

CHANGES IN THE MORPHOLOGY OF AVIAN INTESTINE DUE TO MYCOTOXINS

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Abstract

Morphological changes in the avian intestine induced by citrinin and lack of effect of aflatoxin and T-2 toxin as seen with scanning electron microscopy. Toxicon 15, 41-44, 1977. Young broiler chickens (Gallus domesticus) fed 250 or 500 µg of citrinin per g of ration exhibited changes in morphology of the midgut compared with control birds fed ration with no citrinin. These changes included: (1) a 'herringbone'- like pattern due to marked interdigitation of the villi, (2) continuous villar ridges which were oriented around the gut lumen, and (3) the fusion of the villi into convoluted ribbon forms. The duodenum and ileum were relatively unaffected when compared to control tissue. Although aflatoxin and T-2 toxin exert severe physiological effects in the chick, no changes in villous architecture in any gut region were observed.

Key words: avian intestin, citrinin, aflatoxin, T-2 toxin.