

EFFECT OF SUPPLEMENTED ISOFLAVONES IN FEED ON PLASMA AND EGG CHOLESTEROL CONCENTRATION IN ISA BROWN LAYERS

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Abstract. This experiment was performed to investigate the influence of the dietary daidzein and genistein on the plasma cholesterol and egg cholesterol concentration. A total of 80 ISA Brown Laying hens 27-wks old were randomly assigned to 4 treatment groups containing 20 hens each. Birds were fed commercial feed diet containing: 0 (BF), 1000 (BF +1000 mg SI), 2000 (BF +2000 mg SI) and 3000 (BF +3000 mg SI) supplemented isoflavones. Water was offered for ad libitum consumption throughout the experiment. Plasma cholesterol, yolk cholesterol and yolk total fat was monitored during the three month period. The average content of cholesterol in the plasma of the control hens was lower, then in the plasma of the experimental groups. The supplemented isoflavones in the feed reduced the content of yolk cholesterol during the 3-month feeding period ($P<0.05$). The supplemented isoflavones have no influence on the concentration of fat in the egg yolk. Therefore, supplementation of the commercial feed with isoflavones could be used as a tool for the reduction of the yolk cholesterol.

Keywords: isoflavones, cholesterol, laying hens