IPPS Southern Africa
Sharing Plant Production Knowledge Globally

Agri Logiq

OPTIMIZING GREENHOUSE CONTROL:

A Data-Driven Comparison of Automation Strategies

Agenda

1. Who is standing in front of you?
2. Understanding data and relative data
3. VPD - vapour pressure deficit
4. Greenhouses - VPD relationship
5. Data Visualisations
6. Crop Steering
7. Feel free to ask as we go :)

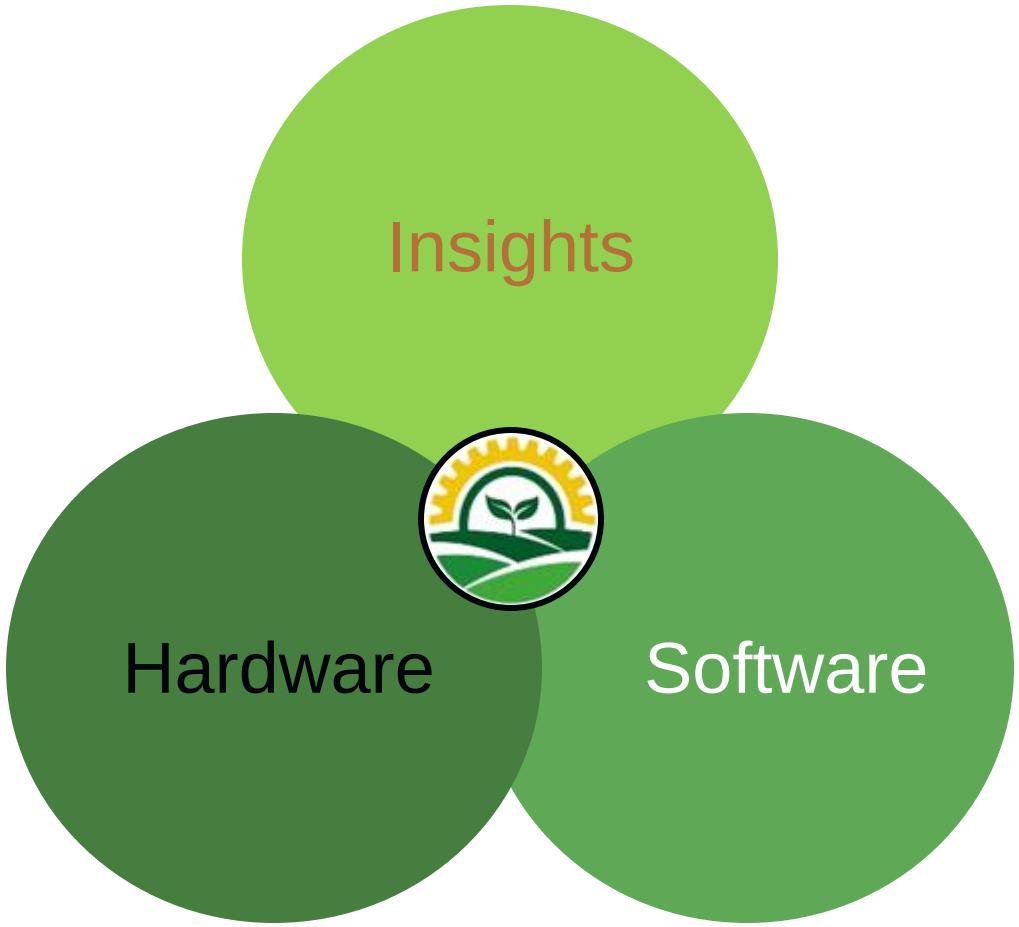
JOEL & AGRILOGIQ

Who am I ?

Joel v.d. Schyff – Co Founder & CGO
Millwright & Mechatronics Engineer
2018 Masters - UCT

- Extensive experience in equipment and automation within food and fruit packing.
- Dad, who loves the outdoors and making a difference in the world through technology.

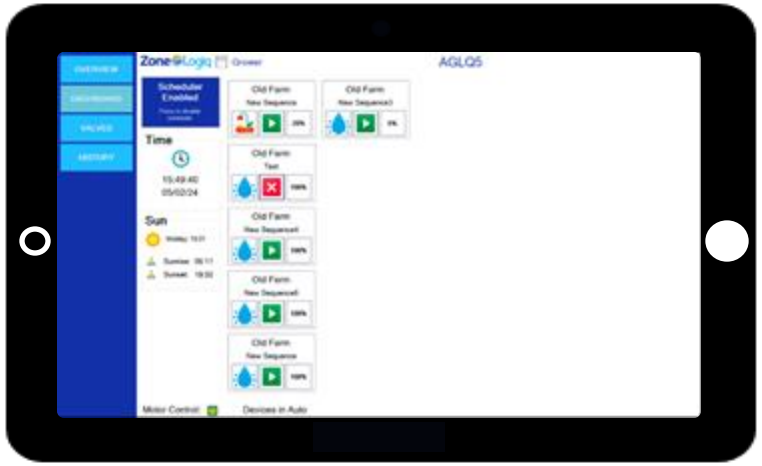
Who is AgriLogiq?



AgriLogiq

connects growers to their farms, through the ultimate **integrated** solution for predictive and scalable protected cultivation

Who is AgriLogiq?



Simplifies greenhouse operations
Reduces implementation costs
Increases Yield & Efficiencies

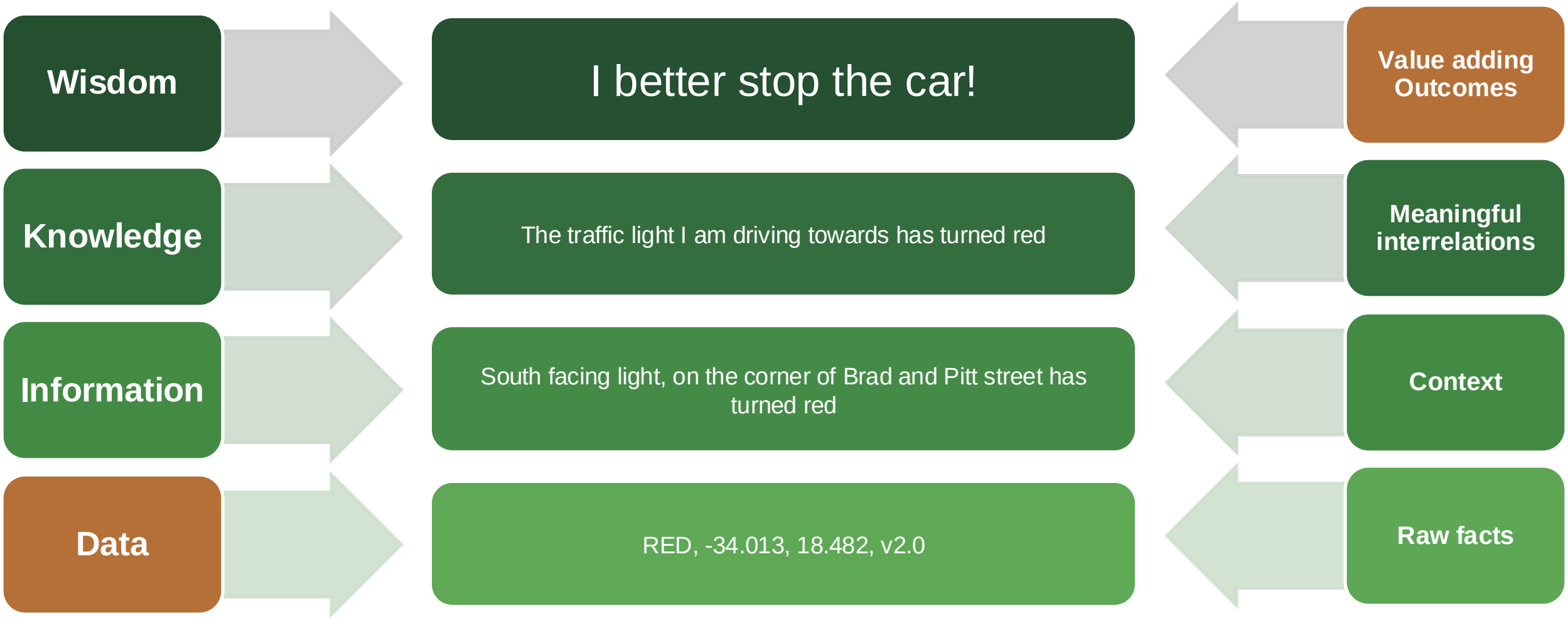
We believe in innovation

- Taken a different approach to operating logic.
- Focus on modern farming enablement.
- Bring VPD to the forefront.
- Common database allows synchronization between functions.
- Large focus on keeping costs down for the features needed.

DATA !

It can be scary

Data is the FOUNDATION of wisdom



Some of the data points that we look at

Environmental & Chemical	Equipment & Structure	Plant Information	Mapping	Input vs Output
Internal factors External factors Pesticides Herbicides Fertilizers	Climate Irrigation Fertigation Physical state Plastic	Stage growth Leaf size Fruit size Node spacing	What Where When Why How	Data to outcomes

How do we make sense of it all?

•**Regression Analysis:** This entails analyzing the relationship between one or more independent variables and a dependent variable.

•**Factor Analysis:** This entails taking a complex dataset with many variables and reducing the variables to a small number.

•**Cohort Analysis:** This is the process of breaking a data set into groups of similar data.

•**Monte Carlo Simulations:** Models the probability of different outcomes happening.

•**Time Series Analysis:** Tracks data over time and solidifies the relationship between the value of a data point and the occurrence of the data point.

Visualisation Tools

Management by exception

in Automation stick to the basics - - >

Even Irrigation

Manage Climate

A or A&B feed

- - > **Measure, manage & Improve**

VPD

Vapor Pressure deficit

What is VPD & Why is it important?

Vapour pressure-deficit, or **VPD**, is the difference between the amount of moisture in the air and how much moisture the air can hold when it is saturated.

Relationship between Temperature and Relative Humidity

Balancing humidity with temperature, allows plants to be comfortable at higher temperatures, as good transpiration is retained.

°C vs %RH	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%	0%
0	0	0,03	0,06	0,09	0,12	0,15	0,18	0,21	0,24	0,27	0,3	0,34	0,37	0,4	0,43	0,46	0,49	0,52	0,55	0,58	0,61
1	0	0,04	0,07	0,1	0,13	0,17	0,2	0,23	0,27	0,3	0,33	0,36	0,4	0,43	0,46	0,5	0,53	0,56	0,59	0,63	0,66
2	0	0,04	0,08	0,11	0,15	0,18	0,22	0,25	0,29	0,32	0,36	0,39	0,43	0,46	0,5	0,53	0,57	0,6	0,64	0,67	0,71
3	0	0,04	0,08	0,12	0,15	0,19	0,23	0,27	0,31	0,34	0,38	0,42	0,46	0,49	0,53	0,57	0,61	0,65	0,68	0,72	0,76
4	0	0,04	0,08	0,12	0,16	0,2	0,24	0,28	0,32	0,36	0,4	0,44	0,48	0,53	0,57	0,61	0,65	0,69	0,73	0,77	0,81
5	0	0,04	0,09	0,13	0,17	0,22	0,26	0,3	0,35	0,39	0,43	0,48	0,52	0,56	0,61	0,65	0,7	0,74	0,78	0,83	0,87
6	0	0,04	0,09	0,14	0,18	0,23	0,28	0,32	0,37	0,42	0,46	0,51	0,56	0,6	0,65	0,7	0,74	0,79	0,84	0,88	0,93
7	0	0,05	0,1	0,15	0,2	0,25	0,3	0,35	0,4	0,45	0,5	0,55	0,6	0,65	0,7	0,75	0,8	0,85	0,9	0,95	1
8	0	0,05	0,1	0,16	0,21	0,27	0,32	0,37	0,43	0,48	0,53	0,59	0,64	0,69	0,75	0,8	0,86	0,91	0,96	1,02	1,07
9	0	0,06	0,12	0,17	0,23	0,29	0,35	0,4	0,46	0,52	0,58	0,63	0,69	0,75	0,81	0,86	0,92	0,98	1,04	1,09	1,15
10	0	0,06	0,13	0,19	0,25	0,31	0,37	0,43	0,49	0,55	0,62	0,68	0,74	0,8	0,86	0,92	0,98	1,05	1,11	1,17	1,23
11	0	0,06	0,13	0,19	0,26	0,33	0,39	0,46	0,52	0,59	0,65	0,72	0,79	0,85	0,92	0,98	1,05	1,11	1,18	1,24	1,31
12	0	0,07	0,14	0,21	0,28	0,35	0,42	0,49	0,56	0,63	0,7	0,77	0,84	0,91	0,98	1,05	1,12	1,19	1,26	1,33	1,4
13	0	0,08	0,15	0,23	0,3	0,38	0,45	0,53	0,6	0,68	0,75	0,83	0,9	0,98	1,05	1,13	1,2	1,28	1,35	1,43	1,5
14	0	0,08	0,16	0,24	0,32	0,4	0,48	0,56	0,64	0,72	0,8	0,88	0,96	1,04	1,12	1,2	1,28	1,36	1,44	1,52	1,6
15	0	0,09	0,18	0,26	0,35	0,43	0,52	0,6	0,69	0,77	0,86	0,94	1,03	1,11	1,2	1,28	1,37	1,45	1,54	1,62	1,71
16	0	0,09	0,18	0,27	0,37	0,46	0,55	0,64	0,73	0,82	0,91	1	1,09	1,18	1,27	1,37	1,46	1,55	1,64	1,73	1,82
17	0	0,1	0,2	0,29	0,39	0,49	0,58	0,68	0,78	0,87	0,97	1,07	1,17	1,26	1,36	1,46	1,55	1,65	1,75	1,84	1,94
18	0	0,1	0,2	0,31	0,41	0,51	0,62	0,72	0,82	0,93	1,03	1,13	1,23	1,34	1,44	1,54	1,65	1,75	1,85	1,96	2,06
19	0	0,11	0,22	0,33	0,44	0,55	0,66	0,77	0,88	0,99	1,1	1,21	1,32	1,43	1,54	1,65	1,76	1,87	1,98	2,09	2,2
20	0	0,12	0,24	0,35	0,47	0,59	0,7	0,82	0,94	1,05	1,17	1,29	1,4	1,52	1,64	1,76	1,87	1,99	2,11	2,22	2,34
21	0	0,13	0,25	0,38	0,5	0,63	0,75	0,87	1	1,12	1,25	1,37	1,5	1,62	1,74	1,87	1,99	2,12	2,24	2,37	2,49
22	0	0,13	0,26	0,39	0,53	0,66	0,79	0,92	1,05	1,19	1,32	1,45	1,58	1,71	1,85	1,98	2,11	2,24	2,38	2,51	2,64
23	0	0,14	0,28	0,42	0,56	0,7	0,84	0,98	1,12	1,27	1,41	1,55	1,69	1,83	1,97	2,11	2,25	2,39	2,53	2,67	2,81
24	0	0,15	0,3	0,44	0,59	0,74	0,89	1,04	1,19	1,34	1,49	1,64	1,79	1,94	2,09	2,23	2,38	2,53	2,68	2,83	2,98
25	0	0,16	0,32	0,48	0,64	0,79	0,95	1,11	1,27	1,43	1,59	1,74	1,9	2,06	2,22	2,38	2,54	2,69	2,85	3,01	3,17
26	0	0,17	0,34	0,5	0,67	0,84	1,01	1,18	1,34	1,51	1,68	1,85	2,02	2,18	2,35	2,52	2,69	2,86	3,02	3,19	3,36
27	0	0,17	0,35	0,53	0,71	0,89	1,06	1,24	1,42	1,6	1,78	1,96	2,13	2,31	2,49	2,67	2,85	3,03	3,2	3,38	3,56
28	0	0,19	0,38	0,57	0,76	0,95	1,13	1,32	1,51	1,7	1,89	2,08	2,27	2,46	2,65	2,84	3,02	3,21	3,4	3,59	3,78
29	0	0,2	0,4	0,6	0,8	1	1,2	1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,2	3,4	3,6	3,8	4
30	0	0,21	0,42	0,63	0,85	1,06	1,27	1,48	1,69	1,91	2,12	2,33	2,54	2,76	2,97	3,18	3,39	3,6	3,82	4,03	4,24
31	0	0,22	0,45	0,67	0,9	1,12	1,35	1,57	1,8	2,02	2,24	2,47	2,69	2,92	3,14	3,37	3,59	3,82	4,04	4,27	4,49
32	0	0,23	0,47	0,71	0,95	1,18	1,42	1,66	1,9	2,14	2,37	2,61	2,85	3,09	3,32	3,56	3,8	4,04	4,27	4,51	4,75
33	0	0,25	0,5	0,76	1,01	1,26	1,51	1,76	2,01	2,26	2,52	2,77	3,02	3,27	3,52	3,77	4,02	4,28	4,53	4,78	5,03
34	0	0,27	0,53	0,8	1,07	1,33	1,6	1,86	2,13	2,4	2,66	2,93	3,19	3,46	3,72	3,99	4,26	4,52	4,79	5,05	5,32
35	0	0,28	0,56	0,84	1,12	1,4	1,69	1,97	2,25	2,53	2,81	3,09	3,37	3,65	3,93	4,21	4,5	4,78	5,06	5,34	5,62

0,4	0,8	Early Veg / Rooting
0,8	1,2	Late Veg
1,2	1,6	Flowering

If VPD is too low, stomata stay closed, limit transpiration and slow photosynthesis

If VPD is too high, plants lose water quickly which can stress them

Humidity Deficit (g/m3) at different temperatures and relative humidity

(%)	Temprature (°C)																													
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
0%	9.4	10.0	10.6	11.3	12.0	12.8	13.6	14.4	15.3	16.3	17.3	18.3	19.4	20.6	21.8	23.1	24.4	25.9	27.3	28.9	30.5	32.2	34.0	35.8	37.7	39.8	41.8	44.0	46.3	48.6	51.0
5%	8.9	9.5	10.1	10.7	11.4	12.1	12.9	13.7	14.5	15.4	16.4	17.4	18.4	19.6	20.7	21.9	23.2	24.6	25.0	27.4	29.0	30.6	32.3	34.0	35.9	37.8	39.7	41.8	43.9	46.2	48.5
10%	8.4	9.0	9.6	10.2	10.8	11.5	12.2	13.0	13.8	14.6	15.5	16.5	17.5	18.5	19.6	20.8	22.0	23.3	24.6	26.0	27.5	29.0	30.6	32.2	34.0	35.8	37.7	39.6	41.6	43.7	45.9
15%	8.0	8.5	9.0	9.6	10.2	10.8	11.5	12.3	13.0	13.8	14.7	15.6	16.5	17.5	18.5	19.6	20.8	22.0	23.2	24.6	25.9	27.4	28.9	30.5	32.1	33.8	35.6	37.4	39.3	41.3	43.4
20%	7.5	8.0	8.5	9.0	9.6	10.2	10.9	11.5	12.2	13.0	13.8	14.6	15.5	16.5	17.4	18.5	19.6	20.7	21.9	23.1	24.4	25.8	27.2	28.7	30.2	31.8	33.5	35.2	37.0	38.9	40.8
25%	7.0	7.5	8.0	8.5	9.0	9.6	10.2	10.8	11.5	12.2	12.9	13.7	14.6	15.5	16.4	17.3	18.3	19.4	20.5	21.3	22.9	24.2	25.5	26.9	28.3	29.8	31.4	33.0	34.7	36.0	38.3
30%	6.6	7.0	7.4	7.9	8.4	8.9	9.5	10.3	10.7	11.4	12.1	12.8	13.6	14.6	15.3	16.2	17.1	18.1	19.1	20.2	21.4	22.5	23.8	25.1	26.4	27.8	29.3	30.8	32.4	34.0	35.7
35%	6.1	6.5	6.9	7.3	7.8	8.3	8.8	9.4	10.0	10.6	11.2	11.9	12.6	13.6	14.2	15.0	15.9	16.8	17.8	18.8	19.8	20.9	22.1	23.3	24.5	25.8	27.2	28.6	30.1	31.6	33.2
40%	5.6	6.0	6.4	6.8	7.2	7.7	8.1	8.5	9.2	9.8	10.4	11.0	11.7	12.6	13.1	13.9	14.7	15.5	16.4	17.3	18.3	19.3	20.4	21.5	22.6	23.9	25.1	26.4	27.8	29.2	30.6
45%	5.2	5.5	5.8	6.2	6.6	7.0	7.5	7.9	8.4	8.9	9.5	10.1	10.7	11.3	12.0	12.7	13.4	14.2	15.0	15.9	16.8	17.7	18.7	19.7	20.8	21.9	23.0	24.2	25.4	26.7	28.1
50%	4.7	5.0	5.3	5.6	6.0	6.4	6.8	7.2	7.7	8.1	8.6	9.2	9.7	10.3	10.9	11.5	12.	12.9	13.7	14.4	15.3	16.1	17.0	17.9	18.9	19.9	20.9	22.0	23.1	24.3	25.5
55%	4.2	4.5	4.8	5.1	5.4	5.7	6.1	6.5	3.9	7.3	7.8	8.2	8.7	9.3	9.8	10.4	11.0	11.6	12.3	13.0	13.7	14.5	15.3	16.1	17.0	17.9	18.8	19.8	20.8	21.9	23.0
60%	3.8	4.0	4.2	4.5	4.8	5.1	5.4	5.8	6.1	6.5	6.9	7.3	7.8	8.2	8.7	9.2	9.8	10.3	10.9	11.6	12.2	12.9	13.6	14.3	15.1	15.9	16.7	17.6	18.5	19.4	20.4
65%	3.3	3.5	3.7	4.0	4.2	4.5	4.7	5.0	5.4	5.7	6.0	6.4	6.8	7.2	7.6	8.1	8.6	9.1	9.6	10.1	10.7	11.3	11.9	12.5	13.2	13.9	14.6	15.4	16.2	17.0	17.9
70%	2.8	3.0	3.2	3.4	3.6	3.8	4.1	4.3	4.8	4.9	5.2	5.5	5.8	6.2	6.5	6.9	7.3	7.8	8.2	8.7	9.2	9.7	10.2	10.7	11.3	11.9	12.6	13.2	13.9	14.6	15.3
75%	2.3	2.5	2.7	2.8	3.0	3.2	3.4	3.8	3.8	4.1	4.3	4.6	4.9	5.1	5.5	5.8	6.1	6.5	6.8	7.2	7.6	8.1	8.5	9.0	9.4	9.9	10.5	11.0	11.6	12.2	12.8
80%	2.9	2.0	2.1	2.3	2.4	2.6	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.4	4.6	4.9	5.2	5.5	5.8	6.1	6.4	6.8	7.2	7.5	8.0	8.4	8.8	9.3	9.7	10.2
85%	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.6	2.7	2.9	3.1	3.3	3.5	3.7	3.9	4.1	4.3	4.6	4.9	5.1	5.4	5.7	6.0	6.3	6.6	6.9	7.3	7.7
90%	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4	2.6	2.7	2.9	3.1	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.9	5.1
95%	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.6
100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Extreme evaporation	High evaporation	Low evaporation
Very high evaporation	Normal evaporation	Very low evaporation

How does it relate to rooting

Low VPD =

Warm + Humid =

“Soft” Transpiration

In simple terms, **low VPD means the air is already holding a lot of moisture**, therefore

- There’s **less pressure** pulling water out of the plant.
- Transpiration is **slow and** stressful.

1. Seedlings have underdeveloped roots.

- They can’t yet pull in water fast enough to keep up with high water loss.
- A low VPD protects them by reducing water loss through transpiration.

2. Keeps energy focused on growth, not survival.

- Less stress = more energy for root and shoot development.
- Stomata remain open just enough to allow **photosynthesis** without excessive water loss.

3. Reduces risk of wilting or transplant shock.

- High VPD can cause dehydration and leaf curling in young plants.
- A cushioned environment ensures seedlings establish before facing harsher conditions.

4. Helps with nutrient uptake.

- With moderate transpiration, there's still enough xylem flow to move nutrients — but not so much that the plant becomes nutrient-deficient or water-stressed.

Evaporative cooling

A tunnel is built for heat generation

Surface area

Good - creates heat energy from solar energy

Bad - allows heat transfer per square meter

Volume

Bigger the volume, the smaller changes can be made, the more precise you can be

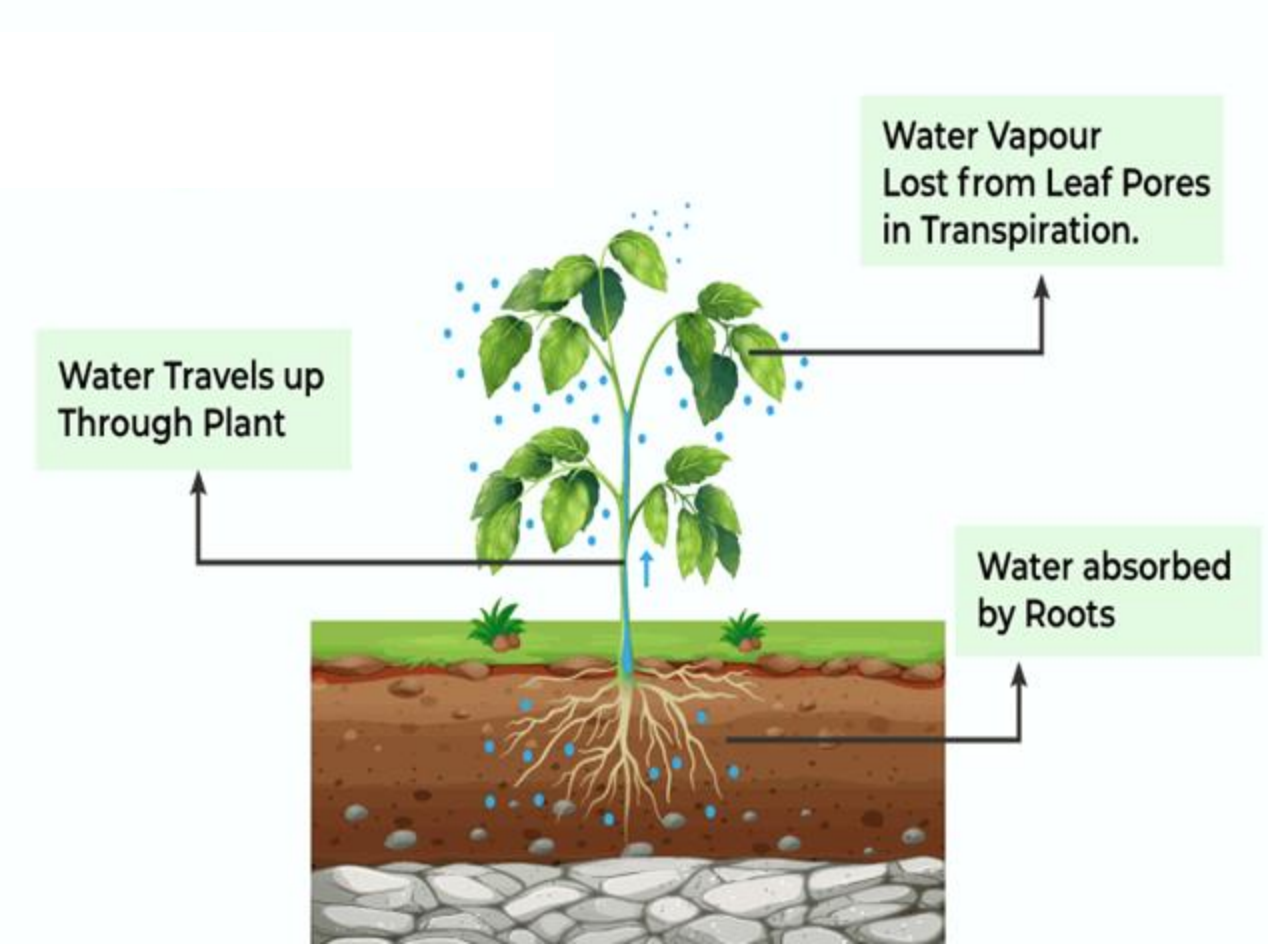
Heat and HUMIDITY rises.

Evaporation & Evaporative cooling

Greenhouse specific, main causes for evaporation are wind and sun (heat), either from venting or power driven by fans.

When plants **transpire**, water moves from the roots → up through the xylem → out through the **stomata** as vapor. This **phase change** (liquid to vapor) absorbs **latent heat**, cooling the **leaf surface** and the **surrounding microclimate**.

Transpiration Think of it like sweating — just as our sweat cools our skin when it evaporates, plant transpiration cools both the plant and nearby air.

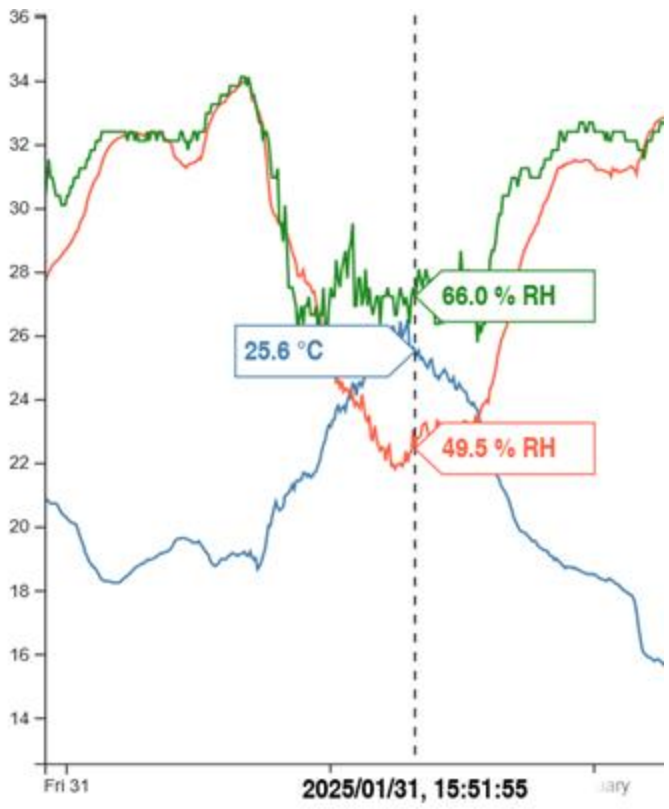


Misting vs Fogging vs Wet Wall

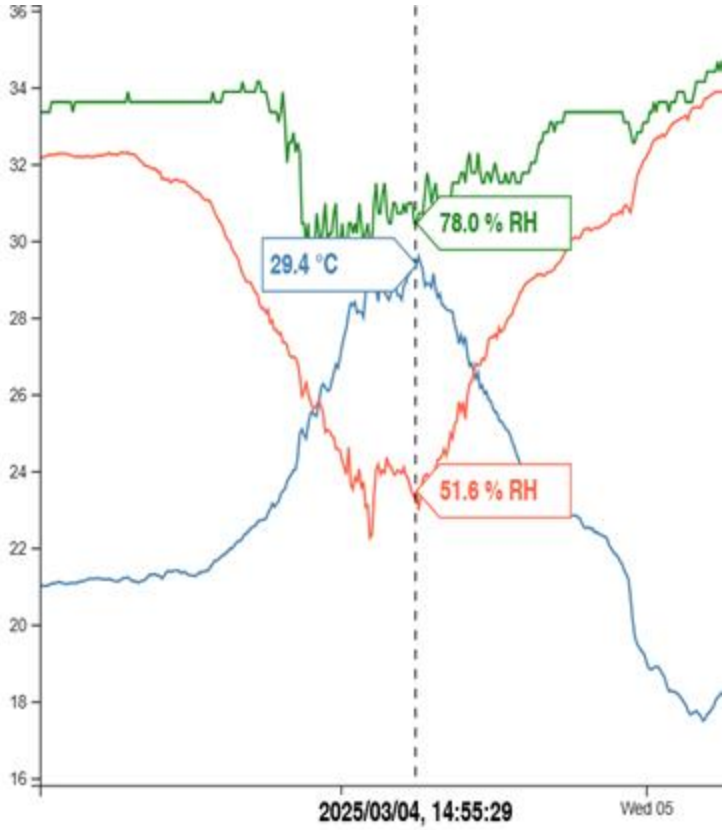
- Varying height and thickness
- Adds moisture to cool
- Needs air flow (energy exchange)

- Varying nozzle flow and numbers
- Operates at 4 bar +
- 40 to 60 micron
- low capex / maintenance
- Needs high energy

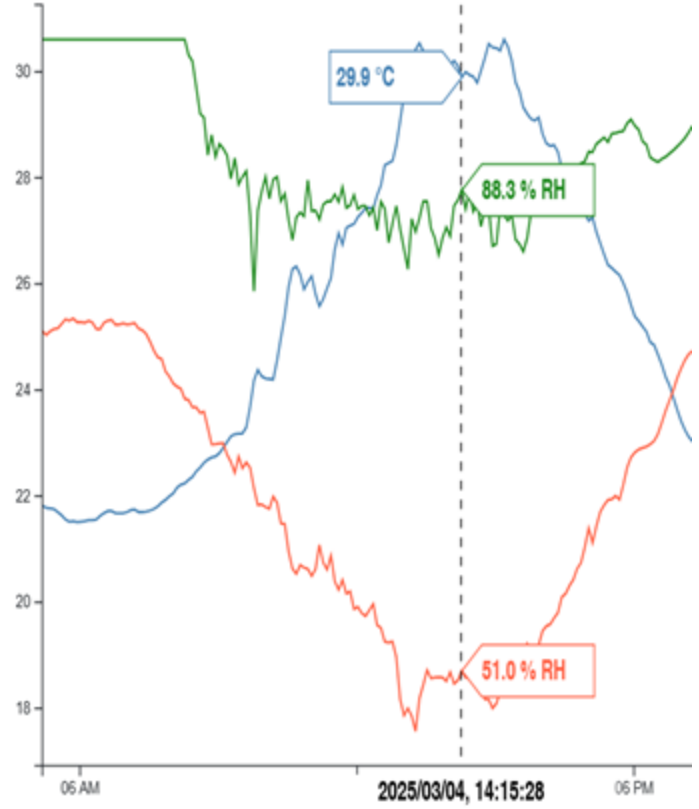
- Operates at 80 bar +
- 10 micron
- high capex
- Needs less energy



WetWall only; small plants, generally at best you can gain about 20%



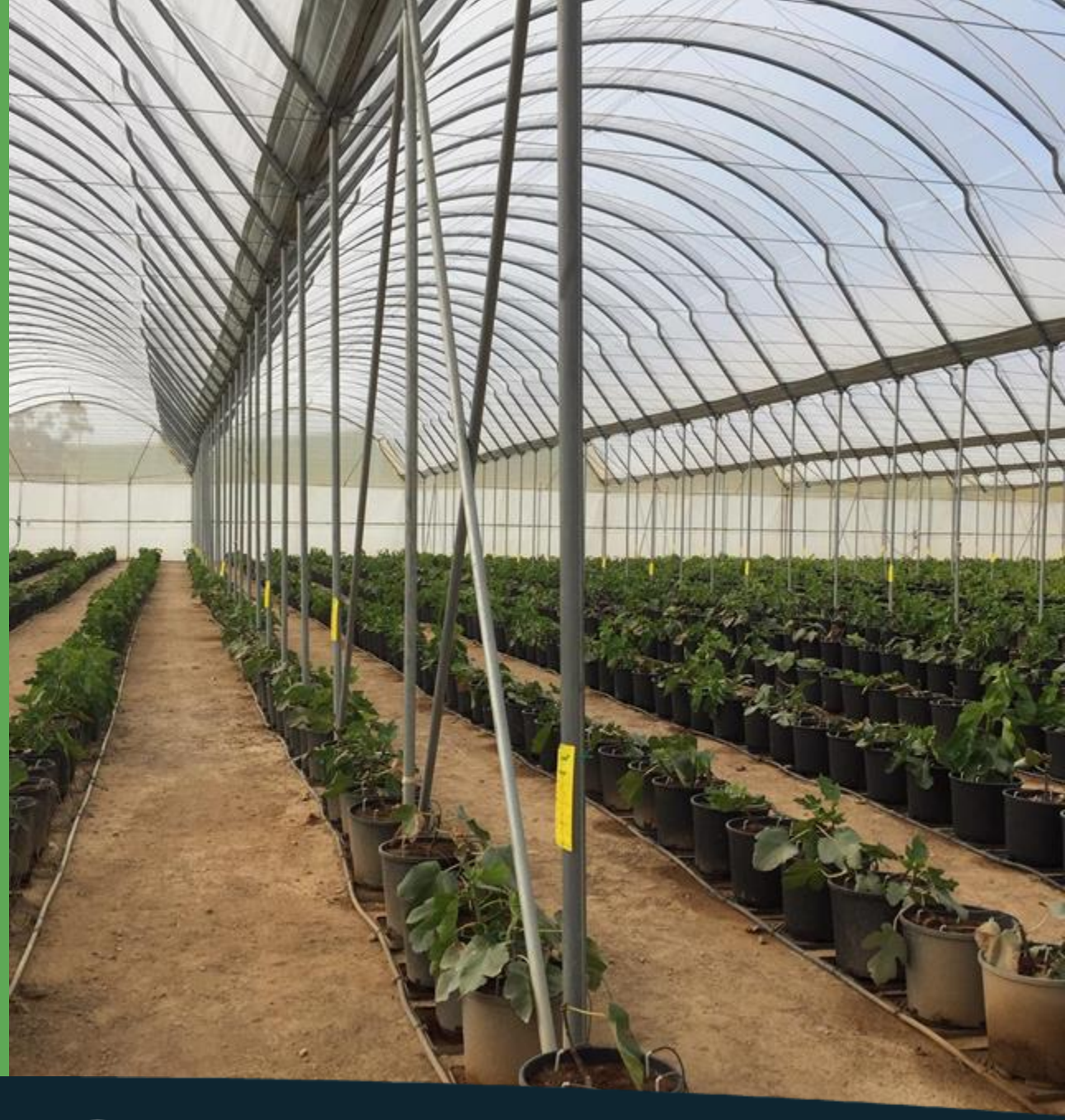
Same House; taller plants (cucumbers), easier to get higher humidity



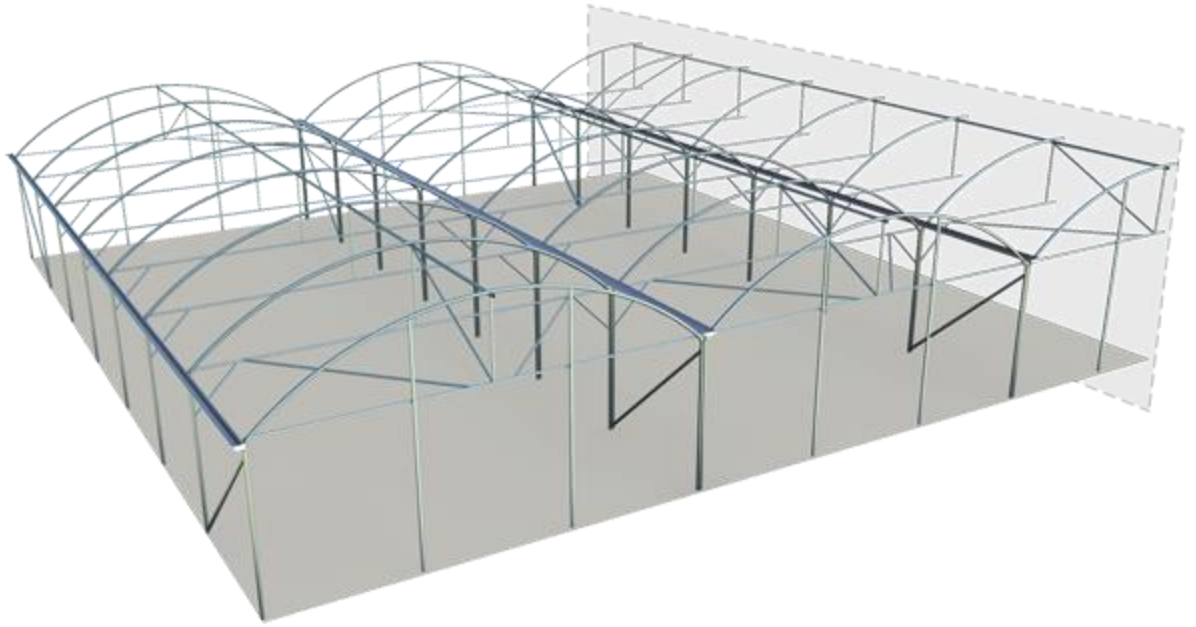
WetWall & Misting; small plants, we can maintain 80% on a warm day

Greenhouses

Managing Automation



Greenhouses



Fully Closed

- Fans
- Wet Wall

Naturally Vented

- One or more sides
- Roof of some sort

Optional Extra: Screens / Circulation Fans/ Misting / Fogging / Heating

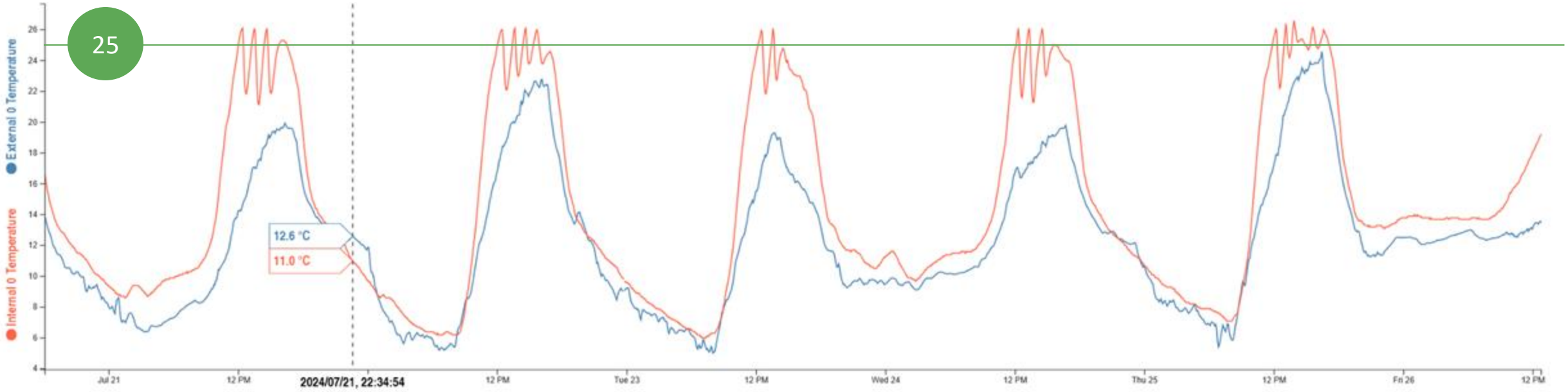
What is in your Control – Natural

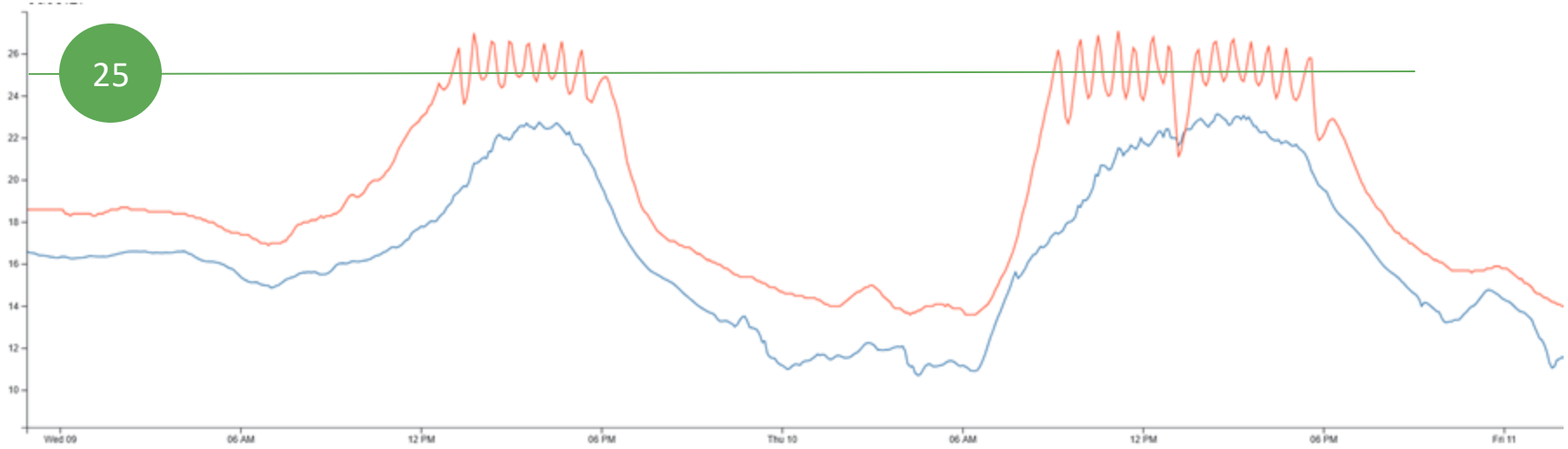
Naturally Vented
Summer - you are only as good as the outside.
Winter - great control, especially on high volume structures.

Typically much more energy efficient and lower cost.

Adding Extras
Screens - depending on it, can cut temps by 5 deg.
Misters - can also cut temps and increase humidity. This can be very difficult to control on large tunnels, needs very specific opening processes and mechanisms, but is VERY BENEFICIAL
Combined, we have seen stabilize 2000sqm at 30 deg and 75% - 80% humidity.

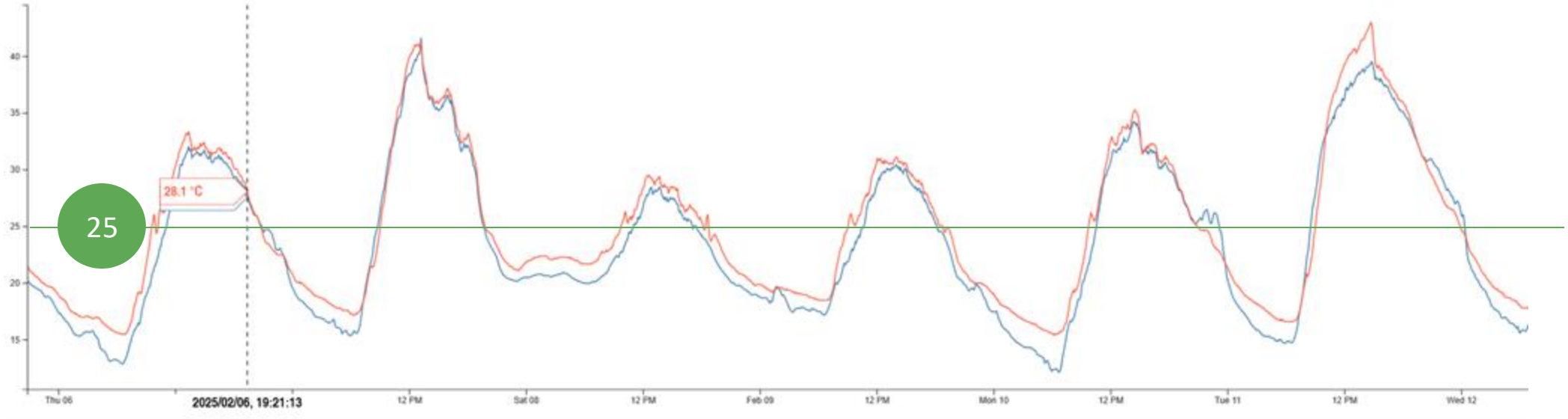
Largest Challenge is stagnating air and water clumping. Difficult to predict energy exchange.



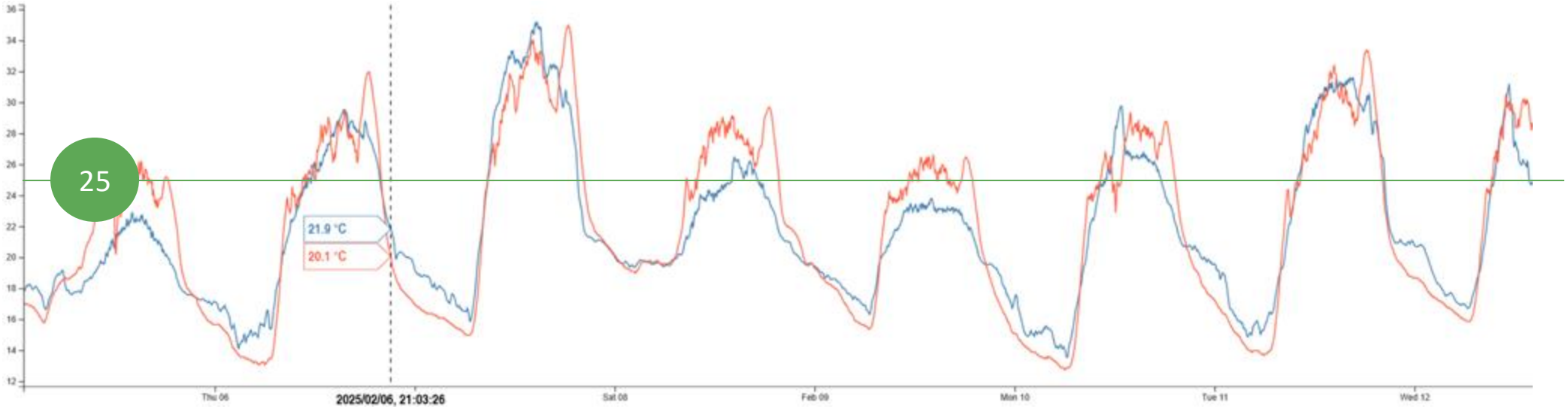


Typical Winter Graph

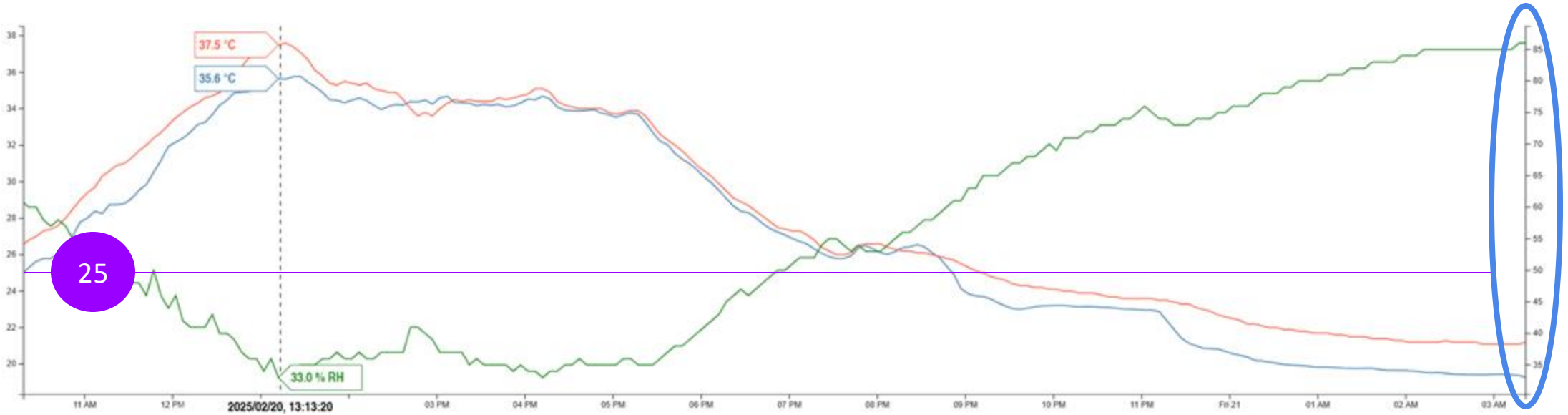
Winter Graph windy day



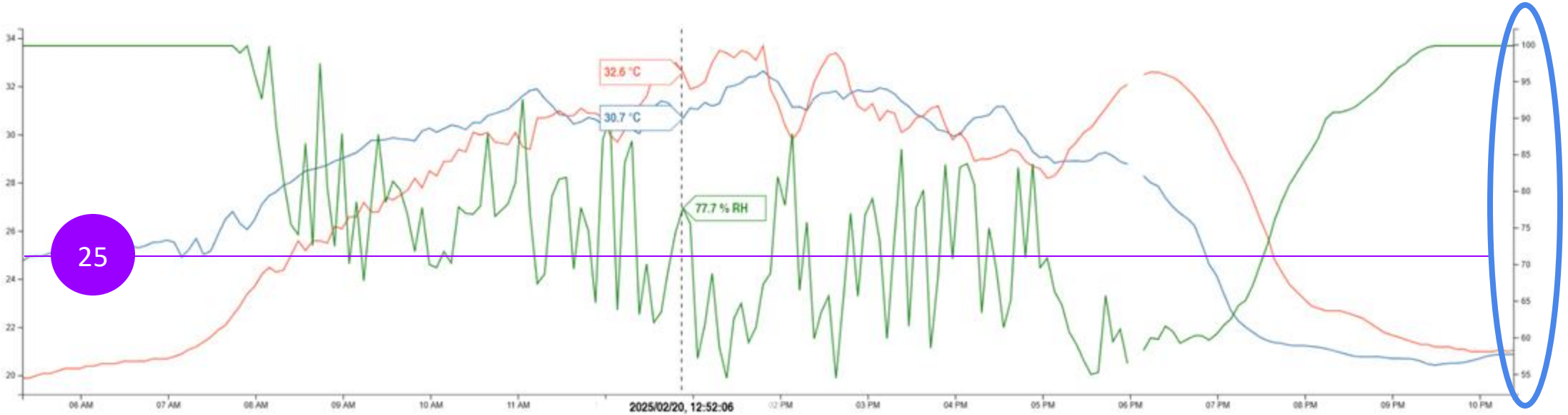
Summer Day



Same with Misting

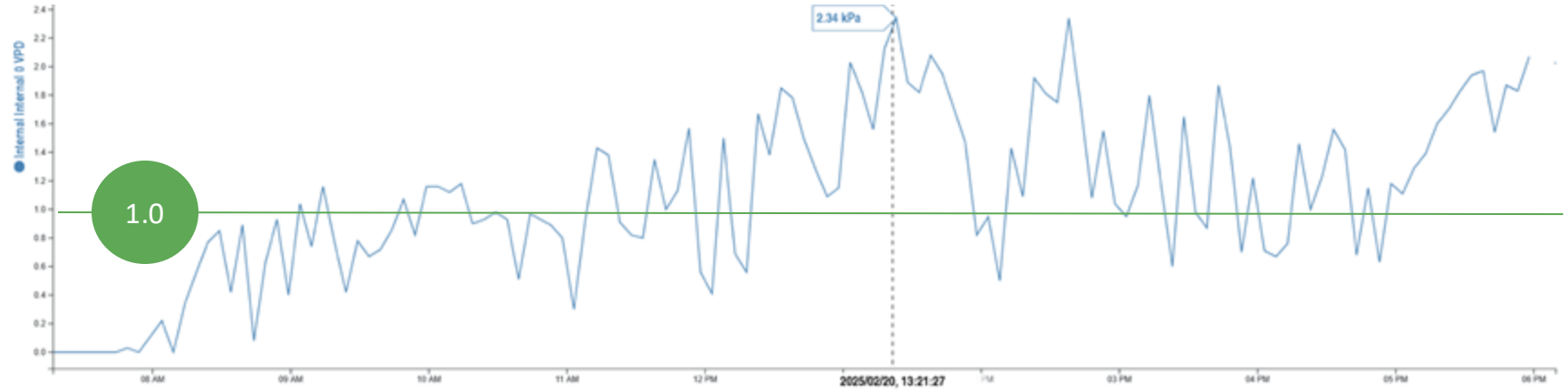


Humidity drops off

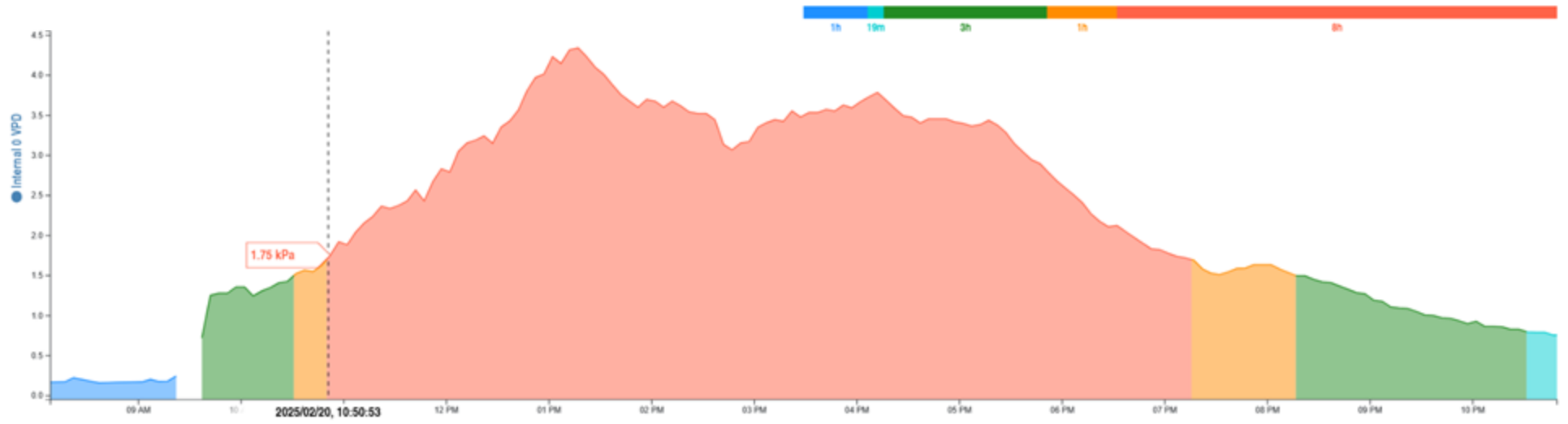


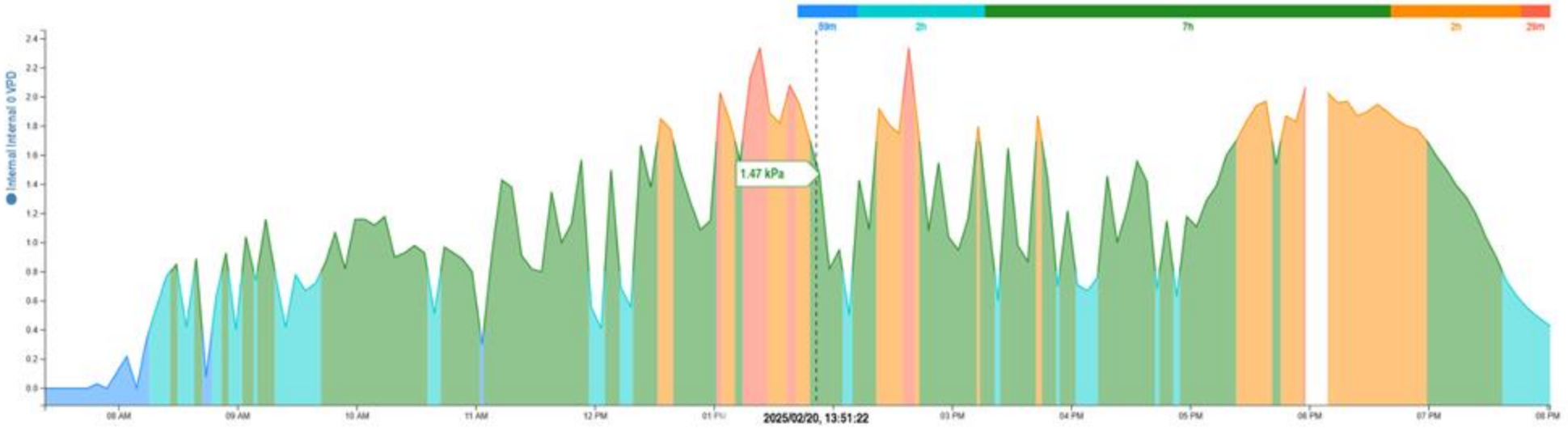
Humidity averages 70%

Natural Vent no misting



Natural Vent with misting





Same graphs, VPD

In Range Graph

Set to
Upper limit 1.7
Upper target 1.2
Lower target 0.4
Lower limit 0.2

What is in your Control – Fully Closed

Pad Fan system

Summer / **Winter** - no major difference.

Very easy to manage energy exchange / movement e.g. bring warm and humid air down etc.

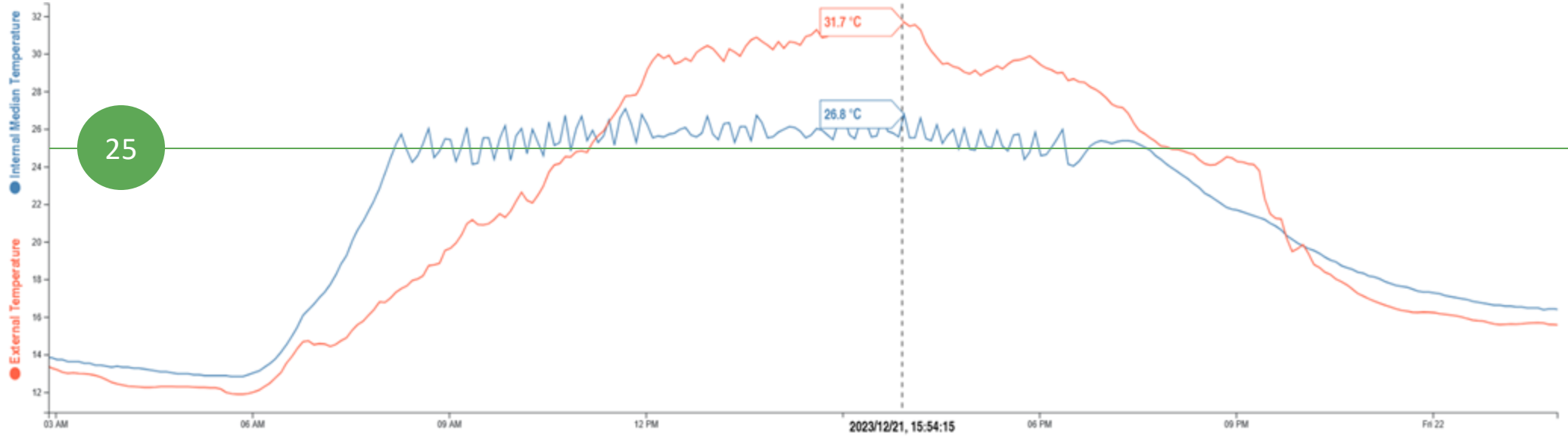
Typically higher cost but more control.

Adding Extras

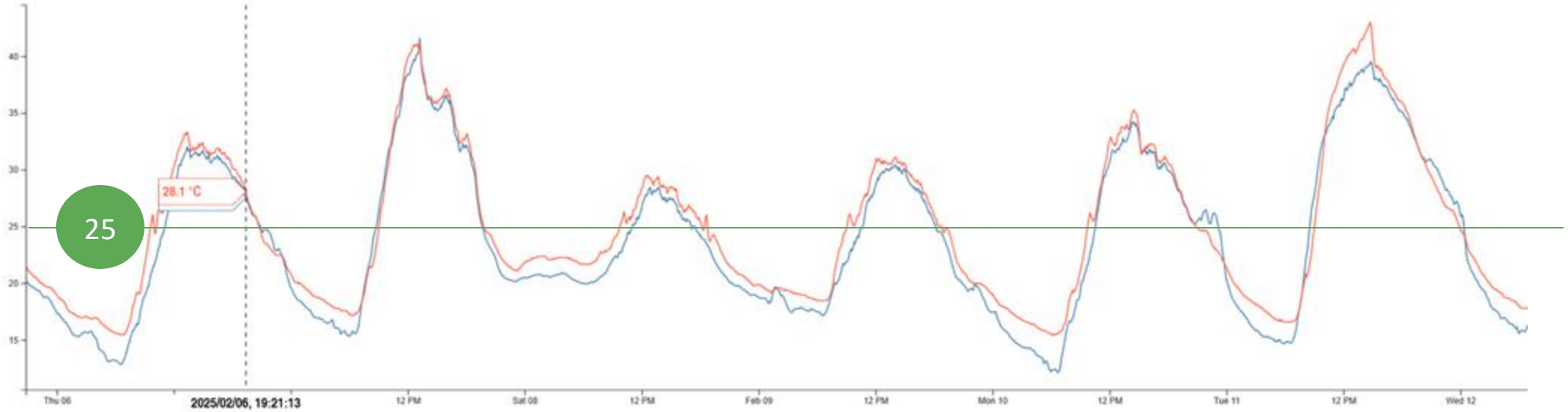
Screens - depending on it, can cut temps by 5 deg.

Misters - can also cut temps and increase humidity. Very beneficial in closed system.

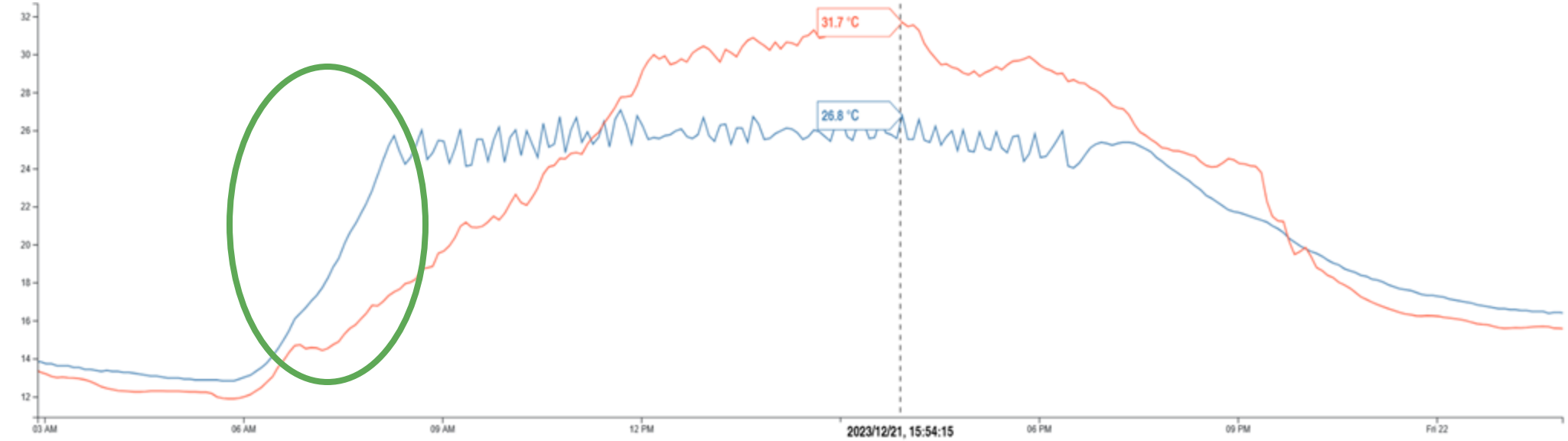
Largest Challenge: Managing energy costs vs output.



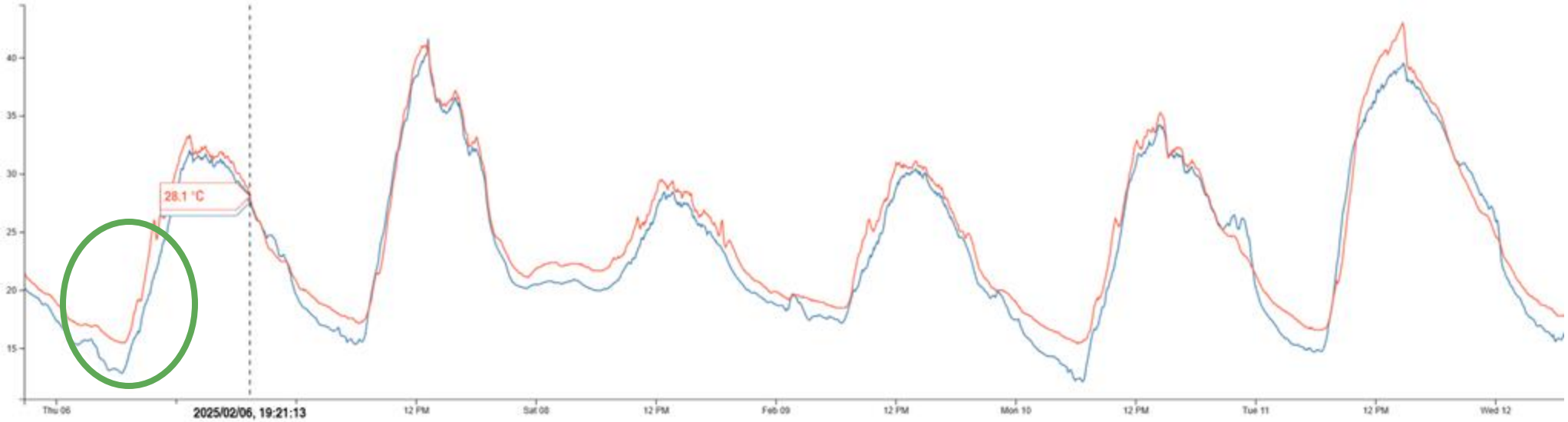
Pad Fan



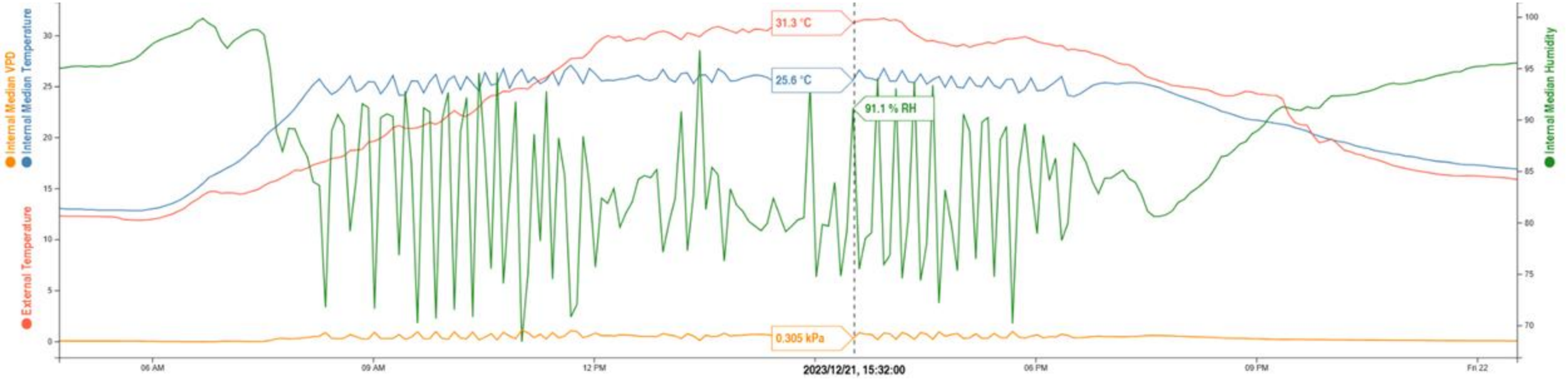
Natural Vent



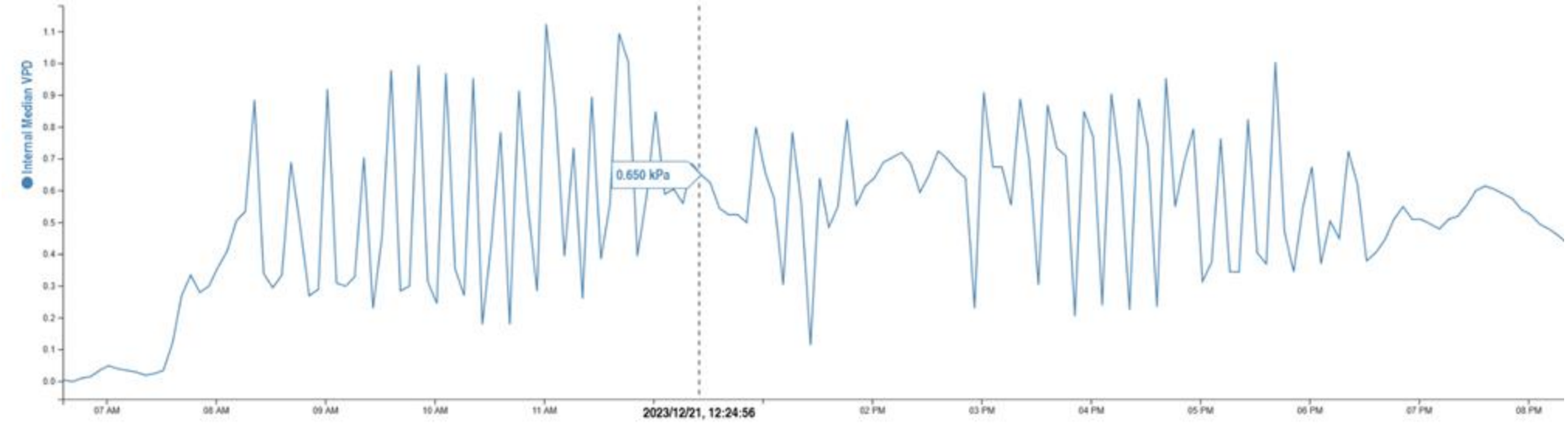
Pad Fan

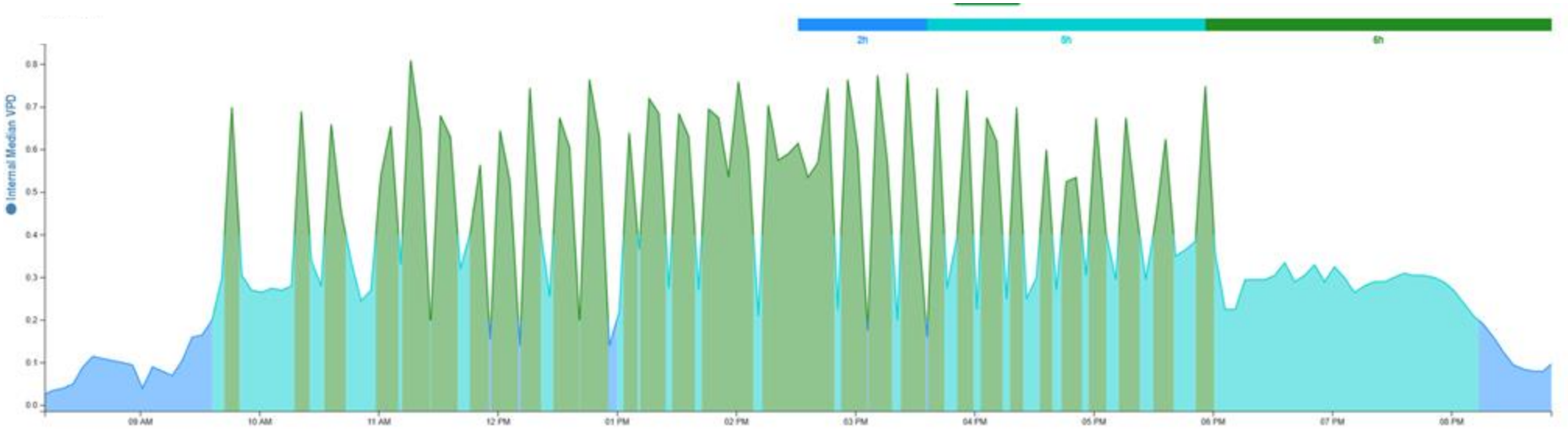


Natural Vent



Pad Fan
Saw Tooth comparison
Humidity averages 80% (range 70 to 100)
Temp on 25





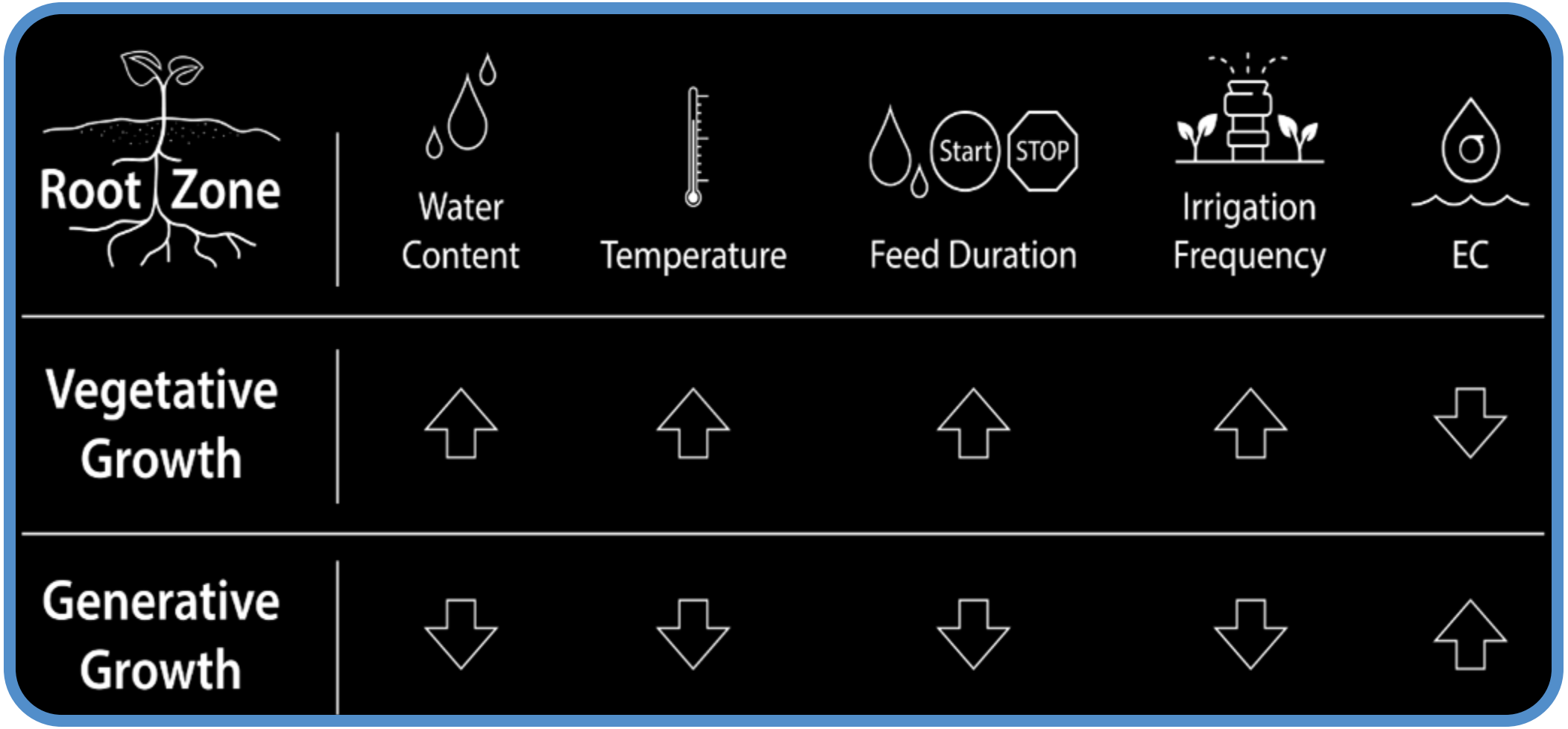
Same graphs, VPD

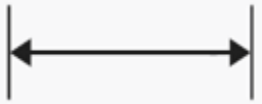
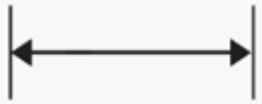
Set to
Upper limit 1.7
Upper target 1.2
Lower target 0.4
Lower limit 0.2

lower softer VPD

Specific tunnel is low volume

Automation control pointers


Root Zone
Water Content
Temperature
Start
STOP
Feed Duration
Irrigation Frequency
EC
Vegetative Growth
Generative Growth

Climate	Temperature 24 Hours	Difference T.day - T.night	Speed Temp Change	Humidity Deficit (gr/m3)	Ventilation/ Air Exchange
Vegetative Growth					
Generative Growth					

How to Control humidity

Vents

Most complicated
Unless you have misting

You are relying on condensation and transpiration

Key is to trap in the condensation / run higher temperatures

try and diffuse with the vents rather than sweep

Run at higher temps - Plant age specific

WetWall

Can help with static humidity injection, just by running under slightly windy and humidity set points

Running a few fans slowly with a VSD introduces more humidity with less cooling

Key is start before fans, stop before fans

Misting / Fogging

all point KEY

Ensure evaporation between cycles

Conditional start

equalisation - dependant on fans, wind and heat

incremental changes in frequency

Data Examples

All shapes and sizes

Visual tools

Summary

Cape Garden Vreedendal

Alans Pump Room
Last Seen: Wed, Nov 22, 23 15:36 (SAST)

Internal Temp	
Internal Humidity	
External Temp	
External Humidity	

Axe's Hothouse
Last Seen: Sun, Mar 23, 25 10:33 (SAST)

Internal Temp	26.3 °C
Internal Humidity	81 % RH
External Temp	24.1 °C
External Humidity	66 % RH

Ellias's Hothouse
Last Seen: Sun, Mar 23, 25 10:37 (SAST)

Internal Temp	24.9 °C
Internal Humidity	72 % RH
External Temp	24.2 °C
External Humidity	64 % RH

Irrigation
Last Seen: Thu, Mar 20, 25 11:54 (SAST)

Internal Temp	
Internal Humidity	
External Temp	
External Humidity	

Las Vegas
Last Seen: Sun, Mar 23, 25 10:36 (SAST)

Internal Temp	25.7 °C
Internal Humidity	60 % RH
External Temp	24.2 °C
External Humidity	64 % RH

Nona's Hothouse
Last Seen: Sun, Mar 23, 25 10:34 (SAST)

Internal Temp	25.9 °C
Internal Humidity	68 % RH
External Temp	24.1 °C
External Humidity	64 % RH

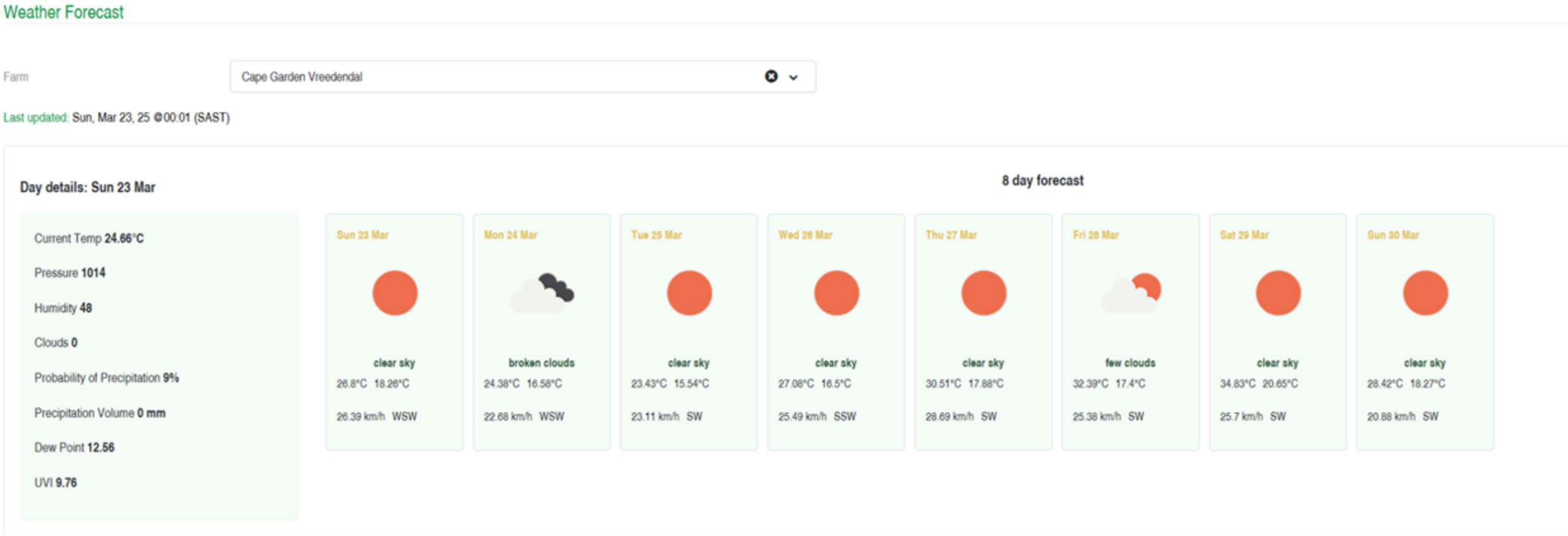
Sabelo's Hot House
Last Seen: Sun, Mar 23, 25 10:36 (SAST)

Internal Temp	23.9 °C
Internal Humidity	77 % RH
External Temp	24.2 °C
External Humidity	64 % RH

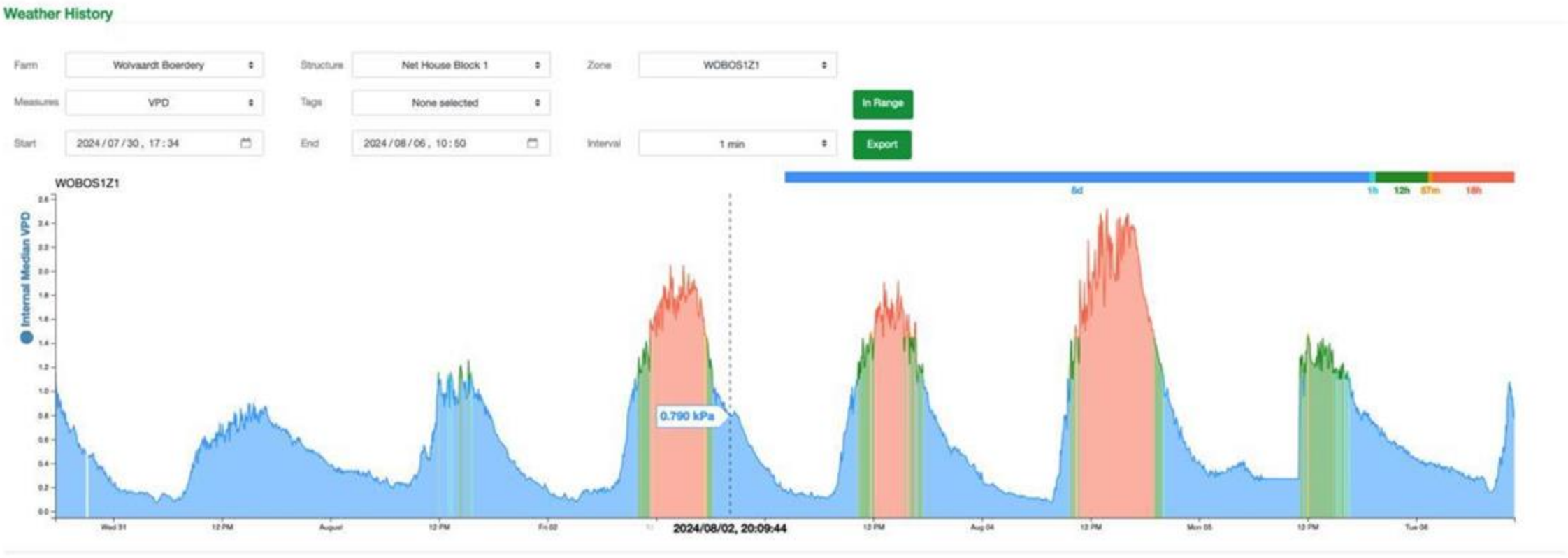
SpaceX
Last Seen: Sun, Mar 23, 25 10:36 (SAST)

Internal Temp	21.9 °C
Internal Humidity	79 % RH
External Temp	24.2 °C
External Humidity	64 % RH

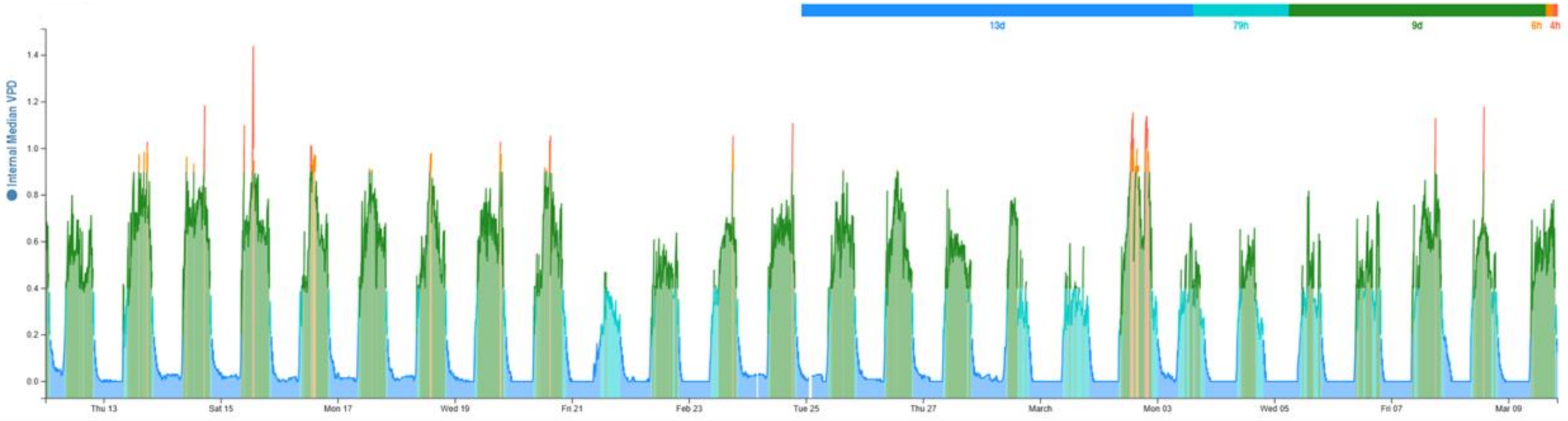
Visual cues


Weather Forecast
Farm
Cape Garden Vreedendal
Last updated: Sun, Mar 23, 25 @00:01 (SAST)
Day details: Sun 23 Mar
Current Temp 24.66°C
Pressure 1014
Humidity 48
Clouds 0
Probability of Precipitation 9%
Precipitation Volume 0 mm
Dew Point 12.56
UVI 9.76
8 day forecast
Sun 23 Mar
clear sky
26.8°C 18.26°C
26.39 km/h WSW
Mon 24 Mar
broken clouds
24.38°C 16.58°C
22.68 km/h WSW
Tue 25 Mar
clear sky
23.43°C 15.54°C
23.11 km/h SW
Wed 26 Mar
clear sky
27.08°C 16.5°C
25.49 km/h SSW
Thu 27 Mar
clear sky
30.51°C 17.88°C
28.69 km/h SW
Fri 28 Mar
few clouds
32.39°C 17.4°C
25.38 km/h SW
Sat 29 Mar
clear sky
34.83°C 20.65°C
25.7 km/h SW
Sun 30 Mar
clear sky
28.42°C 18.27°C
20.88 km/h SW

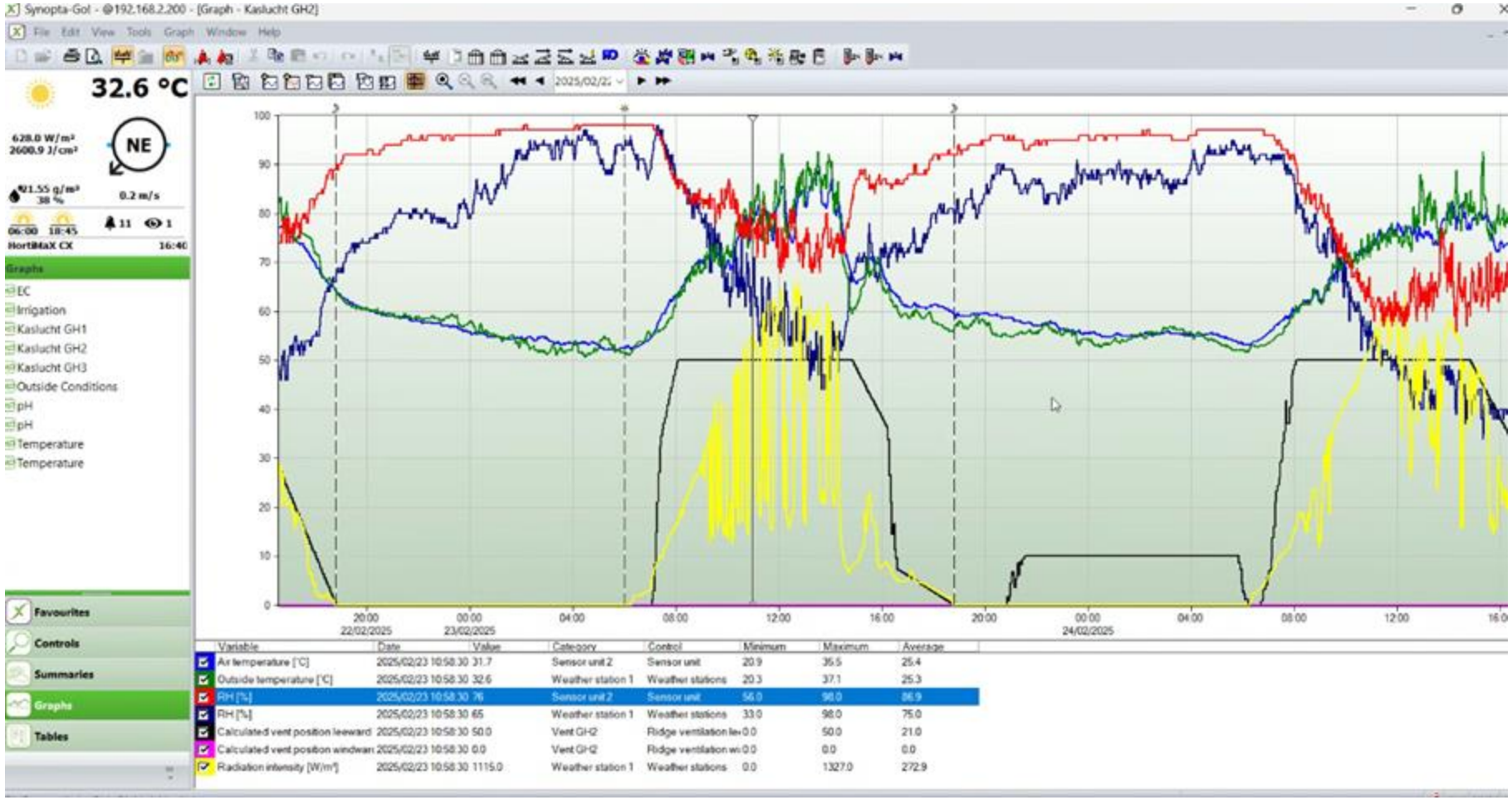
Corrective action of Automation



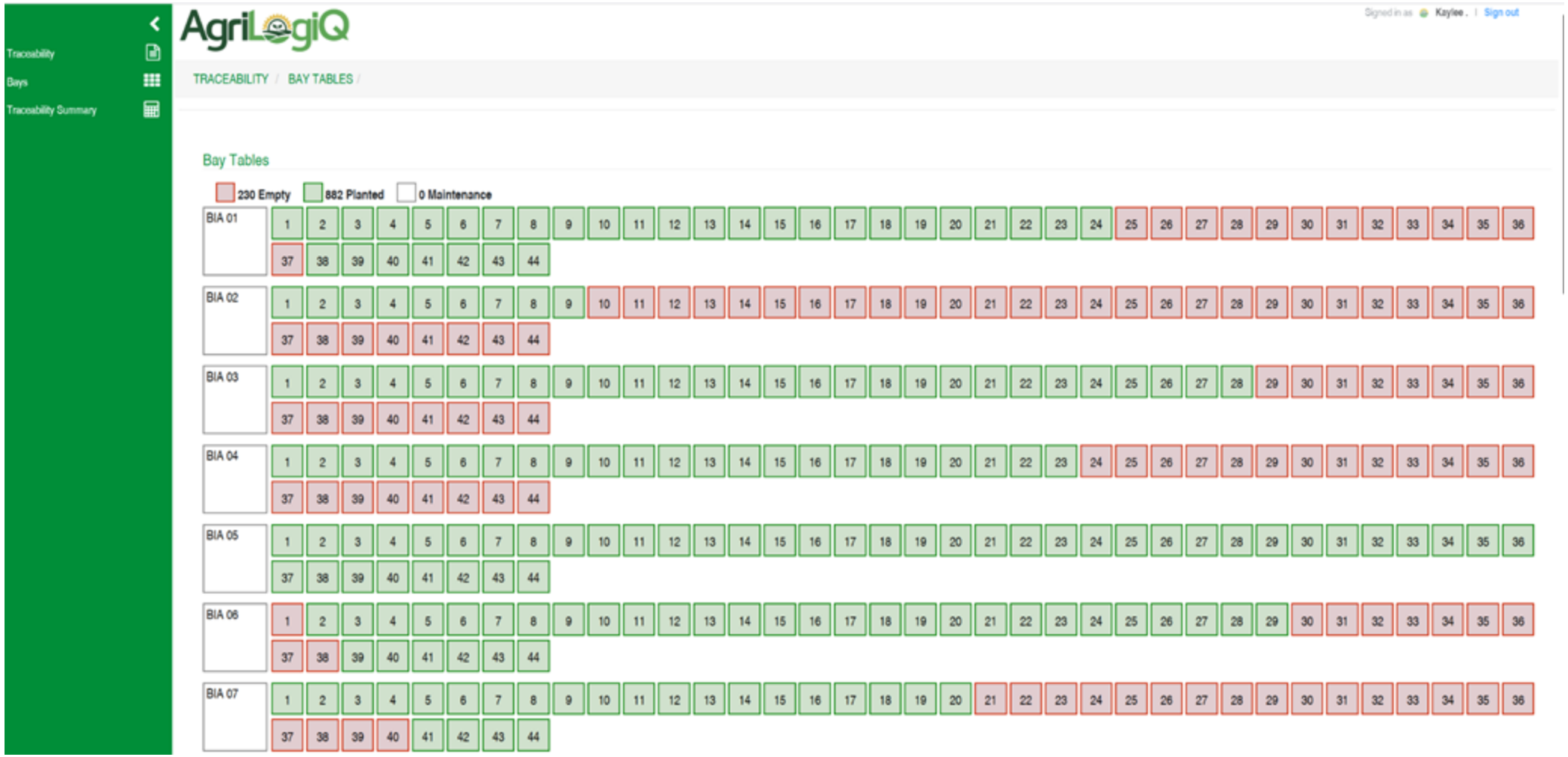
VPD In Range - Pad Fan + Mist



Careful not to over complicate



Mapping


Traceability
Days
Traceability Summary
AgriLogiQ
Signed in as Kaylee . | Sign out
TRACEABILITY / BAY TABLES /
Bay Tables
230 Empty
882 Planted
0 Maintenance
BIA 01
BIA 02
BIA 03
BIA 04
BIA 05
BIA 06
BIA 07

What, where, when, how

Traceability

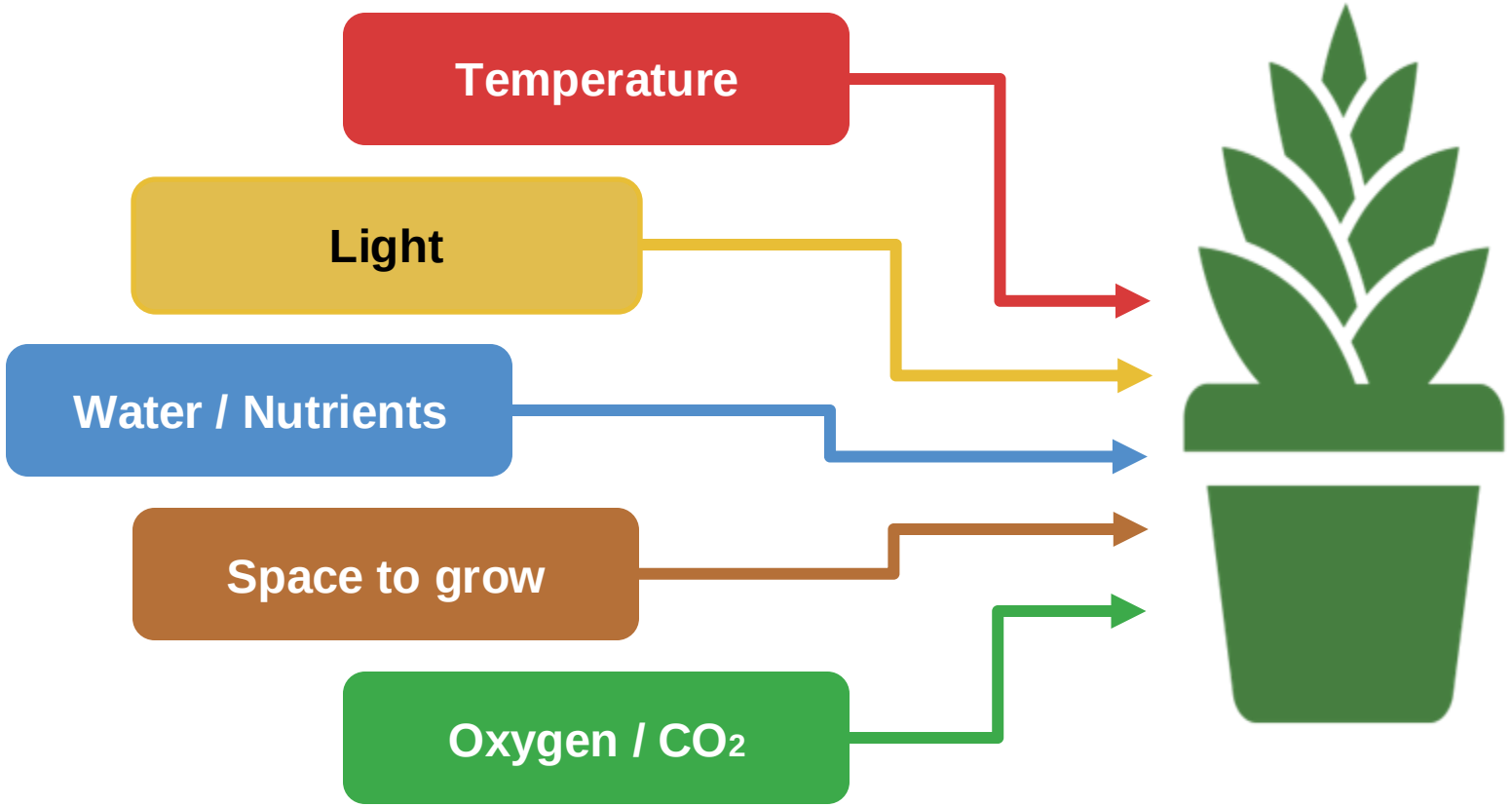
Configure Suppliers | Configure Products | Export | Show Archive | Add +

Category	Supplier	Type	Variety	Current Status	Bay	Table	To	Heads	Day	Sow Week	Plant Week	Priority	Harvest Week	PZH	SZH	Destroy	Action
All	All	All	All	All	All	All	All	369896	All	All	All	All	All				
Fancies		Green Cos	Rafael	To Be Planted	CF B4	14	15	736 / 736	Mon		1	1	6	5	6		Edit
Fancies		Green Oak	Divisor	Planted	CF B2	7	9	1104		1	4		9	5	8		Edit
Fancies		Radicchio	Glove	Planted	BIA 10	38	39	736		1	4		12	8	11		Edit
Trials	HZ	Iceberg	Green Moon	Planted	CF 10	13	15	1104		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	BIA 06	2	29	10304		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	BIA 06	39	44	2208		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	BIA 09	22	44	8464		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	BIA 10	37	37	184		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	BIA 10	40	40	184		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	BIA 10	43	43	368		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	CF 04	40	40	368		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	CF 05	39	39	368		1	4		9	5	8		Edit
Iceberg		Iceberg	Mascherano	Planted	CF 10	16	18	1104		1	4		9	5	8		Edit
Iceberg		Iceberg	Quetglas	Planted	CF B3	34	35	736		1	4		9	5	8		Edit
Fancies		Green Cos	Rafael	Planted	CF B4	9	12	2944		1	4		9	5	8		Edit
Iceberg		Iceberg	Santarinas	Planted	BIA 03	5	28	8832		1	4		9	5	8		Edit
Iceberg		Iceberg	Santarinas	Planted	CF 02	20	22	1104		1	4		9	5	8		Edit

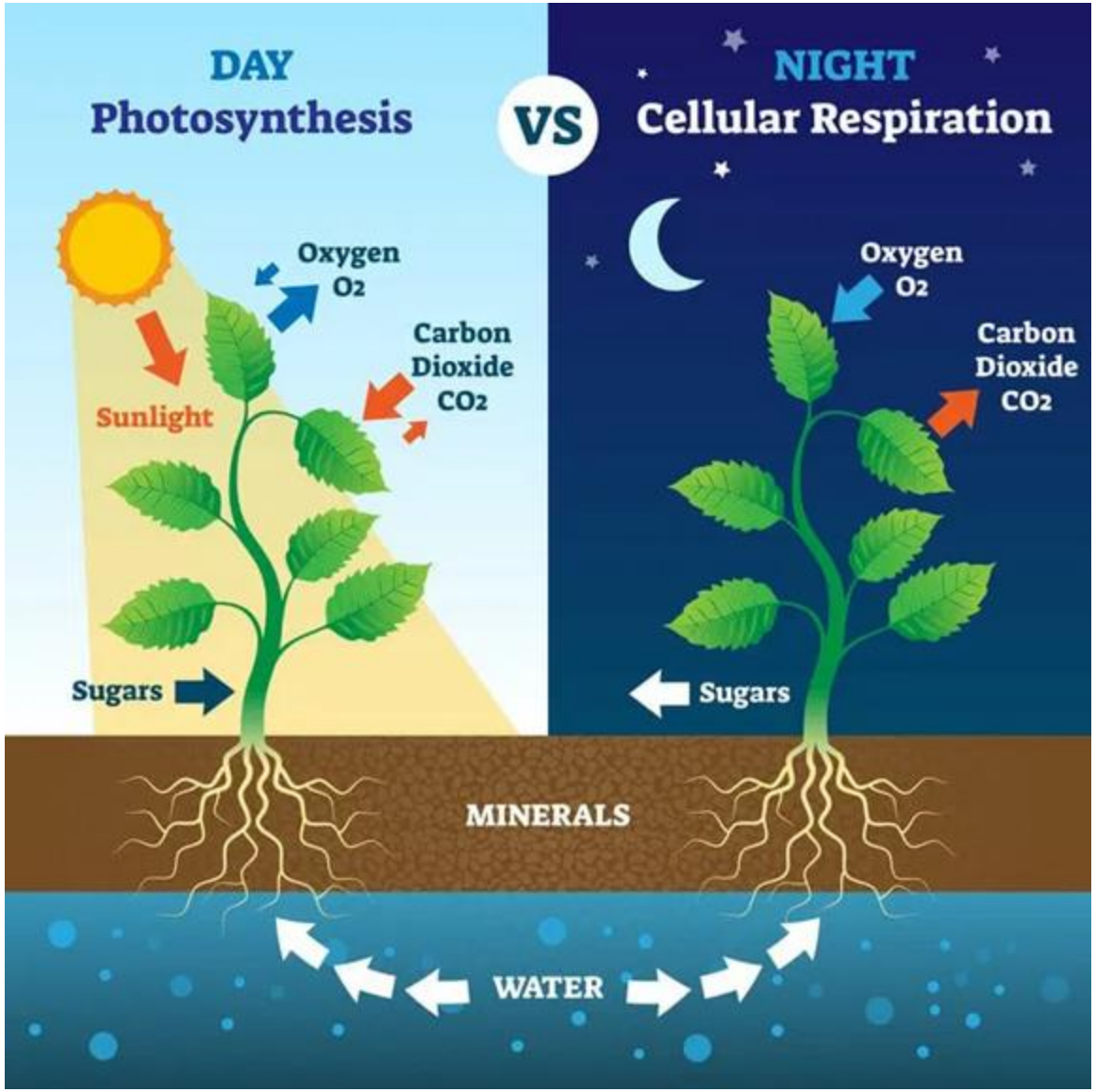
Crop Steering

Driving them where it matters

Used to rely on Seasons



Photosynthesis & Respiration



IF WE UNDERSTAND THE PLANT CYCLES, CLIMATE REQUIREMENTS AND ENERGY NEEDS, WE CAN START AUTOMATING FOR THEM.

In closing

It’s a production line!

- monitor, mange, improve - mindset shift from farming

NOT THE LAW

- Generalized, different plants do different things
- BUT!!! All must go through germination, vegetation and reproductive growth cycles and that is what this is about!

Thank you

Connect for more info

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+27 65 926 9894