DISCUSSION

Application of bentonitic clays in suspension fertilizer formulations

by J. Hanna and H.R. Gonzalez

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Discussion by N.L. Hargett

Dear Dr. Hanna:

As discussed in our phone conversation, we are enclosing a suggested revision to the paper, "Application of Bentonitic Clays in Suspension Fertilizer Formulations," published in *MINERAL & METALLURGICAL PROCESSING*, May 1990. The revision will replace the second paragraph in the article.

The reason for the revision is that suspensions have decreased in market share since 1984 and at present comprise an estimated 25% to 30% of *fluid mixtures*. This represents 6% to 7% of all fluids and only 2% to 3% percent of all fertilizers. Based on national surveys conducted by the Association of American Plant Food Control Officials (AAPFCO), suspensions comprised an estimated 25% of all fluid mixtures in 1974, 33% in 1976, 35% in 1980, 40% in 1984, and 36% in 1988.

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Revision to "Application of Bentonitic Clays in Suspension Fertilizer Formulations."

Suspension fertilizers are an important segment of the fertilizer industry in the United States. Suspensions allow higher concentrations of nutrients (N, P₂O₅, K₂O) than clear liquid solution fertilizers. K₂O content of solutions is limited to about 10%, while suspensions can contain more than 30% K₂O. Suspensions can tolerate greater variations in temperature than solutions. In suspensions, if crystallization occurs, the crystals can remain suspended in a clay jell instead of settling as they would in solutions. Solubility is not a limiting factor in suspensions, since complete solubility of phosphate is not required. This allows a wider range of phosphate materials to be used. Also, materials commonly used in formulating suspensions are less expensive and more widely available than those for clear liquids (Getsiner et al., 1984).