

## Agro-One Soils Laboratory

Instructions for leaf sample collection from Vineyards, Small Fruit and Tree Fruit

pt062811jbf

### VINEYARDS

#### 1. Selecting the vines.

Select an area containing at least 30 vines of the variety to be sampled. These vines should be representative of a problem area or the average of the vineyard. The final fertilizer suggestions will apply **ONLY** to the area represented by the selected vines.

Select at least 30 vines to represent the sample. When sampling more than one area or block, please give each area a reference number and record this number for future reference. If you have fields identified with either a number or a letter, this may be used for the reference number. When the diagnosis sheet is returned, it will refer to the reference number.

#### 2. Collecting petiole samples.

*Time of collection:* Collect petiole samples during the period of August 15 – Sept 10.

*Materials needed:* A 2 or 3lb. STAMPED PAPER BAG is provided in the kit.

*Procedure:* Select the youngest mature leaf from a bearing primary shoot which is well exposed to light. The youngest mature leaf is somewhat difficult to define. It is the youngest leaf on the shoot to obtain full leaf size and is best identified by having brown pubescence on the underside of the leaf instead of white pubescence. Select two to three leaves from each plant. **REMOVE AND DISCARD** the leaf blade and keep **ONLY** the petiole. The petioles constitute the sample. **A minimum of 50 grams fresh weight (~2 oz) is needed.** Place the petioles in the paper bag and mark the IDENTIFICATION NUMBER on the bag.

*Wash the petioles:* Wash the petioles before they wilt to remove spray residue and dust. This may be done by dipping the petioles in distilled water. Shake off excess water and rinse again quickly. Don't allow the petioles to remain in the water for more than one minute. Shake the excess water from the petioles and place them loose back into the bag. With the tops of the bags open, allow the petioles to dry at room temperature until they become crisp.

#### 3. Packaging, payment, and mailing instructions.

Please make check or money order payable to DAIRY ONE. Enclose check, information sheet and leaf samples in mailing carton and mail to: DAIRY ONE, 730 Warren Road, Ithaca, NY 14850

#### 4. Cost per sample.

The 180 Package cost per sample is \$24. It includes Total N, P, K, Ca, Mg, Zn, Cu, Fe, B and Mn.

#### 5. Submission Form Instructions.

Fill out the information sheet completely using the following suggestions. **Keep a copy for your own records to aid in interpretation at a later date.** Be sure that the leaf sample bag and the information sheet are marked with the same ID#.

*Identification of vineyard or area* is important. This will be used in making the fertilizer suggestions.

*Vine vigor:* Estimating the pruning weigh (in pounds) for these vines when dormant and at date of sampling. Estimate the percent of trellis which is filled with foliage.

*Leaves:* Abnormalities – scorch, interveinal chlorosis, ect. Key in or identify on the basis of page 18 of Extension Bulletin 805, *Cultural Practices of New York Vineyards*. Size – estimate the leaf width in inches.

*Pruning:* Describe the severity.

*Yields:* Tons per acre for these vines.

*Vineyard site:* Evidence of poor drainage: mottling at (xx) inches; gray layer; hard-pan; bed rock (minimum depth); evidence of erosion, et al.

**Additional submission forms for download are available on our website: <http://www.dairyone.com>**

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### TREE FRUITS

#### 1. Time to sample.

Between 60 & 70 days after average petal fall date.

#### 2. What to sample.

Select at least 60-100 leaves from the middle of this current season terminal shoots. **If sampling is done later than 60 to 70 days after petal fall** select the first full-sized mature leaf behind the shoot tip. Select 1 or 2 leaves/shoot from several shoots on each of several trees located throughout the area being sampled. **A minimum of 50 grams (~ 2 oz) fresh weight is needed.** Select shoots that are well exposed to light.

Shoots sampled should be of **average** vigor (length and diameter) from the trees in the planting.

*Large trees:* sample 5 to 7 feet above ground level.

*Small trees* (young, trellised or slender spindle plantings): 3 to 6 feet above ground level.

**Avoid** excessively strong shoots (near pruning cuts) and extremely weak shoots.

**Do not** include spur leaves.

**Do not** include leaves that are damaged by: diseases; insects; weather or mechanical injury.

**Do not** mix leaves from trees of different varieties.

**Do not** mix leaves from trees of different ages.

*Trees sampled* should represent the **average** condition within the orchard unless special samples are being taken to determine cause(s) of a distinct problem.

#### 3. Soil conditions, past fertilizer practices and spray program.

Soil conditions, past fertilizer and spray programs should be uniform over the entire sample area. If any of these conditions differ in different parts of the orchard it will be necessary to sample these areas separately.

#### 4. Collecting and handling samples.

Remove leaves by pulling downward so the petiole remains attached to the leaf. Place leaves in a dry paper bag or perforated plastic bag and immediately label the bag for identification. Wash the leaves before they wilt to remove spray residues and dirt. Gently rub the leaves

together in a mild detergent solution (dish washing detergent in tap water). See **Washing leaf samples** below for washing instructions. Place sample into dry paper bag, with top open and let dry at room temperature until the leaves are brittle.

#### 5. Submission Form.

Fill out the information sheet completely **and keep a copy for your own records to aid in interpretation at a later date.** Be sure that the leaf sample bag and the information sheet are marked with the same ID#.

#### 6. Packaging, payment, and mailing instructions.

The 180 Package cost per sample is \$24. It includes Total N, P, K, Ca, Mg, Zn, Cu, Fe, B and Mn.

Please make check or money order payable to: Dairy One, 730 Warren Road, Ithaca NY 14850

#### 7. Washing leaf samples.

Wash the leaf samples while still fresh, before they wilt. If a large number of samples are involved they may be stored overnight in cold storage, refrigerator or ice chest to keep them from drying out.

Use distilled water, available at most drug stores, for washing and rinsing the sample. Change the water if it becomes dirty or after 8 to 10 samples (whichever occurs first). Gently and lightly scrub the leaves together in distilled water. Shake to remove excess water and immediately rinse the sample in clean distilled water. Again shake to remove excess water.

Shake to remove excess water and immediately rinse the sample in clean distilled water. Again shake to remove excess water. Spread out sample on clean paper towels until leaf surfaces are dry. Transfer sample to paper bag, with top open and dry at room temperature until the leaves are brittle.

**NOTE: DO NOT let leaves to stand in water – complete the washing and rinsing process in one minute or less.**

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### SMALL FRUIT

#### 1. Time to sample.

**Strawberries:** Sample the first fully expanded leaves after renovation or within the first 6 weeks after harvest.

**Raspberries:** Sample healthy leaves on non-fruiting canes between August 1st and 20th.

**Blueberries:** Sample healthy leaves between July 1st and August 30th.

#### 2. What to sample.

Sample healthy leaves that are well exposed to light. These should represent the average condition of the planting and should not be damaged by: disease; insects; weather or mechanical injury.

**AVOID** mixing leaves from different cultivars.

**DO NOT** mix leaves from plants of different ages.

**A minimum of 50 grams (~ 2 oz) fresh weight from a minimum of 30 leaves are needed per sample.** If possible, each leaf should be taken from a different plant within the sampled area. Since an accurate recommendation is dependant upon a pH reading, we strongly suggest that you test the pH at this time and record it on the appropriate line of the information sheet.

Plants sampled should represent the average condition within the planting unless samples are being taken to determine cause(s) of a distinct problem or condition.

#### 3. Soil conditions, past fertilizer practices and spray program.

Soil conditions, past fertilizer practices and spray program should be uniform (similar) over the entire sample area. If any of these conditions differ in different parts of the planting, it will be necessary to sample these areas separately.

#### 4. Collecting and handling samples.

Detach leaves and remove the petioles. Place leaves in a dry paper bag or perforated plastic bag and immediately label the bag so that you will know the area this sample represents. Wash the leaves before they wilt

to remove spray residues and dirt. Gently rub the leaves together in a mild detergent solution (dish washing detergent in tap water). See **Washing leaf samples**

below for washing instructions. Place sample into dry paper bag with the top open and let dry at room temperature until the leaves are brittle.

#### 5. Submission Form.

Fill out the information sheet and work sheet completely. **Keep the work sheet for your own records to aid in interpretation at a later date.** Be sure that the leaf sample bag and the information sheet are marked with the same ID#.

#### 6. Packaging, payment, and mailing instructions.

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Please make check or money order payable to: Dairy One, 730 Warren Road, Ithaca NY 14850

#### 7. Washing leaf samples.

Wash the leaf samples while still fresh, **before they wilt**. If a large number of samples need to be prepared, they may be stored overnight in a cold storage, refrigerator or ice chest to keep them drying out.

Use distilled water, available at most drug stores, for washing and rinsing the samples. Change the water if it becomes dirty **or** after 8 to 10 samples (whichever occurs first). **Gently** and **lightly** scrub the leaves together in distilled water.

Shake to remove excess water and immediately rinse the sample in clean distilled water. Again shake to remove excess water and immediately rinse the sample in clean distilled water. Again shake to remove excess water. Transfer sample to paper bag, with top open and dry at room temperature until the leaves are brittle.

**NOTE: DO NOT let leaves to stand in water – complete the washing and rinsing process in one minute or less.**

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