

# UMass Extension

CENTER FOR AGRICULTURE

## Soil and Plant Tissue Testing Laboratory

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USE THIS FORM FOR PLANT TISSUE SAMPLE SUBMISSION FOR **SMALL FRUIT**. See page 2 for sampling instructions, fees, and description of services.

|                      |  |                      |  |
|----------------------|--|----------------------|--|
| <b>Main contact:</b> |  | <b>Send copy to:</b> | <b>Method of receiving results</b><br><br><input type="checkbox"/> US Mail (please include \$2 for postage & handling)<br><br><input type="checkbox"/> E-mail<br><br>Send copies to: |
| Name:                |  | Name:                |  |
| Business Name:       |  | Business Name:       |  |
| Street Address:      |  | Street Address:      |  |
| City, State, and Zip |  | City, State, and Zip |  |
| Phone:               |  | Phone:               |  |
| E-mail address:      |  | E-mail address:      |  |

| LAB #<br>(Leave blank) | Sample ID<br>(You create this) | Test requested           |                          | Fee, \$ |
|------------------------|--------------------------------|--------------------------|--------------------------|---------|
|                        |                                | Standard (\$25)          | or Standard w/o N (\$18) |         |
|                        |                                | <input type="checkbox"/> | <input type="checkbox"/> |         |

Order Total \$ \_\_\_\_\_

|  |  |
|--|--|
| <p><b>Sample Information</b><br/><b>Crop, management, and soil information</b><br/>Date Sampled: _____<br/>Crop: _____ Variety: _____<br/>Age: _____<br/>Plant Spacing or population: _____<br/>Growth stage for grapes: <input type="checkbox"/> bloom <input type="checkbox"/> véraison<br/>Lime: _____ tons/ac applied on: _____ (date)<br/>Fertilizer application rate(s) and date(s): _____<br/>_____<br/>_____<br/>Soil Series (if known): _____</p> | <p><b>Complete this section for problem diagnosis</b><br/><br/>If leaves are discolored, does color variation occur:<br/><input type="checkbox"/> along leaf margins <input type="checkbox"/> interveinal <input type="checkbox"/> in spots <input type="checkbox"/> over entire leaf<br/><br/>Leaves first affected at shoot: <input type="checkbox"/> tip <input type="checkbox"/> base <input type="checkbox"/> over entire shoot<br/><br/>Symptoms first seen: _____ (month &amp; growth stage)<br/><br/>Describe additional symptoms: _____<br/>_____<br/>_____<br/>_____</p> |
|--|--|

| Office Use Only |     |
|-----------------|-----|
| Received        | Due |
| Check#          | PO# |
| Cash            |     |

## **Sampling Instructions**

### ***General Sampling Procedure:***

For a routine evaluation of nutritional status, results will be compared with those from the scientific literature. It is extremely important that samples are collected at the growth stage(s) and from the plant part for which plant nutritional data have been evaluated.

Specific sampling instructions for most small fruit grown in New England are provided here. For those not listed, it is generally best to sample the most recently developed leaves from the upper portion of the plant.

Samples should reflect areas with uniform management and soil type. Where differences occur within a block, sampling should be refined to represent these changes. Samples should represent only one cultivar, but should be collected from several different plants within the block.

When a nutrient deficiency is suspected, always attempt to collect a sample from plants in the affected area and a second sample from plants of the same variety in an area showing normal growth. This will allow for direct comparison of nutrient levels and may aid in diagnosing specific nutrient deficiencies.

When collecting tissues samples you should avoid: diseased or dead plant material; tissue that has been damaged by equipment or insects; plant tissue that has been stressed by excessive heat, cold, or moisture

After collecting your composite sample, it is a good idea to rinse the tissue with clean water to remove pesticides, foliar applied nutrients, and soil particles. Place wet samples on a clean paper towel to dry. Once dry, carefully place sample in a small paper bag labeled with your sample ID and complete the submission form. Hand deliver or mail the sample, submission form, and a check or money order payable to UMass to the address listed at the top of this form.

### **Plant Tissue Test Descriptions & Fees**

#### **Standard Tissue Test: \$25.00**

A determination of the Total Tissue P, K, Ca, Mg, Na, Zn, Cu, Mn, Fe, and B. Analysis by ICP Spectroscopy of wet-ashed sample in Nitric Acid, Hydrochloric Acid, and Hydrogen Peroxide in a block digester. Also included Total Nitrogen by catalytic combustion.

#### **Standard Tissue Test Without Total Nitrogen: \$18.00**

Same as standard tissue test but without N

### **Grapevines**

Samples should be collected at Full Bloom or Véraison

- Full Bloom: collect a total of 80 to 100 petioles from leaves located opposite the first or second flower cluster from the bottom of the shoot (only 1 to 2 petioles from any vine sampled).
- Véraison (70 to 100 days after full bloom): collect 80 to 100 petioles from the youngest fully expanded leaves (usually located 5 to 7 leaves back from the shoot tip).
- Rinse petioles well, air dry and gently place in paper bag.

### **Strawberries**

- Sample the first fully expanded leaves after renovation, generally late-July to early-August.
- Collect 40 to 50 leaves, remove and discard petioles, rinse leaves well, air dry and gently place in paper bag.

### **Brambles**

- Sample leaves on non-fruiting canes in early- to mid-August.
- Collect 50 to 60 leaves, remove and discard petioles, rinse leaves well, air dry and gently place in paper bag.

### **Blueberries**

- Sample leaves during the first week of harvest.
- Collect 40 to 50 leaves, remove and discard petioles, rinse leaves well, air dry and gently place in paper bag.

### **Cranberries**

- Samples should be collected between mid-August and mid-September.
- Collect the top 2 inches of at least 50 randomly selected new upright tips (leaves and stems, mixed flowering and vegetative).
- Rinse tissue well, air dry, and gently place in paper bag.