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PRODUCTION GUIDELINES / SOUTH AFRICA

Squash



PICK TENDER. STORE MATURE. MATCH THE MARKET.

Summer squash, marrows, pattypans, butternut and gem squash: plan the crop around the required maturity and keep their handling routes separate.

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CROP & MARKET

Define the product first

Summer and winter describe the harvested product, not a universal South African planting calendar. Confirm the cultivar and the buyer's maturity standard.

Decision / crop	Practical guidance
Zucchini / baby marrow	Usually sold immature, with a tender rind. Agree length, diameter and whether flowers are retained. [5]
Pattypan	Agree diameter and colour grade. Plan frequent picking to avoid oversized, seedy fruit. [5]
Large marrow	Confirm whether the buyer wants a tender large fruit or a more mature cooking product; the name alone is insufficient.
Butternut	A mature storage-squash product needs developed rind and eating quality, not just full external size. [6]
Gem squash	Agree young tender or mature hard-rind harvest. Validate storage for the actual cultivar and maturity rather than applying one rule to every gem.

Fit the season to the site

These are warm-season crops vulnerable to frost. Use local soil warmth, frost risk, rainfall and buyer dates to set sowing windows. Allow for bush or trailing habit when reserving land and harvest access. [1]

Plan accepted yield

Budget using saleable fruit in the agreed grade, not total field mass. Record undersize, oversize, misshapen and damaged rejects separately. Trial unfamiliar cultivars before scaling.

Order checklist: cultivar / bush or vine / harvest maturity / buyer size / weekly quantity / picking labour / cooling or storage route.

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STAND & POLLINATION

Establish an even crop

Use healthy seed, a workable seedbed and a measured row layout. Protect the intended plant population without crowding access.

Prepare and sow

Choose well-drained ground and a soil-test-based amendment plan. UMN cites pH 6.0-6.5 for summer squash as a reference. Set seed depth and spacing from cultivar guidance, soil and machinery; keep the seed zone moist without saturating it. [1]

Decision / crop	Practical guidance
Plant spacing	Bush zucchini, trailing butternut and different gem cultivars need different layouts. Reserve the mature canopy width and a picking route.
Seed calculation	Required seeds = desired established plants / (germination fraction x expected survival of germinable seed). Use actual seed-lot information.
Emergence check	Count measured row lengths and inspect gaps. Check seed decay, crusting, moisture and depth before deciding to re-sow.
Flowers	Most conventional squash crops have separate male and female flowers on the same plant. Insects transfer pollen; female flowers show a small fruit at the base. [1, 2]
Pollinator access	Remove insect-excluding covers when pollination is needed. Honey bees, bumble bees and other bees can contribute; do not assume only one bee type works. [1, 2]

Investigate poor fruit set

Observe flowers and bee activity during flowering. Poor pollen transfer can cause abortion or misshapen fruit; assess weather, water stress and crop condition too. Protect pollinators when planning any crop-protection intervention. [2]

Field check: stand / gaps / male and female flowers / pollinator activity / fruit set / weather / action.

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WATER & NUTRITION

Measure the root-zone supply

A fixed number of litres per plant cannot fit every soil, season and canopy. Use measured delivery and crop observations.

Decision / crop	Practical guidance
Soil and water tests	Review soil nutrients, salinity, drainage and irrigation-water quality before setting the programme.
Nitrogen	Set a seasonal budget with the adviser and split applications to crop uptake and the irrigation system. Avoid using dark foliage as the only success measure.
Phosphorus and potassium	Apply according to soil-test interpretation and expected crop removal. Do not repeat an old recipe when residual supply is already high. [1]
Micronutrients	Use a confirmed need and suitable product. Routine molybdenum, boron or foliar mixtures are not substitutes for diagnosis.
Irrigation	Check moisture in the active root zone and include rainfall. Protect flowering and fruit growth from severe stress while maintaining drainage.

Check system performance

Collect timed emitter samples across each zone. Correct blocked outlets, leaks and pressure differences before increasing runtime. Inspect both the wettest and driest areas.

Convert depth to volume

1 mm over 1 hectare is 10,000 litres. A planned 8 mm over 0.5 ha is 40,000 litres at the field surface, before allowance for delivery losses. This is a calculation example, not a prescribed irrigation dose.

Water log: rainfall / irrigation depth / delivered volume / soil moisture / crop stage / nutrient inputs / next review.

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CROP HEALTH

Diagnose before treating

Scout leaf surfaces, growing points, flowers, fruit and roots. Keep symptoms, live pests and old damage separate in the record.

Decision / crop	Practical guidance
Powdery mildew	White superficial growth on leaves needs confirmation and a resistance-aware programme. Cultivar resistance can help but is not complete protection. [3]
Downy mildew	Angular yellow lesions and growth beneath leaves can indicate a different disease from powdery mildew. Obtain diagnosis promptly. [4]
Virus-like symptoms	Mosaic, distortion and stunting need investigation. Record affected blocks and insects; a fungicide does not cure a virus.
Fruit or crown rot	Inspect drainage, soil contact, wounds and affected tissues. Remove decayed fruit from harvest containers and seek a cause-specific diagnosis.
Insect feeding	Check leaf undersides, flowers and young fruit. Identify the pest and local pressure before choosing control measures.

Reduce exposure

Use healthy planting material, manage weeds and volunteer hosts and avoid moving contaminated soil or crop waste into clean fields. Plan rotation around the confirmed disease rather than assuming a short fixed break controls every pathogen.

Fit treatment to frequent picking

Verify current South African registration for the crop, target and use. Follow the approved label, re-entry and preharvest intervals and buyer residue requirements. Record the earliest permitted picking date. Protect pollinators and rotate modes of action where the approved programme requires it. [7]

Scout record: date / block / crop stage / diagnosis or sample / severity / decision / permitted harvest date / follow-up.

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HARVEST & STORAGE

Separate the handling routes

Harvest into clean containers, keep lots identifiable and protect fruit from abrasion. Storage cannot restore eating quality lost through the wrong maturity.

Decision / crop	Practical guidance
Tender summer squash	Pick while rind and seeds are tender. Cut fruit free with a clean tool; protect the delicate skin and avoid dumping or overfilling containers. [5]
Summer-squash cooling	A reference range is 5-10°C at about 95% RH. Prolonged exposure below 5°C can cause chilling injury. Plan rapid sale, commonly within about 10 days. [5]
Mature winter squash	Check cultivar-specific rind, stem and internal maturity. Keep stems intact and exclude cracked, decayed or badly wounded fruit from storage. [6]
Winter-squash storage	UC Davis gives 12.5-15°C and 50-70% RH with ventilation as general references. Temperatures below 10°C risk chilling. [6]
Green-rind types	Colour retention can require a different compromise: 10-12°C may reduce yellowing but still carries chilling risk. Validate the cultivar and intended duration. [6]

Cure only where appropriate

Use a cultivar-specific mature-squash curing plan with protection from sun injury, rain and decay. Do not cure tender zucchini or assume curing repairs immature or rotten fruit. [6]

Verify the actual storage lot

Log temperature, humidity, mass loss, decay and buyer acceptance. Do not promise months of storage for untested gem squash or use the same room conditions for tender and hard-rind produce.

Dispatch: correct maturity / sound rind / grade / lot code / temperature record / buyer pack / delivery date.

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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

Squash type / cultivar / seed lot

Sowing / flowering / intended harvest stage

Row layout / target stand / planted area

Buyer / size grade / tender or mature / pack

Soil and water results / nutrient plan

Next action / responsible person / due date

Ready-to-plant checks

- [ ] Product maturity agreed
- [ ] Pollinator access planned
- [ ] Crop health reviewed
- [ ] Seed and stand checked
- [ ] Irrigation measured
- [ ] Correct storage arranged

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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 Summer Squash and Zucchini
Establishment, soil conditions and crop care.

02. UMN - Pollination Requirements
Insect pollination and fruit development.

03. UMN - Powdery Mildew of Cucurbits
Disease identification and management principles.

04. UMN - Downy Mildew of Cucurbits
Distinct pathogen and diagnostic signs.

05. UC Davis - Soft-Rind Squash (1997)
Tender fruit maturity, handling and chilling sensitivity.

06. UC Davis - Pumpkin and Winter Squash (1998)
Mature rind, storage conditions and cultivar differences.

07. 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.