



REPUBLIC OF SOUTH AFRICA



Pretoria · 2026

Citrus, deciduous fruit and wine grapes grown on half the world's average rainfall.

What hydro-retention changes for an export-led sector.

ECOSORB® · ECOFERT® · NAPEMA® · PAULOWNIA



A small share of GDP, a large export earner

≈ 2.5 %

of GDP from agriculture, forestry
and fishing

≈ 1.6 M ha

under irrigation, out of some 12
M ha of arable land

**≈ 465
mm**

of rain a year, about half the
world average

**US\$ 13
bn**

of farm exports a year — a
consistent net exporter

Agriculture is a modest share of national output but employs roughly 5 % of the workforce, close to 900,000 people, and feeds an agro-processing chain worth several times the farm-gate value. Output comes from some 40,000 commercial farms alongside a much larger smallholder base.

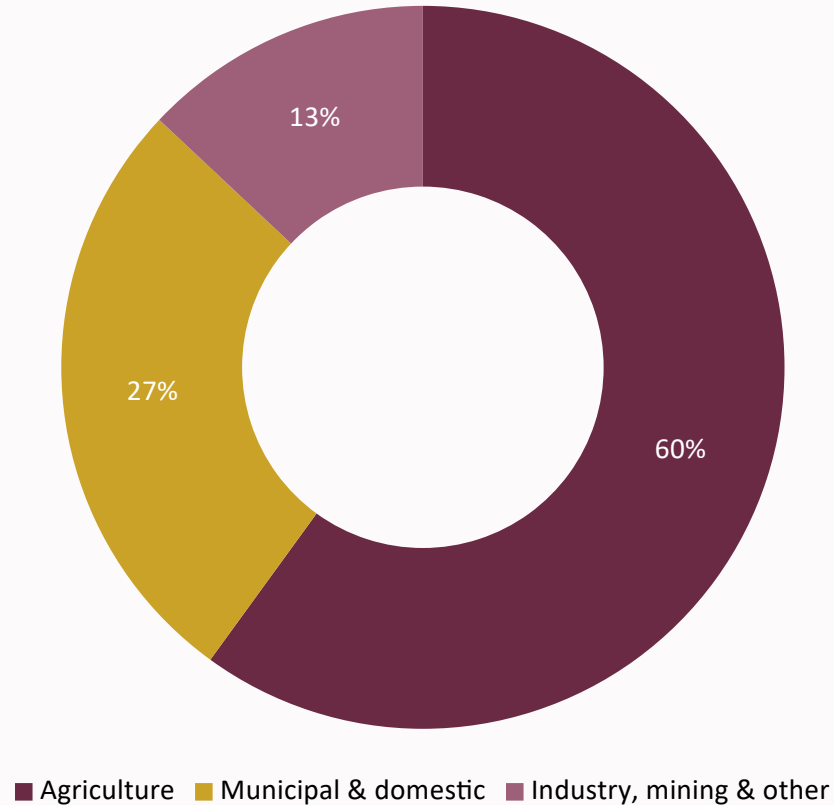
A dry country, and rainfall it cannot count on

- Mean annual rainfall is around 465 mm, roughly half the world average, and potential evaporation exceeds it across most of the interior.
- Irrigation takes about 60 % of the water withdrawn each year: when the resource tightens, the restriction reaches the field before it reaches the city.
- Rainfall is unevenly spread — under 200 mm a year in the Northern Cape, more than 1,000 mm on the KwaZulu-Natal coast — and it arrives in short, intense events.
- Drought is a recurring line item: the 2015/16 El Niño season cut the commercial maize crop to under 8 million tonnes; the 2015-2018 Western Cape drought forced irrigation quota cuts.
- Public plans — new dams, water reuse, coastal desalination — act on supply. Hydro-retention acts on demand, in the root zone, block by block.



Orchards and vineyards, Western Cape

Irrigation takes six litres in every ten



What this implies

A 10 % cut in irrigation demand releases close to half the volume used by industry, mining and every other non-municipal use combined.

That is why the effort belongs in the field rather than in the other uses.

A net food exporter with a two-speed farm economy

No. 2

exporter of fresh citrus in the
world

≈ 0.9 M

people employed in primary
agriculture

≈ 40,000

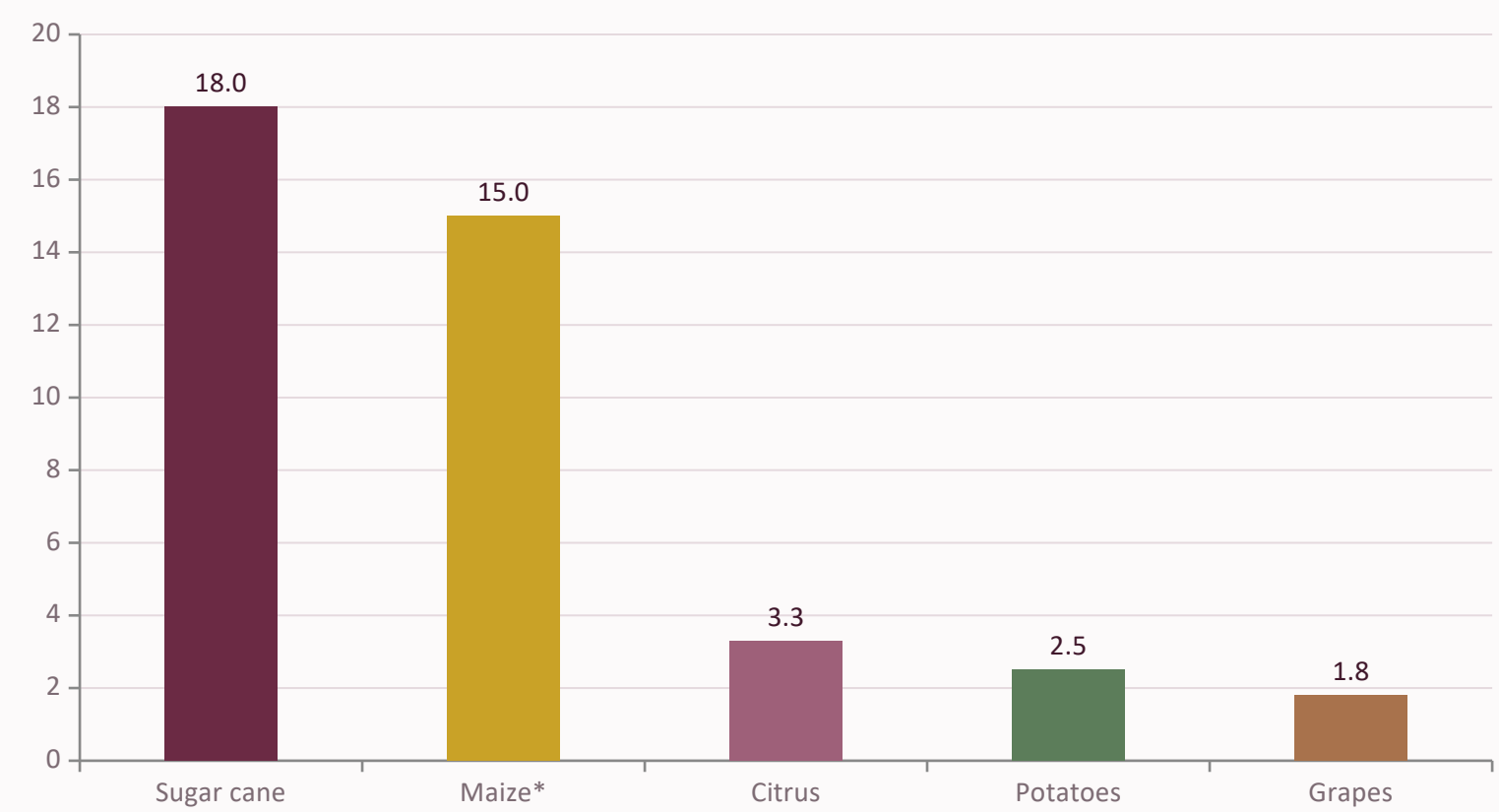
commercial farming units in the
latest census

≈ 2.3 M

households farming on a small
scale, mostly for their own food

Commercial agriculture earns foreign exchange from fruit, wine, nuts and sugar, while millions of households farm small plots with little access to water. Water-use licensing, electricity load-shedding and land reform all weigh on investment decisions.

Five crops carry the volume and the value



Reading

Citrus and grapes are irrigated, export-bound and priced per carton: there, a litre saved converts into margin. The country ships about 2.6 million tonnes of citrus a year, second only to Spain.

* Maize is mostly rain-fed and swings by several million tonnes between seasons.

Citrus: an export leader on a tight water allocation

- Citrus is grown in Limpopo, the Eastern Cape, Mpumalanga and the Western Cape, mostly under micro-irrigation.
- Orchards draw on allocated river and dam water, which is cut back in drought years.
- Load-shedding interrupts pumping schedules, so trees can miss irrigations during hot, dry spells.
- Export markets pay for size and appearance: steady soil moisture protects both at fruit set and sizing.
- NAPEMA® treats pests without residue, which matters under strict European maximum residue limits.

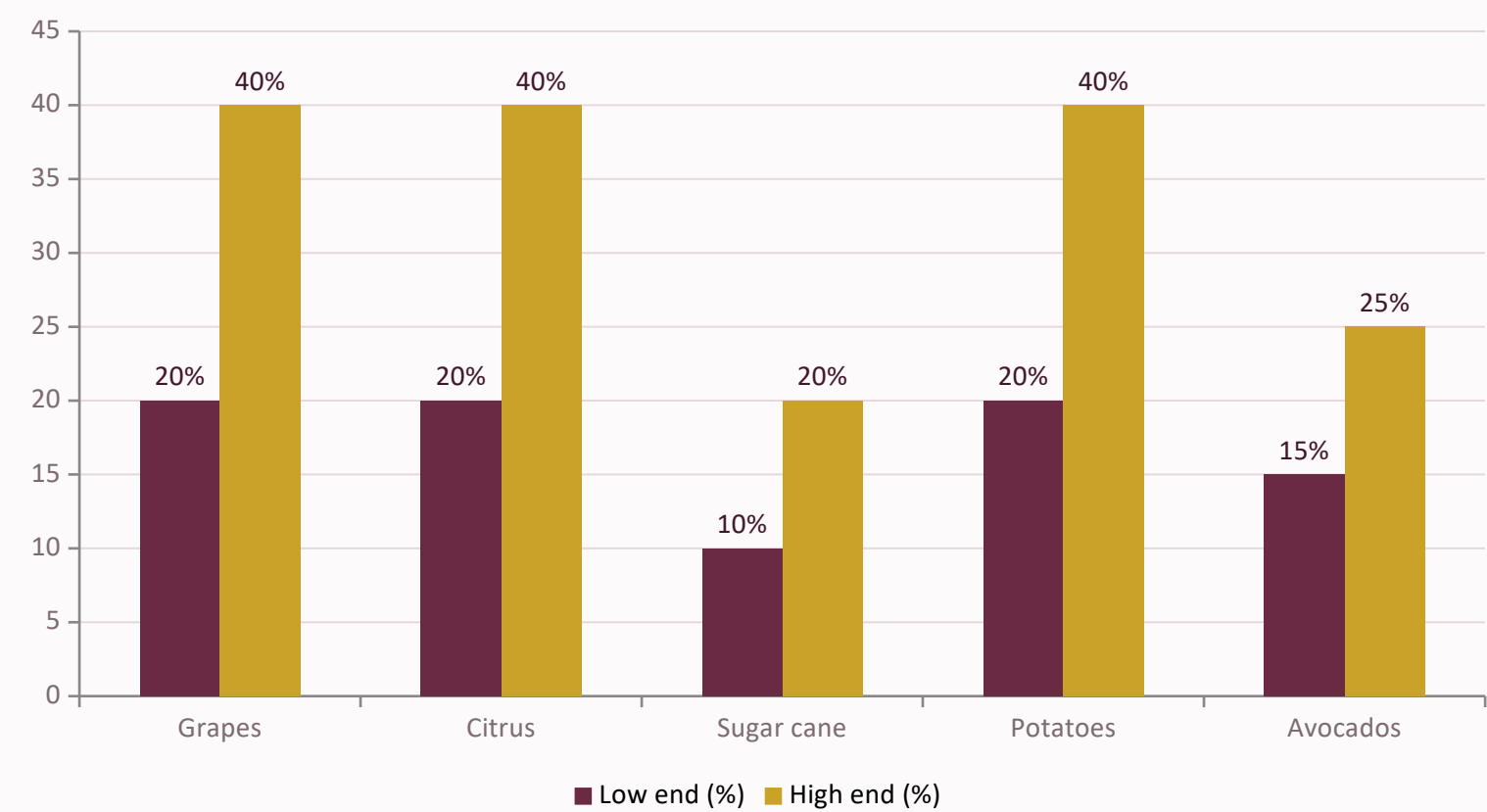


Wine and table grapes in the Western Cape



- The Western Cape holds most of the vineyard area, from Stellenbosch to the Breede and Olifants river valleys.
- The 2015–2018 drought brought Cape Town close to 'Day Zero', and farms lost much of their water allocation.
- Table-grape growers in the Hex and Orange River valleys depend on long, hot seasons and dependable irrigation.
- Replanting a vineyard costs several years of income: young vines must be kept free of water stress to establish.
- EVERGREEN® placed in the planting furrow holds water around young roots between irrigations.

Expected yield gain by crop



Read with care

Ranges used by our dose calculator, for a normally managed crop with EVERGREEN® applied at planting.

Actual results depend on soil, climate and management. For cereals, no gain is claimed without a field trial.

Two technologies, two different constraints

EVERGREEN® — holding the water

- A potassium-based hydro-retainer placed in the root zone at planting or at replant.
- It captures rain and irrigation water and releases it back to the plant gradually, removing water stress through the critical stages.
- Absorbs on the order of 300 times its own weight; useful effect of 3 to 4 years in the soil.
- Breaks down by 20 to 25 % a year, with no build-up and no risk of overdosing.

ECOFERT® — feeding without depleting

- A micro-dose fertiliser of amino acids, nitrogen, phosphorus and potassium, made from renewable resources.
- Non-chelating: it does not strip the clay-humus complex and adds neither salinity nor nitrate load.
- Certified SOHISCERT and EU Bio, in use in 60 countries — the entry condition for European buyers' specifications.
- 1 to 4 bottles of 140 ml per hectare, compatible with existing fertigation equipment.

The two products are sold separately but were designed to reinforce each other: the hydro-retainer extends how long water stays available, the fertiliser puts that water to work without degrading the soil.

Protecting crops, holding soils

NAPEMA® — protection without residue

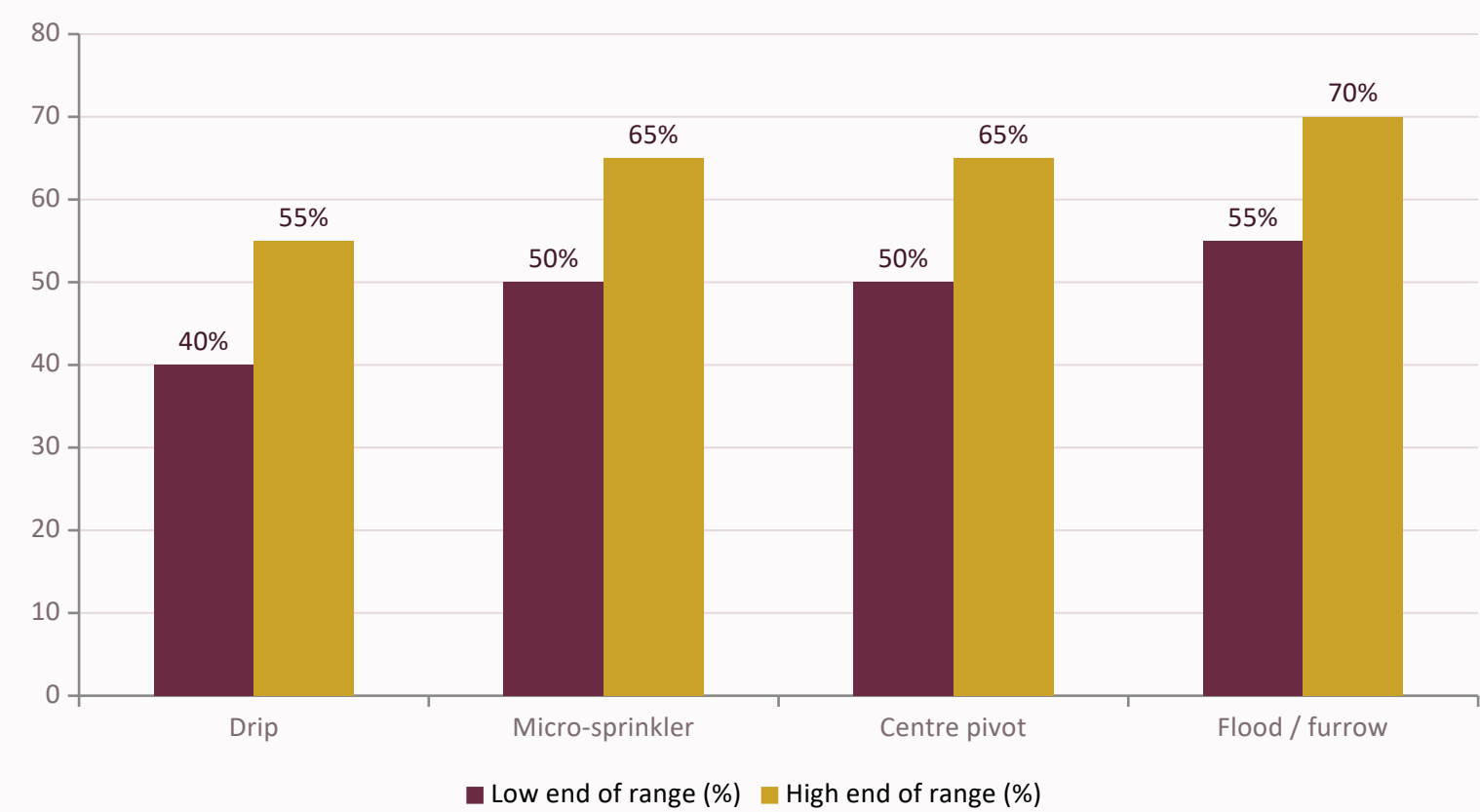
- Controls diseases, parasites, fungi and pests, with no synthetic molecule.
- Foliar and root spraying, working both preventively and curatively.
- No residue in soil, plant or air: pollinators and beneficial insects are spared.
- Formulated for one precise problem: mealybug, citrus greening (HLB), nematodes.

Paulownia ALTIFOLIA® — the tree for hot regions

- 13 to 15 m in six to eight years, with a wide trunk.
- Combined with 100 g of EVERGREEN® per plant, irrigation needs drop by 50%.
- Withstands -25 °C to +45 °C; the wood only ignites above 426 °C.
- Windbreak, protection against soil erosion, 400 to 700 kg of honey per hectare.

Plants delivered potted (25 to 30 cm), certified disease-free and replaced under warranty in case of loss. First harvest at the end of year six, with wood valued at around €400 to €450 per m³.

Expected water saving by irrigation method



Read with caution

These ranges are indicative and based on the savings documented for our hydro-retainers.

The actual result depends on the soil, the climate and the crop. They give an order of magnitude and are in no case a guaranteed, contractual or absolute value.

Where to run the first trials



Western Cape

≈ 90,000 ha of vineyard

- Nearly all of the national vineyard, plus the deciduous fruit of the Breede and Olifants valleys.
- Winter rainfall of 250 to 400 mm inland, and the 2015-2018 quota cuts are a live memory.
- Export blocks already on drip or micro-sprinkler, with buyers asking for organic certification.



Limpopo

≈ 450 mm of rain a year

- The leading citrus province, with macadamia and avocado on sandy, low-retention soils.
- High summer evaporation and a long dry winter: irrigation carries the whole season.
- Orchards planted for twenty years or more — planting is exactly when the retainer goes in.



KwaZulu-Natal

≈ 300,000 ha of cane

- A sugar belt from the North Coast to Zululand, carrying most of a national crop of roughly 18 million tonnes.
- Largely rain-fed: the gain is in holding the rain that falls, not in trimming a dose.
- Around twenty thousand growers organised around mills — one route to a coordinated trial.

A staged rollout, measured at every step

1

Assessment

Soil, irrigation method and crop are reviewed. No commitment at this stage.

2

Trial block

One comparative trial block, against a control block managed identically.

3

Measurement

Water use and yield recorded over a full growing season.

4

Extension

Gradual rollout to the remaining blocks, on the basis of what was measured.

The dosing rule is the same everywhere: 3 grams per litre of useful soil. What changes from one site to the next is the volume of soil the roots actually explore.

A local partner for South Africa

1

Distribution

Territorial exclusivity and launch stock for the first commercial season.

2

Training

Technical training for field teams, dosing protocols and seasonal updates.

3

Joint trials

Demonstration plots with a control, results shared with growers.

4

Institutions

Dialogue with the Ministry of Agriculture and food-security programmes.

The framework adapts to the territory: an importer, an input distributor or a growers' group can lead the partnership.

Identified risks and our answers

Risks

- Rainfall variability: one good La Niña season is enough to mask the value of the product.
- Registration: fertilisers and soil amendments fall under Act 36 of 1947 and must be registered before commercial sale.
- The memory of cheap sodium-based polymers, which left a poor reputation in several regions.
- Farm cash flow after successive droughts, high input costs and a rand that raises the price of every imported input.

Our answers

- Run the trial over a full season against a control block, so the gain is measurable even in a favourable year.
- Open the registration file in parallel with the first trials rather than after them.
- Document the formulation: potassium, never sodium, and compatible with food crops.
- Spread the commitment: a useful life of 3 to 4 years amortises the cost over several seasons.

Acrylamide analysis (Polymex laboratory, ISO 9001, content below 3.0 µg/g) and REACH / SVHC screening (SGS) are available on request, together with the SOHISCERT certificate valid until 4 September 2027.

Sources and working assumptions

Main sources

- Statistics South Africa: GDP by industry, Quarterly Labour Force Survey, Census of Commercial Agriculture.
- Department of Agriculture: Abstract of Agricultural Statistics.
- Citrus Growers' Association; SAWIS for vineyard area.
- Department of Water and Sanitation; FAO (FAOSTAT, AQUASTAT); World Bank (WDI).

Working assumptions

- Figures are rounded orders of magnitude, taken from the latest public data available.
- Water and yield gains are indicative and vary with soil, climate and crop.
- Commercial working document: figures to be refreshed before any official submission.

Trial reports, certificates (SOHISCERT, Polymex and SGS analyses) and technical sheets: available on request.

Tell us about your block

Crop, irrigation method, soil type, the volume of water you use today. We come back with the matching combination of technologies, the dosing, and the trials already run in comparable situations.

A first conversation commits you to nothing.

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