Calibrin®-Z protects against dietary mycotoxins

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Co-contamination of feed stuffs with AFL and FUM is well documented. However, there is a surprising lack of research directed towards understanding the combinative toxic effects of exposure to both toxins, and importantly, how to modulate toxicity related to AFL and FUM co-contamination via a dietary approach. A 21-day experiment was conducted to look at the effects of a combination of aflatoxin and fumonisin on growth performance in broilers. Pens containing four one-day-old chicks were randomly allotted treatments. Treatments were 1) Control; 2) Control + 1ppm aflatoxin B1 and 45 ppm fumonisin FB1 (TOX); 3) TOX + Calibrin-Z; 4) TOX + enzyme-based product (ENZ); 5) TOX + yeast-cell-wall-based product (YCW); and 6) TOX + algae-based product (ALG). Birds fed the TOX diet with Calibrin-Z had gain that was not different than those fed the Control diet (P=0.35). Feeding the ALG or YCW treatments had lower gain than the Control (P<0.03), while feeding the ENZ tended to have lower gain (P=0.08) than those on the Control. Feed conversion was better for the birds on Calibrin-Z (P<0.08) than for those on the TOX diet, while no other additive improved conversion (P=0.18). Feeding Calibrin-Z increased the weight gain by 6.3, 11.3 or 12.0%, and improved conversion by 2, 10, or 4 points compared to ENZ, YCW and ALG respectively. In conclusion, Calibrin-Z maintained gain and feed conversion in the presence of the combination of aflatoxin and fumonisin.