Effects on milk yield and aflatoxin M_1 residues in dairy cows by addition of Mycosorb®

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The objectives of this study were to evaluate the effects of aflatoxin B1, ochratoxin A and T-2 toxin contaminated feed on milk yield and aflatoxin M1 residues in milk with and without supplementation of modified glucomannan (Mycosorb®, Alltech Inc.) in lactating dairy cows.

Fifty multiparous Holstein cows were blocked according to milk yield and then randomly assigned to control or Mycosorb® treatment diets for 45 d trial. Diets contained maize fodder, millet and paddy straw, roughage, corn grain, wheat bran, rice bran, peanut cake, mineral and vitamin mix, and were fed twice daily. Mycosorb® was topdressed at the rate of 10 g/head/d. Diets contained 90 ppb of aflatoxin B1, 60 ppb of ochratoxin A, and 35 ppb of T-2 toxin. Milk yield was recorded daily and milk samples were collected every 15 d in the 45 d trial and analyzed for aflatoxin M1 content. Means were compared with t test, and significance was declared at $P<0.05$.

Daily supplementation of Mycosorb® in the diet of dairy cows that were contaminated with aflatoxin B1, ochratoxin A and T-2 toxin increased ($P<0.05$) daily milk yield by 1.48 liters. Also, aflatoxin M1 content of milk was decreased by 65% with the addition of Mycosorb® to the diet contaminated with aflatoxin B1.

In conclusion, the addition of Mycosorb® to the feed containing aflatoxin B1, ochratoxin A and T-2 toxin improved milk yield and reduced aflatoxin M1 residues in the milk of dairy cows.