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Pricing SEW Piglets

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Interest in SEW (segregated early wean) piglets remains high in the swine industry. An increasing number of Nebraska producers are evaluating the economics of either farrowing and weaning a SEW piglet or purchasing SEW pigs for feedout to slaughter. Because the technology associated with SEW is so new, producers are searching for assistance in valuing the SEW piglet as they prepare budgets to assess the economics associated with adoption of this technology.

What is the SEW Pig Worth?

The value of early weaned pigs is in question, in that there is no competitive market for them, where supply and demand would set the price. Most early weaned pigs are sold privately, often under the terms of a contract. Without an open market, what is an early weaned pig worth?

There are at least two factors which affect the value of early weaned pigs:

- The weight of the pig, as compared to that of traditional feeder pigs
- The potential for enhanced performance of the early weaned pig, which includes reduced feed per pound of gain, decreased death loss, and increased average daily gain

In a farrow-to-finish operation, where all stages of production are owned by one entity, the value of early weaned pigs does not matter. Any benefits are captured by the producer of the pig. But, where two or more producers are setting up a separate site production system, and transferring ownership of pigs between sites, valuation of early weaned pigs becomes necessary. This is particularly true in Nebraska, where unrelated individuals are restricted in ownership arrangements for these pigs by Initiative 300.

One Alternative — A Profit Sharing Arrangement

If the producers involved are interested in a long-term arrangement, and totally trust the integrity and the management abilities of one another, a profit sharing arrangement could be agreed upon. Under this arrangement, the nursery-finisher would buy the SEW pig from the producer at a base price, which

would cover the producer's out-of-pocket costs. When the pigs are sold as market hogs, each person who contributed would be paid costs, and profits would be shared according to the contributions of each party.

While this is workable, and can be the most equitable, there are problems in quantifying the contributions of each party. Expenses for items like feed, veterinarian & medicine, and labor can be quantified rather easily by keeping records, but quantifying the management contribution is often arbitrary as is the valuation of fixed assets that may be fully depreciated. Most producers would agree that the level and intensity of management differs between the breeding herd, the nursery, and the finishing stages, but it is difficult to get agreement on the exact breakdown of management effort between the stages.

Another Alternative — Final Sale at Time of Transfer

Some producers are more comfortable with a clean break between stages — where the sale of the animals is final at the time the animals are moved. They are still interested in being fair to all parties involved. This creates a need for an equitable method of establishing prices for pigs at each point of transfer.

Value Based on Price of 40- to 50-Pound Feeder Pigs

Traditional feeder pig pricing formulae (for pigs weighing 40-60 pounds) typically base the pig price on the price of market hogs, and sometimes the price of feed. DiPietre and Tubbs (1994a) question whether these formulae should be extended to 10- to 12-pound early weaned pigs. In other words, they feel that basing the price of a 10-pound pig on the value of a 250-pound market hog leaves a lot of room for error. DiPietre and Tubbs have proposed using established market prices for feeder pigs (40-50 pounds) as a basis for calculating the price of early weaned pigs.

The reported feeder pig price is adjusted with a "slide" calculated as follows:

- Deduct the estimated total cost of growing the early weaned pig to the weight of pigs for which a reported market price is available (typically 40-50 pounds).
- Add an estimate of increased value of the pig due to early weaning. The reason for this is that early weaned pigs will perform better in the nursery and finishing stages than will traditional feeder pigs, resulting in lower costs for these stages of production. With lower costs of getting the pig to market weight, the pig buyer should be able to pay a higher price for the early weaned pig.

The problem here is that the ballots are not in yet on just how much feed efficiency, death loss, and average daily gain change with SEW. Obviously there are several factors that will affect the magnitude of the changes, including the genetics of the animals, as well as the buildings, the diets, and the management system used in the nursery and finishing phases. Also, the portion of the performance improvement that occurs in the nursery versus the finishing phase has not been established.

To quantify the value of the improved performance, DiPietre and Tubbs utilized: 1) the change in efficiency and death loss between the 70th and 90th percentile in growing-finishing pigs from the Swine Graphics (Webster City, IA) data base, and 2) the change associated with moving from the 80th to the 90th percentile. Three possible values for the early weaned pig are then calculated.

- Assuming no increase in performance due to SEW
- Assuming performance increase based on moving from 80th to 90th percentile

• Assuming performance increase based on moving from 70th to 90th percentile

DiPietre and Tubbs present an example which produces the following values for a 10-pound pig (assuming a price of \$42.25 for a 45-pound pig):

- \$28.39 No increase in performance
- \$31.71 Move from 80th to 90th percentile
- \$35.99 Move from 70th to 90th percentile

These prices are a bargaining range. The highest price (\$35.99) essentially gives all of the value of the performance increase in the growing and finishing stages to the producer of the SEW pig. The lowest price (\$28.39) gives the producer none of the benefit of the increased productivity of the pigs. The parties involved need to determine a price that they can each live with. The price that the buyer and seller agree upon will then reflect their respective bargaining power.

As more research results become available, a more accurate value of the early weaned pig can be determined. A possible problem in applying their pricing formula is that of finding a reliable source of prices for 40- to 60-pound feeder pigs, or pigs in the traditional feeder pig weight range.

Value Based on a Budgeting Process

Given the potential problems of the method just described, DiPietre and Tubbs (1994b) have proposed another approach to valuing SEW pigs. They note that the method described above may under-value SEW pigs, as the prices reported for 40- to 50-pound feeder pigs is typically based on relatively small lots and a cross section of genetics. SEW pigs typically come from operations with improved genetics and are typically sold in large lots. They propose basing the value of SEW pigs on cost of production, plus a premium for increased performance.

They budgeted the total cost of producing SEW pigs in a 600-sow unit at \$24.18 per pig, and then estimated the value of performance improvements in the SEW pigs, using the performance levels of the 70th, 80th, and 90th percentiles in the Swine Graphics data base. An upper and a lower price boundary for the SEW pigs was calculated. The lower price boundary was the production cost (\$24.18) and the upper boundary was \$37.17. At the upper boundary the SEW pig producer would be receiving all of the estimated value due to improved performance of the SEW pig and at the lower boundary he would be receiving none of it. The agreed upon price would be between these boundaries.

This approach is probably better than the one which uses the price of 40- to 50-pound feeder pigs as a base. However, it is extremely important that the budgeted cost of production be an accurate reflection of actual costs. Since the SEW pig "is a different animal" than a conventional feeder pigs and requires a unique system of production that involves diets, buildings, management, and market selection to maximize its potential, our enterprise record data on traditional swine enterprises may not reflect the costs of a SEW production system. It is important that we begin gathering cost data on SEW systems.

Value Based on Shared Risk

Increasingly, producers who want to purchase SEW pigs for finishing facilities are seeking arrangements that include some type of market price risk sharing. In these arrangements, as the estimated final value of the pig increases due to market price increases, the price paid for the SEW pig increases. As the estimated final value falls, so does the SEW pig price. In other words, producers want to purchase SEW pigs in arrangements or agreements that vary the price paid in relation to the estimated final value of the

pig. They want to secure SEW pigs from sources who are willing to share market price risk.

A majority of these arrangements are based on Chicago Mercantile Exchange (CME) futures prices. While not a perfect predictor of future value, CME futures prices are the best estimate of final value when the pigs are sold at 2-3 weeks of age. Various formulas are currently being proposed by sellers and buyers of SEW pigs, but they usually involve a percentage of the futures price lagged by 5-6 months. As a protection clause to both parties, these arrangements usually include specifications for a minimum and maximum price per pig.

Concluding Comments on Valuing SEW Pigs

The structure of the swine industry is evolving toward more contractual arrangements in the production process. This is especially true in SEW production systems. Rather than letting the open market determine the price of animals at intermediate stages of production, individuals are negotiating a price. It is important that all parties involved in the negotiating process know their costs so that they can recover their costs, plus a reasonable profit margin.

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