



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

EXEMPLAR 2008

MEMORANDUM

MARKS: 200

TIME: 2½ hours

This memorandum consists of 33 pages.

QUESTION 1: PIG PRODUCTION

- 1.1.1 I✓
- 1.1.2 G✓
- 1.1.3 M✓
- 1.1.4 C✓
- 1.1.5 N✓
- 1.1.6 P✓
- 1.1.7 J✓
- 1.1.8 Q✓
- 1.1.9 T✓
- 1.1.10 R✓

(10 x 1) (10)

- 1.2 Assist in:
 Market potential of the region. ✓
 What kind of transport is available? ✓
 Market requirements in terms of quality and quantity. ✓
 Price determination in the region. ✓
 Veterinarian issues with regard to production for processors. ✓
 Availability of yellow maize for feeding purposes. ✓
 Contact number of the nearest SAPPO agent in the region. ✓ Any (5)
- 1.3 Agronomical perspective. ✓
 Technical perspective. ✓
 Environmental perspective. ✓
 Economical perspective. ✓ (4)
- 1.4 Number of pigs marketed. ✓
 Average mass of pigs marketed. ✓
 Quality of meat marketed. ✓
 Price/kg received. ✓ (4)
- 1.5 Permanent labourers. ✓
 Temporary labourers. ✓ (2)
- 1.6 Labourers must know that there will be disciplinary action if he/she transgresses. ✓
 Disciplinary action is against the action and not the person. ✓
 Disciplinary action must be as quickly as possible. ✓
 Must be consequent. ✓
 Restore relationship after disciplinary action. ✓ (5)
- 1.7.1 R3✓ on each side. ✓
 1F✓ once on carcass. ✓ (4)
- 1.7.2 U3 = 28 – 22 mm of meat. ✓
 with medium confirmation ✓
 2M = boar ✓
 With moderate damage to the meat. ✓ (4)

NSC - MEMORANDUM

1.8.1	Blood.✓ Waste water.✓ Meat scraps.✓ Inedible fat.✓ Ground up bones.✓	Any	(4)
1.8.2	Blood meal.✓ Meat meal.✓ Bone meal.✓		(3)
1.9	Plan his goals. ✓ Make certain that it will sustainable/profitable. ✓ Collecting information on the enterprise. ✓ Make sure that he can market his produce. ✓ Ensure no transgression of health issues takes place. ✓ Use and preserve natural resources. ✓ Must adapt to changes.✓	Any	(5)
			[50]

QUESTION 2: BEEF PRODUCTION

2.1	2.1.1 C✓ 2.1.2 E✓ 2.1.3 H✓ 2.1.4 G✓ 2.1.5 J✓ 2.1.6 I✓ 2.1.7 D✓ 2.1.8 B✓ 2.1.9 F✓ 2.1.10 A✓	(10 x 1)	(10)
2.2	-to separate meat of a good quality✓ from meat of a poor quality. ✓		(2)
2.3	-it enables the consumer to select on basis of grade✓ -it serves as an indicator to a farmer about his quality of his product✓ -provides the farmer with a system of appellations which are standard throughout the greater part of South Africa✓ and supply the buyer with a standard which remain constant throughout the year.✓	Any	(3)
2.4	-air is a destructive element in any packing of food✓ -it causes oxidation✓ -it causes discoloration,✓ loss of odour✓ and texture✓ -meat become grey and show spots✓ -less palatable(delicious) and nutritious✓	Any	(4)

NSC - MEMORANDUM

- 2.5.1** -it's for better control and management of different classes of animals on the farm./ rest camps/ divide different veld types ✓
 -necessary for the implementation of a system of rotational grazing and rotational rest. ✓
 -to prevent selective grazing or preferential grazing. ✓
 -to prevent under and overgrazing ✓ (4)
- 2.5.2** -reduces runoff and increases infiltration rat. ✓
 - prevents soil erosion improves better utilization of rain water. ✓ (2)
- 2.5.3** Higher incidents of internal parasites. ✓
 Higher incidents of external parasites. ✓
 Hoofs may damage the grass because of higher water content. ✓
 Any (2)
- 2.5.4** Less as possible boundary fences in the same direction as the incline. ✓
 Water supply as centrally placed as possible. ✓
 Take extra care against boundaries to prevent soil erosion. ✓
 Prevent the forming of pathways. ✓ Any (3)
- 2.6** -it provides nutrients to pastures if not compacted ✓
 -it prevents soil erosion especially when there is a ground cover. ✓
 -provides moisture to the pastures if mixed farming is practiced. ✓ (3)
- 2.7** -are needed for legal, financial and taxation purposes ✓
 - for maintaining a permanent record of the farm business ✓
 - for analyzing the business ✓
 - for monitoring day-to-day activities ✓ and
 -for future planning. ✓ Any (4)
- 2.8** -direct sale to abattoir, retail/local butcher or supermarket. ✓
 -contract sale to wholesaler. ✓
 -sale by public auction. ✓ Any (2)
- 2.9.1** A -is the supplier of beef animal to the market. ✓ (1)
 B -is to process meat ✓ (1)
 C -act as a middlemen between processors, importers, the food service sector and retailers. ✓ (1)
 D -is to market beef to consumers through retail outlets. ✓ (1)
- 2.10** -description of the company ✓
 -product or service ✓
 -market ✓
 -forecasts ✓
 -management team ✓
 -financial analysis ✓ Any (5)

- 2.11 -is physical endeavour✓ in a farm which is bought for different activities in the farm. ✓
 Handling of animals. ✓
 Inoculations. ✓
 Erection of camps. ✓
 Maintenance. ✓
 Different veterinary activities. ✓
- Any (2)
- [50]

QUESTION 3: DAIRY FARMING

- 3.1.1 Milking unit ✓
 3.1.2 Left-hand side ✓
 3.1.3 Rotary system ✓
 3.1.4 Cows in milk ✓
 3.1.5 Yes ✓
 3.1.6 B ✓
 3.1.7 Sanitizer ✓
 3.1.8 Soap ✓
 3.1.9 Acid ✓
 3.1.10 75° C ✓
- (10 x 1) (10)
- 3.2 Personnel appointments.✓
 Personnel allocation. ✓
 Compensation. ✓
 Disciplinary actions. ✓
 Training, ✓
 Dismissal, ✓
 Motivation, ✓
- Any (4)
- 3.3 Butter is made of milk and margarine is made out of plants oils.✓
 Collecting the cream✓
 Souring the cream✓
 Getting cream temperature right✓
 Churning the cream✓
 Separate the butter from the buttermilk✓
 Wash the butter✓
 Add salt✓
 Put in moulds✓
- (9)
- 3.4 Bacterial count✓
 Somatic count✓
 Milk fat test✓
- (3)

- 3.5 Milk producers organization✓ Negotiates about prices✓
South African Milk Organization✓ Represent the dairy companies✓
Milk SA✓ Promoting research and development✓
National Milk Distributors Association✓ Promotes the dairy industry in
general✓
Institute for Dairy Technology✓ Provide a wide range of services to
farmers✓ any (6)**
- 3.6.1 April – June Milk price the highest.✓ (1)**
- 3.6.2 Highveld
20.42 + 27.21 + 34.65 = 82.28 / 3 = 27.42✓
KZN
13.25 + 20.16 + 29.87 = 63.28 / 3 = 21.09✓
E-Cape
13.47 + 21.49 + 30.45 = 65.41 / 3 = 21.80✓
W-Cape
18.34 + 25.61 + 33.27 = 77.22 / 3 = 25.74✓
On the Highveld✓ (4)**
- 3.6.3 20 litre / day
39.60 – 13.25 = 26.35✓
30 litre / day
59.20 – 20.16 = 39.24✓
40 litre / day
79.20 – 29.87 = 49.33✓ (3)**
- 3.7 (9)**

	Meaning of	Advantages	Disadvantages
Pasteurization	Heating of milk to a sufficient temperature to make it free of pathogens ✓	Destroy pathogens✓	Loss of some vitamins✓
Homogenisation	Milk is force through small gaps under high pressure to break up fat globules✓	Whiter milk and easier to digest✓	Milk become rancid more easier✓
Sterilisation and UHT treatment	Milk is heated to very high temperatures✓	Milk can stay for long times without becoming sour✓	Cooking smell of milk✓

- 3.8 It is capital in hand on a specific day if the farmer sells all his assets and pays all his creditors.✓ (1)**

[50]

QUESTION 4: SHEEP PRODUCTION (MUTTON)

- 4.1.1 C✓
 4.1.2 C✓
 4.1.3 D✓
 4.1.4 A✓
 4.1.5 A✓
 4.1.6 B✓
 4.1.7 C✓
 4.1.8 C✓
 4.1.9 A✓
 4.1.10 B✓ (10X1) (10)
- 4.2.1 Purchase price = $70 \times 15 = R1\ 050$ ✓ (1)
- 4.2.2 Carcass mass = $70 \times \frac{55}{100}$ ✓
 $= 38,5$ ✓ (2)
- 4.2.3 Purchase price = $70 \times 15 = R1\ 050$ ✓
 Price/kg = $\frac{1\ 050}{38,5}$
 $= R27,27$ ✓ (4)
- 4.2.4 Fat. ✓
 Damage. ✓
 Age. ✓ (3)
- 4.3.1 Ripening of meat is a biological process to soften the meat. ✓
 Enzymes destroys actinic and myosin proteins. ✓
- 4.3.2 Carcasses must be stashed away in a cold storage at ✓
 $0^{\circ} - 4^{\circ} C$ for 5 – 10 days. ✓
- 4.3.3 A mass loss of 4% will occur. ✓
 It is time consuming and meat cannot be sold. ✓
 The carcass became lighter. ✓
 If this ripening does not take place, meat will not be tender. ✓
- 4.4.1 Identify the correct time to slaughter the sheep. ✓
 Identify the mass with the highest prices. ✓
 Indication when there will be the highest profit margin. ✓ (3)
- 4.4.2 The best mass will be at 60kg. ✓

	40 kg	60 kg	70 kg
Slaughter mass	22	31,2✓	35✓
Income	$22 \times 20 = R660$ ✓	$31,2 \times 27 = R842,40$ ✓	$35 \times 27 = R945$ ✓
Feed cost	R200	$60 \times 6 = R360$ ✓	$70 \times 8 = R560$ ✓
Profit	R460✓	R482,40✓	R380✓

(10)

- 4.5 Working hours. ✓
 Job description. ✓
 Different type of leave. ✓
 Total amount of leave. ✓
 Salary. ✓
 Fringe benefits. ✓
 Prolong working hours and overtime. ✓
 Recognition of performance, ✓ Any (2)
- 4.6 More people needed in slaughtering facility. ✓
 Can establish a processing plant ✓
 That will create more work. ✓
 People can buy produce and then sell it at a profit. ✓ (4)
- 4.7 To improve the productivity. ✓
 If you want to expand the enterprise. ✓
 Reduce costs/expenditure ✓
 Obtain higher profit margin. ✓
 Optimal use of resources. ✓ Any (3)
- [50]

QUESTION 5: POULTRY (BROILERS)

- 5.1 5.1.1 Broiling ✓
 5.1.2 Age ✓
 5.1.3 Cockerels ✓
 5.1.4 Plastic packing material ✓
 5.1.5 Motivation ✓
 5.1.6 Scalding ✓
 5.1.7 Biological FCR ✓
 5.1.8 10 ✓
 5.1.9 Product chain ✓
 5.1.10 Dairy/Computer ✓ (10x1) (10)
- 5.2 -Number of chicks purchased ✓
 -Number of chicks sold ✓
 -Date of housing ✓
 -Feed intake ✓
 -Mortalities and culling ✓
 -Daily minimum and maximum temperatures ✓
 -Vaccination and dates ✓
 -Any change in management practice(date) ✓ Any (3)
- 5.3.1 The Labour Relations Act, Act No 66 of 1996 ✓ (1)
- 5.3.2 The Occupational Health and Safety Act, Act 85 of 1993 ✓ (1)
- 5.3.3 overall ✓
 pair of boots ✓
 helmet/hat ✓
 gloves ✓
 goggles ✓
 apron ✓ Any (4)

- put the stuffing lengthwise on the chicken. Lift and fold the sides up and over the stuffing and sew up carefully. ✓
 -Fold the neck skin back and secure. ✓
 -Tie round the breast with string in at least three places. ✓ Any (5)
- 5.7.1 It was R10.00/Kg✓ (1)
- 5.7.2 It was December 2002✓ (1)
- 5.7.3 It was July 2003 , July 2002 and Jan 2002✓ (1)
- 5.7.4 In October 2000 it was R5.00/Kg and in October 2003 it was R16.00/Kg therefore the price increase was R16.00/Kg- R5.00/Kg = R11.00/Kg✓ (1)
- 5.8 Alive✓
 Freshly slaughtered✓
 Frozen✓ (3)
- 5.9 Total mass produced✓
 Average live mass✓
 Biomass✓
 Total loss✓
 Feed consumption✓
 Efficiency factor✓
 Cost calculations✓ Any (5)
- [50]

QUESTION 6: GAME FARMING

- 6.1.1 Prove of rifle✓
- 6.1.2 Small game✓
- 6.1.3 Rump✓
- 6.1.4 10 year✓
- 6.1.5 27 months✓
- 6.1.6 Catching of game✓
- 6.1.7 10 - 30°✓
- 6.1.8 8 – 10m✓
- 6.1.9 Saw✓
- 6.1.10 Cool chamber✓

10 x 1 (10)

- 6.2.1 Bolo✓
Shin✓
Shoulder✓
Neck✓
Prima rib✓
Thick rib✓
Flat rib✓ Any (5)
- 6.2.2 Thin flank✓
Front rib✓
Filet✓
Lion/sirloin✓
Rump✓
Topside✓
Silverside and tail✓
Thick flank✓
Shin✓ Any (5)
- 6.3.1 1. Plato✓
2. Cliff✓
3. Middle slope✓
4. Plain✓ (4)
- 6.3.2 Mountain veldt✓
Hill veldt✓
Plain veldt✓
Valley✓ (4)
- 6.4 Choose the interval.✓
Compile total budget for the period in which all the branches of business budgets and farming plan will occur.✓
Note the estimated cash income.✓
Note the estimated cash expenditure.✓
Note the cash deficit or surplus for the period.✓
Consider adaptations.✓
Calculate the bank overdraft facility.✓
Practice control.✓ Any (6)
- 6.5 Hunting cost per type of animal.✓
The quota✓
Daily fees✓
Amount of compulsory days coupled to each package.✓
Amount of clients for each package.✓
Hunting season.✓
Procedures for reservations and payments.✓
Any illness of the region.✓
Add a loose price list because prices can change suddenly.✓ Any (6)
- 6.6 Lay area out according to infra structure and plant growth.✓
Evaluate the condition of the field.✓
Plan the infra structure.✓
Compile a field management plan.✓
Compile a game management plan.✓
Compile a financial plan.✓ (6)

6.7	Poisoning✓ Lay snares✓ Catching cages✓ Dogs✓ Anaesthetic✓ Automatic weapons✓ Weapons smaller than .22✓ Shotguns✓ Airguns✓	Any	(4)
			[50]

QUESTION 7: LAY HENS

7.1.1	In soil✓		
7.1.2	twenty✓		
7.1.3	control✓		
7.1.4	Health ✓		
7.1.5	61✓		
7.1.6	inports✓		
7.1.7	Standards✓		
7.1.8	Not be fired✓		
7.1.9	first✓		
7.1.10	are✓		
		(10 x 1)	(10)
7.2.1	Sound, slightly soiled, stained✓		(1)
7.2.2	4.8mm✓		(1)
7.2.3	Outline prominent, may be oblong in shape✓		(1)
7.2.4	Yolk fairly well rounded and erect, thick albumen✓		(1)
7.2.5	No restrictions✓		(1)
7.3.1	Wholesalers✓		(1)
7.3.2	Processing✓		(1)
7.3.3	Informal sector✓		(1)

- 7.3.4 Pick and pay✓
Shoprite✓
Hyperama's✓
Spar✓
Woolworths✓
Any✓ (3)
- 7.4 Size and grade shall be indicated✓
The expression "Eggs" or "Eiers" or "Eggs fragile" or "Eiers breekbaar" shall appear on the front or top panel✓
Number of eggs shall be specified✓
Details of the packer✓
If eggs were not obtained from the species Gallus domesticus the name of the poultry from which eggs were obtained shall appear on the front or top✓ (5)
- 7.5.1 Mr. Dube
Costs: R 13 440.00 + 8 500.00 + 342.00 + 1 554.16 = R 23 836.16✓
Benefits: R 24 418.37 + 4 560.00 + 3500 = R 32 478.37✓
Profit/loss: R 32 478 37 – 23 836 16 = R 8 642.21✓ Profit
- Mkhoma
Costs: R 13 440.00 + 10 500 + 342.00 + 1 554.16 + 1 230.00 = R 27 066.16✓
Benefits: R 24 418.37 + 4 560 = R 28 978.37✓
Profit/loss: R28 978.37 – 27 066.16 = R 1 912.21✓ Profit (6)
- 7.5.2 Mr. Dube (1)
- 7.5.3 Mr Dube sell his manure✓
Mkhoma feed costs was more✓
Mkoma's veterinary care was high✓ (3)
- 7.6 The person must know that there will be actions against him/her.✓
Must be towards the wrong action and not the person✓
Must be done as soon as possible after the event✓
Be consequent✓
After the action was taken their must be no ill feelings between the parties✓ (5)
- 7.7 Collected twice a day✓
During very hot or cold days more frequent collecting is necessary✓
When eggs are allowed to stay in the nest, the incidence of dirty and broken eggs increase.✓
Broken eggs encourage egg eating and therefore it should be removed✓
Dirty eggs should be cleaned soon after collecting✓
Eggs should be dried, placed in clean carton and refrigerated soon after gathering✓
Eggs sold to retailers should be grated✓ (7)

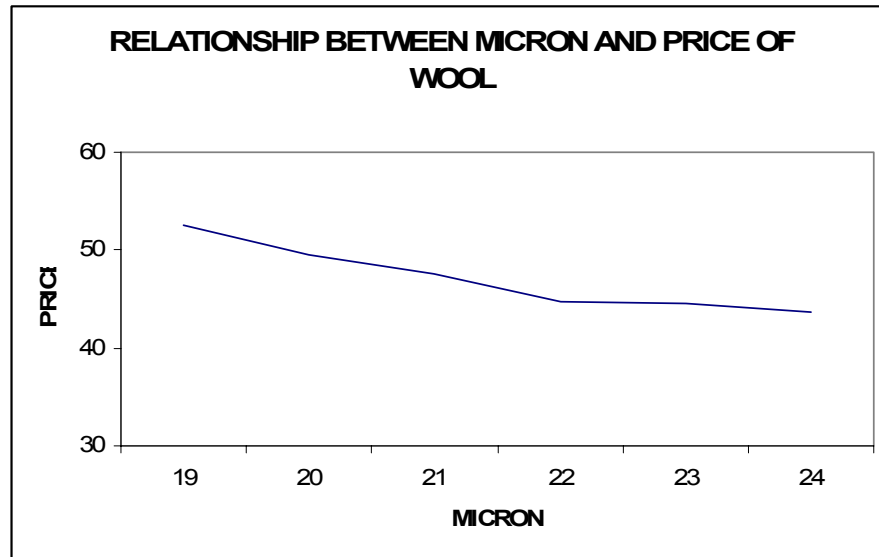
- 7.8 Eggs per hen per day ✓
Broken eggs ✓
Mortality ✓ (2)

[50]

QUESTION 8: SHEEP PRODUCTION (WOOL)

- 8.1.1 B ✓
8.1.2 A ✓
8.1.3 A ✓
8.1.4 C ✓
8.1.5 A ✓
8.1.6 B ✓
8.1.7 C ✓
8.1.8 C ✓
8.1.9 A ✓
8.1.10 A ✓ (10X1) (10)
- 8.2.1 The plant potential of his farm. ✓
Determine the carrying capacity of the farm. ✓ (2)
- 8.2.2 Achieve the densest plant growth. ✓
Graze veldt economically. / best production ✓
Achieve a climax plant growth. ✓
Less drought backfall ✓ any (3)
- 8.3.1 a) backs ✓
b) fleece wool. ✓ (2)
- 8.3.2 Wool stained with ink, paint etc. are sheared before sheep is on the shearing board. ✓
All locks with the belly wool is sheared off. ✓
Fleece is sheared. ✓
Fleece is thrown onto shear table with shearing side face down. ✓
Different lines of wool are skirted. ✓
Classification of the fleece. ✓
The fleece is then rolled. ✓
Baling of fleece into wool sack. ✓ (8)
- 8.4 Tensile strength. ✓
Overall length. ✓
Fineness. ✓
Quality. ✓
Condition. ✓
Appearance. ✓ any (4)
- 8.5 Felt. ✓
Knitted fabrics. ✓
Bonded fabrics. ✓ (3)

8.6.1



(3)

X-axes ✓ y-axes ✓ graph ✓

8.6.2

Wool with the highest demand. ✓
 This micron is used in the clothing industry ✓
 To make high standard/quality garments. /Greater versatility of use. ✓
 Easily woven into material. ✓

(4)

8.6.3

Selection of lines that will produce fine wool qualities. ✓
 Like the Merino. ✓

(2)

8.6.4

The demand for this wool is low. ✓
 The industry has difficulty in using this wool. ✓
 Low prices will discourage farmers in producing this wool. ✓

Any

(2)

8.7.1

Marketing of wool and mohair. ✓
 Centralized sales of wool and mohair. ✓
 Organising auctions in the sale season. ✓
 Take wool and mohair samples for testing. ✓
 Shipping of sold produce. ✓

(5)

8.7.2

Ensure internationally high quality wool trade, ✓
 Internationally accepted products. ✓
 Increased international competitiveness. ✓

Any

(2)

[50]

- 10.2 **Sweet oranges✓
Mandarines✓
Grapefruit✓
Lemons✓
Limes✓** (5)

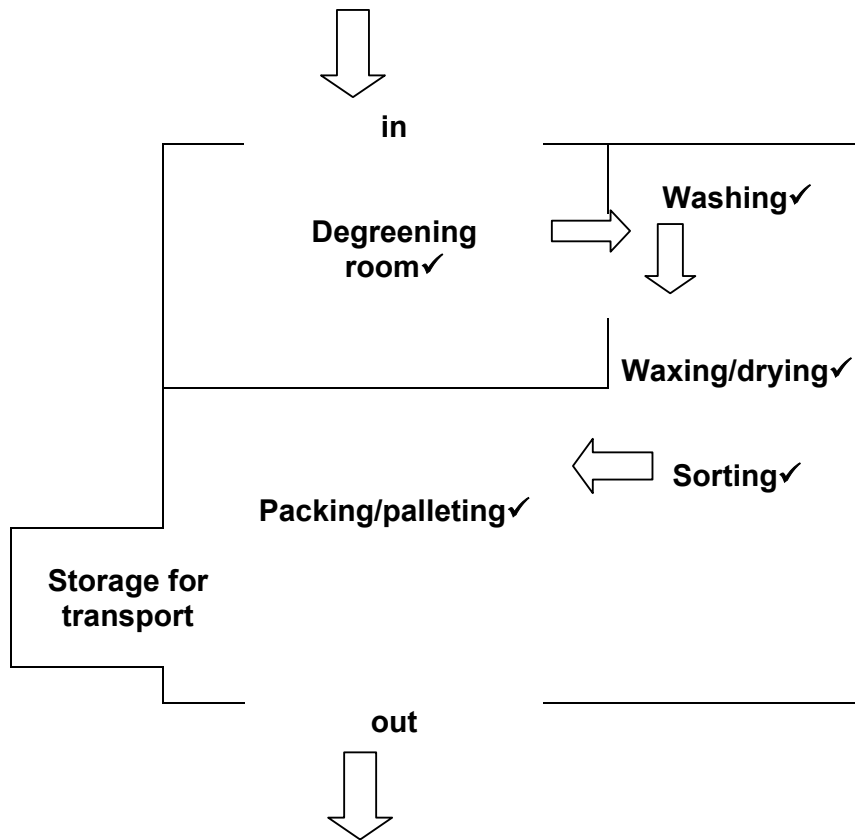
- 10.3 **Contains no additives✓
Has not been subjected to any preserving process other than chilling✓
Is free and clean from foreign matter✓
Free of pips✓
Is intended to be sold for consumption within two hours of extraction thereof and is so sold✓** (5)

- 10.4.1 **Saving of pesticides✓
Open spaces between trees would not be sprayed✓
Saving the farmer money✓** (3)

- 10.4.2 **Global positioning system✓✓** (2)

- 10.4.3 **Yes✓** (1)

- 10.5 (5)



- 10.6.1** This machine displace 1032m^3 / minute
 Tree volume $4 \times 3.5 \times 3 = 42 \text{ m}^3$ / tree✓
 Tree has to be sprayed at both sides $42 \times 2=84$ ✓
 $1032 \div 84 = 12.2$ trees/minute✓ (3)
- 10.6.2** $5 \text{ ha} \times 555 \text{ trees/ ha} = 2775 \text{ trees}$ ✓
 $2775 \times 15\text{l/tree} = 41625 \text{ liters}$ ✓
 $41625 \div 2000\text{l} = 20,8 \text{ times}$ ✓ (3)
- 10.7.1** Changes in the pattern of resources✓ - Labourers resign✓
 Changes in technological and biological relationships✓ - New
 insecticides on market✓
 Changes in prices✓ - Price of certain inputs rise for instance fertilizer✓
 Risks and uncertainties✓ - Rainfall influence the yield✓
 (any other correct example) (8)
- 10.8** Records the number of containers harvest.✓
 Inspects for improperly harvest fruit.✓
 Are also responsible for ensuring that the entire crop or the properly
 sized or colored is harvested from a particular orchard or area of an
 orchard✓ (3)
- 10.9** Perishable Products Export Control Board✓✓ (2)

[50]

QUESTION 11: MAIZE PRODUCTION

- 11.1.1** Soil survey✓
11.1.2 Contours✓
11.1.3 Controlling✓
11.1.4 Financial data✓
11.1.5 Winter✓
11.1.6 Protein and water✓
11.1.7 R/ton✓
11.1.8 Dry milling✓
11.1.9 Business✓
11.1.10 Pesticides✓ (10)
- 11.2.1** Is a process carried out in water✓
 During which pure starch✓
 Is obtained from maize.✓ (3)
- 11.2.2** Cleaning.✓
 Separation.✓
 Refining.✓ (3)
- 11.3.1** Starch.✓ (1)
11.3.2 Cooking oil. ✓
 Margarine. ✓
 Mayonnaise. ✓
 Salad dressing. ✓
 Shortening. ✓ Any (2)

- 11.3.3 **Animal feed materials.**✓ (1)
- 11.3.4 **Animal feed.**✓
Poultry feed.✓ (2)

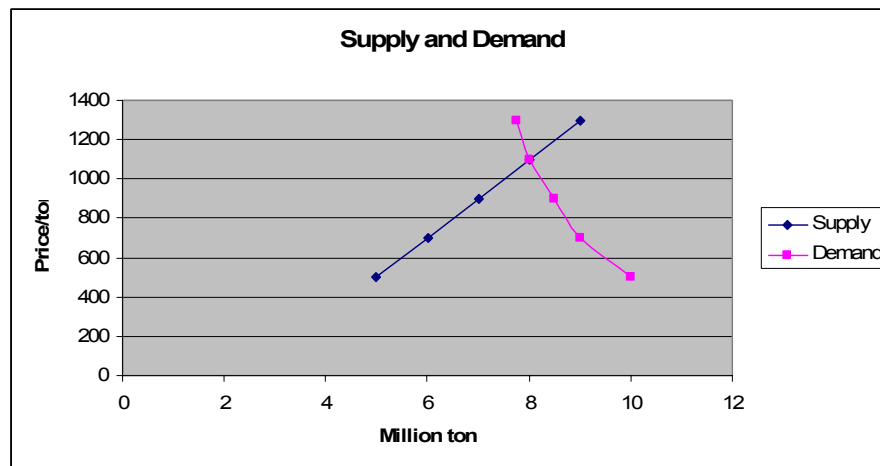
- 11.4.1 **Easier to combat weeds/pests.**✓
Less time use to combat pests.✓
Use of herbicides that was normally not been used.✓
Better control of weeds/pests.✓
Better utilization of labour.✓ (5)

- 11.4.2 **Use less herbicides/pesticides.**✓
Insects like bees are not affected.✓
Does not harm beneficial insects like ladybirds.✓
Seed does not harm birds and rodents.✓
B.t protein is harmless to mammals.✓ (5)

- 11.5.1 **Fixed cost – cost you are certain of and will not change.** ✓✓
Variable cost – subject to change. ✓
- dependent on different factors✓ (2)

- 11.5.2 **Cash turnover = selling price – variable costs**
= 100 – 77 = 23✓✓
Break even point = $\frac{\text{fixed costs}}{\text{Cash turnover}}$
= $\frac{45\ 000}{23}$ ✓
= 6 304,35✓ (4)

11.6.1



X axes✓**Y axes**✓**Supply**✓**Demand**✓ (4)

- 11.6.2 **R1 100**✓
It is the point where the supply meets the demand.✓✓ (3)

- 11.6.3 **Market equilibrium.**✓ (1)

- 11.7 To start a new farming enterprise. ✓
 To start a new production direction in the existing farming enterprise. ✓
 Expansion of the farming enterprise. ✓
 Developing a processing plant. ✓
- Any (2)

[50]

QUESTION 12: WHEAT PRODUCTION

- 12.1.1 K ✓
 12.1.2 G ✓
 12.1.3 A ✓
 12.1.4 B ✓
 12.1.5 C ✓
 12.1.6 E ✓
 12.1.7 F ✓
 12.1.8 I ✓
 12.1.9 L ✓
 12.1.10 J ✓

(1X10) (10)

12.2

1. BUSINESS DESCRIPTION
12.2.1 Nature of business ✓
Vision ✓
Mission ✓
Management ✓
2. MARKET RESEARCH AND ASSUMPTIONS
12.2.2 Growth potential ✓
Customer profile ✓
Competition ✓
Market segments ✓
3. OPERATION PLAN
12.2.3 Facility plans ✓
Employment, Personnel and Administrative Plan ✓
4. RISK ANALYSIS
12.2.4 Price risk ✓
Production/output Risk ✓
Financial risk ✓
5. FINANCIAL PLANS
12.2.5 Assumptions, Definitions and Notes ✓
Audited income statement for last three years ✓

Any one per category (5)

NSC - MEMORANDUM

- 12.3.1** Provides the consumer with the necessary nutrients such as proteins, ✓
fats, ✓
vitamins ✓
and carbohydrates. ✓
Plays an important role in preventing constipation in the alimentary canal with the fibre. ✓ Any (2)
- 12.3.2** White bread = 4,50 x 4,55% (2)
= 0,20 ✓
Price now = R4,70 ✓
- 12.3.3** 4,55% + 1,18 % ✓ = 5,73%. ✓ (2)
- 12.4.1** It is a combine harvester ✓ (1)
- 12.4.2** At the front of the combine, a large reel turns and pushes the heads of wheat plants into a "sickle". ✓
The "sickle" cuts the heads off the plants and they are pulled into the combine. ✓
The combine shakes and beats the wheat seeds out of the heads ✓
And separates the kernels (wheat seeds) from all the other plant materials. ✓
Then the kernels are moved into a grain tank on the combine ✓
While the other "extra" stuff is blown out the back of the combine and spread across the field. ✓ Any (3)
- 12.4.3** Given: Cost price of a harvester = R1 000 000
Estimated salvage value = R100 000
Estimated useful life = 10 years
- Therefore annual depreciation = $\frac{R1\ 000\ 000 - R100\ 000}{10}$ ✓
= $\frac{R900\ 000}{10}$ ✓
= R90 000 ✓ (4)
- 12.5** -at the flour mill the wheat kernels are cleaned to remove dust and pieces of straw. ✓
-mechanical cleaners remove weeds, seeds and other parts of plants. ✓
-the kernels are then washed in a stream of water to take away stones and dirt. ✓
-next, big heavy rollers break up the wheat and crush it. ✓
-it is then sifted many times to give us flour. ✓ (5)
- 12.6** -consumers, particularly those who have concerns about bio-technology. ✓
-food importers and distributors of wholesale ingredients ✓
-the manufacturing and retail sectors of the food industry; ✓ and
-government, where a regulatory decision may impact on trade or WTO obligations and enforcement agencies. ✓ (4)

- 12.7 -they are pacesetters and power balancers✓
-supply farmers with inputs✓
-market farmers' produce ✓
-finance farmers✓
-supply different services to farmers✓
-supply insurance. ✓ Any (5)
- 12.8 -low workplace productivity✓
-low morale✓
-low profit on investment✓
-high investment on labour and low output✓ Any (3)
- 12.9 -indicates where and when money will be needed for any undertaking✓
-indicates the source of money into the business as well ✓
-it evaluates the loan needs for the farm. ✓
-it determines the credit worthiness of the farmer. ✓
-it guides against the misuse of funds. ✓
-it determines the ability of the farmer to meet the short term financial obligations e.g. payment of bank instalments. ✓ Any (4)
- [50]

QUESTION 13: SUNFLOWER PRODUCTION

- 13.1 13.1.1 T✓
13.1.2 F✓
13.1.3 T✓
13.1.4 F✓
13.1.5 T✓
13.1.6 T✓
13.1.7 F✓
13.1.8 F✓
13.1.9 F✓
13.1.10 T✓ (10 x 1) (10)
- 13.2.1 Deal with issues concerning suitability of location, method of farming and type of resources to use. ✓ (1)
- 13.2.2 It is a marketing factor where you ask yourself as to where are you going to sell the produce, how and what are you going to produce✓ and at what price/pricing method. ✓ (2)
- 13.2.3 Provision of money when it is most needed such as the sources and procedures on how to receive money. ✓ (1)
- 13.2.4 How will the project be managed and how will it relate with other agencies.✓ (1)
- 13.2.5 How will the project affect the community and environment such as ecology due to deforestation✓
Control of stray animals from destroying other farms to prevent conflicts. ✓ (2)

- 13.3 It seeks to promote,✓
guide✓
and discipline the operation of markets✓
E.g. product standards and tax, uniform weights and laws dealing with
competition. (3)
- 13.4 A budget is a plan of the future income and expenses of a business✓
and it gives a farmer a direction on what to expect as his profit for any
given enterprise. ✓ It is by making a list of total expenses (TE) and total
income (TC).✓
The expected profit = $TC - TE$ ✓ (4)
- 13.5.1 It is R3.00✓✓ (2)
- 13.5.2 January 2000✓ the price of cooking oil was the same as the price of
margarine in March 2000✓ which was at R6.50 (2)
- 13.5.3 The period of January 2000✓ to February 2002. ✓ (2)
- 13.6.1 Is a selective form tourism or the act of visiting a working farm or any
agricultural, horticultural or agribusiness operation✓
For the purpose of enjoyment, education or active involvement in the
activities of the farm or operation. ✓ (2)
- 13.6.2 Recreation and tourism are social businesses.✓
Provide farmers with auxiliary funding to continue with his/her
agricultural activities,✓
to run a tourists business,✓
And more efficient use of labour, capital and other production factors.✓
Any (3)
- 13.7 Permanent labour,✓
Bookkeeper's fee,✓
Depreciation costs,✓
Electricity for workers.✓
Insurance✓
Compensation✓
Land cost✓ Any (3)
- 13.8.1 It is a balance sheet✓
and indicates the financial status of a farm at a specific point in
time/particular date or time.✓ (2)
- 13.8.2 It is the money left when all the debt is deducted from the total assets. (2)
- 13.8.3 $R187\ 300 - R97\ 100 = R90\ 200$ ✓ (2)

- 13.8.4 Medium term is 2 – 5 year term. ✓**
Use to buy movable assets ✓
Tractors, implements ✓
Short term is 2 – 5 year. ✓
Use for trade expenses. ✓
fertilizer ✓ (6)

[50]

QUESTION 14: VEGETABLE PRODUCTION

- 14.1.1 B ✓**
- 14.1.2 C ✓**
- 14.1.3 D ✓**
- 14.1.4 C ✓**
- 14.1.5 D ✓**
- 14.1.6 A ✓**
- 14.1.7 C ✓**
- 14.1.8 C ✓**
- 14.1.9 B ✓**
- 14.1.10 B ✓** (1 X 10) (10)
- 14.2 Determine soil structure and the soil texture to decide on which vegetable crop to plant on the different soils. ✓**
Root crops may be planted in the sandy soil and loam soil. ✓
Decide on the type of irrigation for each type of soil. ✓
Take soil samples to plan fertilization. ✓
Prevent soil erosion and pollution. ✓ (5)
- 14.3 Fuel and lubricants. ✓**
Labour. ✓
Interest on capital investigation. ✓
Cost of supplying shelter. ✓
Insurance and licensing. ✓
Depreciation. ✓
Repair and maintenance costs. ✓ Any (5)
- 14.4.1 To halt the action of the enzymes. ✓**
Prevent the loss of nutrients. ✓
When dried it prevent adhering to each other. ✓ (3)
- 14.4.2 Pour few centimetres of water into container with closing lid. ✓**
Heat water until boiling point. ✓
Place wire rack just above the water. ✓
Place vegetables into wire rack not more than 5cm thick. ✓
Cover and let steam for half the required time. ✓
Control if steam reaches all the vegetables. ✓
Steam for the rest of the required time. ✓
Let dry, cool down and then packed it. ✓ (8)
- 14.5.1 Stored in covered containers. ✓** (1)
- 14.5.2 Stored in a cool place without refrigeration. ✓** (1)
- 14.5.3 Stored uncovered in the refrigerator. ✓** (1)

- 14.5.4 Stored in cool dry place in containers. ✓ (1)
- 14.6 Taking of rational decisions as well as ✓
 Planning ✓
 Organising ✓
 Implementation and control of ✓
 Human and material resources to ✓
 Achieve business objectives ✓ (5)
- 14.7.1 Production record ✓ (1)
- 14.7.2 Coldest month. ✓ (1)
- 14.7.3 No panting during December and January. ✓
 Temperatures too high for planting. ✓ (2)
- 14.8.1 (a) R36 000 ✓
 (b) R35 275 ✓ (2)
- 14.8.2 Profit percentage = $\frac{725}{36\,000} \times 100$ ✓
 = 20,3% ✓ (2)
- 14.8.3 Yes it will be viable. ✓
 There is a decrease in the expenses of R725 when buying the tractor. ✓ (2)
- [50]

QUESTION 15: PEACH PRODUCTION

- 15.1.1 A ✓
- 15.1.2 B ✓
- 15.1.3 C ✓
- 15.1.4 D ✓
- 15.1.5 C ✓
- 15.1.6 A ✓
- 15.1.7 C ✓
- 15.1.8 D ✓
- 15.1.9 B ✓
- 15.1.10 A ✓ (10)
- 15.2.1 After harvesting. ✓ (1)
- 15.2.2 Cool down quickly. ✓
 0 – 2° C ✓ (2)
- 15.2.3 2 – 3 weeks ✓ (1)
- 15.3 Look at the ground colour/ under colour. ✓
 Do not look at the red blush. ✓
 On yellow fleshed varieties, the under colour change from green to light green and then to yellow. ✓✓
 On white fleshed varieties, the under colour change from green to light green and then to ivory. ✓✓
 For maximum flavour pick peaches when green colour is gone around the stem end. ✓ (7)

- 15.4** Peaches are picked and placed in large bins.✓
 In packinghouses, peaches are hydro cooled or air-cooled.✓
 Released onto conveyor belts for sorting,✓
 Defuzzing,✓
 Grading,✓
 Sizing,✓
 Packaging.✓ (7)
- 15.5.1** Quality must be excellent.✓
 Select firm-ripe peaches that are heavy for their size.✓
 Dried peaches, slightly plumped can be used in chutney,
 cobblers, cookies, granola and pies.✓ (2)
- 15.5.2** Before drying peaches are peeled.✓
 Halved or quartered.✓
 The pit must be removed.✓
 Peaches require ant- darkening treatment before drying to
 prevent browning.✓ (3)
- 15.5.3** Colour yellow-orange, with hints of red. ✓
 Reasonable uniform.✓
 Characteristic of the variety. ✓
 Reasonable free of defects. ✓
 Available in style of halves, ✓
 Dices✓
 And paste. ✓
 Also available as double sized. ✓
 Free of off flavours. ✓
 Sweet to tart.✓ Any (4)
- 15.6** Agronomical perspective.✓
 Technical perspective.✓
 Environmental perspective.✓
 Economical perspective.✓ (4)

- 15.7 Person must know there will be disciplinary action if there is wrongdoing.✓
Action is against wrongdoing and not the person.✓
Must be as quickly as possible after wrongdoing.✓
Actions must be consequent.✓
Restore relationship after disciplinary action.✓ (5)
- 15.8.1 Land area planted.✓
Labour costs.✓
Capital. ✓
Equipment. ✓ (2)
- 15.8.2 Break even point = $\frac{11\,944,52}{20}$ ✓
= 597,23
= 598✓ (2)
- [50]

QUESTION 16: HIDROPONICS

- 16.1.1 E✓
- 16.1.2 G✓
- 16.1.3 D✓
- 16.1.4 B✓
- 16.1.5 A✓
- 16.1.6 I✓
- 16.1.7 L✓
- 16.1.8 M✓
- 16.1.9 K✓
- 16.1.10 P✓ (10)
- 16.2 National fresh produce markets✓
Chain stores✓
Green grocers✓
Informal markets✓
Export✓ (5)

- 16.3 Monitor pickers at harvest✓**
Do not dump produce in crates✓
Reduce drop distance in the packing line✓
To reduce bruising during transport, bulk bins must not contain too much produce✓
Increase workers awareness of the perishable nature of the produce✓
Install padding on metal surfaces✓
Ensure that corners on the packing line are larger than 30°✓
Slow down the packing line✓
During cleaning of produce soft brushes should be used✓
Fruits should be packed tightly into boxes✓ Any (5)
- 16.4 Must be comfortable and balanced to carry✓**
The parts must be strong and of corrosion resistant materials✓
Must seal tightly✓
Enough opening to fill the tank✓
The pipe to the hand held boom must be of the correct length✓
The pumps and the valves must be efficient✓
Spares must be easily obtainable✓
The pump must be small and easily changeable✓
Pressure gauges and pressure regulators are preferable✓ (6)
- 16.5.1 No. ✓**
Income = 2 9231 x R11 = 321 541,00✓
Income – Expenditure = R 321 541,00 – R 500 379,00
= R – 178 838✓ (3)
- 16.5.2 Profit/season = 321 541,00 – 255 275,00 = 66 266. ✓**
Construction costs = 245 122
Capital redemption = 245 122 ÷ 66 266 = 3, 7✓
Thus profitable after 4 years. ✓ (3)
- 16.6 Resources – water✓**
External factors – Marketing quotas, interest rates✓
Parameterization – Any what if answer(e.g. What if yield is lower than expected)✓
The budget horizon – 1 year✓
Inputs – growth medium✓
Prices – pesticides✓ (any other correct example) (6)
- 16.7.1 Precision farming is seen as the practice where a field is not managed as a homogeneous unit. ✓**
It is managed, as different zones each with its own potential. ✓
Each zone is practically managed to its potential irrespective of the size of it. ✓
By using advanced technological equipment. ✓ Any (2)
- 16.7.2 Satellite✓**
Tractor or equipment✓
Tractor network✓
Information centres✓ Any (2)

- 16.7.3** Improve crop yield✓
Provide better information to make better management decisions✓
Reduce costs✓
Provide more accurate farm records✓
Increase profit margin✓
Reduce pollution✓ Any (3)
- 16.8** Planning✓
Organizing✓
Commanding✓
Co-ordination✓
Control✓ (5)
- [50]**

QUESTION 17: VITICULTURE

- 17.1.1** F✓
- 17.1.2** E✓
- 17.1.3** G✓
- 17.1.4** C✓
- 17.1.5** D✓
- 17.1.6** K✓
- 17.1.7** M✓
- 17.1.8** L✓
- 17.1.9** B✓
- 17.1.10** A✓ (10 x 1) (10)
- 17.2.1** Brand name✓
- 17.2.2** Vintage✓
- 17.2.3** Cultivar✓
- 17.2.4** Alcohol content✓ (4)
- 17.3.1** Agri - Tourism✓ (1)
- 17.3.2** Promotes agricultural products✓
Provide information✓
Improve income streams✓
More efficient use of resources✓
Provide jobs✓
Provide business opportunities✓ (4)

- 17.4.1 It is a system of grape growing which is based not on the plant but an attempt at rational management of the living parts of the soil while respecting biological cycles and the environment.✓✓ (2)
- 17.4.2 Yes✓ (1)
- 17.4.3 No✓ (1)
- 17.4.4 Plants take the nutrients from the soil and the farmer has to put it back by organic means.✓
Manure✓
Compost✓ (2)
- 17.5 Soil preparation✓
Tilling✓
Planting✓
Growing✓
Trellising✓
Pruning✓
Combating disease✓
Fertilization✓
Harvesting✓ Any (5)
- 17.6 pH level✓
Sugar content✓ (2)
- 17.7 Formulation of objectives✓
Identification of problems✓
Collection and classification of information✓
Analysis of alternative actions✓
Decision taking✓
Implementing the decision✓
Taking of responsibility✓ (7)
- 17.8
- | | | | |
|------------------------------|----------------------|------------------------------|--------------------|
| CURRENT ASSETS | | CURRENT LIABILITIES | |
| CASH | R 24 000 | ACCOUNTS PAYABLE | R 134 000 |
| ACCOUNTS RECEIVABLE | R 57 000 | NOTES PAYABLE | R 87 000 |
| INVENTORY | R 287 000 | LONG TERM LIABILITIES | R 115 000 |
| FIXED ASSETS | R 870 000 | | |
| TOTALS | R 1 238 000✓✓ | | R 336 000✓✓ |
| NETT VALUE R 902 000✓ | | | |
- (5)
- 17.9 Cane pruning✓
Spur pruning✓
Machine pruning✓
Minimal Pruning✓ (3)

- 17.10 Granite✓
Table Mountain Sandstone✓
Shale✓ (3)

[50]

QUESTION 18: POTATOES

- | | | | |
|---------|----|----------|------|
| 18.1.1 | F✓ | | |
| 18.1.2 | T✓ | | |
| 18.1.3 | T✓ | | |
| 18.1.4 | T✓ | | |
| 18.1.5 | T✓ | | |
| 18.1.6 | F✓ | | |
| 18.1.7 | F✓ | | |
| 18.1.8 | F✓ | | |
| 18.1.9 | T✓ | | |
| 18.1.10 | T✓ | (10 x 1) | (10) |
- 18.2 Train staff to limit damage to tubers. ✓
Start harvesting after all the stems has died off. ✓
Harvest when soil moisture content is 60% - 65%. ✓
Do not harvest if tuber temperature is below 13° C. ✓
Remove as much of the soil and other organic material. ✓
Remove tubers from field as quickly as possible. ✓
Remove all unmarketable tubers from storage shed. ✓
Pack and market all potatoes as soon as possible. ✓ Any (5)
- 18.3 Potatoes can only be sold if it is classified within regulated classes. ✓
Potatoes must comply with the regulated standards. ✓
Packed according into containers within prescribed manner. ✓
Potatoes are marked in prescribed manner. ✓
Potatoes don't contain substances which it may not contain. ✓
Packed in the correct container and manner. ✓ Any (5)
- 18.4 Improve crop yield. ✓
Provide information to make better management decisions. ✓
Reduce chemical and fertilizer costs through efficient application. ✓
Provide more accurate farm records. ✓
Increase profit margin. ✓
Reduce pollution. ✓ Any (5)
- 18.5 Planning of the farming activities. ✓
Exposition of the daily work. ✓
Use of task work. ✓
Acknowledgement of performance. ✓
Supervision. ✓ (5)

18.6	Prize in different time zones. ✓		
	Market movement. (demand and supply in different stages) ✓		
	Price difference between different markets. – Consumer behaviour. ✓		
	Highest and lowest prices during the year. ✓		
	Amount of produce sold/not sold. ✓	Any	(4)
18.7.1	Plan to look ahead, ✓		
	Allocate resources, ✓		
	Focus on key points, ✓		
	And prepare for problems and opportunities. ✓		
	Financial statements. ✓		
	Possible markets. ✓		
	Factors influencing the markets. ✓	Any	(4)
18.7.2	Plan must be simple, easy to understand and contents communicate practically. ✓		
	Plan must be specific with measurable objectives. ✓		
	Plan must be realistic in terms of goal setting. ✓		
	Plan must be complete and include all necessary elements. ✓		(4)
18.8.1	Mixed vegetables. ✓		(1)
18.8.2	French fries. ✓		(1)
18.8.3	Plant potatoes for the French fry market. ✓		
	It is the fastest growing market. ✓		(2)
18.8.4	Change in economic circumstances Will let people buy more luxuries. ✓		
	Expansion of the fast-food industry. ✓		
	Higher average income of the population results in greater expenditure. ✓		
	Rapid rate of urbanisation. Urban people buy more fast food. ✓		
	Influx of international companies in the fast food industry. ✓	Any	(3)
			[50]
		TOTAL	[200]