

## IMPORTANT INFORMATION REGARDING YOUR NEW 4 IN 1 TESTER

**Warning: This meter is specifically calibrated for use in soil. Do not use in water or any other liquid.**

### HOW TO USE YOUR TESTER TO MEASURE FERTILITY

1. Remove the top 2" of the soil. Break up and crumble the soil underneath to a total depth of 5".
2. Thoroughly wet the soil with water (ideally rain or distilled water) to a mud consistency.
3. Wipe the meter probes clean with a tissue or paper towel.
4. Move the switch to the far left position.
5. Insert the probes into the soil to within 1" of the casing. Allow approximately 10 seconds for the reading to stabilize.
6. Record the reading. Remove the probes from the soil and clean thoroughly.

The standards by which the instrument is calibrated are as follows:

	<b>Too Little</b>	<b>IDEAL Range</b>	<b>Too Much</b>
Nitrogen	50 PPM	50 to 200 ppm	200 PPM
Phosphorous	4 PPM	4 to 14 ppm	14 PPM
Potash	50 PPM	50 to 200 ppm	200 PPM

• ppm is defined as parts-per-million

### IF THE TESTER READS "Too Little":

Fertilize with a brand of soluble fertilizer that is recommended for the plants you intend to grow. Follow package instructions.

### IF THE TESTER READS "Ideal":

Water once a month with a soluble fertilizer that is recommended for the plants you are growing.

### IF THE TESTER READS "Too Much":

1. Water thoroughly to leach out the excess fertilizer from the soil.
2. For potted plants, repot with new soil.
3. Do not add any fertilizer. You can add manure, compost, clippings, plant wastes, residues, leaves and any other organic matter to the soil.

### HOW TO USE YOUR METER TO MEASURE LIGHT

1. Move the switch to the 2nd position.
2. Point the photocell on the top of the tester directly at the light source while holding the Tester at leaf level. Avoid positioning your hand or body between the light source and the plant or position you are measuring.
3. Record the reading (x 1000) and the time of day.
4. Take readings in the mid-morning, mid afternoon and early evening to determine the average light intensity.

Example:

9 AM reading	X	4 hours =	Foot-candle hours
(Average between 7AM and 11AM)			
1 PM reading	X	4 hours =	Foot-candle hours
(Average between 11AM and 3PM)			
5 PM reading	X	4 hours =	Foot candle hours
(Average between 3PM and 7PM)			
Total Daily Foot Candle Hours			Total From Above

Please refer to the table of light requirements on the reverse.

### HOW TO USE YOUR METER TO MEASURE SOIL MOISTURE

1. Move the switch to the 3rd position.
2. Insert probes into soil up to plastic base, about half way between the edge of the container and the stem of the plant. Do not push the probe too near the stem.
3. Note the reading.
4. Remove the probes from the soil. Wipe thoroughly with a soft cloth or tissue before taking another reading or putting away.
5. Do not leave the probe in soil for long periods of time.

### General Watering Advise

Plants that like to be kept moist may be watered when the reading is 3 or 4. Plants that prefer to be drier may be watered when the reading is 1 or 2. Plants with lower numbers prefer drier conditions. Check small pots more often than larger ones, they dry out more quickly. Over-watering rots plant roots so don't water too frequently.

### General Watering Guide (Containerized Growing)

Vegetables	2-3
Annuals/Biennials	1-2
Perennials	2-3
Shrubs (flowering)	2-3
Shrubs (foliage)	1-2

### HOW TO USE YOUR METER TO MEASURE pH

1. Remove the top 2" of the surface soil. Break up and crumble the soil underneath to a total depth of 5". Remove any stones or organic debris such as leaves and twigs because they can affect the final result.
2. Thoroughly wet the soil with water (ideally rain or distilled water) to a mud consistency.
3. Move the switch to the last (far right) position.
4. Wet probes. Polish probe on the FAR RIGHT ONLY, with the enclosed special cleaning pad.
5. Insert probes into soil up to plastic base.
6. Wait one minute and take reading.
7. Wipe the probes clean and dry.

### TO RAISE OR LOWER pH OF YOUR SOIL

Add lime to raise soil pH. Add sulfur/sulphate to lower soil pH. How much to add will depend on the product chosen and soil type. Follow package instructions. Raising and lowering pH is not an exact science and most plants have a reasonably wide tolerance, certainly to within 1 pH point. Altering pH takes time so do not expect rapid changes; rather, work steadily towards giving a plant its ideal conditions.

A sampling of pH preferences is printed on the reverse.

## Plant pH Preferences

### Vegetables

Beans	6.0-7.5	Carrat	5.5-7.0	Marrow	6.0-7.5	Radish	6.0-7.0
Beetroot	6.0-7.5	Cauliflower	5.5-7.5	Onion	6.0-7.0	Spinach	6.0-7.5
Broccoli	6.0-7.5	Celery	6.0-7.0	Parsnip	6.0-7.5	Swede	5.5-7.0
Brussels Sprouts	6.0-7.5	Cucumber	5.5-7.5	Pea	6.0-7.5	Tomato	6.5-7.5
Cabbage	6.0-7.5	Leek	6.0-8.0	Pepper	5.5-7.0		
Calabrese	6.5-7.5	Lettuce	6.0-7.0	Potato	4.5-6.0		

### Flowers/Shrubs

Azalea	4.5-6.0	Daffodil	6.0-6.5	Gladiolus	6.0-7.0	Primula	6.0-7.5
Camellia	4.5-5.5	Dahlia	6.0-7.5	Hydrangea (Blue)	4.0-5.0	Rhododendron	4.5-6.0
Carnation	6.0-7.5	Erica	4.5-6.0	Hydrangea (Pink)	6.0-7.0	Rose	6.0-7.0
Chrysanthemum	6.0-7.0	Fuschia	5.5-6.5	Hydrangea (White)	6.5-7.0		
Clematis	5.5-7.0	Geranium	6.0-7.5	Magnolia	5.0-6.0		

### Fruit

Blackberry	5.0-6.0	Grapevine	6.0-7.0	Rhubarb	5.5-7.0
Cherry	6.0-7.5	Lemon	6.0-7.0	Strawberry	5.0-7.5
Currant (Black)	6.0-8.0	Melon	5.5-6.5		
Currant (Red)	5.5-7.0	Peach	6.0-7.5	Lawns	6.0-7.5
Gooseberry	5.0-6.5	Raspberry	5.0-6.5		

### Table of Light Requirements:

Spring (March, April, and May)				
	Shade (SH)	Partial Shade (PSH)	Partial Sun (PS)	Full Sun (FS)
FC/Hrs.	0 to 10,000	10,001 to 20,000	20,001 to 35,000	35,000 +
Summer (June, July and August)				
	Shade (SH)	Partial Shade (PSH)	Partial Sun (PS)	Full Sun (FS)
Fc/Hrs.	0 to 12,000	12,001 to 25,000	25,001 to 65,000	65,000 +

### Definitions

Shade (Symbol SH) is defined as the category that does not expose the plant to direct sunlight. Light intensities under a canopy of trees is preferred.

Partial Shade (Symbol PSH) is defined as that category that exhibits some direct sunlight. Plants grown within this category thrive on bright indirect sun light with minimal direct sunlight. North exposures are generally preferred. Subdued light from tree screening is also adequate.

Partial Sun (Symbol PS) is defined as that category that exhibits bright light with some direct sunlight. Plants in this category cannot withstand full direct sunlight without relief for an entire day. East and West exposures are generally preferred.

Full Sun (Symbol FS) is defined as the category of plants that thrive in full sunlight. Southern exposures are preferred. These sections vary depending upon the planting season.

### CLEANING PAD REORDER FORM

To obtain replacement cleaning pads for your meter, please complete:

**QTY** \_\_\_\_\_ Pkg(s) of 3 Cleaning Pads @ \$2.00 \_\_\_\_\_  
 Add \$1.00 for Postage & Handling \_\_\_\_\_  
**TOTAL \$** \_\_\_\_\_

Luster Leaf Products, Inc.  
 2220 Techcourt, Woodstock, IL 60098

SHIP TO: Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Send check or money order payable to Luster Leaf Products, Inc.  
 (no COD please)