

Chemical, Food Testing, Pharmaceutical / R&D, Service, Maintenance

Manage soil moisture

Constantly monitor soil moisture conditions to manage the growth of agricultural crops

Moisture content affects the ability of soil to absorb water that is indispensable in fostering plant and vegetation growth. Identifying the level of moisture in the soil is one of the prerequisites for quantifying the amount of watering needed to optimize agricultural fields or greenhouses. Without this knowledge, there can be too little water that can lead to vegetation distress, or too much water that can drown the crops. However, the amount of water needed can vary by day or even by hour, depending on the stage of the crop, the temperature and humidity, future weather forecasts, time of day and of course the current moisture level of the soil, so following a set schedule is not feasible.

A permanent setup of compact data loggers with signal input from soil sensors can be used to constantly monitor soil moisture and provide a quick and efficient way to collect moisture data without taking the loggers offline. By being able to identify the moisture level before it is too late, agricultural producers can optimize their farms and greenhouses and make more efficient use of water resources.

■ Highlights

- Measure changes in the soil moisture in the field or greenhouses using a soil moisture sensor and an LR5041, LR5042, or LR5043 Voltage Logger (choose from 3 models according to the voltage input level – refer to the output voltage of the sensor).
- Transfer measured data to a PC and present data as graphs to see trends (use the LR5091 Communication Adapter or LR5092 Data Collector for data transfer).
- Pre-heat function in voltage logger lets you record over a long period thanks to low power consumption.
- Customers can set up their own waterproof case for the compact loggers if required.
- Pair with the LR5001 Humidity/Temperature Data Logger to simultaneously measure temperature and humidity in order to see the correlation and conduct further analysis.

Voltage Logger + Waterproof Case

HUMIDITY LOGGER

Soil moisture sensor

DATA COLLECTOR LR5092

COMMUNICATION ADAPTER LR5091

- Use either COMMUNICATION ADAPTER LR5091 or DATA COLLECTOR LR5092-20 to transfer data from a LR5000 series Logger to a PC. A PC application software is bundled with both LR5091 and LR5092-20.

Products used

HUMIDITY LOGGER LR5001

VOLTAGE LOGGER LR5041(50mV DC), LR5042(5V DC), LR5043(50V DC)

COMMUNICATION ADAPTER LR5091

DATA COLLECTOR LR5092

※Customers provide their own soil moisture sensor and a waterproof case with the appropriate specifications as required.

Information valid as of December 2017. Specifications are subject to change and revision without notice.