

# Influence of organic selenium and nano-selenium particles on broiler chicks (Ross 308)

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## ABSTRACT:

This investigation was done in the poultry field of Animal Production Department at the College of Agriculture, Al-Qasim Green University. The effect of organic selenium and nano-selenium on chicks (Ross 308) utilizing 225 one day old unsexed chicks was analyzed. The treatments of the investigation were as per the following: First treatment (control) without including the organic selenium or nano-selenium particles to the feed. Second and third treatment: Organic selenium was added to the feed ( $0.4$  and  $0.5 \text{ mg}.\text{kg}^{-1}$  feed respectively) and the fourth and fifth treatment:  $0.4$  and  $0.5 \text{ mg}.\text{kg}^{-1}$  feed of nano-selenium particles was added to the feed with 45 birds per treatment (each treatment had three replicates i.e. 15 birds per replicate). Various blood parameters and the relative weight of lymphatic organs viz: bursa of fabricia, thymus gland and spleen were analyzed and recorded. The reports demonstrated that there were no significant changes between the experimental factors in the blood traits. For lymphatic organs except control, all other treatments recorded the best relative weight of fabricia and fabricia index, with significant changes ( $P<0.05$ ). The fifth treatment demonstrated a significant change ( $P<0.05$ ) in the relative weight of thymus gland compared with control, while there was no significant difference in the relative spleen weight between the treatments.

## Keywords:

Organic selenium, Selenium nanoparticles, Blood traits, Lymphatic organs, Broiler chicks.