Selenium Yeast Effect on Broiler Performance

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Abstract:

Positive responses attributed to selenomethionine in Se-yeast (Sel-PlexTM [SP], Alltech, Inc., Nicholasville, KY 40356)-supplemented feed have increased the interest in use of SP in all phases of poultry production. Experiments to test the influence of SP on performance parameters in broiler males (Arbor Acres X Arbor Acres) in floor pens were conducted. A completely randomized experimental design incorporated four Se-supplementation treatment groups [(1) No Se, (2) sodium selenite (NaSe; 0.2 ppm), (3) SP (0.2 ppm), and (4) NaSe (0.1 ppm)+SP (0.1 ppm)]. Body weights (BW), feed conversions (FCR), cut-up carcass yield, breast meat drip loss and serum thyroid hormones were measured through 6 wk of age. BW of SP-fed broilers were increased compared to No Se or NaSe treatment groups and the combination of NaSe and SP was no more effective than SP alone. FCR improved with Se supplementation with the SP and SP+NaSe being superior to NaSe only treatment. Feather yield was increased by SP treatment compared to all other treatments. Carcass weight, yields of viscera, feet, leg and thigh and neck were higher in SP-treated birds. Increased breast meat drip loss was induced by NaSe. The serum thyroxin (T4) levels were higher in birds within No Se treatment as compared to NaSe or SP. The ratios between serum T4 and tri-iodothyronine (T3) indicate that SP treatment facilitated the conversion of T4 to T3. The results suggest that Se from SP was used more efficiently for performance in fast growing, high yielding broiler chickens.

Key Word:
Selenium, broiler, performance, yield, thyroid hormones

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