



April 14, 2009

California Air Resources Board
Byron Sher Auditorium
1001 I Street
Sacramento CA 95814

Gentlemen;

I am writing in response to the Staff Report: "Initial statement of reasons proposed regulation to implement the low carbon fuel standard, Volume I". My specific concerns relate primarily to Volume II, Appendices, and specifically to Appendix C11m "Co-product credit analysis when using distiller's grains derived from corn ethanol production". It is my judgment, as an expert in animal nutrition and feed management, that the reviewers on your staff made some highly judgmental interpretations of the report by Arora et al. from the Argonne National Laboratory, and also made some conclusions that were not warranted. These arise from your interpretation of results in three areas:

1. Variability of nutrient content and availability
2. Handling, storage, and transportation of DDGS
3. Education of livestock producers and managers

First of all, I would like to state that the feed industry lives every day with problems of variation in nutrient content and availability. Almost every feed ingredient that is used in animal feeds is a byproduct or coproduct and subject to variation in nutrient content. When we consider use of a feed ingredient, we take into account this variability in formulation. Assays are frequently carried out to determine the extent of this variability and large scale feeding operations maintain suitable quality control laboratories to quickly make these determinations. While you may consider that a farmer feeding two pigs and three hens may not have this capability, this is not the livestock industry that is common in California. I find most intriguing the statement made on page C-53, "Cattle fed DDGS must therefore receive appropriate quantities of supplemental lysine." This indicates to me that whoever wrote this had ABSOLUTELY no understanding of animal nutrition. The bacteria in the rumen of cattle break down any type of protein, and if lysine is tied up in the Maillard reaction, they are able to break this link and digest the protein. Cattle are able to produce their entire range of amino acid needs from ANY type of protein and would not respond to supplemental lysine. As for swine and poultry, there are now rapid quality control tests that determine the digestibility of the amino acids in DDGS and allow the nutritionist to adjust for batches that may have reduced digestibility.

The high phosphorus levels in DDGS serve merely to displace a like amount of phosphorus from mineral supplements. It is my experience after using DDGS for several years that the total phosphorus content of diets high in DDGS is no greater than that of typical diets without DDGS. In addition, due to the increased world demand for fertilizer grade sources of P, the cost of feed grade phosphorus has increased three-fold in the last few years; thus nutritionists welcome the high level of P found in DDGS.

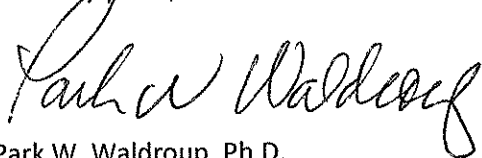
It is true that WDGS present a problem in transportation; thus they are not typically fed in areas where the product must be shipped for any distance. However DDGS can and is shipped around the nation and around the world. While it does have some handling problems in shipping, this in itself should not be a consideration to your board, but to the feed industry. If it is not feasible to use, the industry would not be using it.

Finally, you mention education of the industry and you state that "livestock managers generally lack the information they need on the potential advantages of DDGS when utilized in conjunction with nutrient efficiency management practices." I believe you grossly underestimate the education and resources available to livestock managers. We are not talking about people herding a few goats on the mountainside somewhere, we are talking about men and women who manage millions of dollars worth of animals in a cost-effective, efficient manner that provides food for our nation at the most economical price anywhere in the world. If DDGS does not meet the stringent requirements that are used by these people in providing quality feed for their animals, they will not use it. The fact that DDGS has been widely embraced by the livestock industry indicates that in fact they do recognize its value and are using it in an effective manner.

The scientists interviewed by the Arora group (Klopfenstein, Berger, Shurson et al) are highly recognized nutritionist in the area of livestock, dairy, and swine feeding. To totally ignore their recommendations displays to me an air of arrogance that gives the message that science means nothing, my opinion is what counts.

I would suggest that you determine whether or not DDGS and WDGS offers the suggested benefits in energy savings, and not try to decide whether or not the livestock industry will utilize them as economical feedstuffs.

Sincerely yours;

A handwritten signature in black ink, appearing to read "Park W. Waldroup". The signature is fluid and cursive, with the first name "Park" being more prominent.

Park W. Waldroup, Ph.D.

Novus International Endowed Professor