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PRODUCTION GUIDELINES / SOUTH AFRICA

Sweet Corn



PROTECT POLLINATION. PICK MILKY. COOL FAST.

Fresh-market sweet corn from seed choice to cold-chain handover, with practical checks for isolation, stand establishment, crop health and eating quality.

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GENETICS & MARKET

Confirm the genetic type

Scope: sweet corn harvested with immature edible kernels. Grain maize, popcorn and baby corn require different product and harvest specifications.

Decision / crop	Practical guidance
Sugary / su	Traditional sweet corn loses eating quality rapidly after picking. Match harvest volume to cooling and immediate market capacity. [1]
Sugary enhanced / se	A different sweetness group; cultivar performance and pollen compatibility still need confirmation. [1]
Supersweet / sh2	Typically crisp, high-sugar kernels. Incompatible pollen can change kernel quality in the harvested ear. [1]
Synergistic combinations	Read the exact cultivar information and its isolation requirements. A marketing name alone is not a reliable compatibility guide. [1]
Buyer specification	Agree kernel colour, ear length, tip fill, husked or unhusked format, packaging, tenderness and delivery schedule.

Map neighbouring maize

Record nearby grain maize, popcorn and other sweet corn, including sowing dates and expected pollen shed. Use the seed supplier’s cultivar-specific separation plan. Protect white or bicolour appearance as well as eating quality.

Trial the accepted ear

Sample the intended cultivar with the buyer. Record saleable ears per area, rejection causes and harvest labour. Do not turn a theoretical plant population into a guaranteed ear yield.

Before buying: genetic group / buyer grade / pollen compatibility / neighbouring crops / growing window / cooling capacity.

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STAND & POLLINATION

Aim for uniform flowering

An even stand helps ears reach a consistent harvest stage. Check soil conditions, equipment calibration and actual emergence.

Decision / crop	Practical guidance
Seed lot	Use germination and seeds-per-kilogram information for the actual lot. Handle supersweet seed carefully and check the planter for damage.
Warm seedbed	Sow into suitably warm, moist, well-drained soil. Minimum temperature varies with genetic type and cultivar; use the current seed specification. [1]
Population	Set the target with the supplier for cultivar, ear grade, season and irrigation capacity. Row width alone does not determine final stand.
Pollination	Corn is wind-pollinated. For small plots, use a block of several rows rather than one long isolated row; keep compatible pollen available. [1]
Flowering overlap	Monitor tassel pollen shed and receptive silks. Isolation by time requires actual non-overlap, not merely a fixed number of days between sowings.

Check the arithmetic

Example only: 50,000 intended plants / (0.95 germination x 0.90 establishment of germinable seed) = about 58,480 seeds. This illustrates ordering arithmetic, not a population recommendation.

Walk the stand

Count plants over measured row lengths in representative positions. Note doubles, gaps and late seedlings. Record flowering and compare the planted block with neighbouring maize as the season changes.

Stand log: seed lot / sowing depth / emerged count / gaps / tasselling / silking / neighbouring pollen / action.

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WATER & NUTRITION

Protect silking and ear fill

Use a soil-test-based nutrient plan and an irrigation schedule matched to rooting, weather and crop stage.

Decision / crop	Practical guidance
Soil preparation	Correct drainage and compaction problems before sowing. Test soil and review previous fertiliser and organic inputs.
Nutrient budget	Set nitrogen, phosphorus and potassium inputs from local interpretation and expected accepted yield. Commercial tables do not replace the farm plan. [2]
Split applications	Time mobile nutrients to crop uptake and the irrigation system. Keep fertiliser placement away from seed at injurious concentrations.
Flowering water	Avoid severe water stress around tasselling, silking and early kernel development. Check the active root zone, not only the surface. [1]
System uniformity	Measure outlet or sprinkler performance across the block. Correct uneven delivery before increasing the total dose.

Use a water balance

Record rainfall, irrigation and root-zone observations. One millimetre over one hectare is 10,000 litres; 15 mm over 2 ha is 300,000 litres at the field surface. Allow for measured system efficiency when planning pumping.

Investigate poor fill

Poor tip fill can reflect pollen availability, weather, water stress or crop competition. Inspect the stand and flowering records before assuming a nutrient deficiency or adding foliar products.

Weekly review: crop stage / root-zone moisture / rainfall / applied water / nutrient totals / tassel and silk observations / next action.

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CROP HEALTH

Inspect whorls, silks and ears

Scout from establishment through picking. Record the pest or symptom and crop stage so action can be timed to the actual problem.

Decision / crop	Practical guidance
Seedlings and roots	Check missing plants, cut stems, rotting seed and waterlogged patches. Inspect below ground before treating the whole field.
Whorl feeding	Fall armyworm is an established South African concern and has been reported on sweetcorn. Identify larvae and fresh feeding; do not diagnose from holes alone. [4, 5]
Silks and ear pests	Inspect live larvae and damage at the ear tip and under husks. Keep damaged ears out of the accepted grade and record the proportion affected.
Leaf disease	Map spots, pustules and blighting and obtain diagnosis. Use cultivar resistance information matched to the confirmed disease.
Weeds and volunteers	Control early competition and review volunteer maize in the pollen-isolation plan. Keep field edges and access routes manageable.

Use current local guidance

Consult official pest information and a competent adviser for identification and a crop-stage response. Historical outbreak documents establish occurrence, not today's permitted products or thresholds. [4, 5]

Keep harvest intervals visible

Verify current South African approval for sweet corn, the target pest and intended use. Follow label directions and resistance-management requirements, re-entry and preharvest intervals. Check buyer residue requirements before application. [6]

Scouting record: block / stage / live pest or symptom / incidence / decision / treatment / earliest harvest / follow-up.

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HARVEST & COOLING

Pick for eating quality

Sample ears across the block as maturity approaches. Calendar days and dry silks alone cannot establish the correct picking stage.

Decision / crop	Practical guidance
Milk stage	Kernels should be filled and release a milky liquid when pressed, rather than watery or doughy contents. Assess tenderness and flavour against the buyer's grade. [3]
Ear quality	Check fill, shape, husk freshness and freedom from insects, decay and mechanical damage. Keep rejects separate. [3]
Field handling	Move picked ears into shade and cool promptly. Avoid leaving warm bulk loads waiting for a later packing shift.
Cooling target	UC Davis recommends 0-1.5°C and 95-98% RH. Measure product temperature and avoid freezing; room air alone is not proof that the load has cooled. [3]
Water and ice	Where hydrocooling or icing is used, control food-contact water quality, sanitation, drainage and packaging suitability. Keep the process documented.

Plan a short selling cycle

Standard types deteriorate rapidly; longer sugar retention in supersweet types does not remove the need for rapid cooling. Validate shelf life for the actual cultivar, pack and temperature history rather than promising a maximum from a reference table. [3]

Handover with traceability

Record harvest time, block, pack lot, accepted ears, product temperature and customer. For processing contracts, agree maturity sampling and maximum harvest-to-factory time separately.

Dispatch check: milk-stage sample / tip fill / sound ears / lot label / cooled product / clean pack / 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 / neighbouring maize

Genetic group / cultivar / seed lot

Sowing / tasselling / silking / harvest window

Row layout / target stand / planted area

Buyer / kernel colour / ear grade / pack

Soil and water results / nutrient plan

Next action / responsible person / due date

Ready-to-plant checks

- [ ] Genetic type confirmed
- [ ] Stand and seed calibrated
- [ ] Crop health reviewed
- [ ] Isolation plan checked
- [ ] Flowering water planned
- [ ] Rapid cooling booked

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REFERENCES & EDITION NOTES

Sources you can follow

Independent sources reviewed on 18 September 2026. Links are clickable. Older sources support established principles; overseas dates and product approvals are not transferred to South Africa.

01. UMN - Growing Sweet Corn
Genetic groups, warm-soil establishment and isolation.

02. Mid-Atlantic Commercial Recommendations - Sweet Corn (2026/27)
Commercial crop planning; foreign pesticide tables are not local approvals.

03. UC Davis - Corn (Sweet) (1997)
Milk-stage maturity, rapid cooling and storage conditions.

04. SA Government - Fall Armyworm in South Africa (2017)
Historical confirmation of sweetcorn as an affected crop; not a current spray list.

05. SA Department of Agriculture - Outbreaks and Diseases
Official pest information and fall-armyworm resources.

06. South African Government - Agricultural remedies
Verify current South African crop, target and use approval.

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.