

PACIFIC NUTRITION-CONSULTING

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Kim Burton, Chairperson
NOSB Materials List Committee
Washington DC

Subject: Comments on Proteinated Chelates petitions to Materials List

Dear Ms. Burton,

I am a private consulting dairy nutritionist, working mostly in California. I have worked with organic dairy farms for over 10 years and work with nearly 1,000 dairy cows under certified-organic production.

I am submitting this letter as public comment regarding the issue of the petition for proteinated chelates being added to the national materials list.

Initially, I was very concerned that the term, proteinated chelates, would cause confusion in the TAP review process since proteinated chelates do not really exist. After reading the TAP review "Proteinated and Chelated Mineral Complexes: Livestock", it is clear that there was a satisfactory understanding of the differences between mineral-amino acid complexes and mineral proteinates from a chemical point of view. However, the actual use of these products in the livestock feed marketplace did not appear to be well understood.

First, the supplementation of chelated minerals has been shown to improve animal health and immunity, reduce mastitis, improve foot horn integrity, and improve reproduction. Improving the animal's health and disease resistance should improve animal performance thereby the animal grows faster or produces more product, in the case of the lactating dairy cow that would be milk.

I do not believe that it is fair or reasonable to relate those improvements in animal performance from improved immunity and better locomotion to a growth promoter type of response. It is less a matter of promotion as it is an issue of getting out of the way of possible and normally reasonable performance.

Second, research has shown that chelated minerals improve digestion in the gut, and retention in the animal of those minerals that were chelated. Therefore, the supplementation of mineral chelates could actually reduce the amount of the mineral

needing to be supplemented to the animal, reduce the overflow excretion of the mineral through the feces, and result in less filtering-out of the mineral through the kidney into the urine. Therefore, allowing *the supplementation of mineral chelates should actually be considered beneficial for the environment.*

Third, the issue of supplementation of amino acids impacts significantly on some but not all of the categories of mineral chelates regarding inclusion on the national list. It seems that the supplementation of amino acids has become boiled-down to simply a matter of the synthetic/nonsynthetic question. However, there seems to be language in the rule and supporting documents that amino acids could just as well not be included in the synthetic/nonsynthetic question if that were the desire of the committee.

Another point of view would be that mineral chelates and complexes are addressed in AAFCO in a totally separate section than amino acid supplements. It would seem reasonable that the animal health and environmental benefits of chelated minerals would offset the concern for the small amounts of synthetic amino acids that may be included in the livestock animal's diet. The high cost of chelated minerals versus inorganic mineral forms minimizes the risk that these products would be overfed to supplement additional amounts of the amino acid. Annotations limiting the feeding of mineral chelates to a portion of the mineral requirement in the animal could prevent this problem from occurring.

If mineral complexes were to be prohibited based on the presence of potentially synthetic amino acids then the following categories of mineral complexes would need to be prohibited from inclusion in the national organic list: metal (specific amino acid) complexes, metal amino acid complexes, and metal amino acid chelates.

However, metal proteinates and metal polysaccharide complexes should not be prohibited, simply because of their association with the other complexes, since they do not typically include synthetic amino acids.

Metal proteinates are minerals complexed to hydrolyzed protein fractions typically derived from soy protein. These proteins would be natural and while organic certification may not be feasible regarding these proteins, the requirement of non-GMO status of this material would be reasonable. *Allowing for this type of supplementation would support the animal health and environmental benefits from supplementation of metal chelates while maintaining the prohibition on synthetic substances.*

Metal polysaccharide complexes could be approved depending on the GMO status and manufacturing procedures of the polysaccharide mixture. I believe they should be allowed and the burden left on the marketplace to satisfy both of those requirements on a product-by-product basis.

Finally, the matter of carrier needs to be revisited regarding these products. These products are typically fed to the animal in very small amounts. However, to make the products more user-friendly in the mixing process many of these individual products (i.e.

zinc methionine) are either combined, added to a carrier, or both. However these complexes are included in the national list, assurance would need to be required by the manufactures that the carriers adhere to organic regulations regarding such.

In conclusion, I highly encourage and support the inclusion of all forms of proteinated and chelated mineral complexes to be allowed on the national list on the basis of improved animal health and benefits to the environment. If the committee decides that the amino acid issue is overriding in this matter, then I support the inclusion of metal proteinates and metal polysaccharide complexes with annotations regarding non-GMO status and manufacturing techniques. In the case of all included items, carriers in the marketed products need to meet organic rules regarding that matter.

Thank you for your time and attention regarding this matter.

Sincerely,

Daniel G. Giacomini, MS, PAS