

# CROSSBREEDING



Crossbreeding is when you mate animals of different breeds or breed types. The major objective of crossbreeding is to maximize hybrid vigor (or heterosis), which is most important for traits associated with reproduction, survival, and overall fitness. Another advantage to crossbreeding is the breed complementarity which results from the combining of different breed types.



Hybrid vigor is the superiority of the crossbred offspring compared to the average performance of its parents. There are effects of heterosis in the crossbred offspring, dam, and sire. Heterosis is usually maximized when crossbred females are bred to a male of a third breed or type.

Breed complementarity requires dissimilar sires and dams. Complementarity results not only from the favorable combination of different types but also from the manner in which they are combined. To be effective, it is very important that breeds be used in their appropriate roles. For example, large sires should be bred to smaller dams, not vice versa.



Crossbreeding can also be used for the purpose of "grading up" or for creating composite or new breeds. Essentially all breeds started out as crossbreeds.



There are numerous crossbreeding systems that can be utilized to achieve the desired results. The most common crossbreeding systems are rotational, terminal, and roto-terminal. In a rotational crossbreeding system, dual-purpose breeds are alternated as sires.

Terminal sires are utilized to produce superior crossbred market animals. All offspring from a terminal cross are marketed and replacement females must be purchased, or another portion of the flock/herd needs to be bred to a maternal sire (roto-terminal).



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