

Title: A systematic review of patterns in tenderness metrics of North American based pork from 1994 to 2014 -NBP # 14-233

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SCIENTIFIC ABSTRACT

BACKGROUND

The quality of pork is determined by composition and consumer satisfaction. Given the variety of pork products and other protein sources available to consumers today, it is important that the factors that impact the pork consumers experience are understood. Many changes in genetics and pork production management have occurred in recent decades, and the impact of these factors on pork quality metrics is unclear. Therefore it is of interest to document how pork quality metrics have changed over the last 20 years. To address this need, we undertook a systematic review to determine whether pork loin quality and tenderness has changed between 1994 and 2014.

METHODS AND FINDINGS

CABI, CAB Abstracts® and Global Health (1994-2014) were searched, for pork quality surveys and comparative studies reporting control groups fed a standard diet raised on a conventional or research farm. 147 relevant studies, reporting pork Warner-Bratzler Shear Force, Slice Shear Force, Star Probe, pH, marbling, color (Hunter L* and Minolta L*) as well as sensory tenderness evaluation on barrows and gilts in 229 control groups. There was no evidence of meaningful changes in the mean Warner-Bratzler Shear Force, pH, Minolta L* color or Hunter L* color over the study period.

CONCLUSIONS

There did not appear to be a change in Warner Bratzler Shear Force, pH, color (Hunter L* and Minolta L*) between publication years 1994 and 2014 in the body of work that was evaluated. Unfortunately, a large amount of potentially available data was excluded from the analysis due to incomplete reporting in the original study reports.

These research results were submitted in fulfillment of checkoff-funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer-reviewed.

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