

# IMPACT

 University of Idaho  
Cooperative  
Extension System

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## Tools for Selecting Breeding Animals Pay Dividends

### *The Situation*

The need to improve production efficiency and continually increase product quality has always been a challenge for livestock producers. The length of time it takes to change the direction of the breeding program, changes in consumer preferences and market fluctuations have made it difficult for producers to maximize production. These and other challenges have resulted in reduced numbers of swine in the Magic Valley.

In the late 1980's, the Independent Meat Company and the Southern Idaho Pork Producers co-sponsored an annual swine carcass contest for their industry. This contest provided an opportunity for producers to see the type of carcass quality they were producing in their herds. The herds participating in the contest were at the least representative of the type of hogs that were being produced and marketed at the time. In fact, the producers that participated were generally above-average producers. Due to a number of reasons, the contest is no longer being held.

### *Our Response*

The University of Idaho Cooperative Extension System has used the 4-H Program as a means of educating not only our youth, but adults as well. The introduction of the ultrasound technology as a means of enhancing our ability to evaluate live animals at county fairs was intended to be a

means to encourage the use of the technology as a tool to identify superior animals. Specifically in the production of pork, superior animals are those with backfat less than 0.8" and loin areas that exceed industry standards. By selecting superior animals, we enhance the quality product being marketed.

To make a comparison of what has happened in the industry over the past several years, information was collected on the pigs from Twin Falls, Minidoka, Lincoln, Gooding and Cassia County fairs in 2001. A comparison was made from 455 animals subjected to ultrasound in 2001 to the information collected on the 57 hogs in the 1989 carcass contest. Most of the herds represented by the contest in 1989 are currently supplying animals to 4-H members represented in the 2001 fairs in the five counties. To make the comparison fair, the fat and loin area of the animals were adjusted to a standard of 240 pounds live weight using industry adjustment factors.

### *Program Outcomes*

The use of ultrasound technology has allowed producers to select better breeding animals, which has had a positive impact on the yield of lean edible meat. Most knowledgeable people in the industry would agree that significant progress has been made in reducing fat and increasing lean. Until now, no one could say for sure how much change has been made. Based on the comparisons from the 1989 data to the 2001 data, live weights have increased from an average of 223 lbs in 1989 to 265 lbs in 2001, fat at the 10<sup>th</sup> rib has decreased from an adjusted fat of

1.19 inches to an adjusted fat of 0.61 inches in 2001, loin eye area has increased from an adjusted 5.22 square inches in 1989 to an adjusted 6.91 square inches in 2001, and the percent lean has improved from 52.64% in 1989 to 62.77% in 2001. The increase in percent lean would result in an additional 578,625 pounds of lean marketed on the hogs from the five-county area. A 10% increase in the pounds of lean meat marketed per year is a significant increase in production. There have been other factors that could provide an influence in the production of lean, but by far the selection of desirable breeding stock has had the most significant impact on increased production efficiency.

### **Cooperators and Co-Sponsors**

The 4-H programs in Cassia County, Minidoka County, Lincoln County, Gooding County and Twin Falls County, through their adoption of the use of ultrasound technology in the evaluation of live animals, have been extremely helpful in enhancing the adoption of the technology by the industry. The meat industry, namely Independent Meat Company, has been supportive in allowing the local educators to perform checks of carcass data in the cooler for comparison with the values obtained with the ultrasound equipment to ensure the accuracy of the operators.

### ***The Future***

Improvements in ultrasound technology will enhance the technician's ability to use the equipment to more accurately and quickly predict the amount of fat and muscle that an individual animal has. Additional information will be gathered to make ultrasound readings taken at specific times in the growth cycle more meaningful. For example, we will know what amount of fat or muscle is desirable at different ages or at different weights.

### ***For More Information***

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