VILLA CROP PROTECTION



villa Regional **Weather** Reports

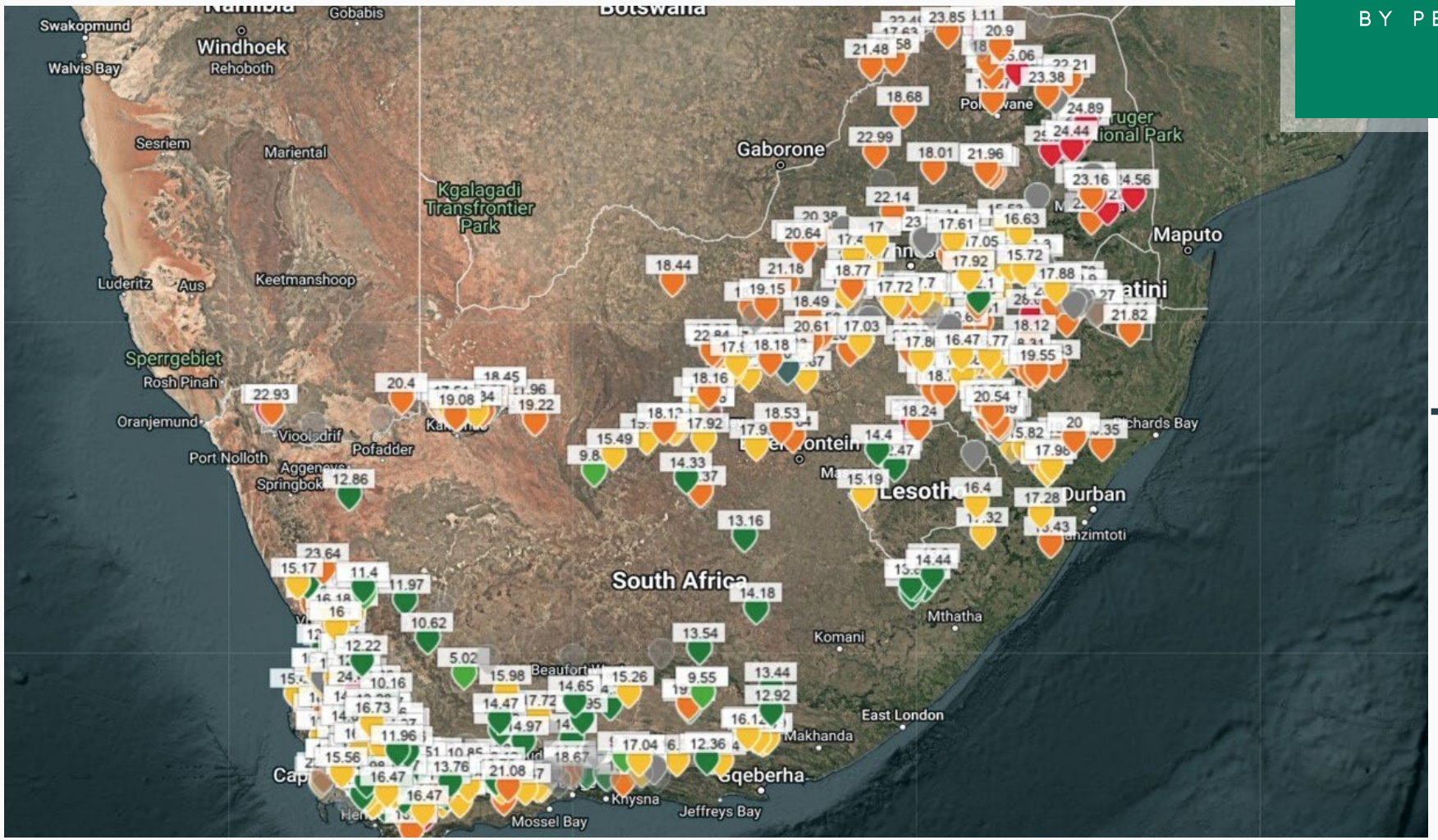
TERRACLIM
FORWARD FARMING

METOS®
BY PESSL INSTRUMENTS



METOS®

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+200
WEATHER STATIONS

+/- 600
NATIONAL NETWORK



TERRACLIM

FORWARD FARMING

1. Productivity

Increase agricultural productivity and farmer incomes while maintaining sustainability

2. Adaptation & Resilience

Strengthen the ability of farming systems to cope with climate variability and extreme events.

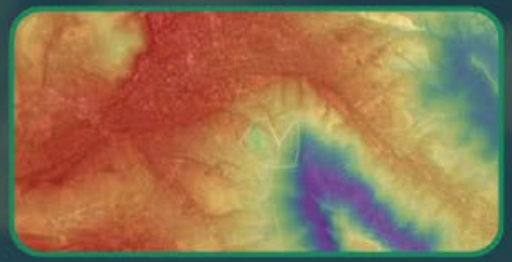
3. Mitigation

Reduce or avoid greenhouse-gas emissions from agricultural systems where possible.







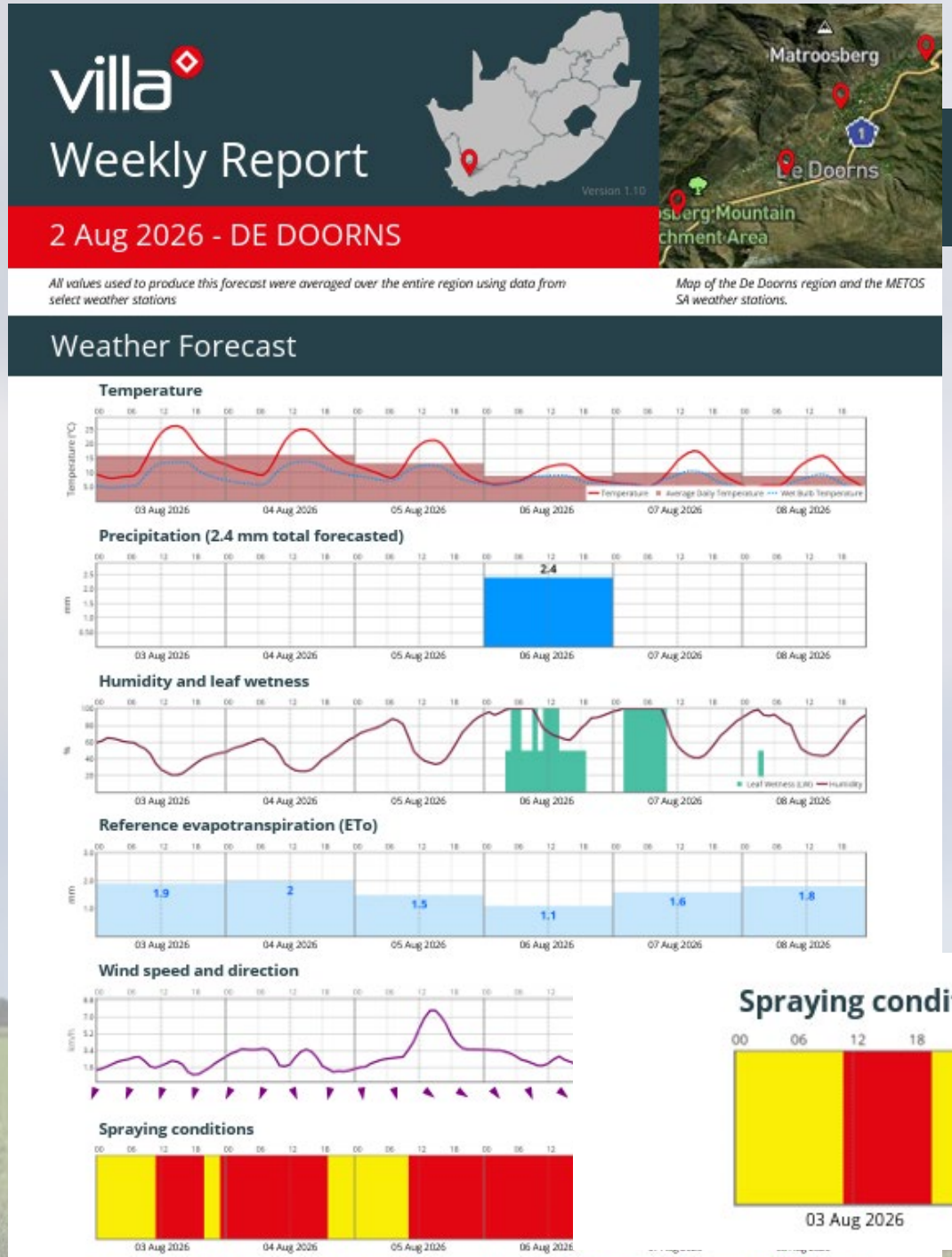


TerraClim supports CSA by translating climate data into actionable agricultural insights:

- Integration of **weather station, satellite** and **historical climate datasets**
- Development of **digital climate tools** for **farm decision-making**
- Analysis of **temperature accumulation, rainfall variability** and **climate risk**
- Supporting **climate-informed crop planning** and **cultivar suitability**

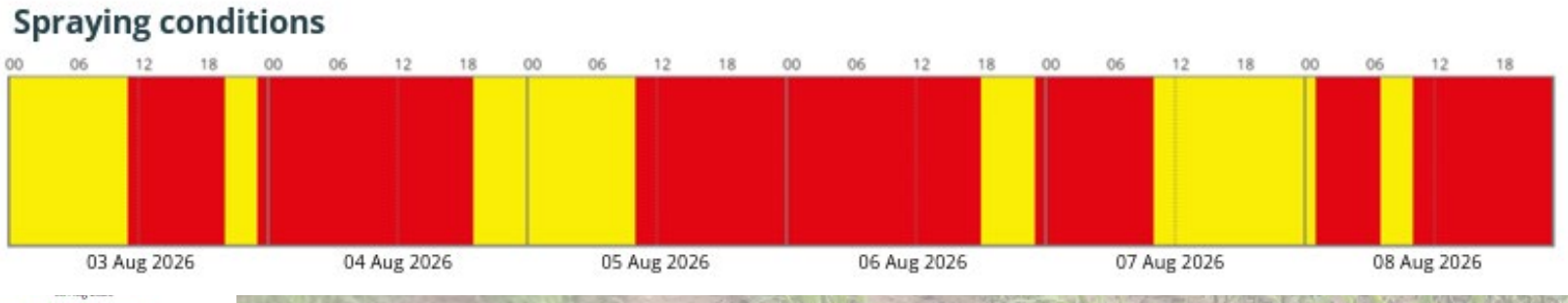
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Weekly Regional Weather Forecast

- Regional forecast based on **hyper-localised** weather forecasts from **actual weather stations**
- Cumulative daily and weekly **rainfall**
- Daily **ETOs** for optimal **irrigation**
- **Optimal spray windows** for more effective use of crop protection products
- Improve **risk** identification



2 Aug 2026 - DE DOORNS

Hindsight Analysis

Index	RAIN (JAN+)	RAIN (APR+)	GDD (JAN+)	GDD (APR+)	DPCU (MAY+)	UCU (MAY+)	HOURS<7° (MAY+)
1 week ago	373	276	1446	353	861	473	402
2 weeks ago	371	275	1441	348	782	422	336
3 weeks ago	371	275	1432	339	702	379	288
4 weeks ago	371	275	1425	332	617	316	257
1 year ago	192	156	1548	426	962	526	556
2 years ago	284	231	1584	473	912	431	461
3 years ago	317	214	1356	336	1021	702	479
4 years ago	158	99	1466	345	952	448	660
5 years ago	258	199	1483	459	960	485	579
3-year average	264	200	1496	412	965	553	498
5-year average	242	180	1487	408	961	518	547

5-Year Hindsight Analysis

- Track cumulative **rainfall**
- Track cumulative **GDD** & **Chill Units**
- Monitor **extreme** weather patterns
- **Compare** current conditions to previous years
- Place current conditions in **historical context**
  e.g., 3 yr average / 5 yr avg.

Disease Pressure – Hindsight

2 Aug 2026 - DE DOORNS

Disease Pressure - Hindsight

		Mon 27/07	Tue 28/07	Wed 29/07	Thu 30/07	Fri 31/07	Sat 01/08	Sun 02/08
Grapes	Downy Mildew - Primary Medium Infection	No pressure	No pressure	No pressure	No pressure	No pressure	No pressure	No pressure
	Grey Mould	No pressure	Low pressure	No pressure	No pressure	No pressure	No pressure	No pressure
	Powdery mildew - Primary Infection	Low pressure	Low pressure	No pressure	No pressure	Low pressure	No pressure	No pressure
	Powdery mildew risk	Low pressure	Low pressure	No pressure	No pressure	No pressure	No pressure	No pressure
Pears	Aphids	No pressure	No pressure	No pressure	No pressure	No pressure	No pressure	No pressure
	Brown Spot - Light Infection	Low pressure	Low pressure	Low pressure	Low pressure	Low pressure	No pressure	No pressure
	Brown Spot - Medium Infection	Low pressure	Low pressure	Low pressure	Low pressure	Low pressure	No pressure	No pressure
	Scab	Low pressure	No pressure	No pressure	Low pressure	Low pressure	No pressure	No pressure

- **Two Crops** per report
- Relevant **pests** and **diseases** available

villa Regional **Weather** Reports

DATA CIRCULAR ECONOMY

Data **Generation**



Data **Integrity**



Data **Dissemination**



Research & **Innovation**



Measure, Collect & Store

Clean, Gap Fill, & Validate

Process, Package & Disseminate

Collaborate & Innovate


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