

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)**  
Livestock Committee Minutes  
Tuesday, January 17, 2011, 3:00 – 4:00 pm ET

**Attending:** Wendy Fulwider (Chair), Calvin Walker, Nick Maravell, Mac Stone and Colehour Bondera; **Absent:** Tina Ellor (Vice- Chair) and Joe Dickson; **New Members:** Tracy Favre **Staff:** Scott Updike and Lorraine Coke

| Petitioned Materials               |                       |          |             |     |                                                                             |
|------------------------------------|-----------------------|----------|-------------|-----|-----------------------------------------------------------------------------|
| Name                               | National List Section | Reviewer | Meeting     | TR? | Notes                                                                       |
| Methionine                         | 205.603               | MS       | Spring 2012 | Yes | TR received 11/15. Need response on sufficiency – to Katrina and Lisa B.    |
| Nonanoic acid / “pelargonic acid”) | 205.603               | WF       | Spring 2012 |     | Response on petition sufficiency was sent to Katrina on (?). TR needed?     |
| GMO Vaccines                       |                       | JD / CB  | Spring 2012 | Yes | TR received on 12/5. Need response on TR sufficiency to Katrina and Lisa B. |

| Committee Projects                                |          |             |     |                                            |
|---------------------------------------------------|----------|-------------|-----|--------------------------------------------|
| Recommendation                                    | Reviewer | Meeting     | TR? | Notes                                      |
| <i>Animal welfare /</i> stocking rates guidance   | CB       | Spring 2012 |     | Discussion with committee in mid-July      |
| <i>Handling and transit</i> to slaughter guidance | MS       | Spring 2012 |     | Discussion with committee on 7/5           |
| Species-specific score cards & guidance docs      |          |             |     | In conjunction with certifiers/specialists |
| Poultry                                           | CB       | Spring 2012 |     |                                            |
| Beef                                              | WF       | ?           |     | With help from Dave Carter?                |
| Dairy                                             | WF       | Spring 2012 |     |                                            |
| Swine                                             | CW       | Spring 2012 |     |                                            |
| Rabbits                                           | ?        | Spring 2012 |     |                                            |
| Poultry and swine omnivore diets (methionine)     | TE→JD?   | Spring 2012 |     | In progress - discussion document          |

**Agenda:**

Review and discuss Methionine and GMO vaccines TRs

**Discussion:**

Methionine:

Material is a synthetic and is vitally important for corn/soy diet. You can get enough through animal by-products, but the industry is against that. However, fish meal and crab meal can be a good source. The price of these stabilized fish products are much higher (approx. \$60/ton). Once you

incorporate the difference in soy intake with added fishmeal, the cost difference is about \$25-30. Complaint that the fishmeal may impart a “fishy” flavor at some levels. Also, there is not enough supply to fill demand for all organic producers, but is becoming more commercially available.

Another consideration is that there is a stabilizer.

→Any concern about mercury/lead levels in the fishmeal products? Some of the committee members thought that this topic is a “red herring.” Important to be aware of this topic and be able to answer questions. Some studies/trials about the use of potatoes for a possible source of methionine.

→Additional questions about other sources of methionine – some studies on breeding of high-methionine corn. The production of this type of corn has very low yields, so the price makes it a difficult feasible alternative.

→Step-down recommendation would take effect October 2012. Still waiting for this draft rule change to take place. In the meantime there has been a petition to bump the levels back up.

→Clarification on whether this discussion is more focused on general uses of methionine or the sufficiency of the TR.

→One committee member reviewed TR, but is not sure whether to declare “sufficiency.” The questions were all answered, but the “commercial availability” and the fishmeal stabilizer issues were not very clear.

→The TR came from a conventional/normative review, which is based on conventional framework. From that perspective it is an “ideal” additive.

→Concern that there is not sufficient research on other alternatives.

→A couple members felt that there is a clear divide between the smaller producers that use pasture-based systems versus larger volume producers that typically confine birds more. Question on whether members who are farmers that do not use methionine need to remove themselves from this conversation?

→Understanding that there is an economic challenge for finding a viable source/alternative.

→Are there any additional questions that the TR should address: Stabilizer in the fish product and viability of fishmeal as a source (including cost/availability)? The challenge is that this information is not readily known (industry information) and may not be available to the contractor/Board. It is more likely that this information would come in public comments.

→Concern that the list of alternatives in the TR is not very thorough/sufficient.

→Synthetic methionine fits into a certain mode of production and non-synthetic methionine fits into a different type of production system.

Whether this TR adequately addresses requirements for organic production-based systems of all types.

Suggestion that Mac will review TR one more time and then submit final questions/concerns back to Wendy and the committee

-add question about high-methionine corn

-request to get background info on Methionine task force work

-will submit this information to committee members by 1/24/2012

#### GMO vaccines:

The “approach” of the TR seemed to be from a more “conventional” perspective, so some elements regarding organic production practices were not covered. Concern about “excluded methods” being permitted in animal production/preventative medicine. One big question was regarding the inclusion of a table in the TR. The table provides a list that contains “selected” items and there is a concern about where the rest of the items on the list are located. Who uses/creates these categories and lists?

→Question about when GMO vaccines may be allowed – commercial availability?

→Should certifiers be expected to evaluate whether a vaccine is “commercially available?” How will they determine this?

→The TR did respond to the questions that were put forth previously?

→The “excluded methods” apply to modifying organisms. Are viruses technically considered “organisms” and how should this be considered?

Suggestion to work with Scott and Hugh Karreman on the review of the TR

-provide questions/comments to Wendy and committee

**Scheduled Committee Calls:**

**February 7**

**February 21**

| Milestone                   | Deadline               |
|-----------------------------|------------------------|
| Finalize Spring 2012 Agenda | Friday, March 23, 2012 |
| Committee Proposals Due     | Monday, April 2, 2012  |
| Spring 2012 NOSB Meeting    | May 21 – 24, 2012      |

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**National Organic Standards Board (NOSB)**  
Livestock Committee Minutes  
Tuesday, February 7, 2011, 3:00 – 4:00 pm ET

**Attending:** Wendy Fulwider (Chair), Calvin Walker, Nick Maravell, Mac Stone, Tracy Favre, Jean Richardson, Joe Dickson (Vice Chair), and Colehour Bondera; **Absent:** none **Staff:** Scott Updike and Lorraine Coke

| Petitioned Materials               |                       |          |             |     |                                                                                     |
|------------------------------------|-----------------------|----------|-------------|-----|-------------------------------------------------------------------------------------|
| Name                               | National List Section | Reviewer | Meeting     | TR? | Notes                                                                               |
| Methionine                         | 205.603               | MS       | Spring 2012 | Yes | TR received 11/15. Need response on sufficiency – to Jennifer and Lisa B.           |
| Nonanoic acid / “pelargonic acid”) | 205.603               | WF       | Spring 2012 | Yes | Response on petition sufficiency was sent to Katrina on (?). TR sufficiency review. |
| GMO Vaccines                       |                       | JD / CB  | Fall 2012?  | Yes | TR received on 12/5. Need response on TR sufficiency to Jennifer and Lisa B.        |
| Pet Food Amino Acids               | 205.603(?)            | ?        | Fall 2012?  |     | Petition sent to LC on 2/7.                                                         |

| Committee Projects                                |          |              |     |                                            |
|---------------------------------------------------|----------|--------------|-----|--------------------------------------------|
| Recommendation                                    | Reviewer | Meeting      | TR? | Notes                                      |
| <i>Animal welfare /</i> stocking rates guidance   | CB       | Spring 2012  |     | Discussion with committee in mid-July      |
| <i>Handling and transit</i> to slaughter guidance | MS       | Spring 2012  |     | Discussion with committee on 7/5           |
| Species-specific score cards & guidance docs      |          |              |     | In conjunction with certifiers/specialists |
| Poultry                                           | CB       | Spring 2012  |     |                                            |
| Beef                                              | WF       | ?            |     | With help from Dave Carter?                |
| Dairy                                             | WF       | Spring 2012  |     |                                            |
| Swine                                             | CW       | Spring 2012  |     |                                            |
| Rabbits                                           | ?        | Spring 2012  |     |                                            |
| Poultry and swine omnivore diets (methionine)     | JD       | Spring 2012? |     | In progress - discussion document          |

**Agenda:**

Discuss Methionine and GMO vaccines TRs for sufficiency

**Discussion:**

### Methionine

On last call the committee discussed the TR and there was communication about the alternatives – understanding that the Board and/or committee could do additional research and determine whether alternatives are available and possible for producers to use.

From the knowledge and review of methionine and its uses it appears that the TR is sufficient. There is still some concern/comments about possible alternatives.

Plan to present recommendation/talking points on methionine on next call.

Will respond to Lisa and Jennifer regarding TR sufficiency.

### GMO vaccines

No new information to share with the committee. In terms of sufficiency, the TR is acceptable. Concern whether the types of information that is needed may not be available in a TR. What other information is needed? On previous call there was a concern about list of vaccines and vaccines that have been approved for human use. Scott sent a list used by the USDA. The ones with an “R” indicate “recombinant.” There are some vaccines that are approved and used by animals and humans that use “recombinant” methods. Not a comprehensive understanding about the list of vaccines and which ones are GMO versus which ones are not.

How would a ACA know how to verify this information on GMO vs. non-GMO?

In inoculants for crops, the producer has to provide an affidavit from a manufacturer verifying non-GMO status – this could be used as an example and possible basis for annotation on this recommendation.

Suggestion to include Hue Karaman on the next LC call.

Additional information regarding European and Canadian uses and levels of acceptance.

Several of the committee members feel that the TR is sufficient, but a few members seem uncertain or concerned that it is not as complete as it could be.

The committee voted to accept the TR - Joe moved to accept, Mac seconded. The vote 7-yes, 1-abstention.

Questions:

What are the standards/regulations under IFOAM?

Are there any practicing veterinarians that are organic? May be helpful to have organic/non-organic veterinarians participate in a conversation with the committee. Perhaps an invitation to Hue Karreman?

The program acknowledges that there are a lot of vaccines in use and many of them may be GMO. According to the TR approximately 18% of vaccines used on livestock are GMO. This is not an allowed practice (there is no allowance for GMO vaccines). Through the regulatory requirements, would the program be able to allow to issue or approve variances for use of GMO vaccines?

### Scheduled Committee Calls:

**February 21** – discussion of Methionine petition/recommendation, review and discuss recommendation documents

**March 6** – Nonanoic acid determine TR sufficiency, GMO vaccine discussion

**March 21** – review and vote on methionine recommendation, vote on complete recommendation documents, finalize LC agenda for spring 2012 meeting

| Milestone                   | Deadline               |
|-----------------------------|------------------------|
| Finalize Spring 2012 Agenda | Friday, March 23, 2012 |
| Committee Proposals Due     | Monday, April 2, 2012  |
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**National Organic Standards Board (NOSB)**  
Livestock Committee Minutes  
Tuesday, February 21, 2011, 3:00 – 4:00 pm ET

**Attending:** Wendy Fulwider (Chair), Nick Maravell, Mac Stone, Tracy Favre, Jean Richardson, Joe Dickson (Vice Chair), and Colehour Bondera;

**Absent:** Calvin Walker

**Staff:** Scott Updike and Lorraine Coke

| Petitioned Materials                  |                       |          |             |     |                                                                              |
|---------------------------------------|-----------------------|----------|-------------|-----|------------------------------------------------------------------------------|
| Name                                  | National List Section | Reviewer | Meeting     | TR? | Notes                                                                        |
| Methionine                            | 205.603               | MS       | Fall 2012   | Yes | TR received 11/15. On hold.                                                  |
| Nonanoic acid /<br>“pelargonic acid”) | 205.603               | WF       | Spring 2012 | Yes | Response on petition sufficiency was sent to Katrina. TR sufficiency review. |
| GMO Vaccines                          |                       | JD / CB  | Fall 2012?  | Yes | TR received on 12/5. Need response on TR sufficiency to Jennifer and Lisa B. |
| Pet Food Amino Acids                  | 205.603(?)            | ?        | Fall 2012?  |     | Petition sent to LC on 2/7.                                                  |

| Committee Projects                            |          |              |     |                                            |
|-----------------------------------------------|----------|--------------|-----|--------------------------------------------|
| Recommendation                                | Reviewer | Meeting      | TR? | Notes                                      |
| Animal welfare / stocking rates guidance      | CB       | Spring 2012  |     | Discussion with committee in mid-July      |
| Handling and transit to slaughter guidance    | MS       | Spring 2012  |     | Discussion with committee on 7/5           |
| Species-specific score cards & guidance docs  |          |              |     | In conjunction with certifiers/specialists |
| Poultry                                       | CB       | Spring 2012  |     |                                            |
| Beef                                          | WF       | ?            |     | With help from Dave Carter?                |
| Dairy                                         | WF       | Spring 2012  |     |                                            |
| Swine                                         | CW       | Spring 2012  |     |                                            |
| Rabbits                                       | ?        | Spring 2012  |     |                                            |
| Poultry and swine omnivore diets (methionine) | JD       | Spring 2012? |     | In progress - discussion document          |

**Agenda:**

Approve last meeting minutes

Discuss GMO vaccines

Review and discuss recommendation documents

## **Discussion:**

Minutes from last call – reviewed/approved.

### **GMO vaccines**

- Scott sent around previous recommendation from NOSB on GMO vaccines
- Wendy had sent around questions/answers from Diamond V Ranch (Dr. Gingerich)
- Question on availability of alternatives for non-GMO vaccines, some committee members question whether a “commercial availability” clause would be necessary
- One committee member explained that from experience of going around to different organic farms, current producers may choose which ones they want to use. Another HC member explained that the use of GMOs is strictly prohibited in organic crop production, but the use in livestock is more lenient – right now there is no attention/differentiation to the use of different types of vaccines
- May be appropriate to list GMO vaccines with an annotation?
- expectation from organic consumers that GMOs are not present in organic products
- important to consider cultural practices and whole organic system – how often and what types of vaccines are essential?
- suggestion that OMRI (or another material review organization) could keep an updated/online list of vaccines that are non-GMO
- given the size of the organic industry and the number of vaccines in use by organic producers, it seems that there may not be a big enough market size to influence production of alternatives
- some of the vaccines are for organisms that are ubiquitous (in the soil) – if you talk with some of the Extension Veterinarians they will explain that environment, nutrition, and then vaccines (animal health) are important factors
- technically GMO vaccines aren’t supposed to be allowed

### **Questions:**

- on the APHIS list, there is a list of codes that identify specific allowable vaccines, the letter codes identify whether recombinant technology has been used – can’t producers use this to identify GMO vaccines?
- is there an opportunity for a practice standard that is similar to pest control – one that would contextualize the use of GMO vaccines only after other practices have been exhausted and in extreme circumstances?
- if EU producers are making it without GMO vaccines, why can’t the US? In Europe they use a lot more antibiotics (allowed approximately 3 applications)
- did HC ever get definitive definition on a “GMO vaccine”?
- does “gene removal” fit under the definition of GMO?
- are there other standards (i.e. power of State Veterinarian or Secretary of Agriculture) that would supersede some organic regulations?

### **Suggestions:**

- take an attempt at a rough draft of a recommendation, it could be developed off the previous recommendation from the NOSB
- if a GMO vaccine is thought to be allowed/allowable then it should be petitioned like a normal material?
- LC could also review and include some of the comments from the Diamond V document
- LC will try to narrow down main issues by drafting a set of questions (JR will compile)
- this may be an issue that needs an expert panel at the spring 2012 meeting



**Scheduled Committee Calls:**

**March 6** – Nonanoic acid determine TR sufficiency, review GMO vaccine questions and discuss

**March 21** – review and vote on methionine recommendation, vote on complete recommendation documents for species specific documents, finalize LC agenda items for spring 2012 meeting

**April 3** –

**April 17** –

| Milestone                   | Deadline               |
|-----------------------------|------------------------|
| Finalize Spring 2012 Agenda | Friday, March 23, 2012 |
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### National Organic Standards Board (NOSB)

Livestock Committee Minutes

Tuesday, March 6, 2011, 3:00 – 4:00 pm ET

**Attending:** Wendy Fulwider (Chair), Nick Maravell, Mac Stone, Tracy Favre, Jean Richardson, Calvin Walker and Colehour Bondera;

**Absent:** Joe Dickson (Vice Chair)

**Staff:** Scott Updike and Lorraine Coke

| Petitioned Materials                  |                       |          |             |     |                                                                                     |
|---------------------------------------|-----------------------|----------|-------------|-----|-------------------------------------------------------------------------------------|
| Name                                  | National List Section | Reviewer | Meeting     | TR? | Notes                                                                               |
| Methionine                            | 205.603               | MS       | Fall 2012   | Yes | TR received 11/15. On hold.                                                         |
| Nonanoic acid /<br>“pelargonic acid”) | 205.603               | WF       | Spring 2012 | Yes | Response on petition sufficiency was sent to Lisa B.. <b>TR sufficiency review.</b> |
| GMO Vaccines                          |                       | JD / CB  | Fall 2012?  | Yes | TR received on 12/5.                                                                |
| Pet Food Amino Acids                  | 205.603(?)            | ?        | Fall 2012?  |     | Petition sent to LC on 2/7.                                                         |

| Committee Projects                                |          |              |     |                                            |
|---------------------------------------------------|----------|--------------|-----|--------------------------------------------|
| Recommendation                                    | Reviewer | Meeting      | TR? | Notes                                      |
| <i>Animal welfare /</i> stocking rates guidance   | CB       | Spring 2012  |     | Discussion with committee in mid-July      |
| <i>Handling and transit</i> to slaughter guidance | MS       | Spring 2012  |     | Discussion with committee on 7/5           |
| Species-specific score cards & guidance docs      |          |              |     | In conjunction with certifiers/specialists |
| Poultry                                           | CB       | Spring 2012  |     |                                            |
| Beef                                              | WF       | ?            |     | With help from Dave Carter?                |
| Dairy                                             | WF       | Spring 2012  |     |                                            |
| Swine                                             | CW       | Spring 2012  |     |                                            |
| Rabbits                                           | ?        | Spring 2012  |     |                                            |
| Poultry and swine omnivore diets (methionine)     | JD       | Spring 2012? |     | In progress - discussion document          |

#### **Agenda:**

Approve last meeting minutes

Discuss GMO vaccine document

Review and discuss score cards/recommendation documents left over from fall 2011

Nonanoic acid?

#### **Discussion:**

Minutes from last call – review/approved?

### GMO vaccines

Based on the livestock healthcare practice standards in the regulations, one of the 6 things that a producer must do is to ensure healthcare of animals is administer vaccines. Some conversation regarding misunderstanding of using vaccines (and then if only GMO vaccines for certain treatments) – what would organic producers do?

Will be hard to have a complete committee agreement on this topic

- routine vaccines are generally given in combinations (makes the list of USDA vaccines more difficult to consider)
- hard to tell which vaccines used are GMO/non-GMO, general consensus from veterinarians (the few consulted in the NE) that there are commonly GMO/non-GMO options of most types of vaccines
- Canada does not allow GMO vaccines, but EU does allow GMO vaccines
- when looking at organizations that are researching these GMO vaccines and effects on humans, there is no conclusive information about these or their effects
- proposal, based on information gathering, is to allow all vaccines currently (with vaccine review process in place)
- possible problem – do we actually have a health problem that only a GMO vaccine could solve?
- a solution to problem that we haven't identified?
- how do we evaluate GMO when it comes to a vaccine? There are steps/processes that may not resolve in vaccine itself, but might be in steps leading to production. There are no clear guidelines on how to do this. (i.e. what if substrate for vaccine was produced using GMO material?)
- there are many questions that need to be answered – uncomfortable moving forward with so many unknowns
- the phrase “excluded methods” does define the process for GMO production/types
- more educational/background information needed to develop full, comprehensive committee proposal
- commercial availability – LC should address this more thoroughly, if possible (very difficult to document this and how far back is necessary?)
- suggestion to develop this as a discussion document for next meeting, in order to get more feedback from the public before creating a proposal
- burden on farmers and ACAs to provide documentation on vaccine origination/process/development
- creation of a “positive list” – is this possible?
- GMO is seeds vs. GMO in vaccines are fundamentally different, according to some (are there detectable levels of GMOs in products that come from using these?)
- how do ACAs verify GMO/non-GMO vaccines?
- perception from public on the use of GMO vaccines and how it relates to integrity of USDA organic label?
- what about writing an allowance for use in “emergency” situations only?
- very small percentage of total vaccines used are GMO (according to the TR it is about 18%) – may be helpful to develop a set of questions for constituents/stakeholders
- 

### Scheduled Committee Calls:

**March 21** – nonanoic acid, review/complete recommendation documents for species specific documents, finalize LC agenda items for spring 2012 meeting

**April 3** –

**April 17 –**

| Milestone                   | Deadline               |
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| Finalize Spring 2012 Agenda | Friday, March 23, 2012 |
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### National Organic Standards Board (NOSB)

#### Livestock Committee Minutes

Tuesday, March 20, 2011, 3:00 – 4:00 pm ET

**Attending:** Wendy Fulwider (Chair)(WF), Nick Maravell (NM), Tracy Favre (TF), Jean Richardson (JR), Calvin Walker (CW), and Colehour Bondera (CB)

**Guests from Newport Labs:** Dr. Mark Titus and Dr. Russ Bey

**Absent:** Joe Dickson (Vice Chair)(JB), Mac Stone (MS)

**Staff:** Scott Updike, Michelle Arsenault and Lorraine Coke

| Petitioned Materials                  |                       |          |            |     |                                                                                    |
|---------------------------------------|-----------------------|----------|------------|-----|------------------------------------------------------------------------------------|
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| Pet Food Amino Acids                  | 205.603(?)            | ?        | Fall 2012? |     | Petition sent to LC on 2/7. <b>Petition sufficiency review.</b>                    |

| Committee Projects                                |          |             |     |                                            |
|---------------------------------------------------|----------|-------------|-----|--------------------------------------------|
| Proposals                                         | Reviewer | Meeting     | TR? | Notes                                      |
| <i>Animal welfare</i> / stocking rates guidance   | CB       | Fall 2012?  |     | Discussion with committee in mid-July      |
| <i>Handling and transit</i> to slaughter guidance | MS       | Fall 2012?  |     | Discussion with committee on 7/5           |
| Species-specific score cards & guidance docs      |          |             |     | In conjunction with certifiers/specialists |
| Poultry – discussion doc                          | CB       | Spring 2012 |     |                                            |
| Beef                                              | WF       | Fall 2012?  |     | With help from Dave Carter?                |
| Dairy – discussion doc                            | WF       | Spring 2012 |     |                                            |
| Sheep – discussion doc                            | WF       | Spring 2012 |     |                                            |
| Swine – discussion doc                            | CW       | Spring 2012 |     |                                            |
| Rabbits                                           | ?        | Fall 2012   |     |                                            |
| Poultry and swine omnivore diets (methionine)     | JD       | Fall 2012?  |     | In progress - discussion document          |

\* Highlight indicates committee action needed

#### Agenda:

Approve last meeting minutes

Discuss GMO vaccine document

### **Discussion:**

Minutes from last call – were not reviewed or approved (move to agenda for next call).

#### GMO vaccines

What specific disease problems can only be addressed through the use of vaccines?

Newport is involved in early stage of developing viral vaccine that does not adapt to traditional viral vaccines. The biotech approach is only way to extract key genes and antigens necessary.

The GMO or sub-unit type vaccines are developed to focus on particular types of organisms that form disease.

Circle virus spread rapidly and was hard to treat originally – the vaccine that was developed used this viral vaccine technology – using biotech methods.

“Commercial vaccines” – these are the vaccines that are primarily regulated/controlled by the USDA.

Unrestricted use – generic/off the shelf (does not require veterinarian assistance)

Autogenous – restricted use (require a veterinarian prescription). There is more flexibility with these between herd (you can develop a custom vaccine).

When autogenous vaccines are developed – are they used for particular types of disease (viral vs. bacterial?). Ex- there is a type of pink eye in cattle that is mostly treated with autogenous vaccines.

#### *Additional questions*

At what period of time did GMO vaccines become more prevalent?

→around the time that the Circle virus came out or when pseudo-rabies came out (within the last 3 years or so), but the USDA has info. or been aware of GMO vaccines since 1984.

→sometimes GMO vaccines will be used to separate or highlight a particular company – set them apart from competitors

→sometimes the GMO version is cheaper/easier to grow

Are there any major diseases that only have GMO vaccines that could be used for treatment?

→there are 1-2 diseases that the guests could think of that

How would a producer know if a vaccine is produced using GMO/biotech methods?

→term “vector” is a biotech term, if you understand the terminology then you could identify biotech derived vaccines

Is there a trend in the future where livestock producers will have less choice between biotech derived/non-biotech derived?

→unless the virus cannot be grown

→almost always be able to get a non-biotech version of a vaccine

Any barriers (time, animal suffering/loss) to using non-biotech?

→to reduce animal suffering/loss there may be an occasion that it would be more urgent to treat animals as soon as possible

One advantage to this vaccine development (using biotech) – ability to focus in on gene sequence where the specific disease attacks, this is a more focused approach.

If there were an emergency outbreak (for foot & mouth disease, or similar), would we need a biotech-type vaccine to address such an outbreak?

→when there is significant variant strain, a killed vaccine (traditional) would work, but would need to have adequate amount

→the biotech vaccine could focus in on particular gene and can have a more broadly cross-protective quality

→the traditional vaccines and biotech vaccines have to go through level of scrutiny/review by the USDA

→the biotech vaccines have a more rigorous review/approval process with the USDA

Center for veterinary biologics (organization in charge of reviewing/approving vaccines – their budget has been reduced and they are short on staff

-took Newport Labs approx. 7 years to get vaccine developed/approved (this was not a biotech vaccine)

-autogenous vaccines have different process for review/approval

As organic producers/customers are concerned about what is in the product. When an animal is administered a biotech vaccine and a person consumes their meat or milk – is it transferred to the consumer?

→biotech products do not have any residue effect

→anything biotech or live – there are additional testing processes. The “shed spread test” reviews whether any shedding or transfer happens between other animals in herd.

#### **Scheduled Committee Calls:**

**March 21** – GMO vaccines document, nonanoic acid (discuss/review TR for sufficiency), pet food amino acids (assign to committee member), review/complete proposal documents for species specific documents, finalize LC agenda items for spring 2012 meeting

**\*April 2** – final committee proposals due to NOP (Michelle)

**April 3** – look at LC work plan items for fall 2012 meeting

**April 17** –

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**National Organic Standards Board (NOSB)**  
Livestock Committee Minutes  
Tuesday, March 21, 2011, 12:00 – 1:00 pm ET

**Attending:** Nick Maravell (NM), Tracy Favre (TF), Jean Richardson (JR), Calvin Walker (CW), and Colehour Bondera (CB)

**Absent:** Joe Dickson (Vice Chair)(JB), Mac Stone (MS), Wendy Fulwider (Chair)(WF),

**Staff:** Scott Updike, Lorraine Coke, Michelle Arsenault

| Petitioned Materials                  |                       |          |             |     |                                                                                    |
|---------------------------------------|-----------------------|----------|-------------|-----|------------------------------------------------------------------------------------|
| Name                                  | National List Section | Reviewer | Meeting     | TR? | Notes                                                                              |
| Methionine                            | 205.603               | MS       | Fall 2012   | Yes | TR received 11/15. On hold.                                                        |
| Nonanoic acid /<br>“pelargonic acid”) | 205.603               | WF       | Spring 2012 | Yes | Response on petition sufficiency was sent to Lisa B. <b>TR sufficiency review.</b> |
| GMO Vaccines                          |                       | JD / CB  | Spring 2012 | Yes | TR accepted 3/21/12                                                                |
| Pet Food Amino Acids                  | 205.603(?)            | MS       | Fall 2012?  |     | Petition sent to LC on 2/7. <b>Petition sufficiency review.</b>                    |

| Committee Projects                                |          |             |     |                                                                                              |
|---------------------------------------------------|----------|-------------|-----|----------------------------------------------------------------------------------------------|
| Recommendation                                    | Reviewer | Meeting     | TR? | Notes                                                                                        |
| <i>Animal welfare /</i> stocking rates guidance   | CB       | ?           |     | Discussion with committee in mid-July                                                        |
| <i>Handling and transit</i> to slaughter guidance | MS       | ?           |     | Discussion with committee on 7/5                                                             |
| Species-specific score cards & guidance docs      |          |             |     | In conjunction with certifiers/specialists                                                   |
| Poultry                                           | CB       | Spring 2012 |     | Put forth as discussion in spring with no vote, will be included in broader doc in the fall. |
| Beef                                              | WF       | Fall 2012?  |     | With help from Dave Carter?                                                                  |
| Dairy                                             | WF       | Spring 2012 |     |                                                                                              |
| Swine                                             | CW       | Spring 2012 |     |                                                                                              |
| Rabbits                                           | ?        | Fall 2012   |     |                                                                                              |
| Poultry and swine omnivore diets (methionine)     | JD       | Fall 2012?  |     | In progress - discussion document                                                            |
| Sheep                                             | WF       | Spring 2012 |     |                                                                                              |

\* Highlight indicates committee action needed

**Agenda:**

-Approve last two meeting minutes

-Discuss GMO vaccine proposal (next steps)



- Nonanoic acid (review TR for sufficiency)
- Pet food amino acids (assign to committee member, review petition for sufficiency)
- Review guidance and species-specific documents (determine next steps)
- Finalize items for spring 2012 LC agenda

**Discussion:**

Minutes from last two calls (March 6 and March 20) approved with no objections.

- GMO vaccine proposal (next steps)

Ready to propose motion on GMO vaccines, and willing to make some minor edits based on call with GMO group yesterday. Chair would like to make motion to move forward on recommendation (draft # 6), and two options. 1) Motion to accept TR as is, or 2) motion to approve use of GMO vaccine in case of emergency with no penalty.

A member of the NOP program staff asked about the best way to address this. If we make the changes on the list and not to the practice standards, it will be cleaner. There are cleaner, more elegant, more succinct ways to draft this legislation. NOP input? It was written to make it easier for the public to understand as opposed to making it easier to get through the rule making process.

Can we write this in our recommendation to the program? (Making it easier for the farmers to understand). Comments: One member agrees that anything that makes it easier for the farmer is better. Although they acknowledge it will make it harder for the program.

The regulation from 2002 was drafted pre-9/11, and therefore there is no regulation about what to do in case of emergency with regard to GMO.

Clarification: would the eradication program for pseudo rabies qualify as “emergency”. Possibly. Was this declared an emergency? Committee asked who could clarify this? Scott will investigate and get back to LC.

Motion by Nick to recommend the following “Modify language in 205.238 (6) as follows; Administration of vaccines and other veterinary biologics, provided, vaccines produced with excluded methods, can only be administered in accordance with §205.105(e).

Modify 205.105 (e) as follows: Excluded methods, except for vaccines: Provided,

(1) such vaccines are administered only due to a Federal or State emergency pest or disease treatment program, and

(2) such vaccines are approved in accordance with §205.600(a); Modify language in 205.603(a)(4) as follows: Biologics—Vaccines, provided, with regard to vaccines produced with excluded methods, the requirements of 205.105(e) are satisfied.”

Seconded by Jean. Approved:5. Opposed: 0. Absent: 3. Recusals: 0. Motion passed

- Nonanoic acid (WF to review TR for sufficiency) and discuss on next call.

- Pet food amino acids (assign to committee member, review petition for sufficiency): Mac agreed (via email) to take the lead on this.

Review guidance and species-specific documents (determine next steps): republish these and ask for public comments for discussion at Fall meeting. Not putting forth a proposal, just a guidance document.

Request that these docs be sent to new board members to get them up to speed, or refresh their memories. Chair will send docs and email so members can vote via email by April 3<sup>rd</sup>

Finalize items for spring 2012 LC agenda

- Excluding: Methionine, Rabbits, Poultry and swine omnivore diets (methionine)
- The committee would like guidance from NOP on these two pieces: Animal welfare/stocking rates guidance and Handling and transit to slaughter guidance. Not discussing at Spring meeting
- Regulatory language 205.2; The definition of emergency pest or disease treatment includes “local agencies” and “eradicating” which differs from the NOSB recommended language.

Adjourned at 12:55.

**Scheduled Committee Calls:**

**April 3** – Discuss nonanoic acid TR for sufficiency.

**April 17** –

**May 1**

| Milestone                   | Deadline               |
|-----------------------------|------------------------|
| Finalize Spring 2012 Agenda | Friday, March 23, 2012 |
| Committee Proposals Due     | Monday, April 2, 2012  |
| Spring 2012 NOSB Meeting    | May 21 – 24, 2012      |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Committee (LC) Meeting Notes  
Tuesday, April 3, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Joe Dickson (Vice Chair) (JD), Tracy Favre (TF), Jean Richardson (JR), Calvin Walker (CW), Colehour Bondera (CB)

**Absent:** Nick Maravell (NM), Mac Stone (MS)

**Staff:** Michelle Arsenault (MA), Emily Brown Rosen (EBR), Lisa Brines (LB)

**Workplan**

| Petitioned Materials               |                       |          |             |                        |                                                                                 |
|------------------------------------|-----------------------|----------|-------------|------------------------|---------------------------------------------------------------------------------|
| Name                               | National List Section | Reviewer | Meeting     | Technical Review (TR)? | Notes                                                                           |
| Methionine                         | 205.603               | MS       | Fall 2012   | Yes                    | TR received 11/15. On hold.                                                     |
| Nonanoic acid / "pelargonic acid") | 205.603               | WF       | Spring 2012 | Yes                    | Response on petition sufficiency was sent to NOP. <b>TR sufficiency review.</b> |
| GMO Vaccines                       |                       | JD / CB  | Spring 2012 | Yes                    | TR accepted 3/21/12                                                             |
| Pet Food Amino Acids               | 205.603               | MS       | Fall 2012   |                        | Petition sent to LC on 2/7. <b>Petition sufficiency review.</b>                 |

| Committee Projects                              |          |             |                   |                                                                                              |
|-------------------------------------------------|----------|-------------|-------------------|----------------------------------------------------------------------------------------------|
| Recommendation                                  | Reviewer | Meeting     | Technical Review? | Notes                                                                                        |
| <i>Animal welfare /</i> stocking rates guidance | CB       | Fall 2012   |                   | Discussion with committee in mid-July                                                        |
| Species-specific score cards & guidance docs    |          | Spring 2012 |                   | In conjunction with certifiers/specialists                                                   |
| Poultry                                         | CB       | Spring 2012 |                   | Put forth as discussion in spring with no vote, will be included in broader doc in the fall. |
| Beef                                            | TF       | Fall 2012?  |                   | With help from Dave Carter?                                                                  |
| Dairy                                           | WF       | Spring 2012 |                   |                                                                                              |
| Swine                                           | CW       | Spring 2012 |                   |                                                                                              |
| Rabbits                                         | ?        | Fall 2012   |                   |                                                                                              |
| Poultry and swine omnivore diets                | JD       | Fall 2012?  |                   | In progress - discussion document                                                            |

|              |    |             |  |  |
|--------------|----|-------------|--|--|
| (methionine) |    |             |  |  |
| Sheep        | WF | Spring 2012 |  |  |

\* Highlight indicates committee action needed

### **Agenda:**

- Approve meeting notes from 03 21 12
- Finish GMO vaccine checklist. (w/assistance from CB)
- Review items for fall meeting and who will take the lead on those items
  - o Swine: This document is nearly completed with both the guidance and outcome pieces
  - o Dairy: WF will write up the remaining guidance piece
  - o Turkeys: Committee needs to decide on minimum numbers-- indoors and out, for the chart
  - o Beef: Looking for volunteer to write this piece
  - o Methionine petition and Omnivore discussion doc
  - o Pet food amino acids-(MS)
  - o Nonanoic acid—Discuss TR

### **Discussion:**

- Approve meeting notes from 03 21 12: NOP re-sent minutes so LC could look at them.
- Finished GMO vaccine checklist
- Review items for fall meeting and who will take the lead on those items
  - o Swine: This document is nearly completed with both the guidance and outcome pieces
  - o Dairy: WF will write up the remaining guidance piece
  - o Turkeys: Committee needs to decide on minimum numbers-- indoors and out, for the chart. JD will work on the gap numbers for this
  - o Beef: TF volunteered to take lead on this
  - o Methionine petition and Omnivore discussion doc - no discussion
  - o Pet food amino acids-(MS) - no discussion
  - o Nonanoic acid—Discuss TR - no discussion

**Scheduled Committee Calls:**

**April 17 3pm EDT**

**May 1 3pm EDT**

| Milestone                | Deadline                     |
|--------------------------|------------------------------|
| Public Comment Period    | April 9 - May 3, 2012        |
| Informal prep meeting    | May 21, 5pm (in Albuquerque) |
| Spring 2012 NOSB Meeting | May 22 – 25, 2012            |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Committee (LC) Meeting Notes  
Tuesday, April 17, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Joe Dickson (Vice Chair) (JD), Tracy Favre (TF), Jean Richardson (JR), Colehour Bondera (CB), Mac Stone (MS), Nick Maravell (NM)

**Absent:** Calvin Walker (CW)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

Workplan

| Petitioned Materials               |                       |          |              |                        |                                                                                      |
|------------------------------------|-----------------------|----------|--------------|------------------------|--------------------------------------------------------------------------------------|
| Name                               | National List Section | Reviewer | Meeting      | Technical Review (TR)? | Notes                                                                                |
| Methionine                         | 205.603               | MS       | Spring 2013? | Yes                    | TR received 11/15. On hold                                                           |
| Nonanoic acid / "pelargonic acid") | 205.603               | WF       | Fall 2012    | Yes                    | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12 |
| GMO Vaccines                       |                       | JD / CB  | Spring 2012  | Yes                    | TR accepted 3/21/12                                                                  |
| Pet Food Amino Acids               | 205.603               | MS       | Fall 2012    |                        | Petition sent to LC on 2/7. <b>Petition sufficiency review.</b>                      |

| Committee Projects                            |          |              |                   |                                                                                              |
|-----------------------------------------------|----------|--------------|-------------------|----------------------------------------------------------------------------------------------|
| Recommendation                                | Reviewer | Meeting      | Technical Review? | Notes                                                                                        |
| <i>Animal welfare/stocking rates guidance</i> | CB       | Fall 2012?   |                   | Discussion with committee in mid-July delete ?                                               |
| Species-specific score cards & guidance docs  |          | Spring 2012  |                   | In conjunction with certifiers/specialists                                                   |
| Poultry                                       | CB       | Spring 2012  |                   | Put forth as discussion in spring with no vote, will be included in broader doc in the fall. |
| Beef                                          | TF       | Fall 2012?   |                   |                                                                                              |
| Dairy                                         | WF       | Fall 2012    |                   |                                                                                              |
| Swine                                         | CW       | Fall 2012    |                   |                                                                                              |
| Rabbits                                       | ?        | Fall 2012    |                   |                                                                                              |
| Poultry and swine omnivore diets              | JD       | Spring 2013? |                   | In progress - discussion document. Removed                                                   |

|              |    |             |  |                |
|--------------|----|-------------|--|----------------|
| (methionine) |    |             |  | from workplan? |
| Sheep        | WF | Spring 2012 |  |                |

\* Highlight indicates committee action needed

#### **Agenda:**

- Approve meeting notes from 04 03 12
- Nonanoic acid TR checklist

#### **Discussion:**

- Meeting notes from 04 03 12 approved with minor corrections.
- Nonanoic acid TR checklist. Committee thought the language in the TR seemed vague, and questioned whether or not this substance is even useful. Farm management techniques, such as wasps, typically address the issues associated with biting insects, so Nonanoic acid doesn't seem necessary. Before addressing the substance, the committee completed the TR sufficiency review and deferred approval until a potential Conflict of Interest? (COI) could be clarified.
- Committee asked about the time frame for review for a petitioned material.
- A member was contacted by Leahy staff about Safeguard (fenbendazol) (NOP thought the status of this substance was between proposed rule and final rule, and has been since May 2008).
- GMO ad-hoc committee coordination. Various issues (4) that are cross-cutting. Apiary issues fall under the purview of the livestock committee. Proposal was sent to NOP and is awaiting decision.
- Future workplan: concerning swine docs. Can we make some of these docs functionally useful by making them shorter?

#### **Scheduled Committee Calls:**

**May 1: Turkeys**

**May 15: Public comments, Pet food amino acids**

| Milestone                | Deadline                     |
|--------------------------|------------------------------|
| Public Comment Period    | April 9 - May 3, 2012        |
| Informal prep meeting    | May 21, 5pm (in Albuquerque) |
| Spring 2012 NOSB Meeting | May 22 – 25, 2012            |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Committee (LC) Meeting Notes  
Tuesday, May 01, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Jean Richardson (JR), Colehour Bondera (CB), Nick Maravell (NM), Tracy Favre (TF)

**Observing:** Barry Flamm (BF)

**Absent:** Calvin Walker (CW), Joe Dickson (Vice Chair) (JD), Mac Stone (MS),

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

Workplan

| Petitioned Materials               |                       |          |              |                        |                                                                                      |
|------------------------------------|-----------------------|----------|--------------|------------------------|--------------------------------------------------------------------------------------|
| Name                               | National List Section | Reviewer | Meeting      | Technical Review (TR)? | Notes                                                                                |
| Methionine                         | 205.603               | MS       | Spring 2013? | Yes                    | TR received 11/15/2011. On hold                                                      |
| Nonanoic acid / "pelargonic acid") | 205.603               | WF       | Fall 2012    | Yes                    | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04/24/12 |
| GMO Vaccines                       |                       | JD/CB    | Spring 2012  | Yes                    | TR accepted 3/21/12                                                                  |
| Pet Food Amino Acids               | 205.603               | MS       | Fall 2012    |                        | Petition sent to LC on 2/7/2012. <b>Petition sufficiency review.</b>                 |

| Committee Projects                            |          |             |                   |                                                                                              |
|-----------------------------------------------|----------|-------------|-------------------|----------------------------------------------------------------------------------------------|
| Recommendation                                | Reviewer | Meeting     | Technical Review? | Notes                                                                                        |
| <i>Animal welfare/stocking rates guidance</i> | CB       | Fall 2012?  |                   | Discussion with committee in mid-July                                                        |
| Species-specific score cards & guidance docs  |          | Spring 2012 |                   | In conjunction with certifiers/specialists                                                   |
| Poultry                                       | CB       | Spring 2012 |                   | Put forth as discussion in spring with no vote, will be included in broader doc in the fall. |
| Beef                                          | TF       | Fall 2012?  |                   |                                                                                              |
| Dairy                                         | WF       | Fall 2012   |                   |                                                                                              |
| Swine                                         | CW       | Fall 2012   |                   |                                                                                              |
| Rabbits                                       | ?        | Fall 2012   |                   |                                                                                              |



|                                               |    |              |  |                                                           |
|-----------------------------------------------|----|--------------|--|-----------------------------------------------------------|
| Poultry and swine omnivore diets (methionine) | JD | Spring 2013? |  | In progress - discussion document. Removed from workplan? |
| Sheep                                         | WF | Spring 2012  |  |                                                           |

\* Highlight indicates committee action needed

#### **Agenda:**

- Approve minutes from April 17<sup>th</sup> meeting
- Turkeys
- Public comments for NOSB spring meeting - poultry.

#### **Discussion:**

- Minutes from April 17<sup>th</sup> meeting approved
- Turkeys - JD absent, so will defer discussion until next meeting.
- Public comments for NOSB spring meeting – Received lots of comments about poultry guidance. Committee clarified process for presenting oral comments at meeting. With regard to this, the committee did not receive a petition, so it's unclear who benefits from this. Not getting comments from producers, mostly consumers.
- With regard to GMO Vaccines, the intention was to make it easier for farmers and as a result, would be more complicated for the public. A member indicated that the list that was put forth was too complicated and did not make it easier for farmers. Committee doesn't feel that the Board has the resources to do this right now. Need more clarification about APHIS list, and are hoping to get that at the spring meeting. Jean feels we will get clarification at meeting from presentation by Newport Labs. Member feels the committee is providing useful info to the program, which was requested. But maybe question was too broad and needs to be more specific in order to get a better answer. There's also an issue with changes in the vaccine from year to year, so keeping the lines of communication with the pharmaceutical companies open is important. Time factor involved in reviewing a petition is also an issue because the diseases and vaccines evolve. It's impractical to review a vaccine each year. Committee asked if NOP had any ideas about how to address this issue. Anticipating great discussion at NOSB meeting.
- Concerned about workload for Fall, and a little concerned about the steep learning curve for aquaculture.
  - TF would like to provide feedback about Beef. Asked about deadline and suggested that fall meeting would be a good time.

**Scheduled Committee Calls:**

**May 15: Public comments, Pet food amino acids**

| Milestone                | Deadline                     |
|--------------------------|------------------------------|
| Public Comment Period    | April 9 - May 3, 2012        |
| Informal prep meeting    | May 21, 5pm (in Albuquerque) |
| Spring 2012 NOSB Meeting | May 22 – 25, 2012            |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Committee (LC) Meeting Notes  
Tuesday, May 15, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CB), Nick Maravell (NM), Tracy Favre (TF), Mac Stone (MS), Joe Dickson (Vice Chair) (JD), Calvin Walker (CW)

**Absent:** Jean Richardson (JR)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

Workplan

| Petitioned Materials               |                       |          |              |                        |                                                                                      |
|------------------------------------|-----------------------|----------|--------------|------------------------|--------------------------------------------------------------------------------------|
| Name                               | National List Section | Reviewer | Meeting      | Technical Review (TR)? | Notes                                                                                |
| Methionine                         | 205.603               | MS       | Spring 2013? | Yes                    | TR received 11/15. On hold                                                           |
| Nonanoic acid / "pelargonic acid") | 205.603               | WF       | Fall 2012    | Yes                    | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12 |
| GMO Vaccines                       |                       | JD/CB    | Spring 2012  | Yes                    | TR accepted 3/21/12                                                                  |
| Pet Food Amino Acids               | 205.603               | MS       | Fall 2012    |                        | Petition sent to LC on 2/7. <b>Petition sufficiency review.</b>                      |

| Committee Projects                            |          |             |                   |                                                                                              |
|-----------------------------------------------|----------|-------------|-------------------|----------------------------------------------------------------------------------------------|
| Recommendation                                | Reviewer | Meeting     | Technical Review? | Notes                                                                                        |
| <i>Animal welfare/stocking rates guidance</i> | CB       | Fall 2012?  |                   | Discussion with committee in mid-July                                                        |
| Species-specific score cards & guidance docs  |          | Spring 2012 |                   | In conjunction with certifiers/specialists                                                   |
| Poultry                                       | CB       | Spring 2012 |                   | Put forth as discussion in spring with no vote, will be included in broader doc in the fall. |
| Beef                                          | TF       | Fall 2012?  |                   |                                                                                              |
| Dairy                                         | WF       | Fall 2012   |                   |                                                                                              |
| Swine                                         | CW       | Fall 2012   |                   |                                                                                              |
| Rabbits                                       | ?        | Fall 2012   |                   |                                                                                              |

|                                               |    |              |  |                                                           |
|-----------------------------------------------|----|--------------|--|-----------------------------------------------------------|
| Poultry and swine omnivore diets (methionine) | JD | Spring 2013? |  | In progress - discussion document. Removed from workplan? |
| Sheep                                         | WF | Spring 2012  |  |                                                           |

\* Highlight indicates committee action needed

#### **Agenda:**

- Approve minutes from May 1 meeting?
- Public comments
- GMO vaccine recommendation
- Work plan

#### **Discussion:**

- Approved minutes from May 1 meeting
- Public comments –have received lots of public comments, many of them (>1000 were a form letter)
- GMO vaccine recommendation - BF suggestion is to make this a discussion doc. NM would like to leave as is and table it so the committee can revise this at a later date. Committee recognizes that the recommendation will have to be revised based on comments and further input. A member (CB) added that since we have a recommendation ready, it is not appropriate to turn this into a discussion document prior to the meeting. Would rather wait until they receive the full input from commenters. The committee asked for feedback from NOP about the best way to proceed. Does NOP expect to ask for more clarification? SU stated that the NOP was formally seeking information from various agencies in APHIS about GMO vaccines approved for use and about emergency or eradication protocols that would require GMO vaccine use. MS will get together with BF to discuss logistics of the proposal presentation.
- WF will put together Powerpoint presentation as way to summarize the animal welfare docs at the meeting. Would like to provide more information to public and be more transparent about intention of docs, and would like the public to know that the committee has received substantial comments about these topics. NOP asked about body condition scoring, and if is based on conventional animals, does this translate to organic animals. Should the scoring change? A member indicated that the scoring rubrics should be identical.
- Work plan: Could potentially add task to make more concise docs on animal welfare.

#### **Scheduled Committee Calls:**

**May 15: Public comments, Pet food amino acids**

| Milestone                | Deadline                     |
|--------------------------|------------------------------|
| Public Comment Period    | April 9 - May 3, 2012        |
| Informal prep meeting    | May 21, 5pm (in Albuquerque) |
| Spring 2012 NOSB Meeting | May 22 – 25, 2012            |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, June 5, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Nick Maravell (NM), Mac Stone (MS), Joe Dickson (Vice Chair) (JD), Calvin Walker (CW)

**Absent:** Jean Richardson (JR), Tracy Favre (TF)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                                                                                              |
|--------------------------------------------|-----------------------|----------|--------------|----------------------------------|----------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Notes                                                                                        |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012    | Yes                              | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12         |
| GMO Vaccines update                        |                       | JR/NM    | Fall 2012    | Yes                              | TR accepted 3/21/12                                                                          |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012    | Yes                              | Petition sent to LC on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12 |
| Methionine proposal                        | 205.603               | MS       | Spring 2013  | Yes                              | TR received 11/15. On hold                                                                   |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013? |                                  | Petition sent to LC on 05/30/12. Response due ~07/30/12                                      |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013? |                                  | Petition sent to LC on 05/30/12. Response due ~07/30/12                                      |
| Aquaculture – Tocopherols                  |                       | CW/CB    | Fall 2012?   |                                  | Petition sent to LC on 05/30/12. Response due ~07/30/12                                      |
| Aquaculture - Trace Minerals Petition      |                       |          | Fall 2012?   |                                  | Petition sent to LC on 06/08/12. Response due ~08/08/12                                      |

| Subcommittee Projects                                  |          |           |                   |                                    |
|--------------------------------------------------------|----------|-----------|-------------------|------------------------------------|
| Recommendation                                         | Reviewer | Meeting   | Technical Review? | Notes                              |
| Omnivore diets for poultry (methionine)-discussion doc | TF/CW    | Fall 2012 |                   | In progress - discussion document. |

\* Highlight indicates committee action needed

#### **Agenda:**

- Approve minutes from previous meeting
- Discuss workplan items:
  - NL petition - Nonanoic acid (Jean & Wendy)
  - NL petition - Pet food amino acids (Mac)
  - NL - aquaculture –
    - Chlorine (JD)
    - Micronutrients (CW)
    - Vaccines, Biologics (NM, and JR?)
  - GMO Vaccines Update (Nick & Jean)
  - Parasiticides for fiber bearing animals discussion document
  - Poultry - Omnivore Diets - discussion document
  - Beef Guidance (Tracy)
  - Dairy Guidance (Wendy)
  - Swine Guidance (Marlene Halverson & Tracy Harper)

#### **Discussion:**

- Minutes from May 15<sup>th</sup>, 2012 – approved with no changes.
- Workplan items:
  - NL petition - Nonanoic acid- Jean & Wendy
  - NL petition - Pet food amino acids - Mac
  - NL - aquaculture
    - o Chlorine (JD)
    - o Micronutrients (CW)

- o Vaccines, Biologics (NM, and JR?)
- o Tocopherols (CW and CBo)
- GMO Vaccines Update - Nick & Jean. WF has list of emails from GMO industry (primarily from people who were at meeting: manufacturers, producers, and veterinarians) and will forward it to subcommittee
- Parasiticides for fiber bearing animals discussion document – JR (JD would also like to work on this)
- Poultry - Omnivore Diets - discussion document –TF. Broad document. CW volunteered to help
- Beef Guidance -Tracy
- Dairy Guidance - Wendy
- Swine Guidance - Marlene Halverson & Tracy Harper

Future calls scheduled, including specific topics to be discussed (see below)

**Future Scheduled Subcommittee Calls:**

June 19, 2012 3:00 EDT:

Nonanoic acid proposal (JR, WF)

Pet Food Amino Acids proposal (MS)

Omnivore diets for poultry (methionine)-discussion doc (TF/CW)

July 3, 2012 3:00 EDT:

Aquaculture – Chlorine (JD)

Aquaculture –Vitamins proposal (CW)

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)

Aquaculture - Trace Minerals Petition

August 7, 2012 3:00 EDT:

GMO Vaccines Update: (NM/JR)

August 21, 2012 3:00 EDT:

Omnivore Diets for Poultry - discussion document (TF/CW)



| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" agenda                                | August 13, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 16-19, 2012 |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, June 19, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Nick Maravell (NM), Mac Stone (MS), Jean Richardson (JR), Tracy Favre (TF), Calvin Walker (CW)

**Absent:** Joe Dickson (Vice Chair) (JD)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                                                                                                             |
|--------------------------------------------|-----------------------|----------|--------------|----------------------------------|-------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Notes                                                                                                       |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | fall 2012    | Yes                              | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                        |
| GMO Vaccines update                        |                       | JR/NM    | fall 2012    | Yes                              | TR accepted 3/21/12                                                                                         |
| Pet Food Amino Acids proposal              | 205.603               | MS       | fall 2012    | Yes                              | Petition sent to LC on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. Due ~ 7-19-12 |
| Methionine proposal                        | 205.603               | MS       | spring 2013  | Yes                              | TR received 11/15. On hold                                                                                  |
| Aquaculture - Chlorine proposal            |                       | JD       | spring 2013? |                                  | Petition sent to LC on 05/30/12. Response due ~07/30/12                                                     |
| Aquaculture – Vitamins proposal            |                       | CW       | spring 2013? |                                  | Petition sent to LC on 05/30/12. Response due ~07/30/12                                                     |
| Aquaculture – Tocopherols                  |                       | CW/CB    | fall 2012?   |                                  | Petition sent to LC on 05/30/12. Response due ~07/30/12                                                     |
| Aquaculture - Trace Minerals Petition      |                       |          | fall 2012?   |                                  | Petition sent to LC on 06/08/12. Response due ~08/08/12                                                     |
| Acidified sodium chlorite (ASC)            | 205.603               |          |              |                                  | Petition sent to LC on 06/12/12. Response due ~08/13/12                                                     |

|                                              |         |  |  |  |                                                         |
|----------------------------------------------|---------|--|--|--|---------------------------------------------------------|
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 |  |  |  | Petition sent to LC on 06/18/12. Response due ~08/17/12 |
|----------------------------------------------|---------|--|--|--|---------------------------------------------------------|

| Subcommittee Projects                                  |          |           |                   |                                    |
|--------------------------------------------------------|----------|-----------|-------------------|------------------------------------|
| Proposal                                               | Reviewer | Meeting   | Technical Review? | Notes                              |
| Omnivore diets for poultry (methionine)-discussion doc | TF/CW    | fall 2012 |                   | In progress - discussion document. |

\* Highlight indicates committee action needed

#### Agenda:

- Approve minutes from June 5 meeting
- Nonanoic acid--JR, WF
- Pet Food amino acids—MS. TR might be delayed
- Omnivore diets--TF, CW NL petition

#### Discussion:

- Minutes from June 5, 2012 – approved with no changes.
- Nonanoic acid:
  - o JR has done a review of the TR, talked with a couple of veterinarians in the Northeast, and has arranged to meet with several veterinarians including an expert from Mid America Agricultural Research to discuss Nonanoic acid, fenbenzadole protocol as recently promulgated by NOP, and possible parasiticides for fibre bearing animals. Based on TR and these discussions, will probably recommend that the NOSB not add Nonanoic acid. With regard to Nonanoic acid, it is a malodorous insect repellent for which there are a number of more pleasant alternatives available and in use. Will provide additional information after next meeting with veterinarians. There were differing views among the members about the effectiveness of Nonanoic acid.
- JR asked if she should develop a discussion doc on parasiticides.

- Pet Food amino acids: TR might be delayed but this is a priority for the LS for the fall 2012 meeting. Necessary for labeling claim. The TR should answer many questions surrounding this issue. Two other subcommittees (via overlapping members) indicated that the TRs seem to be lacking information about alternatives.
- Omnivore diets: NL petition. WF and others have been working on this and are crafting it to be an academic document, primarily aimed at poultry. CW asked for background about why this is a discussion document. SU indicated that methionine is an alternative to synthetic and is an issue for swine.
- A member asked if the Subcommittee was looking at the Aquaculture-vitamins as a group or individually? SU indicated that they would look at them as a group, noting that Tocopherol (Vitamin E) is being petitioned for use as something different than the vitamins and therefore it is listed separately.

**Future Scheduled Subcommittee Calls:**

June 19, 2012 3:00 EDT:

Nonanoic acid proposal (JR, WF)

Pet Food Amino Acids proposal (MS)

Omnivore diets for poultry (methionine)-discussion doc (TF/CW)

July 3, 2012 3:00 EDT:

Aquaculture – Chlorine (JD)

Aquaculture –Vitamins proposal (CW)

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)

Aquaculture - Trace Minerals Petition

August 7, 2012 3:00 EDT:

GMO Vaccines Update: (NM/JR)

August 21, 2012 3:00 EDT:

Omnivore Diets for Poultry - discussion document (TF/CW)

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" agenda                                | August 13, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, July 3, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Jean Richardson (JR), Tracy Favre (TF), Mac Stone (MS), Calvin Walker (CW), Joe Dickson (Vice Chair) (JD)

**Absent:** Nick Maravell (NM)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU), Lisa Brines (LB)

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                                                                                                                  |
|--------------------------------------------|-----------------------|----------|--------------|----------------------------------|------------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Notes                                                                                                            |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012    | Yes                              | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                             |
| GMO Vaccines update                        |                       | JR/NM    | Fall 2012    | Yes                              | TR accepted 3/21/12                                                                                              |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012    | Yes                              | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. Due back ~ 7-19-12 |
| Methionine proposal                        | 205.603               | MS       | Spring 2013  | Yes                              | TR received 11/15. On hold                                                                                       |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013? |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                      |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013? |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12                                                          |
| Aquaculture – Tocopherols                  |                       | CW/CBo   | Fall 2012?   |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12                                                          |
| Aquaculture - Trace Minerals Petition      |                       | CW       | Fall 2012?   |                                  | Petition sent to LS on 06/08/12. Response due ~08/08/12                                                          |
| Acidified sodium chlorite (ASC)            | 205.603               |          |              |                                  | Petition sent to LS on 06/12/12. Response due ~08/13/12                                                          |

|                                              |         |  |  |  |                                                         |
|----------------------------------------------|---------|--|--|--|---------------------------------------------------------|
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 |  |  |  | Petition sent to LC on 06/18/12. Response due ~08/17/12 |
|----------------------------------------------|---------|--|--|--|---------------------------------------------------------|

| Subcommittee Projects                                  |          |           |                   |                                    |
|--------------------------------------------------------|----------|-----------|-------------------|------------------------------------|
| Recommendation                                         | Reviewer | Meeting   | Technical Review? | Notes                              |
| Omnivore diets for poultry (methionine)-discussion doc | TF/CW    | Fall 2012 |                   | In progress - discussion document. |

\* Highlight indicates committee action needed

### Agenda

- Meeting minutes 06 26 12
- Aquaculture update (LB)
- Aquaculture – Chlorine
- Vitamins
- Omnivore diets
- Nonanoic acid

### Discussion:

- Minutes from June 26 approved with no changes
- Aquaculture Overview (LB). Aquaculture Working Group (AWG) is working on proposed rules. NOSB had originally recommended the establishment of 4 new sections of the national list: Two sections for aquatic plants (Crops) and two sections for aquatic animals (Livestock), with some overlap. Some TRs are available already and if the group needs new TRs, they can request them.
- Aquaculture - Chlorine petition sufficiency. Because the usage of chlorine for aquaculture is not much different than its other uses, the earlier TRs seem sufficient and the group does not see the need to request a new one. A member expressed a recurring concern about use of substances in open vs. closed systems. It was suggested that the LS could compose a discussion doc asking for input about open v closed systems. MS offered to connect with his colleagues at Kentucky State University to get some more information about and clarification about using chlorine in each of these systems. Group deemed the petition sufficient.
- Vitamins – Several questions were posed, including how vitamin use differs in open vs closed systems? Upon initial review the LS feels that the petition is sufficient but would like to defer final decision until next call. A member asked how the NOSB would review vitamins, in light of the fact that many products are proprietary. LB added that “vitamins” is a category, so manufacturing process is included under confidential business Information (CBI). NOP has discussed whether or to ask petitioners to submit production

methods and determined that it would not be feasible. With regard to this specific petition, vitamin use is minimal, so the manufacturer has indicated that there are no detrimental effects.

- Omnivore diets - MBailey would like the group to put together a brief document/bulleted list about Omnivore diets prior to moving forward with the discussion document. The LS indicated that the discussion doc is intended to be academic and will lay out options for synthetic methionine. The group discussed using past documents to inform this new document, which were presented at a past NOSB meeting (either Seattle or Woodland in 2011?). A member asked if the program could frame the argument for the document. SU added that the program would be receptive to a document that included a discussion of an omnivore diet as a way of meeting methionine needs.
- Nonanoic acid. JR distributed a document to members prior to the call. Nonanoic acid is a fatty acid that occurs naturally in some foods. Petition is for a synthetic version to be used as a topical insect repellent. Nonanoic acid is not very effective as insect repellent and there are other, less toxic, items available. Nonanoic acid is on the EPA registered list as fungicide and herbicide and has an impact on soils and ecosystem. The group feels that there are alternatives like good management practices, and sees no justification for adding this to list.

Motion to classify Nonanoic acid (CAS 11205) as synthetic:

Motion made by: JR

Seconded by: CBo

No additional discussion

Yes: 7 No: 0 Abstain: 0 Absent: 1 Recuse: 0

Motion to list Nonanoic Acid to 206.603 on the National List:

Motion made by: JR

Seconded by TF

No additional discussion

Yes: 0 No: 7 Abstain: 0 Absent: 1 Recuse: 0

#### **Future Scheduled Subcommittee Calls:**

June 19, 2012 3:00 EDT:

Nonanoic acid proposal (JR, WF) –done (see vote above)

Pet Food Amino Acids proposal (MS)



Omnivore diets for poultry (methionine) - discussion doc (TF/CW)

July 3, 2012 3:00 EDT:

Aquaculture – Chlorine (JD) - petition sufficiency done

Aquaculture – Vitamins proposal (CW)-deferred to next meeting

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)?

Aquaculture - Trace Minerals Petition (CW)?

Aquaculture – Vitamins proposal (CW)

July 31, 2012 Time: TBD Extra call

GMO Vaccines Update: (NM/JR)

August 7, 2012 3:00 EDT:

Pet Food Amino Acids proposal (MS)

August 21, 2012 3:00 EDT:

Omnivore Diets for Poultry - discussion document (TF/CW)

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - “Finalize” tentative agenda                      | August 13, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |



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**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, July 17, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Jean Richardson (JR), Tracy Favre (TF), Mac Stone (MS), Calvin Walker (CW), Joe Dickson (Vice Chair) (JD)

**Absent:** Nick Maravell (NM)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                        |                       |          |              |                                  |                                                                                                                                                  |
|---------------------------------------------|-----------------------|----------|--------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                        | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Notes                                                                                                                                            |
| Nonanoic acid/ ("pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012    | Yes                              | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                                                             |
| GMO Vaccines update                         |                       | JR/NM    | Fall 2012    | Yes                              | TR accepted 3/21/12                                                                                                                              |
| Pet Food Amino Acids proposal               | 205.603               | MS       | Fall 2012    | Yes                              | Petition sent to LS on 2/7. Petition sufficiency review. TR request forwarded to contractor 03 20 12. TR expected to be sent to LC week of 7/25. |
| Methionine proposal                         | 205.603               | MS       | Spring 2013  | Yes                              | TR received 11/15. On hold                                                                                                                       |
| Aquaculture - Chlorine proposal             |                       | JD       | Spring 2013? |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                                                      |
| Aquaculture – Vitamins proposal             |                       | CW       | Spring 2013? |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12                                                                                          |
| Aquaculture – Tocopherols                   |                       | CW/CBo   | Fall 2012?   |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12                                                                                          |
| Aquaculture - Trace Minerals Petition       |                       | CW       | Fall 2012?   |                                  | Petition sent to LS on 06/08/12. Response due ~08/08/12                                                                                          |
| Acidified sodium chlorite (ASC)             | 205.603               |          |              |                                  | Petition sent to LS on 06/12/12. Response due ~08/13/12                                                                                          |

|                                              |         |  |  |  |                                                         |
|----------------------------------------------|---------|--|--|--|---------------------------------------------------------|
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 |  |  |  | Petition sent to LC on 06/18/12. Response due ~08/17/12 |
|----------------------------------------------|---------|--|--|--|---------------------------------------------------------|

| Subcommittee Projects                                  |          |           |                   |                                    |
|--------------------------------------------------------|----------|-----------|-------------------|------------------------------------|
| Recommendation                                         | Reviewer | Meeting   | Technical Review? | Notes                              |
| Omnivore diets for poultry (methionine)-discussion doc | TF/CW    | Fall 2012 |                   | In progress - discussion document. |

\* Highlight indicates committee action needed

### Agenda

- Meeting minutes 07 03 12
- Aquaculture - Tocopherols (Calvin /Colehour)
- Aquaculture - Trace Minerals Petition (Calvin)
- Aquaculture - Vitamins proposal (CW)

### Discussion:

- Minutes from July 3 approved with no changes
- Aquaculture:
  - o SU noted that the petitions were reviewed by a NOP staff person and the initials and date of the person are noted.
  - o Discussed aquaculture checklists and petitions for vitamins, trace minerals, and Tocopherols. Petitions found sufficient and chair will send note to LBrines and request TRs.
  - o Discussed the usefulness of looking at these substances as groups. LS members agreed that it would not be productive to look at individual vitamins and substances.
  - o CW is willing to rely on petitions but would feel more confident requesting a TR to address open vs. closed systems. The other members agreed that they would like to request a TR.
  - o MS asked his colleague Dr. Jim Tidwell, who was the former president of the National Aquaculture Association, about aquaculture and he indicated that vitamins are not an issue in either open or closed systems. JR added that being skeptical of such statements is important, and they would like to see the science that supports this claim. TF stated that she would place more value in research from a group trying to prove that vitamins are environmentally harmful. Would urge the group to request a TR.

- o JD added that it was important that the TR address specific questions, so JD and CW will compose questions and send them via email to group.
- MS asked about inviting his colleagues on a call to answer questions. SU stated that George Lockwood, chair of the Aquaculture Working Group was willing to join call as well, but asked whether or not inviting a petitioner is ok.

**Future Scheduled Subcommittee Calls:**

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)?

Aquaculture - Trace Minerals Petition (CW)?

Aquaculture – Vitamins proposal (CW)

July 31, 2012 Time: 3:00pm EDT Extra call

GMO Vaccines Update: (NM/JR)

August 7, 2012 3:00 EDT:

Pet Food Amino Acids proposal (MS)

August 21, 2012 3:00 EDT:

Omnivore Diets for Poultry - discussion document (TF/CW)

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" tentative agenda                      | August 13, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |



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**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, July 31, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Mac Stone (MS), Calvin Walker (CW), Tracy Favre (TF)

**Absent:** Jean Richardson (JR), Nick Maravell (NM), Joe Dickson (Vice Chair) (JD)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                                                                                                                      |
|--------------------------------------------|-----------------------|----------|--------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Notes                                                                                                                |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012    | Yes                              | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                                 |
| GMO Vaccines update                        |                       | JR/NM    | Fall 2012    | Yes                              | TR accepted 3/21/12                                                                                                  |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012    | Yes                              | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12 |
| Methionine proposal                        | 205.603               | MS       | Spring 2013  | Yes                              | TR received 11/15. On hold                                                                                           |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013? |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                          |
| Aquaculture – Tocopherols                  |                       | CW/CBo   | Fall 2012?   |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12                          |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013? |                                  | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06                             |
| Aquaculture - Trace Minerals Petition      |                       | CW       | Spring 2013? |                                  | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06? Joint TR with Vitamins     |
| Acidified sodium                           | 205.603               |          |              |                                  | Petition sent to LS on 06/12/12. Response due                                                                        |

|                                              |         |  |  |  |                                                         |
|----------------------------------------------|---------|--|--|--|---------------------------------------------------------|
| chlorite (ASC)                               |         |  |  |  | ~08/13/12                                               |
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 |  |  |  | Petition sent to LC on 06/18/12. Response due ~08/17/12 |

| Subcommittee Projects                                  |          |           |                   |                                    |  |
|--------------------------------------------------------|----------|-----------|-------------------|------------------------------------|--|
| Recommendation                                         | Reviewer | Meeting   | Technical Review? | Notes                              |  |
| Omnivore diets for poultry (methionine)-discussion doc | TF/CW    | Fall 2012 |                   | In progress - discussion document. |  |

\* Highlight indicates committee action needed

### Agenda

- Livestock Call Agenda
- Approve minutes from 07 17 12
- GMO vaccine update: Nick Maravell
- Aquaculture petitions
- Schedule discussion with AWG?
- Other business

We should also be thinking about research priorities and I would propose the following topics in order of priority:

- Parasitism – internal parasites e.g., stomach worms and coccidia in young stock and poultry
- Parasitism - external parasites e.g., flies and lice in all animals and species
- Mastitis in dairy animals
- Pneumonia in all animals, especially young stock
- Uterine infections in peri-parturient animals

### Discussion:

- Approved minutes from 07 17 12 with no changes
- Work on GMO vaccines is progressing slowly, and is waiting on APHIS. SU gave brief update about GMO Working Group. Center for Veterinary Medicine (CVM) representative will work on product name list for Livestock Subcommittee, but is not be able to include



provenance of products that were created far back in the chain with excluded methods. Once list is compiled, the WG will schedule a call.

- Omnivore diets for poultry (methionine) discussion doc. TF is editing a doc that CW composed and is struggling with issue on synthetic methionine. NOP asked the group to provide a one page document with a summary of what would be in the discussion doc. TF will write this and send to NOP. This substance has been petitioned multiple times over the last few years and both the group and NOP feel we need to get it finished. SU did not receive the email that CW sent.
- Aquaculture petitions. CW asked about combining Vitamins and Minerals proposals. CBo supported this approach. CW posed several questions to include in the document.
- The members were interested in scheduling a discussion with the Aquaculture Working Group (AWG), and asked the Chair to proceed with coordinating this.
- Pet food amino acids. NOP asked that the group compose a short discussion doc with questions to solicit public comment for fall 2012 meeting. MS is lead on this item, and will write up document.
- Group discussed items for Research Priorities and NOP suggested taking a more holistic approach instead of looking at only medical issues, as is reflected in the list above.
- Dr. Jim Tidwell - will reschedule for a different meeting than meeting as AWG.

#### **Future Scheduled Subcommittee Calls:**

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)?  
Aquaculture - Trace Minerals Petition (CW)?  
Aquaculture – Vitamins proposal (CW)

July 31, 2012 Time: 3:00pm EDT Extra call

GMO Vaccines Update: (NM/JR)  
Dr. Jim Tidwell-rescheduled due to conflict

August 7, 2012 3:00 EDT:

Pet Food Amino Acids proposal (MS)

August 21, 2012 3:00 EDT:

Omnivore Diets for Poultry - discussion document (TF/CW)

September 4, 2012 3:00 EDT

Dr. Jim Tidwell?

September 18, 2012 3:00 EDT

October 2, 2012 3:00 EDT

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" tentative agenda                      | August 10, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |

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**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, August 7, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Mac Stone (MS), Calvin Walker (CW), Tracy Favre (TF), Nick Maravell (NM), Joe Dickson (Vice Chair) (JD)

**Absent:** Jean Richardson (JR)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU), Emily Brown Rosen (EBR)-(sitting in)

**Workplan**

|                                            |                       |          | Petitioned Materials |                                  |          |                                                                                                                                               |
|--------------------------------------------|-----------------------|----------|----------------------|----------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting              | Technical Review requested (TR)? | Vote     | Notes                                                                                                                                         |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012            | Yes                              | 07 03 12 | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                                                          |
| GMO Vaccines update                        |                       | JR/NM    | Fall 2012            | Yes                              |          | TR accepted 3/21/12                                                                                                                           |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012            | Yes                              |          | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12                          |
| Methionine proposal                        | 205.603               | MS       | Spring 2013          | Yes                              |          | TR received 11/15. On hold                                                                                                                    |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013?         |                                  |          | Petition sent to LS on 05/30/12. <b>Response due ~07/30/12.</b> Petition found sufficient 07 03 12                                            |
| Aquaculture – Tocopherols                  |                       | CW/CBo   | Fall 2012?           |                                  |          | Petition sent to LS on 05/30/12. <b>Response due ~07/30/12.</b> Petition found sufficient 08 06 12. Requested TR requested 08 06 12           |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013?         |                                  |          | Petition sent to LS on 05/30/12. <b>Response due ~07/30/12.</b> Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12 |

|                                              |         |    |              |  |  |                                                                                                                                                |
|----------------------------------------------|---------|----|--------------|--|--|------------------------------------------------------------------------------------------------------------------------------------------------|
| Aquaculture - Trace Minerals Petition        |         | CW | Spring 2013? |  |  | Petition sent to LS on 06/08/12. <b>Response due ~08/08/12</b> . Petition found sufficient 08 06 12? Requested joint TR with Vitamins 08 06 12 |
| Acidified sodium chlorite (ASC)              | 205.603 |    |              |  |  | Petition sent to LS on 06/12/12. <b>Response due ~08/13/12</b>                                                                                 |
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 |    |              |  |  | Petition sent to LC on 06/18/12. <b>Response due ~08/17/12</b>                                                                                 |

| Subcommittee Projects                                  |          |           |                   |      |                                    |
|--------------------------------------------------------|----------|-----------|-------------------|------|------------------------------------|
| Recommendation                                         | Reviewer | Meeting   | Technical Review? | Vote | Notes                              |
| Omnivore diets for poultry (methionine)-discussion doc | TF/CW    | Fall 2012 |                   |      | In progress - discussion document. |

\* Highlight indicates committee action needed

### Agenda

- Approve minutes from July 31, 2012
- Aquaculture-Lignin sulfate (feed binder) petition -Who will take the lead?
- Pet food Amino Acids -Mac
- Livestock Research Priorities doc -Anything to add or change?
- Other business

### Discussion:

- Minutes from July 31 approved with no changes.
- Pet food amino acids task force. EBR gave a brief synopsis of the past task force and their work. Pet food is regulated by the states, except in the organic world, so in the Organic realm it is treated like food for livestock. NOP is currently in the rulemaking phase for pet food and feels it would be very helpful if NOSB could present the discussion document at fall 2012 meeting either as a discussion doc or proposal. The group discussed the fact that there are thirteen pet food amino acids from a 2006 recommendation, while the 2008 recommendation has 7 listed, so there are discrepancies between lists. Chair asked NOP how best to proceed. The team acknowledged that the most difficult task is to determine which items need to be on list and which do not. i.e. which ones are organically essential and which ones are not? The group feels that public comment will be informative and useful, and would like to

craft some focused questions. SU cautioned that even though the amino acids are available in organic form, sometimes the ratio of amino acids is the critical factor. The Subcommittee asked about the protocol for asking for additional info to which EBR noted that the subcommittee should ask NOP to ask petitioner. Group decided to write a proposal as opposed to a discussion doc, in an effort to alert the community that the NOSB is considering this. MS asked for input from the group about refining the list. SU asked if grouping questions instead of parsing them out individually would make more sense. EBR will ask Lisa Brines how to best approach this.

- Lignin sulfate. CW volunteered to take lead on this
- Acidified Sodium Chlorite. JD volunteered to take lead on this.
- Livestock Research Priorities doc. The chair asked for input and a member suggested adding methionine to the list (bi-products and herbal methionine). The group also suggested looking at open vs. closed production systems in aquaculture .
- The lead members working on the Omnivore diets for poultry discussion doc asked that EBR send the references regarding animal by-products.

#### **Future Scheduled Subcommittee Calls:**

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)?  
Aquaculture - Trace Minerals Petition (CW)?  
Aquaculture – Vitamins proposal (CW)

July 31, 2012 Time: 3:00pm EDT Extra call

GMO Vaccines Update: (NM/JR)  
Dr. Jim Tidwell-rescheduled due to conflict

August 7, 2012 3:00 EDT:

Pet Food Amino Acids proposal (MS)

August 21, 2012 3:00 EDT:

Omnivore Diets for Poultry - discussion document (TF/CW)

September 4, 2012 3:00 EDT

Dr. Jim Tidwell?

September 18, 2012 3:00 EDT

October 2, 2012 3:00 EDT

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" tentative agenda                      | August 10, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
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| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |

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**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Wednesday, August 15, 2012, 2:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Mac Stone (MS)

**Absent:** Nick Maravell (NM), Calvin Walker (CW), Tracy Favre (TF), Joe Dickson (Vice Chair) (JD), Jean Richardson (JR)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

|                                            |                       |          | Petitioned Materials |                                  |                |                                                                                                                                                     |
|--------------------------------------------|-----------------------|----------|----------------------|----------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting              | Technical Review requested (TR)? | Vote           | Notes                                                                                                                                               |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012            | Yes                              | 07 03 12       | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                                                                |
| GMO Vaccines update                        |                       | JR/NM    | Fall 2012            | Yes                              | NA             | TR accepted 3/21/12                                                                                                                                 |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012            | Yes                              | 08 16-17, 2012 | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12 |
| Methionine proposal                        | 205.603               | MS       | Spring 2013          | Yes                              |                | TR received 11/15. On hold                                                                                                                          |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013?         |                                  |                | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                                                         |
| Aquaculture – Tocopherols                  |                       | CW/CBo   | Fall 2012?           |                                  |                | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested TR requested 08 06 12                        |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013?         |                                  |                | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12              |
| Aquaculture - Trace Minerals Petition      |                       | CW       | Spring 2013?         |                                  |                | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12?                                                        |

|                                              |         |  |  |  |  |                                                         |
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|                                              |         |  |  |  |  | Requested joint TR with Vitamins 08 06 12               |
| Acidified sodium chlorite (ASC)              | 205.603 |  |  |  |  | Petition sent to LS on 06/12/12. Response due ~08/13/12 |
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 |  |  |  |  | Petition sent to LC on 06/18/12. Response due ~08/17/12 |

| Subcommittee Projects                                  |          |           |                   |      |                                    |
|--------------------------------------------------------|----------|-----------|-------------------|------|------------------------------------|
| Recommendation                                         | Reviewer | Meeting   | Technical Review? | Vote | Notes                              |
| Omnivore diets for poultry (methionine)-discussion doc | TF/CW    | Fall 2012 |                   |      | In progress - discussion document. |

\* Highlight indicates committee action needed

### Agenda

- Agenda
- Approve minutes from August 7, 2012
- Discuss Pet Foods Amino Acids
- Livestock Research Priorities

### Discussion:

- Minutes from August 7 not approved, due to lack of quorum. CBo agreed minutes are ok.
- Pet Foods amino acids. NOP provided some information about pet food manufactures and the fact that they sometimes don't list specific amino acids individually, but may include chelated minerals (e.g. mineral amino acid chelates). The group discussed whether or not they are ready and/or able to make a decision based on available information. CBo asked what the next steps would be if the subcommittee delays this document. One option is to put it forth as a discussion document instead of a proposal, to solicit questions from the public and industry. The subcommittee agreed that the information in the TR about Taurine seems solid, and perhaps that can be put forth separate from the other amino acids until more research and information can be gathered. MS suggested that they put forth a recommendation for Taurine for cats only. CBo noted that what is being petitioned isn't just for Taurine for cats, and noted that the Subcommittee is required to work with the petition at hand. NOP noted that the group could accept parts of the petition and not others. Group discussed the possibility of annotating the recommendation instead. Group will ask for an email vote to approve the TR. (DFO note: TR was accepted as sufficient via email 08 16 12).



MS will edit checklist to reflect discussion, and will rewrite recommendation. Chair will ask for votes to be submitted by August 20. Group is accepting TR as is, despite their reservations, and chair will forward their decision to LBrines. (DFO note: TR accepted as sufficient via email on August 16, 2012.)

**DFO note: Vote via email Thursday/Friday August 16 and 17**

**DFO note: Motion was rewritten as per NOP, and Subcommittee revoted August 23. See below for new vote:**

Motion to classify Taurine (CAS 107-35-7) as synthetic:

Motion by: CBo

Seconded: MS

Yes: 7 No: 0 Absent: 1 Abstain: 0 Recuse: 0

Motion to list Taurine only for Pet Foods:

Motion by: WF

Seconded: CW

Yes: 6 No: 0 Absent: 2 Abstain: 0 Recuse: 0

**New Vote: as per NOPs instructions: Vote taken via email August 23, 2012**

Classification Motion: Motion to classify amino acids (Arginine, Methionine, Cystine, Lysine, Taurine, Tryptophan, Threonine, Histidine, Isoleucine, Leucine, Phenylalanine, Tyrosine, and Valine) as synthetic.

Motion by: MS

Seconded by: CB

Yes: 7 No: 0 Absent: 1 Abstain: 0 Recuse: 0

Listing Motion: Motion to list amino acids (Arginine, Methionine, Cystine, Lysine, Taurine, Tryptophan, Threonine, Histidine, Isoleucine, Leucine, Phenylalanine, Tyrosine, and Valine) on section 205.603 on the National List for use in organic pet food.

Motion by: Mac Stone

Seconded by: Colehour Bondera

Yes: No: 7 Absent: 1 Abstain: 0 Recuse: 0

Listing Motion: Motion to list Taurine (CAS 107-35-7) on 206.603(e)(4) for cats

Motion by: Wendy Fulwider

Seconded by: Calvin Walker

Yes: # 7 No: # 0 Absent: # 1 Abstain: # 0 Recuse: # 0

- Livestock Research Priorities: MS, CW, CBo, and TF sent their suggestions in already. Chair will send note to others and ask that they send in their suggestions.

#### **Future Scheduled Subcommittee Calls:**

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)?

Aquaculture - Trace Minerals Petition (CW)?

Aquaculture – Vitamins proposal (CW)

July 31, 2012 Time: 3:00pm EDT Extra call

GMO Vaccines Update: (NM/JR)

Dr. Jim Tidwell-rescheduled due to conflict

August 7, 2012 3:00 EDT:

Pet Food Amino Acids proposal (MS)

August 15, 2012 2:00 EDT: extra call

Discuss Pet Foods Amino Acids - Mac

Livestock Research Priorities

August 21, 2012 3:00 EDT:

Discuss/vote: Omnivore Diets for Poultry - discussion document (TF/CW)

September 4, 2012 3:00 EDT

Dr. Jim Tidwell

Professor/Chair - Division of Aquaculture

Kentucky State University

September 18, 2012 3:00 EDT

October 2, 2012 3:00 EDT

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" tentative agenda                      | August 10, 2012     |
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| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |

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**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Wednesday, August 21, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Nick Maravell (NM), Tracy Favre (TF), Joe Dickson (Vice Chair) (JD), Jean Richardson (JR), Calvin Walker (CW), Mac Stone (MS)

**Absent: Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                          |                                                                                                                                                     |
|--------------------------------------------|-----------------------|----------|--------------|----------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Vote                     | Notes                                                                                                                                               |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012    | Yes                              | 07 03 12                 | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                                                                |
| GMO Vaccines update                        |                       | JR/NM    | Fall 2012    | Yes                              | NA                       | TR accepted 3/21/12                                                                                                                                 |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012    | Yes                              | 08 16-17, 2012 via email | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12 |
| Methionine proposal                        | 205.603               | MS       | Spring 2013  | Yes                              |                          | TR received 11/15. On hold                                                                                                                          |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                                                         |
| Aquaculture – Tocopherols                  |                       | CW/CBo   | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested TR requested 08 06 12                        |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12              |
| Aquaculture - Trace Minerals Petition      |                       | CW       | Spring 2013? |                                  |                          | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12?                                                        |

|                                              |         |  |  |  |  |                                                         |
|----------------------------------------------|---------|--|--|--|--|---------------------------------------------------------|
|                                              |         |  |  |  |  | Requested joint TR with Vitamins 08 06 12               |
| Acidified sodium chlorite (ASC)              | 205.603 |  |  |  |  | Petition sent to LS on 06/12/12. Response due ~08/13/12 |
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 |  |  |  |  | Petition sent to LC on 06/18/12. Response due ~08/17/12 |

| Subcommittee Projects                      |          |           |                   |          |                      |
|--------------------------------------------|----------|-----------|-------------------|----------|----------------------|
| Proposal                                   | Reviewer | Meeting   | Technical Review? | Vote     | Notes                |
| Omnivore diets (methionine)-discussion doc | TF/CW    | Fall 2012 |                   | 08 21 12 | Discussion document. |

\* Highlight indicates committee action needed

### Agenda

- Agenda
- Approve minutes from August 7, 2012

### Discussion:

- Minutes from August 7 approved with no changes
- The group discussed various aspects of the Aquaculture petitions, as well as the possibility of joining the Crops Subcommittee on a call to gather information regarding aquaculture. Crops has invited Dr. Jim Tidwell to join the September 4<sup>th</sup> call. A member asked what specific issues the Crops subcommittee would like addressed and discussed how best to move forward. It was the general feeling that the NOSB has lost its institutional knowledge about aquaculture and would like to gather as much information as possible in an effort to move forward with the petitioned items.
- Omnivore diets (methionine) - discussion doc. The lead member summarized the document and asked for questions from the group. The group discussed other significant issues besides methionine, such as Lysine, which is an issue in baby pigs. The group suggested adding a question about Lysine to the discussion document, and further recommended addressing this under the broader umbrella of “essential amino acids” and putting methionine and lysine in parentheses. It was noted that in the TR the petitioners mentioned a natural methionine source (herbal methionine). SU suggested adding language about existing FDA regulations, and also adding questions about additional Organic regulations or safeguards that should be in place. Groups discussed other questions to include in

document that would be helpful when soliciting public comment. SU will write a short paragraph on aquaculture and its use in meal, and will make some technical changes to document, and send those to the group.

VOTE on Omnivore Diets Discussion Document:

- Motion to accept Omnivore diets discussion document as amended
- Motion made by: TF
- Seconded by: JR
- No additional discussion:
- Yes: 8 No: 0 Abstain: 0 Absent: 0 Recuse: 0

#### **Future Scheduled Subcommittee Calls:**

July 17, 2012 3:00 EDT:

Aquaculture – Tocopherols (CW/CBo)?  
Aquaculture - Trace Minerals Petition (CW)?  
Aquaculture – Vitamins proposal (CW)

July 31, 2012 Time: 3:00pm EDT Extra call

GMO Vaccines Update: (NM/JR)  
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Pet Food Amino Acids proposal (MS)

August 15, 2012 2:00 EDT: extra call

Discuss Pet Foods Amino Acids - Mac  
Livestock Research Priorities

August 21, 2012 3:00 EDT:

Discuss/vote: Omnivore Diets for Poultry - discussion document (TF/CW)

September 4, 2012 3:00 EDT

Dr. Jim Tidwell

Professor/Chair - Division of Aquaculture  
Kentucky State University

September 18, 2012 3:00 EDT

October 2, 2012 3:00 EDT

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
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**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Wednesday, September 4, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Joe Dickson (Vice Chair) (JD), Colehour Bondera (CBo), Nick Maravell (NM), Tracy Favre (TF), Jean Richardson (JR), Calvin Walker (CW), Mac Stone (MS), Jay Feldman (JFe) - sitting in

**Absent:**

**Staff:** Michelle Arsenault (MA), Stacy Jones King (SJK), Scott Updike (SU)

**Guests:** Dr. Jim Tidwell

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                          |                                                                                                                                                     |
|--------------------------------------------|-----------------------|----------|--------------|----------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Vote                     | Notes                                                                                                                                               |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012    | Yes                              | 07 03 12                 | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                                                                |
| GMO Vaccines update                        |                       | JR/NM    | Fall 2012    | Yes                              | NA                       | TR accepted 3/21/12                                                                                                                                 |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012    | Yes                              | 08 16-17, 2012 via email | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12 |
| Methionine proposal                        | 205.603               | MS       | Spring 2013  | Yes                              |                          | TR received 11/15. On hold                                                                                                                          |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                                                         |
| Aquaculture – Tocopherols                  |                       | CW/CBo   | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested TR requested 08 06 12                        |
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|                                              |         |    |              |  |  |                                                                                                                                        |
|----------------------------------------------|---------|----|--------------|--|--|----------------------------------------------------------------------------------------------------------------------------------------|
| Aquaculture - Trace Minerals Petition        |         | CW | Spring 2013? |  |  | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12? Requested joint TR with Vitamins 08 06 12 |
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| Subcommittee Projects                      |          |           |                   |          |                      |
|--------------------------------------------|----------|-----------|-------------------|----------|----------------------|
| Proposal                                   | Reviewer | Meeting   | Technical Review? | Vote     | Notes                |
| Omnivore diets (methionine)-discussion doc | TF/CW    | Fall 2012 |                   | 08 21 12 | Discussion document. |

\* Highlight indicates committee action needed

### Agenda

- Guest Dr. Jim Tidwell, Professor/Chair - Division of Aquaculture, Kentucky State University

### Discussion:

**Question:** What is/are the difference(s) between open and closed systems? Are there videos or websites that the members can visit?

**Question:** What distinguishes the boundary between 'inside the net' and 'outside the net'? Is it only the feed?

**Answer:** Water quality is the same. Survival rate, growth rate and feed/consumption rate are 3 criteria that are used to determine healthy environments. Survival rates are based on various factors.

**Question:** In an open-pen system does feed drift or does it stay in pen and break down?

**Answer:** Very little gets out of the cage/net because it's a major expense, and well-managed operations automate the process. The mesh is fine enough that there isn't much external input aside from water and dissolved components in the water.

**Question:** A member noted that in 2007 the NOSB dealt with many questions about aquaculture and wondered what's changed in the field since that time.

**Answer:** The biggest change has been the decrease in the catfish industry, which was the biggest aquaculture crop. The crop has been reduced by 40%, mainly because feed costs have increased (Feed costs comprise 50 % of cost of aquaculture). EU has current standards so NOSB members can reference them for information. A member added that there is also a lack of organic feed availability and not many interfaces with non-organic systems.

**Question:** If there is effluent, how much of that gets into the fish?

**Answer:** There are many variables; size, age, load in water, bioaccumulations, position in food chain, fish species, etc...

**Question:** If vitamins leach out would it cause environmental concerns?

**Answer:** A minute amount of vitamins is fed to the fish and the feed is regulated so it's not a concern.

**Question:** Is there a difference between herbivorous and carnivorous fish

**Answer:** Most of the species that take low-value fish meal are considered a low quality product. For example catfish is fed 0-4% fish meal. If you stick to organic standards of 12% or less, you limit the quality of the species. For example, you would not feed Salmon less than 12 % fish meal.

**Question:** Have the processes and systems for conventional and organic changed since 2007?

**Answer:** There's been research, but not many changes have been adopted or installed, and most likely won't be adopted until they are profitable.

The group discussed problems that the EU appears to have with environmental issues caused by inputs.

**Question:** What and how much genetic manipulation takes place prior to growth?

**Answer:** Very little genetic modification takes place.

The group discussed water quality regulations, which are regulated by the states and not by the federal system.

**Question:** Can you address predator/prey relationship in aquaculture systems, and also fish escapes?

**Answer:** System failure does occur, but not often. The biggest concern comes from sharks and occasionally seals.

**Future Scheduled Subcommittee Calls:**

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Dr. Jim Tidwell  
Professor/Chair - Division of Aquaculture  
Kentucky State University

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**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Wednesday, September 18, 2012, 3:00pm EDT**

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**Absent:** Mac Stone (MS), Nick Maravell (NM), Joe Dickson (Vice Chair) (JD)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                          |                                                                                                                                                     |
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| Aquaculture – Tocopherols                  |                       | CW/CBo   | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested TR requested 08 06 12                        |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12              |

|                                              |         |        |              |  |  |                                                                                                                                        |
|----------------------------------------------|---------|--------|--------------|--|--|----------------------------------------------------------------------------------------------------------------------------------------|
| Aquaculture - Trace Minerals Petition        |         | CW     | Spring 2013? |  |  | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12? Requested joint TR with Vitamins 08 06 12 |
| Acidified sodium chlorite (ASC)              | 205.603 | CW/JD? |              |  |  | Petition sent to LS on 06/12/12. <b>Response due ~08/13/12</b>                                                                         |
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 | CW/JD? |              |  |  | Petition sent to LC on 06/18/12. <b>Response due ~08/17/12</b>                                                                         |

| Subcommittee Projects                      |          |           |                   |          |                      |
|--------------------------------------------|----------|-----------|-------------------|----------|----------------------|
| Proposal                                   | Reviewer | Meeting   | Technical Review? | Vote     | Notes                |
| Omnivore diets (methionine)-discussion doc | TF/CW    | Fall 2012 |                   | 08 21 12 | Discussion document. |

\* Highlight indicates committee action needed

### Agenda

- Approve minutes from August 15 and 21, 2012
- Acidified sodium chlorite - Review petition sufficiency and decide if we want to request TR's.
- Lignin sulfonate - Review petition sufficiency and decide if we want to request TR's.
- Discuss Dr. Tidwell's information about aquaculture from last call. Do we want to invite an aquaculture expert to join us on a call? Expertise in which aquaculture areas are we seeking? Any particular individuals we should invite?
- Discussion on public comments received to date.
- Other business?

### Discussion:

- Minutes from August 15 and 21, 2012 approved with no changes.
- Lignin sulfonate – The Group reviewed the checklist for petition sufficiency, and agreed that it was sufficient to move forward with a request for a Technical Report (TR). The Chair will send an email to the NOP requesting a TR.
- Acidified sodium chlorite (ASC) - The Group reviewed the checklist for petition sufficiency, and agreed that it was sufficient to move forward with a request for a Technical Report (TR). The Chair will send an email to the NOP requesting a TR.

- A member asked about inviting someone to speak to the group about open versus closed systems in aquaculture. MS offered to get some references.
- The NOP noted that there were only a few public comments to the NOSB so far, and only six specifically addressing Livestock.
- The NOP updated the group on the GMO Vaccines WG and the fact that they are delayed because of the topic of Confidential Business Information-CBI) and will meet soon to discuss next steps.
- CW will forward documents on Methionine to TF.
- JR noted that she was invited to a veterinarian meeting where they were discussing parasiticides and fenbendazole and that several of the veterinarians expressed interest in attending the NOSB meeting.

#### **Future Scheduled Subcommittee Calls:**

September 4, 2012 3:00 EDT

Dr. Jim Tidwell

Professor/Chair - Division of Aquaculture

Kentucky State University

September 18, 2012 3:00 EDT

October 2, 2012 3:00 EDT

November 6, 2012 3:00 EST

November 20, 2012 3:00 EST

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" tentative agenda                      | August 10, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, October 2, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (Chair) (WF), Colehour Bondera (CBo), Tracy Favre (TF), Calvin Walker (CW), Nick Maravell (NM),

**Absent:** Joe Dickson (Vice Chair) (JD), Jean Richardson (JR), Mac Stone (MS)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                       |                       |          |              |                                  |                          |                                                                                                                                                     |
|--------------------------------------------|-----------------------|----------|--------------|----------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                       | National List Section | Reviewer | Meeting      | Technical Review requested (TR)? | Vote                     | Notes                                                                                                                                               |
| Nonanoic acid/ "pelargonic acid") proposal | 205.603               | JR, WF   | Fall 2012    | Yes                              | 07 03 12                 | Response on petition sufficiency was sent to NOP. TR accepted as sufficient 04 24 12                                                                |
|                                            |                       |          |              |                                  |                          |                                                                                                                                                     |
| Pet Food Amino Acids proposal              | 205.603               | MS       | Fall 2012    | Yes                              | 08 16-17, 2012 via email | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12 |
| Methionine proposal                        | 205.603               | MS       | Spring 2013  | Yes                              |                          | TR received 11/15. On hold                                                                                                                          |
| Aquaculture - Chlorine proposal            |                       | JD       | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                                                         |
| Aquaculture – Tocopherols                  |                       | CW/CBo   | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested TR requested 08 06 12                        |
| Aquaculture – Vitamins proposal            |                       | CW       | Spring 2013? |                                  |                          | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12              |
| Aquaculture - Trace Minerals Petition      |                       | CW       | Spring 2013? |                                  |                          | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12?                                                        |



|                                              |         |         |  |  |  |                                                                  |
|----------------------------------------------|---------|---------|--|--|--|------------------------------------------------------------------|
|                                              |         |         |  |  |  | Requested joint TR with Vitamins 08 06 12                        |
| Acidified sodium chlorite (ASC)              | 205.603 | CW/JD ? |  |  |  | Petition sent to LS on 06/12/12. Petition found sufficient 9/18. |
| Aquaculture – Lignin sulfonate (feed binder) | 205.601 | CW/JD ? |  |  |  | Petition sent to LC on 06/18/12. Petition found sufficient 9/18. |

| Subcommittee Projects                      |            |          |             |                   |          |                      |
|--------------------------------------------|------------|----------|-------------|-------------------|----------|----------------------|
| Proposal                                   | NL Section | Reviewer | Meeting     | Technical Review? | Vote     | Notes                |
| Omnivore diets (methionine)-discussion doc |            | TF/CW    | Fall 2012   |                   | 08 21 12 | Discussion document. |
| GMO Vaccines update                        |            | JR/NM    | Spring 2013 |                   | Yes      | TR accepted 3/21/12  |

\* Highlight indicates committee action needed

### **Agenda**

- Approve minutes from Sept 4 and Sept 18, 2012

### **Discussion:**

- Minutes from September 4 and September 18, 2012 approved with minor change to table above to note that Acidified Sodium Chlorite and Lignin Sulfonate responses were completed.
- A member asked about beef guidance docs and why they are not on the workplan. WF would like to finish these before her term is over in 2015.
- A member noted that the GMO Vaccines update should be listed at bottom of the table, not as a petitioned substance (change noted above).
- The group briefly discussed public comments regarding Nonanoic acid and omnivore diets. A member asked about integrated pest management for Livestock (versus crops) and how they differ, and whether or not there's an organic alternative.

**Future Scheduled Subcommittee Calls:**

November 6, 2012 3:00 EST

November 20, 2012 3:00 EST

| Milestone                                              | Deadline            |
|--------------------------------------------------------|---------------------|
| NOP - "Finalize" tentative agenda                      | August 10, 2012     |
| Fall 2012 proposals due to NOP                         | August 20, 2012     |
| NOP - Post proposals, Publish FRN, Open public comment | August 27, 2012     |
| Public comment closes                                  | September 24, 2012  |
| NOP - Send compiled public comments to NOSB            | October 1, 2012     |
| Fall 2012 NOSB Meeting – Providence, RI                | October 15-18, 2012 |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, November 6, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (2012 Chair, 2013 Vice chair) (WF), Colehour Bondera (CBo), Calvin Walker (CW), Jean Richardson (JR), Mac Stone (MS)

**Absent:** Nick Maravell (NM), Joe Dickson (2012 Vice Chair) (JD), Tracy Favre, 2013 Chair (TF)

**Staff:** Michelle Arsenault (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                  |                       |          |          |                                  |      |                                                                                                                                                                                      |
|---------------------------------------|-----------------------|----------|----------|----------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                  | National List Section | Reviewer | Meeting  | Technical Review requested (TR)? | Vote | Notes                                                                                                                                                                                |
| Pet Food Amino Acids proposal         | 205.603               | MS       | Spr 2013 | Yes                              |      | Petition sent to LS on 2/7. Petition sufficiency review. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12. Withdrawn at fall 2012 NOSB mtg |
| Methionine proposal                   | 205.603               | MS       | Spr 2013 | Yes                              |      | TR received 11/15. On hold                                                                                                                                                           |
| Aquaculture - Chlorine proposal       |                       | JD       | Spr 2013 |                                  |      | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 07 03 12                                                                                          |
| Aquaculture – Tocopherols             |                       | CW/CBo   | Spr 2013 | Yes                              |      | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested TR requested 08 06 12                                                         |
| Aquaculture – Vitamins proposal       |                       | CW       | Spr 2013 | Yes                              |      | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12                                               |
| Aquaculture - Trace Minerals Petition |                       | CW       | Spr 2013 | Yes                              |      | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12? Requested joint TR with Vitamins 08 06 12                                               |

| Petitioned Materials                         |            |          |           |                   |      |                                                                                                                                     |
|----------------------------------------------|------------|----------|-----------|-------------------|------|-------------------------------------------------------------------------------------------------------------------------------------|
| Aquaculture – Lignin sulfonate (feed binder) | 205.601    | CW/JD?   | Spr 2013  |                   |      | Petition sent to LC on 06/18/12. Petition found sufficient 9/18. TR requested on 9/18/12                                            |
| Acidified sodium chlorite (ASC)              | 205.603    | CW/JD?   | Fall 2013 |                   |      | Petition sent to LS on 06/12/12. Petition found sufficient 9/18. TR requested on 9/18/12                                            |
| Subcommittee Projects                        |            |          |           |                   |      |                                                                                                                                     |
| Proposal                                     | NL Section | Reviewer | Meeting   | Technical Review? | Vote | Notes                                                                                                                               |
| Omnivore diets (methionine)-proposal         |            | TF/CW    | Spr 2013  |                   |      |                                                                                                                                     |
| GMO Vaccines update                          |            | JR/NM    | Fall 2013 |                   |      | TR sent to LC on 6/23/11; Sufficiency response rec'd 10/26/2011; revised TR sent to LC 12/5/11; TR accepted as sufficient on 2/7/12 |

\* Highlight indicates committee action needed

#### Agenda:

- Approve notes from October 2 call
- Discuss work plan and who has the lead on each item
- Discuss schedule for discussion of workplan items

#### Discussion:

- Notes from October 2 call approved with no changes
- Workplan
  - o Pet Food Amino Acids proposal. The group will discuss this on Nov 20 call. Could potentially get pushed back
  - o Omnivore diets (methionine). The group deferred this item to the Nov 20 call, and will discuss how to proceed and whether or not a proposal is the next step.
  - o Methionine. The NOP finished the final rule this summer. This current petition requests to limit methionine over the lifetime of a bird so that methionine content in the diet could fluctuate based upon the needs of the birds. WF will work with MS on this item.

- o GMO vaccines Working Group has met and will be meeting again. They could have a document ready to discuss in January and potentially a report ready for the spring 2013 meeting.
- o A member suggested asking aquaculture experts to participate in future calls, and asked for updates even if the TRs are not ready for review. It's possible the aquaculture items might not be ready for the spring 2013 meeting. MS reviewed 2008 aquaculture recommendations, and would like to contact past members for background information, since the current Board does not have the institutional knowledge. MS will map out a plan and present it to the Subcommittee for further discussion.

**Future Call Schedule:**

November 20, 2012 3:00 EST

Pet Food Amino acids

Omnivore diets (methionine) - proposal

December 4, 2012 3:00 EST

Methionine proposal

December 18, 2012 3:00 EST

Aquaculture - Chlorine proposal (JD)

Aquaculture items/Aquaculture experts

January 9, 2013 3:00 EST

January 15, 2013 3:00 EST

February 5, 2013 3:00 EST

February 19, 2013 3:00 EST

March 5, 2013 3:00 EST

March 19, 2013 3:00 EST

| Milestone                                              | Target date       |
|--------------------------------------------------------|-------------------|
| NOP – Complete tentative agenda                        | February 8, 2013  |
| Spring 2013 proposals due to NOP                       | February 12, 2013 |
| NOP - Post proposals, Publish FRN, Open public comment | February 19, 2013 |
| Public comment closes                                  | March 19, 2013    |
| NOP - Send compiled public comments to NOSB            | March 25, 2013    |
| Spring 2013 NOSB Meeting – Portland, OR                | April 8-11, 2013  |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, November 20, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (2012 Chair, 2013 Vice chair) (WF), Jean Richardson (JR), Mac Stone (MS), Joe Dickson (2012 Vice Chair) (JD), Tracy Favre, 2013 Chair (TF), Calvin Walker (CW), Colehour Bondera (CBo)

**Absent:** Nick Maravell (NM), Scott Updike (SU) - NOP staff

**Staff:** Michelle Arsenault Advisory Board Specialist (ABS) (MA), Emily Brown Rosen (EBR)

**Workplan**

| Petitioned Materials                                        |                       |          |          |                                  |      |                                                                                                                                                                                                       |
|-------------------------------------------------------------|-----------------------|----------|----------|----------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                                        | National List Section | Reviewer | Meeting  | Technical Review requested (TR)? | Vote | Notes                                                                                                                                                                                                 |
| <a href="#">Amino Acids for Pet Food proposal</a>           | 205.603               | MS       | Spr 2013 | <a href="#">Yes</a>              |      | <a href="#">Petition sent to LS on 2/7/12.</a> Petition found sufficient. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12. Withdrawn at fall 2012 NOSB mtg |
| <a href="#">Methionine in organic poultry feed proposal</a> | 205.603               | MS       | Spr 2013 | <a href="#">Yes</a>              |      | TR received 11/15/11.                                                                                                                                                                                 |
| <a href="#">Aquaculture - Chlorine proposal</a>             | 205.609<br>205.611    | JD       | Spr 2013 | <a href="#">2006 TR</a>          |      | Petition sent to LS on 05/30/12. Petition found sufficient 07 03 12                                                                                                                                   |
| <a href="#">Aquaculture – Tocopherols</a>                   | 205.611               | CW/CBo   | Spr 2013 | Yes                              |      | Petition sent to LS on 05/30/12. Petition found sufficient 08 06 12. TR requested 08 06 12                                                                                                            |
| <a href="#">Aquaculture – Vitamins proposal</a>             | 205.611               | CW       | Spr 2013 | Yes                              |      | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12                                                                |
| <a href="#">Aquaculture - Trace Minerals Petition</a>       | 205.611               | CW       | Spr 2013 | Yes                              |      | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12? Requested joint TR with Vitamins 08 06 12                                                                |

| Petitioned Materials                                           |            |          |                       |                                                |      |                                                                                                                                                                           |
|----------------------------------------------------------------|------------|----------|-----------------------|------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Aquaculture – Lignin sulfonate (feed binder)</a>   | 205.601    | CW/JD?   | Spr 2013              | <a href="#">Feb 2011 TR</a> - Crops Yes        |      | Petition sent to LC on 06/18/12. Petition found sufficient 9/18. TR requested on 9/18/12                                                                                  |
| <a href="#">Sodium chlorite, Acidified (SCA)</a>               | 205.603    | CW/JD?   | Fall 2013             | <a href="#">2008 TR</a>                        |      | Petition sent to LS on 06/12/12. Petition found sufficient 9/18. TR requested on 9/18/12                                                                                  |
| Subcommittee Projects                                          |            |          |                       |                                                |      |                                                                                                                                                                           |
| Proposal                                                       | NL Section | Reviewer | Meeting               | Technical Review?                              | Vote | Notes                                                                                                                                                                     |
| Omnivore diets (methionine)-proposal                           |            | TF/CW    | Spr 2013              | <a href="#">Yes</a>                            |      | <a href="#">Disc doc from Fall 2012</a>                                                                                                                                   |
| Vaccines from Excluded Methods (GMO Vaccines fall 2012 update) |            | JR/NM    | Spr 2013<br>Fall 2013 | <a href="#">Yes</a> (revised and sent 12/5/11) |      | TR sent to LC on 6/23/11; Sufficiency response rec'd 10/26/2011; revised TR sent to LC 12/5/11; TR accepted as sufficient on 2/7/12<br><a href="#">Fall 2012 Proposal</a> |

\* Highlight indicates committee action needed

#### Agenda:

- Approve notes from November 6 call
- Pet Food Amino Acids Proposal (MS)
- Omnivore Diet --Summary of public comments. Proposal? (CW, TF)
- Other business?

#### Discussion:

- Notes from the November 6 call approved with no changes.
- Pet Food Amino Acids - MS reviewed nutrition panels on various products and feels that the research the Subcommittee has done thus far is comprehensive and sufficient, although MS noted he would edit the discussion section of the proposal to make it more succinct. The groups discussed the amino acids being petitioned and have concluded that they fail the essentiality question, and therefore are not necessary. Group will revote on this petition.
- Omnivore Diets. The Chair briefly summarized the public comment that was received, and the overwhelming majority of commenters indicated that they were in favor of non-synthetic methionine sources, and were against meat scraps and meat by-products. However there were no suggestions about next directions, and no science based comments. The Subcommittee discussed separating the



methionine component from the omnivore diet component in this document. A member asked a question about presenting a guidance document or position paper instead of a proposal, as the Compliance, Accreditation and Certification Subcommittee (CACS) did with the Biodiversity document, and the members agreed that would be a good idea. In support of that, CW will forward info that he has about natural methionine. The chair also asked for a list of the members for the Methionine task force group. ABS note: The list is included in the petition and was sent to the Subcommittee.

#### **Future Call Schedule:**

November 20, 2012 3:00 EST

Pet Food Amino acids

Omnivore diets (methionine) - proposal

December 4, 2012 3:00 EST

Methionine proposal

December 18, 2012 3:00 EST

Aquaculture - Chlorine proposal (JD)

Aquaculture items/Aquaculture experts

January 9, 2013 3:00 EST

January 15, 2013 3:00 EST

February 5, 2013 3:00 EST

February 19, 2013 3:00 EST

March 5, 2013 3:00 EST

March 19, 2013 3:00 EST

| Milestone                                              | Target date       |
|--------------------------------------------------------|-------------------|
| NOP – Complete tentative agenda                        | February 8, 2013  |
| Spring 2013 proposals due to NOP                       | February 12, 2013 |
| NOP - Post proposals, Publish FRN, Open public comment | February 19, 2013 |
| Public comment closes                                  | March 19, 2013    |

|                                             |                  |
|---------------------------------------------|------------------|
| NOP - Send compiled public comments to NOSB | March 25, 2013   |
| Spring 2013 NOSB Meeting – Portland, OR     | April 8-11, 2013 |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, December 4, 2012, 3:00pm EDT**

**Attending:** Wendy Fulwider (2012 Chair, 2013 Vice chair) (WF), Jean Richardson (JR), Mac Stone (MS), Calvin Walker (CW), Colehour Bondera (CBo), Nick Maravell (NM), Joe Dickson (2012 Vice Chair) (JD)

**Absent:** Tracy Favre, 2013 Chair (TF)

**Staff:** Michelle Arsenault - Advisory Board Specialist (ABS) (MA), Scott Updike (SU)

**Workplan**

| Petitioned Materials                                                                            |                       |          |          |                                     |      |                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------|-----------------------|----------|----------|-------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                                                                            | National List Section | Reviewer | Meeting  | Technical Review requested (TR)?    | Vote | Notes                                                                                                                                                                                 |
| <a href="#">Amino Acids for Pet Food proposal</a><br><br><a href="#">2012 Original Petition</a> | 205.603               | MS       | Spr 2013 | <a href="#">Yes</a>                 |      | Petition sent to LS on 2/7/12. Petition found sufficient. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12. Withdrawn at fall 2012 NOSB mtg |
| <a href="#">Methionine in organic poultry feed proposal</a>                                     | 205.603               | MS       | Spr 2013 | <a href="#">Yes</a>                 |      | TR received 11/15/11.                                                                                                                                                                 |
| <a href="#">Aquaculture - Chlorine proposal</a>                                                 | 205.609<br>205.611    | JD       | Spr 2013 | <a href="#">2006 TR</a>             |      | Petition sent to LS on 05/30/12. Petition found sufficient 07 03 12                                                                                                                   |
| <a href="#">Aquaculture – Tocopherols</a>                                                       | 205.611               | CW/CBo   | Spr 2013 | Yes<br><a href="#">1995 TAP rvw</a> |      | Petition sent to LS on 05/30/12. Petition found sufficient 08 06 12. TR requested 08 06 12                                                                                            |
| <a href="#">Aquaculture – Vitamins proposal</a>                                                 | 205.611               | CW       | Spr 2013 | Yes                                 |      | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12                                                |
| <a href="#">Aquaculture - Trace Minerals Petition</a>                                           | 205.611               | CW       | Spr 2013 | Yes                                 |      | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12? Requested joint TR with Vitamins 08 06 12                                                |

| Petitioned Materials                                           |            |          |                       |                                                |      |                                                                                                                                                                           |
|----------------------------------------------------------------|------------|----------|-----------------------|------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Aquaculture – Lignin sulfonate (feed binder)</a>   | 205.601    | CW/JD?   | Spr 2013              | Yes<br><a href="#">Feb 2011 TR</a> – (Crops)   |      | Petition sent to LC on 06/18/12. Petition found sufficient 9/18. TR requested on 9/18/12                                                                                  |
| <a href="#">Sodium chlorite, Acidified (SCA)</a>               | 205.603    | CW/JD?   | Fall 2013             | <a href="#">2008 TR</a>                        |      | Petition sent to LS on 06/12/12. Petition found sufficient 9/18. TR requested on 9/18/12                                                                                  |
| Subcommittee Projects                                          |            |          |                       |                                                |      |                                                                                                                                                                           |
| Proposal                                                       | NL Section | Reviewer | Meeting               | Technical Review?                              | Vote | Notes                                                                                                                                                                     |
| Omnivore diets (methionine)-proposal                           |            | TF/CW    | Spr 2013              | <a href="#">Yes</a>                            |      | <a href="#">Disc doc from Fall 2012</a>                                                                                                                                   |
| Vaccines from Excluded Methods (GMO Vaccines fall 2012 update) |            | JR/NM    | Spr 2013<br>Fall 2013 | <a href="#">Yes</a> (revised and sent 12/5/11) |      | TR sent to LC on 6/23/11; Sufficiency response rec'd 10/26/2011; revised TR sent to LC 12/5/11; TR accepted as sufficient on 2/7/12<br><a href="#">Fall 2012 Proposal</a> |

\* Highlight indicates committee action needed

#### Agenda:

- Approve notes from November 20 call
- Methionine petition
- Other business

#### Discussion:

- Notes from the November 20 call approved with no changes
- Methionine - The Petitioner is asking to increase the cap on methionine slightly and use the lifetime average methionine content over the life of the flock, because the methionine requirement is higher in younger birds than it is on older birds. If the NOSB approves this in spring 2013, then the current rates will be in effect until the final rule is implemented. JR noted that quantity of methionine might not be the only factor, and noted that there was some information about synthesis of methionine in sunlight. She will try to find this research and forward it to the group. In a subsequent email, JR stated she was unable to find any such research. The group discussed the issues around record keeping, which they felt might be difficult for small producers who have less detailed record keeping systems. MS has a list of questions to discuss with Jacquie Jacobs of the University of Kentucky. A member added that the NOSB should support a move away from synthetic methionine. Another member noted that most farmers add a higher protein diet to get the extra methionine

leading to wasted grain, which was mentioned in the petition, and the group discussed whether or not this was a viable alternative. The group will continue the conversation about methionine on next call.

- MS will look into inviting aquaculture experts to sit in on Livestock calls. CBo suggested that members of the Crops Subcommittee might be interested in hearing the experts as well.. The NOP suggested waiting until the group discusses the aquaculture - chlorine proposal on the next call. Based upon how that discussion goes, the subcommittee can develop a set of questions for the aquaculture experts.

#### **Future Call Schedule:**

November 20, 2012 3:00 EST

Pet Food Amino acids

Omnivore diets (methionine) - proposal

December 4, 2012 3:00 EST

Methionine proposal

December 18, 2012 3:00 EST

Methionine discussion continued...

Aquaculture - Chlorine proposal (JD)

Aquaculture items/Aquaculture experts

January 9, 2013 3:00 EST

January 15, 2013 3:00 EST

February 5, 2013 3:00 EST

February 19, 2013 3:00 EST

March 5, 2013 3:00 EST

March 19, 2013 3:00 EST

| Milestone                                              | Target date       |
|--------------------------------------------------------|-------------------|
| NOP – Complete tentative agenda                        | February 8, 2013  |
| Spring 2013 proposals due to NOP                       | February 12, 2013 |
| NOP - Post proposals, Publish FRN, Open public comment | February 19, 2013 |
| Public comment closes                                  | March 19, 2013    |

|                                             |                  |
|---------------------------------------------|------------------|
| NOP - Send compiled public comments to NOSB | March 25, 2013   |
| Spring 2013 NOSB Meeting – Portland, OR     | April 8-11, 2013 |

Note: Subcommittee notes may include preliminary discussions regarding substances considered for addition to or removal from the National List. They do not represent official National Organic Program (NOP) policy or regulations. Please see the NOP website for official NOP policy, regulations, and status of substances used in organic production and handling.

**National Organic Standards Board (NOSB)  
Livestock Subcommittee (LS) Meeting Notes  
Tuesday, December 18, 2012, 3:00pm EDT**

**Attending:** Tracy Favre, Chair (TF), Wendy Fulwider (WF) (Vice chair), Jean Richardson (JR), Mac Stone (MS), Calvin Walker (CW), Colehour Bondera (CBo), Nick Maravell (NM), Joe Dickson (JD)

**Absent:** none

**Staff:** Michelle Arsenault (MA) (Advisory Board Specialist (ABS)), Scott Updike (SU)

**Workplan**

| Petitioned Materials                                                                            |                       |          |          |                                                                                                                                                                                |      |                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------|-----------------------|----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                                                                            | National List Section | Reviewer | Meeting  | Technical Review requested (TR)?                                                                                                                                               | Vote | Notes                                                                                                                                                                                 |
| <a href="#">Amino Acids for Pet Food proposal</a><br><br><a href="#">2012 Original Petition</a> | 205.603               | MS       | Spr 2013 | <a href="#">Yes</a>                                                                                                                                                            |      | Petition sent to LS on 2/7/12. Petition found sufficient. TR forwarded to contractor 03 20 12. TR sent to LS 08 06 12. TR deemed sufficient 08 16 12. Withdrawn at fall 2012 NOSB mtg |
| <a href="#">Methionine in organic poultry feed proposal</a>                                     | 205.603               | MS       | Spr 2013 | <a href="#">Yes</a>                                                                                                                                                            |      | TR received 11/15/11.                                                                                                                                                                 |
| <a href="#">Aquaculture - Chlorine proposal</a>                                                 | 205.609<br>205.611    | JD       | Spr 2013 | No<br><a href="#">Crops 2011 TR</a><br><a href="#">Crops 2006 TR</a><br><a href="#">Crops 1995 TR</a><br><a href="#">Livestock 2006 TR</a><br><a href="#">Handling 2006 TR</a> |      | Petition sent to LS on 05/30/12. Petition found sufficient 07 03 12. No TR requested                                                                                                  |
| <a href="#">Aquaculture – Tocopherols</a>                                                       | 205.611               | CW/CBo   | Spr 2013 | Yes<br><a href="#">1995 TAP rvw</a>                                                                                                                                            |      | Petition sent to LS on 05/30/12. Petition found sufficient 08 06 12. TR requested 08 06 12                                                                                            |
| <a href="#">Aquaculture – Vitamins proposal</a>                                                 | 205.611               | CW       | Spr 2013 | Yes                                                                                                                                                                            |      | Petition sent to LS on 05/30/12. Response due ~07/30/12. Petition found sufficient 08 06 12. Requested joint TR with Minerals 08 06 12                                                |

| Petitioned Materials                                           |            |          |                       |                                                |      |                                                                                                                                                                           |
|----------------------------------------------------------------|------------|----------|-----------------------|------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#">Aquaculture - Trace Minerals Petition</a>          | 205.611    | CW       | Spr 2013              | Yes                                            |      | Petition sent to LS on 06/08/12. Response due ~08/08/12. Petition found sufficient 08 06 12? Requested joint TR with Vitamins 08 06 12                                    |
| <a href="#">Aquaculture – Lignin sulfonate (feed binder)</a>   | 205.601    | CW/JD?   | Spr 2013              | Yes<br><a href="#">Feb 2011 TR</a> – (Crops)   |      | Petition sent to LC on 06/18/12. Petition found sufficient 9/18. TR requested on 9/18/12                                                                                  |
| <a href="#">Sodium chlorite, Acidified (SCA)</a>               | 205.603    | CW/JD?   | Fall 2013             | <a href="#">2008 TR</a>                        |      | Petition sent to LS on 06/12/12. Petition found sufficient 9/18. TR requested on 9/18/12                                                                                  |
| Subcommittee Projects                                          |            |          |                       |                                                |      |                                                                                                                                                                           |
| Proposal                                                       | NL Section | Reviewer | Meeting               | Technical Review?                              | Vote | Notes                                                                                                                                                                     |
| Omnivore diets (methionine)-proposal                           |            | TF/CW    | Fall 2013             | <a href="#">Yes</a>                            |      | <a href="#">Disc doc from Fall 2012</a>                                                                                                                                   |
| Vaccines from Excluded Methods (GMO Vaccines fall 2012 update) |            | JR/NM    | Spr 2013<br>Fall 2013 | <a href="#">Yes</a> (revised and sent 12/5/11) |      | TR sent to LC on 6/23/11; Sufficiency response rec'd 10/26/2011; revised TR sent to LC 12/5/11; TR accepted as sufficient on 2/7/12<br><a href="#">Fall 2012 Proposal</a> |

\* Highlight indicates committee action needed

#### Agenda:

- Approve notes from December 4 call
- Aquaculture - Chlorine proposal (JD)
- Aquaculture items
- Discuss joint aquaculture meeting with Crops

#### Discussion:

- Notes from the December 4 call approved with no changes.
- Aquaculture items – The Chair updated the group about the aquaculture review. In support of the review, the NOP will hold a briefing webinar in early January, the Subcommittee will compile questions for the webinar/experts, and several aquaculture resource people will be asked to participate on calls so the group can identify gaps in knowledge and gather more information in an effort to move



forward. In support of this new timeline, the aquaculture materials will be grouped so a discussion document can be written and presented at the spring 2013 meeting, then the materials can be voted on individually at the fall 2013 meeting.

- Aquaculture - Chlorine proposal (JD) –Chlorine, which is ubiquitous as a disinfectant, is being petitioned for use in aquaculture. The NOSB has requested 5 TRs over last 10 years and feels these are sufficient to evaluate the material for use in aquaculture. Several questions were raised on the call and noted, and will be addressed to the experts during the webinar. i.e. Is there a difference in the interaction of chlorine with salt water versus fresh water, and why were fin-fish and shellfish lumped into one standard that a previous Board recommended. The subcommittee discussed the possibility of adding an annotation to this material about residuals not exceeding the standards of the safe-drinking water act. Two members offered resources to the group: transcripts from a Canadian aquaculture meeting and literature from Food and Water Watch. JD will compile the checklist and will distribute it for discussion on the January 9 call.
- The Subcommittee would like to invite several experts to sit in on calls to answer questions, including aquaculturists and environmentalists from such organizations as the National Organic Coalition (NOC) and Food and Water Watch. Other suggestions included Becky Goldberg who was a past NOSB member and is an aquaculturist, and Jim Pierce of the Wisconsin Aquaculture Association.
- MA will work on scheduling the webinar in early January.

#### **Future Call Schedule:**

November 20, 2012 3:00 EST

Pet Food Amino acids

Omnivore diets (methionine) - proposal

December 4, 2012 3:00 EST

Methionine proposal

December 18, 2012 3:00 EST

Methionine discussion continued...

Aquaculture - Chlorine proposal (JD)

Aquaculture items/Aquaculture experts

January 7, 2013 2:00 pm EST - Aquaculture briefing

January 9, 2013 3:00 EST

Discuss Chlorine checklist

Update on Canadian organic aquaculture transcripts

Discuss Methionine update

Pet Food Amino Acids

January 15, 2013 3:00 EST

February 5, 2013 3:00 EST

February 19, 2013 3:00 EST

March 5, 2013 3:00 EST

March 19, 2013 3:00 EST

| Spring 2013 Milestones                                 | Target date       |
|--------------------------------------------------------|-------------------|
| NOP – Complete tentative agenda                        | February 8, 2013  |
| Spring 2013 proposals due to NOP                       | February 12, 2013 |
| NOP - Post proposals, Publish FRN, Open public comment | February 19, 2013 |
| Subcommittees submit tentative workplans to NOP        | March 1, 2013     |
| Discuss workplans on ES call                           | March 8, 2013     |
| NOP provides written comments on workplans to NOSB     | March 11, 2013    |
| Public comment closes                                  | March 19, 2013    |
| NOP - Send compiled public comments to NOSB            | March 25, 2013    |
| Workplans finalized on ES call                         | March 29, 2013    |
| Spring 2013 NOSB Meeting – Portland, OR                | April 8-11, 2013  |