

South Africa dossier summary

Water, climate, fertilisers and crops. The essentials of the 24-page dossier.

Key figures

Figure	What it means
+4,168 t	Of extra maize per 10,000 ha treated, central scenario (2,084 to 8,335 t depending on the scenario).
+908 t	Of extra soybean per 10,000 ha treated, central scenario (454 to 1,815 t depending on the scenario).
2,636,250 ha	Of maize (corn) harvested in 2024, the main crop (FAOSTAT).
2,239,760 ha	Equipped for irrigation, for 12,413,000 ha of cropland (FAOSTAT).
1,519.4 Mm³	Irrigation water saved per year in the central scenario, enough to irrigate about 271,400 more ha.
640,129 t	Mineral nitrogen used in 2024, partly produced locally.
13,192 M$	Of agricultural exports in 2024, for $7,141 million of imports (FAOSTAT).

M = million · Mm³ = million cubic metres · t = tonnes. The gains are scenarios built from the trials cited; no trial has yet been conducted in South Africa.

Our products

Green Solutions develops products for water, fertilisation and crop protection. Four families are of interest to this dossier.

Product	Claimed use	Published evidence (level)
EVERGREEN® (water-retention polymer)	Holds rain or irrigation water as a gel, near the roots.	Trials on maize, potato, watermelon, date palm and soybean. Level B to C.
ECOSORB® (water-retention polymer based on corn starch)	Same use; lasting 2 to 3 years according to the website.	Soybean trial (China); laboratory acrylamide analysis. Level B to C.
ECOFERT® (fertiliser)	Fertiliser certified by SOHISCERT and EU Bio, usable in organic farming.	Published certificate; potato trial with EVERGREEN®. Levels A and C.
Paulownia ALTIFOLIA®	Fast-growing tree for agroforestry.	Website figures; no trial in South Africa. Level C.

Key points

- **Irrigation, a pillar of production.** 2,239,760 ha equipped for irrigation, or 18.0% of cropland: Every cubic metre saved frees water for other plots.

- **Where water is shortest.** National water stress is 67.6%; Upington gets 210 mm of rain for 2,231 mm of evapotranspiration.
- **Rainfed crops quantified.** For maize and soybean, a published trial makes it possible to quantify a yield gain.
- **In irrigation.** The "other irrigated land" group gives 28% of the water saved (generic assumption, no trial).
- **Importing into South Africa.** 0% general duty for subheading 3906.90 (15% for one acrylic resin liquid line), 15% VAT; fertiliser registration by the Department of Agriculture, 1947 Act.

The regions at a glance

Region (city)	Rainfall (mm/yr)	Deficit (mm/yr)	Temperature (°C)
Western Cape (Worcester)	440	988	18.0
Northern Cape (Upington)	210	2,021	21.5
Eastern Cape (Gqeberha)	466	763	18.1
Free State (Bloemfontein)	518	1,215	16.9
KwaZulu-Natal (Pietermaritzburg)	892	295	17.5
North West (Mahikeng)	529	1,236	18.7
Gauteng (Johannesburg)	731	772	15.4
Mpumalanga (Mbombela)	873	445	19.5
Limpopo (Polokwane)	606	948	18.0

How to read the figures

Each figure refers to a source with a confidence level. A: Official statistics or international database (World Bank, FAO, South African public bodies (Stats SA, Department of Agriculture, revenue service SARS)). B: Research institute, laboratory or public body outside statistics. C: Manufacturer statement, website, press or estimate. The sources are listed in Annex A of the dossier.

Extra production per 10,000 ha treated

Crop	Average yield (t/ha)	Cautious (t)	Central (t)	High (t)
Maize	4.87	2,084	4,168	8,335
Soybean	1.61	454	908	1,815

Trade

- **First products exported.** Maize (corn), grapes and oranges, out of $13,192 million of agricultural exports in 2024.
- **Main imports.** Wheat, palm oil and spirits; rice weighs $641 million, out of $7,141 million of agricultural imports.

Full dossier: 24 pages, with the sources (Annex A) and the calculation method (Annex B). Green Solutions · contact@green-solutions-group.com · green-solutions-group.com