The Impact of Yeast Culture Residue on the Suppression of Dietary Aflatoxin on the Performance of Broiler Breeder Hens.

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A study was conducted to examine the effect of yeast culture residue (YCR) on the suppression of aflatoxicosis in broiler breeder hens. One hundred twenty, 35-wk-old, Cobb broiler breeder hens of the same cross were fed diets supplemented with aflatoxin (AF) (0 or 3 mg/kg) and YCR (0 or 2 lb/ton) singly and combined in a 2 × 2 factorial designed experiment. The birds were randomly assigned to pens with 3 replicates of 10 females and 1 male per treatment. Eggs laid by the hens were collected daily, stored at room temperature, and incubated every 7 d for 3 wk. Response variables analyzed were mean percentage of fertility, hatchability, hen-day egg production, egg weight, chick weight at hatch, and embryonic mortality over the 3-wk treatment period. At the end of 3-wk treatment, blood was collected from the hens and analyzed for total protein, globulin, and albumin. Aflatoxin did not negatively affect fertility. However, hen-day egg production (57.6%), percentage of hatchability (67.6%), embryonic mortality (24%), serum total protein, globulin, and albumin were significantly ($P < 0.05$) affected by AF. Hatch of fertile eggs from the AF-fed hens was significantly lower than the control (67.6 vs. 78.5%). The inclusion of YCR in the AF-treated diet raised the level of hatchability (74.9 vs. 67.6%), egg production (65.83 vs. 57.26%), and lowered embryonic mortality (16.8 vs. 24%). Serum globulin and albumin were lowered in the AF-fed hens but was partially restored with the addition of YCR. The data demonstrated that YCR may enhance the performance of broiler breeder hens that are provided feed contaminated with AF.

Key words: broiler breeder, aflatoxin, live yeast culture

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