

"So while electrical conductivity may indicate that salt concentrations are low, sodium concentrations may be so high that they can impede plant growth."



Quality in the Bag

The new Compost Quality Alliance will ensure compost that can be used

Is it in the Bag?
Is it a game of roulette?
When you go out and buy some compost for your garden do you know what you are getting?
In many cases you are buying a good quality product that will benefit your garden. In some cases you are buying a poor quality product that will convince you that you have a brown thumb — literally and figuratively.

What is missing from the mix is consistency. Composting is a short-term process that takes heterogeneous feedstocks, mixes them, and somehow tries to homogenize them into a final product. The variable process produces

many types of compost. An inconsistent compost analytical regime between laboratories further confounds the development of composts that share consistent properties, regardless of where they're produced.

It's safe to say that most composts made from source-separated feedstocks will result in a compost that can meet environmental parameters such as metal concentrations. However, after that the quality of the compost is really a function of how the composting process is managed. This will dictate the types of products that will be produced and will also dictate the types of problems that might be encountered with products.

Compost maturity and salt concentrations are examples of two parameters that can have a negative impact on the quality of compost. The Compost Quality Alliance (CQA) seeks to have its members test their compost for a prescribed set of parameters to start to infuse additional consistency and instill additional consumer confidence in the compost products in the marketplace.

Compost maturity

An immature compost can result in negative impacts in the soil or growing media. It can start to decompose once again — potentially

**Table 1.
Various Grades of Compost**

USE	pH	C:N ratio	Moisture	Particle size	Soluble salts	%Na
Remediation	5.8-8.5	10-40	NA	<2 inch	<20	<3%
Soil Amendment	5.8-8.5	10-30	NA	<1/2 inch	<6	<2%
Landscaping	5.8-8.5	12-22	<50%	<1/2 inch	<5	<2%
Planting Media	5.5-7.8	12-22	<50%	<1/2 inch	<4	<2%
Turf Topdressing & establishment	5.8-7.8	12-22	<50%	<3/8 inch	<3	<1%
Potting Soil	5.5-7.2	12-22	<50%	<1/4 inch	<2	<1%

robbing the soil of nitrogen at the expense of growing plants. It can also contain compounds, such as organic acids, that can have a negative impact on plant germination.

Organic wastes are banned from landfill in Nova Scotia; that province has a well-developed composting infrastructure. In response to some operational issues at some compost facilities and some consumer complaints about the quality of compost the province undertook an “Assessment of the State of Compost Processing Facilities” report that was completed in July 2003. (See www.rrfb.com) Among its findings were that

around 50 per cent of the composts tested (18 facilities) were immature. This was ascertained using a field test (Solvita) and a laboratory carbon dioxide evolution test (translated to an oxygen uptake equivalent). There was a limited correlation between the field test (Solvita) and carbon dioxide evolution.

The report is quite critical of existing Canadian Council of Ministers of the Environment (CCME) guidelines for compost maturity. The authors suggest that it may be possible to manipulate compost to make it appear mature. The study did not analyze compost for these CCME parameters.

While I would not be hanging my hat on the testing regime used, it does appear that in some cases composts being produced may be immature. In this case a broad and unrefined testing regime may be leading to the production of products that could lead to a poor consumer experience.

Salts in compost

Most compost producers recognize that salts in compost can have a negative impact on the final product. Typically electrical conductivity is used as a measure and a guide. However, it does not always result in an accurate depiction

of the impact of salts in the compost.

“Sodium (Na) concentrations in compost and its potential impacts are often overlooked,” says Greg Patterson, President of A&L Laboratories. “A reading of as little one per cent saturation of sodium can cause germination and emergence problems for a number of plants.”

There are issues with various composts out in the marketplace. To prove his point Patterson has, for a number of years, been purchasing commercially available bags of compost off the shelf and testing them for a number of parameters, including sodium. He has regularly found composts with sodium concentrations of three to five per cent. Patterson continues, “Anything greater than three per cent saturation of sodium is going to lead to problems.”

So while electrical conductivity may indicate that salt concentrations are low, sodium

concentrations may be so high that they can impede plant growth.

“We need to educate the composting industry,” says Patterson. “It’s an easy and inexpensive parameter to measure and with a bit of explanation, simple for the compost producer to understand.”

Compost Quality Alliance

While the compost industry in Canada has been soldiering on in earnest over the last 15 years (and there are many who produce good quality products) it’s imperative that the composting industry continue to grow and improve itself.

As she announced the creation of the Compost Quality Alliance (CQA), on 17 September in Gatineau, Quebec at the annual Composting Council of Canada conference Susan Antler, executive director of the Composting Council noted, “It’s critical to

support the development of compost usage across many markets. There’s a significant momentum in the composting industry that can lead to opportunities.”

Canada is a land full of franchises and predictable consistency. A part of our culture is a chain of coffee shops that features freshness and I’m sure, to their delight, people standing in line. People like predictability and consistency.

The Compost Quality Alliance (CQA) seeks to infuse more consistency into the compost products that are out in the market through uniform sampling and analytical procedures.

The voluntary program seeks to work with compost producers to test their products in a very deliberate and consistent manner. Producers would send compost samples to an approved laboratory where they would be analyzed. Samples that pass various criteria would then be approved compost. Some description of

COMPOSTING MATTERS

"The CQA should give consumers a greater level of confidence in the compost products in the marketplace."


what composts could be used for, based on the nature of the compost, will be provided to the compost producer. Patterson notes that the Test Methods for the Evaluation of Compost that will be used in this program provide a number of different methods to analyze various parameters. This means that the program will be flexible and encourage participation.

The system will operate on a pass/fail basis. CQA members producing compost that "passes" will be entitled to use a seal identifying their products. Some additional guidance will be given with regard to how various composts can be used. Table 1 presents an overview of the various CQA grades of compost. It assumes that all environmental parameters (e.g., metals) have been achieved.

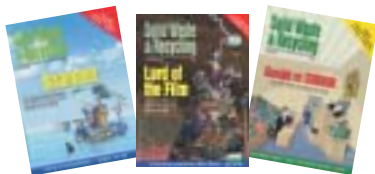
A marketing campaign by the CQA will adver-

tise this seal and what it means to the marketplace.

Barry Friesen, solid waste resource manager for Nova Scotia's Department of the Environment and newly appointed chair of the Composting Council of Canada notes, "The CQA should give consumers a greater level of confidence in the compost products in the marketplace. It should reduce some of the confusion and consistency issues of the marketplace and ultimately result in repeat business."

Only then will quality be "in the bag." 

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STUDY SAYS TRADE MAGAZINES ARE THE MOST USEFUL MEDIA FOR INDUSTRY EXECUTIVES

Trade magazines are the most useful source of information in the eyes of the Canada's business community, particularly those who make or approve purchase decisions, according to a recently released study by Starch Research.

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Specialized business publications	69 per cent
Trade shows	56 per cent
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