



## Guidelines for Certification of Organic Maple Syrup

Vermont Organic Farmers (VOF)

Northeast Organic Farming Association of Vermont (NOFA-VT)

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The VOF guidelines for maple production are drawn from those practices established in the Vermont State law (6 V.S.A. Chapter 32); the Vermont Department of Agriculture Maple Quality Control Manual; Tapping Guidelines by George Buzzell, Orleans County forester; Joint Statement of the North American Maple Syrup Council and the International Maple Syrup Institute on Organic Production of Pure Maple Syrup. In addition, all practices must be in compliance with the USDA National Organic Program Standards (7 CFR Part 205).

### **I. INTRODUCTION**

All organic maple syrup producers must be familiar with the general requirements of the USDA National Organic Program. Contact the VOF office if you do not have a copy of these standards. The following maple guidelines provide additional information for determining what practices are compliant with the national standards. In addition, producers should make sure they are compliant with Vermont State laws governing the production and labeling of Vermont Maple Syrup.

NOP Section 205.207 (b) Wild Crop Harvesting Standard states that, "A wild crop must be harvested in a manner that ensures that such harvesting or gathering will not be destructive to the environment and will sustain the growth and production of the wild crop."

Organic maple sap and syrup production is defined by the following:

- 1) Cultural practices designed to maintain tree health and ensure long-term preservation of the sugar bush as an ecosystem; Therefore, on rented land, a long-term lease is recommended.
- 2) The prohibition of synthetic materials added at various stages of management and production unless allowed on the National List of Allowed and Prohibited Substances.

### **II. PRODUCTION STANDARDS**

All Guidelines are subject to existing Federal, State, and local food handling and sanitation requirements.

#### **1. Sugar Bush Maintenance**

Producers shall take the necessary steps to protect the sugar bush ecosystem.

- a. In order to be certified, no synthetic fertilizers, herbicides or pesticide shall have been used in the 3 years preceding application.
- b. A written forest management plan is required. *The plan may be written by a certified forester or the applicant. However, if written by the applicant, a state or county forester must verify it.* Approved Current Use Plans are acceptable if they cover the topics listed here. It should plan for 5 to 10 years ahead and include a statement of chronology of major management activities: ownership goals and management objectives; a mapping system showing scale and north arrow, a survey map, property location in relation to local areas, boundaries, and a soils map; a site and stand description; and management recommendations including a thinning plan and an



- improvement plan. It should also show any sugarbush roads, wetlands, or ecologically sensitive areas.
- c. Since the roots of maples emerge at the soil surface, producers should avoid passing with their machinery too frequently during and outside the production season.
  - d. Fertilization applications shall be in accordance with requirements based on observed and diagnosed deficiencies. Lime and other non-synthetic fertilizers are allowed. Contact the NOFA office for a complete list of accepted inputs.
  - e. Grazing- If parts of the sugarbush are going to be grazed this practice must be addressed in the forest management plan to ensure no long-term damage to the sugarbush.
  - f. Sugarbush roads must be maintained in a manner that prevents/reduces soil erosion.

## 2. Invertebrate and Vertebrate Pest Management

All relevant production practices should take pest prevention into consideration. Growers must use management practices to prevent pest problems. Once prevention fails, methods of control having the lowest ecological impact should be the first choice. Although “natural” insecticides are widely accepted as organic because of their natural origin and swift decomposition, when over-used they pose a danger to soil organisms, beneficial insects and wildlife, as well as to humans using them. All pesticides, no matter how they are derived, should be handled with caution and used only in accordance with the labeled instructions and Vermont State Law.

### Accepted

- Use of mechanical controls such as traps, lures, barriers and sound.
- Biological controls such as release of natural predators and parasites and providing habitat for natural predators
- Microbial and viral diseases, provided no petroleum-based synergists or carriers are used, if the inert ingredients are disclosed and contain only accepted ingredients.
- Habitat modification to discourage vertebrate pests
- Shooting of mammals and birds in accordance with VT state law
- Physical barriers such as fences, netting, etc.
- *Bacillus thuringiensis* (BT) for tent caterpillar when all ingredients (including inerts) are approved

*Only when the above practices are insufficient, a producer may use a biological or botanical substances or a synthetic substance from the National List. Many “natural” insecticides are prohibited due to synthetic inert ingredients. **Please refer to VOF’s Product List for Organic Crop Production.***

### Prohibited

- Pesticides containing prohibited substances.
- *Bacillus thuringiensis* (BT) for tent caterpillar with prohibited inert ingredients

## 3. Tapping Management

Continued tree productivity depends on determining the proper number of taps per tree and then distributing these taps over as large an area of tappable wood as possible. Distributing these taps properly will keep them separated from each other by larger areas of healthy white wood. Drop line location and length should be adequate to reach these properly located tap holes. A primary objective is to extend the tapping zone to be as large as possible. Tap holes should be as shallow as possible.

- a. Taps should be distributed evenly on the trunk following guidelines below.
- b. It is important to allow long enough dropline lengths (recommend 24-36") to allow vertical staggering as well as horizontal offsetting of new tap holes.

- c. Taps should be placed at least six inches to one side and one foot above or below any old taps which are still open.
- d. The number of taps per tree should be based on the measured live (usable) circumference of each tree. Each tree should be closely inspected and adjusted tree diameter determined by measurement. For example, a cluster of open tap holes should not be considered part of the tappable shell. The non-tappable shell should include the cluster of open tap holes and an additional six inches on each side of the cluster. This tapping guideline is unique because it requires a minimum tree growth necessary to seal over tap holes and produce new wood for future taps. Continued tapping of trees which are not healing over will speed up injury, dieback, and lead to premature death. Two tapping guidelines exist based on type and size of spout used. They both presume that trees are healthy and capable of growing 1/8" of new wood annually measured at the outside growth rings. Health spouts have proven to be less invasive to the tree and are therefore recommended. The guidelines are as follows:

	<b>Health Spout (5/16")</b>	<b>Standard Spout (7/16")</b>
<b>1 tap</b>	<b>9-14" dia. (28-44" circ.)</b>	<b>12-18" dia. (36-54" circ.)</b>
<b>2 taps</b>	<b>15-20" dia. (47-63" circ.)</b>	<b>19" &amp; over, dia. (54"+circ.)</b>
<b>3 taps</b>	<b>21" &amp; over, dia. (66"+ circ.)</b>	<b>Prohibited</b>
<b>4 taps</b>	<b>Prohibited</b>	<b>Prohibited</b>

- e. Smaller diameter trees may be tapped if they are specifically marked to be removed due to thinning (as described in your management plan).
- f. The tapping of any trees in a manner other than described above requires approval from the VOF Review Committee and will take into consideration the use of microtaps (3/16"), soil conditions, slope, aspect, crown size, stocking density, other factors.

#### 4. Production Equipment and Methods

This refers to sap collection, storage and transportation; concentration of maple sap into maple syrup; filtration of sap or syrup; and storage.

##### **Accepted:**

- Use of metal and plastic spouts and seals, plastic tubing. Wire used to hang mainline should be kept from damaging the trees it is attached to. Use of nails should be kept to a minimum and considered as a "tap" if used in an allowable maple tree.
- Use of reverse osmosis, ultra filtration of sap, and ultraviolet light are allowed.
- **Storage, boiling and pipeline equipment (anything that comes in contact with sap or syrup) shall be made of food grade materials. All equipment must be washed and well rinsed. All new equipment must have lead-free solder to prevent lead contamination. The intention of all producers should be to move away from equipment (especially pans where the sap is cooked) that contain any lead.**
- Diatomaceous earth added to syrup before filtering. If DE is used as a filtering agent, the product cannot be labeled as 100% organic. (Please see section IV Labelling)
- Paper, felt, or synthetic filters may be used.
- **Defoamers-** Defoamers are considered processing aids in the production of organic maple syrup. Processing aids must be approved on the National List (see section 205.605). Processing aids must be produced without the use of genetically modified organisms, irradiation and sewage sludge. In products labeled as 100% organic, processing aids that are agricultural must be organically produced. The **only** acceptable defoamers for organic maple syrup production include vegetable glycerin (synthetic on the National List), certified organic oils or certified organic dairy products. **Synthetic defoamers are not allowed.** Please contact the NOFA office if you have a question about your defoamer.

## 5. Washing and Disinfection of Equipment

It is required that all equipment be kept clean and free of traces of cleansing agents. Every time cleansing agents or disinfectants are used, filter, pans, seals, and tanks shall be rinsed thoroughly with clean water.

- a. Conventional cleaning products may be used provided that care is taken to avoid any contamination of the organic product.
- b. If using bleach when disinfecting tubing, producers are encouraged to trap the chlorine wash so it does not damage the roots of adjacent trees.
- c. Tubing systems shall not be sanitized with prohibited products during the season of sap flow unless the sanitization is followed by a purge or rinse.
- d. For reverse osmosis membranes; and when cleansing agents prescribed by the manufacturer are used, membranes must be rinsed thoroughly before use.
- e. Before putting syrup into any drum for storage, producers must first rinse the drum with hot, fresh water or hot, fresh sap to sterilize the drum.

## III. LEAD TESTING

All new producers are required to obtain three separate representative samples taken early, middle, and late season, respectively and equally blended into one composite sample and tested by a third party for lead levels. Original samples need to be kept by the producer and stored for retesting, if necessary. The maximum lead content limit is 250 ppb, and any syrup with lead levels over this amount cannot be sold as organic. It is required to have sequential coding on the storage barrels or containers to be able to identify all syrup.

1. For first year applicants, preliminary approval of the syrup will not be given until the final testing is finished and the results are sent to the NOFA-VT office by May 1<sup>st</sup> of the production year.

2. Any producer who records samples above the 250 ppb lead level must reassess their management and equipment and submit proposed changes in writing. Again, the maximum lead content limit is 250 ppb, and any syrup with lead levels over this amount cannot be sold as organic. Next year's renewal will depend upon the implementation of this proposal and a new lead test showing levels below 250ppb.

3. Renewal applicants whose lead tests levels fall below 250 ppb will not have to submit annual lead tests. Instead, these producers will be required to submit lead tests every five years, unless there is a significant change to their operation and equipment that could introduce lead to the system.

4. Contact the office for a list of laboratories that do lead testing.

## IV. LABELING

Producers must submit their labels to VOF for approval prior to sale. A producer is creating a label only when he or she identifies in writing that the product is organic. For example, a tag that reads "organic maple syrup". Otherwise for those producers who are applying only their farm sticker and VOF logo sticker to their product, they are not required to meet the label requirements as set forth below (for example, adding the phrase "certified by VOF".)

### 1. 100% Organic

Products represented as 100% organic must contain 100% organic ingredients and processing aids. For example, producers using diatomaceous earth as a processing aid, may not label their product as 100% organic.

Products in the 100% organic category may be labeled anywhere on the package as "100% organic" or "organic" and may indicate ingredients individually as organic in the ingredient statement. Processors may use the USDA seal and the VOF Processor logo. However, if a



processor chooses to use both logos, the VOF logo may not be more prominent than the USDA seal. On the information panel below information identifying the handler or distributor, the certifying agency of the handler must be identified with a phrase such as Certified organic by “Vermont Organic Farmers” or “VOF”.

## 2. Organic

Products represented as “organic” must contain at least 95% organic ingredients. The remaining 5% must also be organic unless those ingredients are not commercially available. This 5% may also include non-agricultural substances (such as processing aids) from the National List §205.605. These non-organic ingredients must not be produced using genetic engineering or sewage sludge or be irradiated.

Products in this category may be labeled anywhere on the package as “organic” and may use the USDA seal and the VOF Processing logo. However, if a processor chooses to use both logos, the VOF logo may not be more prominent than the USDA seal. Processors **must** indicate each organic ingredient in the ingredient statement. On the information panel below information identifying the handler or distributor, the certifying agency of the handler must be identified with a phrase such as “Certified by Vermont Organic Farmers” or “VOF”.

If you list the percentage of organic ingredients in the product, the size of the percentage statement must not exceed ½ the size of the largest type size on the panel on which the statement is displayed and must appear in its entirety in the same type size, style, and color without highlighting.

If your product is labeled as “organic” please be sure if indicating that your product also contains 100% pure maple syrup that it is not misconstrued that the product is also 100% organic. VOF will not approve labels where 100% pure and organic are on the same text line.

## **V. VALUE ADDED**

If you produce any value-added products like maple candy or maple sugar that you plan to represent as organic you will need to keep records sufficient to track all raw ingredients to the sale of the final product. Please refer to the VOF Guidelines for more information on certifying processed products. Please note if the gross sales from your value-added products total more than \$5,000, you will need to fill out a complete processing application.

## **VI. AUDIT TRAIL**

Audit trail and inventory control procedures must be detailed enough to trace all sap/syrup from the supplier, through the entire processing, and on through the distribution system to the retailer, using lot numbers, or identifiable codes. A production log should be kept that shows how much syrup was produced on each day of boiling.

It is required to have sequential coding or lot numbers on the storage barrels and containers to be able to identify all syrup and allow traceability of syrup back to date of boiling and canning.

All records, including production records, purchase orders, bills or inventory records, must be made available to the inspector, if requested. Labeled sample jars representing each barrel of syrup should be kept for comparison and inspection.

