



## Module 3 – Animal production

### Unit 1 Animal production systems

#### Short questions

- Change the underlined word(s) in the following statements to make the statements TRUE. Write only the answer next to the question number.
  - Ectothermic animals maintain a constant body temperature even though the environmental temperature may vary.
  - The intensive farming enterprise where sheep are kept in a small area and fed for maximum production output is called a backyard system. 2 × 2 (4)
- Supply ONE word/term for each of the following descriptions. Write only the word/term next to the question number.
  - Animals carefully bred to convert feed more efficiently.
  - A form of farming in which a farmer grows a variety of crops and livestock to meet the needs of his or her family. 2 × 2 (4)

#### Longer questions

- The picture alongside shows a broiler production unit. This broiler unit is equipped with the following specialised equipment for environmental control:
  - insulation material on the inside of the roof
  - foldable side walls
  - electric heaters
  - fans in the roof and walls
  - foot baths at the entrance.
  - Choose the appropriate equipment from this list that would be used in the following cases:
    - To keep the temperature inside the broiler unit constant day and night. (1)
    - To increase the temperature inside the broiler unit if there is a sudden drop in the environmental temperature. (1)
    - To decrease the temperature in the broiler unit on a very hot day. (1)
    - To reduce the possibility of bringing pathogens into the broiler unit. (1)
  - State FOUR possible characteristics of an intensive animal production unit based on the broiler unit shown in the photograph. (4)
  - State ONE possible disadvantage broiler farming based on the broiler unit shown in the photograph. (1)
- State FOUR possible characteristics of an extensive animal production. (4)



### Unit 2 Intensive farming

#### Short questions

- Supply ONE word/term for each of the following descriptions. Write only the word/term next to the question number.
  - Chickens reared for their meat
  - Livestock are raised at high stocking density
  - A plot of ground or building where livestock are fattened for the market
  - The number of broilers kept per square metre in a broiler

1.5 The technique where inside and outside curtains are used in a broiler house to help regulate the temperature

5 × 2 (10)

2. Which of the following are part of an intensive animal production unit?

- (i) Large amounts of money invested
- (ii) A large area of land with a low production output
- (iii) Environmental control and management
- (iv) Mechanisation

Choose the correct combination:

- A (i), (iii) and (iv)
- B (ii), (iii) and (iv)
- C (i) and (iv)
- D (ii) and (iv)

(2)

### Longer questions

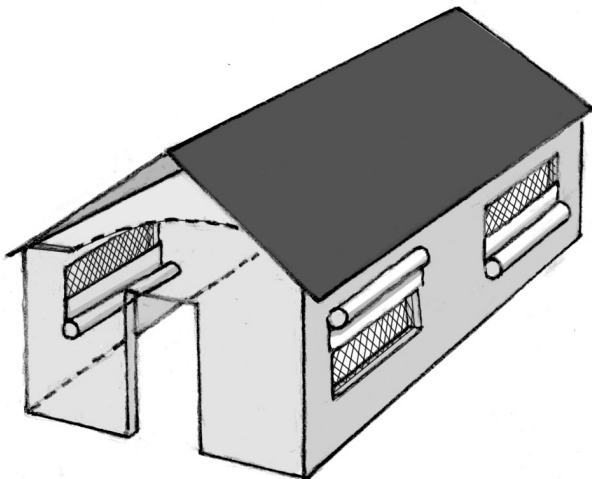
3. Study the farming enterprises illustrated in the photographs A and B below.

Identify which farming production system (A or B) is more intensive. Give four reasons to support your answer.

(5)



4. Study the following diagram, which shows proper temperature control in a broiler house.



4.1 Why is good temperature control so important?

(2)

4.2 What characteristic does the roofing material need to help regulate temperature?

(2)

4.3 In which direction must the broiler house be orientated and why?

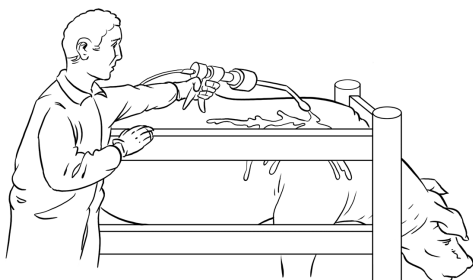
(2)

## Unit 3 Extensive farming

### Short questions

1. Various possible answers are provided for the following questions. Write only the correct letter (A–D) next to the question number.
- 1.1 The beef industry in South Africa is heavily dependent on ..... .  
A rotational grazing  
B natural veld  
C pastures  
D zero grazing
- 1.2 Which one is not a factor that will influence beef cattle production?  
A temperature  
B rainfall  
C soil colour  
D soil shape
- 1.3 Cattle's nutritional requirements change with the ..... .  
A colour of cattle  
B sex of cattle  
C breed of cattle  
D stage of production
- 1.4 All South African vegetation lacks the mineral ..... .  
A nitrogen  
B potassium  
C calcium  
D phosphorous
- 1.5 An animal's energy requirements will be ..... during cold weather.  
A more  
B less  
C the same  
D a little less
- 1.6 Which of the following are part of an extensive animal production unit?  
(i) smaller amounts of money invested  
(ii) a large area of land with low production output  
(iii) environmental control and management  
(iv) mechanisation  
A (i), (ii) and (iv)  
B (ii), (iii) and (iv)  
C (i) and (ii)  
D (ii) and (iv)
- 1.7 The facility used to control ticks in the illustration below can best be described as ..... .  
A spray dip  
B plunge dip  
C pour-on dip  
D foot dip

7 × 2 (14)



## Longer questions

2. Refer to the photograph below and answer the following questions on the reproductive performance of a beef bull.



- 2.1 List FOUR factors that will influence the reproductive performance of this bull. (4)  
2.2 What is the ideal time for calving? (2)  
2.3 To make this possible, when must the bull mate with the cows? (1)  
2.4 Why is it necessary to weigh beef cattle before any chemicals or treatments are given to them? (2)  
2.5 Why is it important that animals are marketed at the correct age? (2)
3. Which FIVE factors will influence the dry matter intake of beef cattle? (5)

## Memorandum

### Unit 1

#### Short questions

- 1.1 Endothermic 1.2 Feedlot (4)  
2.1 Intensive animal production 2.2 Subsistence farming (4)

#### Longer questions

- 3.1.1 Insulation material on the inside of the roof (1)  
3.1.2 Electric heaters (1)  
3.1.3 Fans in the roof and walls (1)  
3.1.4 Foot baths at all the entrances (1)  
3.2 Characteristics of an intensive animal production unit (any four): (4)  
• High use of energy  
• Chickens fed considerably above maintenance  
• Many chickens in a small area  
• Emphasis on productivity  
• Environment modified for optimal production (4)  
3.3 Diseases – contamination can take place easily – broilers are close together (pathogens can spread easily). (1)  
4. Characteristics of an extensive animal production system: (4)  
• low input  
• animal production that is adapted to the environment  
• minimal human input  
• sustainable use of natural resources (vegetation)

## Unit 2

### Short questions

- 1.1 Broilers                      1.2 Intensive farming/Factory farming                      1.3 Feedlot  
1.4 Stocking density      1.5 Insulation                      (10)  
2. A                      (2)

### Longer questions

3. A – broiler system, large capital-intensive production unit.                      (5)  
    • Emphasis on productivity  
    • Many labourers  
    • Control of inputs  
    • Small area farmed with large number of animals  
4.1 It enhances feed conversion and growth rate.                      (2)  
4.2 It should have a reflective surface on the outside to help reduce the conduction of solar heat.                      (2)  
4.3 The broiler house must be orientated in an east–west direction to reduce the amount of direct sunlight on the side walls during the hottest part of the day.                      (2)

## Unit 3

### Short questions

- 1.1 B              1.2 C              1.3 D              1.4 D              1.5 A  
1.6 C              1.7 C                      (14)

### Longer questions

- 2.1 Nutritional status, genetic merit, health status, breeding management                      (4)  
2.2 When adequate natural vegetation of high nutritional value is available                      (2)  
2.3 282 days before the ideal time for calving                      (1)  
2.4 To ensure that the correct dose is administered                      (2)  
2.5 When animals are kept too long, the profit margin decreases.                      (2)  
3. Any five: Animal's weight, condition, stage of production, level of milk production, forage quality, amount and type of supplement.                      (5)