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PRODUCTION GUIDELINES / SOUTH AFRICA

Sweet Melons



HARVEST FOR FLAVOUR. COOL FOR THE MELON TYPE.

Production guidance for cantaloupe, honeydew and speciality sweet melons, from establishment and pollination to maturity checks and careful cooling.

01 Choose the melon type >

02 Establish & pollinate >

03 Water & nutrition >

04 Crop health >

05 Maturity & cold chain >

06 Planner & references >

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CHOOSE THE MELON TYPE

Plan the fruit and destination

Scope: sweet Cucumis melo types. Watermelon is a different crop and is not covered by this guide.

Decision / crop	Practical guidance
Netted cantaloupe	Agree flesh colour, aroma, netting, firmness, mass and shelf-life class. Conventional and long-shelf-life hybrids can behave differently at harvest.
Galia / Charentais	Confirm the cultivar-specific colour and maturity standard with the supplier and buyer. Do not infer picking stage from rind colour alone.
Honeydew	Use its own maturity and handling plan; honeydew generally does not develop the same slip signal as conventional cantaloupe. [2]
Canary / Casaba / Piel de Sapo	Keep the named type in records and labels. Trial the actual cultivar and route before promising market life.
Sales route	Set carton count, size band, sweetness, firmness, delivery time and permitted defects before choosing a planting area.

Choose a warm, frost-free window

Cantaloupe needs warmth and a well-drained site. Penn State describes about 18-35°C as a favourable average growing-season range; very hot or cold conditions slow performance. Use local weather and soil conditions to set dates. [1]

Plan a realistic harvest load

Work backwards from daily picking, grading, cooling and transport capacity. A large flush that exceeds cooling capacity can lose value even when field yield is good.

Crop brief: melon type / cultivar / target grade / minimum buyer sweetness / harvest window / cold-chain route / daily intake limit.

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ESTABLISH & POLLINATE

Make the stand uniform

Use healthy seed or transplants and prepare irrigation before planting. Protect roots and avoid setting plants into unsuitable cold conditions.

Decision / crop	Practical guidance
Planting material	Record lot, germination, treatment and nursery history. Reject weak or suspect transplants.
Layout	Agree rows and spacing for vine vigour, equipment and required fruit size. Include paths and headlands separately in area calculations.
Root zone	Prepare a friable, well-drained bed; check moisture reaches the seed or root ball evenly.
Bee access	Melons generally need insect pollination for reliable fruit set. Plan bee activity and access during flowering. [1]
Covers and screens	For a protected crop, arrange pollination before closing the system. Check that crop covers do not exclude the required pollinators.

Coordinate protection with flowering

Avoid exposing bees to incompatible treatments. Follow label restrictions and agree operations with the beekeeper. Poor set can also reflect heat, water stress or weak plants; inspect the whole situation before adding hives or fertiliser. [1]

Measure establishment

Count plants over measured lengths after emergence or transplant recovery. Compare the achieved stand with the plan and document patching. Uneven establishment can widen the maturity spread and complicate picking.

Flowering log: first flowers / bee activity / weather / irrigation interruptions / fruit set / crop-protection events.

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WATER & NUTRITION

Keep growth consistent

Base nutrition on soil and water tests, cultivar and expected accepted yield. Avoid an automatic feed programme tied only to calendar dates.

Match water to roots and demand

Monitor soil moisture, rainfall and irrigation delivery through flowering and fruit enlargement. Drip irrigation can supply water and nutrients near the roots. Do not use a fixed litres-per-plant rule across soils and weather. [1]

Decision / crop	Practical guidance
Seedlings	Check seed-zone or root-ball moisture frequently and correct uneven wetting.
Fruit development	Avoid large dry-to-wet swings. Record fruit cracking and root-zone conditions together.
Nutrition	Set nutrient amounts from the soil report and credit previous inputs. Convert nutrient mass to product mass using the actual analysis.
Salinity	Test water and investigate salt accumulation where drainage is poor. EC does not identify which salt or nutrient is excessive.
Near maturity	Review irrigation with the crop adviser and harvest plan. Do not impose severe drought simply to chase a sweetness reading.

Use a volume check

Example: 10 mm over 0.4 ha equals 40,000 litres at the field surface. This converts depth to volume; it is not a crop-water recommendation. Compare measured system delivery with intended application.

Weekly review: vine health / soil moisture / water and nutrient totals / fruit size / cracking / expected picking dates.

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CROP HEALTH

Protect the productive canopy

Walk the field systematically and inspect leaf surfaces, growing tips, fruit and roots. Keep a dated map of symptoms.

Decision / crop	Practical guidance
White leaf patches	Investigate powdery mildew, including on leaf undersides. Resistance and canopy management reduce risk but do not replace scouting. [5]
Angular yellow lesions	Downy mildew may develop rapidly in humid weather; check beneath lesions and obtain prompt diagnosis. [6]
Mosaic or distortion	Record affected plants and vector activity. Seek diagnosis before assuming a nutrient deficiency.
Wilt or root decline	Compare soil moisture, drainage and irrigation delivery with root symptoms. Several causes can look alike above ground.
Fruit lesions or rots	Keep affected fruit out of harvest containers and trace the problem to the block and conditions.

Use resistance accurately

Ask which pathogens and races the cultivar claim covers. Keep seed-health records, manage crop residues and choose rotations based on the actual diagnosis. Avoid transplanting a sick nursery batch into a clean field.

Protect harvest and pollinators

Confirm current South African crop and target registration, label intervals and buyer residue requirements. Record treatment dates and the first permitted harvest, and coordinate bee protection during bloom. [7]

Decision record: diagnosis / affected area / preventive or treatment action / harvest restrictions / follow-up result.

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MATURITY & SWEETNESS

Pick maturity, not size alone

A large melon can still be immature. Establish a cultivar-specific picking standard with fruit cut open and measured across the block.

Ripening does not replace field sweetness

Cantaloupe can soften and develop ripeness after harvest, but its sugar content does not increase. Picking too early cannot be corrected by waiting in storage. Honeydew and other types vary in ripening behaviour, so use the cultivar specification. [2, 3]

Decision / crop	Practical guidance
Conventional slipping types	Look for the expected abscission or slip stage, net development, background colour and internal quality. Do not force fruit from the vine. [3]
Non-slip / long-shelf-life types	Use the supplier's maturity indicators and sample testing. Absence of slip is not by itself proof of immaturity. [2]
Honeydew group	Assess the agreed rind change, surface character and internal maturity. Do not wait for cantaloupe-style full slip. [2]
Soluble solids	Use a calibrated refractometer and a consistent sampling method. Record °Brix with firmness, flavour and maturity; agree the acceptance threshold with the buyer. [3]

Sample beyond the field edge

Take representative fruit from several positions and maturity classes. Record cultivar, block, date and individual results. A single sweet fruit does not describe an entire delivery.

Picker standard: show an accepted fruit and rejected examples. State the exact maturity cues and handling method for that cultivar.

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HARVEST & HYGIENE

Move fruit out of field heat

Use clean containers and gentle handling. Keep decayed, split and heavily damaged fruit separate from sound product.

Decision / crop	Practical guidance
Picking	Use the cultivar-appropriate release or cutting method. Protect the stem end and avoid tearing immature fruit.
Field handling	Shade picked fruit and avoid drops, abrasion and overfilled containers. Record the start and finish time for each lot.
Packing line	Separate dirty field handling from clean packing. Keep food-contact surfaces and tools clean.
Wash systems	If washing or hydrocooling, use a documented food-safety process with suitable water quality and sanitation. Avoid unvalidated hot-water recipes.
Lot control	Retain block, harvest date, pack and customer identity. A visibly clean rind is not proof of food safety.

Grade the inside as well as the outside

Check sweetness, firmness and internal defects on a sample, then grade external damage and size. Record accepted and rejected mass by reason so the next pick can be adjusted.

Treat cut melon separately

Fresh-cut melon requires its own hygienic processing and cold-chain controls. The temperatures for storing intact fruit in this guide do not define a ready-to-eat cut-fruit process.

Pack check: correct type / maturity / carton count / cushioning / ventilation / lot label / temperature and dispatch time.

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COOLING & DELIVERY

Use the correct temperature

Cool promptly and measure fruit temperature through the load. Melon types differ in chilling sensitivity.

Decision / crop	Practical guidance
Cantaloupe	UC Davis reference: 2.2-5°C and 90-95% relative humidity. Extended exposure below the suitable range can cause chilling injury. [3]
Honeydew	Reference: 7-10°C and about 85-90% relative humidity. Less mature fruit are more chilling-sensitive. [4]
Casaba / Canary / Santa Claus	UC Davis places these near the warmer end, around 10°C. Confirm the exact cultivar and delivery route. [4]
Crenshaw / Persian	Use honeydew-type handling guidance cautiously, with a shorter expected market life. Trial retained samples. [4]
Mixed loads	Check temperature compatibility, maturity and ethylene exposure. One setting is not automatically suitable for every melon.

Validate the selling window

Published storage periods depend on maturity, cultivar and handling. Inspect retained samples at the expected arrival and sale dates. Agree any ripening treatment or specialised atmosphere with a competent packhouse; no gas recipe is prescribed here.

Review the delivered product

Compare rejection, softness, chilling symptoms and flavour with picking maturity and temperature history. Use the evidence to improve the next shipment rather than extending storage because a general table allows it.

Dispatch record: harvest lot / grade / °Brix sample / fruit temperature / cooling duration / pack / quantity / delivery slot.

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FILLABLE CROP PLANNER

Your next planting

Save a copy before filling it in. Use a PDF reader that supports forms and keep the completed record with your field documents.

Farm / block / previous cucurbit crops

Melon type / cultivar / seed or nursery lot

Planting / flowering / expected harvest

Row layout / population / planted area

Buyer / size / maturity / sweetness / pack

Soil and water results / nutrient plan

Next action / responsible person / due date

Ready-to-plant checks

- [ ] Cultivar grade confirmed
- [ ] Planting window checked
- [ ] Pollination arranged
- [ ] Irrigation measured
- [ ] Maturity standard agreed
- [ ] Type-specific cooling ready

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REFERENCES & EDITION NOTES

Sources you can follow

Independent sources reviewed on 17 September 2026. Links are clickable. Older sources support established principles; overseas dates and product approvals are not transferred to South Africa.

01. Penn State - Cantaloupe Production
Warm-season establishment, pollination and soil-test planning.

02. UMN - Harvesting and Storing Melons
Cultivar-dependent ripening and slip behaviour.

03. UC Davis - Cantaloupe (1997)
Maturity, soluble solids, cooling and humidity.

04. UC Davis - Honeydew (1997)
Honeydew and related melon temperature differences.

05. UMN - Powdery Mildew of Cucurbits
Recognition and preventive crop management.

06. UMN - Downy Mildew of Cucurbits
Humidity-related disease risk and symptoms.

07. SA Department of Agriculture - Residue requirements
Check crop-specific approvals, records and destination requirements.

About this edition. Original AgriCart editorial synthesis for planning and education. Obtain farm-specific advice before setting inputs and crop-protection programmes. No yield or shelf-life guarantee is implied. Cover image is AI-generated illustration, not a documented farm or named cultivar. Source organisations do not endorse AgriCart.