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Cooperative Effort Leads to the Development of Tools to Assist Pork Producers in Evaluating Structural Soundness of Replacement Gilts

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Abstract: The objective of the project described here was to develop and deliver new visual tools to assist pork producers to evaluate the structural and reproductive soundness of replacement gilts within their sow

herds. The development and distribution of the posters demonstrates how Extension, industry commodity groups, industry partners, and business media can work together to deliver the tools needed to have a positive economic impact at the farm level. Ideas like these are needed to meet the increasingly complex educational needs of modern agricultural industries like the U.S. pork industry.

Introduction

Modern pork operations face new challenges when delivering educational programs to employees. Because of health concerns and strict biosecurity restrictions, stockpersons working on modern swine operations find it difficult to participate in traditional Extension educational programs that require travel to a central site. One critical area that requires training for successful swine management is replacement gilt selection for correct feet, leg, and reproductive soundness. Hence, Extension workers must continue to identify new ways to reach the stockpersons who would benefit from educational programs. Consequently, these new and/or novel Extension educational programs are often more expensive to deliver, and the industries that we serve must find new ways to cooperate in order to deliver educational programming to their clientele.

The objective of the project described here was to develop innovative visual tools to assist pork producers in accurately evaluating the structural and reproductive soundness of replacement females destined for the breeding herd. The following is an example of industry groups cooperating to fund, develop, and deliver educational content to pork industry stockpersons demanding the information. Further, it illustrates that traditional visual media, specifically high-resolution photographs, are still a powerful tool for Extension education.

Methodology

An increasing number of commercial swine operations maintain internal multiplication systems to raise replacement gilts. At the same time, many commercial pork operations have employees with minimal livestock background or training, especially when evaluating replacement females for feet and leg as well as reproductive soundness.

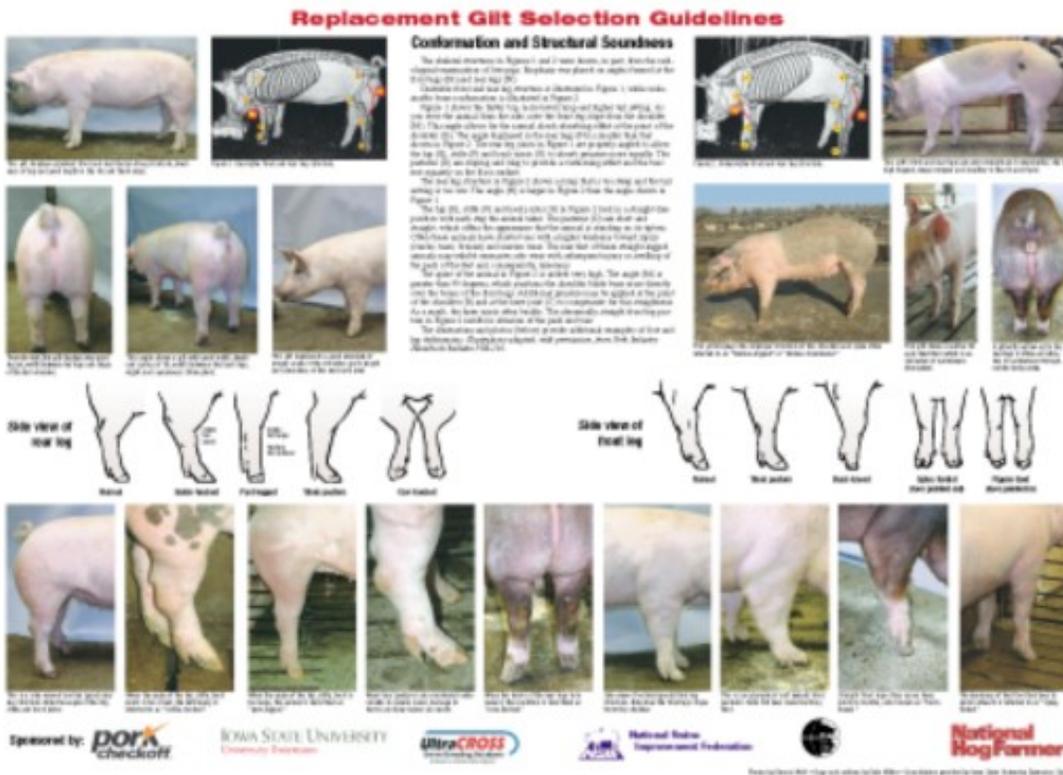
Research has shown that certain structural conditions can affect a sow's lifetime performance in the breeding herd (Serenius & Stalder, 2007; Serenius & Stalder, 2004). Visual appraisal can help identify replacement gilts with various structural infirmities, including "buck-kneed" front legs, straight rear pasterns and swaying hips - all of which have been shown to negatively affect sow longevity. Similarly, visual appraisal can identify replacement gilts that have "soft" front pasterns, a condition shown to have a positive impact on sow lifetime performance in the breeding herd (Serenius, Stalder, & Pounti, 2006). Clearly, the need for training in the area of structural and reproductive soundness exists.

A series of three educational posters were developed cooperatively by several organizations. They are Iowa State University Swine Extension through the Iowa Pork Industry Center, the National Pork Board (the pork industry's national commodity organization), *National Hog Farmer* magazine (a business-to-business magazine that reaches a U.S. cross-section of pork operations and allied industry representatives), and the National Swine Registry (a commercial entity whose members supply the pork industry with breeding stock). The posters were designed to educate pork producers to more easily identify desirable feet and leg soundness as well as evaluate reproductive soundness of candidate replacement gilts (Figure 1).

Figure 1.

Example Poster Developed in Cooperation with Iowa State University Extension, National Pork Board, *National Hog Farmer*, and National Swine Registry to Educate Pork Producers and Their Employees on Feet

and Leg Soundness, as well as Reproductive Soundness of Their Breeding Herd Replacements



To develop the Extension educational program, the authors joined the *National Hog Farmer* editor and photographers to take over 3,000 photographs depicting various desirable and undesirable characteristics of replacement gilts. Approximately 60 photos were selected for use. Iowa State Extension and National Hog Farmer staff developed three posters (70 x 50 cm each). Two posters focused on feet and leg soundness, while the third addressed reproductive traits commonly observed on replacement gilts. Each poster featured an introduction to the respective subject matter, plus captions below each photo to help users understand the significance of the trait and how to apply it to their gilt selection process.

Funding was provided by the National Pork Board (Pork CheckOff) and the National Swine Registry. Posters were inserted in the January, February, and March 2005 issues of *National Hog Farmer* (Stalder et al., 2005a; Stalder et al., 2005b; Stalder et al., 2005c), effectively reaching over 26,000 pork producers, production employees, and swine veterinarians. Press over-run copies of each poster were stockpiled and offered on a "free by request" basis by the posters' developers and sponsors.

Since the development of the original three posters, three additional posters have been developed and distributed in a similar manner. In addition, the photos from the replacement gilt selection posters were used to develop a tool: *Pocket Guide to Structural, Feet and Leg, and Reproductive Soundness*. This is a functional tool that people can take to the barn to help them evaluate and select replacement gilts (Stalder et al., 2005d). The pocket guide garnered additional industry sponsorship from two swine genetic suppliers. These efforts were further leveraged, and, at the time of writing this article, posters have been translated into the Chinese, Finnish, Japanese, and Swedish languages and have been or will be distributed in each of these countries. This demonstrates the value of this educational tool and the breadth of its application around the world.

Conclusion

The development and distribution of the gilt selection posters demonstrates how Extension, industry commodity groups, industry partners, and the business media can work together to develop valuable tools that are widely adopted and used at the farm level. At a recent trade conference, a prominent swine industry veterinarian noted: "These tools are on the front seat of my truck to make sure that every sow farm gets copies; this may be the most useful set of tools developed by Extension to help pork producers in the last 10 years."

Ideas like these are needed in order to meet the increasingly complex educational needs of modern agricultural industries like the U.S. pork industry. Clearly, without the development of this type of material, current Extension educational programs could not have reached the broad audience served by this project.

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