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Effect of feed supplementation with dried leaves of sage (Salvia officinalis) on performances and meat quality traits in rabbits

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Some plant extracts are accounted as phytobiotic and their potential for reducing enteric disorders or improving meat lipid fraction stability is known. Sage could be used as a natural additive for rabbit for its chemical composition. The study investigated the effect of feed supplementation with dried leaves of two sage varieties, differing in their essential oil profile, on performances, carcass and meat traits of rabbits. Forty-five male Bianca Italiana rabbits 30 d old (830±30 g) were allotted to 3 diets: C (control DM 889 g/kg; CP 169 g/kg; CF 171 g/kg), SE (C+1% S. officinalis cv. Extrakta) and SL (C+1% S. officinalis subsp. lavandulifolia), and individually fed ad libitum for 48 d. Feed intake (FI) and BW were recorded every 10 days, while health status and mortality were monitored daily. At the end, 8 rabbits per diet were randomly chosen and slaughtered without fasting. Carcass traits were determined and m. longissimus thoracis (LTM) sampled. Proximate composition, lipid profile and colour of raw LTM, cooking losses and shear force of cooked LTM were evaluated. Data were analyzed by one-way ANOVA and differences by Duncan’s test. Diet significantly improved average daily gain (ADG g/d) (25.79 and 28.22 vs C 21.31) and FI (g/d) (96.45 and 95.16 vs 81.61 C) in SE and SL groups, respectively. Final BW was significantly higher in diet SL (2212 g) than SE (2094 g) and C (2000 g). Mortality experienced was not different and equal to 13% in C and 8% in both SE and SL. No difference were observed in meat quality traits even if some fatty acids (C12:0; C17:1 and C20:5n3) showed significant differences between diets. In conclusion, sage supplementation could be an interesting phytobiotic for rabbits, but further studies are needed in order to define optimal dietary inclusion level and elucidated the mechanism of action.