

IMPACT OF BOAR SELECTION IN OUR COMMERCIAL SWINE OPERATION

R. N. Hankes
Fairbury, Illinois

We have a family farm partnership in central Illinois. Our operation has grown steadily over the last few years to the point where we now have a 270 sow operation farrowing 12 litters per week and marketing 5000 hogs per year.

When considering the impact that a boar has on a commercial swine farm, I feel the two primary areas are health and genetics. Actually, from a health standpoint we hope that new boars do not have an impact on our herd. To insure this we isolate new boars at a site 2½ miles from the main swine farm. After 4 to 6 weeks of isolation, all new boars are tested for brucellosis, pseudorabies, haemophilus pneumonia, leptospirosis, and TGE. We by no means have a perfectly clear herd, but the problems we have are not major. Our health program is to avoid bringing any new diseases to our farm and keeping our current problems at a low level.

Obviously, the genetic impact from a boar is critical since he accounts for 50% of his offspring's genes and about 80% of potential genetic improvement if boars are the only herd additions. I would like to break down a boar's genetic impact into the areas of reproduction, growth and feed efficiency, and carcass merit. At this time, I would like to review a case study of some potential differences in herd boars using our actual on-farm figures.

Reproduction

Conception rate is a key factor in any swine operation. We closely monitor conception rate and cull all boars with less than a 90% rate on sows. Contrary to some people's beliefs we have found great differences in individual boars in the areas of numbers of pigs born alive (NBA), percent saved, and weaning averages. The table below lists three different boars that each sired 20 or more litters farrowed between June and October of 1982.

<u>Boar #</u>	<u>NBA</u>	<u>% Saved</u>	<u>Weaning Ave.</u>
D2	9.3	73	6.8
H5	10.2	87	8.9
C1	11.9	75	8.9

Boar D2 is obviously the poorest and is gone from our farm. H5 and C1 each had the same weaning average. However, they came to this average in two different ways. H5 had a smaller NBA and an excellent survival rate, while C1 was the opposite. According to our 1981 Illinois Farm Business Farm Management records, our farm's returns above feed cost were \$347 per litter, or \$43 per pig. If these two boars each sired 1.5 litters per week (78 per year) then difference in value to our operation is a huge \$7043.40. [\$43/pig x 2.1 (additional pigs per litter) = \$90.3 x 78 litters = \$7043]

Feed Efficiency

Even today with high building costs and high interest rates, our greatest single cost is still feed. Our 1982 running herd feed efficiency is 3.68, and 20.5% of our feed is for the sow herd. This makes our birth to market feed efficiency 2.93. Consider a 10% difference between boars D2 and H5.

D2:	3.08 x 215# pig = 662# x 8 pigs/litter = 5296# feed/litter
H5:	2.78 x 215# pig = 598# x 8 pigs/litter = <u>4784# feed/litter</u>
	Difference: 512# x 6¢/lb = \$.31/litter

Carcass Merit

The ultimate purpose of producing pork is to provide a product that the consumer will demand. Lean, meaty hogs are going to keep people coming back to the meat counter and thus keep us pork producers in business. Using the new Pork Value chart, let us look at the difference of .2 inch difference in backfat between H5 and D2's pigs. The chart shows a pig with .8" backfat at 102% the value of one with 1.0" backfat.

215# pig	
x \$.55 per pound	
\$118.25 pig value	
x 2% (leanness bonus)	
\$2.37 x 8.9 pigs/litter = \$21.09 bonus/litter	
	<u>x 78 liters/year</u>
	\$1645

Conclusions

Using our farm's records, the resulting potential difference between boars H5 and D2 is:

\$ 7,043	Extra pigs
2,418	Feed savings
<u>1,645</u>	Carcass bonus
\$11,106	

That is a tremendous difference that shows that there are great differences in the value of individual boars. In order to attain maximum performances, we buy boars with the best records from the best herds. Remember, boars will breed back to the genetic average of their grandparents. After we purchase boars, they are evaluated in our operation and the poorest ones culled out. In many cases, we are more concerned about losing ground rather than making dramatic improvements. I feel that it is certainly incumbent upon the seedstock producer to do a more thorough job of record keeping. The challenge is to provide the proven breeding stock that will move the industry forward. Commercial pork producers are willing to compensate seedstock producers for this type of boar.