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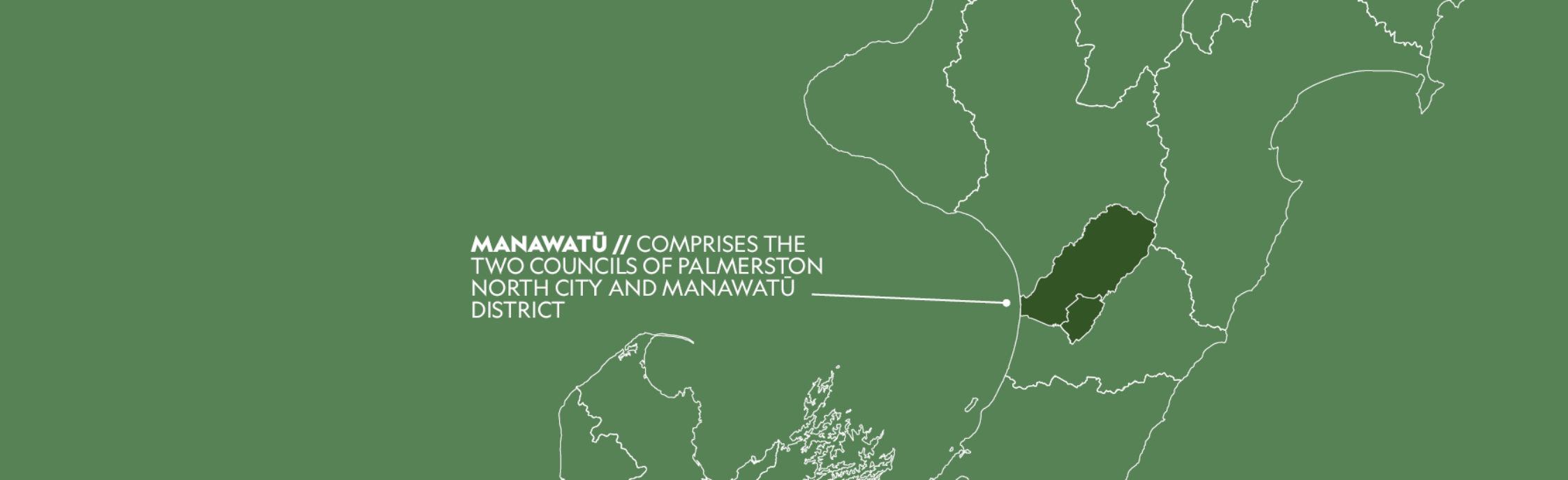
**MANAWATŪ**

**POTATOES**

**IN MANAWATŪ**

A GROWER GUIDE

**PUBLISHED: SEPTEMBER 2025**



**MANAWATŪ** // COMPRISES THE  
TWO COUNCILS OF PALMERSTON  
NORTH CITY AND MANAWATŪ  
DISTRICT

## POTATOES // VERSATILE ROOT CROP WITH STRONG DOMESTIC DEMAND AND EXPORT POTENTIAL

Potatoes are one of New Zealand's most important vegetable crops and a strong option for commercial or semi-commercial production in Manawatū. With well-drained soils, temperate climate, and good water access, the region is well suited for both early and main crop varieties.

This guide is designed to help landowners and prospective growers understand what's involved in establishing and managing a successful potato crop in Manawatū. Developed by the Central Economic Development Agency, this guide was created as part of the [Manawatū Regional Food Strategy](#).

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# SUITABLE POTATO VARIETIES + CHARACTERISTICS

**The Manawātū region offers a favourable environment for growing potatoes, with a range of varieties suited to fresh market, processing, and seed production.**

Climate considerations for the region are further outlined in the [Diversification of Farm Systems report](#).

Selecting the right variety is essential, as each has unique traits that influence market suitability, yield potential, and end-use quality.

## CHARACTERISTICS OF POTATOES

- > **Great tasting:** These potatoes are known for their flavour and versatility across cooking methods such as boiling, mashing, roasting, and frying.
- > **High yielding:** These varieties produce abundant crops, making them ideal for commercial growers.
- > **Early maturing:** These potatoes reach harvest readiness sooner, allowing for quicker turnover and reduced exposure to seasonal risks.
- > **Smooth skin:** These potatoes have a clean, uniform appearance, which is preferred for fresh market presentation.
- > **Dry matter content:** Processing varieties are selected for their high dry matter, which improves texture and frying quality.
- > **Grower certification:** Seed potatoes require certified stock to ensure disease-free propagation and compliance with commercial standards.

While some varieties may exhibit multiple of these characteristics, growers should also consider factors such as soil compatibility, disease resistance, and storage requirements.



## Potato varieties suited to the Manawatū region:

### FRESH MARKET/TABLE POTATOES

- > **Rua:** A heritage favourite with good taste and medium yield. Rua is well-suited to growers seeking a traditional variety with reliable performance.
- > **Ilam Hardy:** Early maturing with white skin, ideal for boiling and mashing. This variety offers a quick turnaround and consistent quality.
- > **Nadine:** Known for its smooth skin and high yield, Nadine is a popular choice for commercial growers targeting the fresh market.
- > **Agria:** A versatile, yellow-fleshed potato, excellent for chips and roasting. Agria is widely favoured for its flavour and cooking performance.

### PROCESSING POTATOES (for chips, crisps and fries)

- > **Innovator, Russet Burbank, Ranger Russet:** These varieties are selected for their dry matter content, shape, and frying quality. They are the industry standard for producing high-quality processed potato products.

### SEED POTATOES

- > **Certified Seed Only:** Commercial growers must use certified seed potatoes to avoid disease and ensure crop viability. Store-bought tubers are not recommended for propagation.







# SELECTING A SITE

**Before selecting a site for growing potatoes, it is important to understand the environmental and soil conditions that will support optimal yield, quality, and storage potential.**

Potatoes thrive in temperate climates and are frost-tolerant during early growth, but frost events during flowering or near harvest can significantly reduce yield. While potatoes require consistent moisture, waterlogged soils should be avoided as they can lead to disease and poor tuber development. Interestingly, a dry spell during tuber maturation can actually enhance storage quality by promoting skin set and reducing internal defects.

The ideal soil for potatoes is a light to medium loam with good drainage. Avoid planting in heavy clays or compacted paddocks, as these can restrict root development and increase the risk of disease. The recommended soil pH is between 5.5– 6.5. Soil testing is strongly recommended prior to planting, and resources such as [Ballance's soil testing guide](#) can assist in this process.

As potatoes are part of the solanaceous family, it is essential to implement a minimum three-year crop rotation with non-solanaceous crops. Avoid planting potatoes after tomatoes, eggplants, or other related crops to reduce the risk of disease build-up in the soil. A well-planned rotation not only supports soil health but also improves long-term productivity and sustainability of the cropping system.







# PLANTING INSTRUCTIONS

**Successful potato cultivation in the Manawatū region begins with careful planning around planting time, soil preparation, and spacing. These factors directly influence tuber development, plant health, and overall yield.**

## Planting time in Manawatū:

Potatoes are typically planted in two seasonal windows:

- > **Early crop:** August to September
- > **Main crop:** October to December

These timings allow for root establishment before the warmer months, while also avoiding frost risk during flowering and harvest stages.

## Soil preparation:

Prior to planting, the soil should be cultivated to a depth of at least 25 cm to allow for strong root penetration and tuber expansion. The soil should be friable and well-drained, with a

structure that supports moisture retention without waterlogging. Raised beds or ridges are recommended to improve drainage and reduce compaction, particularly in heavier soils.

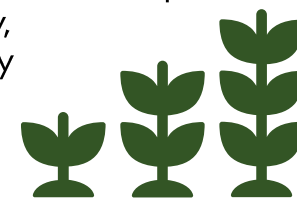
When placing seed tubers, ensure the eyes are facing upwards to promote uniform sprouting. Once placed, cover the tubers and form a slight mound over the row to protect from temperature fluctuations and encourage early growth.

## Spacing and planting depth:

Spacing is a critical factor in potato planting, influencing air circulation, sunlight exposure, and tuber size. The recommended layout is:

- > **In-row spacing:** 25–35 cm between tubers
- > **Row spacing:** 70–90 cm between rows
- > **Planting depth:** 10–15 cm

Once plants reach a height of 15–20 cm, soil should be hilled up again around the base. This supports stem stability, prevents greening of tubers, and enhances yield by encouraging secondary tuber formation.



# FERTILISING + CARE

**Potatoes require a well-balanced nutrient programme to support healthy foliage, strong root development, and high-quality tuber formation.**

Nutrient application should be guided by soil testing to ensure optimal uptake and avoid deficiencies or excesses.

## **Fertilising:**

A two-phase fertilising approach is recommended for potatoes.

### **Phase 1 – Early Growth** (Foliage Development):

- > Nitrogen is essential during the early growth stages to promote vigorous leaf and stem development.
- > Apply 150–200 kg/ha of nitrogen, ideally in split doses to avoid leaching and ensure sustained availability.
- > Phosphorus should be applied at 40–60 kg/ha to support root establishment and early plant vigour.

### **Phase 2 – Tuber Bulking** (Root Development):

- > As the plant transitions into tuber bulking (typically 4–10 weeks after emergence), the fertiliser focus should shift to potassium.
- > Apply 150–250 kg/ha of potassium, which is critical for tuber size, skin quality, and storage potential.
- > Additional magnesium and boron may be beneficial depending on soil test results, particularly in sandy or low-organic soils.





### **Irrigation:**

Water management is crucial during the tuber bulking stage. Both drip and overhead irrigation systems are suitable, but care must be taken to avoid overwatering near harvest, which can lead to tuber cracking and increased disease risk. Consistent moisture during bulking supports uniform tuber development and skin set.

### **Hilling:**

Hilling is an important cultural practice for potatoes.

- > The first hilling should occur when plants reach 15–20 cm in height, followed by a second hilling 2–3 weeks later.
- > This process protects developing tubers from sunlight exposure, which can cause greening, and also encourages secondary tuber formation, improving overall yield.







# WEED, PEST + DISEASE MANAGEMENT

**Potatoes are sensitive to weed competition, particularly during early growth stages when the canopy has not yet closed.**

Weeds not only compete for nutrients and moisture but can also harbour pests and diseases that affect tuber quality and yield.

## **Weed Management:**

Maintaining weed-free rows early in the season is critical to give potato plants the best chance to establish. Growers may consider mechanical cultivation or the use of pre-emergent herbicides to suppress weed growth. However, care should be taken to avoid disturbing developing tubers or compacting the soil.

## **Pest Management:**

Several pests can impact potato crops, and early monitoring is key to effective control.

## **Pests to monitor include:**

- > **Aphids:** These small insects are not only sap feeders but also vectors of viruses. Regular scouting and early intervention are essential to prevent virus spread.



- > **Wireworms and tuber moth larvae:** These pests cause underground damage to tubers, often going unnoticed until harvest. Crop rotation and bait traps can help reduce populations.
- > **Nematodes:** These microscopic worms cause root damage and reduce plant vigour. Avoid planting in known infected fields and implement a minimum three-year rotation with non-solanaceous crops to reduce risk.

### Disease Management:

Potatoes are susceptible to a range of diseases, many of which are influenced by environmental conditions and planting practices

### Diseases to monitor include:

- > **Early and Late Blight** (*Alternaria*, *Phytophthora*): These fungal diseases can devastate foliage and tubers. Use certified seed, rotate crops, and apply preventive fungicides during high-risk periods.
- > **Blackleg / Soft Rot** (*Pectobacterium*): This bacterial disease thrives in waterlogged conditions. Ensure good drainage and use clean planting stock to minimise risk.
- > **Scab:** Common in alkaline soils, scab causes unsightly lesions on tubers. To manage, maintain soil pH within the ideal range (5.5–6.5) and avoid the use of fresh manure before planting.







# COMPLIANCE



**Potato growers in the Manawatū region who are producing for commercial sale, whether for fresh market, processing, or seed, must be aware of the compliance requirements.**

These standards ensure food safety, traceability, and market access, and are often a prerequisite for entering commercial supply chains.

## **Key compliance considerations include:**

- > **NZGAP certification or equivalent:** This provides assurance of good agricultural practices, including environmental management, worker welfare, and food safety.
- > **Crop protection records:** Full documentation of spray applications and fertiliser use must be maintained. This includes timing, rates, and withholding periods to support traceability and audit readiness.
- > **Residue testing:** For export or supply to major retailers, residue testing may be required to confirm compliance with food safety standards.
- > **Seed potato certification:** If producing seed potatoes for resale, growers must use certified stock to prevent disease spread and meet biosecurity requirements.

## **Biosecurity watch:**

Potatoes are vulnerable to several notifiable pests and diseases. One of the most critical is Zebra chip disease, transmitted by the tomato-potato psyllid. Growers should monitor for signs of infestation and report any suspected cases promptly.

To reduce the risk of pest and disease spread, it is essential to maintain hygiene between paddocks, including cleaning equipment and avoiding movement of soil or plant material between sites.



# HARVESTING + STORAGE

**Harvest timing for potatoes depends on the variety planted, seasonal conditions, and the intended market.**

Growers should monitor plant maturity closely to determine the optimal harvest window and avoid compromising tuber quality.

**In the Manawatū region, Potatoes are typically harvested within the following timeframes:**

- > **Early crops:** 80–100 days after planting
- > **Main crops:** 110–150 days after planting

To ensure tubers are ready for harvest, growers should delay lifting until skins are firm and mature. Immature skins are prone to damage during handling and curing, which can reduce shelf life and marketability.

**Harvesting methods vary depending on the scale of production:**

- > **Small plots:** Use a fork or spade, taking care not to bruise or cut the tubers.
- > **Commercial scale:** Use a tractor-mounted digger or harvester designed to lift and separate tubers efficiently.

Regardless of the method, tubers should be handled gently to avoid bruising. After harvest, potatoes should be cured for 10–14 days in a warm, humid environment. This process allows minor skin injuries to heal and prepares the tubers for storage.

**Once harvested, proper storage is essential to maintain tuber quality and prevent spoilage:**

- > Store at 4–8°C in a dark, well-ventilated shed.
- > Maintain high humidity to prevent shrinkage and preserve texture.
- > Avoid exposure to light, as this causes greening, which can lead to the production of solanine, a toxic compound.







# FINANCIAL INFORMATION

**Growing potatoes commercially in the Manawātū region presents a scalable and potentially profitable opportunity for growers seeking to diversify or expand their operations.**

With careful planning, certified seed use, and effective crop management, potatoes can deliver strong returns across fresh market, processing, and seed channels.

## **Yields and production:**

Potato yields are influenced by variety, soil health, seasonal conditions, and management practices.

**While exact figures vary, indicative yield ranges are:**

- > **Early crop:** 25–35 tonnes per hectare
- > **Main crop:** 40–60 tonnes per hectare under good management

Yield consistency improves with crop rotation, mechanisation, and disease control, making these key factors in long-term profitability.

## **Indicative market prices (2024-25):**

Potatoes are sold by weight, with prices varying by market channel and product type

**The following ranges offer a general guide:**

- > **Fresh market:** \$0.80–\$1.50 per kg
- > **Processing contracts:** \$250–\$400 per tonne
- > **Seed potatoes (certified):** \$1.20–\$3.00 per kg

Growers supplying direct-to-consumer channels or boutique processors may access higher margins, particularly for well-graded, clean tubers with strong visual appeal.





### Establishment Costs:

Initial setup costs for potato production typically range from \$8,000 to \$12,000 per hectare, depending on:

- > Seed tuber quality and certification
- > Fertiliser and spray inputs
- > Labour and machinery requirements

### Potential Gross Income:

Gross income potential varies with yield and market access, ranging from \$20,000 to \$35,000 per hectare. Profitability improves with scale, mechanised harvesting, and efficient crop rotation planning.

With the right inputs and care, potatoes offer a commercially viable crop option for Manawatū growers. Early planning, certified seed use, and proactive pest and disease management are essential to achieving high yields and consistent quality.





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➔ [ManawatuNZ.co.nz/FoodStrategy](https://ManawatuNZ.co.nz/FoodStrategy)