

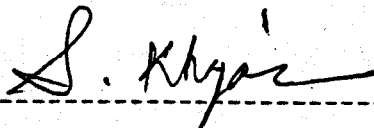
Thesis Title The effects of aflatoxin levels in corn basal
 diets on performance of ducks.

Author Mr. Amnuay Leotaragul

Thesis Advisory Committee



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(Associate Professor Dr. Jowaman Khajaroen)



(Associate Professor Dr. Sarote Khajaroen)



(Professor Dr. Cherdchai Ratanasethakul)

ABSTRACT

Corn seeds with different moisture level of 14, 16, 18, 20 and 22 % were stored in gunny bags for 6 weeks without prior sun drying treatment. It was found that the seed moisture in those with 14 % initial moisture content, increased steadily after the storing while the moisture in those with 16 % content increased only during the first 2 weeks. At 6 weeks the seed moisture of the latter decreased to 15.2 %. The moisture in seed lots with higher than 18 % content decreased to the lower level throughout the storing period. The moisture content in seeds that were sun dried before storing decreased to a lower level than in those without drying in most weeks after the storing.

Aflatoxins in the corn seeds reached the maximum level during the first 3 weeks after storage regardless of the moisture content. Seeds with 20 and 22 % moisture had up to 600

ppb aflatoxins level while those with 14 and 18 % moisture had only 400 ppb at 8 weeks. No aflatoxin was detected in the seed lot with 16 % moisture throughout the experiment. In general, the seeds that were sun dried before storing had lower aflatoxin content than those without drying treatment.

Growth rate of ducks fed with 100 ppb aflatoxins contaminated diet, decreased after 1 week of feeding. This effect was noticed at 2 weeks in those fed with 50 ppb aflatoxin diet. Reduction of feed intake commenced at 2 and 3 weeks after feeding in ducks receiving 100 and 50 ppb aflatoxin diet respectively while the feed efficiency was reduced after the first and second week. Weight gains from 0 to 8 weeks in ducks receiving 0, 50 and 100 ppb aflatoxin diet were 1,247.56 , 1,126.29 and 993.13 gram, respectively. The gains were from feed intake of 6,080 , 5,713 and 5,318 gram with the feed conversion ratio of 4.88, 5.13 and 5.35 respectively. Aflatoxins at both levels (50 and 100 ppb) had no effect on duck mortality rate.

Liver weight of ducks fed with aflatoxins diet was higher than those of the control lot compared at 8 weeks after feeding. The toxins appeared to have no effect on heart weight but increased the spleen weight after 2 weeks. The fat content of liver increased with the increasing level of aflatoxins in the diet. Paler liver was also observed after 2 weeks of feeding.