The Effects of Allium sativum on the Development and Meat Quality of Gallus domesticus

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The problem studied the effects of Allium sativum on the development and meat qualityof Gallus domesticus. The discovery of natural coccidiostats is a step towards reductions in the amount of chemical products applied to poultry. The hypotheses were the broilers treated with garlic solution on wire flooring will grow the largest efficiently (H1), the broilers treated with garlic solution will have the most desirable meat quality (H2), and garlic will prevent the development of coccidia in broiler flocks (H3). The procedure included collecting data on food consumption, body mass, and water consumption over 6 weeks. Data on moisture retention, taste, and coccidian prevention were tested on meat and viscera. Broilers grown on wire flooring/ no garlic grew the largest (average of 2.348 kg). Broilers on wire floors/ garlic solution grew the least (average of 2.144 kg). An ANOVA statistical analysis revealed that there was a difference in growth between broilers, but the difference was marginally significant (F=2.617, p=0.067). Broilers on wire flooring/ no garlic had largest average food consumption but had the least efficient food consumption to body mass ratio. Taste tests showed that broilers treated with garlic had more desirable meat (desirability of 5.65/7). The broilers grown on wire flooring/ garlic had the least moisture loss (0.020 kg). Fecal flotations showed that broilers treated with garlic had 0-1 coccidian/ high power lens sweep. Broilers with no garlic had 12-15 coccidian/ high power lens sweep (significantly more). H1 was not supported, H2 was supported, and H3 was supported.

Awards Won: