

Effects of naturally-produced lovastatin on carcass characteristics, muscle physico-chemical properties and lipid oxidation and cholesterol content in goats

ABSTRACT

This study investigated the carcass characteristics, physico-chemical properties, storage stability and cholesterol content of meat from goats fed with different levels of naturally-produced lovastatin used to mitigate enteric methane production. Twenty intact Saanen male goats of 5-6 months old with initial live weight of 25.8 ± 4.0 kg were randomly allotted into four dietary treatments containing 0 (Control), 2 (Low), 4 (Medium) and 6 mg (High) per kg live weight (LW) of naturally-produced lovastatin for 12 consecutive weeks. No differences were found in all the parameters measured except for full LW, hot and cold carcass weight, shear force, color and cholesterol content among the treatment groups. Aging had significant effects on all the parameters measured in this study except a* (redness) of meat. Meat samples in the Medium and High treatments were of higher lightness and yellowness, more tender and lower cholesterol levels. We conclude that, in addition to mitigate enteric methane emissions, dietary supplementation of naturally-produced lovastatin at 4 mg/kg LW could be a feasible feeding strategy to produce tender meat containing lower cholesterol.

Keyword: Caprine; Carcass; Longissimus thoracis et lumborum; Lovastatin; Meat quality