



NimbeLink Soil Monitor Kit

Remote Moisture Monitoring for Irrigation Management

Product Description

Success in agriculture is all about managing inputs to maximize results, and water is a key input. The water content of soil influences planting, nutrient uptake, plant growth and yield. [See University of Nebraska article on Irrigation Management]

Accurate measurement and management of soil moisture can help reduce costs and maximize returns, and while traditional “hands-on” methods for judging moisture content of soil can be useful for measuring surface moisture, they don’t tell you what’s going on beneath the surface. And they require that you actually visit the site to know what’s going on there, making it difficult to keep up with variations from day to day and location to location.

The NimbeLink Soil Moisture Monitoring System is complete, battery-powered system that can be installed in the field in less than an hour. Once in place, it monitors moisture levels 24/7 at the critical one-foot, two-foot, and three-foot depths, along with soil temperature. The system uploads moisture and temperature data at regular intervals, via cellular data signal, to a cloud-based dashboard that can be accessed from any computer or mobile device to help make informed, accurate irrigation plans.

Deployed at a rate of one or two per 40-acre plot with a center-pivot irrigation system, it can help determine when and where to irrigate to reduce water use and maximize yield.

Soil Monitor Kit Contents

1 TextAlert transmitter

3 Watermark 200SS Sensors

1 Temperature Probe

1 Long-Life Battery

How it Works

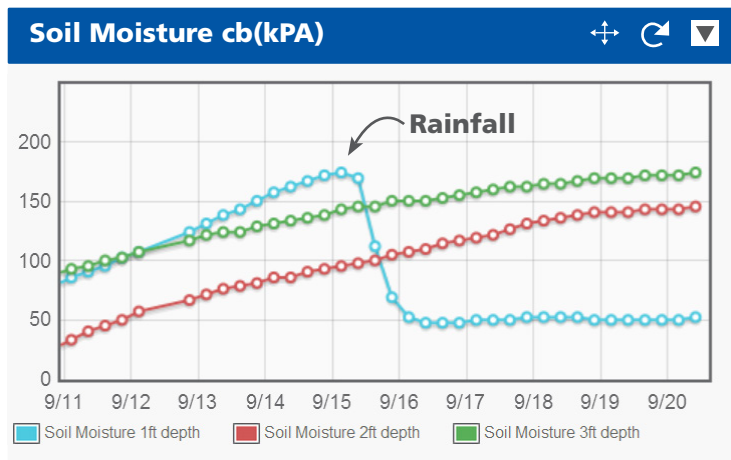
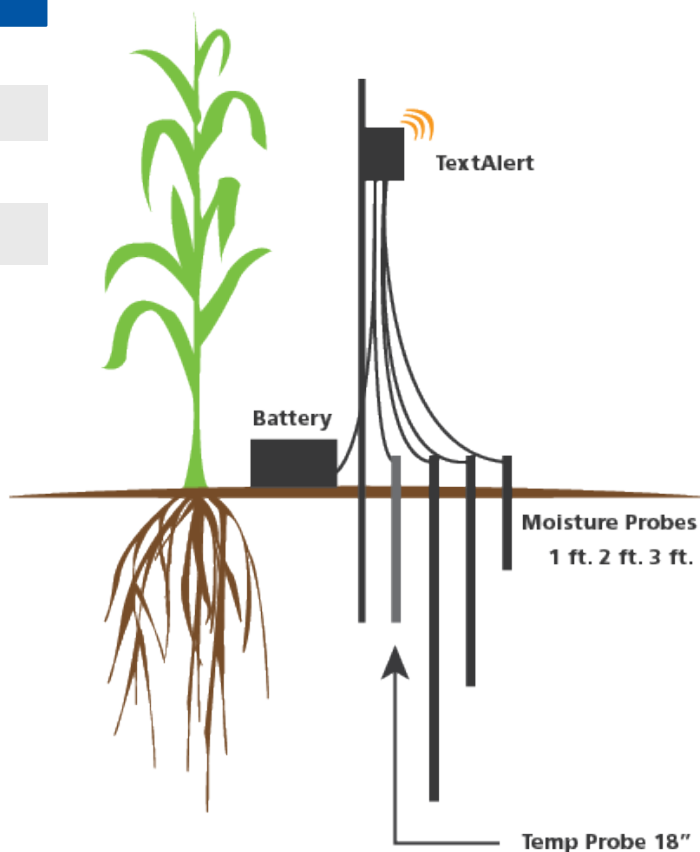
The Soil Monitoring Kit runs off the supplied battery, reads the temperature probe and three moisture probes four times a day, and sends the data to the cloud using a wireless cellular connection. Between readings, the device sleeps to maximize battery life. The device alerts you via text message if the battery needs to be replaced.

How to Measure

The Soil Monitoring Kit plots the “matric potential”, which is the amount of energy required for a plant to extract water from the soil. A low value indicates very moist conditions, a high value indicates very dry conditions. The University of Nebraska publishes recommended watering thresholds targeting different soil types and crops based on matric potential values.

The chart to the right shows real data from a corn field in central Minnesota. Recent rainfall moistened the 1ft depth, but clearly did not help the roots that are in the over-dry soil at 2ft and 3ft depth.

Soil Monitor Kit Diagram



Part Number

NL-SMK-B-RI

Description

Soil monitoring kit



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