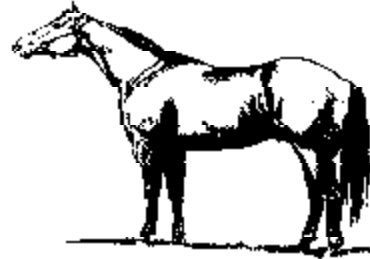


Animal Science Horse Information Series

Phone: 865-974-7294

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HOW TO SELECT STALLIONS

**Dr. Frederick Harper
Extension Horse Specialist
Animal Science Department
University of Tennessee**

and

**Dr. Benny Bell
Associate Professor
Animal Science Dept.
University of Tennessee**

Personal preference is fine when you are selecting the color of your car. But when selecting a stallion to bred to your mare, throw personal preference out the window. Your stallion selection decisions should be based only on sound genetic principles.

The object of horse breeding is for each generation to be superior to the preceding one. Selection permits certain individuals in a population to produce more offspring than others.

Using the best information to estimate breeding value, the horse breeder selects which stallions and mares will be the sires and dams of the next generation.

So, you need to consider three selection methods in choosing a stallion to breed to each mare. The primary selection criteria are phenotype, progeny test and pedigree.

Phenotypic selection considers a horse's performance record and conformation, which must be compared to that of other stallions. Phenotypic selection is valuable for medium to highly heritable traits. There is evidence that most performance ability is in this range of heritability.

Selection based on the stallion's performance will be ineffective for lowly heritable traits, particularly if environmental influences are not taken into account.

To use phenotypic selection, the stallion must be old enough to express his performance ability. So, a young stallion with no performance record is at a disadvantage.

Progeny test considers the performance merit of a stallion's foals to predict the stallion's breeding value. It can be the most accurate selection method. With a large number of foals, you can rank stallions with near certainty, even when the trait has a fairly low heritability. This selection may be biased by preferential treatment of certain offspring or culling of inferior ones.

The stallion must be old enough to have foals of performance age. So, most stallions will be 7 years old or older before they have 2-year-old performers.

The performance records of parents and other relatives are evaluated to estimate the breeding merit of the stallion in pedigree selection. Some horse breeders over-emphasize

pedigree selection. It is most valuable in young stallions for traits not yet expressed, such as performance.

In pedigree selection, the most emphasis should be placed on a stallion's close relatives, since they have more genes in common with the stallion. Great-great grandsires are not as valuable as the sire, the dam or half-siblings. To be successful, breeders should only consider the first two generations.

Pedigrees must be considered for future marketing. But, rarely should the pedigree be given as much emphasis as the stallion's own performance record.

Some mare owners think that a stallion will solve all their mare's faults. Owners need to be objective in evaluating each mare and her breeding value in the process of stallion selection.

They can use a complimentary breeding method. If a mare has bad knees or tends to produce foals with bad knees, she should be bred to a stallion that has good knee conformation and has sired foals with good knees.

A mare that has no performance record or has not produced any foals to perform should be bred to a stallion which is a successful performer. If old enough, his foals also should have performed well in desired events. Pedigree selection can aid the mare owner in these situations. The mare's pedigree, reflected in the first two generations, should represent families that are successful performers (sire/produce performers). Mares that have not performed or produced performing foals may not produce a world's champion from such mating, but she could produce a foal that performs well.

The best method of stallion selection uses a combination of the three selection methods. When a stallion has a large number of performance age foals, little is gained by including other information in the evaluation of the stallion's breeding value.

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Peer reviewed by Dr. Bill Backus and Dr. Arnold Saxton.

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