Selecting Replacement Gilts

Richard Hollandbeck

Follow this and additional works at: https://docs.lib.purdue.edu/agext
Pigs to Pork

https://docs.lib.purdue.edu/agext/94

For current publications, please contact the Education Store: https://mdc.itap.purdue.edu/
This document is provided for historical reference purposes only and should not be considered to be a practical reference or to contain information reflective of current understanding. For additional information, please contact the Department of Agricultural Communication at Purdue University, College of Agriculture: http://www.ag.purdue.edu/agcomm
This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information.
Selecting Replacement Gilts

Richard Hollandbeck, Animal Sciences Department

Maintaining a highly productive breeding herd through successive generations is perhaps the most difficult, and certainly the least understood, problem of the swine industry. To improve productive capacity with each successive generation of animals adds to the difficulty. There is no certain mark or set of visible characteristics that distinguishes highly productive gilts from those of lesser productivity. Yet a continually improving high level of breeding performance is essential for profitable production of market hogs or seed stock.

Breeding--Science and Art

Improving hogs through successive generations is both a science and an art. Genetic research work since 1900 has added greatly to man's knowledge of how specific characteristics are transmitted from one generation to the next. These results have given the knowledgeable breeder considerable control over some aspects of his work. For example, now swirls, certain defects such as hernia, cryptorchidism, and certain color abnormalities are explainable and controllable by the breeder.

Heritability estimates for many of the economically important traits regarding type, conformation and carcass characteristics; production aspects of rate of gain and feed utilization; and reproductive efficiencies have been determined. By applying these technologies, the breeder can improve along well defined paths with predictable results. The reproductive physiologists have added much information explaining body functions and how they relate to reproduction.

These scientific contributions are additional tools which the breeder can use to build a continually improving herd. These tools supplement, not replace, his "art" tools which have been used for centuries.

There is an indescribable art in selecting gilts which will contribute to the continual improvement of the breeding herd through successive generations. The old adage "like begets like" developed from his intimate acquaintance with various strains and long-time study of how characteristics reappear in offspring. Recognition of prepotency is also a part of the art. Thoughtful breeders develop a "sixth sense" in estimating probable breeding performance. Underlying all of this is a clear conception of the characteristics which contribute to the usefulness of the animal in the herd.

Use More Tools

Use of additional tools to select replacement gilts can help build a continually improving herd. Over a period of time, you could build a usable hog house with only a hatchet and logs. But a more usable hog house can be built in less time by using additional tools such as a sheet of plans, handsaw, square, level, plumb, miter box, ham-
mer, nails and dimension lumber. Use the tools supplied by the geneticists and reproductive physiologists along with the art of husbandry for a most rewarding result in herd improvement.

The choice of individual tools will logically vary according to current production levels and to desired rate of improvement. It takes a more refined set of tools, more patience, more care, more application of skill for finishing-carpentry then for framing-carpentry.

Start Where You Are

One of the most important things a producer can do is to put some real pressure on the selection of replacement gilts from his own herd. This involves two things--RECORDS and GOALS.

Keep simple records on (1) brood sow productivity, (2) gainability (and possibly feed conversion), and (3) carcass quality.

Make the standards realistic. Hogs that can't make 200 pounds in 175 days under good conditions just don't have a place on the modern hog farm. The carcasses of these market hogs should be meaty with a maximum of 1.6 inches of back fat. A good brood sow should have an even temperament and permit you to enter the pen or stall at any time. A well-developed udder with 12 to 14 sound, evenly spaced teats is a must. Look for high litter weights (170 pounds and up) at 35 days of age. This indicates the sow's nursing ability and the vigor of her pigs. Large litters of big pigs farrowed and raised (8 or more) is the first real purpose of a sow.

Simple Records Pay

Simple records taken at birth, at 35 days of age and again at about 150 pounds form the basis of a good gilt selection program. (These records also measure your level of management).

At birth, record the ear notch of the pigs for identification. By weighing the pigs within the litter you can measure the genetic and management influences. Light birth weights indicate either a poor producing sow or a sow that was not properly fed and cared for during gestation, or maybe both. Sow temperament can also be noted. Teat number, placement and soundness should be recorded.

At 35 days of age a litter weight indicates milking ability of the brood sow. Survival rate should also be noted.

When the shoats weigh about 150 pounds, individual weights serve as a measure of growth rate. If shoats have had an equal opportunity to eat on a full-fed basis, individual weights are also a good indicator of feed conversion rate. The biggest for their age are, in general, the best converters of their feed. Back fat probes, corrected to 200 pounds, ferret out the lean meaty gilts. It is convenient to also note type at this time.

Now Go

By the records you can appraise your herd, adopt realistic genetic goals or standards and go!

Use as many of these culling standards as possible. With this and common sense (and the "art" of husbandry) you reject gilts that are small, slow maturing, stunted and off type, have unsoundness and are from low producing sows. Then from the gilts that remain--select the biggest, leanest gilts from the largest, heaviest litters from the best milking, best natured sows from the most consistent producing family lines.
A "finishing carpenter's" tool that increases the chances of making the correct selection at this time is a selection index. This index gives a single numerical value to each gilt. Then select the gilts with the highest number. Select a few extras—maybe 1 1/2 times as many as you will need.

Turn these candidates out on a good pasture on a growing ration. Just prior to breeding make a final visual selection.
Pigs should be ear-notched for identification.

Notching system: right ear = litter number; left ear = pig number.

Individual weights at about 150 pounds help measure performance.

Backfat probes of gilts ferret out the lean litters.

Gilts need moderate length, good top and underline and strong feet and legs.

Weights and records will help you decide which pigs to keep.

From the rear, check natural turn over the loin, meatiness of hams and width between rear legs.