



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL SCIENCES P2

SEPTEMBER 2025

MARKING GUIDELINES

MARKS: 150

These marking guidelines consist of 10 pages

SECTION A**QUESTION 1**

1.1	1.1.1	A ✓✓		
	1.1.2	C ✓✓		
	1.1.3	B ✓✓		
	1.1.4	C ✓✓		
	1.1.5	C ✓✓		
	1.1.6	B ✓✓		
	1.1.7	D ✓✓		
	1.1.8	D ✓✓		
	1.1.9	C ✓✓		
	1.1.10	B ✓✓	(10 x 2)	(20)
1.2	1.2.1	F ✓✓		
	1.2.2	G ✓✓		
	1.2.3	J ✓✓		
	1.2.4	A ✓✓		
	1.2.5	C ✓✓	(5 x 2)	(10)
1.3	1.3.1	Accumulation ✓✓		
	1.3.2	Collateral ✓✓		
	1.3.3	Heritability ✓✓		
	1.3.4	Biometrics ✓✓		
	1.3.5	Quantitative ✓✓	(5 x 2)	(10)
1.4	1.4.1	Market intelligence/Research ✓		
	1.4.2	Undercapitalisation ✓		
	1.4.3	Sex-linkage ✓		
	1.4.4	Segregation ✓		
	1.4.5	Selection ✓	(5 x 1)	(5)
TOTAL SECTION A:			[45]	

SECTION B**QUESTION 2: AGRICULTURAL MANAGEMENT AND MARKETING****2.1 Marketing systems**

- 2.1.1 **The marketing system represented by the pictures A and B**
Free marketing ✓ (1)
- 2.1.2 **Reason to support the answer in QUESTION 2.1.1**
Products are sold directly to consumers ✓ (1)
- 2.1.3 **Marketing channel illustrated in A**
A- Auction ✓ (1)
- 2.1.4 **The letter of the marketing channel to which each of the statements refer:**
- (a) B ✓ (1)
 - (b) B ✓ (1)
 - (c) A ✓ (1)
- 2.1.5 **TWO disadvantages of farm gate/stall marketing**
- Volumes demanded may be limited ✓
 - Buyers have to come to the farm, thus requires accessibility/ the farmer may not be well located to reach customers ✓
 - Individual consumers might not be willing to pay the set price because they are not buying in store ✓
 - Encourages monopoly in a region ✓
 - Product will remain on the farm for longer after production if buyers do not visit the farm ✓ (Any 2) (2)

2.2 TWO differences between selling and marketing

SELLING	MARKETING
• Management is sale volume orientated ✓ • Producer driven/emphasis is on the agricultural product ✓ • Planning is short-term based on current products and market ✓ • Focus is the needs of the seller ✓	• Management is profit orientated ✓ • Consumer driven/emphasis is on customer needs ✓ • Planning is long-term based on new products and future growth ✓ • Focus is on the wants of buyers ✓

(Any 2) (4)

2.3 Scenario**2.3.1 TWO entrepreneurial success factors**

- Innovative/creative ✓
 - Vision ✓
 - Risk taking ✓
- (Any 2) (2)

2.3.2 Justification

- **Innovative:** realisation of youth unemployment by the farmer/ potential of the area to start a business ✓
- (1)

2.3.3 Source identified by the farmer

- (a) Unemployed youth ✓ (1)
- (b) Adequate infrastructure ✓ (1)
- (c) Availability of peaches/good supply of peaches ✓ (1)

2.3.4 The statement implying that the enterprise was successful

- Production rose from 150 to 1 500 bottles per day ✓
 - Secured a contract with local wholesalers ✓
- (Any 1) (1)

2.4 Supply and demand of mangoes**2.4.1 Deduction the equilibrium price**

R25 ✓ (1)

2.4.2 Relationship between the price and quantity of mangoes supplied

The higher the price of mangoes, ✓ the higher the quantity supplied ✓ (2)

2.4.3 TWO other factors affecting demand of mangoes other than price

- Number of consumers ✓
 - Quality of products ✓
 - Season ✓
 - Buying power of consumers ✓
 - Consumer preference ✓
- (Any 2) (2)

2.4.4 TWO ways of promoting agricultural products

- Posters/brochures ✓
 - Personal selling ✓
 - Direct mailing ✓
 - In-store promotion ✓
 - Advertising/radio/TV/internet /newsletter ✓
 - Exhibition ✓
- (Any 2) (2)

2.5 Drawing up a business plan

- 2.5.1 **Name of an electronic resource**
Computer software programmes ✓ (1)
- 2.5.2 **One aspect that should be included in:**
- (a) **Title page**
- Name of the business/person ✓
 - Logo ✓
 - Address ✓
 - Contact details of the business/person ✓ (Any 1) (1)
- (b) **Human resource plan**
- Number and types of employees ✓
 - Competencies and skills needed ✓ (Any 1) (1)
- 2.5.3 **TWO problems encountered when drawing up a business plan**
- Incomplete/gaps ✓
 - Vague ✓
 - Unrealistic assumptions/over ambitious ✓
 - Hiding weakness and risks ✓
 - Not taking the competition into account ✓
 - Using incorrect format ✓
 - Insufficient research ✓
 - Insufficient technical details ✓ (Any 2) (2)

2.6 Components of SWOT analysis

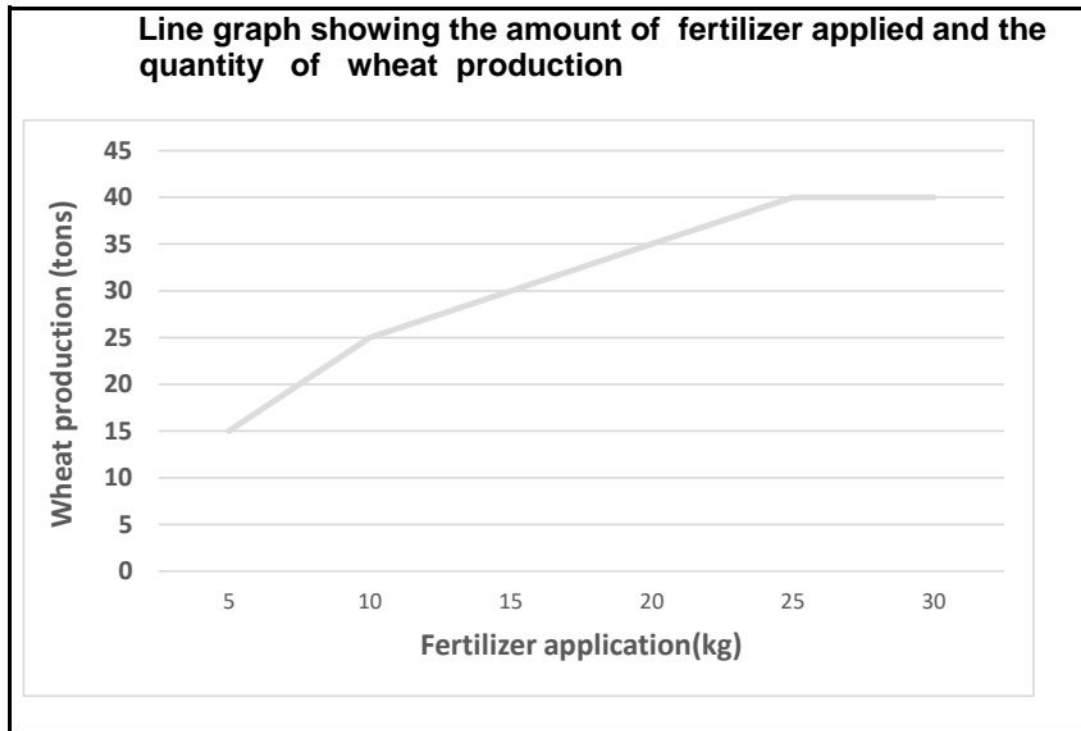
- 2.6.1 Strength ✓ (1)
- 2.6.2 Opportunity ✓ (1)
- 2.6.3 Weakness ✓ (1)
- 2.6.4 Threat ✓ (1)

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QUESTION 3: PRODUCTION FACTORS**3.1 Land as production factor****3.1.1 Economic characteristic of land**

Land is subject to the law of diminishing return ✓

(1)

3.1.2 Line graph**CRITERIA/RUBRIC/MARKING GUIDELINES**

- Correct heading ✓
- X-axis: Correctly calibrated and labelled (Fertilizer) ✓
- Y-axis: Correctly calibrated and labelled (Wheat production) ✓
- Correct units (tons and kg) ✓
- Type of graph (Line graph) ✓
- Accuracy (80% + correct plotting) ✓

(6)

3.1.2 The function of land

- Land provides food ✓
- Land provides space ✓

(Any 1)

(1)

3.2 Methods to improve land productivity**3.2.1 Improving water management ✓**

(1)

3.2.2 Use of scientific methods ✓

(1)

3.3 Labour

- 3.3.1 **Indication of type of farm workers**
PICTURES B and C- Seasonal workers ✓ (1)
- 3.3.2 **Motivation for answers to QUESTION 3.3.1**
Employed for a specific task/during peak periods ✓ (1)
- 3.3.3 **Identification of Pictures of farm workers**
(a) B/C/both B and C ✓ (1)
(b) D ✓ (1)
- 3.3.4 **Justification of answer to QUESTION 3.3.3**
They are the least educated/have less bargaining power due to lack of formal training/ lack of skills ✓ (1)
- 3.3.5 **Indication of labour legislations that protect farm workers**
(a) **PICTURES B and C**
Basic Conditions of Employment Act (Act 75 of 1997) ✓ (1)
(b) **PICTURE D**
Occupational Health and Safety Act (Act 85 of 1993) ✓ (1)
(c) **PICTURE A**
Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993) ✓ (1)

3.4 Assets and liabilities**3.4.1 Re-drawing the populated table ✓**

ASSETS	RANDS/R	LIABILITIES	RANDS/R
Value of buildings	R920 000	Truck loan	R360 000
Value of farm	(a) R2 800 000✓	Bond	(b) R3 900 000 ✓
TOTAL ASSETS	(c) R3 720 000✓	TOTAL LIABILITIES	(d) R4 260 000 ✓

(5)

- 3.4.2 **Calculation of net worth**
Net worth = Assets – Liabilities ✓
R3 720 000 – R4 260 000 ✓
= -540 000 ✓ (3)

3.5 Capital

- 3.5.1 **Types of capital**
(a) **Capital item B** - fixed ✓ (1)
(b) **Capital A** - movable ✓ (1)
- 3.5.2 **Type of credit B**
Long-term ✓ (1)

3.6 Management of a farm business

- 3.6.1 **External force**
Competition ✓ (1)
- 3.6.2 **Risk that may be encountered**
Price/market/financial risk ✓ (1)
- 3.6.3 **TWO risk management strategies**
- Risk-sharing ✓
 - Diversification ✓ (2)
- 3.6.4 **TWO key management principles**
- Planning ✓
 - Organisation/coordination
 - Implementation ✓
 - Control ✓ (Any 2) (2)

[35]**QUESTION 4: BASIC AGRICULTURAL GENETICS****4.1.1 Genetic crossing****Punnet square**

Gametes	R	R
r	Rr	Rr
r	Rr	Rr

Marking rubric

- Correct gametes of male parent ✓
- Correct gametes of female parent ✓
- Correct genotype of the offspring ✓
- Completed and populated punnet square ✓ (4)

- 4.1.2 **Indication of the dominant colour**
Black ✓ (1)

- 4.1.3 **Justification of the answer in QUESTION 4.1.2**
- All the F₁ offspring have black colour ✓
 - Black is represented by (R) which is a dominant allele/
black is dominant over red ✓ (Any 1) (1)

- 4.1.4 **Calculation of the black offspring**
 $4 \div 4 \times 100$ ✓
 $= 100\%$ ✓ (2)

4.2 Breeding systems

4.2.1 **Indication of the system**
Cross breeding ✓ (1)

4.2.2 **Justification of the breeding**
Two different breeds are crossed/Brahman and Nguni ✓ (1)

4.2.3 **TWO advantages of cross breeding to farmers**

- Produces hybrid vigour/heterosis ✓
- Development of new breeds ✓
- Increases genetic variation ✓
- Progeny is more resistant to diseases ✓
- Improves performance of animals ✓
- Better adaptation of individuals ✓

(Any 2) (2)

4.2.4 **Other TWO breeding systems farmers can use**

- Upgrading ✓
- Line breeding ✓
- Inbreeding ✓
- Outbreeding ✓

(Any 2) (2)

4.3 Differences in the characteristics between individuals of the same species

4.3.1 **The genetic term in the statement**
Variation ✓ (1)

4.3.2 **TWO genetic processes causing variation**

- Crossing over/meiosis/recombination of genes ✓
- Random fertilisation ✓
- Mutation ✓

(Any 2) (2)

4.3.3 **Importance of variation in the breeding programme**

- Brings about new cultivars ✓
- improved characteristics ✓
- Is the foundation for selection ✓

(Any 2) (2)

4.4 Indicating patterns oh inheritance

4.4.1 Polygenic inheritance ✓ (1)

4.4.2 Co-dominance ✓ (1)

4.4.3 Atavism/throwback ✓ (1)

4.4.4 Complete dominance ✓ (1)

4.5 Dihybrid crossing

4.5.1 **Identification of the type of crossing**
Dihybrid crossing ✓ (1)

4.5.2 **Reason for the answer**
The crossing involves two different characteristics/two contrasting characteristics/traits ✓ (1)

4.5.3 **Determination of TWO possible phenotypes of the F₁**

- Green round ✓
- Green wrinkled ✓
- White round ✓
- White wrinkled ✓

(Any 2) (2)

4.5.4 **Identification of the genotype numbered**
 (a) GGrr ✓ (1)
 (b) ggRR ✓ (1)

4.5.5 **Calculation of the percentage of white round offspring**
 $\frac{3}{16} \times 100$ ✓
 $= 18,75\%$ ✓ (2)

4.6 Genetic modification

4.6.1 **TWO potential risks of genetic modification**

- Food safety ✓
- Environmental issues ✓
- Socio-economic ✓

(Any 2) (2)

4.6.2 **TWO desirable characteristics of genetically modified animals**

- Improved resistance to diseases ✓
- Animals with improved growth rate ✓
- Strong and healthy animals/more fertile ✓

(Any 2) (2)

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TOTAL SECTION B: 105
GRAND TOTAL: 150