

ASSESSMENT OF BROILER MEAT COLOR AND ITS INFLUENCE ON PURCHASING DECISION

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Meat colour is one of the most important traits that indicate meat quality. This study aimed to compare the colourimetric assessment methods used to evaluate the broiler meat colour and to examine the consumer's capability to judge the broiler meat quality based on its colour. The research was carried as an online survey with the participation of 344 respondents. The Colorimeter (CL) and a Computer Vision System (CVS) were employed to measure broiler meat colour and based on the measured L*, a*, b* values, colour chips were generated. The colour chips were compared against the photographs of the meat samples. Photographs of meat samples (n=10) were divided into two categories based on their L* value as high and low-quality meat and respondents were asked to indicate the willingness to purchase those on a 5-point Likert scale. The colour similarity between the colour chips and the photographs was analyzed using χ^2 one-sample test. The student T-test was used to determine differences in CVS and CL measurements. The logistic regression was applied to analyze the effect of socio-demographic, market characteristics on purchasing decisions of low or high-quality meat by the consumers. Among the respondents, 63.0% were female and 78.00% of the consumers were completed higher education. Most of the consumers (47%) were purchased 500g to 1 kg of broiler meat weekly. The measurements of CVS and CL were significantly different ($p < 0.05$) and respondents found the colour measured by CVS were more similar to the meat samples ($p < 0.05$). The gender, education level and purchasing frequency significantly affected purchasing decisions of high-quality meat ($p < 0.05$). In conclusion, the CVS method can successfully assess the broiler meat colour compared to the colourimeter method. Further, consumers can distinguish the broiler meat quality by perceived colour, and their socio-demographics and market characteristics may influence the purchasing decisions.

Keywords: Colour measurements, Meat colour, Meat quality, Purchasing decision