

An Editorial Note on Animal breeding

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Editorial

Animal breeding is a discipline of animal science concerned with determining the genetic value (estimated breeding value, EBV) of animals (using best linear unbiased prediction and other approaches). Breeding animals with higher EBV in terms of growth rate, egg, meat, milk, or wool output, or other desirable qualities, has changed livestock production around the world. The scientific theory of animal breeding is based on the pioneering work of Sewall Wright, Jay Lush, and Charles Henderson, and includes population genetics, quantitative genetics, statistics, and, more recently, molecular genetics.

Breeding stock

A group of animals utilised for the purpose of scheduled breeding is referred to as breeding stock. When people are attempting to breed animals, they look for specific features in purebred animals, or they may intend to employ crossbreeding to create a new type of stock with unique, and apparently extraordinary powers in a particular field. For example, "breeding stock should be sound, quick growing, muscular, lean, and reproductively efficient" when breeding pigs for meat. In horses, "subjective selection of breeding stock" has resulted in numerous breeds with distinct performance characteristics. While animal breeding is popular in agricultural settings, it is also a frequent technique for selling pets such as cats, dogs, and horses.

Backyard breeding

A backyard breeder in the United States is someone who breeds animals for profit, generally without certification. In certain circumstances, animals are inbred only for their appearance, with little consideration for their health. The phrase has a negative connotation. Puppy mills are related with backyard dog breeders who have a large number of breeding animals. The USDA licences the majority of puppy mills.

System of breeding

In general, there are two types of breeding methods:

1. Inbreeding is defined as the breeding of related animals as sire (male) and dam (female).
2. Out breeding refers to the practise of breeding unrelated animals as male and female.

Inbreeding: Inbreeding, or the mating of related individuals, frequently causes a shift in a trait's mean. Inbred animals' performance reduces reproductive efficiency and can cause a variety of problems. As a result, this type of breeding is not used to improve cattle. Inbreeding, on the other hand, is done on purpose to ensure genetic consistency in laboratory populations and to produce crosses (animal and plant breeding). However, inbreeding occurs unintentionally when tiny populations are kept for breeding and selection.

Breeding on the move (out breeding): There are two types of out breeding systems, i.e. breeding of unrelated animals:

1 Crossbreeding: is the mating of two animals that are of different breeds. Hybrid vigour or heterosis refers to the superior qualities found in crossbred progeny as a result of crossbreeding.

2 Grading up: is the breeding of animals from two different breeds, in which animals from an indigenous breed/genetic group are mated with animals from an enhanced pure breed for numerous generations in order to achieve the improved breed's superior features.

In a grade herd, grading up refers to the employment of purebred sires of the same breed on a regular basis. The graded animals may attain practically purebred standards by the fifth generation.

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