

Class : 9<sup>th</sup>

Chapter : 8

# PRODUCTION OF FARM ANIMALS

## Exercise Solved

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1. What is the primary purpose of milch animals?

- a) Meat production
  - ✓ b) **Milk production**
  - c) Draught power
  - d) Wool production
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2. Which of the following is an example of a draught animal?

- a) Cow
  - b) Goat
  - ✓ c) **Ox**
  - d) Chicken
- 

3. What is the main advantage of the intensive livestock production system?

- a) Low input costs
  - ✓ b) **High productivity**
  - c) Use of natural grazing
  - d) Low labor requirements
- 

4. Which disease is common in poultry?

- a) Foot-and-mouth disease
  - ✓ b) **Avian influenza**
  - c) Brucellosis
  - d) Mastitis
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**5. What is a major challenge in animal breeding?**

- a) Lack of market access
  - ✓ **b) Inadequate record-keeping**
  - c) Overproduction of fodder
  - d) Excessive use of antibiotics
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**6. Which livestock production system involves seasonal migration of animals?**

- a) Intensive system
  - ✓ **b) Nomadic system**
  - c) Zero-grazing system
  - d) Commercial system
- 

**7. What is the primary cause of fodder shortage?**

- a) Overproduction of crops
  - ✓ **b) Climate change and droughts**
  - c) Excessive use of fertilizers
  - d) Lack of veterinary services
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**8. What is the economic importance of livestock in Pakistan?**

- a) It contributes 3% to GDP
  - ✓ **b) It provides employment to over 8 million families**
  - c) It is the largest exporter of dairy products
  - d) It has no significant impact on the economy
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**9. Which of the following is a problem in animal marketing?**

- a) High demand for livestock products
- ✓ **b) Dominance of middlemen**
- c) Excessive use of modern technology
- d) Overproduction of fodder

Solved Short Questions – Chapter: Livestock Production

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### 1. What are the two main purposes of raising farm animals?

The two main purposes of raising farm animals are:

- **Milk and meat production** for food.
  - **Draught power and manure** for agricultural activities and soil fertility.
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### 2. Name two common diseases in cattle and buffaloes.

- **Foot-and-Mouth Disease (FMD):** A viral disease affecting hooves and mouth.
  - **Mastitis:** A bacterial infection of the udder causing swelling and reduced milk production.
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### 3. What is the difference between the extensive and intensive livestock production systems?

- **Extensive System:** Animals graze on open lands with low inputs and low productivity.
  - **Intensive System:** Animals are kept in confined areas with high inputs and high productivity.
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### 4. How does climate change affect fodder availability?

Climate change causes **droughts, irregular rainfall, and extreme temperatures**, which reduce the growth of fodder crops, leading to shortages and poor livestock nutrition.

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### 5. Why is animal health important for sustainable farming?

Healthy animals are more productive and require fewer medical treatments. **Animal health improves milk and meat quality, reduces losses, and supports long-term farm profitability.**

☐ Long Question 1: Explain the economic importance of livestock in Pakistan. Discuss its contribution to food security and rural livelihoods.

### Introduction:

Livestock is the **backbone of rural economy** in Pakistan. It supports millions of small farmers by providing food, income, and employment. It contributes significantly to **GDP, exports, food security, and daily nutrition**.

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## 💰 Economic Importance of Livestock in Pakistan

### 1. Contribution to GDP:

Livestock contributes about **60% of the agriculture sector's output** and over **11% to the national GDP**.

### 2. Employment Source:

Over **8 million rural families** depend on livestock for their livelihood, especially women and landless farmers.

### 3. Export Earnings:

Dairy products, leather, wool, and meat are exported, bringing foreign exchange.

### 4. Support to Industries:

Leather, dairy, textile, and meat processing industries depend on livestock.

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## 🍴 Role in Food Security

- **Milk & Dairy:** Primary source of protein and calcium for rural and urban families.
  - **Meat & Eggs:** Fulfill protein needs and nutritional balance.
  - **Animal Products:** Ghee, butter, yogurt, and cheese are widely used.
- 

## 📦 Support to Rural Livelihoods

- **Income Source:** Milk, animals, and manure are sold for cash.
  - **Draught Power:** In some areas, animals are still used for plowing and transport.
  - **Manure for Soil:** Improves soil fertility, reducing the need for chemical fertilizers.
- 

## ✓ Conclusion:

Livestock ensures **nutritional security, economic stability, and poverty reduction** in Pakistan's rural areas. Strengthening this sector is essential for national progress.

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□ Long Question 2: Describe the challenges faced in animal breeding and suggest solutions to improve breeding practices.

### △ □ Challenges in Animal Breeding

1. **Inadequate Record-Keeping:**  
Farmers don't maintain breeding or health records, leading to poor selection.
  2. **Lack of Awareness & Training:**  
Most farmers have no knowledge of genetic improvement or breed standards.
  3. **Uncontrolled Mating:**  
Random mating results in **low productivity and genetic dilution**.
  4. **Poor Veterinary Services:**  
Shortage of AI (Artificial Insemination) facilities, technicians, and disease control.
  5. **Limited Access to Improved Breeds:**  
High-quality breeds are either unavailable or unaffordable for small farmers.
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### ✂ □ Solutions to Improve Breeding Practices

1. **Record-Keeping Training:**  
Teach farmers how to maintain breeding, health, and milk yield records.
  2. **Promote Artificial Insemination:**  
Increase access to AI services using trained veterinary workers.
  3. **Use of Superior Breeding Stock:**  
Government should provide subsidies or breeding bulls of good quality.
  4. **Breed Improvement Programs:**  
Launch national-level programs to preserve and enhance local breeds.
  5. **Community-Based Breeding Systems:**  
Involve local communities in organized breeding plans and control.
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### ✓ Conclusion:

Improving animal breeding ensures **better productivity, healthier herds, and stronger rural economies**. With training, support, and proper planning, Pakistan can strengthen its livestock gene pool.

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□ Long Question 3: Discuss the role of the nomadic farming system in Pakistan. What are its major problems, and how can they be addressed?

### Definition:

Nomadic farming is a **traditional system** where herders move with their animals from place to place in search of grazing land and water. Common in **Balochistan, Cholistan, and mountainous regions**.

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### 🔄 Role of Nomadic System

- **Utilizes Marginal Lands:** Makes use of arid and non-cultivable lands.
  - **Supports Livelihoods:** For landless communities in deserts and hilly areas.
  - **Provides Animal Products:** Milk, meat, hides, and wool are collected and traded.
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### ⚠️ Major Problems in Nomadic Farming

1. **Water and Fodder Shortage:**  
Due to climate change and overgrazing.
  2. **Animal Health Issues:**  
Lack of veterinary care, vaccination, and disease control.
  3. **Poor Market Access:**  
Nomads cannot access cities or sell animals at good prices.
  4. **Lack of Education and Awareness:**  
Low literacy hinders adoption of modern methods.
- 

### ✂️ Solutions

- **Mobile Veterinary Clinics:** Reach moving herds with health services.
  - **Grazing Management:** Provide controlled grazing zones to avoid overgrazing.
  - **Fodder Banks & Water Points:** Set up seasonal supply points.
  - **Skill Training Programs:** Educate nomads about better feeding and breeding practices.
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## ✓ Conclusion:

Nomadic farming is part of our cultural heritage and rural economy. With proper support, it can **coexist with modern agriculture** and provide sustainable income to pastoral communities.

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□ Long Question 4: Explain the importance of conserving good-quality animal breeds through genetic means. How can this be achieved?

## 💡 Why Conserve Good Breeds?

1. **Higher Productivity:**  
Local breeds like **Sahiwal** (cattle) and **Beetal** (goat) have high milk/meat potential.
  2. **Disease Resistance:**  
Indigenous breeds are more adapted to local conditions and diseases.
  3. **Genetic Diversity:**  
Essential for long-term survival and future breeding improvements.
  4. **Cultural Value:**  
Some breeds are linked to tradition and history.
- 

## □ Genetic Methods of Conservation

1. **Selective Breeding:**  
Choose animals with desirable traits and breed them under controlled conditions.
  2. **Artificial Insemination (AI):**  
Use of semen from high-quality males to improve genetics across herds.
  3. **Embryo Transfer Technology (ETT):**  
High-quality embryos are implanted into surrogate mothers.
  4. **Cryopreservation:**  
Long-term storage of semen or embryos in frozen form.
  5. **Breed Registries & Recording:**  
Maintain official records of local breeds and their performance.
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## ✓ Conclusion:

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Genetic conservation of animal breeds ensures **sustainable livestock production**, especially in changing climate conditions. Pakistan must preserve its valuable breeds for future generations and food security.

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### Inquisitive Questions – Solved

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#### **1. If you were to design a livestock production system for a rural area, what type of system would you choose and why?**

**I would choose a semi-intensive system, which combines controlled feeding and open grazing.  
Why?**

- **Cost-effective** for small farmers
  - **Healthier animals** with partial grazing
  - **Better productivity** than extensive systems
  - **Easier monitoring and disease control**
- 

#### **2. How can modern technology be used to solve the problems of fodder shortage and animal health in livestock production?**

##### **Fodder Solutions:**

- **Hydroponic fodder units**
- **Mobile fodder banks**
- **Satellite weather forecasts** for planning

##### **Health Solutions:**

- **Mobile veterinary apps and AI units**
  - **Health tracking collars and record systems**
  - **Telemedicine for remote diagnosis**
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#### **3. Do you think the nomadic farming system can coexist with modern agricultural practices? Why or why not?**

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**Yes**, nomadic systems can coexist with modern farming if:

- **Infrastructure is improved** (mobile vet, grazing zones)
  - **Technology is adapted** to their lifestyle
  - **Government supports integration** through policies and education
- This coexistence will preserve tradition while improving productivity.
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