



Assessment and Reporting in Agriculture Stage 6

Effective from	2010 (Preliminary and HSC courses)
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This document contains the Board of Studies' requirements for assessing and reporting achievement in the Preliminary and HSC courses in Agriculture for the Higher School Certificate, and provides details of the HSC examination in this course. From time to time changes are made to HSC assessment and examination requirements. Such changes will be made available through updates to this document. Please note that the version on the Board of Studies website is always the current version.

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Assessment in Stage 6

Assessment is the process of gathering information and making judgements about student achievement for a variety of purposes. In the Preliminary and HSC courses those purposes include:

- assisting student learning
- evaluating and improving teaching and learning programs
- providing evidence of satisfactory achievement and completion in the Preliminary course
- providing the Higher School Certificate results.

Assessment for Learning provides a useful approach for the delivery of the Agriculture Preliminary and HSC courses. It provides opportunities in the context of everyday class activities for students to demonstrate their learning.

The approach is most effective when students:

- are involved in setting learning goals
- know and understand standards and expectations about what is expected and the standards of work
- receive feedback that helps them understand the next steps in their learning and plan how to undertake the next steps.

Reporting achievement at the HSC

The Higher School Certificate credentials received by students are used by the Board to report both the internal and external measures of achievement. Higher School Certificate results in Agriculture comprise:

- **an assessment mark** derived from the mark submitted by the school and produced in accordance with the Board's requirements for the internal assessment program
- **an examination mark** derived from the HSC external examination
- **an HSC mark**, which is the average of the assessment mark and the examination mark
- **a performance band**, determined by the HSC mark.

Student performance in an HSC course is reported against standards on a course report. The course report contains a performance scale for the course describing levels (bands) of achievement, an HSC mark located on the performance scale, an assessment mark and an

examination mark. The course report also shows, graphically, the statewide distribution of HSC marks of all students in the course.

The distribution of marks is determined by students' performances against the standards and not scaled to a predetermined pattern of marks.

The use of both internal assessment and external examinations of student achievement allows measurements and observations to be made at several points and in different ways throughout the HSC course. Taken together, the external examination and internal assessment provide a valid and reliable assessment of the achievement of the knowledge, understanding and skills described for each course.

The Board of Studies uses a standards-referenced approach to reporting student achievement in the Higher School Certificate. The standards in the HSC are:

- the knowledge, skills and understanding expected to be learnt by students – the syllabus standards
- the levels of achievement of the knowledge, skills and understanding – the performance standards.

Both the syllabus standards and the performance standards are based on the aims, objectives, outcomes and content of the course. Together they specify what is to be learnt and how well it is to be achieved. Teacher understanding of the standards comes from the aims, objectives, outcomes and content in the syllabus together with:

- the performance descriptions that summarise the different levels of performance
- HSC examination papers and marking guidelines
- samples of students' achievement, collected in the standards packages and published on the Board's Assessment Resource Centre website.

Internal assessment

This section should be read in conjunction with advice on internal assessment in the Board's [Assessment Certification and Examination \(ACE\) Manual](#).

Preliminary course

The suggested components and weightings are designed to give guidance for the school's assessment of student achievement in the Preliminary course. They may be varied to suit school needs.

HSC course

The Board requires schools to submit an assessment mark for each HSC candidate in Agriculture. The internal assessment mark submitted by the school provides a summation of each student's achievements measured at several points throughout the course. The marks submitted for each course group at a school should reflect the rank order of students, and must be on a scale sufficiently wide to reflect adequately the relative differences in student performances.

Internal assessment provides a measure of a student's achievement based on a wider range of syllabus content and outcomes than may be covered by the external examination alone. The assessment components and weightings to be applied ensure a common focus for internal

assessment in the course across schools, while allowing for flexibility in the design of tasks. A variety of types of task should be used to give students the opportunity to demonstrate outcomes in different ways and to improve the validity and reliability of the assessment.

The standards-referenced approach to assessment for the HSC involves schools ensuring that:

- assessment tasks reflect the weightings and components specified in this document
- tasks are designed to focus on objectives and outcomes
- the types of assessment task are appropriate for the outcomes being assessed
- students are given the opportunity to demonstrate their level of achievement of the outcomes in a range of different task types
- the assessment criteria for each task are such that higher marks are gained by demonstration of better achievement in relation to the syllabus outcomes
- students know the assessment criteria before they begin a task
- marks earned on individual tasks are expressed on a scale sufficiently wide to reflect the relative differences in student performances.

Students should receive meaningful feedback about what they are able to do, and what they need to do in order to improve their level of performance.

The HSC examination

The external HSC examination provides a measure of student achievement in a range of syllabus outcomes that can be reliably measured in an examination setting. The external examination and its marking relate to syllabus standards by:

- providing clear links to syllabus outcomes
- enabling students to demonstrate the levels of achievement outlined in the course performance scale
- applying marking guidelines based on criteria that relate to the quality of the response
- aligning performance in the examination each year to the standards established for the course.

Board requirements for the HSC internal assessment mark

The Board requires that the assessment tasks used to determine the HSC internal assessment mark must comply with the components and weightings specified. The collection of information for the HSC internal assessment mark must not begin before the completion of the Preliminary course.

Schools are required to develop an HSC internal assessment program that:

- specifies the various assessment tasks and the weightings allocated to each task
- provides a schedule of the tasks designed for the whole course.

Note that school-based assessment marks submitted to the Board must NOT include:

- measures of objectives and outcomes that address values and attitudes. (However, as these objectives are important elements of any course, schools may decide to report on them separately to students and parents, perhaps using some form of descriptive statements.)
- measures that reflect student conduct.

See the Board's [ACE Manual](#) for further information.

Assessment components and weightings

Preliminary course

The suggested components and weightings for the Preliminary course are set out below.

Component	Weighting
Overview	15
Plant production	30
Animal production	30
Farm case study	25
	100

HSC course

The mandatory components and weightings for the HSC course are set out below. The internal assessment mark submitted to the Board of Studies is to be based on the HSC course only.

Component	Weighting
Plant/animal production	45
Farm/product study	25
Electives (2) OR Research Project	30
	100

Teachers may use their discretion in determining the manner in which they allocate tasks within the course content. The Board considers that 3 to 5 assessment tasks is sufficient.

Agriculture HSC examination specifications

The examination will consist of a written paper worth 70 marks and the choice of either an additional written paper worth 30 marks or a Research Project worth 30 marks.

Paper 1 – Core

(70 marks)

Time allowed: 2 hours plus 5 minutes reading time.

The paper will consist of three sections.

Section I (25 marks)

- There will be three short-answer questions.
- Questions may contain parts.
- There will be approximately 10 items in total.
- Questions will be based on farm/product study, practical work, experimental design and analysis, and ecological and sustainability issues.

Section II (30 marks)

- There will be two short-answer questions.
- Questions will contain parts.
- There will be approximately eight items in total.
- At least two items will be worth from 4 to 6 marks.
- Questions will be based on plant/animal production.

Section III (15 marks)

- There will be four questions in parts.
- Candidates will be required to answer one question.
- Each question will consist of a short-answer part worth 5 marks and an extended response part worth 10 marks.
- The extended response part will have an expected length of response of around three pages of an examination writing booklet (approximately 400 words).

Paper 2 – Electives

(30 marks)

Time allowed: 1 hour plus 5 minutes reading time.

- There will be six structured extended response questions, one for each of the electives.
- Candidates will be required to answer the questions on the two electives they have studied.
- Each question will have an expected length of response of around four pages of an examination writing booklet (approximately 600 words) in total.

Research Project

(30 marks)

Candidates will submit a Research Project consisting of a report and a process journal.

See *Requirements for the Research Project*, below.

Summary of external and internal HSC assessment

External examination	Mark	Internal assessment	Weighting
Paper 1 – Core <i>Section I</i> Short-answer questions	25	Plant/animal production	45
<i>Section II</i> Short-answer questions	30	Farm/product study	25
<i>Section III</i> Candidates answer one question in parts	15	Electives (2) OR Research Project	30
Paper 2 – Electives Candidates answer two structured extended response questions OR Research Project	30		100
	100		

Resources and advice

Further guidance and advice related to assessment and the HSC examination in Agriculture can be found on the Board’s website at www.boardofstudies.nsw.edu.au/syllabus_hsc.

Requirements for the Research Project

The Research Project enables students to study a particular agricultural issue or problem. The scope of the issue or problem open to students includes those that arise from production, the economic environment, marketing and the social environment. There is a wide range of research methodologies that can be used and the most appropriate one must be applied to investigating and exploring the particular issue or perspective chosen.

The material submitted by students for the Research Project consists of a report and process journal. The report communicates the research methodology, data analysis and evaluation of the Research Project. It must consist of at least 3000, and no more than 5000, words. The text must be supplemented by additional appropriate material such as graphs, figures, tables, slides and photographs. The process journal details the student’s progress through the Research Project, and is verified by the student’s teacher. The process journal will not be marked and will not contribute to the report mark. It may be used for verification that the candidate has carried out the research identified in the report.

The balance between various segments of the report may alter, depending on the specific nature of the Research Project undertaken and the resources available to the student.

The report must include:

- a research question
- synopsis or abstract

- literature review
- research methodology
- results
- data analysis
- conclusions
- ethical and welfare issues
- recommendations
- referencing and acknowledgements.

Students may commence the practical component of their Research Project at any time after the beginning of Term 2 of the school year preceding their HSC year, provided that the student's report (analysis and writing up of material) is substantially completed in the HSC course.

It is essential that students are aware of the legal requirements and ethical considerations involved in the aim, design and methodology of their Research Projects. Ethical considerations and legal requirements relate to animal welfare, the use of chemicals and occupational health and safety. It is expected that students are aware of specific laws, regulations and codes of practice that may affect the conduct of their projects.

Schools must have procedures in place that will allow effective supervision of the development of students' Research Projects. This is particularly the case where work is done away from school. Schools must be confident that effective supervision and sufficient documentation of this work is possible before giving consent for students to begin work on their Research Project.

Students will be required to certify that the Research Project is their own original work, and that any material drawn from other sources and any outside assistance is acknowledged.

Teachers must certify that the work has been completed under their supervision, and that the rules and procedures described here and in the Board's [*ACE Manual*](#) have been followed.

Principals must be able to endorse the teacher's declaration that the work:

- has been done under the teacher's supervision
- is the student's own work consistent with earlier drafts and other examples of the student's work
- was completed by the due date.

On occasions it may be necessary for some minor aspect of the Research Project to be undertaken by some other person or agency. In such cases, the contribution of the outside agent/organisation must be documented in the Research Project. Students will not be given credit for work completed by others. The justification for such work will be recognised in the marking process. The work presented in the Research Project must have been undertaken by the student and the results must be based on the student's own investigation. The investigation may be based on previously published work.

A brief written record of each student's progress through the project must be kept by the teacher. This should not be submitted with the project, but may be requested in exceptional circumstances where the examiners require further information. This record should be

retained in the school together with assessment records. A Practical Project: Record of Student's Progress pro-forma is available to download from *Schools Online*.

Assessment of the project will be based on the extent to which the Research Project fulfils the outcomes and content specified in the syllabus.

Agriculture Research Project examination criteria

- Presentation of a cohesive, well-reasoned and detailed report on an appropriate independent investigation
- Inclusion of appropriate supporting material, such as graphs, figures, tables, slides and photographs
- Identification of an appropriate research question in an agricultural situation
- Provision of an accurate synopsis or abstract of the investigation
- Evidence of a comprehensive literature review
- Application of appropriate research methodology and technologies
- Presentation of results, appropriate data analysis and drawing of accurate and relevant conclusions from this investigation
- Identification and evaluation of ethical and welfare issues relevant to this research and the wider field of agricultural research
- Presentation of detailed and appropriate recommendations drawn from this research and supported by the data and/or research
- Inclusion of accurate referencing and acknowledgments.