



Scientific Selection of Dairy Cattle for Higher Milk Production

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Dairy farming profitability depends largely on the scientific selection of dairy cattle. This article provides detailed information on breed selection, body conformation traits, udder characteristics, production performance, reproductive efficiency, health parameters, and behavioral attributes required for selecting high-yielding dairy animals. Proper selection improves milk production, longevity, adaptability, and economic returns.

Introduction

Livestock plays a vital role in agricultural economy, particularly in developing countries like India. Dairy cattle contribute significantly to rural income generation and nutritional security. Selection of genetically superior dairy animals is one of the most important management practices determining productivity and profitability. Improper selection leads to poor milk yield, reproductive disorders and increased maintenance cost.

Methodology

The present article is based on field observations from dairy farms, interaction with farmers, and review of scientific literature related to livestock production management. Selection criteria were evaluated using physical examination, milk production records, reproductive history, health status, and adaptability parameters.

Results and Discussion

Animals possessing dairy temperament, wedge-shaped body conformation, well-developed udder and efficient reproductive performance were found to be superior milk producers. Indigenous breeds exhibited better heat tolerance and disease resistance, whereas crossbred animals produced higher milk yield under improved feeding and management conditions. Body conformation plays an important role in determining productive efficiency. A deep barrel indicates higher digestive capacity and better feed utilization. Strong legs and feet are essential for longevity and mobility of dairy animals.

Udder morphology significantly influences milk production and milking ease. Large, soft and uniformly developed udders with properly placed teats were associated with higher milk yield and lower incidence of mastitis.

Reproductive efficiency is another key determinant of dairy profitability. Animals with short calving intervals, early maturity and regular estrus cycles maintained consistent milk production throughout their productive life.

Health evaluation revealed that animals free from lameness, parasitic infestation and metabolic disorders demonstrated improved productivity and reduced veterinary expenses.

Comparison Table for Selection of Dairy Cattle

Selection Criteria	Good Dairy Animal	Poor/Unsuitable Animal
Body Shape	Wedge-shaped, long and deep body	Short, compact and fleshy body
Udder Structure	Large, soft and well attached	Pendulous or uneven udder
Milk Veins	Prominent and tortuous	Poorly visible
Temperament	Docile and manageable	Aggressive or nervous
Milk Yield	High and consistent	Low and irregular
Reproductive Efficiency	Regular calving interval	Delayed breeding
Health Status	Active, disease free	Weak and disease prone
Adaptability	Adjusts well to environment	Poor adaptability

Practical Guidelines During Purchase of Dairy Cattle

Observe animal during milking before purchase.

Check milk yield records and lactation stage.

Prefer animals in second or third lactation.

Avoid animals immediately after calving.

Seek veterinary examination before final purchase.

Conclusion

Scientific selection of dairy cattle ensures sustainable dairy development. Selection based on production potential, reproductive efficiency, udder quality and health status helps farmers achieve higher profitability. Adoption of scientific selection practices combined with proper feeding and management can significantly enhance dairy productivity.