

# **EVALUATION OF MODIFIED MONTMORILLONITES IN POULTRY DIETS**

Paula Butkeraitis

Dr. David R. Ledoux, Dissertation Supervisor

## **ABSTRACT**

The present work was conducted to determine if modification of MONTs with Cu and Zn would enhance the protection of broiler chicks against the adverse effects of AF, and to determine if the modified MONTs would be bioavailable mineral sources. Cu-MONT ameliorated the growth depressing effects of AF, and the deleterious effects of AF on relative organ weights. Results suggest that Cu-MONT was partially effective in ameliorating the toxic effects of AF in broilers. Copper from Cu-MONT was determined to be less available than Cu from Mintrex<sup>®</sup>Cu and copper sulfate. Serbia Zn-MONT and Zn-IMTX ameliorated the growth depressing effects of AF, and Zn-IMTX also reduced the negative effects of AF on liver weights. Results suggest that birds supplemented with Zn-IMTX were better protected against the toxic effects of AF compared to birds supplemented with Serbia Zn-MONT. Zinc from Serbia Zn-MONT was more available than Zn from Zn-IMTX, but was equally available as Zn from Mintrex<sup>®</sup>Zn. Zinc from all three sources was equally available as Zn from zinc sulfate. Results suggest that modified MONTs protected poultry against the negative effects of AF to different degrees. Results also indicated that Cu-MONT is not a source of bioavailable Cu comparable to copper sulfate; however Serbia Zn-MONT is a source of bioavailable Zn comparable to zinc sulfate.