

# Dear Rochelle

by Rochelle Eisen

Dear Rochelle

I am new to organic farming and thinking of applying for certification. I have heard soil tests are needed, is this true? I have never done one. Do I do the soil test or does the government? What type of test is required? Does it matter that the land has been a horse pasture for at least 20 years?

*Testy in Rutland*

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Dear Testy

There is no overarching soil testing requirement stipulated in the Canada Organic Standard, but some individual Certification Bodies (CBs) do require submission of mac-

ro & micronutrient test results with each initial farm application, no matter what the land was used for up to submission of your application. Either you or your current crop consultant can take the soil samples. The samples are submitted to the lab of your choice and then you submit the results to your CB to serve as a soil nutrient benchmark.

Some people think that not requiring soil tests means the organic certification process doesn't encourage organic operators to do regular soil testing. Nothing could be farther



# Typical Soil Test

The standard soil test – readily available through commercial labs – provides data on soil macro and micronutrient levels, it also includes the percent organic matter and the bulk density factor and a few soil chemical characteristics (pH, Electrical Conductivity and sometimes Cation Exchange Capacity). In general, these parameters form the basis of commercial synthetic fertilizer and liming recommendations. <sup>3</sup>



# Soil Health

Soils are considered healthy when there is a diversity of beneficial soil organisms (bacteria, fungi, protozoa, nematodes, tiny insect-like creatures, earthworms, etc.) digesting organic residues (fallen leaves, manure, crop residues, etc.) and converting these into humus (the decomposed organic matter that makes topsoil dark brown and enhances its capacity to hold water and nutrients). This activity is called the “organic matter cycle,” and it releases nutrients in plant-available form. In addition, healthy and diverse soil life promotes good tilth and protects plants against soil-borne pathogens <sup>4</sup>.

from the truth, but there is a huge difference of opinion on what type of testing would be actually useful to the certification process or to the farmer, and that is basically why a specific requirement for a soil test is not in the current standard. However, sometimes when a CB has concerns about an operator’s soil management, they can <sup>1</sup> direct their Verification Officer to sample while onsite and the CB will review those results. Also, be aware that micronutrients can only be applied to land or be foliar fed when a deficiency is identified by either a soil or plant tissue test <sup>2</sup>; thus making soil or tissue testing a necessity to support certification in certain situations.

Why is there debate about whether soil testing should be required? There are a few reasons including: (1) soil tests are only as good as the sampling technique used; (2) most commonly available soil tests focus on the chemical makeup [see typical soil test sidebar] and don’t supply any insight into the soil health [see soil health sidebar] aspect of soil fertility which is a critical part of the story; (3) a single soil test is only a “snapshot” of one moment in time and doesn’t necessarily give credible insight into an operation’s soil management regime; (4) even if recognized as a valuable diagnostic tool, the recommendations are only as good as their interpretation; (5) most labs don’t provide practical fertilizer recommendations suited to commercial organic farming; and (6) for a significant portion of operations soil testing is a standard operating practice, so why regulate this activity?

Don’t get me wrong, soil tests, can be very useful over time to observe trends. But you need to stick to one lab, send in replicate samples (to see if the results are consistent), have a reliable sampling technique, and be sure sampling is done at the same time each year and taken roughly in the same locations. This is the only way you can compare results and notice any trends over the years to ensure soil improvement is taking place.

In fact, the trends are probably the most useful information that can be gleaned from the whole exercise. Are the Soil Organic Matter (SOM), pH and nutrient levels approaching the optimum range? Are “low” nutrient levels coming up and “excessive” nutrient levels coming down? Sometimes the over application of inputs, like compost or dolomite lime, can create imbalances in nutrients in the soil that will affect your crops. Remember that

even though your soil may be “healthy,” you can easily ruin your soil with poor cultivation techniques.

I hope this little missive helps you embrace the principles of organic farming, so you will be conscious of not only the chemical health of your soil but become aware of both the biological and physical aspects as well. Most farmers have a gut sense of how they are doing based on yields, productivity and quality, but erroneous assumptions can easily be made. Sometimes testing is the only logical option. For a contact list of labs check out: [www.certifiedorganic.bc.ca/rcbtoa/services/soil-testing-services.html](http://www.certifiedorganic.bc.ca/rcbtoa/services/soil-testing-services.html)

<sup>1</sup> This can be inferred by virtue of CAN/CGSB 32.310 para 5.5.2.2 as it maybe be necessary to substantiate an operator’s nutrient management plan.

<sup>2</sup> Refer to CAN/CGSB 32.311 Permitted Substance List entries for Gypsum, Iron products, Sulphates of zinc and iron, and Trace Elements.

<sup>3</sup> Modified from ATTRA’s Alternative Soil Testing Laboratories <http://attra.ncat.org/attra-pub/soil-lab.html>

<sup>4</sup> Modified from VABF’s How to Use A Soil Test <http://www.vabf.org/soilre3.php>



## LATEST ON THE CANADA ORGANIC STANDARD

*By Rochelle Eisen*

**In the hopes of keeping everyone informed of what standards changes may be coming down the road, I have attempted to summarize the results of the last CGSB Technical Committee meeting held the 15th & 16th April 2009, which was the 10th Meeting of the CGSB Committee on Organic Agriculture. Suggested changes were completed for both CAN/CGSB 32.310 General Principles and Management Standards & CAN/CGSB 32.311 Permitted Substance List (PSL).**

To see a complete summary of these go to:

[www.certifiedorganic.bc.ca/contacts/extension/COS\\_update\\_spring09.pdf](http://www.certifiedorganic.bc.ca/contacts/extension/COS_update_spring09.pdf) or contact Rochelle Eisen 250.547.6573 extension@certifiedorganic.bc.ca.