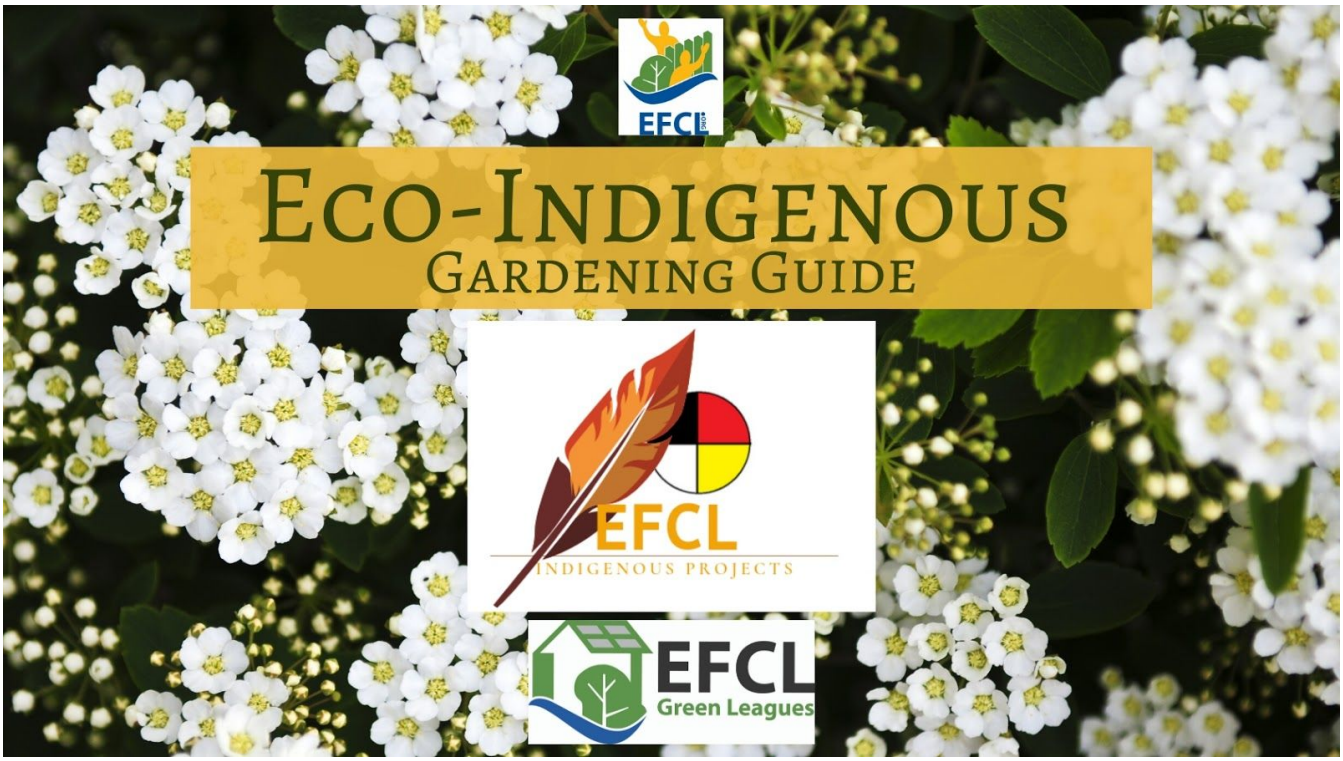

FOOD IS MEDICINE

Many traditional Indigenous plant foods are similar to those available in the average supermarket today. These include root vegetables, green vegetables, fruits, wild berries, seeds, nuts, grains, and mushrooms. Indigenous people have also known about nutrients available in algae, lichens, flowers, and bark or inner bark of trees. It is believed by Ojibwe people that health and wellbeing of the body and mind are vital aspects of wellness and that the Earth, *Nimaamaa Aki,* provides all the foods and medicines required to be and stay well.

This gardening guide will provide you with the information needed to plant traditional Indigenous medicines and plant foods in your own garden at home as well as help you understand how you can benefit from planting, harvesting and incorporating these plant foods and medicines into your diet. In addition, please be mindful of our sustainable gardening tips developed with help from Green Leagues at the Edmonton Federation of Community Leagues and remember to harvest these plants and medicines respectfully.

With this guide, you will be able to reduce your ecological footprint by growing your own food at home (which effectively reduces the food miles from supermarkets) in addition to, employing some sustainable techniques like composting you will be actively reducing pollution and also feeding your family fresh, healthy plant foods and medicines regularly for a fraction of the cost of buying them elsewhere.

So please share this guide with your friends and family and may these plants flourish in your gardens and keep you, your family and your community healthy!

CONTENTS OF THIS GUIDE

The Indigenous Circle Garden at McMaster University

INDIGENOUS FOOD & MEDICINE PLANTING GUIDE

PLANT/MEDICINE	FOOD/MEDICINAL USE	PLANTING INFO
CHOKECHERRY PLANT  *Chokecherry bush*	Sticks used as skewers, flavors meat in cooking, cherries used in soup and with cooked meat or stew, dried and mashed into cakes and into meat for pemmican, bark and fresh cherries used for medicine tea Can also be used for jellies/jams, wine, can be stored canned or frozen	Grown best in a sunny area nearby trees and other shrubs. Ripens in late summer or early fall (August-September).
RASPBERRY, BLACKBERRY & THEIR RELATIVES  *Raspberry & Blackberry Bush*	Berries can be eaten raw, dried and cooked in various ways. Can also be used for jellies/jams and can be stored canned or frozen	Berries grow well in open sunny areas, nearby trees or in wooded shady areas with lots of access to moisture Ripen from July until September
MUSHROOMS  *Pine Mushroom*	Mushrooms were cooked and boiled with meat and used in soups/stew, mushrooms were also peeled, boiled and drained & cooked in fat **SOME** mushrooms can be toxic (not many were consumed). Pine mushrooms are safe to eat when peeled (cap must be scraped all over) cut and used fresh or preserved by drying, canning or freezing.	Grows best in sandy soil under or nearby coniferous trees or near shrubs like cedar and grow well in a moist area Mushrooms can grow all spring and summer across Canada Harvest mushrooms in the early summer (June) or early fall (July).

FERNS & FERN ALLIES  *Ostrich fern fiddleheads (harvest-ready)*  *Ostrich fern (pre-fiddlehead)*	Ostrich fern and sensitive fern fiddleheads were eaten boiled or cooked with meat	Grows best in wet areas, near ditches, seepage areas and on a swampy edge Green vegetative shoots (fiddleheads) grow best in midsummer (July) and can remain until fall.
WILD GREENS  *Skunk cabbage*  *Mustard greens*  *Dandelion greens (leaf), root and flower*	Western skunk cabbage leaves can be boiled or roasted and have a peppery taste Nettles and dandelion greens can be cooked and eaten and mustard greens can be eaten raw and they are also great when mixed with nuts and crushed raspberries berries. Dandelion flower heads can be eaten raw and are extremely high in vitamin K. Add them to salads or roast them (they taste similar to arugula) and delicious roasted with fiddleheads and wild onions.	Grows best in a shady, wet area nearby trees or in a moist, wooded area Flowers can appear in spring but the plant does not fully mature until July or August. Nettles and mustard greens mature in July and ca continue growing until fall Dandelions are powerful detoxification aids. The root and stem can be dried and ground up and made into a tea to treat digestive upsets and diarrhea, or the tea can be mixed with juice from fresh cranberries to treat urinary tract infections. Greens can be harvested all summer from June-September when the flowering plants begin to die out in the changing season.

STEM, ROOT, & SHOOT VEGETABLES  *Yellow squash*  *Cow parsnip (wild "indian" celery)*	Root vegetables such as potatoes, carrots, parsnips, yams, squash, wild celery, green onion are all hearty vegetables that can be added to soups, stews, cooked alongside or with meat and fish and can be also stored and canned for later. These vegetables were among some of the most popular. Growing these in rich, fertile soil that's nourished with compost can yield a highly nutritious root, stem, and shoot vegetables as they absorb vitamins and minerals from the soil and have high mineral content. The stems of cow parsnip (indian celery) can be eaten raw and are rich in vitamins and minerals. Squash and root vegetables can be roasted, boiled or cooked with meat and have high vitamin C content which when consumed in the fall, protects individuals from colds and flus related to adapting to the temperature fluctuations during the changing of seasons	The best way to plant these is to plant at least 6 inches deep into moist, fertile soil in an area that gets access to sun for part of the day but also access to shade as these plants require a lot of moisture from the soil. If planting in a sunny area, make sure there is more access to water due to sunlight drying out the soil throughout the day if there is a lot of sunlight exposure. Plant in early spring (April-May) and harvest in early-late fall (August-September). You will need to dig these out of the soil carefully during harvest.
LICHEN & ALGAE  *Rock tripe lichen*  *Black tree lichen*	Rock tripe grows on rocks and has antibacterial and antimicrobial properties. It is a nutrient-dense food that is able to remove toxins from the kidneys, liver, and digestive system. This food was used as a survival food by indigenous tribes as it can sustain a person when there is no other food available and is delivers a similar profile nutritionally as black tree lichen which grows on trees.	These can be harvested in midsummer to early fall (June-August). To harvest, you will need to scrape the lichen off the back of the rock or off the tree bark with something sharp. You can store it to food by drying it and grinding into a powder which makes it easy to sprinkle on food as well.

INDIGENOUS PLANT FOOD & MEDICINE TYPES

PLANT TYPES	TRADITIONAL EDIBLE PLANTS & MEDICINES
STEM & SHOOT VEGETABLES	Thimbleberry Fireweed Indian Celery Fiddleheads
MUSHROOMS	Wild mushrooms & fungi
GREEN VEGETABLES	Mustard Greens Nettles Cabbage Watercress
WILD BERRIES & FLESHY FRUITS	Saskatoon Berries Blueberries Huckleberries Gooseberries Currants Blackberries Crowberries Raspberries Strawberries Cloudberries Wild Plums Cherries Crabapples Rose Hips Wild grapes
SEEDS, NUTS, GRAINS	Maize Wild rice Oak acorns Beechnuts Hazelnuts Pine seeds
LICHENS	Rock tripe Black Tree lichen

GREEN LEAGUES SUSTAINABLE GARDENING TIPS

A core value in indigenous culture is living in harmony with the natural environment.] The EFCL encourages sustainable gardening practices that exclude pesticide use and reduce the use of potable water. Below, you will find some tips and advice on sustainable gardening brought to you by EFCL's Green Leagues Program.

There are a variety of ways to practice sustainability while gardening. Not only is gardening itself a sustainable practice--gardening encourages biodiversity and vegetable gardening reduces greenhouse gas emissions due to transportation and, if done organically, reduces chemical runoff due to pesticide use--but there are a number of ways to practice gardening in the most sustainable way possible. Below, you will find a number of tips and instructions on how to maximize sustainability while gardening.

Composting

The Importance of Composting

When organics get sent to the landfill, they get trapped underneath other garbage. When this happens, the lack of oxygen causes the organic waste to produce methane gas as it breaks down. Methane is roughly 25 times worse than carbon dioxide for contributing to climate change. Further, compost, called 'black gold' by gardeners, is one of the best ways to ensure healthy plant growth. This can be avoided by composting at home, but many people don't know how to compost or are concerned about the smell. Below, we explain how to compost and ways to reduce nasty smells coming from the compost pile.

How to Compost

The first step is to purchase a kitchen compost pail and to create an outdoor compost pile. A kitchen pail is a small receptacle for organic wastes that sits on your kitchen counter and

is emptied into the outdoor compost pile regularly. Some kitchen compost pails come with filters to help reduce the smell. Just be sure to replace the filter regularly or it will stop working, and always empty the compost pail every few days, rinsing the pail each time (Tip: put a folded piece of paper towel in the bottom of the pail to help make cleaning and emptying easier).

There are several ways to create an outdoor compost pile. The cheapest way is to dig a hole in the ground and dump your organic wastes inside. This is typically only done on large properties such as acreages where a lot of yard wastes accumulate. If you decide to go this route, make sure to fence off your pile to prevent critters and pests from getting into the pile and making a mess.

In the city, it is typical to use a compost bin for your outdoor pile. Compost bins are large black bins with holes in the sides for air circulation. Bins can be purchased from the garden section of your local hardware store. Alternatively, you can make your own compost bin by drilling holes in a black garbage pail for air circulation.

For a compost pile to be effective, it must be turned regularly. Turning your compost involves mixing it up to increase air circulation throughout the pile. If organic wastes break down without the presence of oxygen, methane is created. To avoid this, the pile must be turned regularly. Turning the pile also increases the speed of the composting process. To turn your pile, you can use a shovel or garden fork, though this can be difficult in store-bought bins. An alternative is to purchase a compost turner. These tools designed to mix up the compost pile can be found online or at your local hardware store. The easiest but most expensive method is to purchase an outdoor compost tumbler bin that turns the pile over with a crank, eliminating the need to mix the pile with a fork or compost turner. Again, the pile should be turned over regularly, generally a minimum of once a week to be effective and reduce methane production. Turning over the pile also reduces odours. The more you turn or mix your compost pile, the less it will smell. Also, try placing the pile away from where you spend time. Ideally, place the compost pile in a corner of the yard, away from the patio and back door and in a shady location.

What to Compost

Almost all organic wastes can be composted. Organic wastes from the kitchen can be put into the compost. This includes vegetable cuttings, fruit peels and pits, and even coffee grounds and eggshells (eggshells will not break down with the rest but help to oxygenate the compost and improve drainage). Make sure to avoid meat scraps and fats. For outdoor wastes, dead leaves, grass clippings, and plant wastes are all compostable. If you have dogs, avoid adding grass clippings from the backyard. Also avoid adding weeds whenever possible, since you don't want to add seeds from noxious plants into your garden. Finally, maintaining a healthy balance between nitrogen and carbon will help speed up the composting process and cut down on odours. The best way to ensure a good ratio of nitrogen to carbon in your pile is to include roughly 2 parts green organics to 1 part brown organics (this is more of a general guideline than an exact science, so don't worry if you can't achieve this ratio exactly–even one part green to one part brown organics works well). Green and brown organics are just what they sound like. Organics that are green or colourful, such as vegetable wastes, are considered green organics, while organics that are brown in colour, such as dry leaves, are considered brown organics.

Composting is great for the environment and can also help with home gardening. Gardeners call compost "black gold" because it is such an effective fertilizer. Sprinkle compost on your garden or mix it with peat moss and pearlite for a great potting mix.

Composting without a Backyard

While Edmonton does not currently have a green bin program, there are other ways to compost without a backyard. One way is to find out if your local Community League has a Community Garden. Most Community Gardens throughout the city have composting programs. If you're unsure, contact your local Community League to find out.

If there isn't a Community Garden near you, or if you don't want to transport your organic waste, you can create a Worm Bin. A worm bin is a compost bin you can keep inside your house! The worms help speed up the decomposition process, resulting in fewer odours and no turning over of the bin. This method requires more preparation than backyard composting but is a

great alternative for people living in apartments or without access to a backyard. Here is how you do it:

Purchase or build your worm bin. You can purchase a pre-made worm bin or make your own. To make a worm bin, buy a ceramic container of the appropriate size (the size will depend on how much space you have in your apartment and how much organic waste you produce) and cut or drill holes in the top and bottom of the container. Place the bin on a drainage tray to catch any liquids coming out of the bottom.

Prep your bin. Cover the bottom of the bin with strips of paper (either cut newspaper into strips or, if you have a shredder, you can use shredded paper–bonus points since shredded paper cannot be recycled!). Next, pour a small amount of potting soil or peat moss onto the paper scraps, then add your worms. Worms can be purchased from your local bait shop, or at some specialty gardening stores. You need roughly one pound of worms per square foot of container space.

Place the worm bin indoors (the worms prefer room temperature), preferably somewhere it will receive some sunlight.

You're all set to add your kitchen organics. Since you want to maintain a healthy carbon and nitrogen balance (see above), you will want to add kitchen waste and paper at a roughly even ratio throughout the process. It may also help to have two worm bins, which you can cycle so that you have compost for house plants (or a windowsill herb garden) in one bin while the worms go to work on the other bin. You can add most of the same wastes to your worm bin as you would to an outdoor compost bin, except for citrus peals; worms do not like citrus, so continue to throw these in the trash.

Water Reduction While Gardening

Rain Barrels

Many people use sprinklers throughout the growing season to water their grass. Covering your lawn in treated water is wasteful. Consider watering your lawn every 3 days or even once a week. If you really want to minimize water consumption, quit watering your lawn altogether. It may not be as green-looking, but you will earn points with your sustainable-minded neighbours for being environmentally friendly!

When it comes to garden watering, consider using a rain barrel. Rainwater is free, better for your plants, reduces your water bill and, most importantly, is environmentally friendly and sustainable. Another benefit is that collecting rainwater reduces runoff, mitigating overland flooding and reducing the number of pesticides and chemicals entering the storm drain system.

A rain barrel is a water receptacle that collects runoff from your gutter system. The water collected is much better for your plants since it lacks minerals found in tap water, and reduces the use of potable (treated) water, which takes energy to treat and transport to your home. You can purchase a rain barrel at your local hardware store. Most rain barrels come with a tap near the bottom to which you can attach your hose.

Place the rain barrel underneath the downspout closest to where you will need the water. Some rain barrels come with pumps to increase water pressure. If your rain barrel lacks a pump, try to elevate the barrel to increase the water pressure exiting the spigot. Generally speaking, rain barrels do not work with sprinklers or hose attachments, but they work well with drip irrigation systems and for filling watering cans. Be sure to ensure your gutters are free of debris before installing your rain barrel.

This concludes the Eco-Indigenous Gardening Guide. Hopefully this gardening guide can help you and your family build a flourishing garden and also foster the understanding of Indigenous foods and medicines in your home and community and utilize sustainable gardening practices. If you have any questions or require further clarification on any of the content in this guide please feel free to contact either of the co-authors of this guide:

RAYNA GOPAUL, B.A. Hons., Indigenous Programs, Protocol and Practice Advisor
rayna.gopaul@efcl.org | (587)414-7916
→ Indigenous food and medicines + protocol for harvesting medicines & food plants

MICHAEL BARNARD, B.A., EMIT, Energy Transition Advisor
michael.barnard@efcl.org | (780)485-5332
→ Composting information and resources + sustainable gardening tips