SUMMARY

This study has been conducted to determine the effects of usage of grape seed oil alone and/or combined with vitamin E + organic Se, as a natural feed additive for diets, on performance, carcass traits, oxidative stability and some serum biochemical parameters in broiler chickens.

A total of 320 one day old male broiler chicks were divided into four groups (one control, three treatments) each containing 80 chicks. Each group was assigned to 4 treatments with 4 replications, each having 20 birds. Corn and soybean meal based basal ration was supplemented with grape seed oil supplemented at the level of 300 mg/kg (for the 1st treatment), with 200 mg/kg vitamin E + 300 mg/kg organic Se (as a 2nd treatment group) and with grape seed oil + vitamin E + organic Se at same supplementation levels (as a third experiment group) in present study. Feed and water was provided *ad libitum* for the entire experimental period.

Supplementation of diets with grape seed oil and/or vitamin E and organic Se had no significant effects on examined parameters such as; body weight, body weight gain, feed intake, feed conversion ratio, carcass weight, absolute and relative weights of breast, hindquarter, liver and abdominal fat, pH value of breast meat and peroxide number in abdominal fat, serum triglyceride and cholesterol levels in broiler chickens. Besides, MDA levels of breast meat were found significantly lower in vitamin E + organic Se supplemented (2nd and 3rd treatment group) when compared with other treatments ($P<0.05$). It is concluded that vitamin E + organic Se had more effectiveness on oxidative stability than grape seed oil.

Keywords: Broiler, grape seed oil, oxidative stability, Se, vitamin E