

Buying A Herd Boar

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The herd boar contributes 50 percent genetically to the pig crop; the sow contributes 50 percent of the genetic characteristics of a given pig. One of the best ways to improve income from your hog business is to improve, through the boar, the quality (meatiness) of the hogs you are marketing. The boar in a closed herd is your only source of added genetic material, and the last three sires in a herd represent 87% of genetic change.

Anticipate the need for a herd boar and make the decision to buy one well ahead of the time he will be used. This gives you an opportunity to determine what your needs are and where to look for a boar and to get the boar in condition for the breeding season.

Consider the purchase of a herd boar as an investment. If he is cared for and used properly, he can have a long, productive life. If not, the results can be disappointing.

What Do You Need in a Herd Boar?

What is needed in a herd boar depends on several factors. A major decision, if crossbreeding, is which breed to choose. Purebred breeders have no choice, but commercial producers need to make this decision depending on their breeding programs.

You need to know the strong and weak points of your sow herd and where it needs improvement most. This knowledge will help you select a boar that will improve the weaknesses in the herd without sacrificing strong points.

Selection of a herd boar should be based on one or more of the following: (1) type and quality, (2) performance testing information, (3) pedigree and ancestry, (4) show ring performance, (5) health, and (6) structural soundness.

(1) Type and Quality (or individuality)

Type can be referred to as a combination of characteristics appropriate for a special kind of use, such as meat type. Selection should be for boars that approach the ideal or standard of perfection for meat type; cull those that fall short of these standards.

The breeder should have knowledge of what a meat-type hog looks like—basically a combination of size, smoothness, quality, and conformation. These factors can usually be

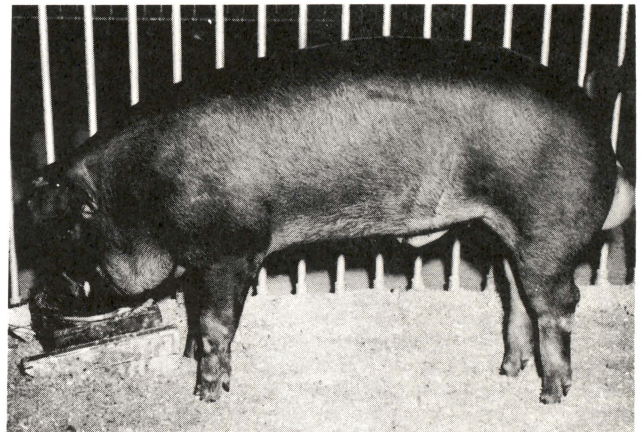


Figure 1. A Good Kind, Thoroughly Tested: This is a breed grand champion, Missouri State Fair—five days out of a test pen at the University Swine Evaluation Station where he indexed in the top 1/3 of boars on test. He is from a certified meat sire and production registered dam and a certified litter.

determined by visual observation. Also, look for good spacing of teats, sound feet and legs, and a trim, smooth, well balanced animal with indication of muscling. (See Figure 1.) Most breeders are fairly proficient in evaluating a boar based on these factors.

(2) Performance Testing Information

Performance testing information is important in selecting a herd boar. Some testing data to take into consideration are: age at 230 lbs., back fat probe, adjusted average daily gain, feed efficiency, and carcass quality of littermate barrows or gilts. Another important consideration, when available, is loin eye area estimate as measured by ultrasonic sound (sonoray) or percent lean as determined by EMME (Electronic Meat Measuring Equipment).

Heritability estimate. Heritability measures the influence of inheritance (in percentage) in determining the variations in traits. It is the amount of genetic improvement transmitted to offspring from superior parents.

Some traits are influenced by inheritance more than others and some are of greater economic value than others.

Heritability of Production and Carcass Traits of Swine

Trait	%
No. of pigs farrowed	15
No. of pigs weaned	15
Weight of litter at weaning	15
Growth rate	30
Weight of pigs at 5-6 months	20-30
Economy of gain (feed efficiency)	40
Body length	60
Number of nipples	60
Type	25-35
Carcass length	60
Loin eye area	50
Back fat thickness	45
Percent of lean cuts (carcass weight)	35

Example: Calculating expected improvement in length, using heritability estimate:

Average length of the sow herd	28 in.
Length of a selected boar	32 in.

Difference 4 in.
 $4 \text{ in.} \times \frac{1}{2} \text{ (sow's contributed half)} \times 60\% = 1.2 \text{ in.}$ or an average improvement of about 1.2 inch per pig above the 28 in. sow average. This means you would expect the progeny from this mating to average $28 + 1.2 = 29.2 \text{ in.}$

(3) Pedigree and Ancestry

These items are important and should be considered desirable only when close relatives such as sire, dam, and (to a lesser degree) grandsire and granddam are outstanding individuals. Check for Certification, Pacesetter, or Superior Meat Sire on the sire side of the pedigree. Check on Production Registry information on the dam side.

(4) Show Success

Breed and carcass shows are useful to a breeder in establishing and identifying strains that are producing good carcasses. Show ring placings are based on an opinion; however, the judge is usually a well qualified person connected with the swine industry.

The most useful kind of show is a carcass barrow show where the pigs are fed on test and performance data are obtained; then they are observed on foot, and cut-out data are obtained.

(5) Health

Other important factors to take into consideration are the health of the herd from which you plan to purchase the boar and the health of the boar himself. A negative blood test for brucellosis, leptospirosis, and pseudorabies is a "must." The boar should be vaccinated for erysipelas. He should be free of internal and external parasites.

Where Can You Find a Good Replacement Boar?

After you determine what you need in a herd boar, the next problem is where to find him. Missouri has a lot of good

purebred breeders representing most breeds.

Herd boars can be purchased at public auction or at private treaty. Many purebred breeders hold one or more annual production sales with large numbers of performance tested boars in each sale. Several state and local breed associations hold annual auction sales. In addition, several performance tested boar sales, representing most breeds, are held in Missouri each year. You can find the time and place of these from local University of Missouri Extension Centers or from newspaper and magazine advertising.

Most boars are purchased at private treaty. Sometimes not all the desirable information on performance is available. Therefore, many buyers are securing boars from herds that are doing performance testing. If a performance tested boar can't be purchased, perhaps you can obtain the next best thing, one closely related to some that have been tested or from sires and dams that have had offspring with performance testing data.

What About Hybrid Boars?

Hybrid boars are available from several commercial companies. Knowing the quality of boars produced and the reputation of the breeder is as important when buying hybrid boars as when buying purebreds.

In general, best results are obtained when hybrid boars are mated with a hybrid line of females specifically developed for crossing. Some hybrid vigor may be lost when using a hybrid boar from a foundation line, only giving a backcross response.

Hybrid boars with superior records for highly heritable economic traits will produce results equal to purebreds with little difference in variation. These boars and their progeny will show some hybrid vigor in reproduction traits such as livability and vigor. Most hybrid boars are developed from two or more breeds.

Extension agents, college personnel, breeders, and others can supply information to buyers on where to look for herd boars.

Suggested Selection Standards

Boars that meet the following standards are good candidates for herd sires. If possible, select boars from the top 50 percent of the group they are tested in.

Trait	Standard
Litter size	10 or more farrowed and eight or more weaned.
Underline	12 or more fully developed, well spaced teats.
Feet and legs	Medium to large bone, wide stance front and rear, free in movement, good cushion to feet, equal sized toes.
Age at 230 lbs.	160 days or less
Feed efficiency	275 lbs./cwt. gain or less
Backfat probe at 230 lbs.	1 in. or less
Loin eye area	5 in. or more
Daily gain (60 to 230 lbs.)	2 lbs./day or higher