

41273**Carry out seedbed preparation, crop establishment and crop management**

Kaupae Level	3
Whiwhinga Credit	15
Whāinga Purpose	This skill standard is intended for learners working in arable farming. They will be able to contribute to crop production planning, prepare a seedbed appropriate to the crop and establishment method, establish a crop according to an establishment plan, and carry out crop management activities as directed, under limited supervision. This skill standard aligns with the New Zealand Certificate in Arable Farming (Level 3) [Ref: 5679].

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Plan and prepare a seedbed.	a. Use soil test, soil structure and field history to propose cropping options.
	b. Determine establishment method.
	c. Select and use appropriate cultivation methods to prepare the seedbed.
2. Plant a crop according to establishment plan.	a. Calibrate machinery to meet crop management plan requirements.
	b. Cross-reference calibration against seed used and area covered during planting.
	c. Problem-solve basic planting problems, and escalate problems as necessary.
	d. Plant crop according to establishment plan.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Manage the crop as directed.	a. Monitor crop condition in relation to pests, crop fertility and health, and soil moisture.
	b. Contribute to crop management decisions based on observations.
	c. Carry out crop management activities, as directed.
	d. Record crop management activities.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

All activities must be carried out in accordance with workplace health and safety requirements, workplace procedures, and manufacturer's specifications.

Providers must give due consideration to embedding ngā kaupapa (principles) o Te Tiriti o Waitangi when designing delivery activities relevant to this standard. These principles are outlined in [Guidelines for Providers: Embedding Tirohanga Māori](#).

Providers must give due consideration to the needs and values of Pacific peoples and other cultural groups when designing delivery activities relevant to this standard, ensuring practices are inclusive and equitable.

Ākonga/learners should be assessed against this standard in a real-life context using naturally occurring evidence. A verifier's checklist with appropriate comments confirming competency is acceptable if accompanied by evidence that includes examples from the learner's performance.

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

Crop production planning

- soil testing and soil structure
- crop types and effect on soil
- cultivation methods and conditions and effect on soil
- field history
- returns and margins
- reasons for crop rotation e.g. soil contamination, disease and pest mitigation, nutrient balance, implications of successive crops
- order of crop rotation e.g. grass to grass, grass to crop to grass/crop
- role of pasture in crop rotation
- factors influencing cropping options e.g. soil condition, field history, crop suitability, expected returns, pest and disease risk, establishment method.

Seedbed preparation

- seedbed preparation by crop
- soil test results by crop requirements
- soil structure
- soil testing and fertility e.g. taking soil cores, reading soil test results, interpreting nutrient trends, pH, nutrient levels
- transition between crops e.g. spraying, ploughing, burn off
- establishment methods e.g. direct drilling, strip tillage, precision drilling
- cultivation methods appropriate to crop and establishment method e.g. ploughing, harrowing, rotary tillage
- recording seedbed observations e.g. soil condition, cultivation method, seedbed quality details of seed, rate of application.

Planting crops

- calibrating machinery e.g. sowing rate and depth, calibration settings for different seeds
- calibration requirements e.g. sowing rate, sowing depth, plant population
- implementing an establishment plan e.g. sowing depth, timing, spacing, seed rate
- basic planting problems and corrective actions, including escalation requirements
- pest and disease risks
- weed pressure
- key features of an establishment plan.

Crop growth

- growth stages relevant to crop type e.g. Zadok's Growth Stage Model, emergence, vegetative growth, tillering, reproductive stage, maturity
- interventions at growth stages e.g. water requirements, nutrient requirements, recognising signs of pests and disease, weed pressure
- optimising yield
- crop end uses e.g. harvest, storage, processing
- crop-specific and end-use specific management tasks e.g. nitrate testing, micro-toxin testing
- contributing to crop management decisions based on crop condition observations
- recording crop management activities e.g. crop inputs, observations, interventions, timing.

Rauemi | Resources

- [Health and Safety at Work Act 2015](#).
- [Resources](#) (Foundation for Arable Research).
- Manufacturer's specifications.
- Farm-specific Standard Operating Procedures.

Pārongo Whakaū Kouna | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Food and Fibre Industry Skills Board
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Agriculture, Forestry and Fisheries > Agriculture > Arable Farming
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0052

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	30 July 2026	N/A
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	31 December 2031		

Please contact the Food and Fibre Industry Skills Board at info@foodandfibreisb.nz to suggest changes to the content of this skill standard.