

INVESTIGATIONS ON THE USE OF CAMELINA SATIVA SEEDS PRODUCED FROM  
ECOLOGICAL CROPS, IN BROILER FEEDING; BIRD PERFORMANCE AND  
ORGANOLEPTIC TRAITS OF THE MEAT

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SUMMARY

Poultry production in Europe plays a major role on the market, particularly on some nutritional traits of poultry meat. These include lower fat levels and higher polyunsaturated fatty acids level that can be improved through feeding strategies. Concerns emerged lately on carcass quality in response to consumer demand to reduce the dietary energy. Lower fat carcass was one of the early targets of poultry producers to meet consumer demands. Lower fat pig carcasses were obtained using new selection and feeding programs. This progress is yet to be achieved, however, for broiler carcass. Even though the consumer demands low-fat broiler carcass, their price is prohibitory for the consumers. Under these circumstances achieving lower fat broiler carcasses remains a major goal. Changing carcass fatty acids profile, changing carcass taste, flavour and meat texture are research topics in support of a healthy human feeding. The study quantified the effects of Camelina seeds and buckthorn meal on broiler carcass production and quality. Camelina seeds and buckthorn meal were incorporated in the compound feeds for finishing broilers as natural source of vitamins (beta-carotene, vitamins C, B1, B2, E, F, calcium, phosphorus, magnesium, potassium, sodium, iron). The experiment was conducted on 600 Hybro PN broilers during the age period 7 – 42 days. The broilers were assigned to 3 groups, a control group (C) and two experimental groups (E1 and E2), each with 200 broilers (3 groups × 3 replicates × 100 broilers). Three (phase-feeding) compound feeds formulations were used. The control diet consisted mainly of corn, full fat soybean, soybean meal and corn gluten. Camelina seeds (10%) replaced full fat soybean in the experimental groups, while additionally, in E2 the classical premix with synthesis vitamins and mineral was replaced by buckthorn meal. The partial results show that the use of Camelina seeds reduced significantly ( $P < 0.05$ ) the final live weight, but the liveability percentage was not influenced by the type of dietary compound feed throughout the experimental period. Carcass fat decreased by 61.44% and 30.72% in the experimental groups compared to the control group. Total proteins increased in average by 3-10% concomitantly with the increase of the water content, fat decreased in average by 1.5-4%, the energy value also decreased proportionally with the fat in the experimental groups compared to the control group. Water retention capacity increased by 1% in E2.