



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

EXEMPLAR 2009

PUNTE: 200

TYD: 2½ hours

This question paper consists of 16 pages.

INSTRUCTIONS AND INFORMATION

1. This paper consists of FOUR questions. Answer ALL the questions.
2. SECTION A (QUESTION 1) must be answered on the ANSWER SHEET provided.
3. SECTION B (QUESTION 2 TO 4) must be answered in the ANSWER BOOK
Study the questions carefully and make sure you answer what is required.
4. Start each question SECTION B on a NEW page
5. Read the questions carefully and make sure that you answer what is asked
6. Number the answers correctly according to the numbering systems used in this question paper.
7. Write neatly and legibly.
8. Place your ANSWER SHEET for SECTION A (QUESTION 1) within your ANSWER BOOKLET.

Question 1.1/Vraag 1.1

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

Question 1.3 / Vraag 1.3

1.3.1

1.3.2

1.3.3

1.3.4

1.3.5

1.3.6.....

1.3.7.....

1.3.8.....

1.3.9.....

1.3.10.....

Question 1.2 / Vraag 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	

SECTION A**QUESTION 1**

- 1.1 Various possible options are provided as answers to the following questions. Choose the most correct answer by making a cross over the correct letter (A-D) next to the question number (1.1.1 - 1.1.10) on the answer sheet provided.

Example:

1.1.11	A	B	C	D
--------	--------------	---	---	---

- 1.1.1 Which ONE of the following is NOT a component of the strategic planning process for an agricultural enterprise?
- A Vision
 - B Mission
 - C Evaluation of the product line
 - D Weather data
- 1.1.2 The marketing of a product whereby the product can be sold to any person at an agreed price is called ...
- A free marketing.
 - B controlled marketing.
 - C co-operative marketing.
 - D governmental marketing
- 1.1.3 It is compulsory to report any highly contagious animal disease according to the ...
- A Livestock Brands Act, 1962.
 - B Animal Diseases Act, 1984.
 - C Animal Improvement Act, 1998.
 - D Genetically Modified Organisms Act, 1997.
- 1.1.4 Efficient mechanisation in farming is the solution to the ...
- A lack of schooling amongst labourers.
 - B cost of having labourers trained.
 - C increasing lack of farm labour.
 - D production of better products.
- 1.1.5 Without causing damage to the environment, containers of chemical pesticides can be disposed by ...
- A incineration.
 - B dumping them in or near rivers.
 - C dumping them on dumping sites.
 - D throwing them in open fields.

- 1.1.6 During planning a farmer has to show all estimated costs, returns, profits and possible losses he or she may incur during the farming enterprise. This information is known as the ... of an enterprise.
- A draft
 - B plan
 - C summary
 - D budget
- 1.1.7 The cash flow of an enterprise can easily be obtained from the ...
- A income statement.
 - B daily balance sheet.
 - C budget sheet.
 - D yearly balance sheet.
- 1.1.8 The best time for a farmer to do repairs on his/her spraying equipment is during the ...
- A peak harvesting season.
 - B spring when trees are in full blossom.
 - C winter when the work volume on the farm is low.
 - D summer when the citrus trees are in peak growing season.
- 1.1.9 Depreciation can be defined as ...
- A wear and tear.
 - B being out of date, new technology available.
 - C deterioration.
 - D All the above-mentioned
- 1.1.10 When processing fresh meat for human consumption, it is important to ...
- A use previously handled knives.
 - B wear a hair protector.
 - C wash the carcass.
 - D mark every bone.
- (10 x 2) (20)

- 1.2 Choose a description from COLUMN B that matches an item/word in COLUMN A. Write only the letter (A – J) next to the question number (1.2.1 – 1.2.10) on the attached ANSWER SHEET for example 1.2.11 M. A description in COLUMN B can only be used ONCE.

COLUMN A		COLUMN B	
1.2.1	Direct competition	A	programme aiming at increasing productivity of workers
1.2.2	Precision farming	B	protect farm workers from exploitation
1.2.3	Gross profit	C	a person that delivers the exact same product as you to the market
1.2.4	Labour laws/Acts	D	a type of farming that allows the farmer to maximise production by using the correct methods at the correct time for the correct reasons
1.2.5	Skills development	E	soil, rainfall, labour, capital and information forms part of it
1.2.6	Resources	F	obtained by subtracting operational costs from the income of a business
1.2.7	Disciplinary action	G	a substitute for your product on the market
1.2.8	Agricultural Product Standards Act (Act 119 of 1990)	H	the process whereby a farmer has an interview with his labourer and his trade union representative to discuss and punish the labourer for coming late and under the influence of alcohol to work
1.2.9	Control	I	the managerial principle which uses clock cards and pacesetters for labourers
1.2.10	Veterinary stock movement permit	J	it is needed when animals are moved from one area to the other
		K	the regulation of products with regard to standard and quality for the export market

(10 x 2) (20)

1.3 All the statements below are FALSE. Change the underlined word(s) to make each statement TRUE. Write only the correct words next to the question number.

1.3.1 Monitoring animal health on a daily basis and feeding the animals individually is part of an extensive animal production system.

1.3.2 Movable capital is the capital that farmers use to buy new land to expand his/her farming systems.

1.3.3 Tuberculos is a disease that causes severe immunodeficiency in humans which eventually leads to death.

1.3.4 Permanent labour is labour that only comes to work to do certain tasks which can be completed seasonally.

1.3.5 All veld management systems are based on the principle of selective grazing.

1.3.6 Profit is the income that is calculated after all the expenses have been paid and results in less money than the enterprise started with.

1.3.7 Fixed costs are general expenses and not related to one enterprise in particular.

1.3.8 Organic farming methods make use of synthetic pesticides, herbicides and fertilisers.

1.3.9 After a thorough soil surveyance a farm can be replanned to adhere to scientific principles to minimise agricultural production.

1.3.10 Supply and demand are the principles of controlled marketing.

(1 x 10) (10)

TOTAL SECTION A: 50

SECTION B**QUESTION 2: ANIMAL AND CROP PRODUCTION**

- 2.1 John is a commercial farmer. He has just bought a new tractor with a GPS system. He strives to change his farming methods to precision farming. In contrast to this, his neighbour Petrus is a subsistence farmer. He uses donkeys to cultivate his land. He also applies organic fertilisers randomly as his father has told him to do.

2.1.1 Briefly distinguish between *commercial farming* and *subsistence farming* as farming methods. (4)

2.1.2 Describe strategies that both farmers can utilise for more effective fertilisation of their crops. (4)

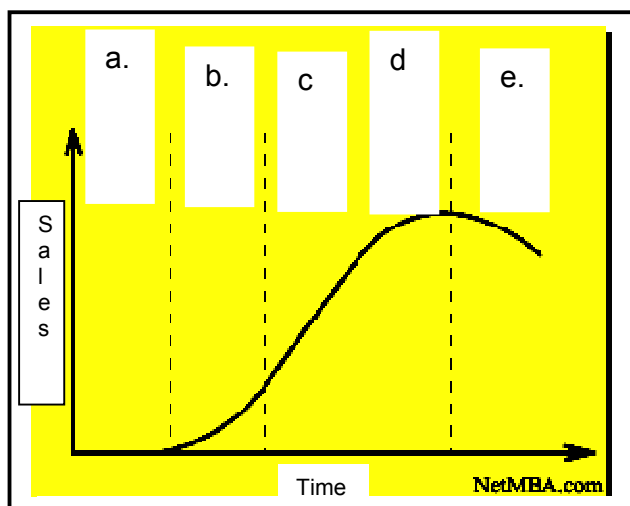
- 2.2 The picture below represents instrumentation used in precision farming, which is an integration of several technologies and plays an important role in farm management. Remote sensing is one of the technologies used in precision farming. State FIVE ways in which instruments that are used in precision farming could assist the farmer to monitor crop growth and the potential yield.



(5)

- 2.3 In South Africa various production management systems can be used in a farming enterprise. A production management system is determined by the availability and application of resources. Name FOUR factors that determine the choice of a production system. (4)

- 2.4 Product life cycles relate to the sales and profit of a product or service over a period of time. There are several distinct phases in the life of a product from its initial introduction to its removal from the market. The graph below indicates this process. Name the FIVE phases that make up the product life cycles.



(5)

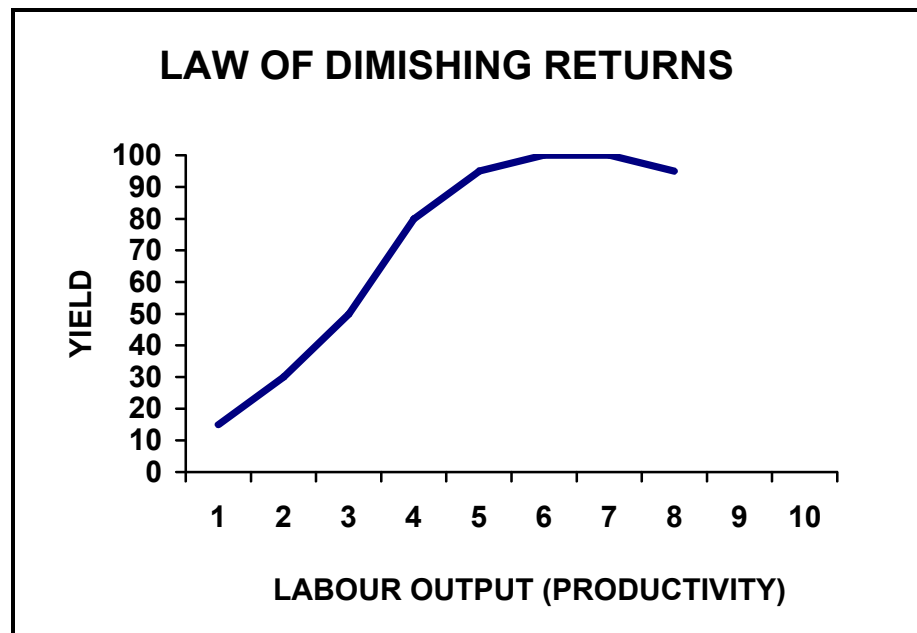
- 2.5 Biotechnology is technology based on biology, especially when used in agriculture, food science and medicine. The picture below shows a scientist involved with green biotechnology, which is one of the techniques applied to agricultural processes. Examples will be Bt corn, the selection and domestication of certain plants and animals, and engineering plants to express pesticides thereby eliminating the need for the external application of pesticides.



- 2.5.1 Explain what you understand by the term *biotechnology* in Agricultural Management Practices? (2)
- 2.5.2 Deduce FOUR benefits of this type of technology in agriculture from the paragraph given above. (4)

- 2.6 The design of contours depends on the spacing of structures.
- 2.6.1 What is the importance of contours in agribusiness? (1)
- 2.6.2 Name THREE factors which affect contour design in agri-business. (3)
- 2.7 According to the Basic Conditions of Employment Act (Act 75 of 1997), the wages for a farm worker who is between the ages of 16 and 18 is calculated at R5,59 per hour.
- 2.7.1 Calculate the total wage a farm worker in the above age range should be paid at the end of the month if the worker has worked for 35 hours per week for four weeks in the month. (3)
- 2.7.2 Name any other TWO incentives available to the farmer that could be given to this worker so that he/she can find the job rewarding and be prepared to be more productive at work. (2)
- 2.8 The three commonly known systems of keeping animals on the farm are the intensive system, semi-intensive system and extensive system. Name each system as characterised by the following?
- (a) Animals being allowed to find extra food for themselves after being fed with a fixed ration of nutritious feed and supplements
- (b) Animals raised in feedlots for fast growth or fattening
- (c) Animals allowed to graze freely without much restrictions and care (6)

2.9 Study the graph below and answer QUESTIONS 2.10.1 – 2.10.3.



- 2.9.1 According to the graph above, describe (quantify) the effect of increasing the production factors from one to four labour output units on the yield. (2)
- 2.9.2 Explain what happens to the yield as the number of labour units is increased from four to six. (2)
- 2.9.3 Compare the changes in yield that you observed in QUESTIONS 2.9.1 and 2.9.2. (3)
- [50]**

QUESTION 3 : RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP.

- 3.1 Taxation is part of any enterprise. In an agricultural enterprise, the farmer sells a processed product for R30,00. Calculate the amount of VAT he must pay. (2)
- 3.2 For an entrepreneur to be successful it is imperative that the enterprise is exceptionally well organised. Briefly explain the guidelines to organise an enterprise. (5)
- 3.3 In compiling a strategic plan for any farming enterprise, it is important to identify all possible obstacles. Design a possible business plan for a production enterprise, using a realistic scenario. (8)
- 3.4 Martha's enterprise consists of animal and vegetable production components. The table below includes entries for one month.

ITEM	COST/UNIT (R)	AMOUNT	VALUE (R)
Income of milk	R3,00	48 000 l	R144 000,00
Selling of vegetables (average)	R30,00/case	2 000 cases	(a)
Feed costs	R12,00/kg	9 800 kg	R117 600,00
Veterinary cost, cleaning aids and Pesticides/herbicides	R350,00	10	R3 500,00
Contract workers	R65,00	10 workers for 20 days	(b)
Permanent labourers	R1 500,00	5	(c)
Fertilises	R600,00/50 kg	25 kg/week for 4 weeks	R1 200,00
Transport costs	R3,00/km	500 km	R1 500,00

- 3.4.1 Calculate a, b, and c. (3)
- 3.4.2 Consider the data from the table above and indicate whether it would be advisable to extend this operation. (2)
- 3.4.3 Motivate your answer to QUESTION 3.4.2. (5)

- 3.5 George is selling his produce on an open market. The selling price is determined every day. The values for the last fortnight are reflected in the table below.

DAILY PRICE OF PRODUCE	
DAY	PRICE/kg
1	R5,50
2	R6,00
3	R7,00
4	R7,00
5	R15,00
6	R18,00
7	R20,00
8	R8,00
9	R6,00
10	R4,00

- 3.5.1 Draw a line graph that represents the above values. Use the days on the x-axis and the price on the y-axis. (4)
- 3.5.2 Determine from the graph the day on which the maximum price for the product was reached. (1)
- 3.5.3 Indicate TWO market-related reasons for the price fluctuation between day 5 and day 8. (2)
- 3.5.4 This trend of prices is repeating itself every ten marketing days. You must advise a farmer in producing the product. It took 28 days from starting time to harvest the produce. Make a recommendation to the farmer on the starting time to produce this product to make the most out of the higher prices. Explain your recommendation. (3)
- 3.6 The strategic planning for a farm involves a process of thinking how you want the farm to develop and how to provide the resources to achieve that development. Tabulate the difference between a vision and a mission statement in a strategic planning process for an agricultural enterprise. (4)
- 3.7 Mr Nkiliva, an emerging farmer, practises both livestock and crop farming on his small communal land holding. His income was R48 000 from sale of crop products and R16 000 from sale of animal products. The farm's expenditure was as follows:
- R11 000 labour and machinery
 - R4 000 pesticides and chemicals
 - R9 000 fertilisers and animal feed
- Prepare a Profit and Loss Account of the farm using the data supplied above. This may also be called the Trading Account. (9)

3.8 Define the following terms used in farming financial business management:

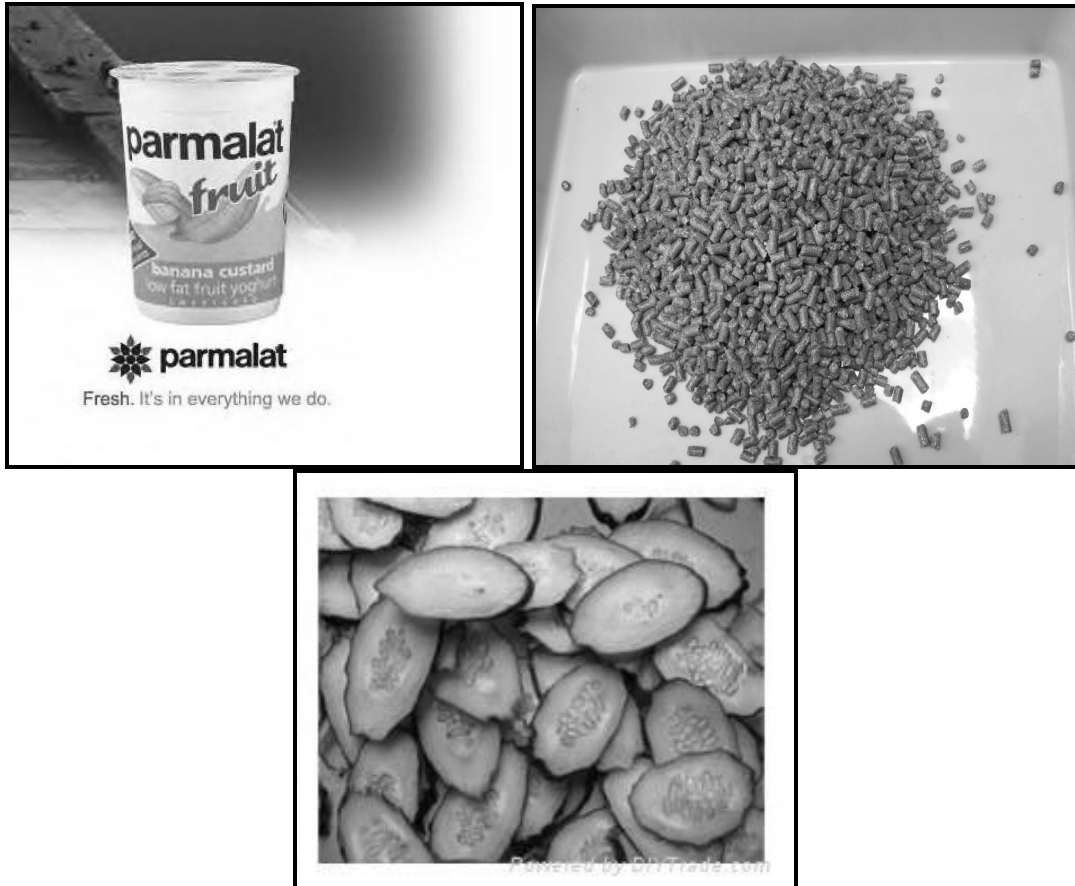
3.8.1 Turn over (1)

3.8.2 Net worth/Owner's equity (1)

[50]

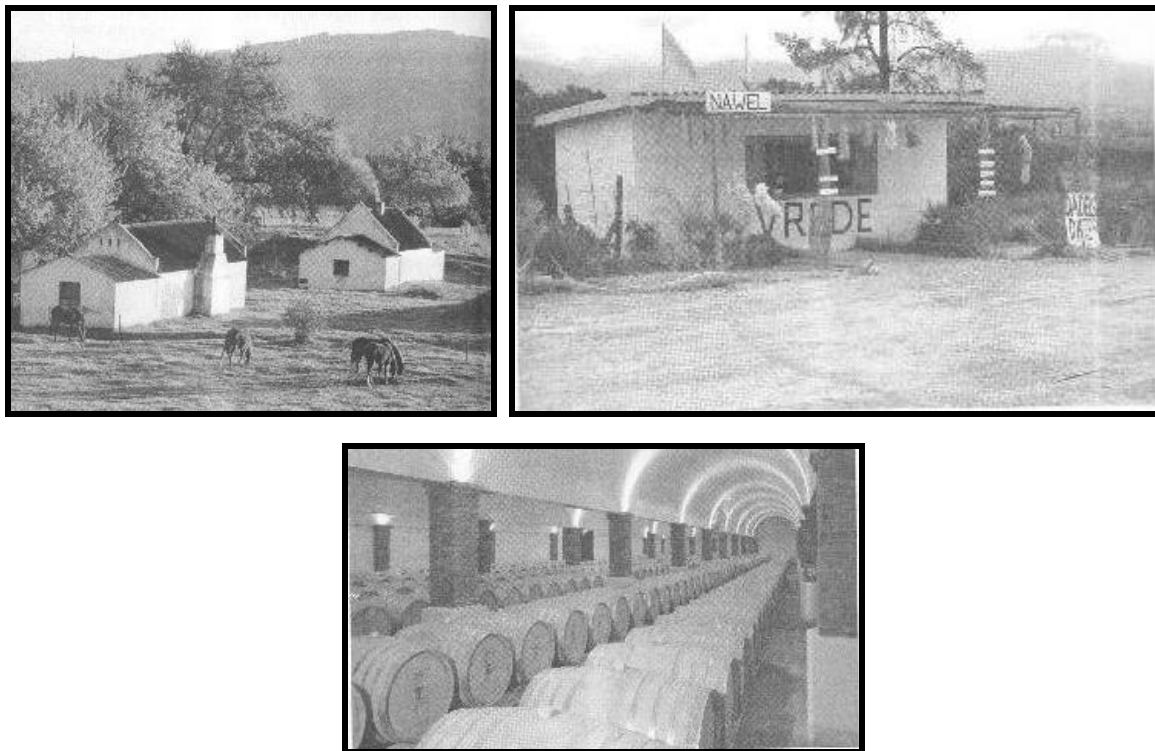
QUESTION 4: HARVESTING, VALUE ADDING, MARKETING, AGRO-TOURISM AND INDUSTRY

4.1 The pictures below are examples of processed agricultural products.



- 4.1.1 Explain the importance of grading products before processing it. (3)
- 4.1.2 Briefly explain THREE aims of processing an agricultural product. (3)
- 4.1.3 One of the aims of food processing is to eliminate micro-organisms that causes the food to become inedible. Indicate THREE methods that are used to eliminate these micro-organisms (3)
- 4.1.4 Mention the role that producer organisations can play in processing products. (3)

- 4.2 A local agricultural community was struggling economically. Rather than to give in to this situation, the community coordinated and created an association to collectively help all of the individuals of this community. This community took the opportunity to attract tourists to their local area by offering a unique package for the city dwellers.



- 4.2.1 Define the term agritourism. (1)
- 4.2.1 Explain the main aim of the above-mentioned project. (1)
- 4.3 Identify THREE benefits of agritourism in poor and semi-poor communities. (3)
- 4.4 The advantages and disadvantages of value-adding are important in determining the profit or loss of any enterprise. Value-adding normally increases the price you get for your raw material. Adding less expensive ingredients and packaging to your primary product gives it consumer appeal.
- 4.4.1 Identify the primary objective of value-adding to a product. (2)
- 4.4.2 Name THREE precautionary measures/factors that a farmer has to consider to be competitive when adding value to his/her product, in order to beat the competition. (3)
- 4.5 Packaging comes in various shapes and sizes. Name the THREE ways of packaging and give an example of each. (6)
- 4.6 The success of a farming enterprise often stands or falls depending on the farmer's ability to market. Most farmers are quite capable to produce a product, but often fail to market successfully. This can lead to huge losses

for the farmer. Discuss the principles of a marketing strategy that a farmer should apply to make sure that his products are marketed successfully. (4)

- 4.7 In the preparation for harvesting, an assessment must be done of the tools and equipment required. Name THREE factors the farmer would consider during the preparation period for harvesting. (3)
- 4.8 Identify a method of harvesting that you would recommend for each of the following cases:
- 4.8.1 Subsistence farmer (1)
- 4.8.2 Large commercial farmer (1)
- 4.9 The Agricultural Research Council (ARC) of South Africa is a research institution that wants to assist the agricultural community to produce more food. State the THREE main aims of the ARC division for sustainable rural livelihoods. (3)
- 4.10 Explain FIVE principles or aims of vacuum packing animal or crop products. (5)
- 4.11 The following are questions that are often asked by a farmer when drafting a farm business plan:
- Where am I going to sell my product?
 - Where am I going to get the capital?
 - What are the customers' needs?
 - What is the cost of producing a unit of the product?
 - When will I reach break-even point?
 - Are there any legal food safety considerations to take into consideration?

Categorise the above questions by re-writing each question in the appropriate column representing a section of a business plan. The columns are:

MARKETING	FINANCIAL PLANNING
...	...
...	...
...	...

(6)
[50]

TOTAL SECTION B: 150

GRAND TOTAL: 200