

FROM FARMING TO GARDENING: Bringing Soil Health to Life

Whether you are a farmer with 500 acres or are gardening in the city, Soil is your greatest resource for success. Its health and vitality are essential for healthier food, cleaner water, richer biodiversity and a calmer climate.

*Whether on the farm or in a garden, caring for your soil comes down to six basic principles. These are known as the **6Cs of Soil Health**.*

The 6th C: Compost and Other Soil Improvers

Compost and other organic amendments play crucial roles in building healthy soils by improving soil structure, fertility, and biological activity. They are rich sources of organic matter, which serves as food for soil organisms and contributes to soil structure. They contain a wide range of essential plant nutrients, including nitrogen, phosphorus, potassium, and micronutrients. They also improve water retention and drainage as well as support a diverse and active soil microbiome, including bacteria, fungi, protozoa, nematodes, and earthworms. These soil organisms play critical roles in nutrient cycling, organic matter decomposition, disease suppression, and soil aggregation.

As a gardener, it is important to remember that:

You can't go wrong with good compost.

We all like to add things to try to improve our gardens and lawns, whether they be fertilizers or various organic soil improvers, such as compost, composted manures, peat moss, etc. But we should be aware that when we add these things we are interfering in a natural system.

Your underground workforce consists of living creatures, with the same physical needs that we have – food, water, air, and a safe habitat. Left to their own devices, as in natural ecosystems, they will build an environment in which they will have all of these things in abundance.

When we interfere in their lives by adding things to the soil, we should do so carefully and consciously. Otherwise, we may well do more harm than good. Here are some tips for nurturing your soil with inputs that help and do not harm your underground workforce.

- **Adding compost is always a good idea.** Compost feeds your soil critters, provides nutrients for your plants, builds organic matter in your soil, and generally helps out around the soil community. But it also has one special feature that other inputs don't have: it adds diversity to your soil. Diversity is good for several reasons (see the 5th C – Create Crop and Plant Diversity) and it can easily be lost. Some inputs can reduce diversity by giving advantages to some critters over others. However, mature compost will never harm your workforce or your plants and will add to soil diversity.
- **If you build a healthy soil, and add compost yearly, you can reduce your fertilizer.** In fact, some very healthy soils don't need any fertilizer at all, just some compost to replace any nutrients removed if you harvest. Your underground workforce will recycle the nutrients in the compost you add, plus get more nutrients out of the minerals in your soil. No extra feeding necessary.
- **Use all fertilizers, both synthetic and organic, carefully and conservatively.** As you build your workforce (using the 6 Cs) to an optimum size and strength, you will need to carefully manage your fertilizer use. This soil-building process may take a few years. During this time, it is very important not to overfeed. A soil test will help, but you need to remember that a soil test only tells you what is in the soil and available to the plants at the time the soil was sampled – it does not tell you how much nutrition your workforce will make available during the course of the season. This additional nutrition can be substantial in a healthy soil. As the natural fertility of your soil increases over time, the amounts of fertilizing inputs can be reduced.
- **Only use pesticides as and if necessary, never as a prevention technique.** As soils get healthier, so do plants. As plants get healthier, they protect themselves from diseases and pests (often working in partnership with your underground workforce). If you have a pest or disease problem, this is an indicator that the health of the soil is less than is needed to fully protect the plants at this time. In these cases, use pesticides if you must, but once the pest has been knocked back, double down on the 6 Cs!

To learn what some Canadian farmers are doing to improve the health of their soils, check out the many great interviews at the Compost Council of Canada's YouTube channel.

For more information, visit www.compost.org.



Compost and Other Soil Improvers ... one of the 6 C's for Healthy Soil

Canadian Farmers: *Bringing Soil Health to Life*

The 6Cs of Soil Health: Tackling Climate Change with Soil

Soil is an important ally in tackling climate change, as well as achieving productivity and profitability. Paying attention to the health of the soil realizes a rich harvest of benefits: climate stability, improved water quality, drought resistance, cost savings, healthier food, and a generally more profitable enterprise. It all comes down to six basic practices: **the 6Cs of Soil Health**.

1. **Control Compaction**
2. **Cultivate Carefully**
3. **Continuous Living Plants**
4. **Cover the Soil Constantly**
5. **Crop and Animal Diversity**
6. **Compost and other Soil Improvers**



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