ABSTRACT

Indigenous chicken (IC) in Kenya performs a major food security and socio-economic function for most households, especially of the rural poor. The trend has been to move from rearing IC on free-range systems to more intensive and semi intensive systems. This study was conducted by use of Quantitative Descriptive Analysis (QDA) and the Just About Right (JAR) scale scores to quantify the appeal of the IC meat reared under intensive systems. The IC used in the study had been obtained from Taita, Kakamega and Narok ecotype clusters kept under the intensive system at Indigenous Chicken Improvement Programme (INCIP) unit at Egerton University. During the intensive rearing, the chickens were given the same treatment in terms of feed, disease control at all the stages and water was given *ad-libitum*. The chickens were slaughtered at the same age and only cocks were used as control for sensorial differences accruing due to sex. Five cocks from each ecotype cluster were slaughtered after a feed withdrawal period of 8-10 hours and their meat prepared by boiling for sensory evaluation after ageing on ice for 3-6 hours. A trained panel of tasters (13-15) was used to evaluate the descriptive and JAR sensorial quality of indigenous chickens' meat from the breast and thighs. One commercial broiler (Kenbro) was used as a control. Results showed that there was significant effect at $P<0.05$ of the ecotype of the IC on its meat aroma, flavour and brown colour intensity. The JAR scale showed that the consumers' scores for the colour, flavour, juiciness, tenderness of indigenous chicken was 'just about right' compared to broiler which was described by colour as too light, flavour too strong, too juicy in terms of expression of juiciness and too tender with regard to texture. The Principal Component Analysis results showed that there were two principal components (colour and texture) that accounted for 55.4 % and 11.6% and 53.9 and 19% for both descriptive scores and JAR scores for IC meat, respectively. This study indicates sensorial differences among the Kenyan Indigenous chicken ecotypes (of different genetic characteristics) under intensive systems and demonstrates significant difference among various attributes from the commercial broiler.

KEYWORDS

Descriptive; sensory evaluation; Kenyan Indigenous chicken; ecotype cluster; intensive system