

THE EDIBLE GARDEN

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The Wonderful World of Worms...and their Poop!

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If you thought worms were nothing more than fish food, or specimens for a grade 10 science experiment to work on developing your surgeon's touch, you are, well, partially correct. But worms have far greater potential, and should be praised for their function and contributions to soil ecology. Worms are a most excellent subterranean gardening assistant. Below are some of the reasons why you should take worms and their castings (i.e. poop) more seriously.

The Many Functions of Worms

Worms perform a multitude of functions below our feet. Worms shred organic matter, allowing smaller organisms to digest this matter more easily. This helps to increase soil fertility, and promote the proliferation of other soil assistants.

Worms create pathways, aerating the soil and allowing for easier movement of plant roots. These pathways increase soil porosity, and create spaces for microorganisms to breed, increasing microbial life, and improving the soil's constitution, contributing to plant growth and health.

Worms move organic matter and microorganisms throughout the soil, helping to improve soil health and life by dropping off these passenger-like microorganisms and organic matter along their vermiculture subway lines and dispersing them more evenly throughout the soil.

Worms can deposit vast amounts of castings throughout your soil on an annual basis. This is significant, as worms can play an important role in building soil ecology, increasing the availability of nutrients in the soil without the need for the gardener to add copious amounts of fertilizer to their garden.

Poop, Glorious Poop! (Why you should consider using worm castings to feed your plants)

While it is difficult to offer up an N-P-K (Nitrogen-Phosphorus-Potassium) ratio for earthworm castings with complete accuracy, this is undoubtedly one of my favourite and most often used soil amendments.

Digestive enzymes produced by bacteria in worms' intestines unlock many of the chemical bonds that prevent nutrients from being available within the soil, thus making them usable to the surrounding plant life. Soil which has passed through worms in the form of castings can be as much as 50% higher in organic matter than soil that has not moved through worms. As a result, soil that has passed through the digestive tract of an earthworm can be as much as seven times richer in phosphorus (P) (phosphate) than soil that has been untouched by earthworms. It can also contain upwards of ten times the available potassium (K) (potash), and five times the amount of nitrogen (N). There can be three times the usable magnesium (Mg) in worm castings and one and a half times the amount of calcium (Ca), as calcium carbonate is added to the castings during the process of digestion.

What are the Roles of these Nutrients in my Garden

Nitrogen (N) - Gives the dark green colour to a plant. It increases the growth of leaf crops and stimulates rapid, early growth in plants.

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Currants – Bad Berries or Good Berries?

*Edythe Falconer
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Aka – *Ribes petraeum*, *R. rubrum*, *R. sativum*, *R. nigrum*, or *R. oleratum* all carry the possibility of being infected with white pine blister rust (*Cronartium ribicola*) with currants being the first stop in the progress of the fungus. The fungus doesn't hurt the canes but can be fatal to white pines. We used to hear a lot about this. It is seldom mentioned now.

Many gardeners have productive stands of currants, my favorite being the red currant.



Red Currants

Edythe Falconer

Some stands are intentional and some have been sown by birds. They are easy to grow and my solution to the possibility of infec-

Phosphorus (P) - Stimulates early root growth, providing plants a rapid and vigorous start. It is important in seed and flower formation and helps to increase resistance to disease.

Potassium (K) or Potash - Increases plant vigour and disease resistance. It stimulates the production of strong, stiff stalks, sugars, starches and oils. It enhances flavour, colour and cold hardiness.

Magnesium (Mg) - Aids photosynthesis and is a key element in chlorophyll.

Calcium (Ca) - Needed for plant growth and cell division.

A Final Word on Wigglers

A thriving worm population is a good indicator that your soil is benefiting from the many functions these little wigglers perform. Where there are worms, there are castings, organic matter, nutrient availability, and likely a thriving biological community. An application of earthworm castings to your garden beds will add a much-needed source of nutrients to your soil while encouraging the proliferation of microscopic life forms, helping the development of fertile soil and encouraging a more balanced ecosystem. In turn, a balanced ecosystem leads to a happy ecosystem, a happy ecosystem to happy plants, and happy plants to a happy gardener.

Happy growing!

Note: Earthworms are not a native species to Ontario and many of our woodlands do not have populations of earthworms. It is important not to introduce earthworms into areas which don't have an existing population, as this can disrupt the ecology of these places to their detriment. In areas colonised already, such as our gardens, enjoy the benefits that earthworms offer.

Pesto Possibilities!

*Nancy McDonald
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I was late to the game in making pesto, probably as it wasn't part of our meat and potatoes diet when growing up on the PEI family farm. But as life took me away from the farm and into enjoying Italian cuisine, I became aware of pesto and how versatile it is in the kitchen. History points to the origin of pesto as the northern region of Italy and it is recognized as a very ancient part of Italian cuisine.

I quickly became familiar with the basic basil pesto and would make it with or without pine nuts and freeze in ice cube trays (then knock out once frozen into containers). It was my go-to in the winter to top a flatbread pizza instead of a tomato sauce, to serve on pasta or just to eat on a cracker. This past winter watching a food segment on TV, a chef was asked to prepare a fast food recipe at home. She quickly stir-fried shrimp adding pesto for the last minute and served this dish over couscous. Talk about a five-minute meal!

Checking online and in recipe books many variations of pesto recipes can be found. Basil would be combined with mint or parsley leaves in some recipes; others would omit basil altogether and use herbs such as cilantro, parsley, oregano, sage, rosemary or thyme. Instead of pine nuts, other nuts such as walnuts, almonds, pistachios might be used or seeds such as sunflower substituted. There were so many possibilities and taste sensations to discover.

My plan was to make classic basil pesto but experiment with other pestos as well. The first pesto I made utilized the garlic scapes or the flower stalk on my hard-necked garlic. In the past, I had always cooked these scapes in a stir fry, but why not try something new. I decided to make this pesto nut free and added additional parmesan cheese. Basically, I cut the garlic scapes into 2.5 cm pieces and processed in the food processor with the cheese and juice from ½ lemon, salt and pepper to taste. Added olive oil until desired consistency.

tion is that if I ever see signs of this fungus, I will immediately cut out the infected branches and put the cuttings into bags for city pick up.

Birds have been busy in our front yard too and since we've been back in town three tiny black currant bushes have grown into productive plants from which I have produced tasty pancake syrup. These bushes require little care but if we get a dry period I will at least water them.

Finding them at all was the first surprise. Tasting them was the next. These can actually be eaten raw. On our 30's farm we had a whole row of black currant bushes and there was no way anyone would want to eat the berries raw, except on a dare? Berries freeze well without processing and are a rich source of Vitamin C, especially the black currant. Our farm currants must have been European black currants known for their especially strong taste. These are almost hardy enough to be grown near the Arctic Circle!

Self pollinating?—yes, hardy?—yes, tolerate clay soil?—yes. These all are pluses for any plant in our climate. Currants are generally low maintenance (Dad used to "manure" them every fall) and they don't mind partial shade. Perhaps they are 'Consort', a variety that is resistant to rust.

It is best to plant them five feet apart and helpful to keep them well mulched. Then you want to maintain 8 to 10 canes per bush as you cull annually to remove one or two older less productive canes.

Currants are definitely a fine addition to your garden. If you don't get around to picking them all – which is best done at intervals – pick and freeze until you have enough for jelly – the birds will be happy to help you with the rest.

Seedy Set-ups

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Tomato tins were highly prized in 30's and 40's Saskatchewan. They were great for starting fresh versions of their former contents and were available at no extra cost. Drainage holes were installed with a hammer and a nail. A rusty pie plate served as a drip tray as did orphan saucers of one pattern or another. The tins were filled

After taste testing, this will be my favourite way to use garlic scapes from my garden. Delicious and such a light pretty green colour!

As I had a bumper crop of slow to bolt Cilantro 'Calypso' it became my 2nd type to prepare. Cilantro pesto was made using proportions of 2 cups of cilantro and ¼ cup of parsley leaves, a clove of garlic, lemon juice, parmesan cheese, olive oil and seasoned with salt and pepper. I made this pesto a little thinner in consistency as I planned to add it to vegetable dips, into sauces, into butters and into mayonnaise as a sandwich spread. I also left this pesto nut free. So, unless you are one who tastes soap when you try cilantro, this pesto is a good one.

Edible flowers are of interest and I saw online recipes for nasturtium pesto and this would be my 3rd pesto to prepare. I used a 2:1 ratio of leaves and tender stems to flowers. In this recipe, I added walnuts along with parmesan cheese, garlic, olive oil and salt and pepper to taste. The flavour wasn't as peppery as I expected and I would describe the flavour as earthy but in a good way. I decided to add a few squeezes of lime juice just to brighten the flavour. It was good just spread on a cracker.

Then I prepared a traditional basil pesto recipe as printed with this article and my pesto preparing was complete. Pesto, is wonderful as once you have followed a basic recipe for the first time, then you can let your taste buds decide if it needs more cheese, more brighter notes with lemon or lime or additional seasoning. After all, most of us are preparing the pesto for our own use, so make sure you enjoy the taste. Look around your garden and see what herbs you have growing. Chances are the herbs you have growing will be suitable for pesto. This is an easy way to harvest and preserve herbs and then savour those summer flavours during our cold Ottawa winters. I describe pesto as a true culinary delight and you will also!

Here is a Basic Basil Pesto recipe:

Basil Pesto

Ingredients

½ cup grated Parmesan Cheese
 1/3 cup pine nuts or walnuts
 2 cloves garlic
 2 1/2 – 3 cups packed fresh basil leaves
 Salt and pepper to taste
 1/3 cup extra-virgin Olive Oil.

Instructions

- In food processor, pulse cheese, nuts and garlic until coarsely chopped.
- Add basil, salt and pepper and pulse 4-6 times.
- Add olive oil in a slow stream until desired consistency.
- Store in an airtight container in fridge for 3 days or freeze for up to 6 months.

Watch for *Trowel Talk* the Master Gardeners of Ottawa Carleton electronic monthly gardening newsletter available on the 15th at <http://mgottawa.ca/>

Visit the Almonte online community newspaper 'The Millstone' - <http://millstonenews.com/> - for a column by David Hinks of the Lanark County Master Gardeners; under the Gardening tab.

Master Gardeners of Ottawa-Carleton and Master Gardeners of Lanark County are member groups of Master Gardeners of Ontario Inc., a registered charity with the mission of providing gardening advice to homeowners. The Edible Garden logo was created by Jon Last (jonlast13@rogers.com).



Nasturtium pesto

Nancy MacDonald

with a mix of good prairie soil and leaf compost collected the previous fall. The tidy little system was then parked near the sunniest window available.

All of which is to say that if we set up in February we are more likely to get on with seeding in March and April.

This month, February, if fall did get away from us, we can go shopping for soilless potting mixes from any of the big box stores. Soilless mixes are more likely to be free of hitchhikers and they are less prone to damping off problems.

A creative assessment of our pot/container/drip tray collection can come next. If we find ourselves short of containers, a trip to Thrift, Value Village or Good Will can solve the problem. They will have an abundance of appropriate choices. Then, too, we might want to consider cow pots and/or peat pots. Later on, when we transplant seedlings to the great outdoors, these little pots can be sunk right into outdoor containers or a vegetable patch.

If we have old seed packs around we can test the seeds for viability. Ten seeds per pot. If we get a strike rate of seven or more it is probably safe to plant the rest of them in March or April. Otherwise we'll need to purchase new packs. The pictures on the packs are very seductive so we mustn't get carried away.

The bottom line is this – we are the source of all good for our seedlings. We will see to their supply of air, water, drainage, light and nutrition, even a health plan – until we get them into the ground in May. At which time there may be help from the weather, or not.

Seedy set-ups help to get us thinking about what we want and will have us prepared for the actual planting in March and April. Come spring I'm thinking of any of the cabbage family, spinach, root crops of all kinds, herbs and marigolds? Yes, marigolds make great borders around rims of large containers or along edges of vegetable patches.