

Using ultrasound to compare Idaho's youth livestock projects to industry targets

The Situation

The incentive for many youth who enroll in 4-H and FFA with livestock projects is the money. However, it is essential that these youth understand the concept that they are producing a product that consumers are going to eat, and what they do in raising their animal affects the quality of the end product. Consumers demand a consistent, high quality product. Therefore, the livestock industries have identified targets in which they strive to meet to provide a high quality product to consumers.

With the health and safety regulations associated with producing food products and the concerns over a variety of other issues, access to packing and processing plants has become more difficult. Consequently, youth rarely have the opportunity to view their final product and expand their knowledge of harvesting and carcass data collection processes. It can even be challenging for adults and fair officials to gain access to the plants to collect data for carcass contests and educational programs. Therefore, a need exists for other tools to provide youth, their parents, and breeders with carcass information.

Our Response

University of Idaho Extension educators and specialists have been using ultrasound as a tool to provide carcass information to 4-H and FFA youth for the past nineteen years. In 2008, Tianna Fife, Twin Falls County Educator, Richard Garrard, Cassia County Educator, and Benton Glaze, Extension Beef Specialist, traveled to county fairs throughout Idaho to ultrasound beef, sheep, and swine projects for youth. Education was conducted in a number of ways, ranging from answering questions as the animals were being ultrasound to group meetings of participants and parents to explain what was measured, why it was measured, how it was



Tianna Fife, Twin Falls County Extension Educator, explaining "Ultrasound and Its Uses" at the 1st Annual Beef Camp in Mackay, ID.

measured, and how the information could be used. Additionally, some counties held educational programs to demonstrate ultrasound and its uses.

Program Outcomes

During the 2008 fair season 1,738 animals (244 steers, 473 lambs, and 1,021 hogs) were ultrasound in 12 Idaho counties. The ultrasound information was used in educational efforts in the following ways:

- Educating youth, parents, and leaders about ultrasound, its value, and how it can be used in livestock operations
- Providing livestock carcass measurements for use in carcass contests when actual carcass data is not available
- Incorporating ultrasound data into youth livestock program record books to enhance decision making
- Including ultrasound data as a component of a judge's packet to assist with placing at live shows

County Fair 4-H Livestock Data and Industry Targets

Table 1. Beef.

	Industry Targets ¹	Fair Mean
Hot Carcass Weight (lbs)	600.00-800.00	*769.61
Fat Thickness (in)	0.30-0.45	0.30
Ribeye Area (in ²)	12.50-14.00	13.97
Yield Grade	Less than 3.00	2.07
Quality Grade	Select+ to Choice	**Select

*Dressing % of 62 from live weights. **Quality grades were assigned numbers to figure average: 1=Standard, 2=Select, 3=Choice-, 4=Choice, 5=Choice+, 6=Prime-. Average was 2.67.

Table 2. Sheep.

	Industry Targets ²	Fair Mean
Live Weight (lbs)	135.00-150.00	127.00
Fat Thickness (in)	0.10-0.25	0.19
Ribeye Area (in ²)	3.00 or more	3.29
Yield Grade	Less than 3.00	2.33
Quality Grade	Choice & Prime	*Choice

*1=Good, 2=Choice. Average was 1.98.

Table 3. Swine.

	Industry Target ³	Fair Mean
Live Weight (lbs)	270.00	249.83
Fat Thickness (in)	0.60-0.70	0.56
Loin Area (in ²)	6.50-7.10	7.34

- 1) Hicks, Carole. 2007. Understanding Beef Carcass Reports. The University of Georgia Cooperative Extension Bulletin 1326.
- 2) Market Lamb Evaluation. 2006. The Breeding Sheep Page. Retrieved 26 August 2009 from <http://www.breedingsheepage.com>.
- 3) Pork Checkoff Unveils Symbol III at World Pork Expo. 2005. National Pork Board. Retrieved 25 August 2009 from <http://www.pork.org>.

With this information youth, parents, breeders, and other industry clientele can see how their animals compare to industry targets. They can then address breeding and production systems so their animals are within the targets. Meeting these targets will result in the animals having a greater value and will help improve the reputation of the quality of animals produced by Idaho's youth. The ultrasound data collected at fairs throughout Idaho help

validate what youth are learning through 4-H and FFA livestock programs. The data presented in the tables has been presented at educational programs in various counties and at leader meetings.

The Future

University of Idaho Extension has provided ultrasound as a tool in the past, but as private industry expands in this area we will cooperate with them to continue gathering data and conducting educational programs. As data is collected it will be compiled and more extensive results will be published to report not only means, but also how much variation there is in the carcass characteristics of the three species. As data is collected over a number of years, trends will also be evaluated and published. Through the cooperation between University of Idaho Extension and private ultrasound technicians, the progress of Idaho's youth and how their livestock projects compare to industry targets will be documented.

FOR MORE INFORMATION

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