National Organic Standards Board
Livestock Subcommittee
Discussion Document:Omnivore Diets

August 21, 2012

I. Introduction

The National Organic Standards Board (NOSB) Livestock Subcommittee (LS) seeks the organic community's discussion on the framework for natural omnivore diet materials, production, manufacturing, and commercial availability. Pigs, chickens, and turkeys are omnivores. These omnivores eat primarily both plants and non-plant (meat) materials. Cattle, sheep, rabbits, and bison are herbivores. As herbivores, they eat primarily plant materials. The LS views the natural behavior of chickens, turkeys, and pigs to be omnivorous. Therefore, the LS is considering the options of providing both plants and animal materials that are compatible with organic principles, production practices, and that allow omnivores their natural diet of plant and animal materials rather than feeding an unnatural herbivore diet. The LS is seeking stakeholder input on the issue of an omnivorous diet for organically raised omnivores.

II. Background

Chickens, turkeys, and pigs are omnivores. Omnivores, by nature, eat plant and non-plant materials. Organic production practices require that poultry and pigs be reared outdoors and on the soil. Because of this requirement, poultry and pigs should already be consuming plant and animal materials. These materials may include (1) grass and other plants, (2) insects and other invertebrates, (3) carrion, (4) vegetables, (5) fish or meat materials naturally, (6) herbs, (7) fruits, and (8) berries, nuts, and whatever else they find to eat. By foraging, the animals are performing their natural behavior in consuming a diverse diet that includes non-plant life.

Practical poultry and swine diets fed for normal growth, maintenance, production, and reproduction require essential amino acids, minerals, vitamins, and possibly fatty acid supplementation. As the organic community moves toward reducing or removing synthetic supplements in omnivore diets, a real need exists for organic omnivore producers to provide or be provided options for supplying the essential nutrients to these omnivores. Essential nutrients are needed in poultry and pig diets due to their inability to manufacture certain nutrients in adequate amounts for maintenance, growth, reproduction, and production. While some organic practices, including access to bio-diverse healthy pastures may provide some of these nutrients, supplementation may still be required. A case in point is methionine, an essential amino acid for poultry and pigs. Methionine comes in natural and synthetic forms. Methionine is naturally present in all feedstuffs with protein; however, the amount of methionine present varies among the various feedstuffs. Natural sources of methionine are corn gluten meal, crab meal, fishmeal, blood meal, alfalfa meal, and sunflower meal according to the NOP, (2012), Methionine Task Force, 2011, and NOP Technical Review of Methionine, 2011. There

is at least one company that market sea kelp which is claimed to replace synthetic methionine There is an organic feed mill which manufactures a soy free feed mix using fishmeal for providing sufficient amino acids(methionine, lysine, etc.), mineral, vitamins (Favre, 2012). However, the mill manufactures medium to small formulations, primarily for small or hobby poultry producers. The cost and availability at a commercial level may be prohibitive. As it relates to fish meal, there seems to be an inadequate supply of fish meal with no synthetic preservatives added that would make fishmeal a possible 1:1 replacement for synthetic methionine. There is interest in developing a natural source for methionine through extraction, fermentation or hydrolyzing protein, but at present, none of these processes currently provide a commercially viable alternative to synthetic methionine. (Fanatico, 2010). There is a potential herbal methionine on the market in India that might have applicability in the United States. Research results are promising and mixed. (Walker, 2012). Chattopadhyay, 2006 and Halder, G., and Roy, 2007 reports a 1:1 replacement for synthetic methionine with herbal methionine in broiler rations. However, Salome, et.al. 2010 reported inferior results. The difference could be due to herbal ingredients in the natural methionine product. Salome, et. al. 2010 suggested that the methionine requirement of broilers could be met by the supplementation of DL-Methionine and the use of animal protein sources.

Synthetic methionine was first petitioned in 1995, with technical reviews in 1996, 1999, 2001, and 2011. Currently, synthetic methionine is allowed in poultry diets at a maximum level of 4 pounds per ton of feed for layers, 5 pounds for broilers, and 6 pounds for other poultry. From October 2, 2012 to October 1, 2017, the step-down rate will be 2 pounds for layers, 2 pounds for broilers, and 3 pounds for other poultry. Methionine will be up for a sunset review prior to 2017 and a new petition by the Methionine Working Group (MWG) has been submitted. Therefore, the LS is seeking to advise and assist in increasing the dialogue in the organic community on possible approaches to obtaining viable and commercially available natural methionine alternatives for poultry before the October 31, 2017 sunset date for synthetic methionine.

Meat by-products and fish meals are good natural sources of essential minerals and vitamins. LS solicits our stakeholder input on possible ways to reduce synthetic nutrients (minerals, vitamins, and amino acids, etc.) in organic livestock rations by organic omnivore producers regardless to scale and type of operation. Significant work has been done on alternatives to synthetic methionine; yet more effort is still required. Time is of the essence. We believe that the current work into researching natural forms of methionine is encouraging. However, it needs to be accelerated. It could be that not one, but multiple organic practices may be required in order to provide a viable alternative to synthetic methionine.

III. Relevant Areas of the Rule

Relevant areas of the rules are briefly stated in this section. At Section 2110(3) of the Organic Foods Production act (OFPA) it reads, "…. no use of growth promoters and hormones on such livestock, whether implanted, ingested, or injected, including antibiotics and synthetic trace elements used to stimulate growth or production of such livestock." The National Organic Program regulatory text at § 205.239 (a) states, "the producer of an organic livestock operation must establish and maintain livestock living conditions which accommodate the health and ***natural behavior of animals***." The rule at §205.239(a) (1) further asserts that "access to the outdoors, shade, shelter, exercise areas, fresh air, and the environment are required." At §205.238(a)(2), it reads, "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)" is required.

At § 205.237 Livestock feed.

(a) 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, non-synthetic substances and synthetic substances allowed under §205.603 may be used as feed additives and supplements, (b) the producer of an organic operation must not: (1) use animal drugs, including hormones, to promote growth; (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; (3) feed plastic pellets for roughage; (4) Feed formulas containing urea or manure;
(5) feed mammalian or poultry slaughter by-products to mammals or poultry; or (6) use feed, feed additives, and feed supplements in violation of the Federal Food, Drug, and Cosmetic Act.(OFPA, 2002).

IV. Discussion

Prior to the 1950's poultry and pigs were fed a plant and meat based diet without synthetic amino acids such as methionine. One former NOSB member stated, "we have seemingly made vegetarians out of poultry and pigs" in §205.237(5) (b). As the organic community moves toward reducing or removing synthetic nutrients in the diets of poultry, a heightened need exists for the organic community to rally around omnivore producers to marshal our collective efforts in finding viable alternatives to synthetic methionine, and to help find approaches for making them more commercially available. The approaches need to be compatible with (1) omnivore natural behavior and food sources, (2) organic principles, and (3) good organic omnivore management practices.

To enhance our ability to consider and incorporate public comment into our decision-making process, the LS is seeking public input on this topic as a means of addressing this important concern. In particular, the LS seeks input regarding solutions to low supply of materials, commercial availability, approaches for providing a greater opportunity for the expression of an animal's natural behavior and providing a path for nutritional management of omnivores as omnivores rather than feeding a natural omnivore as a vegetarian or herbivore.

V. Discussion Questions Request from Stakeholders

The LS is seeking the public's perspective on the questions below. (Please indicate the question number in responses provided to these questions below.)

1. Would you recommend the LS look at a possible annotation to allow 100% organic meat scraps or by-products to be used in omnivore diets (poultry and pigs), since it is natural for these omnivores to consume both plant and animals materials? Explain.
2. Natural herbal methionine, potato meal, and corn gluten meal are showing promising results. Should this type of research effort increase? Explain.
3. There is a natural herbal methionine manufacturer in India that touts their product as being a 1:1 replacement for synthetic methionine. How can this product be brought to commercial availability/viability within the next three years in the United States?
4. How can the organic community spur more production and manufacturing of natural amino acids, including methionine and lysine, vitamins, and minerals products for livestock and aquaculture rations in the next three to five years?
5. While the FDA regulates the safety of meat/slaughter by-products, what additional organic regulations or safeguards should be in place before organic livestock producers feed mammalian or avian slaughter by-products to their omnivore livestock?
6. Would the organic brand be damaged if organic livestock producers were given the choice of feeding organic animal by-products and naturally or organically harvested fish by-products? Explain.
7. Would a rule change at §205.237(5) (b) to allow the feeding of organic meat offal or by-products to omnivores be appropriate to help fulfill the essential amino acids, vitamins, and minerals requirement? If yes, state the language you would use. If no, offer viable suggestions to dealing with the absence of synthetic amino acids in omnivore rations.

VII. References

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VIII. Summary

Poultry and pigs are omnivores and naturally eat plant, animal, and non-animal materials. Yet in organic livestock production, they are fed as vegetarians and herbivores. Maybe it is time to feed organic materials that are of both plant and animal origin.

IX. Committee Vote:

Moved: Tracy Favre Second: Jean Richardson

Yes: 8 No: 0 Abstain: 0 Absent: 0 Recusals: 0