Operate a root crop harvester

Level 4
Credits 20

Purpose
People credited with this unit standard are able to: select and prepare root crop harvesting equipment and machinery; carry out field preparation; operate the root crop harvester; and carry out post-operational procedures.

Subfield
Rural Contracting

Domain
Agricultural Contracting

Status
Registered

Status date
25 June 2007

Date version published
25 June 2007

Planned review date
31 December 2012

Entry information
Prerequisite: Driver licence and any driver licence endorsement appropriate to the machine or vehicle being used.

Accreditation
Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB)
Infrastructure ITO

Accreditation and Moderation Action Plan (AMAP) reference
0101

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

Special notes

1 This unit standard does not include grading for size and/or quality.

2 The following legislation and requirements apply to this unit standard:
Health and Safety in Employment Act 1992;
Guidelines for the Provision of Safety, Health and Accommodation in Agriculture (Wellington: Department of Labour, 1996); and
Guarding Farm Machinery – Tractor power take-offs and transmission machinery (Wellington: Department of Labour, 1984); both available from http://www.osh.govt.nz/order/catalogue;
Manufacturer’s instructions.

Other requirements applicable to this unit standard may include but are not limited to:
Approved Code of Practice for the Management of Noise in the Workplace

Any legislation or other requirement superseding any of the above will apply, pending review of this unit standard.

3 Assessment against this unit standard must be based on evidence from a workplace context.

4 Personal protective equipment, appropriate to job requirements, is to be selected and used in accordance with company requirements and manufacturer's instructions.

5 Definitions

Company requirements refer to all policies, procedures, and methodologies the candidate’s organisation has in place including but not limited to those relating to health, safety, environment, quality, and operations.

Manufacturer’s instructions may include specifications, installation, handling, use, and maintenance instructions and safety data sheets.

Root crops means those crops that are harvested by being lifted from the soil as opposed to cut from the rest of the plant. They include such plants as potatoes, onions, and carrots.

Elements and performance criteria

Element 1

Select and prepare root crop harvesting equipment and machinery.

Performance criteria

1.1 Equipment and machinery chosen are appropriate for the crop to be harvested.

   Range includes – attachments, wheel spacing;
   may include – lifter, digger, harvester, transporter, containers, tractor, wheels, tyres, attachments.

1.2 Equipment and machinery are checked for condition, damage, wear, and faults; problems are identified; and corrective action is taken in accordance with manufacturer’s instructions and company requirements.

   Range nuts and bolts, bearings, transmission systems, couplings, alignments.

1.3 Checks are made and any necessary actions are taken or adjustments made to ensure the mobile machinery complies with legal and company requirements for operator health and safety.

   Range may include but is not limited to – fire extinguisher, first aid equipment, seat, safety belt, mirrors, controls, climate control, sound equipment, communications equipment.
Element 2

Carry out field preparation.

Performance criteria

2.1 Crop is assessed for suitability to harvest in relation to maturity, foliage desiccation, soil structure and condition, moisture content, client requirements, and weather conditions.

2.2 Logistical readiness is established in accordance with company requirements.

Range may include but is not limited to – access, fuel and oil supplies and storage, communications.

2.3 Hazards in the field are identified and controlled in accordance with company requirements.

Range may include but is not limited to – underground services, in-ground services, overhead objects, surface obstacles, contours.

2.4 Equipment is set up to meet the requirements of crop type and crop conditions.

Range share depth, trash separation mechanism, riddles, screens, draught, wheel spacing; crop container equipment – bags, boxes, or bulk transport.

Element 3

Operate the root crop harvester.

Performance criteria

3.1 Harvester is operated with minimal damage to the crop in accordance with client requirements.

Range cutting, bruising.

3.2 Harvester is operated with minimal rubbish in yield in accordance with client requirements.

Range foreign matter, crop trash.

3.3 Harvester is operated with minimal crop wastage in accordance with client requirements.

Range crop on ground, unlifted crop.

3.4 Harvester is operated causing minimal soil compaction and field damage.
3.5 Truck or bin loading is carried out in accordance with company requirements.  
Range includes but is not limited to – safety, minimal wastage, communication, load weight compliance.

3.6 Equipment and machinery are monitored during operation for condition, damage, wear, and faults, and are replaced, repaired and/or reported in accordance with manufacturer’s instructions and company requirements.

**Element 4**

Carry out post-operational procedures.

**Performance criteria**

4.1 Shut-down procedures are carried out in accordance with manufacturer’s instructions.

4.2 Equipment is cleaned and, as required, treated in accordance with manufacturer's instructions and/or company requirements.

4.3 Lubrication is carried out in accordance with manufacturer’s instructions.

4.4 Any damage or faults including any missing, bent, broken, or loose parts are identified and are repaired, replaced, or reported in accordance with manufacturer's instructions and/or company requirements.

4.5 Equipment and machinery are stored in accordance with company requirements.

4.6 Documentation for the operation is completed in accordance with company and client requirements, and is stored in accordance with company requirements.

**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 Infrastructure ITO askus@infratrain.co.nz if you wish to suggest changes to the content of this unit standard.