



**education**

Department:  
Education  
REPUBLIC OF SOUTH AFRICA

# **NATIONAL CERTIFICATE (VOCATIONAL)**

## **SUBJECT GUIDELINES**

**AGRI-BUSINESS**

**NQF Level 3**

September 2007



# **AGRI-BUSINESS - LEVEL 3**

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## INTRODUCTION

### A. What is Agri-business?

The National Certificates (Vocational) extends from NQF Levels 2 to 4 in Further Education and Training Colleges. Agri-business is an optional Vocational subject of in the Primary Agriculture programme. The subject covers the following fields of study:

- Basic farm accounting
- Entrepreneurship in agricultural contexts
- Collecting data, costing, planning and budget construction
- Sustainability and importing and exporting
- Integrated management of a small agricultural enterprise

Basic farm accounting, Entrepreneurship and Collecting data costing, planning and budget construction are at least started in Level 2, but Sustainability and importing and exporting and Integrated management of small agricultural enterprises are addressed at Levels 3 and 4 only.

The subject aims to equip students with skills, values and knowledge necessary to progress through all the levels of the Primary Agriculture programme.

### B. Why is Agri-business important in the Primary Agriculture programme?

The Primary Agriculture programme is designed to equip students to enter a mixed farming situation. Agri-business enables students to manage a farm as a viable and successful business enterprise.

### C. The link between the Agri-business Learning Outcomes and the Critical and Developmental Outcomes

The methods of teaching and assessment are vital for the achievement of the Critical Outcomes and Developmental Outcomes. During the three years of the National Certificates (Vocational) programme, students are responsible, individually and in groups, for live animals and crops, and consequently, keep journals in which they answer, amongst others, reflective questions.

The assessment questions will require students to go beyond mere recall and into solving problems that relate to farms as business. The topics linked to the practical work require students to go beyond this immediate context by asking “What if...?” and similar questions. Questions relating to the planning of farm activities can be used to promote in-depth thinking.

Given these teaching and assessment processes, by the end of the three years the students should have covered all seven Critical Outcomes to some extent, and most if not all of the Developmental Outcomes. Critical thinking, critical evaluation and seeing the world as a set of interrelated systems will be easier to address by the third year of the programme, when the students are at Level 4 and they have more information available and are able to consider a wider range of options.

### D. Factors that contribute to achieving the Agri-business Learning Outcomes

- Enabling environment – This subject should be presented in the context of small, micro and medium enterprises (SMMEs), emerging small-scale farmers and personal needs.
- Resources – Students should have access to all the necessary resources needed for the chosen practical activities at hand.
- Experiential exposure – Students should be exposed to real work and simulated work environments.
- Suitably qualified lecturers – Lecturers should have a solid command of subject knowledge and skills and be well informed about legislation, community issues and accessing support systems, for example systems provided by the Department of Agriculture.

## 1 DURATION AND TUITION TIME

This is a one year instructional programme comprising 200 teaching and learning hours. The subject has been planned as part of a full-time programme, but could be offered on a part-time basis provided that all the assessment requirements set out here are adhered to.

Students with special educational needs (LSEN) must be catered for in a way that eliminates barriers to learning.

## 2 SUBJECT LEVEL FOCUS

- Demonstrate an understanding of Agri-Business.

## 3 ASSESSMENT REQUIREMENTS

### 3.1 Internal assessment (50 percent)

#### 3.1.1 Theoretical component

The student will be required to achieve all outcomes of the subject at this level. All Subject Outcomes will contribute to the formative assessment of this subject.

The theoretical component will form 50 percent of the internal assessment.

#### 3.1.2 Practical component

The practical component will form 50 percent of the internal assessment.

It must be clearly indicated which outcomes were achieved in each practical assessment, and the rating for each one. All practical assessments must be recorded in the Portfolio of Evidence (PoE).

### 3.2 External assessment (50 percent)

A national examination is conducted annually in October or November by means of a paper/s set externally and marked and moderated externally.

## 4 WEIGHTED VALUES OF THE TOPICS

TOPICS	WEIGHTED VALUES
1. Collecting data, costing, planning and budget construction	90
2. Sustainability and importing and exporting	10
<b>TOTAL</b>	<b>100</b>

## 5 CALCULATION OF FINAL MARK

Continuous assessment:                      Student's mark/100 x 50/1 = a mark out of 50    (a)

Examination mark:                              Student's mark/100 x 50/1 = a mark out of 50    (b)

**Final mark:                                        (a) + (b) = a mark out of 100**

All marks are systematically processed and accurately recorded to be available as hard copy evidence for, amongst others, purposes of moderation and verification.

## 6 PASS REQUIREMENTS

The student must obtain at least fifty (50) percent in ICASS and fifty (50) percent in the examination.

## 7 SUBJECT AND LEARNING OUTCOMES

On completion of Agri-Business Level 3 the student should have covered the following topics:

Topic 1:                      Collecting data, costing, planning and budget construction

Topic 2: Sustainability and importing and exporting

### 7.1 Topic 1: Collecting data, costing, planning and budget construction

**7.1.1 Subject Outcome 1:** Collect data on the operations of a farming enterprise and report appropriately.

#### Learning Outcome

Student should be able to

- Design and implement appropriate sampling procedures.  
*Range: Soil, water; pests and diseases; indicators of quality of product; maturity indexing. Stock levels (commodities, agro-chemicals and other inputs). Tools and equipment available and their condition; project-related information.*

#### Learning Outcome

Student should be able to

- State the implications of the data collected and produce appropriate reports.

**7.1.2 Subject Outcome 2:** Explain costing and use it to help assess the viability of parts of an agri-business.

#### Learning Outcome

Student should be able to

- Identify various sources of income generation available to the agri-business.
  - Determine demand for each product or service.
  - Determine income from each product or service.

#### Learning Outcome

Student should be able to

- Identify and budget for the various costs impacting on the agri-business, and source new prices for the selected cost items, per unit.  
*Range: fixed and variable costs.*

#### Learning Outcome

Student should be able to

- Demonstrate an understanding of the use of break-even budgets to calculate break-even points, and determine and apply the break-even point of each commodity as a management tool.

#### Learning Outcome

Student should be able to

- Calculate the return on an investment.  
*Range: In a situation where the investment cost is easy to estimate, e.g. in the introduction of a new project.*

### **7.1.3 Subject Outcome 3:** Demonstrate understanding of a farming operations plan / work plan

#### **Learning Outcome**

Student should be able to

- Outline the components of such a plan - the operations involved and their sequence.

*Range: In the practical activities they are themselves involved in, and also a case study of a farm where the kinds of operations involved are not very different from those commonly used in the area the students are in. Plan should include maintenance and repairs of farm infrastructure and equipment.*

### **7.1.4 Subject Outcome 4:** Demonstrate understanding of farm infrastructure and its maintenance.

#### **Learning Outcome**

Student should be able to

- Describe the role and function of the various components of farm infrastructure.

#### **Learning Outcome**

Student should be able to

- Explain the maintenance requirements, as well as regulations and legislation relating to farm infrastructure.

### **7.1.5 Subject Outcome 5:** Construct a cash flow budget for an agri-business.

#### **Learning Outcome**

Student should be able to

- Construct a cash flow budget for individual sections of an enterprise as well as for the whole enterprise.

*Range: Month by month figures of income and expenditure for a year for a farm where the kinds of operations involved are not very different from those commonly used in the area the students are in.*

## **7.2 Topic 2: Sustainability and importing and exporting**

### **7.2.1 Subject Outcome 1:** Demonstrate an understanding of different aspects of sustainability of an agri-business.

#### **Learning Outcome**

Student should be able to

- Explain the concepts of social sustainability, economic sustainability environmental sustainability and political sustainability, in the context of the legal environment.

*Range: Social sustainability refers to participation and ownership. Economic sustainability refers to profit, productivity, marketability. Environmental sustainability refers to biodiversity, conservation, long-term productivity and animal welfare.*

### **7.2.2 Subject Outcome 2:** Demonstrate an awareness of issues in exporting and importing agricultural products

#### **Learning Outcome**

Student should be able to

- State some key problems in exporting and importing agricultural produce, and list sources of information on how to approach them.

## 8 RESOURCE NEEDS FOR THE TEACHING OF PRIMARY AGRICULTURE

### 8.1 Phased development of training and demonstration farm

The following is a summarised phased development approach that is suggested for the establishment of a training and demonstration farm mainly for the NCV programme. It is suggested that the development of the programme be done in phases. Staff appointment has not been included

- **Phase 1:**
  - Farm layout or land use planning
  - Bush clearing on cropland
- **Phase 2:**
  - Build, equip and stock the broiler unit
  - Build, equip and stock the egg layer unit
  - Install irrigation reticulation
  - Establish vegetable field crops and seedling units
  - Establish a beekeeping unit
  - Erect external security fence
- **Phase 3**
  - Establish pastures
  - Erect internal fences and allocate grazing camps
- **Phase 4**
  - Build, equip and stock dairy, beef, goat and pig units
  - Extend training courses

### 8.2 Resource needs training and demonstration

<b>FARM INFRASTRUCTURE</b>	
1. BROILER PRODUCTION AND PROCESSING UNIT	<ul style="list-style-type: none"> <li>• Building costs: 5 x 57.5m<sup>2</sup></li> <li>• Equipment (brooders, drinkers, tube feeders)</li> <li>• Complete broiler processing equipment</li> </ul>
2. LAYER AND EGG PROCESSING UNIT	<ul style="list-style-type: none"> <li>• Building costs: 1 x 64m<sup>2</sup></li> <li>• Equipment (includes cages)</li> <li>• 500 point of lay 20 week old pullets</li> </ul>
3. DAIRY AND MILK PROCESSING UNIT	<ul style="list-style-type: none"> <li>• Buildings</li> <li>• Equipment for milking and milk processing</li> <li>• 12 heifers</li> </ul>
4. BEEF UNIT	<ul style="list-style-type: none"> <li>• Sheltered beef feedlot unit: 1 x 30m</li> <li>• Beef handling pens and equipment</li> <li>• 12 Nguni heifers</li> <li>• 1 Nguni bull</li> </ul>
5. GOAT UNIT	<ul style="list-style-type: none"> <li>• 20 young nanny goats</li> <li>• 2 quality breeding billy goats</li> <li>• Goat handling pens and equipment</li> </ul>
6. PIG UNIT	<ul style="list-style-type: none"> <li>• Buildings</li> <li>• Equipment (brooders, farrowing rails, troughs)</li> <li>• 8 gilts and 2 boars</li> </ul>
7. APIARY UNIT	<ul style="list-style-type: none"> <li>• Apiary equipment including honey extractor</li> </ul>
8. ESTABLISHED PASTURES	<ul style="list-style-type: none"> <li>• Land preparation, fertilisation planting 8ha</li> </ul>
9. IRRIGATION	<ul style="list-style-type: none"> <li>• 1ha vegetables, 4ha maize/beans and 8ha pastures</li> <li>• Rising main from the river to reservoir and gravity flow (lower lands, paddocks) or booster pump (upper lands)</li> </ul>

10. FARM TOOLS AND AGROCHEMICALS	<ul style="list-style-type: none"> <li>• Equipment (hand tools, knapsacks, mower, wheelbarrows, spades etc.)</li> <li>• Farm shed</li> </ul>
11. SEEDLING NURSERY (Vegetables, trees, shrubs)	<ul style="list-style-type: none"> <li>• Shadecloth, poles, standpipes, equipment</li> </ul>
12. WATER RETICULATION	<ul style="list-style-type: none"> <li>• Reticulation to paddocks, livestock units</li> </ul>
13. VEHICLES	<ul style="list-style-type: none"> <li>• 1 tonne pick up and canopy</li> <li>• 1 medium size tractor</li> <li>• 1 mini bus for transporting learners</li> <li>• Tractor trailer and implements</li> </ul>
14. FENCING	<ul style="list-style-type: none"> <li>• External security fence: 2 km</li> <li>• Internal fences: 1.6km</li> </ul>
15. MISCELLANEOUS	<ul style="list-style-type: none"> <li>• Laboratory with equipment for plant and soil science</li> <li>• Laboratory with equipment for animal and poultry science</li> <li>• Teaching aids (data projectors, screen, DVD player etc.)</li> <li>• Computers with internet links</li> <li>• Library with relevant books and magazines</li> </ul>