



Animal Production Systems General Course Year 12

Selected Unit 3 syllabus content for the

Externally set task 2020

This document is an extract from the *Animal Production Systems General Course Year 12 syllabus*, featuring all of the content for Unit 3. The content that has been highlighted in the document is the content on which the Externally set task (EST) for 2020 will be based.

All students enrolled in the course are required to complete an EST. The EST is an assessment task which is set by the Authority and distributed to schools for administering to students. The EST will be administered in schools during Term 2, 2020 under standard test conditions. The EST will take 50 minutes.

The EST will be marked by teachers in each school using a marking key provided by the Authority. The EST is included in the assessment table in the syllabus as a separate assessment type with a weighting of 15% for the pair of units.

Unit 3

Unit description

In this unit students learn about different digestive processes in livestock. They consider how feed rations change depending on physiological state. Students learn about the impacts of animal production on the natural environment, and stewardship of natural and farming resources. They learn about the value of domestic animal production, and marketing options. Students will be involved in an investigation and will learn to identify the elements of valid experimental design. Students apply breed selection criteria to produce to market requirements profitably.

The content should be based around one or more animal production enterprises.

Unit content

An understanding of the Year 11 content is assumed knowledge for students in Year 12. It is recommended that students studying Unit 3 and Unit 4 have completed Unit 1 and Unit 2.

This unit includes the knowledge, understandings and skills described below.

Knowledge and management of animal production systems

Systems ecology

- impact of animal production systems on natural ecosystems, including
 - the effects on soils
 - water quality
 - atmospheric and soil pollution
 - loss of biodiversity
- effects of pesticides on the environment

Animal structure and function

- processes of gastric digestion
- microbial digestion in herbivores

Animal nutrition

- feed rations for maintenance, growth and reproduction

Animal health

- impact of pests and diseases on production systems
- life cycles of external and internal pests and diseases
- assessment of pest and disease risk
- biosecurity measures to reduce risk from pests and diseases
- factors influencing pest and disease control programs

Breeding and improvement

- aims of breeding and selection, including
 - profitability
 - market requirements
 - environmental conditions
- sources of genetic variation
- selection criteria, including subjective and objective characteristics

Economics, finance and markets

- quantity and value of domestic animal production
- marketing options for animal products
- assessment of resources used in enterprises

Sustainable production

- maintaining and improving the quality of soil and water
- stewardship of natural and farming resources, including technologies
- complying with industry codes of practice

Investigating animal production

- develop hypotheses to test based on prior information
- design and conduct an investigation, considering aspects of experimental design, including variables and controls
- analyse and interpret data, including calculating means
- present data using appropriate methods
- draw conclusions based on experimental data and validate from other sources

Produce for purpose

- implement a calendar of operations for a selected animal enterprise
- identify legal requirements of owning livestock