Does the Use of Peanut Derived Products in Broiler Feed Affect Food Quality Standards?

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The purpose of this experiment was to determine if the addition of peanut flour or oil to the diet of meat chickens affects the quality of meat and to determine if the meat would test positive for the peanut allergen. The hypothesis was that the chickens with the peanut flour or oil added to their diet in addition to their normal feed would grow better quality meat and the peanut allergen would be evident in the meat. Sixty Cornish Cross chickens at the age of two days old were chosen for this project. One group of chicks were fed measured amounts of peanuts while the other group were fed no peanut material. The birds were processed and the meat quality was determined on a personal scale along with recording the processed weights of the birds. The peanut allergen test was conducted on samples from the cooked meat of the peanut flour test group, breast meat of the peanut oil and flour test groups, along with the control group chickens. There was a change in meat quality and chicken weight between the test groups with the peanut flour test group having lower meat quality than the control test group. All weights were within a normal range for the Cornish Cross chickens. The peanut allergen test revealed that the peanut flour and peanut oil tested positive for equal to or greater than 5 PPM peanut allergen within the sample while both the non-peanut samples tested negative for any peanut allergen. All the cooked meat samples tested positive for greater than 5 PPM of the peanut allergen. In conclusion, the addition of peanuts to the diet of meat chickens is not advisable with a negative effect on meat quality, as well as the peanut allergen was present in the majority of raw or cooked meat samples at or above 5 PPM.

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