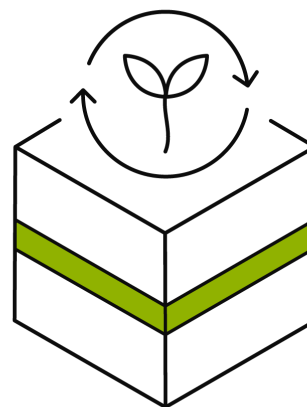


# Biomass Gain Package



Aranet Horticulture Packages offers a comprehensive, ready-to-use wireless sensor solution tailored for horticultural applications. This package includes the Aranet base station and a selection of wireless sensors designed to monitor key environmental parameters in greenhouses or outdoor cultivation settings. It comes pre-configured, ready to use, and includes 6 months of free Aranet Cloud PRO service.

## Product numbers

Product number	Radio band	To be used in
TDSPHP05	EU868	European Union
TDSPHPU5	US920	United States of America, Canada, South America, Australia, New Zealand
Not available	AS923	BRN, KHM, HKG, IDN, LAO, TWN, THA, VNM, MYS, SGP
Not available	JP923	Japan
Not available	KR923	South Korea

## Package contains

Product number	Quantity	Product name
TDSB0B*3	1	PRO Plus LTE base station
TDAP0E*3	1	PoE injector for base station power supply
TDSPT8*2	6	T/RH IP67 sensor
TDSPT5*9	2	T/RH sensor with radiation shield
TDSPSV*2.050	4	Weight sensor with 50 kg load cell

- Package is pre-configured and ready for use, with sensors paired to the base station and labeled for easy identification. Package also includes 6 months of free *Aranet Cloud PRO service*, redeemable via email to Aranet sales support ([sales\\_support@aranet.com](mailto:sales_support@aranet.com)).
- Product number designations include the symbol “\*” to signify multiple product numbers, which, depending on the region of use, have either 0 or U in place of the asterisk. Refer to the relevant product datasheets for more information.

## Pre-configuration settings

### Sensor pre-configuration

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Sensor measurement interval	1 min
Sensor labeling pattern	<type> <number>, e.g. <i>T/RH 1</i> , <i>T/RH 2</i> , <i>VWC 1</i>

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- Sensors are labeled both physically, with tags on the devices themselves, and digitally, with matching names configured in the base station.

### Base station pre-configuration

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Wi-Fi network settings	Access point mode (for configuration using the WebGUI)
Ethernet network settings	Enabled, with DHCP
Mobile LTE network settings	Disabled, no SIM card inserted
Defined users	Default root user only

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- To access the base station configuration WebGUI, use the Wi-Fi access point mode with the login credentials (root user password) provided on the base station label. For enhanced security, it is strongly recommended to change the default login credentials during the initial setup.
- To enable LTE network connectivity, insert the SIM card and access the WebGUI to activate the LTE network and to enter the required credentials as provided by your mobile network operator.
- If you wish to adjust these pre-configured settings, please refer to the base station user guide. It provides instructions on changing base station settings such as re-pairing sensors to optimize battery life through longer measurement intervals or updating network settings.

## Use case

Continuous weight measurements provide real-time monitoring of various plant growth factors, including biomass increase, plant weight, water addition, and drainage weight. These measurements enable precise, long-term tracking of growth progress up to harvest and offer feedback on how plants interact with their environment.



## Plant growth and health monitoring

- **Growth tracking.** Weight of the plant is an indicator of its overall health and growth progress. Consistent weight gain suggests the plant is developing well, while stagnation or weight loss could indicate stress, disease, or inadequate environmental conditions.

- **Data-driven decisions.** By linking plant weight data with ambient temperature and humidity readings, growers can identify environmental conditions that promote optimal growth. This enables fine-tuning of heating, cooling, and ventilation systems to create the best possible environment for plant development.

### Accurate irrigation control

- **Preventing over-watering or under-watering.** Optimize irrigation schedules based on continuous weight measurements and biomass gain to ensure plants receive the right amount of water, reducing the risk of diseases caused by over-watering.
- **Detecting water loss.** Plants lose water through transpiration, and changes in weight provide an accurate indication of how much water the plant has used.

### Taking care of growth conditions

- **Growth control.** By correlating plant weight with temperature data, growers can adjust greenhouse temperatures to reduce water loss or increase irrigation, promoting healthier growth. Detect hotspots and address uneven ventilation to support optimal plant development.

### Benefits of using the Aranet ecosystem

- All your data in one platform—available anytime, anywhere.
- Easy to add any other Aranet PRO series sensor or use Aranet transmitters to gain data from third-party sensors for the Aranet platform.
- Integrated with third-party control systems using MQTT, Modbus TCP/IP, and BACnet IP protocols, or use the Cloud API to integrate with any web- or cloud-based IT system.