

Demonstrate knowledge of the modification of plant processes to optimise plant production

Level 4

Credits 4

Purpose People credited with this unit standard are able to describe: the physiology of agricultural plants; and the farmer inputs required to optimise plant growth and seed production.

Subfield Agriculture

Domain Farming Skills

Status Registered

Status date 23 April 2008

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Entry information Open.

Replacement information This unit standard and unit standard 24636 replaced unit standard 19121.

Accreditation Evaluation of documentation and visit by NZQA, industry and teaching professional in the same field from another provider.

Standard setting body (SSB) Primary Industry Training Organisation

Accreditation and Moderation Action Plan (AMAP) reference 0052

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Special notes

None.

Elements and performance criteria

Element 1

Describe the physiology of agricultural plants.

Range examples – pasture, cereals, brassicas, root crops, legumes.

Performance criteria

- 1.1 Photosynthesis is described in terms of its importance to plant growth and development.
- 1.2 Respiration is described in terms of its importance to plant growth and development.
- 1.3 Water uptake, movement, and transpiration are described in terms of importance to plant growth and development.
- 1.4 Nutrient uptake and use are described in terms of plant growth.
- 1.5 Pollination, fertilisation, seed and/or fruit formation and development are described in terms of their significance to a selected sector of agriculture.
- 1.6 Annual, biennial, and perennial life cycles are described in terms of plant growth and development.

Element 2

Describe the farmer inputs required to optimise plant growth and seed production.

Range may include but is not limited to – Feekes, Zadoks; evidence is required for at least one.

Performance criteria

- 2.1 Nutrient requirements are described for growth stages of crops.
- 2.2 Chemical requirements are described for growth stages of crops.
Range growth regulator, weed control, pest control.
- 2.3 Soil water requirements are described for growth stages of crops.
- 2.4 Grazing regimes and mechanical processes are described in terms of their effect on plant competition.

Please note

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.