From: jean&pablo mendoza <jmen@bentonrea.com>
Sent: Wednesday, January 6, 2010 9:51 AM
To: ATR-Agricultural Workshops <agriculturalworkshops@usdoj.gov>
Subject: Comment

Dear Working Group,

I want to share something with you that I would not have believed if I did not read it myself while trying to stay current on our nation's health. This is a direct quote from a major textbook for dairy science.

Sincerely,

Jean Mendoza

Manure as Feed

Recycling manure as a livestock feed is the most promising of the non fertilizer uses. Various processing methods are employed, and some manure is being fed without processing. More and more feed lot manure will be either incorporated in a grower ration or fed to breeding herds during periods when pasture supplementation is beneficial, with the residues distributed over grazing areas where they would have fertilizer value.

Animal wastes contain several nutrients that are capable of being utilized when the material is recycled by feeding. Nitrogen, present in both protein and non protein forms, is a major constituent. Available energy is rather low. Fiber and ash are generally high. The high ash content indicates animal wastes are high in minerals; they are especially rich in phosphorous. They also contain certain vitamins synthesized in the digestive tract.

One characteristic of all animal wastes is variability in composition due to diet, kind and amount of bedding; length of time before collecting; and processing method. The main difference in composition between raw and processed waste is in moisture content; many of the processed wastes are low in moisture. The high fiber content and considerable non protein nitrogen of animal wastes indicate that they are best suited for feeding ruminants because they possess a digestive tract capable of utilizing high fiber and non protein nitrogen efficiently. Because of their low energy content animal wastes are best adapted for use in maintenance and gestating animals, rather than lactating and growing rations. Animal wastes processed by ensiling, dehydration, and other methods can be fed successfully to a wide range of animals. The inclusion of excessive amounts of waste in dairy rations results in an excessive level of fiber and/or minerals, followed by lowered animal performance. Because of this limitation, not more than ten percent waste should be included in high energy rations, such as lactating cow rations.

Tyler, Howard D. & Ensminger, M.E. (2006) *Dairy Cattle Science 4th Edition.* Upper Saddle River, New Jersey: Pearson/ Prentice Hall