

Column heading	Parameter description	Unit	Interval	Dataset name	Type	Comments	Data collection
Tout	outside temperature	°C	5 min	meteo	raw data		Weather station
Rhout	outside Relative Humidity	%	5 min	meteo	raw data		Weather station
Iglob	radiation	W/m2	5 min	meteo	raw data		Weather station
Windsp	wind speed	m/s	5 min	meteo	raw data		Weather station
RadSum	radiation sum	l/cm2	5 min	meteo	raw data		Weather station
Winddir	wind direction	0-360°	5 min	meteo	raw data		Weather station
Rain	rain (status 1=rain, 0=dry)	1=rain, 0=dry	5 min	meteo	raw data		Weather station
PARout	PAR weather measurement	μmol/m ² /s	5 min	meteo	raw data		Weather station
Pyrgeo	heat emission: pyrgeometer	W/m2	5 min	meteo	raw data		Weather station
AbsHumOut	absolute humidity content outside air	g/m3	5 min	meteo	raw data		Weather station
Time	Timestamp 5 minute (Excel format)						Weather station

Tair	Air temperature greenhouse	°C	5 min	Ghclimate	raw data		Measuring box
RHum	Relative humidity greenhouse	%	5 min	Ghclimate	raw data		Measuring box
CO2air	CO2 greenhouse	ppm	5 min	Ghclimate	raw data		Measuring box
HumDef	Humidity deficit	g/m3	5 min	Ghclimate	raw data		Process computer
VentLee	Vent lee	% (0-100)	5 min	Ghclimate	raw data		Process computer
Ventwind	Vent wind	% (0-100)	5 min	Ghclimate	raw data		Process computer
AssimLight	Assimilation lighting	% (0-100)	5 min	Ghclimate	raw data		Process computer
EnScr	Energy curtain	% (0-100)	5 min	Ghclimate	raw data		Process computer
BlackScr	Black-out curtain	% (0-100)	5 min	Ghclimate	raw data		Process computer
PipeLow	Lower circuit Temperature	°C	5 min	Ghclimate	raw data		Process computer
PipeGrow	Growth circuit Temperature	°C	5 min	Ghclimate	raw data		Process computer
GHtime	Timestamp 5 minute (Excel format)						Process computer

Water	Irrigation water supplied	L/m2	Daily	Irrigation	Processed	Time between last and next irrigation turn	
Drain	Drainage water	L/m2	Daily	Irrigation	Processed		
pH_Drain	pH of drainage water	[-]	Daily	Irrigation	Processed	Daily averages on 5 minute data	pH Probes
EC_Drain	EC of drainage water	dS/m	Daily	Irrigation	Processed	Daily averages on 5 minute data	EC Probes
Time	Timestamp 1 day (Excel format)						

CO2_VIP	CO2 setpoint	ppm	5 min	Vip	raw data		Process computer
HumDef_Vip	humidity deficit setpoint	g/kg	5 min	Vip	raw data		Process computer
MinPipeLow_Vip	net pipe minimum temperature setpoint	°C	5 min	Vip	raw data		Process computer
MinPipeGrow_Vip	crop pipe minimum temperature setpoint	°C	5 min	Vip	raw data		Process computer
HeatTemp_VIP	heating temperature setpoint	°C	5 min	Vip	raw data		Process computer
VentLeew_VIP	ventilation temperature lee side setpoint	°C	5 min	Vip	raw data		Process computer
VentLeewMin_VIP	lee side window position minimum setpoint	%	5 min	Vip	raw data		Process computer
VentWind_VIP	ventilation temperature wind side setpoint	°C	5 min	Vip	raw data		Process computer
WaterSupInt_VIP	water supply interval time setpoint	minutes	5 min	Vip	raw data		Process computer
Time	Timestamp 5 minute (Excel format)						

Heating_Eenrgy	Heating energy consumption (rail+ grow pipes)	KWh/m2 day	Daily	ResourceConsumption	Processed	Energy sum from rail and growing pipe	
Electricity_Lamps	Electricity consumption (artificial light)	KWh/m2 day	Daily	ResourceConsumption	Processed	From cumulative number of hours the lights were on, lamp efficiency (1.6μmol/J) and lamp intensity (187 μmol/m2 s)	
CO2_dosage	CO2 consumption	Kg/m2 day	Daily	ResourceConsumption	Processed	From cumulative number of hours the valve was open and dosing capacity (0.0128 Kg/h m2)	
net_water	Water use (net of drainage)	L/m2 day	Daily	ResourceConsumption	Processed	Irrigation minus Drain	
Labour	Labour hours for crop management and harvest	hours/day	Daily	ResourceConsumption	Processed	Number of hours per day per m2 corrected by a factor (0.42) to take into account the small-scale experimental greenhouse	
Time	Timestamp 1 day (Excel format)						

Prod_value_cum	Production value (fruit number multiplied by price)	€	Daily	Production	Processed	Fruit number * cucumber price	
ProdA_cum	Cumulative Production cucumber category A	Kg/m2	Daily	Production	Processed	Cumulative sum	Manual registration
ProdB_cum	Cumulative Production cucumber category B	Kg/m2	Daily	Production	Processed	Cumulative sum	Manual registration
ProdA_num	Cumulative number of cucumber category A	number of fruits	Daily	Production	Processed	Cumulative number sum	Manual registration
ProdB_num	Cumulative number of cucumber category B	number of fruits	Daily	Production	Processed	Cumulative number sum	Manual registration
Total_Prod_cum	Total cumulative production	Kg/m2	Daily	Production	Processed	Sum class A and class B	Manual registration
Time	Timestamp 1 day (Excel format)						

Fruit maintained	% of fruit maintained on internode	%	week	Crop Management	raw		
Leaves maintained	% of leaves maintained on internode	%	week	Crop Management	raw		
Stem_Elong	stem-elongation	cm/week	week	Crop Management	raw		Manual registration
FruitGrw	fruit development time	days/fruit	week	Crop Management	raw		Manual registration
LeafFormRate	Leaf formation rate	n_leaves/stem week	week	Crop Management	raw		Manual registration
N_leaves	Cumulative number of leaves	n_leaves/stem	week	Crop Management	raw		Manual registration
Weeks	Timestamp week number (year 2018)						