

## 2020 Review of the Canadian Organic Standards



**What is organic food? In one way, the answer is simple - food produced according to the organic principles of health, ecology, fairness and care. Can it be produced with synthetic fertilizers or pesticides?**

**Well, this is where the answer gets a bit tricky.**

by Janet Wallace

### The use of some synthetic substances in organic production



Years ago, organic food was defined as being produced using “natural” substances, such as composted manure for nutrients and crushed eggshells for slug control. Soon, people realized that “natural” was surprisingly difficult to define. Moreover, it often wasn’t relevant, particularly with new technology.

For example, a floating row cover made of spun polyester isn’t natural but using row

covers to reduce pest pressure certainly conforms to the principles of organic agriculture.

The word “natural” was eventually replaced with the term “non-synthetic.” This sounds much more scientific and accurate, but is it? For a couple decades, organic farming has been defined as farming without the use of synthetic fertilizers or synthetic pesticides. This served to differentiate between organic and non-organic agricultural methods.

For example, organic farming relies mostly on manure, compost, rock dusts and green manures for nutrients, whereas mainstream non-organic farming relies on synthetic fertilizers derived from petrochemicals. For pest control, organic farmers use companion planting, crop rotation, biological pest control and benign substances like diatomaceous earth and soap. Non-organic farmers depend on synthetic pesticides, often persistent broad-spectrum pesticides, which kill more than just the target pests and remain in the environment long after their application.



## Synthetics in the 2020 Standard

In the revision of the standards for 2020, the Standards Interpretation Committee (SIC) submitted many petitions to remove the terms “synthetic” and “non-synthetic” from the Permitted Substances Lists.

One thing is clear: there is no desire from the SIC to open the floodgates and let organic farmers use all sorts of chemicals. Instead, the SIC wants to ensure the language of the standard is accurate and meaningful.

In the 2015 Canadian Organic Standard and Permitted Substance Lists, the terms “synthetic” or “non-synthetic” are used more than 100 times. The problem is that the terms are sometimes used inaccurately; this can lead to confusion among producers and inspectors, and also misleading statements.

### **Soap - the slippery slope to synthetics**

The review of the synthetic issue was partially triggered by a question about soap. In crop production, soaps (including insecticidal soaps) are allowed if they “consist of fatty acids derived from animal or vegetable oils.” The problem is that soap is synthetic. Even home-made soap--produced traditionally as it’s been done for a hundred years by combining animal fat with lye from wood ashes--is considered synthetic. That’s because the ingredients are chemically altered as the fat and lye are heated.

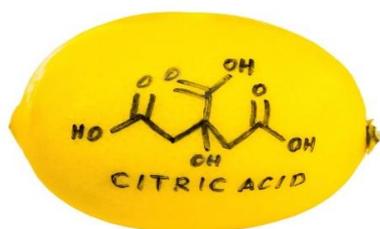
If soap is allowed for pest control, we can no longer say that synthetic pesticides aren’t used in organics. Does this mean soap should be banned from organic production? That’s one approach but soap is a valuable pest control product. It can control pests but is very short-acting; it literally washes away with rain or irrigation. While we might want to permit soap, we don’t want to open the floodgates and allow all sorts of persistent pesticides. Instead, the Standards Interpretation Committee thought it was time to examine the use of the term synthetic.

### **Refining the standards**

The challenge is finding the words to accurately describe what is or what is not allowed while maintaining the overall principles of organic agriculture. To do this, we need to look at how substances are produced. The synthetic form of a substance, such as an essential oil or vitamin, produced entirely in a lab may appear to be identical to a form found in nature. But it is the production process that renders these substances synthetic.

In other case, a substance as natural as lactic acid, produced by biofermentation of a carbohydrate such as sucrose or lactose, may be rendered synthetic during the final

purification stage. Rather than require non-synthetic forms, there is a proposal to require non-purified forms.



In some cases, the proposals will not just clarify, but also strengthen the standards. For example, both synthetic and non-synthetic forms of citric acid are currently permitted (in the 2015 PSL) in crop production to adjust pH, but the proposed change for 2020 limits the citric acid to “sources other than petrochemicals.”

For certain substances, non-synthetic forms are required but are not commercially available, such as sodium citrate (allowed as a food-grade cleaner). In this case, there is a petition to remove the requirement for a non-synthetic form of the substance.

In other places, the terms “synthetic” and “non-synthetic” are proposed to be replaced by more accurate wording and examples. For example, in Tables 4.2 and 4.3, we suggest replacing the annotation for Chelates. The current wording is “Non-synthetic and listed synthetic chelates are permitted. See Table 4.3 Lignin sulphonates.” We propose changing that to “Chelates listed in Tables 4.2/4.3, such as Acetic acid; Ascorbic acid; Citric acid; Humates; Lignin sulphonates; Vinegar.”

It is also suggested to allow certain sources of specific substances when they appear to be the better choice. For example, there is a proposal in Table 4.2 to allow “both mined and reclaimed sources” of elemental sulphur as a soil amendment or foliar application. Mined non-synthetic sulphur is available - albeit in very limited quantities. It is obtained, however, by the very hazardous work of mining volcanos and relying on a soil amendment that violates the organic principle of fairness. Instead, the Crop PSL Working Group is recommending that organic farmers be allowed to use recycled or reclaimed sulphur from smokestacks.

### **What’s the outcome of all this?**

If all the proposals to remove the terms “synthetic” and “non-synthetic” are accepted, there won’t be a huge change in organic farming practices or in the scope of permitted substances. Instead, hopefully the proposed changes will make it easier for farmers and processors to know what substances are allowed.

As for the difference between organic and non-organic agriculture, it won’t be as easy as saying synthetic substances aren’t permitted in organic farming. In reality, that hasn’t been true because certain synthetic substances, like soap, have always been allowed. But just as the standards focus on what is permitted rather than what is banned, organic farming can be defined by what it is, not what it isn’t. Organic farming focuses on promoting the health of plants, soil and animals in ways that replicate nature as much as possible. Organic producers focus on using methods and products that can produce nutritious food in a socially just way while minimizing our environmental impact.

