC), Jim True (ISC), Teresa Grant (LMSC), Jennifer Mirabile (LMSC), Dave Phillips (FLC), Stan Cook (PFC), Richard Ten Eyck (IDC), Eric Nelson (FDA), Ali Kashani (ST&CIO), Judy Thompson (FFIMC), Linda Morrison, Chair (SAC)

**Members Absent:** Jenna Areias (FLC), Doug Lueders (MBRC)

**Participants (Board):** Ken Bowers, Mark LeBlanc, Dan Danielson, Bob Geiger, Kristen Green

**Participants (Other):** Lorraine Garkovich (facilitator), Jennifer Roland (FASS)

### Task Force Report

The Task Force (TF) met to review the priority activities identified by the group to date (Table 3). The goal was to critically assess each point to determine whether AAFCO needs to lead and action it. Table 2 reflects the group's comments and distillation to identify the activities that are need to be taken by AAFCO, for AAFCO members.

Table 1 reflects the final product, which is only the 6 key activities needed for AAFCO members. The TF deliberated linkages between activities, general order and timing of the activities as well as responsible and supporting committees. The TF edited the activities to improve clarity and developed suggested actions that will need to be accomplished.

With the remaining time, the TF selected activities 2, 3, and 6 and further elaborated inputs and outputs as follows:

2. FFIMC—Livestock feed, pet food, and feed ingredients to be included to determine the path forward for:
  - a. AAFCO GMPs; Develop a plan for states that have adopted AAFCO's model GMPs to make the transition to FSMA GMPs—include MBRC and PFC  
*Inputs*  
FSMA/FSM Regulations  
AAFCO GMPs  
Identification of states that have adopted AAFCO GMPs  
AFRPS  
FSMA operations manual (NASDA): Food Safety Program  
*Outputs*  
Develop plan for states to adopt Federal GMPs. Clarify what to do with on farm. Communicate exit strategy for states with AAFCO GMPs (August 2016)  
Remove GMPs and check list from OP (hard copy Nov. 2015; electronic Mar. 2016)  
Determine how states can deliver FSMA requirement under federal or own authority and the ways they will enact. Need an adaptable model for different ways states will implement.  
Reference to FSMA in Model Bill; instructions to MBRC (Nov. 2015)
3. FFIMC—To determine the contaminants, hazards, matrix, and action levels and enforcement strategies to provide guidance to LMSC to inform method development and priority setting. Integrate collaboratively into current LMSC priorities.  
*Inputs*  
FSMA and lab priorities need to be linked  
Identify current lab methods and method development priorities  
Effort required needs to be identified (low hanging fruit)  
Identify number of labs that could be doing this work and costs to do so (includes worker safety and environmental concerns)  
Consider environmental scope  
Identify action limits (FDA/CFIA; consider action limits versus detection limits)  
*Outputs*  
Prioritized list of hazards  
Lab methods to be developed  
Strategy to use lab resources effectively and efficiently

Detection limits

Recommend min/max detection level of hazard or contaminant

Typical matrices

Levels of concern (species of interest)

Where to find hazards (ingredients of concern, processing steps or conditions)

Incorporate hazards identified by FSPCA into lab detection or quantification processes

Identify lab methods and procedures needed to implement

6. Current Issues and Outreach Committee—Develop an AAFCO communication plan to better inform

*Outputs*

Need to review and revise/confirm AAFCO mission and vision statement

Board work with communications firm to develop a communications plan (reporting template, list of AAFCO members who are liaisons, committee coordinators, external audience messages, identify spokesperson (internal/external), AAFCO technical support to spokesperson, and communications material

Recommend who will lead communications planning process to board

Recommend who will lead implementation of communications plan to board

**Next Steps**

Task Force committee representatives with the 6 key activities will begin work in the assigned committee to develop work plans with deliverables, responsibilities, and timing.

Task Force Instruction—General committee work should begin with scoping of what other organizations are already doing in this area. Intelligence gathering is required to capitalize on similar initiatives to minimize AAFCOS work (e.g., EU and IFIF regarding HACCP, NASDA's FSMA Operations Manual when finalized).

It is anticipated that this work will begin immediately and responsible committees will include this during the August meeting. A touch-base will be held with committee chairs during the board meeting for communication and information sharing on progress preceding the August 2015 meeting.

In order to facilitate the oversight process, the use of mind mapping software will be used. The software will help identify deliverables and sort out relative order and priorities. As part of the process, responsibilities and time lines will be determined. The TF were provided with a tutorial and brief overview of <http://www.mindjet.com/mindmanager/>. It can be exported to pdf with the Mindjet viewer. A viewer can be distributed of the mind map that people can click on to expand the topics. Jennifer will take the information from the responsible committees and input it into mind manager for tracking purposes.



**TF Report: Table 1  
FSMA Implementation Task Force  
Meeting Report: April 27, 2015  
Final Condensed Table  
AAFCO Specific Priority Activities 2015–2017**

Item No.	Activity: January 11, 2015	Source	TF Revised Activities: April 27, 2015	Rev. Item No.	Responsible Committee and Deliverable Description: April 27, 2015	Timing
1.1	Confirm that states have proper authorities for inspectors to do the work either for FDA or on their own, i.e., at the state level. Review the Model Bill to identify need for new, revised, and missing authorities.	FFIMC Annual 2014	Figure out how the states can deliver FSMA activities for their own purposes (an adaptable model).	1	MBRC – When FSM rules come out in summer of 2015, make recommendations to align Model Bill with needed authorities to implement FSMA.	Fall 2015
1.2 4 5	<p>a. Identify whether we are rewriting AAFCO GMPS or modifying the Model Bill, Model Regs., and Pet Food Regs. to line up with FSMA. Currently, the OP (2015) contains:</p> <ul style="list-style-type: none"> <li>• AAFCO Good Manufacturing Practice Regulations for Feed and Feed Ingredients (211-214); and</li> <li>• Checklist for AAFCO Good Manufacturing Practice Regulations for Feed and Feed Ingredients (215-220)</li> </ul> <p>As a first step, we will need to decide whether we are going to maintain these two documents or reference FSMA in the Model Bill/Regulations in the same way as the Federal BSE provisions were included. If we choose to modify the Model Bill/Regulations, we should likely remove both of these documents from the OP at the correct point in time.</p> <p>Pet Food inspection will change as these firms now fall under GMPs and preventive controls so that will have an effect on Model Bill (4).</p> <p>b. Was looking at the Model Feed Safety Program Plan— August 2007 (240-253). This should also be reviewed and updated in light of the finalized FSMA as required. Might also be useful to identify some additional things to consider with respect to FSMA implementation (5).</p>	FFIMC PFC	<p>a. Develop a plan for states to adopt the Federal GMPS (1.2).</p> <p>b. Review and update Model Feed Safety Program Plan taking FSMA into account (5).</p>	2	<p>FFIMC – Livestock feed, pet food, and feed ingredients to be included to determine the path forward for:</p> <p>a. AAFCO GMPS; Develop a plan for states that have adopted AAFCO's model GMPs to make the transition to FSMA GMPs – include MBRC and PFC</p> <p>b. Model Feed Safety Program Plan – include Linda (OP Section) and Bob Waltz (Feed Safety Coord.)</p>	NOW

Item No.	Activity: January 11, 2015	Source	TF Revised Activities: April 27, 2015	Rev. Item No.	Responsible Committee and Deliverable Description: April 27, 2015	Timing
6	Focus shifting to include more control of contaminants/hazards. Do we have the necessary methods, proficiency, and limits of detection/quantification to support the change in regulatory focus?	FFIMC Annual 2014	Use Hazards identified by the FSPCA as a starting point. Develop a prioritized list of hazards for LMSC.	3	FFIMC—include Alliance (FSPCA), Enforcement Issues Committee, ISC, IDC and LMSC—To determine the contaminants, hazards, matrix, and action levels and enforcement strategies to provide guidance to LMSC to inform method development and priority setting. Integrate collaboratively into current LMSC priorities.	NOW
10.1	(FSPCA, ETC, FFIMC) Expertise in ingredient manufacturing vis-a-vis preventive controls and hazards may be an issue for many sectors (FSPCA, ETC, FFIMC).	FFIMC Annual 2014	Link to regulations item 1.2 and to training.	4	FFIMC and ISC—supported by ETC—To verify if training material for feed ingredient manufacturing from the Alliance meets the needs of inspectors and revise as needed.	Fall 2015 pending Alliance
11	Intelligence gathering is required to capitalize on similar initiatives to minimize AAFCOS work. Should include discussion with EU officials about implementation and IFIF regarding HACCP. Additional resource will be NASDA's FSMA Operations Manual when finalized.	TF mtg. 2015. 01.11	General scoping statement for all committees for when they begin work.		Task Force Instruction—General committee work should begin with scoping of what other organizations are doing in this area.	Complete—issued with TF report
31	Pet Food inspection will change as these firms now fall under GMPs and preventive controls so that will have an effect on AAFCO Feed Inspector's Manual.	PFC	To ISC	5	ISC—supported by LMSC and ETC—Review and revise the Feed Inspector's Manual to make sure it supports the implementation of FSMA (notably aseptic sample).	NOW
34	<ol style="list-style-type: none"> <li>1. Communications strategy to get the word out (e.g., AFRPS). Resources with good outreach that could help are AgLabs and PFP.</li> <li>2. Need standardized reporting format from member activities related to FSMA.</li> <li>3. Need list of members working with affiliated organizations on FSMA activities.</li> <li>4. Need point of coordination gathering information and sharing internally and externally.</li> </ol>	TF mtg. 2015. 01.11	All: Need for better communications and information sharing.	6	Current Issues and Outreach Committee—supported by SAC <ol style="list-style-type: none"> <li>a. Develop an AAFCO communication plan to better inform.</li> <li>b. Develop a model communication plan for states to use for outreach to regulated parties.</li> </ol>	NOW

**TF Report: Table 2  
FSMA Implementation Task Force  
Meeting Report: April 27, 2015  
First round discussion on initial “Priority Activity 2015-17” list**

Item No.	TF Revised Activities/Actions: April 27, 2105	Activity: January 11, 2015 (TF Report)	Source
<b>Regulations</b>			
1	1. Figure out how the states can deliver FSMA activities for their own purposes (an adaptable model). 2. Develop a plan for states to adopt the Federal GMPS	(FFIMC, MBRC) 1. Confirm that states have proper authorities for inspectors to do the work either for FDA or on their own, i.e., at the state level 2. Identify whether we are rewriting AAFCO GMPs, modifying the Model Bill, Model Regs., and Pet Food Regs. to line up with FSMA	FFIMC Annual 2014
2	Part of 1.2 above	Currently, the OP (2015) contains: • AAFCO Good Manufacturing Practice Regulations for Feed and Feed Ingredients (211-214); and • Checklist for AAFCO Good Manufacturing Practice Regulations for Feed and Feed Ingredients (215-220) As a first step, we will need to decide whether we are going to maintain these 2 documents or reference FSMA in the Model Bill/Regulations in the same way as the Federal BSE provisions were included. If we choose to modify the Model Bill/Regulations, we should likely remove both of these documents from the OP at the correct point in time.	FFIMC
3	Strike out	Oregon would like a comparison of the FSMA GMPs to the Model Bill GMPs. What would we have to change to align the Model Bill to subpart B of the rule?	Member
4	Part of 1.2 above	Pet Food inspection will change as these firms now fall under GMPs and preventive controls so that will have an effect on model bill.	PFC
5	Part of 1.2 above: review and update MFSP taking FSMA into account	Was looking at the Model Feed Safety Program Plan—August 2007 (240-253). This should also be reviewed and updated in light of the finalized FSMA as required. Might also be useful to identify some additional things to consider with respect to FSMA implementation.	FFIMC

	<b>Laboratories</b>		
6	1. Use Hazards identified by the FSPCA as a starting point. Develop a prioritized list of hazards for LMSC. Collaborate with LMSC to incorporate into their current priority list. 2. Strike out	(LMSC, CSC) 1. Focus shifting to include more control of contaminants/hazards. Do we have the necessary methods, proficiency, and limits of detection/quantification to support the change in regulatory focus? 2. Are there opportunities to expand the check sample program to include key hazards/contaminants and different/new ingredient/substrates?	FFIMC Annual 2014
7	Part of 1: normal process	Will the working groups or method needs statements need to change in order to conform to FSMA implementation/regulations/rules/preventative controls? If so, where do we look for guidance?	LMSC
8	Part of 1: normal process	Will FSMA/FDA be looking to this committee for help with tolerance levels?	LMSC
9	Part of 1: normal process	Will any of these methods become mandatory testing for accredited labs?	LMSC
	<b>Ingredient Manufacturing</b>		
10	1. Link to regulations item 1.2 and to training. 2. FDA in process of doing.	(FSPCA, ETC, FFIMC) 1. Expertise in ingredient manufacturing vis-a-vis preventive controls and hazards may be an issue for many sectors (FSPCA, ETC, FFIMC). 2. Is there a need to identify common hazards in ingredient descriptions (including critical limits) or in some other way (e.g., monographs?)—IDC	FFIMC Annual 2014
11	General scoping statement to all committees when they begin work.	Intelligence gathering is required to capitalize on similar initiatives to minimize AAFCO's work. Should include discussion with EU officials about implementation and IFIF regarding HACCP. Additional resource will be NASDA's FSMA Operations Manual when finalized.	TF mtg. 2015.01.11
	<b>Ingredients</b>		
12	Strike out	Evaluate MOU with FDA and offer changes that facilitates AAFCO's role in establishing common ingredient names for feed labeling.	IDC
13	Strike out	Define grocery store waste (and other human food waste streams if appropriate).	IDC
14	Strike out	Foreign outreach of how to get a new ingredient defined	IDC
15	Strike out	Education on intended uses of ingredients	IDC
16	FDA will do	Enhance detail level of definitions where needed to address significant hazards	IDC
	<b>Labeling</b>		
17	Strike out	(IDC, FLC, MBRC) 1. Is additional information required on labels, e.g., critical limits for contaminants in ingredients (and mixed feeds?), importer/exporter, 3rd-party inspection program recognition?	FFIMC Annual 2014

<b>Inspection Protocols</b>			
18	1. FDA will do 2. FDA will do 3. FDA will do	(ISC, FFIMC) 1. Develop inspection protocols for facilities we don't currently inspect. 2. Develop inspection protocols/design sampling equipment for contaminants and hazards. 3. Develop inspection protocols focusing on hazard ID and PCs for all facility types.	FFIMC Annual 2014
19	FDA will do	cGMP form for a nonmedicated feed manufacturing facility	ISC
20	FDA will do	Identify inspection changes when preventive controls are required for all feed facilities	ISC
21	FDA will do	Will FSMA change when or why we sample?	ISC
22	FDA will do	Will contaminant sampling be required as part of FSMA?	ISC
23	FDA will provide guidance for the assessment during inspection.	Who will be responsible for assessing PCPs?	ISC
24	FDA will specify inspection protocol and training.	What will the inspector's role be during inspection review of a PCP?	ISC
25	Already in process; FDA is leading. Need for better communications and information sharing.	Assuming that the FDA will be developing inspection protocols for FSMA. Hopefully FDA might want to involve the states in this process. This might be a project to be managed jointly by the Inspection and Sampling/Feed and Feed Ingredient Manufacturing Committees with input from the FSPCA.	FFIMC
26	Alliance is leading and AAFCO is participating. No further action. Need for better communications and information sharing.	The FSPCA is also developing model animal food safety plans for: <ul style="list-style-type: none"> <li>• Dry Food</li> <li>• Liquid Feed</li> <li>• Minerals, Vitamins, Micro Ingredients</li> <li>• Animal Co-products</li> <li>• Plant Co-products</li> <li>• Pet Food</li> <li>• Special Purpose Products</li> </ul> We should discuss whether we will need to develop specific inspection protocols for each of these or something generic or a hybrid of the two. There will likely also be some good information about hazards coming out of this exercise that could inform laboratory method development needs for more common hazards, etc. Might also help to identify updates required to ingredient definitions in relation to feed safety concerns and labeling requirements.	FFIMC
27	Per above—FDA are doing. Need for better communications and information sharing.	The FSPCA has as a primary responsibility for development of the training curriculum and guidance documents for the feed industry and there will be corresponding needs for FDA and state inspectors as well. Tim Lyons, ETC, is on the subgroup, but he and the FDA will likely need SMEs from FFIMC to help with that as well.	FFIMC
28	Alliance developing training for industry; FDA developing training for inspectors. Need for better communications and information sharing.	JTA (Job Task Assessment): This is still ongoing as we are coordinating Subject Matter Experts from different states in conjunction with FDA, IFPTI, UC-Davis, and NEHA to thoroughly evaluate what a professional feed inspector does on a daily basis. This JTA will allow these partners to develop trainings to further enhance careers of feed inspectors all the way to managerial positions and leadership.	ETC
29	AAFCO reps already working with Alliance. Includes competency assessment (IFPTI and NEHA). No further action required. Need for better communications and information sharing.	Food Safety Preventative Control Alliance: Working with this group to stay in tune with how this will affect industry and regulators to implement such controls. Evaluate this process in order to educate regulators on how these practices will affect their inspection duties.	ETC

<b>Inspection Protocols</b>			
30	Normal business	Subcommittee Work Groups: Develop subcommittees to allow committee member to become more involved in the processes that will be coming once all facets of FSMA are implemented.	ETC
31	To ISC	Pet Food inspection will change as these firms now fall under GMPs and preventive controls so that will have an effect on AAFCO Feed Inspector's manual.	PFC
<b>Pet Food</b>			
32	See 6 above	1. Similar issues as livestock feed. Handle together or separate? Biological versus chemical contaminants.	FFIMC Annual 2014
33	<ol style="list-style-type: none"> <li>1. FDA will do</li> <li>2. Task force function</li> <li>3. Task force function</li> <li>4. Canada doing in part at this time</li> <li>5. Per above</li> <li>6. Statement; no response</li> </ol>	<p>Random thoughts:</p> <ol style="list-style-type: none"> <li>1. Training of industry, regulators, and inspection staff will be a big need to fill (FSPCA, ETC + SMEs from across AAFCO)</li> <li>2. Need a documented strategy for the whole thing and funding to get ready.</li> <li>3. Coordination role—Feed Safety Coordinator or other?</li> <li>4. North American (Canada/USA) comparability/recognition will be important to both countries.</li> <li>5. Development of model systems may be helpful to assist inspectors in compliance assessments.</li> <li>6. Significant impact of AAFCO for years to come!</li> </ol>	FFIMC Annual 2014
<b>Outreach</b>			
	All: Need for better communications and information sharing.	<ol style="list-style-type: none"> <li>1. Communications strategy to get the word out (e.g., AFRPS). Resources with good outreach that could help are AgLabs and PFP.</li> <li>2. Need standardized reporting format from member activities related to FSMA.</li> <li>3. Need list of members working with affiliated organizations on FSMA activities.</li> <li>4. Need point of coordination gathering information and sharing internally and externally.</li> </ol>	TF mtg: 2015.01.11

**TF Report: Table 3**  
**FSMA Implementation Task Force**  
**Priority Activities 2015–2017**  
**(TF Report January 11, 2015)**

Item No.	Activity	Source
<b>Regulations</b>		
1	(FFIMC, MBRC) 1. Confirm that states have proper authorities for inspectors to do the work either for FDA or on their own, i.e., at the state level. 2. Determine whether we are rewriting AAFCO GMPs or modifying the Model Bill, Model Regs., and Pet Food Regs. to line up with FSMA.	FFIMC Annual 2014
2	Currently, the OP (2015) contains: <ul style="list-style-type: none"> <li>• AAFCO Good Manufacturing Practice Regulations for Feed and Feed Ingredients (211-214); and</li> <li>• Checklist for AAFCO Good Manufacturing Practice Regulations for Feed and Feed Ingredients (215-220)</li> </ul> As a first step, we will need to decide whether we are going to maintain these two documents or reference FSMA in the Model Bill/Regulations in the same way as the Federal BSE provisions were included. If we choose to modify the Model Bill/Regulations, we should likely remove both of these documents from the OP at the correct point in time.	FFIMC
3	Oregon would like a comparison of The FSMA GMPs to the Model Bill GMPs. What would we have to change to align the Model Bill to subpart B of the rule?	Member
4	Pet Food inspection will change as these firms now fall under GMPs and preventive controls so that will have an effect on model bill.	PFC
5	Was looking at the Model Feed Safety Program Plan—August 2007 (240-253). This should also be reviewed and updated in light of the finalized FSMA as required. Might also be useful to identify some additional things to consider with FSMA implementation.	FFIMC
<b>Laboratories</b>		
6	(LMSC, CSC) 1. Focus shifting to include more control of contaminants/hazards. Do we have the necessary methods, proficiency, and limits of detection/quantification to support the change in regulatory focus? 2. Are there opportunities to expand the Check Sample Program to include key hazards/contaminants and different/new ingredient/substrates?	FFIMC Annual 2014
7	Will the working groups or method needs statements need to change in order to conform to FSMA implementation/regulations/rules/preventative controls? If so, where do we look for guidance?	LMSC
8	Will FSMA/FDA be looking to this committee for help with tolerance levels?	LMSC
9	Will any of these methods become mandatory testing for accredited labs?	LMSC

<b>Ingredient Manufacturing</b>		
10	(FSPCA, ETC, FFIMC) 1. Expertise in ingredient manufacturing vis-a-vis preventive controls and hazards may be an issue for many sectors (FSPCA, ETC, FFIMC). 2. Is there a need to identify common hazards in ingredient descriptions (including critical limits) or in some other way (e.g., monographs?)— IDC	FFIMC Annual 2014
11	Intelligence gathering is required to capitalize on similar initiatives to minimize AAFCOS work. Should include discussion with EU officials about implementation and IFIF regarding HACCP. Additional resource will be NASDA's FSMA Operations Manual when finalized.	TF mtg. 2015.01.11
<b>Ingredients</b>		
12	Evaluate MOU with FDA and offer changes that facilitates AAFCO's role in establishing common ingredient names for feed labeling.	IDC
13	Define grocery store waste (and other human food waste streams if appropriate).	IDC
14	Foreign outreach of how to get a new ingredient defined	IDC
15	Education on intended uses of ingredients	IDC
16	Enhance detail level of definitions where needed to address significant hazards.	IDC
<b>Labeling</b>		
17	(IDC, FLC, MBRC) Is additional information required on labels, e.g., critical limits for contaminants in ingredients (and mixed feeds?), importer/exporter, 3rd-party inspection program recognition?	FFIMC Annual 2014
<b>Inspection Protocols</b>		
18	(ISC, FFIMC) 1. Development of inspection protocols for facilities that we don't currently inspect. 2. Development of inspection protocols/design sampling equipment for contaminants and hazards. 3. Development of inspection protocols focusing on hazard ID and preventive controls for all facility types.	FFIMC Annual 2014
19	cGMP form for a nonmedicated feed manufacturing facility	ISC
20	Identify inspection changes when preventive controls are required for all feed facilities	ISC
21	Will FSMA change when or why we sample?	ISC
22	Will contaminant sampling be required as part of FSMA?	ISC
23	Who will be responsible for approving PCPs?	ISC
24	What will the inspector's role be during inspection review of a PCP?	ISC
25	Assuming that the FDA will be developing inspection protocols for FSMA. Hopefully, FDA might want to involve the states in this process. This might be a project to be managed jointly by the Inspection and Sampling/Feed and Feed Ingredient Manufacturing Committees with input from the FSPCA.	FFIMC



26	<p>The FSPCA is also developing model animal food safety plans for:</p> <ul style="list-style-type: none"> <li>• Dry Food</li> <li>• Liquid Feed</li> <li>• Minerals, Vitamins, Micro Ingredients</li> <li>• Animal Co-products</li> <li>• Plant Co-products</li> <li>• Pet Food</li> <li>• Special Purpose Products</li> </ul> <p>We should discuss whether we will need to develop specific inspection protocols for each of these or something generic or a hybrid of the two. There will likely also be some good information about hazards coming out of this exercise that could inform laboratory method development needs for more common hazards, etc. Might also help to identify updates required to ingredient definitions in relation to feed safety concerns and labeling requirements.</p>	FFIMC
27	<p>The FSPCA has as a primary responsibility for development of the training curriculum and guidance documents for the feed industry and there will be corresponding needs for FDA and state inspectors as well. Tim Lyons, ETC, is on the subgroup, but he and the FDA will likely need SMEs from FFIMC to help with that as well.</p>	FFIMC
28	<p>JTA (Job Task Assessment): This is still ongoing as we are coordinating Subject Matter Experts from different states in conjunction with FDA, IFPTI, UC-Davis, and NEHA to thoroughly evaluate what a professional feed inspector does on a daily basis. This JTA will allow these partners to develop trainings to further enhance careers of feed inspectors all the way to managerial positions and leadership.</p>	ETC
29	<p>Food Safety Preventative Control Alliance: Working with this group to stay in tune with how this will affect industry and regulators to implement such controls. Evaluate this process in order to educate regulators on how these practices will affect their inspection duties.</p>	ETC
30	<p>Subcommittee Work Groups: Develop subcommittees to allow committee member to become more involved in the processes that will be coming once all facets of FSMA are implemented.</p>	ETC
31	<p>Pet Food inspection will change as these firms now fall under GMPs and preventive controls, so that will have an effect on:</p> <ol style="list-style-type: none"> <li>1. AAFCO training manual</li> <li>2. GMP inspection form</li> </ol> <p>Note this will overlap with inspection and sampling.</p>	PFC
<b>Pet Food</b>		
32	<p>Similar issues as livestock feed. Handle together or separate? Biological versus chemical contaminants.</p>	FFIMC Annual 2014
33	<p>Random thoughts</p> <ol style="list-style-type: none"> <li>1. Training of industry, regulators, and inspection staff will be a big need to fill (FSPCA, ETC + SMEs from across AAFCO)</li> <li>2. Need a documented strategy for the whole thing and funding to get ready.</li> <li>3. Coordination role—Feed Safety Coordinator or other?</li> <li>4. North American (Canada/USA) comparability/recognition will be important to both countries.</li> <li>5. Development of model systems may be helpful to assist inspectors in compliance assessments.</li> <li>6. Significant impact of AAFCO for years to come!</li> </ol>	FFIMC Annual 2014
<b>Outreach</b>		
34	<ol style="list-style-type: none"> <li>1. Communications strategy to get the word out (e.g., AFRPS). Resources with good outreach that could help are AgLabs and PFP.</li> <li>2. Need standardized reporting format from member activities related to FSMA.</li> <li>3. Need list of members working with affiliated organizations on FSMA activities.</li> <li>4. Need point of coordination gathering information and sharing internally and externally.</li> </ol>	TF mtg. 2015.01.11

### **Task Force Report Reference Information**

The Task Force (TF) was formed, with representatives from key committees, to assess the federal *Food Safety Modernization Act* (FSMA) changes being proposed and to develop an implementation plan for AAFCO affected activities.

The representatives from the key AAFCO committees are

Laboratory Methods and Services—Robert Sheridan, Jennifer Mirabile, and Teresa Grant  
Education and Training—Tim Lyons  
Feed and Feed Ingredient Manufacturing—Judy Thompson  
Feed Labeling—Jenna Areias  
Ingredient Definitions—Richard Ten Eyck  
Inspection and Sampling—Jim True  
Model Bill—Doug Lueders  
Pet Food—Stan Cook  
Current Issues and Outreach—Ali Kashani

The charge for the Task Force is:

Review FDA FSMA and regulations, new CGMP rule and FDAAA to identify the changes and develop a prioritized implementation strategy for activities relevant to AAFCO to:

1. Facilitate and coordinate change within AAFCO.
2. Identify, develop, and deliver materials needed by members for implementation.
3. Facilitate policy discussions around new FDA rules, e.g., adopt by reference or rewrite models.
4. Coordinate the implementation process with NASDA.

Time frame: 2 years