Unit 6: Beef Cattle Production and Management

Beef Cattle Breeds and Methods of Selection

Beef Cattle Breeds: In tropical countries, there are no specialized beef cattle breeds, but certain breeds like Boran, Brahman, Africander, and Ankole-Watusi are commonly used for beef production. These breeds are selected based on characteristics such as weaning weight, slaughter weight, carcass percentage, and meat quality. Crossbreeding with local cattle is also practiced to improve beef production and productivity. Each breed has specific traits that make them suitable for beef production:

- **Boran:** Known for excellent meat quality, fast growth, and hardiness.
- **Brahman:** Resistant to heat and insects, strong and hardy, making them ideal for tropical climates.
- **Africander:** Good resistance to tick-borne diseases and known for their fertility and maternal qualities.

Key Terms:

- **Beef:** Meat from cattle.
- **Fattening:** The process of increasing fat or muscle in cattle.
- **Beef Cattle:** Breeds primarily used to produce meat.
- **Dual/Multi-Purpose Breed:** Breeds used for beef, dairy production, work, etc.

Temperate Cattle Breeds: These breeds, often found in the USA and Europe, are known for their beef production and are selected for specific traits like body color, horn shape, and the absence of a hump. Examples include:

- **Hereford:** Hardy and adaptable to various climates.
- **Angus:** Known for strength and adaptability to cold climates.
- **Charolais:** Hardy, easy calving, and produces high-quality meat.

Beef Cattle Traits for Selection: When selecting beef cattle, certain traits are essential to ensure improved production:

- **Weaning Weight:** Weight of calves around 205 days old, indicating growth potential.
- **Dressing Percentage:** Ratio of dressed carcass weight to live animal weight.
- **Birth Weight:** Weight of a calf at birth.
- **Carcass Traits:** Include marbling, fat thickness, and meat quality.

Beef Cattle Selection Methods: Selection is crucial for genetic improvement in beef cattle. It involves choosing animals with good performance in traits like meat yield, growth rate, feed intake, and disease resistance to be the parents of the next generation.

Key Term:

- **Feedlot:** A facility where animals are fed intensively before slaughter.

This summary highlights the important concepts and characteristics involved in beef cattle breeds and their selection for improved production.

6.2. Beef Cattle Feeds and Feeding Methods

6.2.1. Beef Cattle Feeds

Types of Feeds:

- **Dry Feeds:** Include hays, grains, straw, and others like corn cobs, soybean hulls.
- **Green Feeds:** Fresh pastures or green chop, which are freshly chopped roughages given directly to livestock.
- **High Moisture Feeds:** Consist of feeds like silage, high-moisture grains, and wet byproducts.

Feed Resources: Feed resources vary based on factors like agroecology, season, and the level of farm operation. In Ethiopia, common feed resources include natural pastures and crop residues, while commercial fatteners use specific protein and energy sources like noug seed cake and wheat bran.

Feeding in Commercial Farms: In commercial feedlots, beef cattle are typically fed roughage first, followed by concentrate feeds twice a day, based on their nutritional needs.

6.2.2. Beef Cattle Feeding Methods

Nutrient Requirements: Beef cattle need nutrients for maintenance, reproduction, lactation, and growth. The amount of each nutrient depends on factors like age, breed, and production level.

Factors Influencing Nutrient Needs:

- **Age and Weight:** Older or heavier animals require more energy and protein.
- **Breed:** Heavier-muscled breeds have higher maintenance needs.
- **Production Level:** High-milking breeds need more nutrients.
- **Activity:** Increased activity or harsh weather increases energy needs.

- **Environmental Conditions:** High temperatures can reduce feed intake.
- **Physiological Status:** Pregnancy and lactation increase nutritional needs.

Feeding Adjustments: Producers must adjust feeding strategies based on changes in environment, animal activity, and reproductive status to ensure optimal animal performance.

Key Takeaways:

- Understanding the different types of feeds and their appropriate use is crucial for maintaining healthy beef cattle.
- Feeding methods should be tailored to the specific needs of the cattle, considering various factors that affect nutrient requirements.

Strategies of Disease Control in Beef Cattle

In Ethiopia, effective disease control in beef cattle involves a risk-based strategy focused on identifying areas of infection and those at high risk. Key strategies include:

1. **Availability of Information**: Accurate and up-to-date information on disease prevalence and spread is crucial.
2. **Proper Diagnosis**: Early and correct diagnosis helps in timely treatment.
3. **Vaccination**: Using vaccines of appropriate quality is vital for preventing diseases.
4. **Veterinary Services**: Functional and accessible veterinary services ensure proper treatment and disease management.
5. **Use of Anthelminthic Drugs**: These are used to treat internal parasites.
6. **Hygiene Practices**: Regular cleaning of animal housing, proper drainage, and rotational grazing are essential measures to prevent the spread of diseases.