



## **SOW LONGEVITY AND APPETITE**

### **INTRODUCTION**

Genetic selection and trends of the past ten years are in opposite directions, taking today's animals towards higher lean output while reducing their capacity for daily feed intake. Some national data indicates this feed intake slide has shown up in the breeding herd during lactation and is putting the best sows with greatest output at risk of being culled too early in their productive life. Sow longevity will be a critical factor of the future that sorts who remains in the industry with low-cost high output breeding herds.

### **DISCUSSION**

Sow longevity is important for several reasons. Sows farrowing between parity 2 and parity 5 tend to be most prolific and have the best performing progeny. Besides being in smaller litters, the offspring from parity 1 sows receive sow's milk with potentially lower immunity and protection from pathogens. As a result, those pigs from younger sows do not have as strong of a health status and consequently will grow slower than other pigs.

Dr. Ken Stalder of Iowa State University conducted an analysis of national PigChamp data. When he sliced out herds in the top 10 percent, he discovered that sows being culled were averaging 5.8 parities as they left the herd. Sows being culled from herds in the bottom 10 percent averaged 2.2 parities. Assuming average production and marketing rates, Dr. Stalder states that the average farrow-to-finish operation needs sows to produce 3 litters to break even. In breed-to-wean operations, the break even is a little higher. Even if sow longevity of a given herd is above average, there is good money to be gained from improving herd parity rate - \$70 net revenue per sow for each additional parity achieved.

There are two main reasons that breeding females get culled from the sow herd early: reproductive failure and structure-leg issues. Reproductive failure takes out most parity 1-parity 2 sows that are culled too early. This can result from the sow's failure to cycle after weaning or failure to conceive. Even worse is the sow "not in pig" because it usually is not discovered until near the end of the gestation cycle.

Several important factors influence sow longevity. Genetic effect or heritability estimates are low, just like with reproductive traits. So selection for longevity is possible, but improvements would be slow. Management is the best opportunity to influence the outcome. This is an area that researchers, veterinarians, geneticists, nutritionists, and even the National Pork Board are focusing attention and resources towards.

Among the most important management topics for breeding herd productivity and longevity is nutrition and feeding programs. Even though it begins with growth and development of replacement gilts, there is limited research for gilt nutrition programs.



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Nutrition Management People

*Quality  
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Industry leaders are suggesting elevated calcium, phosphorus, and selected vitamins starting at around 150 pounds. The feed program needs to be managed for the following:

- \*approximately 300 pounds at breeding
- \*at least 0.60 inches backfat at breeding
- \*at least 0.75 inches backfat at first farrowing
- \*over 75 pounds gain through parity 1 gestation
- \*approximately 75 pounds gain through subsequent parities

Beyond the gilt development stage, there are some golden rules of breeding herd nutrition that must be applied for preserving breeding animals in the herd:

- \*an extra 2 pounds of lactation feed consumed per day could save about 22 pounds of lactation weight loss
- \*2<sup>0</sup>F temperature rise over the sow's comfort zone reduces feed intake by 3.5 percent and of course milk production by 2.5 percent
- \*high gestation feeding levels creates poor lactation appetites
- \*offering lactation feed to appetite multiple times each day enhances intake

## **SUMMARY**

Selection for breeding herd output and lean pork are critical components of making U.S. pork production competitive in the global market. If it creates a tendency for lower intakes initially, we must compensate with managerial interventions. Extra attention to diet and body composition through every breeding phase will be very important. Shown below are several Suther Feeds Breeding Herd Nutrition Program features that will enhance longevity of modern high output herds:

- \*SF 45P Base is formulated to major mineral levels approximately 20 percent over NRC 98 minimum for growing pigs over 150 pounds.
- \*Sow Balancer Program is concentrated approximately 40 percent higher than NRC 98 for major minerals.
- \*Liquid Gold not only concentrates caloric density of a lactation ration, it stabilizes flavor tones between feed batches and grain sources.