



**Soil and Plant Nutrient Testing Laboratory**

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**USE THIS FORM FOR PLANT NUTRIENT SAMPLE SUBMISSION FOR VEGETABLE CROPS FOR UMASS RECHARGE. See page 2 for sampling instructions, fees, and description of services. Complete Recharge information requested below.**

<b>Main contact:</b>		<b>Principal Investigator:</b>		<b>Method of receiving results</b>  <input type="checkbox"/> US Mail (please include \$2 for postage & handling)  <input type="checkbox"/> E-mail  <input type="checkbox"/> Copy Results to PI
Name:		Name:		
Business Name:		UMass Department:		
Street Address:		Street Address:		
City, State, and Zip		City, State, and Zip		
Phone:		Phone:		
E-mail address:		E-mail address:		

<b>LAB #</b> (Leave blank)	<b>Sample ID</b> (You create this)	<b>Test requested</b> Standard (\$45) or Standard w/o N(\$30)	
		<input type="checkbox"/>	<input type="checkbox"/>

**Sample Information:**  
**Crop management and soil information**  
 Date Sampled: \_\_\_\_\_  
 Crop: \_\_\_\_\_ Variety: \_\_\_\_\_  
 Growth Stage: \_\_\_\_\_  
 Plant spacing or population: \_\_\_\_\_  
 Lime: \_\_\_\_\_ tons/acre applied on: \_\_\_\_\_ (date)  
  
 Fertilizer application rate(s) and date(s): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
  
 Soil Series (if known): \_\_\_\_\_

**Complete this section for problem diagnosis**

If leaves are discolored, does color variation occur:  
 along leaf margins  interveinal  in spots  over entire leaf

Leaves first affected at shoot:  tip  base  over entire shoot

Symptoms first seen: \_\_\_\_\_ (month & growth stage)

Describe additional symptoms: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

GL Unit	Speed Type	Account Code	Fund Code	Amount	GL Unit	Speed Type	Account Code	Fund Code	Order #
A					A	104913	699900	51069	
<b>Dept. ID:</b>		<b>Project/Grant:</b>			<b>Signature:</b>				

## 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 common commercially grown vegetables in New England are provided here. This is not a complete list. Contact the lab for sampling instructions for crops not listed here.

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 tissue 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. Seed should not be sampled because it does not generally reflect the nutrient status of the whole plant.

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 Nutrient Test Descriptions & Fees**

#### Standard Tissue Test: \$45.00

A determination of the Total Tissue P, K, Ca, Mg, Na, Zn, Cu, Mn, Fe, and B. Analysis by ICP Spectroscopy of acid wet digestion 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: \$30.00 Same as standard tissue test but without N

### ***Crop – Plant part collected – Growth Stage***

**Beans** – 10-15 uppermost recent fully-developed trifoliolate leaves – Summer

**Beets** – 20-25 mature leaves from new growth – 4-6 weeks after seeding OR 8-10 weeks after seeding

**Broccoli or Cauliflower** – 12-15 mature leaves from new growth – At heading

**Brussels Sprouts** – 12-15 mature leaves from new growth – Maturity

**Cabbage** – 15-20 whole tops – 2-6 weeks old

**Cabbage** – 12-15 wrapper leaves – 2-3 months old

**Cabbage** – 15-20 midribs from wrapper leaves – Mature plants

**Cantaloupe or Muskmelon** – 12 unfurled leaves (5<sup>th</sup> leaf from tip) – Flower start to small fruit OR Small fruit to harvest

**Carrots** – 15 mature leaves from new growth -Middle of growing season

**Carrots** – 15-20 oldest leaves – Mature plants

**Celery, Field** – 12-15 petioles from most recent fully-developed leaves – 6 week old plants

**Celery, Field** – 12-15 mature leaves from new growth – Mature plants, non-flowering

**Celery, Greenhouse** – 12-15 mature leaves from new growth – 6 weeks after transplanting

**Collards or Kale** – 12-15 mature leaves from new growth – Middle of growing season

**Corn, Sweet** – 10-15 fully mature leaves from below the whorl – Prior to tasselling

**Corn, Sweet** – 10-15 entire leaves at the ear node – At tasselling

**Cucumber** – 12 leaf blades (5<sup>th</sup> leaf from tip) – Flower start to small fruit OR Small fruit to harvest

**Potato** – 25-30 most recent fully-developed leaves – Plants 30 cm tall OR Tubers ½ grown

**Pumpkin** – 15-20 mature leaves from new growth – Middle of growing season

**Radish** – 30-35 most recent fully developed leaves – Middle of growing season

**Spinach, Field** – 15-20 most recent fully developed leaves – 25-30 days old OR Mature plants

**Summer Squash** – 12 blades from most recent fully-developed leaves – Summer

**Tomato** – 15-20 compound leaves adjacent to top inflorescences - Mid-bloom

**Watermelon** – 10-12 unfurled leaves – Flower start to small fruit

**Watermelon** – 12-15 mature leaves from new growth – Mature plant, small fruit stage

**Watermelon** – 12-15 unfurled leaves (5<sup>th</sup> leaf from tip) – Older fruit to harvest

**Zucchini** – 12-15 mature leaves from new growth – Mature plants, non-fruiting