



223 Research paper

## **Genetic Improvement of Livestock for Milk Production**

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2012 Milk Production – Advanced Genetic Traits, Cellular Mechanism, Anir

### **In Significant Impact Groups:**

Breeding for disease resistance or robustness \

Species targeted: Dairy;

Age: Adult;

### **Summary:**

This chapter presents issues pertaining to genetic improvement of livestock for production. It covers aspects from basic population to quantitative genetics to molecular genetics, and their application in animal breeding. The use of specific gene information could help to increase rates of genetic improvement, and open opportunities for using additive and non-additive genetic effects of domestic species, provided wise improvement goals are used and this new technology is optimally used together with the so called 'traditional' or 'conventional' methods based on phenotypic and genealogical information. A rational use of the molecular methodologies in milk production genetic improvement requires the simultaneous optimization of selection on all the genes affecting important traits in the population. The maximum benefit can be obtained when these techniques are used in conjunction with reproductive technologies like artificial insemination, and collection and production in vitro of embryos to accelerate genetic change.

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### **Where to find the original material:**

<https://www.intechopen.com/books/milk-production-advanced-genetic-traits-cellular-mechanism-animal-management-and-health/genetic-improvement-of-livestock-for-milk-production>;

<http://dx.doi.org/10.5772/50761>

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