IRRIGATION & WATER TECHNOLOGIES

TECH GUIDE

DIY Home Soil Capillary Wetting Test

A well planned irrigation system will ensure you save more water and money.

Regardless of your final choice of irrigation system it is important to check the condition of your soil. Testing the capillary lift of your soil is very simple to do and will help to ensure maximum benefit is gained from Subsurface Textile Irrigation.

It is important to ensure soil is ready for irrigation, regardless of your choice of system. Testing soil capillary action will also help to ensure maximum benefit is gained from subsurface textile irrigation, thereby saving more water ultimately more money.

The height that water will lift in a dry soil by capillary action is a good guide to how wide the wetting pattern will spread from a KISSS Subsurface Textile Irrigation line. This measurement can be used to check whether a soil is suitable for KISSS irrigation.

The potential capillary lift generated by a dry soil can be determined quite simply using common household objects. The following method was devised as a Do It Yourself test for keen gardeners.

Collecting a sample of soil

Note: *this guide is suitable for residential use only. For commercial use a proper Soil Capillary Wetting Test must be carried out to ensure the success of the installation.*

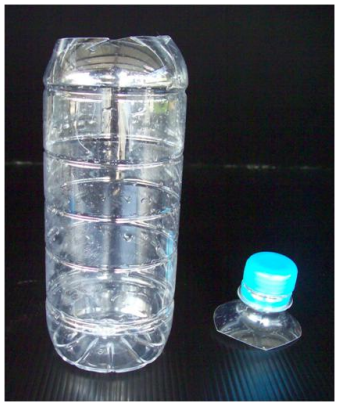
The test should be done on the soil that will be above the KISSS line. For most residential applications, this will be the top 150mm of soil.

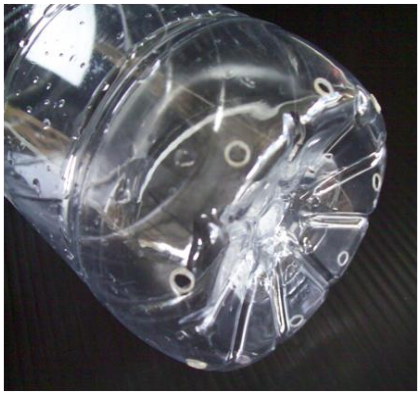
Dig a number of holes across the area and combine the soil to obtain an average sample. One litre of soil is enough for the test. Remove any rocks or plant residues including roots and spread the soil on a sheet of plastic to dry in the sun.

Irrigation & Water Technologies Pty. Ltd.
Phone: 1300 761 781 International: +61 2 9679 0111
Fax: +61 2 9679 0122 ABN: 31 099554 613 Web: www.iwtech.com.au
344 Annangrove Road, Rouse Hill NSW 2155 Australia PO Box 3666 Rouse Hill NSW 2155 Australia
KISSS SUB-SURFACE TEXTILE IRRIGATION

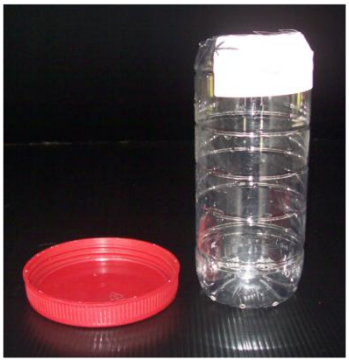
Test method

1. Cut the top off a clear plastic bottle and make a few holes in its base.

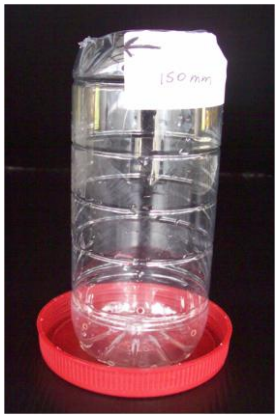




2. Fill the bottle with dry soil. You will need to shake or drop the container on a solid surface to pack the soil down.



3. Stand the bottle in a shallow water filled container, a plastic lid from a large jar or a saucer works well. Place a mark on the outside of the bottle 150mm above the water level in the plastic lid.



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4. Leave bottle standing in the shallow water filled container for 24 hours.

5. Top up the water in the lid as it is absorbed by the soil. The demand for water will be greatest in the first few hours and then slow down. Top the saucer up before you go to bed and again when you wake in the morning.

6. Measure the height of the wetting pattern above the water level after 24 hours

Interpretation of the test

If the wetting pattern fails to reach the 150mm mark then the soil is unsuitable for subsurface textile irrigation. If it falls a long way short, the soil is probably water repellent.

Poor soils may be amended to improve their wetting characteristics. This will be necessary if you want to use water effectively regardless of the method of irrigation. Seek advice from your local soil supplier.

If the wetting pattern climbs 150mm above the level of water in the saucer then the soil has suitable capillary wetting properties for KISSS irrigation.

Consult your local distributor or purchase on line.

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