Introduction
Issues:
- Fishmeal can be a valuable source of protein and specific amino acids.
- Fishmeal is nonsynthetic.
- There is confusion about when a natural substance becomes a synthetic.
- Fishmeal is highly perishable and so usually contains preservatives many of which are synthetic substances and therefore not approved for organic livestock production, according to §205.105(a) and §205.603.
- OFPA 6517(c)(1)(A)(i) allows for the use of a substance if it “would not be harmful to human health or the environment.” Conventional fishmeal can be produced from fish harvested unsustainably and which may contain contaminants such as heavy metals, PCB's, dioxins, and pesticide residues.
- Organic Fishmeal will not be available unless standards for Wild Caught Organic Fish and/or Organic Aquaculture are developed.
- There remains confusion as to when a feed supplement or additive becomes a feed. §205.237(a) requires the use of organic feed, but allows the use of nonsynthetic substances and substances on §205.603 as feed additives and supplements. The definitions of “feed,” “feed additive,” and “feed supplement” do not provide definitive guidance as to the types of nutrients (carbohydrates, proteins, fats, amino acids, vitamins, or minerals) that are considered under each, nor do they establish limits on quantities allowed in organic feed rations.

Background
Previous Recommendations:
- NOSB 1994 Livestock Feed Standard Recommendation stated,
  - “A.1. Feed Supplements fed to livestock directly or as a supplement to feed rations shall be certified organically produced.
  - B.1. Natural feed additives shall be from any source, provided the additive is not classified as a Prohibited Natural on the National List.”
- NOP stated in the Second Proposed Rule, Federal Register 13589-90, March 13, 2000: "Synthetic nonactive ingredients in formulated products used as production inputs, including fertilizers, animal drugs, and feeds, must be included the National List. … As sanctioned by OFPA, synthetic substances can be used in organic production as long as they appear on the National List."
- §205.105(a) states, “To be sold or labeled as “100 percent organic,” “organic,” or “made with organic (specified ingredients or food group(s)),” the product must be produced and handled without the use of:
  (a) Synthetic substances and ingredients, except as provided in § 205.601 or § 205.603;”
- §205.237(a) states, “The producer of an organic livestock operation must provide livestock with a total feed ration composed of agricultural products, including pasture and forage, that are organically produced and, if applicable, organically handled: Except, That, nonsynthetic substances and synthetic substances allowed under § 205.603 may be used as feed additives and supplements.”
- §205.237(b)(2) and (6) state, “The producer of an organic operation must not:
(2) Provide feed supplements or additives in amounts above those needed for adequate nutrition and health maintenance for the species at its specific stage of life; or

(6) Use feed, feed additives, and feed supplements in violation of the Federal Food, Drug, and Cosmetic Act.”

§205.238(a)(2) states “The producer must establish and maintain preventive livestock health care practices, including:

(2) Provision of a feed ration sufficient to meet nutritional requirements, including vitamins, minerals, protein and/or amino acids, fatty acids, energy sources, and fiber (ruminants);”

**OFPA 6517**

(c) Guidelines for Prohibitions or Exemptions.

(1) Exemption for Prohibited Substances. The National List may provide for the use of substances in an organic farming or handling operation that are otherwise prohibited under this chapter only if

(A) the Secretary determines, in consultation with the Secretary of Health and Human Services and the Administrator of the Environmental Protection Agency, that the use of such substances

(i) would not be harmful to human health or the environment

**Definitions**

**NOP Final Rule**

Feed. Edible materials which are consumed by livestock for their nutritional value. Feed may be concentrates (grains) or roughages (hay, silage, fodder). The term, "feed," encompasses all agricultural commodities, including pasture ingested by livestock for nutritional purposes.

Feed additive. A substance added to feed in micro quantities to fulfill a specific nutritional need; i.e., essential nutrients in the form of amino acids, vitamins, and minerals.

Feed Supplement. A combination of feed nutrients added to livestock feed to improve the nutrient balance or performance of the total ration and intended to be:

(1) Diluted with other feeds when fed to livestock;

(2) Offered free choice with other parts of the ration if separately available; or

(3) Further diluted and mixed to produce a complete feed.

Synthetic. A substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral sources, except that such term shall not apply to substances created by naturally occurring biological processes. (Identical to OFPA definition.)

Nonsynthetic (natural). A substance that is derived from mineral, plant, or animal matter and does not undergo a synthetic process as defined in section 6502(21) of the Act (7 U.S.C. 6502(21)). For the purposes of this part, nonsynthetic is used as a synonym for natural as the term is used in the Act. (Nonsynthetic (natural) not defined in OFPA.)

**Association of American Feed Control Officials (AAFCO)**

Natural: A feed or ingredient derived solely from plant, animal, or mineral sources, either in its unprocessed state or having been subject to physical processing, heat processing, rendering, purification, extraction, hydrolysis, enzymolysis or fermentation, but not having been produced by or subject to a chemically synthetic process and not containing any additives or processing aids that are chemically synthetic except in amounts as might occur unavoidably in good manufacturing practices.

**Association of American Plant Food Control Officials (AAPFCO)**

Natural Organic Fertilizer: Materials derived from either plant or animal products containing one or more elements (other than carbon, hydrogen and oxygen) which are essential for plant growth. These materials may be subjected to biological degradation processes under normal conditions of aging, rainfall, sun curing, air-drying, composting, rotting, enzymatic, or anaerobic/aerobic bacterial action, or any combination of these. These materials shall not be mixed with synthetic materials or changed in any
physical or chemical manner from their initial state except by manipulations such as drying, cooking, chopping, grinding, shredding, hydrolysis, or pelleting. (Definition T-13; AAPFCO 2002)

NOP Directive
- In an August 1, 2003 letter, the NOP classified fishmeal as a Nonsynthetic Feed Supplement allowed in an organic livestock feed ration.
- The April 13, 2004 Guidance Statement also classified fishmeal as a Feed Supplement allowed in an organic livestock ration that must comply with Food, Drug and Cosmetic Act requirements. FDCA allows for the use of preservatives and other substances not on the National List.

Recommendation:
- The NOSB Livestock Committee believes that fishmeal is nonsynthetic.
- The NOSB Livestock Committee finds that fishmeal preserved with natural substances and that “would not be harmful to human health or the environment” should be allowed as a Feed Additive or Feed Supplement for organic production, in accordance with §205.237(a), §205.237(b)(2) and §205.238(a)(2).
- The use of fishmeal must comply with all applicable requirements of the Federal Food, Drug, and Cosmetic Act, as required by §205.237(b)(6).
- Nonsynthetic (natural) preservative ingredients are allowed in fishmeal used in organic production.
- Synthetic preservative ingredients used in fishmeal must be petitioned, reviewed, and placed on the National List in order to be allowed, according to §205.105(a).

Related issues for future work:
- The status of fishmeal for use in organic aquaculture will be considered during the development of NOP aquaculture standards. Issues including sustainability of fisheries exploited for fishmeal production and possible heavy metal, PCB, dioxin, and pesticide contaminants in fishmeal should be addressed during the development of aquaculture standards.
- If NOP standards and definitions are developed for the production of organic fishmeal, then organic fishmeal must be used as a Feed, Feed Supplement, or Feed Additive for any organic livestock, in accordance with §205.237(a), which requires the use of organic feed.
- A clear predictable policy needs to be developed concerning when incidental substances in livestock and crop production materials make an otherwise natural substance a synthetic
- To help clarify the distinction between natural and synthetic substances, the Livestock Committee recommends that the current definition of “nonsynthetic (natural)” in the Final Rule be revised. The AAFCO definition of “natural” and the AAPFCO definition of “natural organic” fertilizers should be considered in the revision process.
- To clarify the differences between “feed,” “feed additives,” and “feed supplements,” the NOP and NOSB should provide guidance concerning the types of nutrients (carbohydrates, proteins, fats, amino acids, vitamins, or minerals) allowed in each category and if there should be limits set on the quantities of nonorganic feed additives or supplements allowed in organic feed rations.

Committee vote: 5 Yes, 0 No, 1 Absent

NOSB vote October 13, 2004
Motion to consider the NOSB Livestock Committee directive for fish meal and forward for posting as amended:

11 Yes; 0 No; Abstain 1; Absent 2