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PRODUCTION GUIDELINES / SOUTH AFRICA

Pickling Cucumbers



GROW TO GRADE. PICK ON TIME. DELIVER FRESH.

A practical guide to field-grown pickling cucumbers and gherkins: agree the processor specification, establish evenly and protect harvest quality.

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PLAN THE CONTRACT

Start with the processor

Scope: pickling types of Cucumis sativus grown for sale as raw fruit. This guide covers crop production and delivery; it is not a commercial pickling process specification.

Define acceptance before planting

Agree the required grade in writing. A cultivar suited to fresh slicing is not automatically suitable for a processor's brining, whole-pack or sliced product. Send a trial lot where the buyer requires one.

Contract item	Confirm explicitly
Fruit specification	Diameter bands, length, shape, colour, firmness, seed-cavity limits and accepted defects.
Harvest system	Repeated hand picking or once-over machine harvest; compatible cultivar and equipment.
Payment	Price by grade, weighing method, rejection rules and treatment of oversize fruit.
Delivery	Booked intake dates, maximum delay, load condition, containers and responsibility for transport.
Traceability	Field and seed lot, spray records, sampling, residue requirements and receiving documentation.

Choose for the actual production system

Commercial recommendations distinguish hand-harvest, machine-harvest and parthenocarpic pickling cultivars. Ask the supplier to confirm the intended use, local disease resistance and flowering behaviour. Do not treat every female-flowering hybrid as pollination-independent. [1]

Planting decision: do not calculate hectares from a yield promise alone. Work backwards from processor intake, picking capacity and likely accepted grades. Keep a contingency for weather delays or rejected loads.

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ESTABLISH & POLLINATE

Build a uniform stand

Choose a warm, frost-free window and well-drained land. Prepare the seedbed and irrigation together so the planted block can emerge evenly. [3]

Calibrate before the full block

Use the seed lot's germination and count, intended final population and expected field survival. Select rows and in-row spacing with the processor and harvesting team; a once-over system may need a very different stand from repeated hand picking.

Crop type	Pollination decision
Seeded monoecious	Male and female flowers occur on the crop. Bees transfer pollen for normal fruit set. [2]
Seeded gynoecious	Mainly female flowers require a compatible pollen source. Check the supplied seed blend and follow its polliniser instructions. [1, 2]
Parthenocarpic	Fruit can form without pollination. Confirm isolation requirements and the supplier's advice on unwanted pollen. [1, 2]

Plan bee access where needed

Inspect flowers during bloom and discuss pollination provision with a beekeeper before flowering. Protective covers must allow pollinator access for seeded types. Coordinate irrigation and crop protection with bee activity and label restrictions; do not assume wild bees will always be sufficient. [2]

Stand calculation: example only: 30,000 required plants / (0.95 germination x 0.90 survival of germinable seed) = about 35,088 seeds. Choose the required stand first; this example is not a recommended plant population.

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WATER & NUTRITION

Keep growth consistent

Use soil and water analysis, previous crop records and realistic accepted yield to prepare the input plan. Test irrigation before sowing.

Let the soil report lead

Set phosphorus and potassium from test results and divide nitrogen applications to suit growth and the production system. Current commercial recommendations explicitly give the farm nutrient plan priority over generic tables. Convert nutrient needs into product quantities using the actual fertiliser analysis. [1]

Field check	Record and act
Seed-zone moisture	Inspect several points after irrigation. Check dry ridges, crusting and waterlogged depressions before blaming seed quality.
Flowering and fruit growth	Track soil moisture and crop demand. Record rainfall and irrigation together so a wet week is not treated like a dry one.
Uniformity	Compare measured output at the start, middle and end of irrigation lines. Repair leaks or blockage before increasing runtime.
Nutrient symptoms	Map the affected area and examine roots, water delivery and recent applications. Use tissue or soil testing before adding a corrective product.
Drainage	Keep runoff from repeatedly crossing the crop and note persistent wet patches for the next land-preparation plan.

Use a simple water balance

One millimetre over one hectare equals 10,000 litres. Example: 12 mm over 0.5 ha is 60,000 litres at the field surface. This conversion helps check delivery; it does not determine the crop's water requirement.

Weekly review: actual stand / soil readings / rainfall and irrigation / nutrient amounts / flowering / grade distribution / next adjustment. Record fertiliser as both product mass and nutrient mass.

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CROP HEALTH

Keep the canopy productive

Inspect the same field route regularly and add extra checks after prolonged wet weather. Identify the cause before choosing a treatment.

Problem	Recognition and prevention
Powdery mildew	White powdery patches can spread across leaf surfaces. Choose suitable resistance and avoid a dense, poorly ventilated canopy. [4]
Downy mildew	Angular pale or yellow leaf areas and grey-purple growth below can develop rapidly in humid conditions. Confirm promptly. [5]
Angular leaf spot	Leaf spots may dry and fall out; fruit can be affected. Clean seed, rotation and dry-crop working reduce spread. [6]
Uneven wilt or mosaic	Inspect roots and irrigation as well as leaves. Record location, severity and nearby affected crops; submit diagnostic samples.
Feeding or fruit damage	Inspect flowers, leaf undersides and fruit. Identify the pest and local threshold with an adviser; avoid a routine spray calendar.

Protect the picking programme

Choose controls compatible with frequent harvest and required intervals. Mark treated blocks and communicate the earliest permitted re-entry and picking date to the harvest team. Keep rejected or diseased fruit out of delivery containers.

Before application: verify South African crop and target registration and follow the label. Keep treatment records and confirm the processor's residue requirements, including destination-market limits where relevant. [8]

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HARVEST & DELIVERY

Pick for the size band

Set the harvest trigger with the buyer. Fruit size distribution matters more than a calendar date or the size of the largest fruit.

Repeated hand picking

Inspect fruit daily as harvest approaches. MSU guidance calls for daily picking of pickling cucumbers and prompt use for quality. Shorten the operational interval when rapid growth pushes fruit out of grade; remove oversize fruit separately. [3]

System / checkpoint	Arrange in advance
Once-over harvest	Ask the processor to approve sample grading and the harvest date. Confirm machine availability, field access and receiving capacity.
Sorting	Use the agreed diameter gauge. Separate undersize, oversize, damaged and diseased fruit; record mass in each category.
Delivery	Shade loads, use clean containers and minimise delay. Follow the processor's documented intake and temperature instructions.
Holding raw fruit	General cucumber guidance is 10-12.5°C and about 95% relative humidity; avoid prolonged chilling below 10°C. This does not define processed-product storage. [7]
Mixed loads	Avoid ethylene exposure from ripening produce, which can accelerate yellowing. [7]

Measure accepted yield

Accepted mass / harvested mass x 100 gives the acceptance percentage. For example, 850 kg accepted from a 1,000 kg load is 85%. Track this by field and picking date to improve timing and labour planning.

Process boundary: the processor must validate its own preservation, hygiene and shelf-life controls. A crop guide cannot establish a safe brine, acidification or canning process. Record the handover time and condition of each raw-fruit lot.

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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 crop

Cultivar / flowering type / seed lot

Sowing date / processor harvest window

Row layout / target stand / area

Processor / diameter grades / delivery slot

Soil and water results / nutrient plan

Next action / responsible person / due date

Ready-to-plant checks

- [ ] Processor terms confirmed
- [ ] Pollination plan confirmed
- [ ] Crop protection reviewed
- [ ] Seed and stand plan checked
- [ ] Irrigation delivery tested
- [ ] Harvest and transport booked

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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. Mid-Atlantic Commercial Recommendations - Cucumbers (2026/27)
Flowering types, soil-test nutrition and commercial crop planning.

02. UMN Extension - Crops That Require Pollination
Distinguishing seeded and parthenocarpic cucumber requirements.

03. MSU Extension - How to Grow Cucumbers (legacy bulletin)
Warm-season establishment and frequent pickling harvests.

04. UMN Extension - Powdery Mildew of Cucurbits
Recognition and canopy management.

05. UMN Extension - Downy Mildew of Cucurbits
Wet-weather risk and diagnosis.

06. UMN Extension - Angular Leaf Spot
Seed health, residues and avoiding wet-crop operations.

07. UC Davis Postharvest - Cucumber (1997)
Established raw-fruit cooling and ethylene principles.

08. SA Department of Agriculture - Maximum Residue Limits
Crop registration, spray records and destination residue 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.