

December 22, 2017

Pork Carcass Revisions
Standardization Branch
Quality Assessment Division
Livestock, Poultry, and Seed Program
Agricultural Marketing Service
U.S. Department of Agriculture
1400 Independence Avenue SW
Room 3932-S, STOP 0258
Washington, D.C. 20250-0258

Re: Docket No. AMS-LPS-17-0046: United States Standards for Grades of Pork Carcasses.

To Whom It May Concern:

The North American Meat Institute (NAMI or Meat Institute) is the leading voice for the meat and poultry industry. The Meat Institute has a rich, century-long history and provides essential member services including legislative, regulatory, scientific, international, and public affairs representation. Together, the Meat Institute's members produce the vast majority of U.S. beef, pork, lamb, and poultry, in addition to the equipment, ingredients, and services needed to produce the safest and highest quality products. The meat and poultry industry is committed to supporting and following policies and regulations rooted in sound science and proven to improve the quality and value of its products.

The Meat Institute appreciates the Agricultural Marketing Service's (AMS or the agency) outreach to the industry to solicit input regarding changes to the pork carcass grading standards (standards). However, the Meat Institute does not support the implementation of the proposed pork grading standards.

Implementing the proposed pork grading standard would not benefit packers or consumers.

In most establishments, evaluation for quality grade determination would not be done on a cross section of the *longissimus dorsi* (loin), but on the exposed lean on the ventral side. This evaluation would take place on the fabrication floor and at that point during processing, the associated parts (shoulder, belly, and ham) likely will not be traceable; therefore the grade would apply only to the loin. As a result, any potential value premium only would apply to the loin and not the associated parts. In such a circumstance, for the proposed pork quality grading system to be economically practical for packers, any premium generated would need to “captured” on the limited number of high grading loin primals without the associated parts.¹ The potential premiums and value captured from higher grading loins are not likely to cover implementation costs of adding AMS graders, grading cameras, and additional personnel.

The pork industry has worked hard to improve pork quality. For example, in effort to reduce the prevalence of pale, soft, and exudative pork and ecchymosis, many in the industry have moved from electrically stunning hogs to using carbon dioxide.² Likewise, incorporating rapid chill systems has improved pork color and quality.³ Not only has the processing industry invested in quality, so have live producers, investigating the effect of different factors, including diet, breed, and genetics, to improve pork quality.⁴ While the entire industry has made great

¹ Assuming the ventral side evaluation method is used, it may be difficult, if not impossible, to extend the grade beyond the loin. There is some scientific literature that questions whether it would be appropriate to extend quality and eating experience estimations based on the loin to the entire carcass. Arkfeld, E. K., Wilson, K. B., Overholt, M. F., Harsh, B. N., Lowell, J. E., Hogan, E. K., ... & Wheeler, T. L. (2016). Pork loin quality is not indicative of fresh belly or fresh and cured ham quality 1, 2, 3. *Journal of Animal Science*, 94(12), 5155.

² Velarde, A., Gispert, M., Faucitano, L., Manteca, X., & Diestre, A. (2000). The effect of stunning method on the incidence of PSE meat and haemorrhages in pork carcasses. *Meat Science*, 55(3), 309-314.

Grandin, T. (1994). Methods to reduce PSE and bloodsplash.

Channon, H. A., Payne, A. M., & Warner, R. D. (2003). Effect of stun duration and current level applied during head to back and head only electrical stunning of pigs on pork quality compared with pigs stunned with CO₂. *Meat Science*, 65(4), 1325-1333.

³ Springer, M. P., Carr, M. A., Ramsey, C. B., & Miller, M. F. (2003). Accelerated chilling of carcasses to improve pork quality. *Journal of Animal Science*, 81(6), 1464-1472.

Jones, S. D. M., Jeremiah, L. E., & Robertson, W. M. (1993). The effects of spray and blast-chilling on carcass shrinkage and pork muscle quality. *Meat Science*, 34(3), 351-362.

Huff-Lonergan, E., & Page, J. (2001). The role of carcass chilling in the development of pork quality. National Pork Producers Council.

⁴ Cannon, J. E., Morgan, J. B., Heavner, J., McKeith, F. K., Smith, G. C., & Meeker, D. L. (1995). Pork quality audit: A review of the factors influencing pork quality. *Journal of muscle foods*, 6(4), 369-402.

improvements in pork quality some factors, most notably marbling, need to be influenced by the live producer using diet and genetics.⁵

As discussed above, most loins graded on the fabrication floor will not be traceable back to an individual animal. This inability to trace an individual loin on the fabrication floor to an animal makes it almost impossible to pass any premium or discount back to the producer. All discounts would be absorbed by the packer, with no value incentive to the live producers to alter practices to influence quality. Even if producers alter practices or select for hogs with improved marbling genetics, studies show there also likely would be a reduction in the percentage of fat-free lean carcass yield. Producers and packers would have to sacrifice yield for increased quality with no guarantee that the value of higher grading loins, or in the rare case carcasses, would be worth the sacrifice.

The proposed changes are difficult or impossible to implement in large establishments.

Evaluating quality for grading classification would happen simultaneously to processing and therefore difficult, if not impossible to implement. If implemented, most packers would not sacrifice the value of the loin by taking a cross section for grade evaluation; they would leave the loin intact and evaluate the exposed lean on the ventral side. In order not to interrupt the processing flow of the establishment, evaluating loins using the ventral side method would have to be done on the fabrication floor. Many establishments would encounter significant challenges fitting enough additional personnel on the fabrication floor to accomplish that feat. A study conducted by the Agricultural Research Service (ARS) and funded by the National Pork Board (NPB) evaluated using a VQG camera to assess pork quality.⁶ While this study shows progress in the ability to evaluate pork quality at line speeds, high volume facilities would still require additional resources to install multiple cameras on the fabrication floor to keep up with production. Establishments also would need additional resources to segregate graded product throughout the facility, which will be cumbersome. Segregation will burden not only the packer but the entire supply chain.

⁵ Witte, D. P., Ellis, M., McKeith, F. K., & Wilson, E. R. (2000). Effect of dietary lysine level and environmental temperature during the finishing phase on the intramuscular fat content of pork. *Journal of Animal Science*, 78(5), 1272-1276.

Xu, G., Baidoo, S. K., Johnston, L. J., Bibus, D., Cannon, J. E., & Shurson, G. C. (2010). Effects of feeding diets containing increasing content of corn distillers dried grains with solubles to grower-finisher pigs on growth performance, carcass composition, and pork fat quality. *Journal of animal science*, 88(4), 1398-1410.

⁶ Shackelford S.D., D.A. King, and T.L. Wheeler. 2017. Prediction of pork loin quality and tenderness with the VQG pork loin grading camera – NPB #15-103. National Pork Board Research Report.

Not only is segregation problematic but marbling also presents challenges. Marbling scale in the proposed standards and maintained by NPB are based on a cross section of the loin, not the exposed lean on the ventral side. Keeping in mind the NPB marbling standards, visual evaluation of intramuscular fat using the ventral side method would be difficult and inconsistent with the loin cross section marbling standards. Intramuscular fat or marbling is fat contained between muscle fibers and visual evaluation of marbling using the exposed lean on the ventral side of the loin would be difficult because marbling is contained within the muscle. The VQG camera shows promise as an evaluation tool ventral side method; however, camera utilization would require all establishments interested in implementing the proposed standards to incorporate enough cameras to keep up with line speeds, which would be difficult.

The proposed standards would compromise other quality based marketing programs.

Many packers, large and small, market their products to consumers using different quality and consumer preference standards. Many of these programs have been in place for years and the products they yield are highly sought after by consumers. The AMS proposed standards endanger those programs and relationships. Both packers and producers have the autonomy to develop niche marketing programs with retailers and the food service sector and have preexisting programs where they receive a premium for products sold under that program. Many of these programs are based on different quality factors or have a quality component and are helping drive the industry toward improved consistency and quality. Any AMS driven standard would place the value captured on these products at risk.

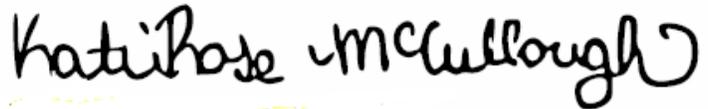
Summary

The Meat Institute appreciates the agency's efforts to improve consumer eating experience. However, research shows that adding a pork grading system in the U.S. would not solve issues surrounding variability in consumer eating experience.⁷ Although, the Meat Institute is not in favor of the proposed standards, NAMI welcomes the opportunity to work with AMS and other industry stakeholders to discuss ways to improve the consistency of pork quality and consumer eating experience.

⁷ Tonsor, G. T., & Schroeder, T. C. (2013). Economic Needs Assessment: Pork Quality Grading System. Report prepared for the National Pork Board. Available at Web site [http://www. agmanager. info/sites/default/files/pdf/EconomicNeedsAssessmentOfPorkQualityGradingSystem. pdf](http://www.agmanager.info/sites/default/files/pdf/EconomicNeedsAssessmentOfPorkQualityGradingSystem.pdf).

The Meat Institute appreciates the opportunity to submit these comments. If you have questions about these comments or would like to discuss them, please contact me at (202)587-4249 or kmccullough@meatinstitute.org. Thank you.

Respectfully submitted,

A handwritten signature in black ink that reads "Katie Rose McCullough". The signature is written in a cursive, flowing style.

KatieRose McCullough, Ph.D.

cc: Barry Carpenter
Mark Dopp
Norm Robertson
Susan Backus
Tiffany Lee, DVM, Ph.D.