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CENTRAL ECONOMIC DEVELOPMENT AGENCY
MANAWATŪ

SWEETCORN IN MANAWATŪ

A GROWER GUIDE

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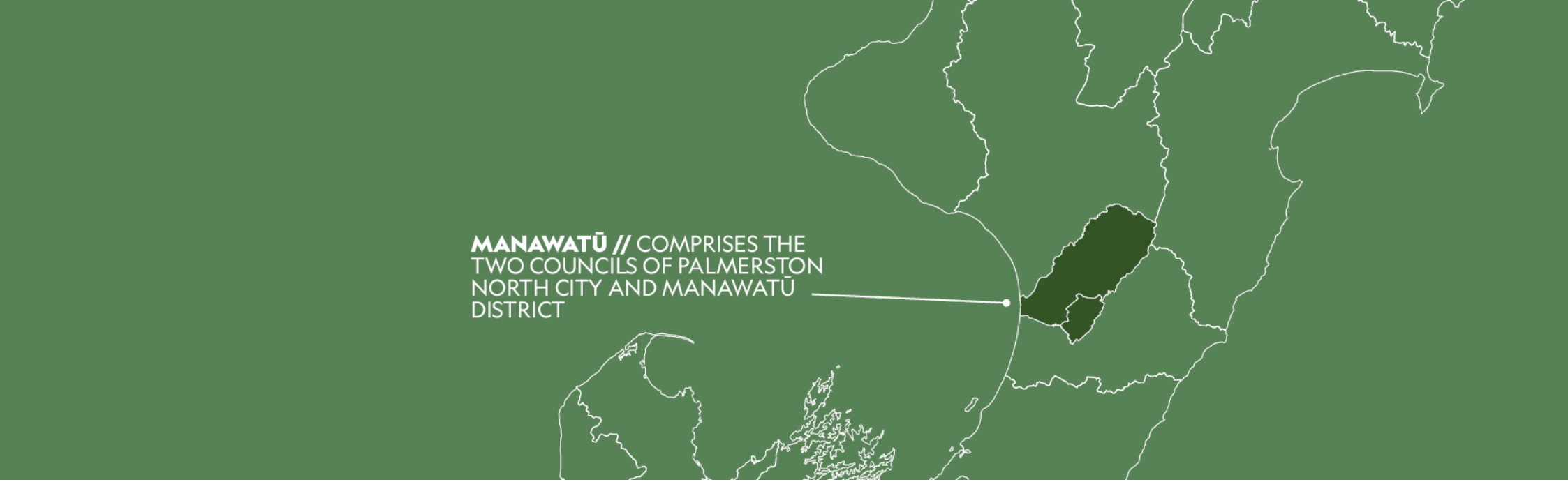

SWEETCORN // AN IN-DEMAND, HIGH VALUE SUMMER CROP

Sweetcorn is an in-demand crop that, with correct management, can offer high value returns. Well suited to Manawatū's warm summers and reliable rainfall, with careful planning and market alignment, sweetcorn can be a profitable addition to summer cropping rotations in the Manawatū region.

This guide supports landowners and growers interested in diversifying into sweetcorn production 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 SWEETCORN VARIETIES + CHARACTERISTICS

Manawatū's warm summers and reliable rainfall during the growing season make it well suited to sweetcorn production. However, as a warm-season crop, sweetcorn is sensitive to frost and requires consistently warm soil and air temperatures for successful germination and pollination.

Climate considerations for the region are further outlined in the Diversification of Farm Systems report.

Choosing the right variety of sweetcorn is essential, as each type offers different characteristics that can influence market suitability, storage potential, and overall crop performance.

CHARACTERISTICS OF SWEETCORN

> **Standard Sugary** (su): Traditional sweet flavour with a short shelf life. Best suited for immediate consumption or local markets.
> **Sugary Enhanced** (se): Sweeter and more tender than su types, with improved shelf life.
> **Super Sweet** (sh2): Very sweet with excellent storage and shipping qualities, making it ideal for commercial distribution.
> **Synergistic** (syn): Combines traits of su, se, and sh2 for enhanced flavour and texture.

Key traits to consider include:

> **Maturity range:** Early (70–80 days), mid (80–90 days), or late (90–100 days) maturity from planting.
> **Kernel colour:** Yellow, white, or bi-colour depending on market preference.
> **Disease resistance:** Select hybrids with resistance to rust, smut, and northern leaf blight.
> **Market type:** Consider whether the crop is intended for processing, fresh market, or export.

While some varieties may offer multiple advantages, it's important to consider how these traits align with your growing conditions, harvest timing, and market goals.

Sweetcorn varieties likely to suit the Manawatū region:

Honey 'n Pearl (se):
A bi-colour variety with tender kernels and strong disease resistance. Well suited for fresh market sales.

Golden Jubilee (su):
A popular yellow variety known for its traditional flavour and suitability for local markets.

Obsession (sh2):
Offers high sweetness, excellent shelf life, and uniform ears – ideal for commercial growers.

Temptation (se+):
An early maturing variety with compact plants and reliable performance across seasons.

SELECTING A SITE

Before selecting a site for sweetcorn cultivation, it is important to understand the conditions that will support optimal growth, pollination success, and yield quality.

Sweetcorn thrives in fertile, well-drained loamy soils with full sun exposure. The ideal soil pH range is between 5.8–6.8. Sites with heavy clay or poor drainage should be avoided, as sweetcorn is highly sensitive to waterlogging which can lead to root damage and reduced plant vigour.

As a tall crop, sweetcorn benefits from shelter against strong winds – particularly during the silking and tasseling stages. Wind exposure during these phases can negatively impact pollination and kernel development. Selecting a site with natural windbreaks or installing protective barriers can improve crop outcomes.

Crop rotation is also a key consideration. Avoid planting sweetcorn in areas recently used for corn or maize to reduce the risk of pest and disease carryover. A rotation period of at least two years is recommended to maintain soil health and minimise pathogen build-up.

By ensuring the site meets these conditions, growers can support strong germination, healthy plant development, and successful harvests.

PLANTING INSTRUCTIONS

To achieve optimal germination and pollination success, it is important to understand the seasonal and soil requirements for planting sweetcorn in the Manawatū region.

Sweetcorn is a warm season crop and should be planted from late October through to December, once soil temperatures consistently exceed 12°C. For super sweet varieties (sh2), a minimum soil temperature of 15°C is required to ensure successful germination.

Prior to sowing, soil should be assessed for moisture content and loosened to promote root penetration and nutrient uptake. Seeds should be sown at a depth of 2.5–4 cm, with deeper planting recommended in drier soils to maintain adequate moisture contact.

Spacing is a critical factor in sweetcorn cultivation. Plants should be spaced 20–30 cm apart in rows that are 60–90 cm apart. For effective pollination, sweetcorn should be planted in blocks of at least four rows wide rather than in single rows.

This configuration supports better pollen distribution during tasseling and silking stages, which directly impacts kernel development and yield.

To extend the harvest period across summer and early autumn, staggered plantings at 2–3 week intervals are recommended. This approach allows for continuous crop availability and can help mitigate the impact of variable weather conditions.

By following these planting guidelines, growers can support strong crop establishment and maximise sweetcorn performance throughout the growing season.

FERTILISING + CARE

Sweetcorn is a nutrient-demanding crop that requires consistent feeding throughout its growth cycle to support strong vegetative development and successful ear formation.

Conducting a soil test prior to planting is recommended to determine baseline nutrient levels and guide fertiliser application. Soil testing is strongly recommended prior to planting, and resources such as Ballance's soil testing guide can assist in this process.

Sweetcorn benefits from a phased fertilising approach. Nitrogen is particularly important for early growth and should be applied in split doses; half at planting and the remainder when plants reach knee height (approximately 30–50 cm tall). A further side-dressing may be applied just before tasseling if needed. However, excessive nitrogen late in the season should be avoided as it can delay maturity and reduce crop quality.

As a general guide, each hectare requires:

> **Nitrogen:** 150–200 kg (split application)
> **Phosphorus**: 30–50 kg.
> **Potassium:** 100–150 kg

Phosphorus and potassium play key roles in root development and kernel formation and should be incorporated into the soil prior to planting or applied as part of a balanced fertiliser programme.

Pollination is a critical phase in sweetcorn production. As a wind-pollinated crop, sweetcorn relies on the movement of pollen from tassels to silks for kernel development. Poor pollination can result in incomplete ears and reduced market quality. To support effective pollination, sweetcorn should be planted in blocks of at least four rows wide. This configuration enhances pollen distribution and reduces the impact of wind disruption.

Minimising plant stress during tasseling – such as avoiding overcrowding and ensuring adequate soil moisture – will further improve pollination success and kernel fill.

WEED, PEST + DISEASE MANAGEMENT

Sweetcorn is particularly vulnerable to weed competition during the early stages of growth.

As a heavy feeder, it requires unobstructed access to soil nutrients, especially during the first six weeks after emergence. Once the canopy closes, sweetcorn is generally able to suppress most weed competition, but early intervention is essential for optimal crop performance.

Growers may consider a combination of weed management strategies depending on scale and site conditions.

- **Mechanical cultivation:** can be used to disrupt weed growth between rows.
- **Pre-emergence herbicides:** may be applied to prevent weed establishment before sweetcorn germinates.
- **Mulching:** is suitable for small-scale production, helping to retain soil moisture and suppress weed growth, though care should be taken to avoid waterlogging.
- **Inter-row mowing:** can be effective for grass suppression in larger plots.

In addition to weed control, sweetcorn is susceptible to a range of pests common in the Manawatū region.

Common pests include:

> **Armyworms**: feed on leaves and ears. Early monitoring and treatment are recommended.
> **Cutworms:** clip seedlings at ground level. Baiting or using row covers may help reduce damage.
> **Corn earworm:** can damage ears. Tight silking windows and biological control methods are effective deterrents.
> **Aphids:** may transmit virus diseases. Regular monitoring and control are advised if populations rise.

Sweetcorn is also prone to several diseases, including:

> Rust
> Smut
> Northern leaf blight
> Maize dwarf mosaic virus

To reduce disease incidence, growers should implement crop rotation (minimum two years), select resistant hybrids, and ensure timely planting. Avoiding overhead irrigation can also help minimise fungal issues by reducing leaf wetness.

By proactively managing weeds, pests, and diseases, growers can support healthy sweetcorn development and maximise yield potential.

COMPLIANCE

Sweetcorn growers in the Manawatū region who are considering commercial production, whether for processing, fresh market, or export, 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:** This provides assurance around good agricultural practices, including environmental management, worker welfare, and food safety.
- **MPI traceability and food safety requirements:** Growers must maintain systems that allow sweetcorn to be traced from paddock to processor or retailer. This includes accurate records of planting, harvesting, and handling.
- **Pesticide and chemical usage records:** If any agrichemicals are used, full documentation of application timing, rates, and withholding periods must be maintained. These records support both domestic and export market access.

Market specific considerations:

> **Processing markets:** Sweetcorn destined for processing must meet strict specifications around cob size, kernel maturity, and moisture content. These parameters are often defined by the processor and may vary by product type.
> **Export and supermarket supply**: These channels require consistent ear shape, clean husks, and uniform kernel development. Growers may be asked to participate in on-farm audits or provide batch-level traceability documentation.

As demand for locally grown sweetcorn increases, maintaining high compliance standards will support both market access and consumer confidence. Growers are encouraged to engage with industry bodies and market partners to stay informed of evolving requirements.

HARVESTING + STORAGE

Harvest timing for sweetcorn is influenced by variety, temperature, and seasonal conditions.

As with many crops, close observation during the final stages of development is essential to ensure peak flavour and market quality.

Sweetcorn is typically ready to harvest 18–24 days after silking, though this can vary depending on temperature and the specific variety grown.

The best indicators that sweetcorn is at its prime include:

> **Kernels:** that are plump and release a milky liquid when pressed (rather than appearing doughy)
> **Silks:** that have turned brown and dry
> **Ears:** that feel full and firm when gently squeezed

Blueberries do not ripen all at once and are typically harvested multiple times over a 4–8 week period. This staggered harvest allows for optimal fruit quality and size but requires careful planning and labour management.

To preserve sweetness and texture, harvesting should ideally be done in the early morning when sugar levels are highest. Ears should be snapped downward and twisted off cleanly from the stalk. Care should be taken during harvest and handling to avoid bruising or tearing the husks, as this can reduce shelf life and market appeal.

Post-harvest, sweetcorn, particularly standard sugary (su) types, lose sweetness rapidly. To maintain quality, ears should be cooled as soon as possible to between 1–3°C and stored at 95–100% humidity. This helps to slow the conversion of sugars to starch and preserve eating quality.

For fresh market sales, sweetcorn should ideally be sold within 2–3 days of harvest. For processing, delivery is typically required on the same day as harvest to meet quality specifications.

By aligning harvest timing with crop maturity and implementing best practice storage techniques, growers can maximise both flavour and market value.

FINANCIAL INFORMATION

Growing sweetcorn commercially in the Manawatū region offers a reliable and scalable summer cropping option for growers seeking to diversify their operations.

With appropriate site selection, crop management, and market alignment, sweetcorn can deliver strong returns, particularly when sold directly to consumers or through short supply chains.

Yields and production:

Sweetcorn yields in the Manawatū region typically range from 10–18 tonnes per hectare, with higher yields achievable under irrigation and good agronomic management. Variety selection, planting density, and pest control all play a role in maximising output.

Indicative market prices (2024-25):

Sweetcorn is sold either by ear or by weight, depending on the market channel. The following ranges offer a general guide:

> **Fresh market:** $1.00–$1.50 per ear
> **Processing** (by weight): $300–$600 per tonne
> **Export:** Premium pricing for consistent ears with tight husks and clean tips.

Fresh market sales often offer higher margins, especially when targeting local retailers, farmers markets, or direct-to-consumer sales. Export and processing markets require strict adherence to quality specifications, including cob size, kernel maturity, and moisture content.

Factors influencing profitability:

> **Labour costs:** Particularly relevant for hand-harvested fresh market corn, where picking and packing labour can be significant.
> **Weed and pest pressure:** Effective early-season control is essential to avoid yield loss and quality downgrades.
> **Water availability:** Irrigation can significantly boost yields but requires upfront investment and ongoing management.
> **Market access and post-harvest infrastructure:** Cooling facilities and efficient logistics are critical for maintaining quality and meeting buyer expectations.

With careful planning and market alignment, sweetcorn can be a profitable addition to summer cropping rotations in the Manawatū region.

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