HASS AVOCADO BOARD

2025

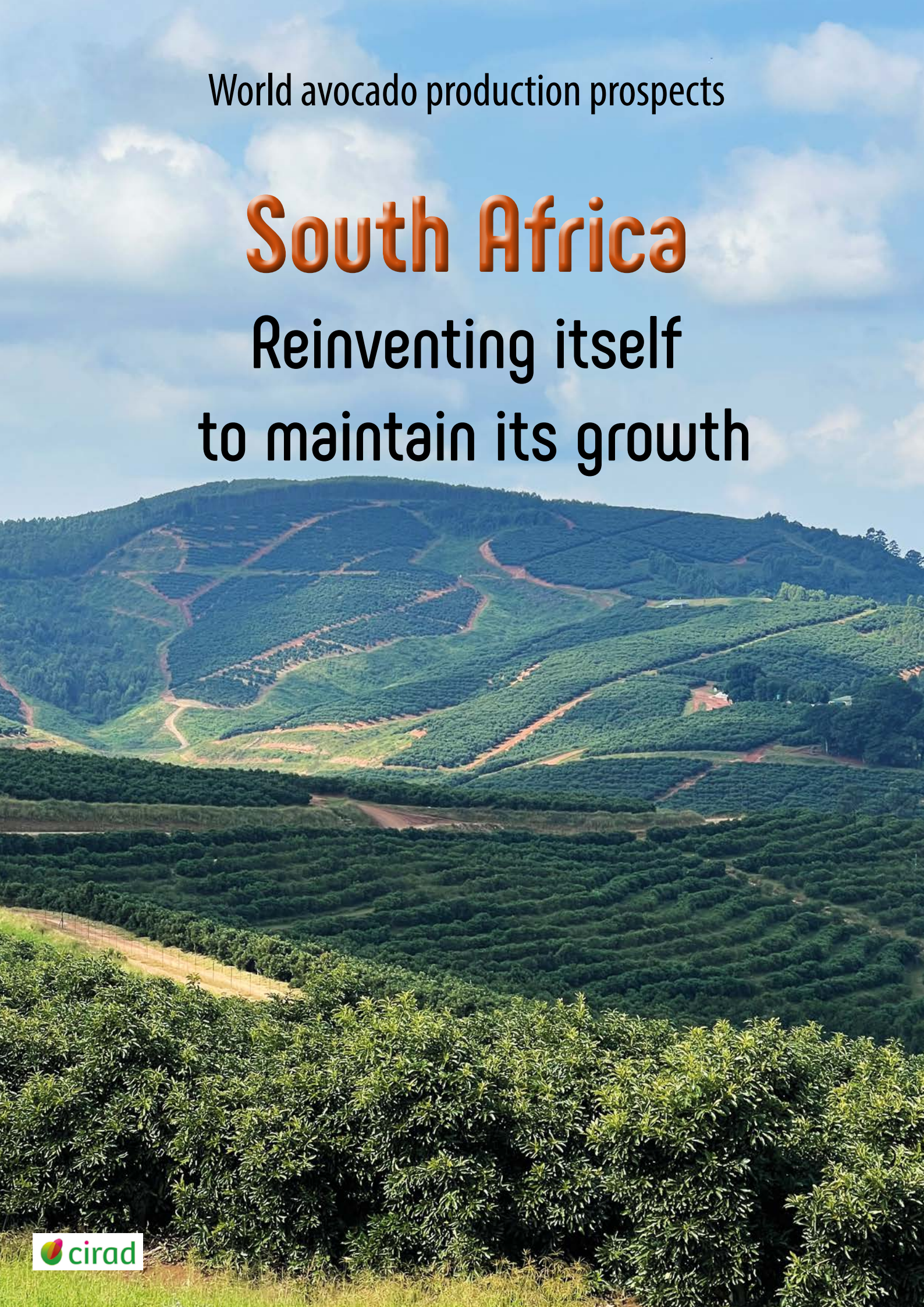
Country Profile: South Africa

Producer country profile produced by *CIRAD, The Centre De Cooperation International En Recherche Agronomique Pour Le Développement.*

World avocado production prospects

South Africa

Reinventing itself to maintain its growth



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The avocado in South Africa

South Africa remains a dominant player in the world avocado trade, having been among the founder countries back in the 1960s. Many major innovations, still benchmarks in *Phytophthora* management and post-harvesting to mention just a couple of domains, were developed there, and its industry's experience and technical expertise are still recognised to this day. The cultivation area now stands at over 20 000 ha, concentrated mainly in the wet, cool zones of the Drakensberg and Northern Drakensberg foothills, on the country's eastern seaboard. The export sector, the economic engine of the industry, has faced fierce competition from Peru in recent years on the European Union market, practically the country's sole international outlet. In this tough context the sector is reinventing itself by upping its efforts to break onto new markets, and by altering its trading and even production window, via structural changes.

History

A pioneering export origin, right at the cutting edge in technical terms, facing a new, highly competitive context

There are few records about the introduction of the avocado to South Africa. The most common theory set out in the literature states that Dutch colonists imported the first West Indies race plants from the Dutch West Indies or other colonies in the late 18th Century. Another theory suggests an earlier introduction, by Portuguese sailors.

Cultivation of this fruit was fairly common among banana, mango and papaya growers on the coasts of Natal and the low-altitude plains of Transvaal, but until 1925 was based solely on West Indies race trees obtained by germination. 1925 marked a turning point, with the introduction from California of grafted plants of improved varieties, including Fuerte, by the South African Department of Agriculture. After evaluation during the 1930s on the Nelspruit trial station, some initial commercial plantations began to be set up, mainly in the Lowveld mountainous regions of Transvaal (Westfalia Estate near Tzaneen by H. Merensky, Hugh Lanion Hall at Mataffin near Nelspruit). However, the crop remained in its infancy in the early 1950s: an article estimates the cultivation area at 3 255 "morgens", 90 % concentrated in north-eastern Transvaal, i.e. less than 3 000 ha with very low-density planting (under 100 trees/ ha).

Nonetheless, a small export flow, first by air then by sea, had already started up to the United Kingdom, with which the then Union of South Africa maintained a special relationship, as a dominion of the British Crown. Incidentally, we should note that the fruit export activity was one of the cornerstones of South African arboriculture. From the early 17th Century, citrus plantations were developed by the first colonists to supply ships and help sailors combat scurvy, with the first commercial shipments at the very start of the 20th Century.

It was during the 1960s that the South African avocado cultivation area started to really take off. The African form of greening, known in the country since the 1920s as "yellow branch disease", devastated the wet citrus-growing zones (above 700 m in altitude). More than a third of the country's cultivation area was infected, with the production centres of Tzaneen, White River, Brondal, Shagen, western Nelspruit and Rustenburg practically wiped off the map. Some of the growers from these regions opted to switch to avocado production (especially Fuerte and Edranol, and to a lesser extent Collinson and Ryan), well-suited to the local climate conditions. The cultivation area doubled in the 1960s.

South Africa in a few figures:

- **Population:** 63.2 million in 2023 (source World Bank)
- **GDP/capita:** US$6,023/year (source World Bank - 2023)
- **Agriculture:** 2.6 % of GDP (source StatSA - 2023)
- **Value of agricultural exports:** US$13.7 billion (source ITC - 2023)

Main agricultural export products: (source ITC - 2024)

- **Citrus:** US$1,809 million
- **Grape:** US$1,017 million
- **Apple:** US$577 million
- **Avocado:** US$2,05 million
- **Macadamia:** US$160 million
- **Blueberry:** US$154 million

In the face of this production surge and growing competition in Europe, South African growers decided to team up to develop the export industry to Europe. The Avocado Growers Export Coordinating Committee was founded in 1967, and became the South African Avocado Growers Association in 1971. The 1970s saw exports take off from approximately 1 500 t to 10 000 t, and the cultivation area continue its lighting expansion. In 1976, SAAGA set up its technical committee, which soon proved itself very useful.

While the 1980s was again characterised by cultivation area expansion, several major technical challenges appeared. There was such a boom in the infestation of the cultivation area by *Phytophthora* that it threatened the very existence of the industry. Furthermore, post-harvest quality problems became extremely numerous, with South Africa the first to face post-harvest constraints due to avocado transport over a long period. In both cases, South African research, especially in the private sector with Westfalia Technological Service, pioneered the development of ground-breaking technical solutions subsequently adopted by the whole world, and still in use to this day (injecting fosetyl and tolerant/resistant rootstocks to manage *Phytophthora*; developing refrigeration and controlled atmosphere techniques for optimal preservation).

Surface areas maintained significant expansion until the early 2000s (approximately 12 800 ha surveyed in 2002), and then stopped because of much tougher market conditions in Europe, with the emergence of the Peruvian competition. In this context, producers focused on developing the local market. After a period of relative stability, the South African cultivation area started swelling again from 2017-2018, with an annual planting rate of around 800 ha in recent years. The boom in Peruvian volumes entering the European Union, still practically the sole outlet for South African exports, forced the industry to make a strategic turn by altering its trading calendar, and seeking to further expand its market portfolio.

According to the latest national survey, South Africa has an avocado planted area of over 20 000 ha. Its exports of approximately 80 000 t put the country in seventh place in the 2024 international trade ranking. The 360 growers surveyed in 2023 employed approximately 11 500 people (permanent and temporary), generating major economic and social externalities in often deprived rural zones, and in a country where unemployment levels are among the highest in the world, particularly for young people (32 % of the active population, and 45 % of 15-34 year-olds).

Production zones

Particularities due to the climate and infrastructures

On the wet Northern Drakensberg foothills, over a wide latitude segment

According to the latest survey, from 2024, the South African cultivation area covered just over 20 000 ha, putting it in the world's top five in terms of surface area, behind Mexico, Peru, Colombia and Chile. It is primarily concentrated in four major regions, in the south (Western Cape) and over the whole of the eastern seaboard, from KwaZulu-Natal in the south to Limpopo in the north, via Mpumalanga: the latter two being historical production regions responsible for three-quarters of surface areas between them. Approximately 200 ha have also been planted in Eastern Cape. The Drakensberg mountain chain, which runs along the eastern coast around a hundred kilometres inland, shapes the climate by halting the wet air coming in from the Indian Ocean. Hence while the country's eastern seaboard has a good to very good rainfall level, the vast majority of the land situated to the west is very dry.

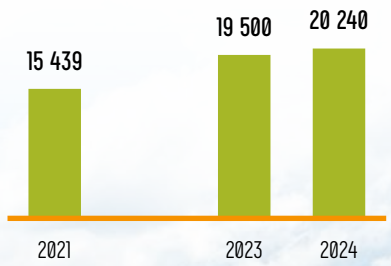
Latitude also plays an important part, with the climate ranging from Mediterranean in the south to tropical in the north. Hence from KwaZulu-Natal northwards, Hass type avocado is practically systematically planted in the midlands, at an altitude of between 600 and 1 400 m depending on the regions. This helps mitigate the very high temperatures on the plains ("Middleveld", located between the warm zones of the "Lowveld" and the high altitude zones of the "extreme Highveld"). This climate diversity, which is increasingly being harnessed, means that the country is able to expand its production window.

The relief and clash of masses of warm, humid from the east (Agulhas) with the cool, dry air from the west (Benguela) makes this part of the world fairly exposed to the risk of convective storms, and especially hail, particularly along the Drakensberg Mountains. As sailors who have passed through the Roaring 40s and Howling 50s will be aware, the anti-trade winds between the tip of South Africa and the South Pole are also particularly powerful, with little relief to mitigate them in the middle southern latitudes, unlike in the Northern Hemisphere. So the wind is a structuring variable to consider in this country, with Cape Town actually among the most frequently windy cities in the world.

Weakness of certain infrastructures and significant insecurity in some zones

Besides these climate characteristics, there are also other factors to consider, relating to the infrastructures. While the road network is decent to good, the port and electrical infrastructures are insufficient because of a lack of investment and misuse of funds allocated to the national corporations operating these services (TRANSNET for the ports and rail transport, and ESKOM for electricity). There are frequent ship loading delays, especially since the wind often complicates crane operations. In addition, there are frequent power outages or load shedding operations (a record at nearly 6 700 hours in 2023), driving many of the companies to resort to their own power generation systems (genset, or very often solar power). The situation has improved since then. Finally, in social terms, insecurity is forcing operators to make costly investments to protect their orchards or other facilities (fencing, sometimes electrified).

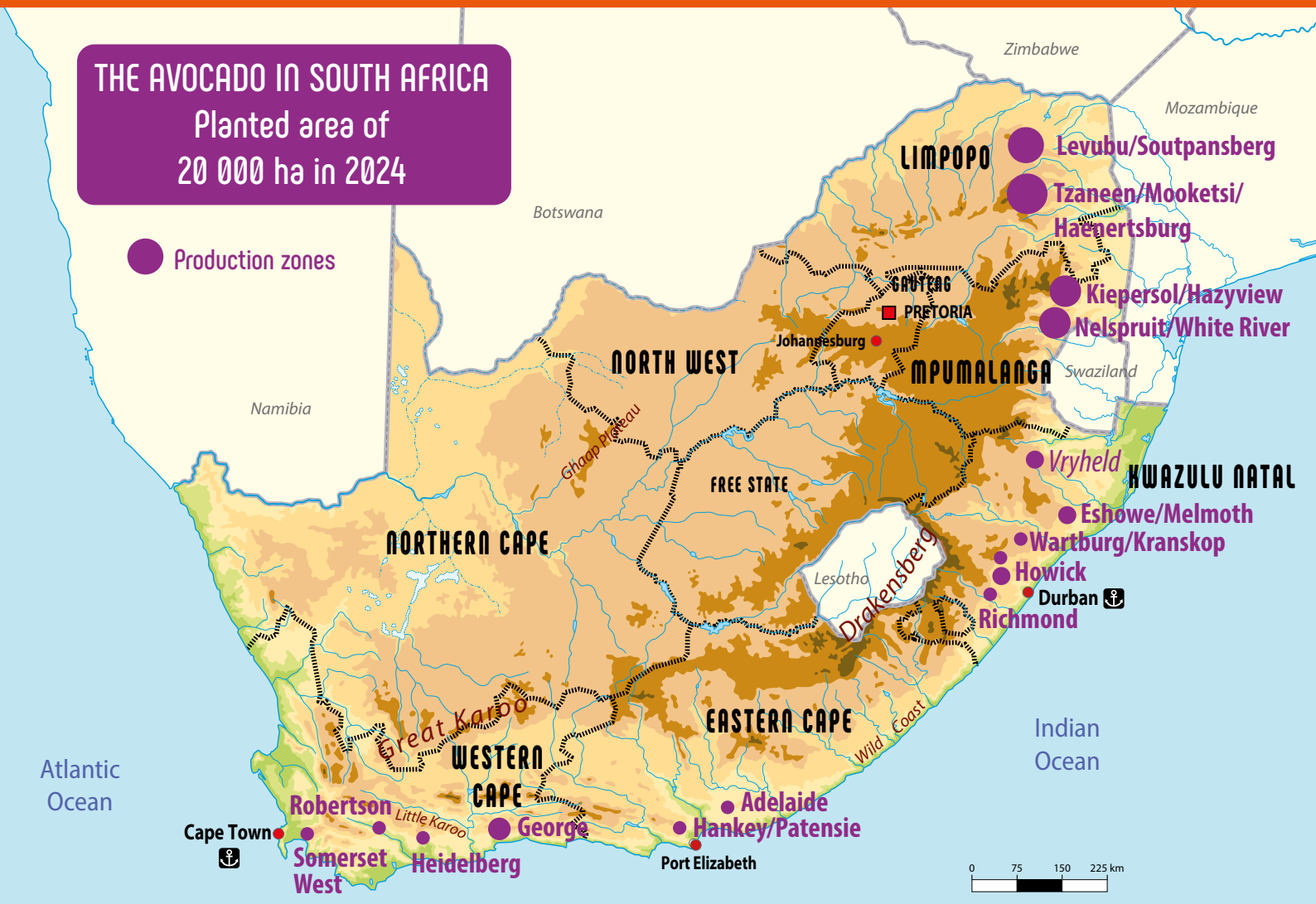
Avocado - South Africa - Cultivation area
(in hectares | source: SAAGA)



AVOCADO – SOUTH AFRICA
PLANTED AREAS

Regions	Hectares in 2024
Limpopo, of which	10 743
Letaba	8 965
Levubu/Soutpansberg	1 513
Mpumalanga, of which	3 925
Nelspruit/White river	2 057
Hazyview/Kierpersol	1 687
KwaZulu-Natal	3 429
Western Cape*	972
Eastern Cape	171
Uncounted orchards (estimate)	1 000
Total	**20 240**

* Western Cape: 1 400 ha according to professional sources |
Source: SAAGA



Western Cape

A recent production centre, and technically demanding, but with a very appealing deferred production calendar

A still very modest centre, though progressing

Its cultivation area, still recent and covering only about 1 400 ha, is concentrated mainly around George, situated approximately 400 km east of Cape Town. The plantations were set up near the coast, on rolling terrain marking the foothills of the Outeniqua Mountains. The avocado is not a traditional crop in this region, historically focused on dairy and vegetable farming (barely 140 ha of avocado orchards in 2014). However, this cool southern zone has a late production window, barely covered by the country's historic avocado centres, which is particularly useful both for exports and the local market. Furthermore, the dairy sector's steep decline over the past decade, suffering stiff competition from imports and more recently the winegrowing crisis, has freed up land possessing water resources. Expansion of the cultivation zone is reported to be around 200 to 300 ha per year, starting to move westward from the George centre (between Robertson and Heidelberg, under similar conditions of proximity to the coast and the Langeberg foothills, which extend from the Outequina Mountains).

Tough cropping conditions

The pedoclimatic conditions require good technical expertise. The topography, with its gentle relief, is fairly straightforward. However, the acidic soils are generally shallow and fairly heavy, and of highly varied types even within the same plot. Some of them are saline-sodic. This part of Western Cape has a suitable climate, temperate without a dry season, and with hot summers (cfb). The winters are mild (average minimum around 7°C), and the summers temperate (average maximum 26°C). However, very occasional heatwaves are possible in summer (above 35°C). In addition, the rainfall is relatively low (600 to 700 mm on average in recent years), but is fairly regular throughout the year, with a slight dip from May to July. Furthermore, it is a windy region, with a strong current from the south in summer, and the northwest in winter. Severe climatic accidents remain infrequent, though a few have occurred in recent years.

A generally high-flying production system

The plantations are generally small (20 to 30 ha) or medium-sized (around a hundred hectares). The Hass and Hass Like varieties (Gem and Lamb Hass) make up the bulk of the plantings. In response to the pedoclimatic constraints, the production system is generally very high-tech. It is advisable to precisely map out the highly varied soil types prior to planting, so as to be able to tailor the cropping practices. Planting is carried out after liming, on high ridges, in order to improve the rooting depth. Pruning mulch is reincorporated to improve the soil's properties. The rootstock used is generally Dusa, for its salinity tolerance. The average density is 6 m x 4 m. The irrigation system is designed to ensure optimal water resource savings (low-pressure micro-spraying system, with a sensor to adjust the dose to requirements). Around 3 000 to 5 000 m^3 per year of water is required, often drawn from reservoirs on the plantation, or public dams (especially Wolvedans). Windbreaks are often installed, with natural Casuarina-based systems often replaced by artificial barriers. This pioneering zone, with its crop diversity, enjoys a low sanitary pressure. Phytophthora is still scarce. Some Sunblotch problems have been reported. Sucking insects are the main pests.

This high-tech production system provides good results in terms of yield, with averages of over 15 t/ha for Hass. Regarding the post-harvest, the fruit from this zone exhibits renowned conservability. The packout is around 65 to 70 %. There are several packhouses in place, though none specialised in the avocado. The vast majority of the fruit is aimed at the international market. Exports are shipped via the port of Cape Town, approximately 400 km away.

Strengths:

- Very late production calendar.
- Very good yields.
- Very good technical expertise.
- Few sanitary problems, as a recent zone.

Challenges:

- Difficult and varied soils.
- Water resource.
- Winds.
- Major investment needed (cutting-edge system).

KwaZulu-Natal

Avocado cultivation is making distinct progress, boosted by the appeal of a late production calendar, still inexpensive land and good water availability. Nonetheless, the cool, windy climate is a factor to take into account.

A surge that is definitely far from over

The avocado region is situated in the Kwazulu-Natal Midlands, just one hundred kilometres or so from the ocean. This rolling zone, in the foothills of the Great Escarpment leading up to the Drakensberg Mountains, marks the break from the coastal plain. The first commercial Hass plantations were set up in the region in the mid-1980s. However, it is only really in the last few years that the cultivation area has made big progress. The 3 400 ha surveyed in 2024 are concentrated around Pietermaritzburg (Richmond, Howick, Wartburg), further north around Eshowe/Melmoth and Vryheid, and then finally further south in the recently developed zone of Ixopo and Harding.

Surface areas are continuing to expand rapidly, with in particular the very recent arrival of agri-business players with big financial resources and a vast land capital, which have branched out into avocado production (the sugar giant UCL branched out from this regional flagship crop to set up an ultra-modern packhouse – there have also been trials by timber industry companies, dominant in the high-altitude zones). Just as in Western Cape, the main asset of these medium-altitude zones (approximately 900 to 1 400 m) lies in their production calendar deferred into the late season, compared to the major centres in the north. Furthermore, there is good land availability in these zones, also affected by the dairy sector crisis, and prices remain fairly attractive.

Favourable pedoclimatic conditions, but climate incidents to be wary of

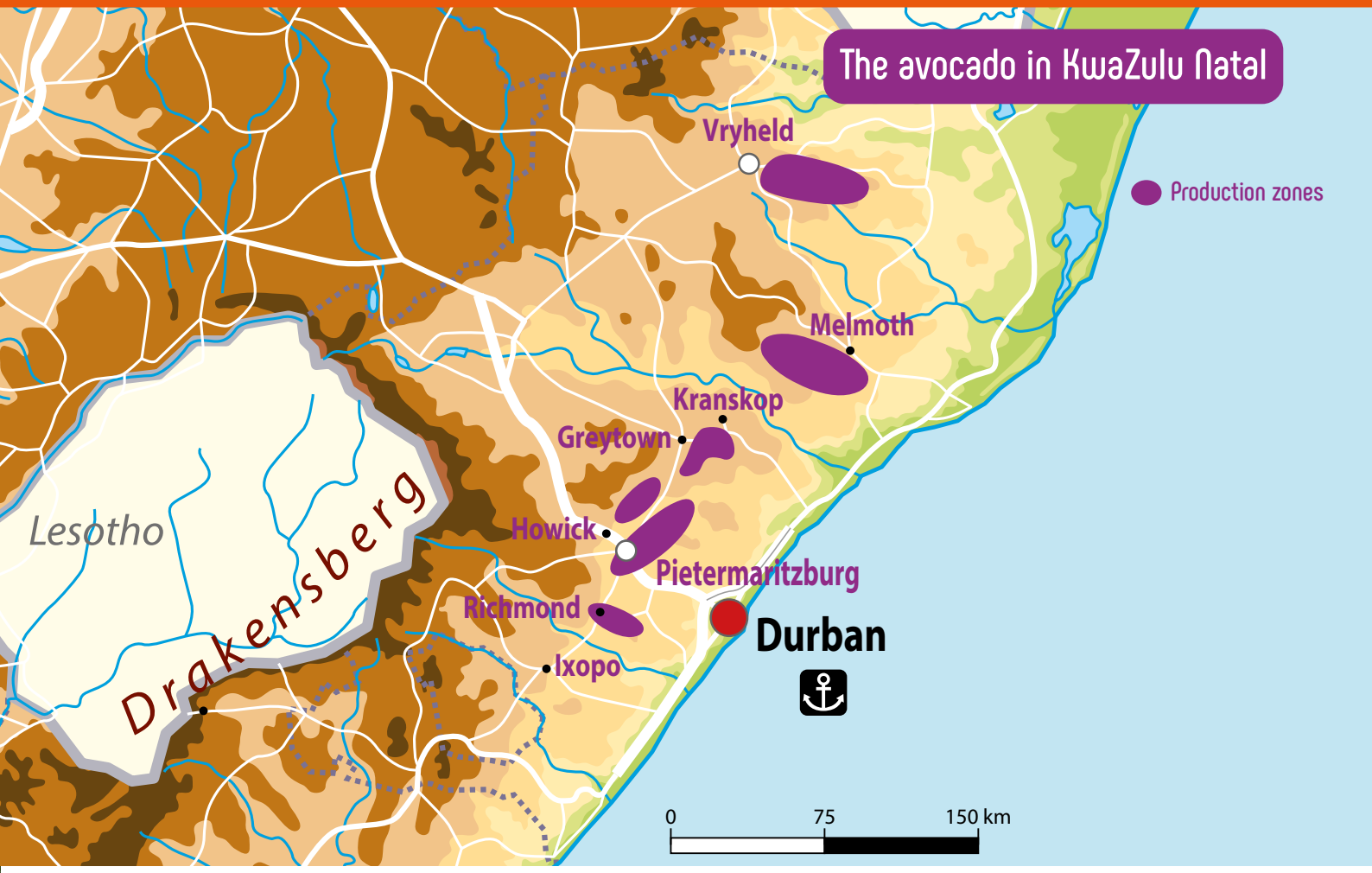
The region's cool subtropical climate is governed by its relatively low latitude (29° South), the oceanic influence and finally the relief, with the Drakensberg chain soaring up to 3 500 m acting as a barrier against the wet currents from the Indian Ocean. Just as on the coast, the summers are hot and wet (average maximum 28°C from September to March/April, with spikes over 35°C). Conversely, the winters are cold and dry (average minimum around 4 to 5° C, with sometimes some light frosts in the low-lying areas). The annual rainfall level is fairly good, at around 800 to 1 100 mm, with numerous rivers sometimes equipped with dams providing good water reserves. The region is among the most at-risk in terms of hail storms, especially from mid-November to February. It is also very windy, particularly from September to November. The soils are generally ferralitic, deep and fairly well-drained.

Strengths:

- Late production calendar.
- Production costs.
- Affordable land prices.

Challenges:

- Low packout.
- Winds.
- Hail risk.



A fairly simple, yet efficient production system

The plantations are generally set up in zones with fairly gentle slopes. The relatively heavy soils and high summer rainfall make it necessary to create high ridges. The rootstocks used are mainly Dusa, and more recently Bounty, for its adaptability to tougher soils, and to a lesser degree to the cold. The density is generally 8 m x 4 m. Hass and Hass Like account for three-quarters of planted surface areas, with Hass ultra-dominant, though Hass Like varieties are on the up (Gem and Lamb Hass). The main green varieties planted, often in the colder low-lying areas, are Fuerte, Pinkerton and Ryan.

A large proportion of the orchards is irrigated (micro-sprinklers to preserve a root system that grows extensively during the long rainy period), but not all. The irrigation period is around three months (typically from June to August), with an occasional make-up supply during the key phenological periods. Growers generally have their own reservoir. Fertigation is not widespread, but it is on the up. Weeding is generally manual, and sometimes mechanical. Particular attention is paid to pollination in this windy and rainy zone, in particular with the installation of beehives, and maintenance of controlled grassing. The latter factor also contributes to integrated pest management, with pest populations still relatively low (generally one insecticide treatment per year). Disease problems are limited.

Phytophthora remains a major fear in this zone with its hot, wet summers and heavy soils. Treatments are still limited given the young age of the stock. Some plantations are equipped with frost prevention systems. Conversely, windbreaks are rarely installed, despite the magnitude of the problem for topographical reasons.

The yields of course depend on the production system used, but are more or less average (around 12 to 15 t/ha for Hass for growers with good technical expertise). The production calendar depends on the altitude, but is late. The harvest generally starts in mid-July, and ends in late October. There are several medium-sized packhouses in the region, as well as one very recent large packhouse. The packout is fairly low because of wind-induced aesthetic flaws (around 50 %). Exports are shipped mainly via the port of Cape Town, and to a lesser extent from the port of Durban.

Mpumalanga

A historical development region for the crop, Mpumalanga is now the country's number two production centre, a long way behind Limpopo. The cultivation conditions and technical expertise of the growers are solid, providing good yields, particularly in the Kiepersol zone. However, its trading activity and cultivation area expansion are being held back by its export window's direct clash with the middle of the Peruvian season.

A historical production centre

Mpumalanga is one of South Africa's main agricultural regions, especially for cereal farming in the Highveld zones (soya, sorghum, maize), as well as sugar cane and fruits (citruses, tropical fruits) in the Lowveld zones. It was among the pioneering production centres for the avocado. As a reminder, the first enhanced variety plants imported from California were evaluated at the Nelspruit trial station, and one of the country's first commercial plantations, HL Hall & Sons, was set up near Nelspruit in Mataffin in the 1930s. Just as in KwaZulu-Natal, the avocado zone, covering an estimated 4 000 ha, is situated in the Lowveld, in the foothills of the Great Escarpment. There are two main centres: Kiepersol/Hazyview, which is dominant in terms of the Hass variety, and the Nelspruit/White River centre. Despite good agronomic potential, surface areas are exhibiting a stagnant trend. The Hass harvesting period, running from early April to late June, is very tough in commercial terms on the key European market, because of the Peruvian supply pressure peak.

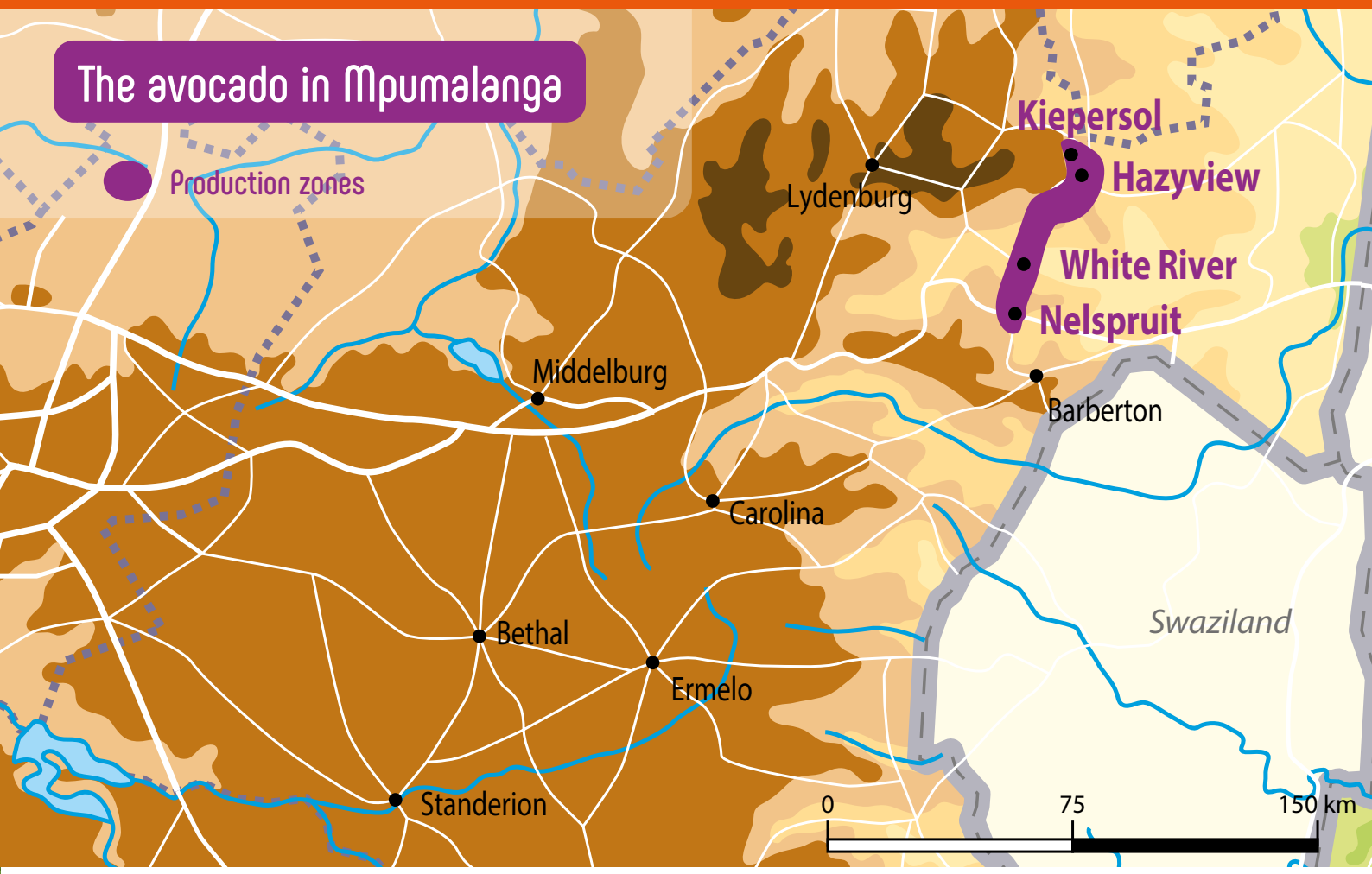
Strengths:

- Solid yield and packout.
- Production cost.
- Generally good technical expertise.

Challenges:

- Sanitary pressure.
- Very difficult production calendar.
- Risk of hail.
- Need to replant some of the cultivation area.
- Winds.

The avocado in Mpumalanga



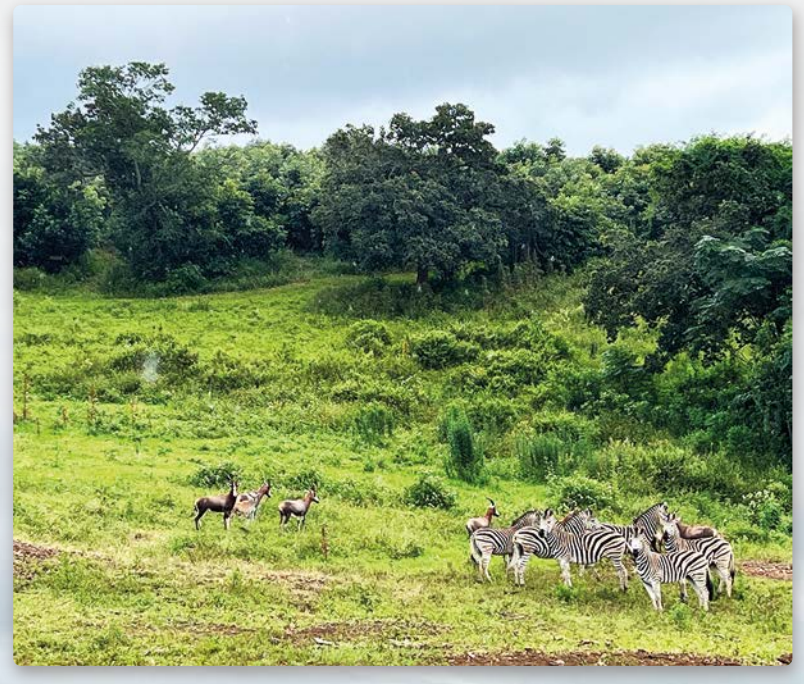
Very good cultivation conditions, particularly in the high-altitude zones

The pedoclimatic conditions are well-suited to Hass production on a fairly narrow altitude band between 700 and 900 m. It has a wet subtropical climate, with hot summers (average maximum 26°C to 28°C from September to march), which packs in most of the annual rainfall (around 900 to 1 000 mm in the Kiepersol zone, and 600 to 800 mm in the Nelspruit zone). The winters are mild (average minimum 9°C to 14°C), and frosts are quite rare in this altitude band. Conversely, the zone is among the most exposed to hail in the country. It is also very windy, particularly in high-altitude zones. Most soils are deep, well-drained and with a low clay content.

Good yield levels, in both the orchards and packhouses

Generally speaking, growers operate orchards of between 40 and 60 ha, which they cultivate alongside other fruit crops such as macadamia or the banana. They have a very good level of technical expertise.

The oldest plantations are not always set up on ridges. The main rootstocks used are Duke 7 and Bounty. The density is generally 8 m x 4 m. Green varieties (mainly Fuerte and Pinkerton) still represent 35 % of surface areas. Conventional Hass is ultra-dominant within the Hass group (more than 90 % of surface areas). Though Lamb Hass is on the increase, it remains very much a minority cultivar. Irrigation is essential, as the rainfall is a long way short of requirements from May to October. It is generally applied by micro-spraying, with growers generally owning a reservoir and boreholes. The disease pressure is fairly high in this zone, with its hot and very rainy summers. Insecticide treatments are required, although practices aimed at encouraging natural predators are generally implemented. *Phytophthora* and anthracnose are also present, and injection treatments against *Phytophthora* are required. Yield levels are good, with the best growers often achieving an average of 15 t/ha. The packout is around 65 to 75 %.

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Limpopo

A major horticultural region and historical development region for the South African avocado industry, Limpopo is still on top in terms of cultivation area and production. The expansion dynamic remains strong in some zones, with the diversity of climate conditions ensuring great agility in terms of the production window.

Great climate variability, with a wide trading window

Limpopo, the country's northernmost province, is also one of the hottest and driest on the eastern seaboard. While the region is mostly set in arid zones under the Köppen classification, it nevertheless remains one of South Africa's main agricultural production centres, thanks to the microclimates present in some parts of its territory. Limpopo in particular plays a key role in supplying fruits, vegetables and meat to the neighbouring province of Gauteng, which on its own packs in nearly a quarter of the country's population (including Johannesburg). A pioneer in commercial avocado production in the 1930s with the "Westfalia Estate", Limpopo is still the country's number one centre, with nearly 11 000 ha of avocado, i.e. just over half of total surface areas.

The zones fit for production of this crop are concentrated in wet, cooler areas situated near or on reliefs (the last northern foothills of the Drakensberg and Soutspanberg Mountains). The climate is wet subtropical or oceanic (Cwa or Cwb), with temperate to cool, dry winters (less than 5 % annual rainfall) and with wet and hot to very hot summers. These production centres are fairly windy, and subject to significant risks of violent hail storms. There are two distinct main zones:

- The early production calendar region of **Levubu**, situated in the very north of the province in the fertile valley of the same name, which runs along the south of the Soutspanberg Mountains on an east-west axis, had approximately 1 400 ha in 2024. The plantations are located at an altitude of around 700 to 800 m. The rainfall is around 1 000 mm and the average maximum temperature 29°C, with frequent spikes above 35°C from October to March. Winters are never frosty. Green varieties are still abundant in this production centre

- The **Letaba** region, situated further south, near the town of Tzaneen in the last foothills of the Northern Drakensberg Mountains, is the country's main production centre. It had an estimated surface area of 8 600 ha in 2024, very roughly divided into three main centres. Each of these has very different climate characteristics, with the average temperature varying greatly according to the altitude, ranging from 700 to 1 400 m. The rainfall too differs greatly with this same factor, and with exposure to the wet currents from the east. So the production calendar can range from early to fairly late. Thanks to this asset, which can be extended by intelligent selection of early or late Hass Like cultivars, a considerable planting dynamic has been maintained.

Strengths:

- Production cost.
- Generally good technical expertise.
- Extended production calendar.

Challenges:

- Sanitary pressure.
- Hail risk.
- Need to replant some of the cultivation area.
- Winds.

The region around Mooketsi, which is located on the plain at an altitude of approximately 500 to 600 m, north-west of the city of Tzaneen, is the hottest and driest (dry subtropical climate Cwa, to semi-arid Bsh). The winters are mild and never frosty (average winter low of 9°C to 12°C and 3°C as an extreme) and the summers very hot (average 28°C to 30°C, with frequent spikes above 35°C). The average annual rainfall is around 500 to 700 mm. The soils are generally sandy-loamy.

Conversely, the mountainous zone surrounding the town of Tzaneen from north to south on the west side, is the coolest and wettest. The plantations are located at altitudes of between 1 000 and 1 400 m. The rainfall is around 1 000 to 1 200 mm. The average maximum summer temperatures are 25°C, with possible frosty spells in winter. The most significant production centres are Agatha in the south, Politsi and Magoebaskloof in the west and Modjadjiskloof in the north-west. Some plantations can have significant dips. Unlike on the plain, the soils are mainly clay-loam. The Morebeng/Soekmekaar centre, also situated at altitude (1 100 to 1 200 m) but north of Mooketsi, is relatively cool, but a bit less wet than Tzaneen. The soils are also mainly clay-loam.

The Tzaneen/Letaba centre is situated in the intermediate altitude band, with climate conditions that are also intermediate.

The avocado in Limpopo

Mainly large plantations, with varied technical level

The production structure is highly diversified. There are two big producers with over one thousand hectares (Westfalia, ZZ2), which between the two of them account for a quarter of total surface areas. The majority of the province's cultivation area is situated on plantations of between 80 and 200 ha, with some medium-sized family farms of 20 to 40 ha also present. The production system is highly diversified: there are very old, low-density and low-tech plantations alongside young, high-tech orchards.

Irrigation is mandatory throughout the dry period. The systems in place are generally micro-sprinklers, though some operators are switching to drip fertigation systems. The requirements are around 5 500 m3/ha/year in the Tzaneen zone. The water comes from private dams, the Tzaneen dam or boreholes. The water resources can be limited at times, and there are some salinity problems in the low-lying very hot zones, where salt-tolerant rootstocks are employed.

There is a considerable prevalence of phytosanitary problems in this region of hot, wet summers. *Phytophthora* is abundant, making phosphonate injections essential (generally twice a year). The majority of new plantings are on ridges and *Phytophthora* tolerant rootstocks are used. There is active fungal disease management in place, with two or three copper treatments per year. Insects also have a fairly big presence in these hot zones where the diapause is limited (sucking insects such as the coconut bug *Pseudotheraptus* wayi or avocado bug *Taylorilygus* sp), as well as thrips.

The production calendar is extremely wide. Hass harvesting can start in early March in the hottest zones, and not until mid-April at the highest altitudes. The fruit can be kept on the trees until September in the high-altitude zones. The average packout is around 70 % in the Letaba zone, and 75 % in the Levubu zone (mainly problems caused by winds, sun scalding and insects).

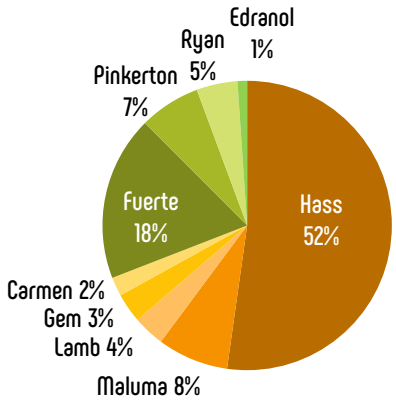
Production calendar

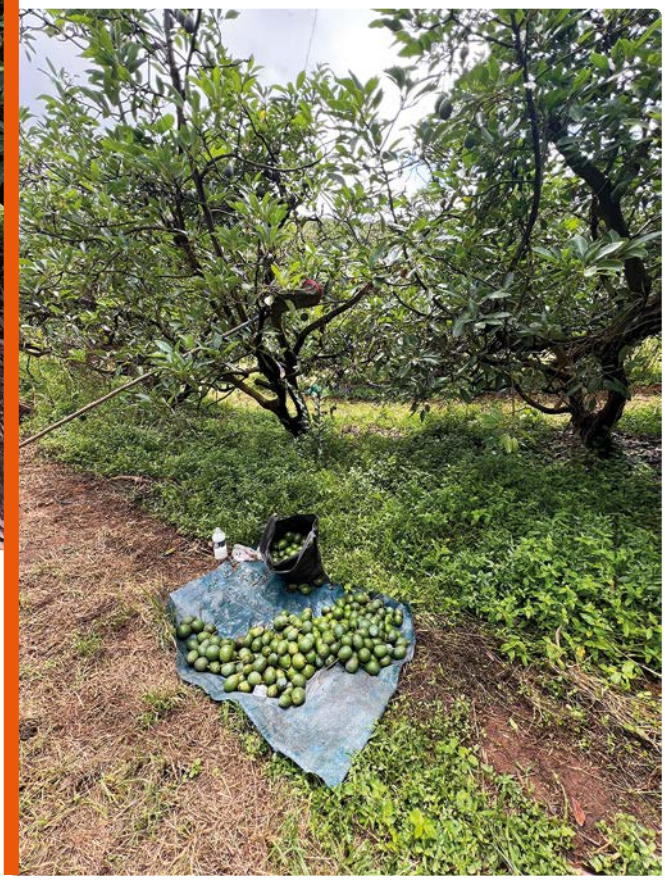
A long and constantly expanding season

Hass avocado – South Africa – Production calendar

Regions	J	F	M	A	M	J	J	A	S	O	N	D
Western Cape												
KwaZulu-Natal												
Mpumalanga												
Limpopo – Low												
Limpopo – High												

Avocado - South Africa
Stock breakdown by variety in 2024
(data on 83 % of areas | source: SAAGA)

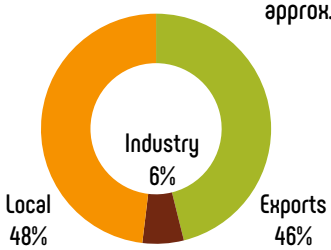




Outlets

A developing local market, though exports remain the most lucrative outlet

Avocado - South Africa
Production distribution
approx. 150 000 t
(source: SAAGA 2022-23)



Exports are on a roughly equal footing in terms of volumes with local fresh sales. Nonetheless, the international outlet is far ahead in terms of economic returns. While South Africa has over 63 million inhabitants, the purchasing power of a very large proportion of the population remains very limiting (average GDP per capita just $6 000 in 2023). Furthermore, this average hides great disparities. According to a study published in 2024 by University of Cape Town (UCT), two-thirds of the population lived in households with a monthly income of less than 8 000 rands (i.e. under 400 euros).

Nonetheless, the local market has developed considerably since the early 2000s, with volumes placed going from approximately 40 000 t per year to over 70 000 t in 2022 and 2023 (i.e. nearly 50 % of total production). If we assume an import level of around 4 000 to 5 000 t, mainly during the counter-season period, the consumption of the country's 63 million inhabitants would be around 1.2 kg/capita/year.

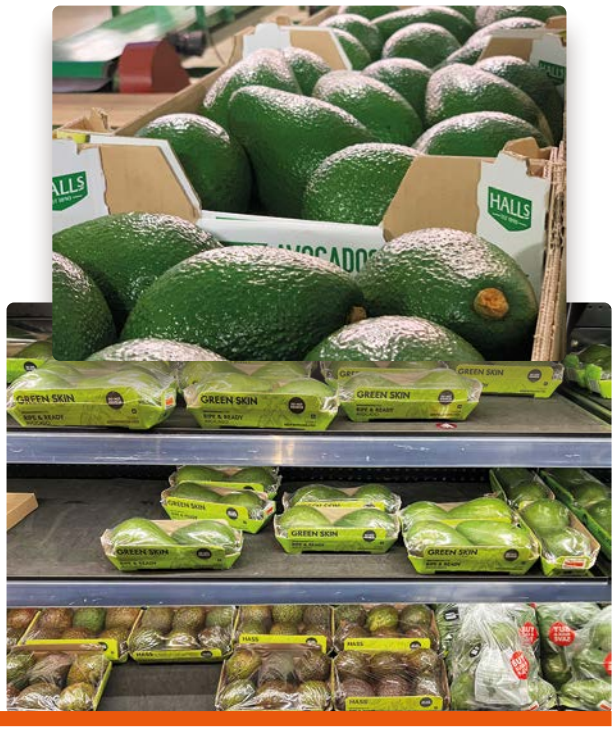
There are three main active local market segments. Sales to the national wholesale markets, created in 1967 to facilitate access to the smallholder market, reportedly make up 45 % of total volumes. The four biggest of the fourteen present in the country are Johannesburg (hugely dominant), Pretoria, Cape Town and Durban.

Direct sales to the supermarket sector are reported to represent approximately 30 % of volumes placed. The top four in the sector are Shoprite, Pick n Pay, Spar and Woolworths. The segmentation of these chains is generally based on several references: ready-to-eat (punnet of 2, 4 or 6 fruits), entry-level packed fruit (generally in 1 kg plastic bags) and loose. The green varieties are still predominant, though Hass is on the up, especially with the growth in the ready-to-eat segment.

Finally, sales in the informal sector are estimated at just under 30 % of volumes. On this segment, the fruit, packed in 15 kg bags, is sold by "bakkies", usually selling to street vendors.

There is also a well-developed and diversified processing industry, which takes in approximately 10 000 to 15 000 t/year. Manufacture of pulp and guacamole is reportedly the most developed industrial outlet, with in particular at least three HPP units in place in the country (Avolands, Westfalia, SAHPP). These facilities only accept large fruits. There are a host of oil-making factories operating in the big producer provinces (Westfalia, Da Gama, Specoil, etc.).

At present, none of these market segments can rival exports in terms of economic returns.

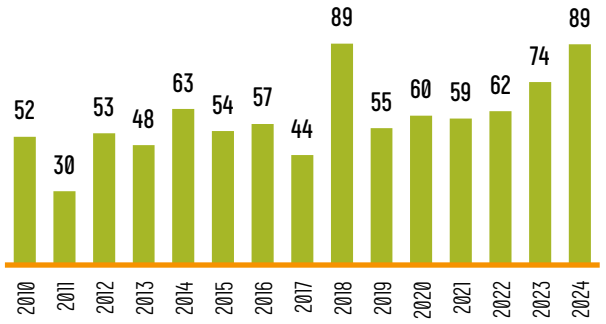


Exports

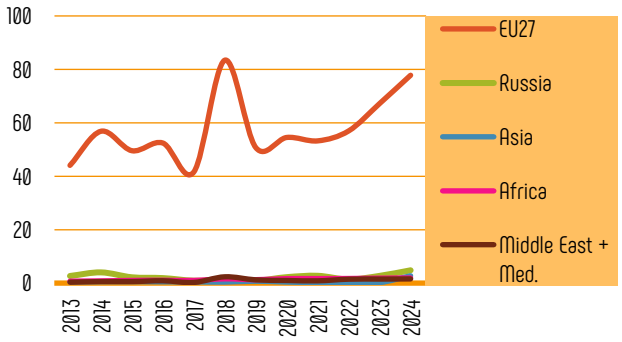
A strategic turn, in the face of the boom by the Peruvian competition

The export sector forms the backbone of South African fruit growing. South Africa was the founding origin of the world counter-season avocado trade, during the 1970s developing a large-scale export activity, based on the British and then European markets. The South African industry was also a pioneer in developing ground-breaking techniques, enabling optimal conservation of the avocado for long periods, with in particular nitrogen and calcium management in the orchards, and at the post-harvest and container transport level, temperature control, controlled atmosphere and the use of ethylene absorbers.

Avocado - South Africa - Exports (all varieties)
(in 000 tonnes | sources: Comext, South African Customs)



Avocado - South Africa - Exports by destination
all varieties (in 000 tonnes | sources: Comext, South African Customs)



South African exports reached 89 000 t in 2024, making it the world no. 7 exporter. They have registered a distinct growth in recent seasons, due to the large-scale planting trend initiated in 2017-2018, and still ongoing. More than 90 % is still aimed at the EU27+UK. However, the boom in the Peruvian competition at the start of the new millennium has radically changed the hand. After losing their position as counter-season market leaders in the late 2000s, South African exporters have had to make a strategic turn in the last few seasons to cope with the price collapse registered since 2020 in Europe. On the one hand, the export calendar has been profoundly altered to avoid the period from June to August, when the Peruvian supply is at its peak. On the other hand, efforts to seek alternative markets have been stepped up. In 2024 they led to the opening up of Japan's borders to the South African Hass, subject to a 19-day 2°C cold treatment; while China's borders impose a much more limiting insect elimination protocol (fumigation with methyl bromide). Export volumes to these two destinations were very limited during the exploratory 2024 season, albeit in a context of an atypically open European market.

Avocado – South Africa – Exports by destination

in tonnes	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU27	44 073	56 855	49 568	52 441	41 608	83 478	50 749	54 532	53 254	56 984	67 245	77 841
Africa	656	765	941	1 001	937	1 564	1 235	1 633	1 653	1 693	1 813	1 895
Middle East+Med.	362	610	594	900	287	2 365	1 236	1 011	882	1 486	1 522	1 585
Asia	486	548	566	502	474	402	728	401	219	199	213	2 710
Russia	2 678	3 994	2 197	1 902	957	1 243	936	2 247	2 747	1 398	2 716	4 763
Others			0	0	0	40	117	206	196	119	33	4
TOTAL	**48 255**	**62 772**	**53 866**	**56 746**	**44 263**	**89 092**	**55 001**	**60 030**	**58 951**	**61 879**	**73 542**	**88 798**

Sources: Comext, South African Customs

With the commissioning of the port of Chancay in Peru, which further reduces South Africa's comparative advantage in transport time, some exporters have undertaken to develop the Indian market. While South Africa's logistical asset for this destination remains intact, the obstacle of the very high customs duty levied on South African fruits would need to be lifted before the product can even start to be introduced to the market. SAAGA is also working assiduously on opening up the US market, in a political context which has become difficult.

The export sector is supported by a wide based of companies (more than thirty surveyed by SAAGA), though three of them cover approximately 80 % of volumes. Westfalia, one of the founders of the industry, remains the undisputed leader, controlling approximately 50 % of the export supply. Capital Fruit and ZZ2 come next in the rankings. The big exporters generally have a mixed supply model, based both on their own production and that of partner growers. There are generally long-term relationships between growers and exporters, with some exporters rewarding loyalty. Growers generally receive a down payment when the merchandise reaches the destination market, with the remainder settled after the sale.

There is a high certification level, with practically all the professionals holding the main international certifications (95 % of growers certified under Global Gap, HACCP, BRC, LEAF, Tesco Nature's Choice and other common labels), as well as the South African social and environmental sustainability benchmark SIZA. As for all other fruits aimed at the international market, cold chain and minimum quality standards compliance are monitored by an official body, the PPECB. The minimum dry matter content required for export has gone from 23 % to 21 %.

The industry is also at the cutting edge in terms of consumption promotion, running campaigns in the United Kingdom since 1997, and then joining and playing a driving role in the worldwide initiatives conducted by the WAO in Europe.

Logistics

A fairly critical point

Exports are made in controlled-atmosphere refrigerated containers (using ethylene absorbers for markets where the fruit is not ripened on arrival). The fruit is transferred into the containers directly at the packhouse, or at the port.

The port of Cape Town remains the main export point (85 to 90 % of volumes). The fruit is transported by road from the production zones (distance around 1 800 km from Tzaneen and Kiepersol, 1 600 km from Howick and 450 km from George). The road infrastructures are good quality. The road-freight cost was around 4 500 euros per container in early 2025 for shipments from Tzaneen. A small percentage of the fruit is exported via Durban.

Avocado – South Africa – Sea-freight logistics

Port of departure	Port if arrival	Transit time	Lines
Cape Town	Rotterdam	19-23 days	Maersk, MSC
	Algeciras	14-16 days	Maersk
	Shanghai	24-25 days	Maersk, Evergreen, CMA-CGM
	New York	20 days	Maersk, MSC, CMA-CGM
	Osaka	27-30 days	Evergreen
Durban	Mumbai	20-22 days	MSC

The port logistics remain a blemish, with the equipment managed by the national corporation TRANSNET partly obsolete, due to lack of sufficient investment and misuse of public funds. Furthermore, the winds, particularly strong in the south of the country, can delay loading operations. The crisis in the Red Sea, which forced some of the large-scale traffic taking the Suez Canal to be rerouted to the tip of Africa, aggravated congestion. The World Bank's most recent port performance index, presenting the data from 2023, put the port of Cape Town down in 405th position and the port of Durban in 399th, out of the 405 ranked ports.

In this context only a limited number of shipping companies run a service between Cape Town and Europe, with a high and regular frequency (mainly Maersk and MSC). They imposed a "congestion surcharge" in 2024 (total transport cost around $6 000/container). The transport time to Rotterdam is around 19 to 23 days.

Production projection

Growth still vibrant

Data and methodology

The projection proposed in this study is based on the latest SAAGA survey data (2021, 2023 and 2024). It relates solely to the Hass variety (Hass Like, which represents approximately 25 % of total surface areas of Hass and Hass Like, is treated as Hass in our analysis). The simplifying hypothesis used are shown in the table below. Its main features are:

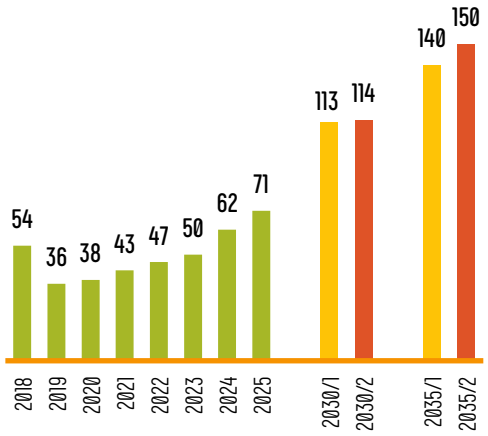
- a smoothed average orchard yield of 12 t/ha at full maturity,
- gradual maturation of the young orchards over 7 years to reach this full potential (with the first two years non-productive),
- an average packout of 66 %, calculated using a figure of 68 % for Mpumalanga and Limpopo, and 60 % for KwaZulu-Natal and Western Cape.

We assumed a stable cultivation area expansion rate of 800 ha per year up to 2026 (80 % Hass plus Hass Like, and 20 % green varieties), in view of the forecasts supplied by ANA. For the post-2026 planting rate, we applied two hypotheses. The first extended the current trend, and the second reckoned on a higher annual rate of 1 200 ha. Of course, the European market, which continues to play a key role in the profitability equation of South African exporters, has become much more difficult with the boom in the Peruvian supply. Nonetheless, we take the view that the South African industry has the ability to continue its expansion at a rate similar to the current 800 ha, or even higher, thanks to the assets at its disposal.

Results

According to our projection, the Hass and Hass Like export potential should be around 113 000 to 114 000 tonnes in 2030 and 130 000 to 140 000 tonnes in 2035, depending on the adopted scenarios.

Avocado - South Africa - Projection of Hass and Hass Like exports according to 2 hypotheses
(in 000 tonnes | source: CIRAD)



Basic hypothesis: average orchard yield of 12 t/ha

Avocado – South Africa – Maturation hypothesis of young orchards
(in % production potential at maturity)

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7
		15 %	30 %	55 %	80 %	100 %

Avocado – South Africa – Estimated surface areas and packout by Region

	Western Cape & Eastern Cape	KwaZulu Natal	Mpumalanga	Limpopo
% of total surface areas in 2024	6 %	18 %	20 %	56 %
Packout	60 %	60 %	68 %	68 %

Cultivation area expansion hypotheses

Hypothesis 1: + 800 ha/year (Hass and Hass like = 80 %)

Hypothesis 2: + 1 200 ha/year (Hass and Hass like = 80%)

Justification of the chosen hypotheses

Competitiveness in the broad sense

South African growers from most of the regions enjoy major relative comparative advantages in terms of cost and availability of certain essential production factors. On the one hand, labour is abundant and the official minimum agricultural wage is low (approximately €250 per month). On the other hand, water is inexpensive and the need for irrigation is generally only seasonal. In addition, the pedoclimatic conditions ensure a good to very good potential yield, depending on the regions, even with relatively low-investment production systems. The level of expertise is generally very good. While the sanitary pressure is fairly high because of the hot, wet summers (*Phytophthora*, diseases and pests), it is well controlled, increasingly by means of integrated pest management.

The production quality is also recognised on the international markets, again thanks to the work carried out in the orchards, the exemplary post-harvest know-how and the long production cycle in the country's high-altitude or southern zones. This high economic competitiveness is tempered by the lower-range export packout (60 to 70 % on average, depending on the regions), which is due to the winds, high solar radiation or the relatively high frequency of extreme climate events (hail, etc.). Furthermore, inland transport from the production zones to the port of Cape Town is generally long and expensive (approximately €2 000 to €2 500 per container from the north of the country).

New markets or new market windows

The up-and-coming Peruvian competition (see Peru file) is asserting itself as the key variable in how South African exporters define their strategy. While their historical trade positioning, i.e. the mid-summer market in Europe, has become a non-lucrative period, there are other opportunities accessible or taking shape. Thanks to the very wide range of latitudes and altitudes where Hass cultivation is in place, South African exporters can position themselves before or after the avalanche of Peruvian fruit into Europe. The late summer to early autumn niche seems buoyant. South African Hass can be highly competitive against its Chilean counterpart, before the variety's supply surge from the early Mediterranean origins, such as Morocco and Israel.

Since 2024, South Africa has also been able to place its production on the two main Asian markets, i.e. China and Japan. While these two commercial centres have not exhibited any clear growth dynamic in recent years, they nonetheless represent significant volumes (50 000 to 60 000 t each). Furthermore, the signs of economic revival in Japan may be helpful. Finally, while the Peruvian competition cannot be disregarded in the first part of the season in the Asian zone either, particularly since the opening in late 2024 of the port of Chancay, the South African fruit's keeping properties may make the difference at the end of the campaign.

In the medium term, India may be a promising outlet for South Africa, given the big advantage in logistical terms (reachable in less than 15 days). A significant proportion (20 to 40 % according to sources) of the population of nearly 1.5 billion is vegetarian, and starting to discover the avocado, especially thanks to the introductory efforts undertaken by the WAO (working with the media mogul Sanjeev Kapoor and the Haldiram restaurant chain) and fruit distribution efforts by Westfalia. Negotiations are underway to lift the 30 % customs duty currently stifling the South African avocado in India.

In addition, the long-term project to access the vast US market could finally pay off. Currently political in nature, the barriers could be lifted in the medium term.

Industry structure

In an increasingly changeable and uncertain climate and political context, responsiveness is a major asset. The South African avocado industry is capable of quick adaptations, as it showed in 2023 by altering its trading calendar in Europe. Its assets are the very high representativeness of its organisation (95 % of exports are from SAAGA members), its export sector's concentration (80 % of the supply controlled by three exporters), the coverage of all the key sectors from research to trade, and finally its interconnectedness and vitality. It is an exemplary industry in the avocado world.

Capacity building ongoing, with an even higher planting rate

Availability and above all prices of agricultural land suitable for avocado cultivation vary between the regions. However, even in zones where access to land is economically difficult, changes in usage are possible (e.g., switching from dairy farming or wine growing, two sectors struggling in Western Cape, to avocado production), sometimes via partnerships between a land owner and an avocado specialist. Similar movements are possible through diversification of sugar cane or forestry companies, in other regions. The nurseries present in the country (three main large ones, and several other medium-sized ones) can ramp up their production rate.

Climate change resilience

The effects of climate change, already highly perceptible for arboriculture in many parts of the world, should be taken into account in any medium-term forecasting. For South Africa, all the scenarios considered agree that the avocado zone will undergo a temperature rise by 2050. The extent of the rise varies between the sources (from 1.5-2°C in the George zone in the south to 2.0-2.5°C in the Tzaneen zone in the north, according to CSIR). Hence there should be a relatively moderate increase in the number of days' heat above 35°C in the Western Cape and KwaZulu-Natal production zones (0 to 15 days, again according to CSIR), but a more significant increase in the north (up to 20-40 days in the Tzaneen zone).

The projections also agree on increased occurrence of extreme climate events (hail storms, strong winds, etc.). For rainfall, the projections are much vaguer, depending on the model, ranging from a slight increase to a 5 to 10 % fall in the northern zones. The number of days' rain could decrease slightly, leading to a smaller number of rainy spells, but of greater intensity, or even extreme.

In every scenario, increased evapotranspiration, due to the higher temperatures in a context of stable to slightly lower rainfall, pressure on the water resource will increase. The water supply schemes to the orchards may need to be reviewed, with the installation of more reservoirs in the already tense Western Cape zone and low-altitude Limpopo zone, a switch to irrigation for some rain-watered plantations and system upgrades (low-volume drip-irrigation). These changes seem essential in order to maintain a yield and sizing level compatible with a possibly structural drop in prices.

The disease pressure could also rise, in a context of higher temperatures and ongoing high humidity. Finally, growers might have to step up the installation of windbreaks, especially in the most exposed coastal or high-altitude zones. Overall, while there are real challenges, which will require significant investment from the growers, no zone seems to be under threat from a medium temperature rise scenario.

So we have opted to maintain the current average yield hypothesis, and also assumed a stable sorting waste rate, with the possibly greater climate instability offset by better-performing production systems (new clonal rootstocks, upgraded irrigation systems, windbreaks, etc.).