

**Title:** Prediction of pork quality using online computer vision system # 15-084

**Investigators:** Xin Sun, David Newman

**Institution:** North Dakota State University

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**Scientific Abstract:**

Currently pork color and marbling is assessed subjectively in the industry, because of the limited methods and tools that are suitable for the industry. In this project, we are devoted to developing a computer vision system for objective measurement of pork, which suits the industrial needs. Color images of pork loin samples were acquired using a Computer Vision System (CVS). Subjective color and marbling scores (SMS) were determined according to the National Pork Board standards (NPB, 2011) by a trained evaluator. Objective color measurement (Minolta Camera Co., Osaka, Japan) from colorimeter and crude fat percentage (CF%) according to ether extract method (AOAC, 1990) were used as control measurement. The results showed for pork loin color quality attribute, CVS reached the highest regression coefficient of determination ( $R^2$ ) value to 0.90. For pork loin marbling attribute, the  $R^2$  was reached highest value of 0.62 by using CVS. For tenderness, the CVS reached the regression  $R^2$  to 0.89 highest. For pork juiciness, the CVS reached the regression  $R^2$  to 0.92 highest.

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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 This report has not been peer-reviewed.

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For more information contact:

National Pork Board • PO Box 9114 • Des Moines, IA 50306 USA • 800-456-7675 • Fax: 515-223-2646 • [pork.org](http://pork.org)

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