ZINC SOURCE INFLUENCE ON CARCASS QUALITY: CARCASS DEFECTS AND CONDEMNATION. Marco Rebollo, Alba Fireman, Thim Cheng, Cheng Zang, Leonardo Linares, Duarte Neves, Terry Ward (Zinpro Corporation, Eden Prairie, MN, USA).

Zinc is involved in metabolic processes concerning epithelial health, healing, and prevention of lesions. A study was developed using 1296 one-day-old male Ross 308 broiler chicks, raised until 34 days, in a completely randomized design. Birds received 1 of 4 treatments: 1) 40 ppm Zn as ZnSO4 (Sulfate-40); 2) 40 ppm Zn as Zn amino acid complex (ZnAA-40); 80 ppm Zn as ZnSO4 (Sulfate-80); 4) 40 ppm Zn as ZnSO4 + 40 ppm Zn as zinc amino acid complex (ZnAA-80). There were 12 replicates/treatment, 27 birds/replicate, and 16.5 birds/m2. Performance and carcass variables were evaluated. Body weight and mortality were not affected by trace mineral source. Birds showed improved feed conversion rate when fed Sulfate-40 or ZnAA-40 treatments (*P* < 0.05). No differences were observed for carcass or carcass constituent weight. Birds fed ZnAA-80 had a reduction in prevalence of severe bone protrusion score of their carcasses (*P* < 0.05), and increased number of carcasses without scratches (*P* < 0.05). Birds fed ZnAA-40 or ZnAA-80 had increased number of carcasses without hematomas, and reduced prevalence of mild and severe hematoma score (*P* < 0.05). These data suggest the use of ZnAA complex alone or in combination with ZnSO4 creates an opportunity for reducing carcass defects and condemnation at the processing plant, when industry raises broilers in high-density systems.

Key Words: broiler, carcass quality, zinc amino acid complex