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Preface

Breeding animals is the deliberate mating of animals with desirable genetic qualities in order to preserve or improve those traits in subsequent generations. This entails estimating the genetic worth of individuals in cattle for features like growth rate and yield of goods like eggs, milk, or meat.

Breeding is the regulated reproduction of domestic animals to enhance desired characteristics. For generations, people have changed domesticated animals to better meet their requirements. Selective breeding makes use of knowledge from numerous scientific fields. Among these include molecular genetics, reproductive physiology, computer science, statistics, and genetics.

Breeding goals can be explained in terms of altering the genetic composition of an animal population, where population is referred to as a certain breed. Choosing breeding objectives and creating a successful breeding programme are often difficult tasks. Market demand ultimately determines breeding objectives, but it is challenging to foresee what customers will desire several years in ahead. Sometimes the product that was deemed desirable in the original breeding purpose is no longer in demand by the market. Breeders must then modify their procedures which lead to less effective selection than if the new breeding goal had been employed from the start.

The application of traditional quantitative genetics for the enhancement of beef, swine, and dairy animals is a specialization of the breeding and genetics department, both historically and more recently. More recently, special mouse strains have been developed to examine metabolic, composition, and reproductive capabilities, in order to demonstrate the likelihood that the knowledge gained will be useful for livestock species. The applied breeding techniques used today for many domestic animal species are attempted to be described in this book.

Author