

Water for Profit

SOIL MOISTURE MONITORING DEVICE TUBE INSTALLATION



WATERFORPROFIT

Many soil moisture monitoring devices require an access tube to be installed. This allows the device to measure the soil moisture while being protected from direct contact with the soil.

Positioning of the Access Tube

Position the tube in an area that is representative of the wetted area and the plant's root system. There is less root and irrigation activity outside the wetted area. Having a tube installed here will not give a good representation of how much water the plants are using and require. When positioning tubes under sprinkler systems it may be necessary to put some catch cans out to determine where most of the water is landing. The access tube should be installed in this area. In drip systems access tubes are generally positioned in the wetted area halfway between a plant and an emitter. Other issues influencing tube placement include safety from machinery and ease of access for measurement.

Installation of Access Tube

Tubes can either be installed by a dry or wet (slurry) method. The wet method can be a lot easier and ensures a good contact between the tube surface and the soil. If air gaps occur between the tube and the soil, faulty or inaccurate readings will occur. The slurry method ensures that there are no air gaps. The slurry method cannot be used in sandy soils.

The Wet (Slurry) Method

The auger tip diameter needs to be slightly bigger than the access tube diameter. Auger a hole at the site you have chosen for the access tube. The hole should be deep enough to accept the entire length of probe leaving only the cap protruding from the surface. It should be slightly deeper than the depth of the tube to allow for slurry build-up when installing the tube. Once the hole is augered make slurry from the soil dug from the hole. This ensures that the soil in the slurry is similar to the soil surrounding the tube. You may need bit more soil than you auger from the hole. Use soil from the surface.

Sieve the soil used in the slurry to remove any large objects such as stones and sticks, and to aid in smooth slurry being made. Add water to the sieved soil until a slurry is formed. If the slurry is too

dry it will not push up the sides of the tube. If it is too wet it will lead to air gaps around the tube as the slurry dries out.

Once you have the slurry made fill the hole one third full. Push the access tube into the hole immediately after pouring the slurry until the slurry bubbles out the top. Wiggle the tube to assist in air removal. Push the tube in to the desired depth.

The Dry Method

This method is used in sandy soils where slurries cannot be made. Use the auger to dig a hole in the soil to the desired depth. The auger tip diameter should be fractionally smaller than the access tube diameter. This allows for a snug fit as the tube is installed. It is crucial to dig a straight hole. If the hole is crooked the tube will not push in properly. Once the hole is dug, place the spacer provided from the soil moisture monitoring device manufacturer into the top of the access tube. Use a mallet or sledge hammer to bang the spacer, pushing the tube into the ground until it reaches the desired depth.

For more details contact Growcom on 07 3620 3844.

Disclaimer: This information is provided as a reference tool only. Seek professional advice for irrigation specifics.

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