



INTERNATIONAL SECONDARY CERTIFICATE EXAMINATION
NOVEMBER 2023

AGRICULTURAL MANAGEMENT PRACTICES

MARKING GUIDELINES

Time: 3 hours

200 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

SECTION A

QUESTION 1

- 1.1 1.1.1 D
 1.1.2 A
 1.1.3 C
 1.1.4 A
 1.1.5 B
 1.1.6 A
 1.1.7 B
 1.1.8 D
 1.1.9 C
 1.1.10 C

1.2	1.2.1	1.2.2	1.2.3	1.2.4	1.2.5	1.2.6	1.2.7	1.2.8	1.2.9	1.2.10
	I	K	M	N	A	G	H	L	F	B

- 1.3 1.3.1 Delegate/Delegation
 1.3.2 Selective grazing
 1.3.3 Gross production value (GPV)
 1.3.4 Electronic/Internet/Online payment
 1.3.5 Depreciation
 1.3.6 Direct competition
 1.3.7 Calibration
 1.3.8 Distribution chain/Marketing chain
 1.3.9 Soil structure
 1.3.10 Soil degradation
- 1.4 1.4.1 Intensive farming system
 1.4.2 Oversupply
 1.4.3 Non-cultivation
 1.4.4 Water capacity (maximum water holding capacity)
 1.4.5 Soil texture
 1.4.6 Market research
 1.4.7 Balance sheet
 1.4.8 Planning
 1.4.9 Cooperatives

SECTION B

QUESTION 2

- 2.1 **Formulate a short explanation of precision farming as applied in the article above.**

When technology, such as GPS, ear tags and software, is used to collect and process information, allowing the farmer to better manage variables and increase the yield.

- 2.2 **Provide TWO functions of the computer software on this precision livestock farm.**

Monitoring cattle
Analysis of data

- 2.3 **Identify the technological aids that are used in the following divisions of this cattle farming enterprise (written out in full).**

- 2.3.1 **Ear tags of cattle to monitor movement.**

GPS – Global positioning system

- 2.3.2 **Maps indicating grazing patterns and veld composition.**

GIS – Geographic information system

- 2.4 **Although commercial cattle farming has a small economic profit margin, precision cattle farming is becoming an important part of the industry.**

- 2.4.1 **Define *profit margin* in cattle farming.**

(Both facts must be present)

It is an indication of the profitability expressed as a percentage.

- 2.4.2 **Provide ONE economic advantage of technology in cattle farming.**

Higher profit/higher productivity/lower input cost

- 2.4.3 **Distinguish between gross profit and net profit.**

Gross profit

Sales/Income/Turnover MINUS expenses/direct cost/production cost

Net profit

Gross profit minus overheads/non-production cost
OR income minus all expenses

2.5 According to the data that was collected, the veld composition consists of two veld types, namely sweetveld and sourveld.

2.5.1 In which types of soils can the farmer expect to find sweetveld and sourveld grasses, respectively?

Sweetveld: Fine-textured soil with poor drainage such as clay

Sourveld: Soil with a coarse texture that drains well

2.5.2 Sweetveld and sourveld are both nourishing for cattle. However, sweetveld is more palatable to cattle than sourveld. The farmer has decided to fence off the different types of veld separately and use the sourveld camps for summer grazing and the sweetveld camps for winter grazing. Justify the farmer's decision.

Fencing off – Sweetveld is more palatable than sourveld and cattle would easily overgraze the sweetveld sections and damage the veld.

This means that fencing off could prevent overgrazing.

Sweetveld in winter – The farmer decided this because sweetveld is more palatable and nourishing for the cattle during the winter months.

OR Sourveld is unpalatable and low in nutrients during winter.

This means that the sweetveld rests during summer to recover from the controlled grazing in winter and is again available as good grazing for the next winter.

In winter, sweetveld's nourishment is higher than that of sourveld and this would have a positive effect on the condition of the cattle and the financial viability of the farm.

2.5.3 How would you go about preventing overgrazing and even increasing the productivity of the veld?

(Any 3)

- Do not overgraze/Never exceed carrying capacity/Do not keep too many animals
- Apply rotational grazing/camps
- Remove invader plants
- Controlled fire at the correct times

2.6 In commercial farming enterprises record-keeping is done by a computer system with a large database and the information that is collected plays an important role in the management decisions made by a farmer on a daily basis.

2.6.1 Distinguish between commercial farming and subsistence farming.

Commercial farming means that the sole purpose of the farmer/producer is to sell some or all of his/her products to make a profit WHILE subsistence farming means that the family consumes all or most of the production for their own needs.

2.6.2 Identify TWO advantages and TWO disadvantages of a database for a commercial farming enterprise.

Advantages (any 2)

- Comparisons can be done easily
- Easy access to information
- Can use tested, reliable programs
- Calculations are done more accurately
- More information can be stored in a smaller space
- Easier transfer of information

Disadvantages (any 2)

- Farmer has to be computer literate
- Expensive to buy computers
- During power failures data is not accessible
- Technology must be updated regularly
- It takes time to update data
- Data may be lost as a result of theft, computer virus, etc.

2.6.3 Which data can a farmer expect to find in the LIVESTOCK RECORDS?

Numbers of livestock
Reproduction records
Health records
Production records

2.7 Any farm sometimes has to make small payments from petty cash.

2.7.1 Which document is issued when cash purchases have to be made from petty cash?

Petty cash authorisation/Authorisation form/Requisition form

2.7.2 **To prevent the misuse of cash, the petty cash fund has to comply with certain requirements. Explain how you would prevent the misuse of this fund.**

- Keep funds in a **lockable** drawer or petty cash box, separate from any other cash
- Keep a **record** of each payment, including the cash authorisation, cash invoice/slip, receipt
- Only **one person** should handle the account

2.7.3 **Any purchase made from petty cash must be supported by a source document. Identify the source document.**

Invoice/Cash invoice/Cash slip

2.8 **Record-keeping on a farm should keep track of the depreciation of assets.**

2.8.1 **Construct a short explanation of depreciation by referring to the factors that result in the depreciation of an asset.**

Depreciation refers to the **decrease in the value** of assets **over time**, for example vehicles, machinery, implements, equipment and tools.

Thus depreciation is a result of **age, regular use and assets that are not used any more**.

2.8.2 **A farming enterprise buys a cattle trailer to the value of R140 000 (excluding 15% VAT). The useful life of the trailer is 10 years. The depreciation on the trailer is a fixed amount each year. Calculate the value (VAT included) of the trailer after two years. Show calculations.**

((VAT included)	Depreciation per annum
Depreciation over 2 years	Value of trailer after 2 years)

Calculations:

Value of trailer, VAT included:

$R140\,000 + 15\% = R140\,000 + R24\,705,88 = \mathbf{R164\,705,88}$

Depreciation per annum according to useful life of trailer:
 $R164\,705,88 / 10 \text{ years} = R16\,470,59 \text{ per year}$

Value decreases over 2 years:

$R16\,470,59 \times 2 \text{ years} = \mathbf{R32\,941,18}$

Depreciation after 2 years = $\mathbf{R164\,705,88 - R32\,941,18}$
= $\mathbf{R131\,764,70}$

The value of the trailer after 2 years is **R131 764,70**.

QUESTION 3

3.1 **The following are examples of different marketing methods. Study the pictures carefully and then answer the questions that follow.**

3.1.1 **Identify the marketing method in the following pictures:**

TYPE A: Free marketing

TYPE C: International (global) marketing

3.1.2 **When preparing a budget, all possible costs should be taken into consideration. Provide TWO possible marketing costs involved in TYPE A marketing.**

(Any 2)

- Packing cost
- Advertising cost (website, pamphlets, advertising boards)
- Promotion cost/Promotions (special offers, delivery)

3.1.3 **Describe the role of a country's government in the TYPE B marketing method.**

Government interferes in the marketing of a product through price guarantees on imports, single-channel marketing, subsidies, production quotas.

3.1.4 **Briefly explain the purpose of TYPE B marketing.**

(Any 2)

- The purpose of controlled marketing is to stabilise the prices of a product.
- It helps to reduce the gap between producer and consumer prices.
- Better prices result in improved productivity and efficiency in agricultural production.
- It protects the interests of all stakeholders, such as the producers, consumers, the trade and processing industries.

3.1.5 **Strict legislation is necessary during TYPE C marketing. Justify the statement.**

Legislation is important, because safety measures and health of food have to be ensured.

3.1.6 A small-scale vegetable farmer must decide whether to use the farm stall or fresh-produce market marketing channel to sell his products. Compare the two channels in terms of product prices and marketing and transport costs.

- Farm stall marketing: The farmer has to accept the local price while the prices may be higher in the case of the fresh-produce market than for farm stall marketing.

OR

- Fresh-produce market's prices can fluctuate a lot while farm stall marketing's prices may be more stable.
- Farm stall marketing has no costs while agent's commission is payable at the fresh-produce market (higher marketing cost)
- Minimum to no transport cost involved in farm stall marketing while fresh-produce market is further away from the farm and therefore has higher transport costs.

3.2 3.2.1 Use the supply curve (F) to explain the law of supply.

It shows that as the price of a product increases, the quantity of the product also increases. This means that the seller (producer/farmer) receives a higher income, which motivates him/her to supply/produce more of the product.

3.2.2 State TWO factors that can affect the supply of a product.

(Any 2)

- Product prices
- Quality of product
- Usefulness of product
- Amount of competition
- Price of similar products
- Number of consumers
- Religion and traditions of consumers
- Preferences of consumer
- Buying power/financial position of consumer

3.2.3 During certain times of the year the supply curve shifts to the left (F_1). Make assumptions about the *supply and price* of the product.

The supply of the product decreases while the price increases.

3.2.4 Identify POINT R and summarise what is happening at this POINT.

Market equilibrium

This is the point where the demand for and supply of a product is equal.

3.3 3.3.1 **Is Fairtrade Africa a production (product) or a marketing organisation?**

Production (product) organisation

3.3.2 **Provide TWO reasons for your answer to Question 3.3.1.**

(Any 2)

- The product organisation sets standards for product.
- Products are certified.
- Products are labelled.
- Research is facilitated/managed.
- Technology transfer takes place.

3.3.3 **The organisation represents 1 050 000 farmers in Africa. Name THREE other the possible benefits of this organisation for farmers.**

(Any 3)

- Negotiates credit with banks on behalf of farmers
- Provides market information
- Advertises and promotes agricultural products
- Gives technical/scientific advice to the farmers
- Organises inputs and negotiates discount on behalf of farmers

3.3.4 **Any organisation's business plan contains a *mission and vision*. Describe what a *mission and vision* is so that the PURPOSE of a mission and vision can be clearly understood.**

This is the road map of the organisation to guide projects and decision-making for the future.
Management and workers remain focused on the ultimate objective during their respective tasks.

3.4 3.4.1 **Identify the type (method) of advertising in Advertisement K.**

Pamphlets

3.4.2 **Briefly explain the purpose of advertising in agritourism.**

To inform people about facilities or entertainment on a farm and to convince people to use the facilities or entertainment. Advertising is also to make people aware of a special offer.

3.4.3 Provide TWO other electronic methods of advertising to reach foreign tourists.

(Any 2)

- Online advertisement
- Digital newspaper
- Radio and television
- Electronic advertising boards

3.4.4 State a disadvantage of agritourism on a farm.

(Any 1)

- May have negative environmental impact
- Additional responsibility for farmer
- Availability of trained staff
- Loss of privacy for farmer
- Expensive process to get going
- Public liability is a legal aspect and additional insurance has to be taken out
- The development requires additional planning and supervision of the farmer

3.5 3.5.1 Give a short definition of an entrepreneur.

Someone who is able to spot a need of consumers and then sells a product or provides a service to satisfy this need.

OR

Someone who is able to identify a business opportunity and has the courage to take the risk to establish and then manage an enterprise.

3.5.2 Provide TWO characteristics of a 'good' entrepreneur.

(Any 2)

- Spots opportunities
- Is able to start on his/her own
- Gets along with most people
- Is able to organise well
- Responsible
- Is able to work hard
- Is able to make decisions
- Is reliable and responsible
- Has a lot of energy
- Willing to take risks
- Confident
- Possesses management skills

3.5.3 When an entrepreneur starts or expands an agricultural business, a business plan should be compiled. Explain why the development of a business plan is necessary.

(Any 3)

The business plan:

- Tests the feasibility of the business idea
- Is submitted to a financial institution (loan)
- Helps to determine the financial needs of the business
- Identifies the daily tasks
- Gathers information on marketing issues
- Indicates the current position of the business

3.5.4 State TWO advantages of a business plan.

(Any 2)

- Provides clear strategies and objectives
- Helps steering the enterprise to achieve objectives
- Helps the enterprise to determine, describe and refine strong points
- Helps with efficient business management
- May help with determining and managing risks
- Helps spending capital in the correct way
- Helps to identify opportunities and benefit from them
- A time frame may help the enterprise to reach objectives within the planned period

QUESTION 4

- 4.1 4.1.1 **Identify TWO types of labour that are used in the farming enterprise above.**

Permanent labour
Temporary labour

- 4.1.2 **Explain the term *niche market*.**

A niche market is a small part of a bigger market that has the potential to be profitable if it is developed correctly.

A niche market is created by identifying gaps in current markets where consumers have a specific need that is not yet being addressed by someone else. The product or service is then provided to fill the gap.

- 4.1.3 **Distinguish between *manual harvesting* and *mechanical harvesting*.**

Manual harvesting means that workers manually harvest the product and mechanical harvesting means that a product is harvested with machines.

- 4.1.4 **State TWO advantages of manually harvesting mushrooms.**

(Any 2)

- Cheap
- Little maintenance, if any, of equipment
- Minimum damage to mushrooms
- Selective harvesting of mushrooms is possible

- 4.1.5 **Harvesting mushrooms (product) is a critical and very important activity on the farm. Therefore, planning is crucial. Identify THREE labour factors that the farmer should consider when planning the harvesting season.**

- Availability of manual labour.
- Cost of manual labour.
- Will permanent labour be enough or should temporary labour be appointed (how much labour)?

4.1.6 Explain how precautionary measures and good hygiene can be applied in the packing plant.

(Any 2)

Plant

Sufficient water and lighting should be available
Water should be able to run off floor (slight gradient)
Must be easy to clean the plant
Walls, floors and ceiling of plant must be cleaned
Equipment must be kept clean – containers/knives/tables
Lights and bulbs must be covered in case they break
Sewage system must be in working condition
Packing and storage areas must be separated
Good ventilation in plant

Employees

Clean clothes
Wash hands before and after packing
Cover hair
Sick labour should wear masks or should not work in plant
Wear closed shoes

4.1.7 Describe the following financial terms:

(a) Input costs

This is the money needed to start a farm/enterprise/
business

(b) Profit

This is income minus expenses over a given time

4.2 4.2.1 Identify the processing methods that were used in the pictures above.

PICTURE A: Heating

PICTURE B: Drying or Dehydration

4.2.2 Distinguish between processing and preservation.

Processing is the conversion of a primary agricultural product into an edible product while preservation means to remove or kill microorganisms through various processes to prolong the shelf life of fresh produce.

4.2.3 Fresh produce does not have a long shelf life. Explain the main causes of chemical and physical changes in fresh produce such as mushrooms.

(Any 2)

- Oxidation that takes place
- Living microorganisms and enzymes that are present on fresh produce
- Damage to the product caused by, among other things, bruising, insects, incorrect harvesting and handling procedures, and rodents

4.2.4 The bottles in PICTURE A were sterilised. Justify the decision.

Microorganisms and pathogens may be present in the bottles and they are destroyed by sustained and high temperatures.

4.3 4.3.1 State TWO aspects that should be considered if the type of packing material above is considered for mushroom packing.

(Any 2)

- The packaging should protect the product
- Striking packaging would draw consumers' attention
- It should be easy to insert information on the packing material
- Is the packing material easy to handle?
- Is the packing material cost-effective?
- It should provide the necessary information to consumers

4.3.2 Provide TWO advantages of the packing material in the photo above.

(Any 2)

- Protects product
- Handling is easier
- Communicates information to consumer
- Helps to identify product
- Looks pretty
- Increases value of the product
- May prolong shelf life

4.3.3 Packed fresh produce must be labelled. Justify strict regulations (legislation) regarding the labelling of fresh produce.

(Any 2)

- It is necessary to have a standardised method to communicate information to the consumer and to ensure that the information is true and not misleading.
- To allow tracking of the product in case quality or safety problems arise.
- To warn the consumer of possible allergens in the product.

4.4 4.4.1 **Explain why diversification in a farming enterprise is important.**

- To reduce risks
- To increase profitability
- To improve sustainability of farming

4.4.2 **Identify TWO factors that justify planning and replanning in a farming enterprise.**

(Any 2)

Factors for planning and replanning:

- Changes in **resource patterns** such as labour, capital items that have to be replaced, purchasing land, planting grazing
- Changes in **technology and biological relationships**, for example new technology, implements, new breeds, new sprays and toxins, new feed crops.
- Changes in **prices**, for example purchase prices, changing input costs, changes in supply and demand.
- Changes in **risks** such as rainfall, legal aspects, marketing aspects and economic aspects

4.4.3 **Good planning is crucial for the success of any farm. State TWO advantages of good planning.**

(Any 2)

- Because a problem was anticipated, adjustments can be made more easily
- Objectives and standards have been determined already
- The farmer's insight into his/her farming improves
- Planning gives direction to the farmer

4.5 **Management activities that are also crucial for the success of any farm are organising, motivating, and controlling.**

4.5.1 **State TWO possible work factors that may negatively affect labourers' motivation.**

(Any 2)

- Unreasonable employer
- Employer who is not satisfied with work done
- Unfair remuneration or deductions
- Little/no job satisfaction
- Long working hours
- Extreme climatic conditions, for example whole day in cold storage

4.5.2 What are the ADVANTAGES of organising and controlling labour on a farm well?

(Any 4)

Advantages of organising:

- Each person knows what his/her duties and responsibilities are
- Because labour perform duties purposefully, management and control are easier
- It saves time because there is no need for a new allocation of work every day
- Effective organising may result in better profit

Controlling:

- It helps the purposeful completion of tasks
- Tasks are completed more accurately
- It prevents the misuse of assets and capital
- It helps with the delegation of duties and tasks
- It facilitates supervision
- The entire enterprise is more efficient
- It improves morale/good attitude of labour

4.5.3 Justify the use of training and incentives when motivating labourers.

(Any 6)

Training:

- Training results in opportunities for promotion
- Trained labour has more insight into the task that has to be completed

Incentives:

- Create a feeling of satisfaction
- Labour feels part of management
- May result in higher productivity
- Workers feel appreciated
- Build labour's confidence

Total: 200 marks