



Sustainability Newsletter

June/July 2015

Digging Deep in the Year of Soil!



2015 is being recognized as the International Year of Soils.

In a year when California is experiencing a fourth year of severe drought conditions that threaten production of many foods that supply our store shelves here in BC, it is fitting to think about our food needs...and that brings to mind the importance of soil.

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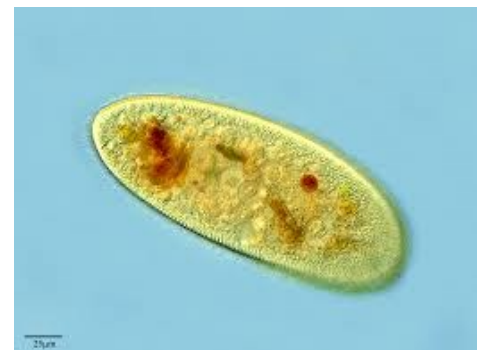
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Stewardship of our soil and water is an essential part of the food security picture. Healthy soil is where food begins! Not only that, soil is the basis of feed for livestock, fibre for clothing, and the medicines we rely on. Soil filters and stores water, providing critical flood and drought protection. Science has discovered that soil holds more carbon than the atmosphere and all plant life combined! This means that protecting and restoring soil is something we can all do to slow the effects of climate change.

The soil is a fascinating dynamic place that we often take for granted. Did you know? Earthworms are just the start. Soil is FULL of microscopic life.

One teaspoon of healthy soil can contain:

- one billion bacteria representing between 20,000 and 30,000 species;
- several yards of fungal hyphae (white, threadlike growth by which fungi absorb and transmit nutrients);
- several thousand protozoa (single celled micro-organisms that can eat 10,000 micro-organisms in a day); and
- a few dozen nematodes (tiny worms that eat fungi, bacteria, roots or even other nematodes).



A protozoan under microscope.

Along with other soil life, this microscopic community performs vital functions. By supporting them, we are ensuring that the soil can support us! And the best part: the ingredients are right at hand...(see page 2)

This newsletter can be viewed online at: www.rdbn.bc.ca/environmentalservices/recycling/sustainability-newsletter

If you have any questions or suggestions about the content of this newsletter, please call Lynda Fyfe, Sustainability Assistant for the Regional District of Bulkley-Nechako at 250-692-3195, toll free: 1-800-320-3339, email: lynda.fyfe@rdbn.bc.ca

Support the Soil in Your Veggie Garden

By varying the ingredients in your compost and the mulches you use, you can support soil life that is either:

- ◇ dominated by bacteria (this soil environment is best appreciated by your lawn and veggie garden)
- ◇ dominated by fungi (this soil environment is best for most of your trees, shrubs and perennials)

Support the soil environment that your garden veggies need, using simple ingredients!



Compost:

Now is a great time to treat your garden with the mature compost you have been culturing throughout the past year (note that when compost is mature, you can't recognize what's in it!). A layer of about 1/4" thick is all that is needed to boost your soil with the bacteria and other soil life found in your compost.

The soil creatures found in compost benefit the soil in many ways:

1. They give structure to the soil as they move through the it—providing passages for air and water.
2. They provide tasty soil nutrients (think steak and potatoes!) that your plants can access through their roots. They do this in a way that chemical fertilizers cannot.
3. They help control disease organisms in the soil.



A Springtail under microscope...
cute soil bug alert!!

Chemical fertilizers, pesticides, insecticides and fungicides disrupt the soil food web. They destroy the foods that earthworms eat. They **disrupt the life of the soil and can reduce living soil to life-less dirt.**



Grass Mulch:

Mulches are a great way to control weeds, protect against heavy rains and insulate the soil against extreme heat and cold. Even more importantly, mulch boosts the organic content in soil and provides a home and food for the tiny soil animals that provide nutrients (remember that juicy steak!) to your plants. Grass mulch supports the soil environment that your garden veggies need. All this and it is free! Here is how to apply:

1. Grass mulch works best when it is applied over top of compost (see above).
2. Don't use grass clippings from lawns that have been treated with chemicals or where dog excrement is part of the mix.
3. Add an amount no thicker than 2 to 3 inches thick —avoid putting it next to any plant stems.
4. Work this into the top layer of soil.
5. Moisten the soil/mulch mixture to make it most palatable for the creatures of the soil food web.

Something to Digest

If you already have a backyard composter you will know that some food waste is just not composter-friendly. Cooked foods such as bread or pasta, oil or grease and any fish, meat or bones can create odours, and attract animals, including bears and rodents.

Although these foods may only be a small portion of your food scraps, wouldn't it be nice to keep it ALL out of the waste stream and have an odour free (and smaller) bag of garbage? Here are some options for dealing with these hard to compost wastes:

⇒ **The Green Cone**

You can throw ALL food waste into this container. It requires decent drainage—because most of the food waste is converted into nutrient rich liquid that flows into the soil—as well as sunlight, which along with air circulation, powers the decomposition process. For more information about the Green Cone, including how to use it properly in bear country, please visit: <https://www.greencone.ca/partner.php?partner=Durablesolutionsinc>.



⇒ **DIY Backyard Digester**

If you have sufficiently deep and well-drained soil, you can make your own backyard digester to handle those food scraps that are unsuitable for your regular composter. Here's how:

- ◆ Take a galvanized steel garbage can and have the bottom cut or welded out. Drill or punch about 20 holes (1/4" to 3/8" diameter in size) around the sides of the cylinder.
- ◆ In a location that is sunny, well drained and away from any water source, dig a hole deep enough to sink the garbage can, leaving the handles above the surface. If your soil isn't quite deep enough, you can mound it up around the sides.
- ◆ Before sinking the can into the hole, improve the drainage by mixing gravel or pebbles into the soil in the bottom of the hole.
- ◆ Backfill the soil around the edges of the can.



After each addition of food scraps, sprinkle some wood ash or lime in the hole to cover the scraps and provide odour control. When the hole is filled to within 1 foot (30 cm) of the surface, just pull up the garbage bin, cover the hole with soil, and start over.



⇒ **Feed the Pigs**

Find out if there is a pig farmer in your area who would like to take your extra food scraps as feed.

Q: What happens to organic waste in a landfill?

Myth: Organic waste is excellent to add to the landfill. When it breaks down it helps to decompose all the other waste!

Reality: Organic waste doesn't do any good in a landfill. In the absence of air, it turns into a liquid, which moves through the landfill, mobilizing toxins and creating nasty leachate. It also creates methane—a greenhouse gas 21 times stronger than carbon dioxide.

Kale Snack Attack

Kale is an easy to grow power-green that is packed with nutrients. It is tasty raw, steamed or stir fried. By baking up some kale chips, you can also enjoy it as a snack food.

Kale Chips (the following recipe is for a half bunch of kale- this will fill one baking sheet).

- Tear leaves into large pieces (you can remove the stems first if you prefer and eat them separately, steamed or blended in a green smoothie).
- Wash and thoroughly dry leaves.
- In a bowl, add about 1/2 tbsp of vegetable or olive oil and toss until all parts of the leaves are coated with the oil.
- Spread leaves out in a single layer on the baking sheet.
- Bake at 300°F until crispy (about 25 minutes).
- Once out of the oven, let sit for about 3 minutes to crisp up even further.
- Eat soon or store in airtight containers, since they will lose their crispiness over time.



You can experiment with mixing different herbs and spices into the kale after you have tossed it with oil. Here is a recipe for All-Dressed Kale Chips (ohsheglows.com). You can use any or all of these herbs and spices in your own version—or experiment using what is in your spice drawer.

All-Dressed-Kale Mix (per half bunch of kale—mix into the kale after tossing it with oil).

- 1 1/2 tablespoons nutritional yeast
- 1 teaspoon garlic powder
- 3/4 teaspoon chili powder
- 1/2 teaspoon onion powder
- 1/2 teaspoon smoked paprika

Seasonal Eating in June and July

Although it is nearly impossible to have a modern “100 Mile Diet” while living in northern British Columbia, we are lucky to be able to find many fruits and vegetables that are grown in the province. Here are some BC grown foods to look for at your local farmers market or grocery store throughout June and July:

June

- Strawberries
- Rhubarb
- Spinach
- Kale
- Green Onions
- Swiss Chard
- Broccoli

July

- Apricots
- Nectarines
- Raspberries
- Cherries
- Potatoes
- Lettuce
- Turnips

