

## 3-in-1 Garden Meter model 01413



### Getting Started

- Remove any stones, leaves, twigs or other debris near the test area.
- Insert the probe to a test depth of 5 in (12.7 cm).
- Leave the probe inserted for about 1 minute for the meter to stabilize its readings.
- Repeat these steps in an additional test area to confirm the accuracy of your readings.

### Soil Types and Watering Information

#### Loam Soil:

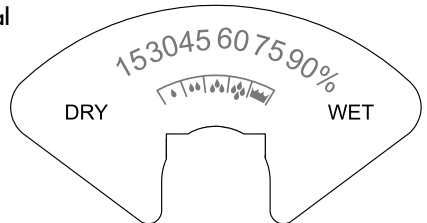
Very porous and retains moisture well. This is the optimal soil type and can be watered normally.

#### Sandy Soil:

Extremely porous and drains quickly. Water slowly to saturate soil root zones.

#### Clay Soil:

Holds more water, but is slow to absorb and release. Do not water faster than the soil can absorb it.







**SAVE THIS MANUAL FOR FUTURE REFERENCE.**



# General Soil Moisture Information & Tips

- If you have sandy or very heavy clay soils and would like to improve its water retention, add compost or organic matter to your soil.
- Adding sand to clay soils, or clay to sandy soils will create a cement-like soil, making water retention worse.
- One inch of water per week is adequate for most plants. You may use a rain gauge to assist (not included; sold separately).





## Recommended Soil Moisture Levels

The plants listed in this guide represent commonly found species. Consult a local horticulture professional for more specific details on plants not found on this list.  
**NOTE:** All vegetables require soil moisture between 41% - 80%.





	<b>TOLERATES EXTREMELY DRY SOIL</b>
	<b>TOLERATES DRY / WELL DRAINED SOIL</b>
	<b>TOLERATES MOIST SOIL</b>
	<b>TOLERATES WET SOIL</b>

Flowers	 0% - 20%	 21% - 40%	 41% - 60%	 61% - 80%
Agave	•	•		
Aster		•		
Astilbe		•		
Big Blue Stem		•		
Bleeding Heart		•	•	
Butterfly Weed			•	
Cactus	•			
Catmint				
Christmas Fern				
Coneflower		•		
Daffodil		•		
Dalia			•	
Daylily			•	
Gaillardia		•		
Heaths/Heathers				
Hellebores			•	
Hosta			•	
Hyssop		•		
Iris		•		
Ironweed			•	
Jack In Pulpits			•	
Joe-Pye Weed			•	
Lavender		•		
Lemon Balm		•		
Lily			•	
Lobelia				•
Lupine				
Marigold		•		
Marsh Marigold				•
May Apple			•	
Meadow Rue			•	
Nonarda				
Ornamental Grasses		•		
Penstemon		•		
Peony			•	
Petunia				
Poppy (general)			•	
Purple Coneflower			•	
Queen of the Prairie			•	
Red Milkweed			•	
Sedges			•	•
Sedum	•	•		
Sod/Turfgrass				
Pansy			•	
Tulip			•	
Violet			•	
Yarrow	•			
Yucca	•			
Zinnia		•		

Trees & Shrubs	 0% - 20%	 21% - 40%	 41% - 60%	 61% - 80%
Alpine Currant		•		
American Filbert		•		
American Holly		•	•	
Amur Privet		•		
Arborvitae		•		
Azaleas			•	
Bald Cypress				•
Barberry		•		
Bayberry			•	
Birch			•	
Black Tupelo		•		
Chinese Juniper		•		
Clematis			•	
Common Boxwood			•	
Common Elderberry		•		
Common Lilac		•		
Cotoneaster			•	
Crab Apple		•		
Crape Myrtle		•		
Dawn Redwood			•	•
Dogwood			•	•
Eastern Red Cedar		•		
Elderberry		•	•	•
Elm		•	•	
Frazier Fir		•		
Gardenia		•		
Ginkgo		•		
Hawthorn		•		
Holly		•		
Honey Locust		•		
Horse Chestnut		•		
Hydragea			•	
Juniper		•		
Lilac		•		
Maple (general)		•		
Mockorange		•		
New Jersey Tea		•		
Oaks (general)		•		
Ohio Buckeye		•		
Potentilla	•	•		
Red Cedar			•	
Red Twig Dogwood			•	
Rhodendron			•	
Roses		•		
Rugosa rose	•	•		
Saucer magnolia		•		
Serviceberry		•	•	
Silver Maple		•		

Trees & Shrubs <small>continued</small>	 0% - 20%	 21% - 40%	 41% - 60%	 61% - 80%
Spruce		•		
Sugar Maple		•		
Swamp White Oak			•	
Sweetshrub			•	
Tamarac/Larch			•	•
White Fir		•		
White Pine		•		
Willow		•		

Fruits	 0% - 20%	 21% - 40%	 41% - 60%	 61% - 80%
Apple		•	•	•
Grapes		•	•	•
Fig		•	•	•
Pear		•	•	•
Peach		•	•	•
Pear		•	•	•
Raspberry		•	•	•
Strawberry		•	•	•
Blackberry		•	•	•
Blueberry		•	•	•
Cranberry				•

# General Soil pH Information & Tips

The pH of soil directly affects nutrient availability to plants. Plants thrive in different soil pH ranges, but readings outside 4 to 8 are uncommon. Some plant species are tolerant of wider pH ranges, but most prefer a neutral soil with pH levels falling within the 6 to 7 range.

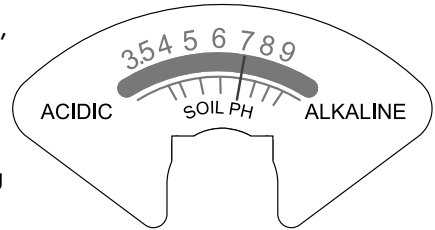
7.1-8.0	ALKALINE SOIL
6.1-7.0	NEUTRAL SOIL
4.5-6.0	LOW ACID SOIL
3.5-4.4	ACIDIC SOIL

## Increasing Soil pH

A common practice is to apply finely ground agricultural limestone. Depending on your soil type, different amounts of limestone will be required to adjust the soil pH value.

## Decreasing Soil pH

Adding organic material such as highly acidic sphagnum peat moss will lower soil pH. Introducing elemental sulfur (90 or 99% sulfur material) or acidifying fertilizers such as ammonium sulfate with repeated use can also reduce soil pH.



## Recommended Soil pH Ranges

The plants listed in this guide represent commonly found species. Consult a local horticulture professional for more specific details on plants not found on this list.

Flowers	PH			
	3.5 - 4.4	4.5 - 6.0	6.1 - 7.0	7.1 - 8.0
Agave			•	
Aster			•	
Astilbe			•	
Big Blue Stem			•	
Bleeding Heart			•	
Butterfly Weed			•	
Cactus		•		
Catmint			•	
Christmas Fern			•	
Coneflower			•	
Daffodil			•	
Dalia			•	
Daylily			•	
Gaillardia			•	
Heaths/Heathers		•		
Hellebores			•	
Hosta			•	•
Hyssop			•	
Iris			•	
Ironweed			•	
Jack In Pulpits			•	
Joe-Pye Weed			•	
Lavendar			•	
Lemon Balm			•	
Lily			•	
Lobelia			•	
Lupine			•	
Marigold			•	
Marsh Marigold			•	
May Apple			•	
Meadow Rue			•	
Monarda			•	
Ornamental Grasses			•	
Penstemon			•	
Peony			•	
Petunia			•	
Poppy (general)			•	
Purple Coneflower			•	
Queen of the Prairie			•	
Red Milkweed			•	
Sedges			•	
Sedum			•	
Sod/Turfgrass			•	
Pansy			•	
Tulip			•	
Violet			•	
Yarrow			•	
Yucca			•	
Zinnia			•	

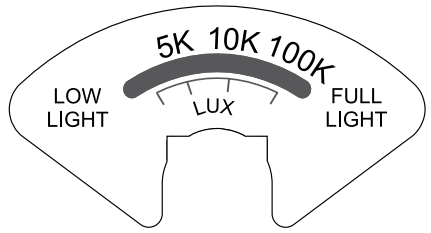
  

Vegetables	PH			
	3.5 - 4.4	4.5 - 6.0	6.1 - 7.0	7.1 - 8.0
Asparagus			•	•
Basil			•	
Beans			•	
Beets			•	•
Broccoli			•	
Brussels sprout			•	
Cabbage			•	•
Carrot			•	
Cauliflower			•	
Celery			•	•
Chard			•	
Chives			•	
Cilantro			•	
Corn			•	
Cucumber			•	
Dry bean			•	
Eggplant			•	
Fennel			•	
Fennel			•	
Garlic			•	
Green Peppers			•	
Horseradish			•	
Kale			•	
Leafy Greens			•	•
Leek			•	
Lemon Balm			•	
Lettuce			•	
Lima bean			•	
Mint			•	
Muskmelon/Cantaloupe			•	
Onion			•	
Oregano			•	
Parsley			•	
Pea			•	
Pepper			•	
Potato			•	
Pumpkin			•	
Radish			•	
Rosemary			•	
Rutabaga			•	
Sage			•	
Snap bean			•	
Soybean			•	
Spinach			•	
Summer squash			•	
Thyme			•	
Tomato			•	
Watermelon			•	
Winter squash			•	

# General UV Information & Tips

UV light is measured in lux (lumen/sq. meter) and directly affects your plant's ability to grow.

Plants thrive in different lux ranges, but most plants require between 5k and 100k lux per day in order to convert the UV light energy into food, a process known as photosynthesis.



## Recommended UV Ranges

If you are unsure what kind of light your plants require, consult a local horticulture professional for details.

5,000-10,000 lux	10,000-20,000 lux	20,000-45,000 lux	> 45,000 lux
Low light intensity; good for shade-loving plants.	Bright but indirect light intensity; good for many types of plants that require indirect sunlight.	Bright light; appropriate for plants that require good, strong light intensity.	Strong direct sunlight; good for plants with high light requirements.

# IMPORTANT

PRODUCT MUST BE REGISTERED TO RECEIVE WARRANTY SERVICE

## PRODUCT REGISTRATION

Register online to receive 1 year warranty protection

[www.AcuRite.com](http://www.AcuRite.com)

**Questions?** Contact Customer Support at (877) 221-1252.

## Limited 1-Year Warranty

AcuRite is a wholly owned subsidiary of Chaney Instrument Company. For purchases of AcuRite products, AcuRite provides the benefits and services set forth herein. For purchases of Chaney products, Chaney provides the benefits and services set forth herein.

We warrant that all products we manufacture under this warranty are of good material and workmanship and, when properly installed and operated, will be free of defects for a period of one year from the date of purchase.

Any product which, under normal use and service, is proven to breach the warranty contained herein within ONE YEAR from date of sale will, upon examination by us, and at our sole option, be repaired or replaced by us. Transportation costs and charges for returned goods shall be paid for by the purchaser. We hereby disclaim all responsibility for such transportation costs and charges. This warranty will not be breached, and we will give no credit for products which have received normal wear and tear not affecting the functionality of the product, been damaged (including by acts of nature), tampered, abused, improperly installed, or repaired or altered by others than our authorized representatives.

Remedy for breach of this warranty is limited to repair or replacement of the defective item(s). If we determine that repair or replacement is not feasible, we may, at our option, refund the amount of the original purchase price.

**THE ABOVE-DESCRIBED WARRANTY IS THE SOLE WARRANTY FOR THE PRODUCTS AND IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ALL OTHER WARRANTIES OTHER THAN THE EXPRESS WARRANTY SET FORTH HEREIN ARE HEREBY EXPRESSLY DISCLAIMED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

We expressly disclaim all liability for special, consequential, or incidental damages, whether arising in tort or by contract from any breach of this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

We further disclaim liability from personal injury relating to our products to the extent permitted by law. By acceptance of any of our products, the purchaser assumes all liability for the consequences arising from their use or misuse. No person, firm or corporation is authorized to bind us to any other obligation or liability in connection with the sale of our products. Furthermore, no person, firm or corporation is authorized to modify or waive the terms of this warranty unless done in writing and signed by a duly authorized agent of ours.

In no case shall our liability for any claim relating to our products, your purchase or your use thereof, exceed the original purchase price paid for the product.

### Applicability of Policy

This Return, Refund, and Warranty Policy applies only to purchases made in the United States and Canada. For purchases made in a country other than the United States or Canada, please consult the policies applicable to the country in which you made your purchase.

Additionally, this Policy applies only to the original purchaser of our products. We cannot and do not offer any return, refund, or warranty services if you buy products used or from resale sites such as eBay or Craigslist.

### Governing Law

This Return, Refund, and Warranty Policy is governed by the laws of the United States and the State of Wisconsin. Any dispute relating to this Policy shall be brought exclusively in the federal or State courts having jurisdiction in Walworth County, Wisconsin; and purchaser consents to jurisdiction within the State of Wisconsin.