



# CITOLEAF

Liquid Seaweed Concentrate Extract

## 0.2 – 0 – 2

### Guaranteed Analysis

Total Nitrogen (N).....	0.2%
0.2% Water Soluble Nitrogen	
Soluble Potash (K <sub>2</sub> O).....	2.0%

Derived From: seaweed extract (Ascophyllum Nodosum) and yeast extract

### KEEP OUT OF REACH OF CHILDREN

**NET CONTENT:** 1.0 U.S. Gal (3.78 Liters)  
**NET WEIGHT:** 8.9 LB (4.03 kg)

**NET CONTENT:** 2.5 U.S. Gal (9.4 Liters)  
**NET WEIGHT:** 22.25 LB (10.09 kg)

**Manufactured By**  
Miller Chemical & Fertilizer, LLC  
P.O. Box 333  
Hanover, PA 17331

## GENERAL INFORMATION

**CITOLEAF** is a proprietary blend of marine algae, protein hydrolysate and yeast. Use **CITOLEAF** to improve root growth, yield and quality and maximize crop potential during periods of stress. Major and micronutrient levels must be adequate and maintained to achieve designed results to support crop production loads.

### Compatibility

**CITOLEAF** is compatible with most pesticides and fertilizers. If interaction of chemicals is unknown, a jar compatibility test is recommended.

### Storage

Store away from heat and direct sunlight preferably in a cool, dry place. This product does not contain any preservatives. Once opened, use product immediately to avoid contamination. **CITOLEAF** should be used within the season it is purchased.

## DIRECTIONS FOR USE SHAKE WELL BEFORE USE

### Foliar Applications:

Add **CITOLEAF** to the spray tank after it is half full and agitation has started. Use sufficient water for good spray coverage. The foliar spray should be made as a fine mist until foliage is wet.

### Soil Applications:

Soil applied treatments may be made by mixing with soil applied fertilizers or applied separately through irrigation systems which would effectively apply **CITOLEAF** to the soil.

## SPECIFIC APPLICATION RATES

FRUIT CROPS	Dosage per application	Best use recommendations
<b>Avocados</b>	1 to 3 pints per acre	<b>1st application:</b> at start of regrowth in the spring <b>2nd application:</b> 2 weeks pre-bloom <b>3rd application:</b> 2 weeks after petal fall <b>4th application:</b> before summer fruit drop <b>Repeat:</b> every 2-4 weeks during summer months <b>Post-harvest application:</b> 2-4 weeks after harvest
<b>Bushberries</b> ( <i>Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, etc.</i> )	1 to 2 pints per acre	<b>1st application:</b> 4 weeks pre-bloom (soil) <b>2nd application:</b> 2 weeks pre-bloom <b>3rd application:</b> petal fall <b>Repeat:</b> every 2-4 weeks during summer months <b>Post-harvest application:</b> 2-4 weeks after harvest

FRUIT CROPS (cont.)	Dosage per application	Best use recommendations
<p><b>Caneberries</b> (Blackberry, Caneberry, Loganberry, Raspberry, etc.)</p>	1 to 2 pints per acre	<p><b>1st application:</b> at start of growth in the spring  <b>2nd application:</b> 2 weeks pre-bloom  <b>3rd application:</b> petal fall  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Citrus</b> (Grapefruit, Lemons, Limes, Mandarins, Oranges, etc.)</p>	1 to 3 pints per acre	<p><b>1st application:</b> start of growth in the spring (feather growth)  <b>2nd application:</b> 2 weeks pre-bloom  <b>3rd application:</b> petal fall  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Fall:</b> apply with gibberellin sprays in mid and late season varieties  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Cranberries</b></p>	1 to 2 pints per acre	<p><b>1st application:</b> 4 weeks pre-bloom (soil)  <b>2nd application:</b> 2 weeks pre-bloom  <b>3rd application:</b> petal fall  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Grapes- Wine</b></p>	1 to 3 pints per acre	<p><b>1st application:</b> 1-4 inch shoot growth (foliar AND soil)  <b>2nd application:</b> 10-12 inch shoot growth (foliar AND soil)  <b>3rd application:</b> 5 days pre-bloom (foliar)  Avoid foliar pre-bloom application in varieties that are prone to under shatter. Use high rate in pre-bloom sprays on varieties that tend to over shatter.  <b>4th application:</b> 'BB' sized berries (2-3mm) (foliar)  <b>5th application:</b> veraison (foliar AND soil)  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Grapes</b> (Table, Raisin and Juice)</p>	1 to 3 pints per acre	<p><b>1st application:</b> 1-4 inch shoot growth (foliar AND soil)  <b>2nd application:</b> 10-12 inch shoot growth (foliar AND soil)  <b>3rd application:</b> 5 days pre-bloom (foliar)  Avoid foliar pre-bloom application in varieties that are prone to under shatter. Use high rate in pre-bloom sprays on varieties that tend to over shatter.  <b>4th – 6th application:</b> sizing sprays (foliar)  <b>7th application:</b> veraison (foliar AND soil)  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Kiwi</b></p>	1 to 3 pints per acre	<p><b>1st application:</b> at start of growth in the spring  <b>2nd application:</b> 2 weeks pre-bloom  <b>3rd application:</b> petal fall  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Olives</b></p>	1 to 3 pints per acre	<p><b>1st application:</b> late winter (foliar)  <b>2nd application:</b> 2 weeks pre-bloom  <b>Repeat:</b> every 2-4 weeks through to harvest  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Figs</b></p>	1 to 3 pints per acre	<p><b>1st application:</b> at start of growth in the spring  <b>Repeat:</b> every 2-4 weeks  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>

FRUIT CROPS (cont.)	Dosage per application	Best use recommendations
<p><b>Pome Fruits</b> (Apples, Pears and Quince)</p>	1 to 3 pints per acre	<p><b>1st application:</b> pre-pink  <b>2nd application:</b> pink bud  <b>3rd application:</b> 7-10 days post petal fall  <b>4th application:</b> 1/2- 3/4" fruit  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Stone Fruits</b> (Peaches, Nectarines, Apricots, Plums, and Prunes, etc.)</p>	1 to 3 pints per acre	<p><b>1st application:</b> pink or white bud  <b>2nd application:</b> petal fall  <b>3rd application:</b> jacket split  <b>Repeat:</b> every 2-4 weeks during summer months  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Cherries</b></p>	1 to 3 pints per acre	<p><b>1st application:</b> pink or white bud  <b>2nd application:</b> petal fall to shuck fall  <b>3rd application:</b> exposed young fruit  <b>4th application:</b> straw colour  Apply with gibberellin sprays. Avoid sprays after straw-colored fruit on non-gibberellin blocks where early market is desired.  <b>Repeat:</b> during times of stress  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Pomegranate</b></p>	1 to 3 pints per acre	<p><b>1st application:</b> start of growth in the spring  <b>2nd application:</b> 2 weeks pre-bloom  <b>3rd application:</b> petal fall  <b>Repeat:</b> every 2-4 weeks  <b>Post-harvest application:</b> 2-4 weeks after harvest</p>
<p><b>Strawberries</b></p>	1 to 2 pints per acre	<p><b>Pre-plant:</b> transplant treatment (see page 1)  <b>Repeat:</b> soil applications every 14 days until harvest is complete</p>

VEGETABLE CROPS	Dosage per application	Best use recommendations
<p><b>Asparagus</b></p>	1 to 2 pints per acre	<p><b>Pre-plant:</b> transplant treatment (see page 1)  <b>1st application:</b> for newly established plants, make a soil or foliar application at emergence  <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest is complete</p>
<p><b>Brassica Vegetables</b> (Broccoli, Brussels Sprouts, Cauliflower, Collards, Cabbage, Kale, and Mustard Greens)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil or transplant treatment at planting  <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest is complete</p>
<p><b>Bulb Vegetables</b> (Garlic, Leeks, Onions, and Shallots)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil applied treatment at planting  <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest is complete</p>
<p><b>Corn</b> (Fresh, Sweet, and Pop)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil treatment at planting  <b>2nd application:</b> soil or foliar at the 12-14 inch stage  -</p>

VEGETABLE CROPS (cont.)	Dosage per application	Best use recommendations
<p><b>Cucurbit Vegetables</b> (Cantaloupe, Cucumbers, Gourds, Honeydew, Muskmelons, Squash, Pumpkins, and Watermelons)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil or transplant treatment at planting <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest is complete</p>
<p><b>Fruiting Vegetables</b> (Eggplant, Fresh Tomatoes, Processing Tomatoes, and Peppers)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil or transplant treatment at planting <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest is complete. Use adequate water for very good coverage. Minimum 40 GPA for mature plants is recommended.</p>
<p><b>Leafy Vegetables</b> (Celery, Endive, Lettuce, Radicchio, Rhubarb, Spinach and Swiss Chard)</p>	1 to 2 pints per acre	<p><b>1st application:</b> foliar application at the 2-4 leaf stage <b>Repeat:</b> foliar applications every 14-21 days until harvest is complete</p>
<p><b>Legume Vegetables</b> Fresh, Dry, and Processing (Beans, Garbanzos, Lentils, Peas, and Soybeans)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil applied treatment at planting <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest</p>
<p><b>Peanuts</b></p>	1 to 2 pints per acre	<p><b>1st application:</b> soil applied treatment at planting <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest</p>
<p><b>Potatoes</b></p>	1 to 2 pints per acre	<p><b>1st application:</b> soil applied treatment at planting <b>Repeat:</b> soil or foliar applications every 21-30 days until harvest</p>
<p><b>Root and Tuber Vegetables</b> (Beets, Carrots, Ginger, Radishes, Sweet Potatoes)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil applied treatment at planting <b>Repeat:</b> soil or foliar applications every 14-21 days until harvest</p>

FIELD CROPS	Dosage per application	Best use recommendations
<p><b>Alfalfa</b></p>	1 to 2 pints per acre	<p><b>1st application:</b> soil or foliar application at planting or early season growth <b>Repeat:</b> soil or foliar applications after each cutting or every 3-4 weeks</p>
<p><b>Corn</b> (Grain, Feed, Forage and Silage)</p>	1 to 2 pints per acre	<p><b>1st application:</b> soil treatment at planting <b>2nd application:</b> soil or foliar application at the 12-24 inch stage</p>
<p><b>Cotton</b></p>	1 to 2 pints per acre	<p><b>1st application:</b> soil applied treatment at planting <b>Repeat:</b> soil or foliar applications every 7-21 days</p>
<p><b>Hops</b></p>	1 to 2 pints per acre	<p><b>1st application:</b> at start of training in the spring <b>Repeat:</b> every 2-4 weeks</p>

FIELD CROPS (cont.)	Dosage per application	Best use recommendations
<b>Rice</b>	1 to 2 pints per acre	<b>1st application:</b> 30-40 days after seeding <b>2nd application:</b> at early panicle emergence
<b>Wheat</b>	1 to 2 pints per acre	<b>1st application:</b> soil applied treatment at planting <b>Repeat:</b> soil or foliar treatments at the 6 and 12-18 inch growth stage

NUTS	Dosage per application	Best use recommendations
<b>Hazelnuts</b>	1 to 3 pints per acre	<b>1st application:</b> at ovule growth initiation <b>2nd application:</b> first leaf expansion <b>Repeat:</b> every 2-4 weeks until harvest <b>Post-harvest application:</b> 2-4 weeks after harvest
<b>Almonds</b>	1 to 3 pints per acre	<b>1st application:</b> pink bud <b>2nd application:</b> petal fall <b>3rd application:</b> before summer heat stress (late May early June) <b>Repeat:</b> every 2-4 weeks during summer months <b>Post-harvest application:</b> 2-4 weeks after harvest
<b>Tree Nuts</b> (Cashews, Pecans, Walnuts, Chestnuts, etc.)	1 to 3 pints per acre	<b>1st application:</b> 1% bloom <b>2nd application:</b> 30% bloom <b>3rd application:</b> 2 weeks after previous application <b>Repeat:</b> every 2-4 weeks during summer months <b>Post-harvest application:</b> 2-4 weeks after harvest
<b>Pistachios</b>	1 to 3 pints per acre	<b>1st application:</b> at early bud break <b>2nd application:</b> at bloom <b>3rd application:</b> fully leafed out <b>Repeat:</b> every 2-4 weeks during summer months <b>Post-harvest application:</b> 2-4 weeks after harvest

OTHER	Dosage per application	Best use recommendations
<b>Herbs and Spices</b>	1 to 2 pints per acre	<b>1st application:</b> soil or transplant treatment at planting <b>Repeat:</b> applications every 14-21 days until harvest is complete
<b>Vegetable Seed Crops</b> all varieties	1 to 2 pints per acre	<b>1st application:</b> at planting (soil) <b>Repeat:</b> every 14-21 days Apply as foliar spray pre-bloom and 7-10 days before beginning "dry down" prior to harvest
<b>Hydroponic Greenhouse Operations</b>	0.2 to 0.4 fluid ounces per 100 gallons of water	In substrate culture systems, apply CITOLEAF continuously with each fertigation cycle. In closed systems, CITOLEAF should be reapplied every 7 to 14 days.

Information regarding the contents and levels of metals in this product is available on the internet at <http://www.aapfco.org/metals.htm>

Use this product in accordance with good agronomic practices, which include utilizing proven spray equipment set for proper coverage. Do not make applications when temperatures are too hot, as crop damage may occur. Applications should be made at temperature levels and when other environmental conditions in your area are such that your experience indicates the application will be compatible and will accomplish the desired result.

**Notice of Warranty:** Miller Chemical & Fertilizer, LLC, warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Miller. In no case shall Miller be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. MILLER MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

Information concerning the raw materials composing this product can be obtained by writing to Miller Chemical & Fertilizer, LLC, P.O. Box 333, Hanover, PA. 17331. Please refer to the batch number found on this container.