

**National Organic Standards Board Livestock Committee**  
**Recommendation on Livestock Feed Ingredients**  
**April 11, 2002**

Note: All substances allowed as feed ingredients in organic livestock production must be labeled, handled, and fed to animals in compliance with all applicable Food and Drug Administration (FDA) or Association of American Feed Control Officials (AAFCO) regulations.

**I**     *Regulatory basis for synthetic vitamins and minerals*

Issue: Under Section 205.238(a)(2) of the livestock health care practice standard, a producer is required to provide livestock with a feed ration including vitamins and minerals sufficient to meet the animals' nutritional requirements. Section 205.237(a) of the livestock feed practice standard identifies three types of allowed feed ingredients: organically produced agricultural products; natural, nonagricultural substances; and synthetic substances included on the National List. Sections 205.603(d)(1) and (2) of the USDA standard allow a producer to meet livestock nutritional requirements by augmenting the feed ration with synthetic vitamins and minerals for "enrichment and fortification when FDA approved".

There are two separate processes that could be construed as providing FDA approval for vitamins and minerals in livestock feed. Under the first process, the FDA identifies allowed feed additives by publishing them in the applicable section of the Code of Federal Regulation (CFR) including 21 CFR Part 573, Food Additives Permitted in Feed and Drinking Water of Animals, and 21 CFR Part 582, Substances Generally Recognized as Safe. The second process results from the sharing of regulatory authority for livestock feed ingredients between individual states and the FDA. Acting collectively as AAFCO, states have established procedures to authorize the use of certain feed ingredients not published in the CFR. Under this process, AAFCO submits material on the proposed ingredient to FDA. If the FDA expresses no objection to its use but indicates that it will not move to add it to the CFR, AAFCO can include the ingredient in its annual Official Publication. Adding a feed ingredient to the Official Publication authorizes use of that substance in states that adopt the Official Publication as their state feed labeling law. Feed ingredients that are included in the Official Publication but not in the CFR are considered allowed by discretion of the FDA. The Official Publication identifies allowed sources of mineral in Section 57, Mineral Products and vitamins in Section 90, Vitamins.

Recommendation: The NOSB continues to support an allowance for specific synthetic vitamins and minerals as warranted by the conditions and circumstances specified in an approved organic system plan. Synthetic supplements should not be used as a substitute for a balanced feed ration including access to pasture for ruminants and exposure to direct sunlight for all livestock. Furthermore, Section 2115(c)(1)(B)(ii) of the Organic Foods Production Act (OFPA) requires that a synthetic substance only be allowed when a wholly natural substitute product is not available. The importance of organically produced agricultural products and direct sunlight in organic livestock production and the availability of many natural sources of vitamins and minerals dictate that the allowance for synthetic forms of these nutrients should be carefully



proscribed. At this time, the NOSB recommends that the allowance for synthetic vitamins and minerals contained in Sections 205.603(d)(1) and (2) include materials either listed for such use in the CFR or in Sections 57 or 90 of the AAFCO Official Publication. The only exception to this allowance are those ingredients in the Official Publication Section 57, Mineral Products that are derived from mammalian and poultry slaughter by-products and therefore prohibited under Section 205.237(b)(5). These ingredients are definitions 57.1 (Bone Ash); 57.2 (Bone charcoal); 57.14 (Bone Phosphate); 57.17 (Bone Charcoal, Spent); 57.18 (Bone Meal, Steamed); and 57.141 (Bone Meal, Cooked). The NOSB anticipates that additional synthetic and possibly natural sources of vitamins and minerals from the CFR or in Sections 57 or 90 of the AAFCO Official Publication may not meet the OFPA's criteria for suitability in organic livestock production. For example, Section 2110(c)(2)(C) of the OFPA specifically prohibits urea in livestock feed and other source of synthetic nitrogen may also prove objectionable. The NOSB recommends that a Technical Advisory Panel (TAP) be convened to provide a comprehensive review of all natural and synthetic vitamins and minerals from the CFR and the Official Publication for their suitability in organic livestock production. In the interim, the NOSB recommends that a producer and certifying agent consider the availability of natural forms of vitamins and minerals before allowing synthetic forms when supplementation of organically produced agricultural products is deemed necessary.

## **II *Incidental Additives in Livestock Feed Additives and Supplements***

**Issue:** Livestock feed ingredients and formulated feed products containing nonsynthetic and allowed synthetic ingredients such as vitamins, minerals, and probiotics may incorporate several additional types of substances including incidental additives and carriers. Incidental additives have no technical or functional effect in the feed and are exempt from being included on the feed's ingredient list by 21 CFR Part 570.100(a)(3). The AAFCO Official Publication defines "carrier" as "an edible material to which ingredients are added to facilitate uniform incorporation of the latter into feeds. The active particles are absorbed, impregnated or coated into or onto the edible material in such a way as to physically carry the active ingredient." Incidental additives and carriers may be derived from agricultural products including corn, soy and wheat.

**Recommendation:** The NOSB recommends that the NOP not establish requirements for substances used as incidental additives in livestock feed ingredients. Under the CFR definition, incidental additives are present at insignificant levels and do not have any technical or functional effect in the feed. The NOSB recommends that carriers added to a feed ration and therefore identified on the ingredient list must be reviewed under the requirements in Section 205.237. Given that the NOSB recommends that a carrier must comply with all applicable provisions of the livestock feed practice standard, this recommendation does not limit specifically limit the percentage of a carrier or carriers included in feed ingredients or formulated feed products.

## **III *Preservatives in Formulated Feed and Feed Ingredients***

**Issue:** A variety of natural and synthetic substances may be used as preservatives with feed ingredients and formulated feeds. These materials are identified in the several sections of the

CFR and in the AAFCO Official Publication under Section 18, Chemical Preservatives. Implementation of the final rule will require additional guidance on adding preservatives to livestock feed in organic production.

Recommendation: The NOSB recommends that ingredients used as feed preservatives be addressed on a case by case basis under the standard provisions for regulating material use in organic livestock production. Natural preservatives such as citric acid are allowed unless prohibited and synthetic substances are prohibited unless allowed. Individuals may petition the NOSB to allow any of the synthetic feed preservatives included in Section 18.

NOTE: Incorporating recommendation #7 from this memo would create an allowance for ascorbic acid and tocopherols as preservatives in livestock feed because the NOSB has already voted to allow these synthetic nonagricultural materials in human food.

#### **IV *Definition of mammalian and poultry slaughter by-products***

Issue: Section 205.237(b)(5) of the final rule states that an organic livestock producer must not feed mammalian or poultry slaughter by-products to mammals or poultry. Since a wide variety of materials used in livestock feed may be derived from animals, implementation of the final rule will require additional guidance on the definition of “mammalian and poultry slaughter by-products”.

Recommendation: The NOSB defines “mammalian or poultry slaughter by-products” to include the following AAFCO feed ingredient definitions:

Official Publication Section 9, Animal Products, inclusive of all existing and tentative definitions.

Official Publication Section 33, Fats and Oils, definitions 33.1 Animal Fat; 33.3 Hydrolyzed \_\_\_\_\_ Fat , or Oil, Feed Grade (if from animals); 33.4 \_\_\_\_\_ Ester \_\_\_\_\_, feed Grade (if from animals); 33.5 Fat Product, Feed Grade (if from animals); 33.15 Hydrolyzed \_\_\_\_\_ Sucrose Polyesters, Feed Grade (if from animals).

Official Publication Section 57, Mineral Products, definitions 57.1 (Bone Ash); 57.2 (Bone charcoal); 57.14 (Bone Phosphate); 57.17 (Bone Charcoal, Spent); 57.18 (Bone Meal, Steamed); 57.141 (Bone Meal, Cooked).

The NOSB is currently considering a Technical Advisory Panel (TAP) review on gelatin in processed products labeled as “organic” or “made with organic (specified ingredients or food group(s))”. The outcome of this TAP review will substantively affect the status of gelatin as a feed ingredient in organic livestock production. The NOSB will not take a position on including gelatin in the definition of “mammalian or poultry slaughter by-products” pending the outcome of the existing TAP process.

#### **V *Enzymes as Feed Ingredients***

Issue: In 1999, the NOSB recommended that enzymes produced from nonpathogenic sources without the use of excluded methods were natural and allowed in livestock feed.

Recommendation: The NOSB recognizes the feed ingredients contained in the Section 30 of the AAFCO Official Publication (Enzymes) as allowed nonsynthetic feed additive, provided that they are not derived from excluded methods. The NOSB does not consider the substrate material used to produce the enzyme as part of the feed ingredient provided that non-organic materials used in the substrate are consumed during production and are not present in the final product.

## **VI *Probiotics as Feed Ingredients***

Issue: In 1995, the NOSB recommended that probiotics added to livestock feed are nonsynthetic substances and therefore allowed unless specifically prohibited. The term “probiotics” was applied generically and cannot be linked to a specific category of allowed feed ingredient. AAFCO uses the term “direct-fed microorganism” to refer to this category of materials.

Recommendation: The NOSB recommends the feed ingredients contained in the Section 36.14 of the AAFCO Official Publication (Direct Fed Microorganisms) as allowed nonsynthetic feed additives, provided that they are not derived from excluded methods. The NOSB does not consider the substrate material used to produce the probiotic as part of the feed ingredient provided that non-organic materials used in the substrate are consumed during production and are not present in the final product..

## **VII *Synthetic nonagricultural substances ingredients allowed as feed additives***

Issue: In 2000, the NOSB recommended that unless otherwise specified in the annotation, any substance on the National List of nonagricultural substances allowed in processed foods labeled as organic (Section 205.605(b) of the final rule) should be allowed for use in livestock feed, provided that its use was sanctioned by FDA or AAFCO. This recommendation would allow numerous substances including lecithin, citric acid, and tocopherols that the NOSB has voted to allow in human food to be used in the feed ration of organically managed livestock in compliance with any FDA or AAFCO use restrictions. This recommendation would apply to substances that are either CFR listed as feed ingredients or else included in the AAFCO Official Publication.

Recommendation: The NOSB reiterates its recommendation that any substance on the National List of nonagricultural substances allowed in processed foods labeled as organic (Section 205.605(b) of the final rule) should be allowed for use in livestock feed, provided that its use is sanctioned by FDA or AAFCO. Nonsynthetic nonagricultural substances identified in Section 205.605(a) of the final rule as allowed ingredients in human food are already allowed for use in livestock feed in accordance with any FDA or AAFCO use restrictions based on Section 205.237(a).