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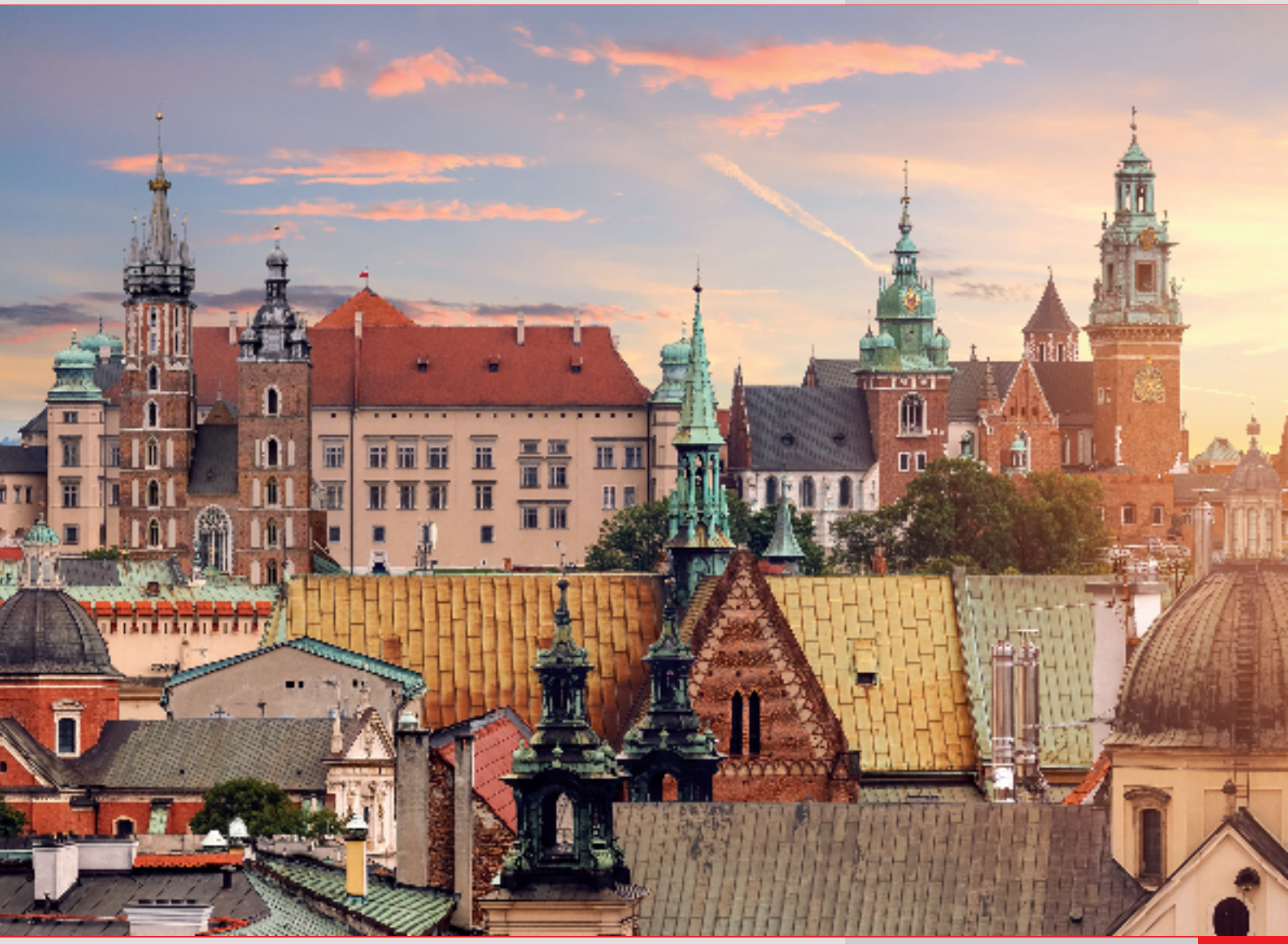
Abstract Book



OP-20 Dietary inclusion of Chlorella vulgaris and heat-stress in broiler chickens: effects on growth performance and product quality of broiler chickens.

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The present study aimed to evaluate how the use of *Chlorella vulgaris* (3% or 6% replacing the same quantities of soybean meal from the control diet) affected growth performance and carcass traits of 576 broiler chickens (half males, half females) kept under thermoneutral or heat-stressed conditions until slaughtering (41 d). The 6% inclusion level of *C. vulgaris* resulted in lower final body weight (BW), body weight gain (BWG), and feed intake (FI) in comparison with the other dietary treatments (P <0.01) as well as higher breast and *Pectoralis major* muscle proportions compared to the control group (P < 0.05). Regarding environmental temperature, FI and breast proportion were higher in birds reared under thermoneutral conditions (P < 0.01) than in those kept in a heat-stress environment, while the opposite was observed for hind legs. Regarding the effect of sex, BW, BWG, and FI were significantly (P <0.01) lower, and feed conversion ratio was higher in females than in males. Males had also heavier carcasses (P < 0.01) and higher hind leg proportion (P < 0.01) than females, whereas females showed higher (P < 0.01) dressing percentage, breast, and *P. major* muscle yields than males. Regarding meat quality, the dietary inclusion of microalgae resulted in a color change (P < 0.05) and, at the highest inclusion level, in increased n-3 fatty acids (P < 0.05) and decreased n6/n3 ratio (P < 0.01). The heat stress led to higher meat pH and cooking loss (P < 0.01) and lower thawing loss (P < 0.05) compared to the control group.