

E261 PLANT PRODUCTION AND MARKETING (YEAR 12) – 2008 - 2009

Rationale

Students elect to study this subject in order to develop knowledge, understandings, skills and values related to the commercial production and marketing of plants.

The subject is linked to agricultural industries with vocational relevance and may enhance further study or employment prospects in these areas. The subject develops broad-based understanding of the place plant production and marketing in the Australian economy.

The subject provides a broad understanding of methods and systems of marketing plants and plant products in agricultural industries, and provides students with an appreciation of the underlying principles of plant production systems.

Subject Design

This subject stipulates a set of outcomes. These describe what the student can do as a result of studying the subject. On completion of the subject the student must have been provided with at least two opportunities to demonstrate achievement of each outcome.

A set of components is listed under each outcome. These components are specified for the development of each outcome and indicate how students will demonstrate achievement of the outcome in this subject. The teaching/learning program will give coverage to all components in order to ensure each outcome is appropriately addressed.

If schools wish to vary these components they may do so, provided it can be demonstrated that the outcomes are still able to be achieved and that the subject is still assessed through the common assessment framework described for the subject. Proposals for variations must be submitted to the Curriculum Council for approval.

To support an outcomes approach to education, the satisfactory performance criteria for each outcome is the same as the outcome. The components described under each outcome are designed to support achievement of a satisfactory level. To ensure that students are able to achieve at a H or V level, teachers should use the performance criteria to establish an extensive teaching/learning program

which caters for the higher achievement of each outcome.

Appropriate resources are critical in meeting the outcomes of the subject. Students will have access to, and participate in at least two plant production systems.

The assessment framework, based on a series of generally defined common assessment tasks, has been stipulated for the subject. Each task measures student performance on a subset of subject outcomes.

A generalised set of performance criteria supports the assessment framework.

A procedure for rating student performance on each outcome and allocating grades has also been stipulated.

Subject Outcomes

Within the context of Plant Production and Marketing the student is provided with opportunities to meet each of the following outcomes:

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| <p>Outcome 1: Explains how meeting the needs of individuals, communities and environments impacts on economic, social and environmental issues.</p> <p>Outcome 2: Assesses risk and operates within industry-specific occupational safety and health and ethical standards.</p> <p>Outcome 3: Selects, uses and presents information relevant to meeting needs in plant production and marketing.</p> <p>Outcome 4: Identifies and implements plant production practices which reflect recognised management principles.</p> <p>Outcome 5: Explains how basic physiological processes impact on plant production and marketing systems.</p> <p>Outcome 6: Selects plants for a specific purpose using appropriate criteria.</p> <p>Outcome 7: Selects and uses equipment appropriate to meeting specified standards in a plant production system.</p> <p>Outcome 8: Contributes to planning and achievement of personal and group goals.</p> |
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Components of Outcomes

Outcome 1: Explains how meeting the needs of individuals, communities and environments impacts on economic, social and environmental issues.

The following components amplify the context and meaning of the outcome. The student:

- explains how individual, community and environmental needs are met by plant production and marketing practices
- identifies the social, economic and environmental issues associated with plant production and marketing
- explains the impact on common plant production practices when meeting needs, and responding to social, economic and environmental issues
- identifies systems for monitoring economic, social and environmental factors in a plant production system
- analyses the effects of social, economic and environmental changes on selected plant production systems
- generates a wide range of possible responses to a given change and examines the merits of the most appropriate response.

Outcome 2: Assesses risk and operates within industry-specific occupational safety and health, and ethical standards.

The following components amplify the context and meaning of the outcome. The student:

- identifies the occupational safety and health and ethical standards appropriate to plant production and marketing systems and industries
- considers ethical issues in the production and marketing of plants and plant products
- considers plant, social and environmental issues in preventing and treating disease of plants
- outlines responsibilities for workplace safety and health when working with plants and plant products
- assesses risks related to a range of work situations associated with plants and plant products
- works within industry specific occupational safety and health standards.

Outcome 3: Selects, uses and presents information relevant to meeting needs in plant production and marketing.

The following components amplify the context and meaning of the outcome. The student:

- generates a range of possible responses to a given change and examines the relative merits of the most appropriate response
- collects and uses information which supports retention, rejection or modification of a plant production system.
- systematically collects and analyses information on or about individual plant performance
- presents findings from a trial of a plant production system
- presents a summary of the performance of plant production and marketing systems.

Outcome 4: Identifies and implements plant production practices which reflect recognised management principles.

The following components amplify the context and meaning of the outcome. The student:

- identifies recognised management principles in different plant industries
- implements plant production practices that reflect recognised management principles
- monitors husbandry practices to identify possible solutions to problems
- investigates causes of sub-optimal production and proposes appropriate solutions
- expresses an informed personal choice in response to a range of options in a plant production system.
- generates a number of possible solutions and presents reasoning for adoption or discarding of those solutions
- applies preventative and controlling measures for a disease/disorder
- demonstrates persistence, autonomy and flexibility when working with plants.

Outcome 5: Explains how basic physiological processes impact on plant production and marketing systems.

The following components amplify the context and meaning of the outcome. The student:

- explains the impact of physiological processes on plant production practices
- identifies stages in a plant's life cycle and the impact they have on management decisions
- outlines the relationship between physiological processes, growth and development stages and management decisions
- monitors and analyses information in order to make a prognosis for future management decisions.

Outcome 6: Selects plants for a specific purpose using appropriate criteria.

The following components amplify the context and meaning of the outcome. The student:

- determines appropriate criteria for plant selection in a range of circumstances
- outlines the characteristics of plants which are assessed in a plant production system
- compares and contrasts objective and subjective selection methods
- ranks and selects plants with some degree of accuracy with respect to their merits for a specific purpose
- describes how continuous improvement in plant performance is maintained.

Outcome 7: Selects and uses equipment appropriate to meeting specified standards in a plant production system.

The following components amplify the context and meaning of the outcome. The student:

- identifies relevant industry standards in plant production and marketing systems
- identifies design features of equipment and structures that enable plant production and marketing standards to be achieved
- analyses, against specific standards, the efficiency and effectiveness of plant-related equipment and structures
- justifies proposed design changes to equipment and structures based on changes in practices
- recognises the implications of changes to equipment and structures on production/marketing systems.

Outcome 8: Contributes to planning and achievement of personal and group goals.

The following components amplify the context and meaning of the outcome. The student:

- plans and appraises personal and group goals
- demonstrates self-management skills
- interacts effectively with others
- participates collaboratively to achieve goals
- develops and strives for productive work relationships.

Common Assessment Framework

The framework outlined below specifies a series of common assessment tasks for this subject. The teacher has the flexibility to select from the Plant Production and Marketing outcomes those to be assessed in each task. On completion of the subject the student must have been provided with at least two opportunities to demonstrate achievement of each outcome.

Each common assessment task measures student performance on a subset of subject outcomes. For each outcome measured in a task, student performance will be rated as Very High (V), High (H), Satisfactory (S) or Not Demonstrated (ND).

Task and Task Description

The term ‘task’ should not be confused with ‘project’. Each task may not be a separate individual project but a broad description of the type of activity that the student is to complete to satisfy the specified outcomes within that task. The organisation and number of projects is up to the individual school, as long as all tasks are covered during the subject.

PLANT PRODUCTION AND MARKETING		
Task	Outcomes	Task Description
One	The teacher has the flexibility to select from the Plant Production and Marketing outcomes those to be assessed in each task.	Practical Work The student demonstrates the ability to determine and perform tasks and task procedures, to communicate tasks and task procedures to others, and to check and respond appropriately to ensure task completion in a plant production system.
Two		Case Study Report The student reports their evaluation of management decisions in a plant production system that have been made in response to genetic, environmental and market factors.
Three		Production and/or Marketing Modification To improve returns, the student recommends and justifies modifications to a plant product and/or the way it is marketed.
Four		Whole-Farm Plan The student develops and presents a whole-farm/site plan, showing how decisions made about development, operation and viability of plant production systems account for the short- and long-term social and environmental consequences of plant production in a specified catchment.

The above set of tasks represent assessable activities that would be undertaken within a range of projects defined by the teacher at the commencement of the subject.

Common Assessment Task Booklet

The *Common Assessment Tasks* booklet for this subject further describes each task, and defines parameters for its completion. Schools are free to determine specific assessment details within these parameters. Copies of the booklet are available from the Curriculum Council and are included with the syllabus, on the Curriculum Council website (<http://www.curriculum.wa.edu.au>).

Performance Criteria

Ratings for student performance of each outcome will be based on the following criteria:

Outcome 1: Explains how meeting the needs of individuals, communities and environments impacts on economic, social and environmental issues.

Satisfactory	High	Very High
Explains how meeting the needs of individuals, communities and environments impacts on economic, social and environmental issues.	Proposes and justifies adaptations to products and processes, to improve the economic, social and environmental impacts.	Plans appropriate action to resolve some economic, social and environmental issues, justifying decisions made.

Outcome 2: Assesses risk and operates within industry-specific occupational safety and health, and ethical standards.

Satisfactory	High	Very High
Assesses risk and operates within industry-specific occupational safety and health, and ethical standards	Adopts practices appropriate to circumstances and justifies how they meet industry-specific occupational safety and health, and ethical standards	Evaluates and refines practices to better achieve industry-specific occupational safety and health, and ethical standards.

Outcome 3: Selects, uses and presents information relevant to meeting needs in plant production and marketing.

Satisfactory	High	Very High
Selects, uses and presents information relevant to meeting needs in plant production and marketing.	Selects, manipulates and presents information to achieve particular effects and meaning when meeting needs in plant production and marketing.	Adopts and/or creates information products and processes to negotiated standards when meeting needs in plant production and marketing.

Outcome 4: Identifies and implements plant production practices that reflect recognised management principles.

Satisfactory	High	Very High
Identifies and implements plant production practices that reflect recognised management principles.	Selects, undertakes and justifies plant production practices that reflect recognised management principles.	Selects, undertakes and evaluates the effectiveness of plant production practices that reflect recognised management principles.

Outcome 5: Explains how basic physiological processes impact on plant production and marketing systems.

Satisfactory	High	Very High
Explains how basic physiological processes impact on plant production and marketing systems.	Explains how management of physiological processes may optimise productivity.	Evaluates strategies for managing physiological processes to optimise productivity.

Outcome 6: Selects plants for a specific purpose using appropriate criteria.

Satisfactory	High	Very High
Selects plants for a specific purpose using appropriate criteria.	Justifies the selection of plants for a specific purpose.	Evaluates appropriateness of selected plants in meeting identified needs, modifying selection as necessary.

Outcome 7: Selects and uses equipment appropriate to meeting specified standards in a plant production system.

Satisfactory	High	Very High
Selects and uses equipment appropriate to meeting specified standards in a plant production system.	Selects, uses and justifies the appropriateness of equipment when achieving specified standards in a plant production system.	Evaluates the efficiency and effectiveness of selected equipment, making and justifying changes or modifications where necessary to achieve specifications.

Outcome 8: Contributes to planning and achievement of personal and group goals.

Satisfactory	High	Very High
Contributes to planning and achievement of personal and group goals.	Participates in the effective and efficient decision-making processes leading to achievement of the individual and group goals.	Demonstrates leadership and organisational skills which enhance the achievement of individual and group goals.

Rating Procedure

Before a final grade can be awarded, the final rating achieved for each outcome must be determined. This is done using the following process:

- V is attained when at least 50% of ratings are at a Very High level, and at least 50% of the remainder are at a High level or better.
- H is attained when at least 50% of ratings are at a High level or better, and at least 50% of the remainder are at a Satisfactory level or better.
- S is attained when at least 50% of ratings are at a Satisfactory level or better.
- ND is attained when more than 50% of ratings are at a Not Demonstrated level.

Where a student fails to achieve a final rating of S for an outcome, teachers are encouraged to provide the student with an additional opportunity to demonstrate S if:

- the student has completed all the CATs incorporating that outcome; and
- the student has demonstrated S for that outcome in at least one task.

The additional opportunity should not simply be a repetition of a task, but should be an equivalent task which reflects a change of context in which the task is done.

Professional judgement should then be used to determine whether a final rating of ND or S is appropriate in each situation.

Grading Procedure

At the completion of this subject, grades will be awarded in the following manner:

- A Very High in at least 50% of outcomes, and High or better in at least 50% of the remainder.
- B High or better in 50% of outcomes, and Satisfactory or better in the remainder.

- C Satisfactory or better in all outcomes.
- D Satisfactory or better in at least 50% of the outcomes.
- E Not Demonstrated in more than 50% of the outcomes.

A final rating of ND for any outcome will result in a grade of D being awarded.

Specific details giving examples of the combination of V, H and S resulting in different grades can be found in the *Common Assessment Tasks* booklet.

Time Allocation

The subject has been designed to be completed through a structured education program of approximately 110 hours in any suitable contexts and series of learning experiences. Typically the subject will be studied over the period of one school year. For administrative reasons schools wishing to vary this delivery pattern (e.g. over a shorter period or over a longer period up to two school years) are required to notify the Chief Executive Officer of the Curriculum Council.

Subject Completion

Students must complete the school's structured educational and assessment program for a subject in order to be eligible to receive a grade unless there are exceptional and justifiable circumstances. In situations where the school considers that insufficient information has been gathered to justify the award of a grade for the subject, a result of U (for unfinished) should be allocated. The Curriculum Council offers the flexibility for the U to be converted to a grade after the final grades have been submitted. Further details on assessment and grading are provided in Volume I of the syllabus manuals.