NSN School Code This assessment is based on a now-expired version of the achievement standard and may not accurately reflect the content and practice of external assessments developed for 2024 onwards. Draw a cross through the box (图)	To be completed by candidate			
accurately reflect the content and practice of external assessments developed for 2024 onwards. Draw a cross through the box (🗵)	NSN	School Code	SUPERVISOR'S USE ONLY	
9 1 9 3 0	accurately reflect the content and practice of external assessments developed for 2024 onwards.		Draw a cross through the box (図) if you have NOT written in this booklet	



Mana Tohu Mātauranga o Aotearoa New Zealand Qualifications Authority

Level 1 Agricultural and Horticultural Science RAS 2023

91930 Demonstrate understanding of how soil properties are managed in a primary production system

Credits: Five

PILOT ASSESSMENT

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how soil properties are managed in a primary production system.	Explain how soil properties are managed in a primary production system.	Evaluate how soil properties are managed in a primary production system.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2 – 11 in the correct order and that none of these pages is blank.

Do not write in any cross-hatched area (). This area may be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

NOTE

'Soil properties' refers to physical, chemical, and biological aspects of soil.

A soil management practice is carried out by the grower to improve or modify plant growing conditions.

Choose a primary production system to answer ALL THREE questions.

Primary production system:

Ensure reference to a **relevant** Māori concept or value, related to soil management, is included. One or more concepts may be appropriate.

QUESTION ONE: Soil pH

	luction system?
⊨vai syst	luate a management practice used to modify the pH of soil in your primary production
oyo:	5111.
In yo	our answer you should consider:
•	the health of the soil
•	how the management practice helps optimise plant production.

QUESTION TWO: Soil compaction or pugging

Ensure reference to a **relevant** Māori concept or value, related to soil management, is included. One or more concepts may be appropriate.

(a)	Des help	scribe a management practice that can be carried out in your primary production system that ps avoid soil compaction or pugging.				
(b)	(i)	What soils are more susceptible to soil compaction or pugging?				
	(ii)	What are the effects of soil compaction or pugging on soil properties in your primary production system?				

Evaluate a management practice used to restore compacted or pugged soil properties in your

(c)

ı y c	our answer you should consider how the management practice:
	optimises plant production
	ensures the long-term sustainability of the production system.

QUESTION THREE: Soil temperature

Ensure reference to a **relevant** Māori concept or value, related to soil management, is included. One or more concepts may be appropriate.

(i)	How does the composition and structure of soil affect soil temperature?
(ii)	What are the impacts of temperature on the biological properties of soil?
- Fire	
	duate how a specific management practice is used to modify soil temperature. Our answer you should consider how the management practice: optimises plant growth demonstrates care for the environment.
In yo	our answer you should consider how the management practice: optimises plant growth
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Extra space if required. Write the question number(s) if applicable.

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