

THE DIRT



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Growing Onions in the Garden

By Lila Hlebichuk, lilahl@yahoo.com

Onions are a favorite vegetable for many. They provide flavor, color and texture to a wide variety of dishes. Victoria Jarzabkowski, a nutritionist at the University of Texas at Austin states, "Onions are super-healthy; they are excellent sources of vitamin C, sulphuric compounds, flavonoids and phytochemicals."

According to the National Onion Association, onions probably originated in central Asia and in modern-day Iran and Pakistan. Prehistoric people probably ate wild onions long before farming was invented. Most researchers agree the onion has been cultivated for 5000 years or more.

They are biennials, producing seed in the second year and are members of the allium family along with chives, garlic, leeks, scallions, shallots and many ornamental varieties.

When planting onions there are several options to choose from: seed, transplants and sets. Onions can be started from seed however, you need to start them eight to ten weeks prior to the last frost date as it can take up to five months from sowing to mature bulb. Transplants can be found at your local garden center where you can be sure of a variety suitable to our climate and soils. Onion sets are immature bulbs grown the previous year and can be found in local garden centers, big box stores, grocery stores and online.

There are many ways to group onions including light requirements and characteristics such as those that are especially sweet like the Vidalia onion from Georgia. The most common grouping for onion bulbs is by their skin color of yellow, white or red and there are many

varieties in each group. Yellow onions are the all purpose onion and can be used raw or in cooking. White onions can be thinner skinned, are more pungent and used most often in cooking. Red onions are used raw in salads or on burgers. The red skinned onions can be used in cooking, but tend to lose their color when cooked.

There are three main considerations in growing onions; a full sun location, water of one inch per week including rainfall to keep the soil evenly moist and being shallow rooted they do best if fertilized once or twice during the season.

Onions should not be planted too deep especially in clay soils. The top of the bulb should be level with the soil and each bulb should be four to six inches apart. Onions can also be grown in containers in potting soil in a sunny location such as a deck or balcony. A steady supply of green onions can be grown in a container with potting soil on a sunny window sill all year long. You can harvest just a leaf or two and let the plant continue to grow and produce more leaves. Be sure to plant in well drained soil as several fungal, bacterial and viral diseases can affect onions.

If you plan to store your onions you can cut



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back on watering a few weeks before harvest to help them dry. When harvesting onions for bulbs, wait until the tops turn yellow and bend over. The onions can then be pulled, wiping any dirt off and let dry in the sun for a week or in a warm spot in the house providing plenty of ventilation so they do not rot. The tops can then be cut to about one inch and the onions can be stored in mesh bags or a wicker basket in a cool, dry place. Properly cured onions can be stored for six to eight months in a root cellar or cool basement.

These are the basics to get you started. More in depth information can be found in many seed catalogs, the staff at the garden centers and nurseries and of course searching the internet for information for our area.

Sources:

- <https://www.onions-usa.org/>
- <https://www.livescience.com/45293-onion-nutrition.html>



The Unpretentious Spud

By Cathy Ruebel, foxtail2400@gmail.com

Through the centuries, the humble potato has nourished countless generations and continues to be the backbone of many meals. Lately, more thought has had to go into those meals, as the current health crisis has virtually eliminated the option of going out to eat. Gardening and the thoughts of warmer and better times ahead, have led many to begin or renew a love affair with Mother Earth and all she can provide. (Fig.1)

“Even during the rationing period, during World War II, we didn’t have the anxiety that we’d starve, because we grew our own potatoes, you know?”

- James Earl Jones



Fig. 1. "Red Potatoes" by GraveUndertakings is licensed under CC0 1.0

North Dakota is well known for its potatoes, with fresh and processed potatoes shipped throughout the country. The eastern edge of the state has optimum growing conditions, while the rest of the state will rely on irrigation for a bumper crop. (Fig. 2) A little closer to home, potatoes can be in your garden, too! Relatively easy to grow, there are a number of varieties that do well in this state. Combine that with options for growing potatoes in containers or in your garden plot, there is no



Fig. 2. Spokely potato field near Nielsville, MN

reason not to give it a try.

An excellent resource found online is "Potatoes from Garden to Table", a NDSU Extension publication (FN630), by Julie Garden-Robinson, Asunta (Susie) Thompson, and Duane Preston. It provides step by step growing instructions, storage, nutritional information, and even some recipes.

Your first considerations will be how much space you will have and the potato variety best

suited for that purpose. Will you have a garden you can devote rows for cultivation, or a container in a sunny location on your patio or deck? (Fig. 3)

Select seed potatoes that have two to three eyes ready to sprout, two ounces or more in size. Bigger seed potatoes can be cut into chunks about the same size and number of eyes. (Fig. 4) Certified seed potatoes, which you can find at garden centers and online, will provide you an assurance that these seed potatoes were monitored through their growth and harvest for varietal purity, free from disease, and for harvest and shipping standards; each can be traced back to the actual producer of that seed. Potatoes purchased in the produce department of the grocery store are not "seed potatoes" even if they sprout in your pantry. Most have been treated to inhibit sprouting.

Which cultivar to choose? Reds and russet potatoes are the mainstay in the state, with an ample selections. Some favorite characteristics are skin texture and disease resistance. Ask an Extension agent guidance if you have questions. Check out the article on purple potatoes in Volume 2 Issue 4 of The Dirt by Lila Hlebichuk for a unique tuber to grow. Yukon Gold, actually an heirloom variety, has seen a surge in popularity and is easy to grow. (Fig. 5)

Oh, sweet potatoes! This southern favorite requires a longer growing season than we have in North Dakota and lots of heat, but that’s not to say it can’t be done! You’ll need to buy growing plants to make that happen. Or maybe not? Read Tom Kalb’s article Secrets for Growing Sweet Potatoes in North Dakota, about a couple who start their own sprouts in winter to be planted after the danger of frost has passed. Look for it under the Archives



Fig. 3. Container Potatoes: "Potatoes" by mrmole is licensed under CC BY-NC 2.0



Fig. 4. Red potato plant growing from its seed potato

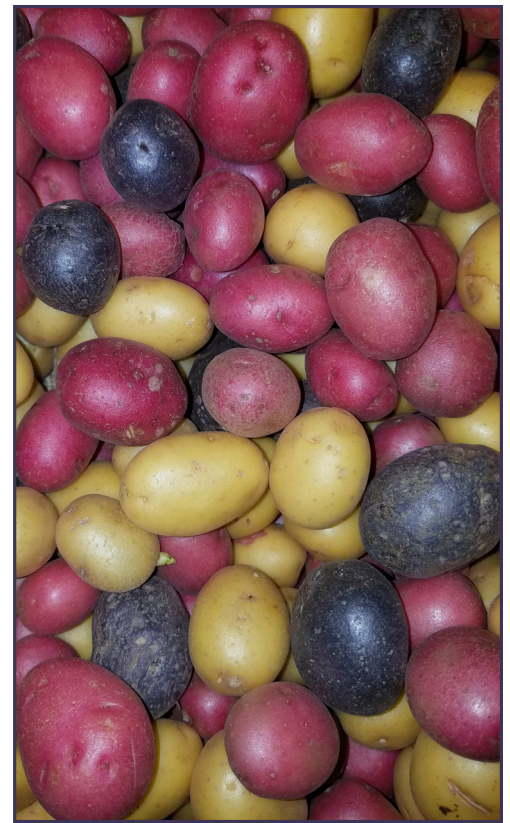


Fig. 5. Potato varieties: "File:Pee wee potatoes - Boston, MA.jpg" by Daderot is licensed under CC0 1.0

"My idea of heaven is a great big baked potato and someone to share it with."
- Oprah Winfrey

section of the Yard and Garden Report from August 31, 2016 - <https://www.ag.ndsu.edu/yardandgardenreport> . It may be just the plan to get those golden gems into your harvest next year! (Fig. 6)

One last thought as you plot out your potato patch: Do you have the space to put in another row or a few more plants for those who do not have access to fresh vegetables? Maybe for a friend or neighbor, or your local food pantry? There is nothing better than fresh – really FRESH out-of-the-garden taste! This, of all years, is the best time to start a new tradition if you can, of sharing your bountiful harvest, too!

Sources:

www.redrivervalleypotatoes.com
Potatoes from Garden to Table, NDSU publication (FN630), by Julie Garden-Robinson, Ph.D., R.D., L.R.D., Extension food and nutrition specialist, Asunta (Susie) Thompson, Ph.D., potato breeder, and Duane Preston, Extension potato specialist, NDSU and UMN Extension (former)

Picking the Perfect Purple Potato, By Lila Hlebichuk, The Dirt newsletter, Vol. 2 Issue 4
Secrets for Growing Sweet Potatoes, by Tom Kalb, Extension Horticulturist, North Dakota State University. Published in the NDSU Yard & Garden Report, August 31, 2016.



Fig. 6. Sprouted Sweet Potato: "Sprouted Potato" by Semblance is licensed under CC BY 4.0



Fig. 7. Potato Garden: "June 11 2010 - Potatoes" by jackharrybill is licensed under CC BY-NC-SA 2.0

Buttercup Squash

By Caitlin Stegmiller, cait.steg@gmail.com

Buttercup squash is a delicious, healthy and versatile addition to any garden. It was originally developed in the early 20th century by NDSU (then North Dakota Agricultural College), and is well known amongst veteran gardeners in the area. Easy to grow, tasty and versatile, this squash is also a fantastic choice for first-time gardeners.

Not to be confused with butternut squash, buttercup squash has dark green, striped skin and resembles a small, squat pumpkin (Fig. 1). Buttercup squash also has a characteristic light green "button" on the bottom. A mature buttercup squash weighs around 3 to 4 pounds and has a slightly sweet, orange flesh. Buttercup squash is packed with nutrients like beta-carotene and potassium and can be roasted, baked into pies, or pureed into soups.

Key factors when growing buttercup squash:

- Due to their longer growing season, winter squashes (including buttercup) often require ample space. However, bush type varieties are for gardeners working with smaller areas.
- When watering, use a soaker hose, or careful direct watering to the soil to avoid getting foliage wet and abate diseases.
- Squash vines have shallow roots. Careful, shallow cultivation when weeding is important to avoid damaging the roots.
- Squash vine borer is a common pest to watch for with most squash and pumpkins. Scout for adults in late June to early July. For more info on identification and control of squash vine borer, visit: <https://extension.umn.edu/yard-and-garden-insects/squash-vine-borers>
- Harvest winter squashes before a hard frost. Cure in a dry, sunny spot for a few days to help dry out the skin and improve storage longevity.



Fig. 1. Buttercup squash (Photo courtesy of Bluestem Farm, Michigan)

- Properly cured buttercup squash can be stored whole in a cool (around 55 degrees) place for three to six months. Other preservation options include dehydrating, freezing and canning. Refer to NDSU Extension guidelines for specific details on winter squash preservation: <https://www.ag.ndsu.edu/publications/food-nutrition/field-to-fork-winter-squash/fn1801.pdf>

Additional information on winter squash can be found at: <https://extension.umn.edu/vegetables/pumpkins-and-winter-squash>

Gardening Safely During a Pandemic

By Julie Garden-Robinson, Ph.D., R.D., L.R.D., Food and Nutrition Specialist – NDSU Extension

Greetings, fellow Master Gardeners and others interested in gardening! Like you, I am very excited to begin planting flowers and vegetables in my yard and in a community garden. This is a unique time for all of us, and I have received many questions about food safety and COVID-19 in my role with NDSU Extension. I am happy to share with you some things I have learned as part of national and regional food safety groups and from evidence-based sources.

Is COVID-19 spread through food or food packaging?

- According to the Food and Drug Administration, “there is no evidence of food, food containers or food packaging being associated with transmission of COVID-19.” Be sure to wash your hands with soap and water for at least 20 seconds before and after handling food packaging, before you prepare food and before you eat.
- In other words, wash your hands a lot! Remember that hand sanitizers are not a substitute for handwashing, and any hand sanitizer products you use should be at least 60% alcohol.

What should I do to help protect gardeners in the times of a COVID-19 pandemic if I manage a community garden?

- As with restaurant food preparers, if someone is sick (especially with a fever), they should NOT visit the garden or handle food.
- Be sure to maintain the recommended physical distance between gardeners. While 6 feet is the recommendation shared by the CDC for social distancing, the criteria being used in COVID-19 contact tracing in North Dakota is as follows.
 - When the Health Department is notified of a positive test by the testing laboratory, they notify the provider that sampled the patient who then notifies the patient of the positive test. They ask the patient where they traveled and who they were near/around in the recent past.
 - The distance/time criteria being used to consider contacts as “close” is a 12-foot distance for longer than 10 minutes.
 - ***Please note that Esther McGinnis is drafting a safety protocol for the Extension Master Gardener Program that requires social distancing of 12 or more feet to comply with NDSU ANR Extension Policy; more details are forthcoming***
- Limit the number of people who assemble to garden to 10 people.
- According to many experts, wearing a cloth face mask is a best practice for safety.
- Wear clean gardening gloves or disposable gloves when picking vegetables. Launder cloth gloves using the hot cycle.
- Clean and disinfect tools. Wash tools in soapy water (such as a biodegradable soap), rinse and wipe dry with a clean cloth. After cleaning tools, many experts recommend disinfecting them using 70% isopropyl alcohol. Wet a clean rag with alcohol, wipe them and allow to air-dry.
- Clean shed handles, counters, padlocks, spigots, gates and other frequently-touched hard surfaces with a detergent-water solution to remove soil prior to disinfecting. To disinfect, use an EPA-registered sanitizing agent made according to the directions on the container. Avoid any contact of the disinfectant with fresh produce.
- Communicate regularly. The most important thing we can all

do is to continue to follow the Centers for Disease Control and Prevention guidelines at [CDC.gov](https://www.cdc.gov), because this guidance is updated with the latest research.

- Encourage gardeners to stay in touch through texting, Facebook groups, Zoom, phone or other electronic means. Gardening is a social activity, so staying in touch from a distance is a good practice. Share your gardening success with pictures on Facebook!

How should I clean fresh fruits and vegetables?

- Regardless of whether you grow your own vegetables or buy them at a farmers market or a grocery store, be sure to rinse all fresh fruits and vegetables with plenty of running tap water.
- If desired, you can soak vegetables such as lettuce and cauliflower for a couple minutes in cold clean water to help remove soil, followed by additional rinsing. If you purchase prepackaged (“triple-rinsed”) salads at the grocery store, you do not need to rinse the produce again.
- Be sure to rinse vegetables and fruits with skin/rinds you do not eat. Use a produce brush to scrub them as necessary. Rinse produce before you peel or prepare it, so you do not transfer dirt and microorganisms to the fruit or vegetable.
- Do NOT use soap/detergents or bleach on food. These products are not meant to be ingested by us and can be very harmful to our health. Some fruit/vegetable produce washes are sold in grocery stores, which are safe to use on produce. Food safety experts only recommend running tap water.
- What about rinsing fresh produce in a vinegar-water solution? Although some people rinse produce in a vinegar-water solution, researchers in Canada have shown that vinegar (diluted acetic acid) is not an effective disinfectant. Although it won’t hurt you to rinse your produce in a vinegar-water solution, it probably will not make your food safer. (Besides, your lettuce might taste like pickles as a result.)
- Be sure to thoroughly clean and sanitize countertops and cutting boards. In general, a solution of 1 tablespoon of unscented chlorine bleach per gallon of water is the sanitizer concentration for countertops and cutting boards. Follow the directions on the container for cleaning other surfaces. Never mix cleaning and disinfecting products (such as ammonia and bleach), because harmful, even deadly, gases can be produced.
- See www.ag.ndsu.edu/fieldtofork for a recorded webinar on food safety and COVID-19.

Here’s to a successful summer of gardening! Stay well and have fun gardening!

References

North Dakota Department of Health. Novel Coronavirus (COVID-19) Recommendations for Events and Public Gatherings. Available at https://www.health.nd.gov/sites/www/files/documents/Files/MSS/coronavirus/NDDoH_Event_Recommendations.pdf

North Carolina State Extension/Florida State University Extension. Handling COVID-19. Guidance for Community Gardens. Available at <https://edis.ifas.ufl.edu/pdf/FS/FS34200.pdf>

average growing season is around 120 days (the length of time from last frost in the spring to first frost in the fall), but can be as short as 105 days or as long as almost 160 days, depending on the year, your location in the state and any microclimates for your garden. Any vegetables that require more than 90-100 days from seed to harvest are best started indoors or purchased as transplants. This generally includes tomatoes and peppers as well as a few others. Most other vegetables can be directly sown as seed, but read the packet to see what it lists as number of days to harvest. Keep in mind that unless the gardener is harvesting for purposes of preserving food for the winter, he or she may want the vegetables to be ready for harvest before the first day of frost in the fall. Staggering planting of seeds over the course of a couple of weeks means vegetables will be ready over the course of a couple of weeks at harvest, rather than all at once.

Q I picked up a 6-pack of tomato seedlings at the plant store. Should I plant them right away?

Transplants are tender, having been spoiled by being raised in the perfect conditions of a greenhouse. Gardeners should pick out the best, strongest looking transplants (Fig. 2), but even then it would be quite a shock to drop them into a hole in the ground in the North Dakota outdoors without letting them get used to it first by hardening them off. Put them outside for a few hours a day, lengthening that amount of time until they are out overnight for a couple of days before putting them in the ground. The gardener may want to wait to plant until night temperatures are at least 50 deg F (usually around end of May but may occur earlier). All transplants require hardening off, whether vegetable or floral.



Fig. 2.

Q Fertilizer? Help!

The best practice, whether you're starting a new garden or planting in an established bed, is to have your soil tested to determine the levels of nitrogen, phosphorus and potassium as well as micronutrients in your soil. The NDSU Soil Testing Lab can take care of that for less than \$20, and complete instructions can be found here: https://www.ndsu.edu/snrs/services/soil_testing_lab/.

In addition to eight or more hours a day of sunshine, vegetables require nitrogen to flourish. Some vegetables require more than others. NDSU Extension typically recommends a commonly available fertilizer with a formulation of 15-23-10 (percentages of nitrogen, phosphorus and potassium respectively) spread at the rate of 3 to 4 pounds for each

1000 square feet of planted area. Mix in the fertilizer at the same time you are tilling in the organic matter. However, if the soil test indicates a surplus of phosphorus, a different fertilizer that lacks phosphorus will be recommended. A surplus of phosphorus can result in stunting and poor growth in general.

If the gardener is growing vegetables in a container and using potting soil that already includes fertilizer, there is no need to add fertilizer at the start. Once the plants begin to flower, use a water soluble fertilizer at ½ concentration weekly. The same formulation can be used for leafy vegetables. Manure, which has been used as organic matter in gardens for years, is now under review as it has been identified in crop fields around the country as a source for E.coli and salmonella contamination in food.

South Dakota State University Extension has a guide on growing vegetables that covers fertilization as well as other vegetable gardening information. It can be accessed here: <https://extension.sdstate.edu/sites/default/files/2019-08/P-00123.pdf>.

Q What about bugs and other pests in my garden?

The use of pesticides, whether chemical or organic, is a complicated topic. Pollinators, like bees and other "good" insects, are just as harmed by pesticides as the insects and pests that are eating your tomatoes. NDSU has a publication on using pesticides that can answer most of your questions and supplies solid information. It can be accessed here: <https://www.ag.ndsu.edu/publications/lawns-gardens-trees/pesticide-safety-a-guide-for-gardeners-and-homeowners>.

Q What is the best way to water my garden?

While watering a garden doesn't seem like rocket science, there are practices that will improve gardening success. Deep, weekly watering instead of daily, shallow watering is best. Sometimes Mother Nature takes care of that. Sometimes you have to help her out a bit.

It is best to water growing plants from below rather than from above. Of course, nature waters from above in the form of rain, and we love it when it rains in North Dakota unless it rains too much or at the wrong time. Nonetheless, we can't do much to change the course of rain. If the gardener has to supplement Mother Nature, laying a soaker hose – one that slowly drips water from small holes along the length of the hose – in the garden is the best way to water. It allows watering right at the base of the plants, ensuring it is getting to the roots. It also prevents water from splashing dirt and microorganisms onto the plants.

The most important thing about watering is to ensure the vegetables are getting watered regularly and evenly. Vegetables that aren't kept evenly watered are going to suffer – tomatoes may develop blossom end rot, potatoes may have hollow centers, and more.

Vegetables growing in containers will need watering more than once a week, and during the heat of the summer will likely need watering daily (and possibly more than once a day) unless Mother Nature is helping out. Again, regular and even watering is crucial to prevent problems with vegetables.



Q Why isn't the sweet corn I planted germinating well?

Sweet corn needs soil temps between 55 degrees and 65 degrees to germinate, and certain types need warmer temps while others will do well in the cooler temps. If the gardener planted seed that prefers warm temps when the soil was too cold, it may not germinate until the soil warms or may not germinate at all. Synergistic, hybrid Se/se and hybrid sh2 super sweet do not germinate in cold wet soil. For best germination of these varieties soil temperature should be in the 70 degree F range; use a soil thermometer if uncertain.

The University of Minnesota Extension has an excellent web page devoted to sweet corn with information for home gardeners on choosing the right seed, what soil temperature is required for germination and how to care for the crop. It can be found at: <https://extension.umn.edu/vegetables/growing-sweet-corn>.

Q Why are my tomatoes turning black on the bottom as they ripen?

That is called blossom end rot and is most likely caused by uneven watering once the plant has set fruit. Tomatoes need calcium, and there is often enough calcium in the soil but if the soil dries out when the fruit is developing, the roots can't move calcium into the plant and blossom end rot is the likely result.

As long as we're on the subject of tomatoes, tomatoes can be pruned early to develop strong healthy plants that will produce healthy fruits. Gardeners should remove flowers until plants are 12-18 inches tall, remove suckers (small branches that are just getting started) beneath fruit clusters, and pinch the tip off about a month before the first frost is expected.

Q What vegetables should I plant first?

Cold season crops are seeds and plants that can withstand the cooler temperatures of spring. They include peas, lettuce, radishes, carrots, beets, spinach, kale and collards. These seeds will germinate in cold soil. In fact, the leafy greens will bolt, or quit producing leaves and start producing flowers and seeds, when the temperatures get warm. Potatoes, which should only be grown from certified seed potatoes, can also be planted in cold soil. All other seeds should be planted when the soil temperatures get to 50 degrees or warmer as it takes warmer temperatures for their seeds to germinate.



New Gardening Resources for Beginning Gardeners

By Esther E. McGinnis, Ph.D., NDSU Extension Horticulturist, esther.mcginis@ndsu.edu

During the COVID-19 pandemic, many of us are left feeling insecure due to short-term supply chain issues. At the grocery store, large gaps appear where toilet paper used to be stacked. Meat processing plants have been affected by the outbreak. In warmer states, we are hearing that vegetable crops that were destined for restaurants are being plowed under because of lack of demand. In this time of uncertainty, many individuals are turning to gardening to produce a bountiful supply of vegetables and fruits for our families. A bumper crop of fresh greens, tomatoes and cucumbers will make us feel richly supplied!

The NDSU Extension Horticulture/Forestry Team is anticipating that we will have many new gardeners. To help first-time and established gardeners, the Team is preparing an array of new resources to help with the production of edible crops. In the past, we relied upon gardening workshops to educate the public. Now, we are pivoting to various media to reach all generations of gardeners.

Although most Extension personnel are working from home, this has not limited our productivity. We are shooting short videos in home gardens or in our kitchens. The first

videos to be posted include seed starting, making seed tape, thinning and transplanting seedlings, and cutting up seed potatoes. We will be continuously adding videos as the season progresses. All videos will be posted on our NDSU Extension Lawns, Gardens and Trees website:

https://www.ag.ndsu.edu/extension/lawns_gardens_trees

Seed starting videos are being posted under the vegetable heading on our website (Fig. 1). As our subject matter broadens, videos will be posted under other headings such as fruit.

For those individuals that like social media, we are sharing content on our NDSU Extension Lawns, Garden & Trees Facebook page. In the near future, we will start Twitter and Instagram accounts.

The Team is also starting a newspaper column for the region entitled, "Dakota Gardening". Extension specialists Esther McGinnis, Tom Kalb, and Joseph Zeleznik along with Grand Forks County Horticulture Agent Carrie Knutson will write articles for the column. This column will be published in Ag Week and local newspapers.



Fig. 1.

Finally, don't forget about our Extension publications! We have over 40 publications ranging from flowers and pollinators to fruits and vegetables as well as tree diagnosis and lawncare. Here's the publication website: <https://www.ag.ndsu.edu/publications/lawns-gardens-trees>

If you can't find what you need, NDSU Extension has a robust network of Extension agents that can answer your questions. To find your local agent, please consult our directory: <https://www.ag.ndsu.edu/extension/directory>

Let's Grow on the Northern Prairie by Eric Bergeson

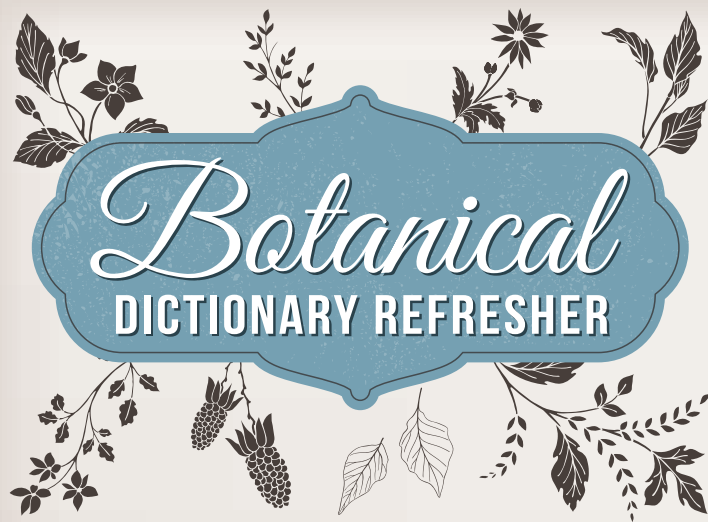
By Rachel Brag, rbinndak@gmail.com

Let's Grow on the Northern Prairie is a pictorial walk through the prairie region accompanied by straight forward information about what grows in North Dakota, most of South Dakota, western Minnesota to the Iowa border and east of the Rockies in Montana...and what doesn't. The author, Eric Bergeson, starts out reporting on his 2019 summer tour of North and South Dakota. He traveled over 18,000 miles visiting this vast territory, holding meetings with gardeners in small town parks, libraries, cafes and community centers. The book is a result of his conversations with local folks, his observations as he drove the region and his 17 years as owner of Bergeson Nursery near Fertile, MN.

A wide variety of subjects are covered in the pages of Let's Grow on the Northern

Prairie: trees, shrubs, flowers, fruits, pollinators and garden topics such as mulch and fertilizer. Eric doesn't hold back when stating his dislikes of common gardening practices but explains what should be done instead. The book is at least 50% pictures of the plants that grow best on the northern prairie. It is easy to read, contains nuggets of information that will be useful to novice and experienced gardeners alike.

"Thoughtfulness is a critical ingredient and a quality that describes a successful northern prairie landscape," says Eric. "It has to spring from within, and takes time to develop one's thoughts." Reading Let's Grow on the Northern Prairie will help you develop your own thoughts on what you can successfully incorporate into your landscape.



By Lila Hlebichuk, lilahl@yahoo.com

Members of a plant family share characteristics such as flowers and fruits, cultural requirements, pollination and susceptibility to pests and diseases.

Vegetable Families and Their Common Names:

Solanaceae: nightshade or tobacco family: tomato, eggplant, bell pepper, chili pepper, tobacco, and potato.

Fabaceae (f/k/a Leguminosae): legume or pea or bean family: peas, green/string beans, fava beans, hyacinth bean, cowpea, peanut.

Cucurbitaceae: gourd or cucurbit family: cucumbers, melons, watermelon, winter squash, zucchini, gourds, luffa

Alvaceae: hibiscus or mallow family: okra, roselle, cotton, hibiscus.

Alliaceae (now merged into Amaryllidaceae): onion or allium family: onion, garlic, leek, and chive

Poaceae (f/k/a Graminae): grasses or grain family: corn, rice, wheat, lemon grass, sugar cane.

Asteraceae (f/k/a Compositae): sunflower or aster family: lettuce, artichoke, dandelions, calendula, zinnia, marigold, sunflower

Brassicaceae (f/k/a Cruciferae): brassicas or crucifers or mustard family: broccoli, cabbage, cauliflower, kale, mustard, pak choi, radish.

Chenopodiaceae (now merged into Amaranthaceae): goosefoot family beet, chard, spinach.

Amaranthaceae: amaranth or pigweed family: amaranths, celosias.

Apiaceae (f/k/a Umbelliferae): parsley family: carrot, parsley, coriander, fennel, celery.

Lamiaceae (f/k/a Labiatae): mint family mints, basil, rosemary, thyme, oregano, sage

For more information on vegetable families, please consult the following sources:

<https://ucanr.edu/sites/placervevadasmallfarms/files/170644.pdf>

<https://www.missouribotanicalgarden.org/Portals/0/Gardening/Gardening%20Help/Factsheets/Vegetable%20Families69.pdf>

Collaborate to Help Food Pantries

By Esther E. McGinnis, Ph.D., NDSU Extension Horticulturist, esther.mcginnis@ndsu.edu

COVID-19 has temporarily changed our economy. In recent years, North Dakota has enjoyed one of the lowest unemployment rates in the country. While current unemployment rates have not been calculated, they will be sobering to even the most stoic individual. In other states, high unemployment has resulted in long lines at food pantries. According to the Great Plains Food Bank, North Dakota food pantries are reporting a 44% increase in demand.

The NDSU Extension Master Gardener Program and the Fargo Public Library are rising to the challenge to support food pantries with nutritious, fresh produce. The Fargo Public Library intended to start a seed library for the 2020 growing season to benefit its patrons. The Library in conjunction with Friends of the Fargo Public Library acquired vegetable seeds over the winter from reputable seed companies. The Cass County Extension Master Gardener Program repackaged the seeds in small envelopes for free distribution through the library system. However, the closing of libraries due to COVID-19 meant that the seed library could not be accessed in time by the public. To prevent the vegetable seeds from going to waste during a time of food insecurity, the entire seed library was donated to the NDSU Extension Master Gardener Program to benefit food pantries around the state.

The Extension Master Gardener Program has distributed the seeds to 18 NDSU Extension County Offices across the state. Master Gardeners, 4-H youth, and avid gardeners within those counties will sow the seeds primarily in home gardens, care for the plants, and harvest the fresh vegetables for donation to local food pantries. Food safety protocols will be followed to ensure safe harvesting and handling of the produce.

According to Julie Garden-Robinson, NDSU Extension food and nutrition specialist, “there is no evidence of food or food packaging being associated with transmission of COVID-19 according to the Food and Drug Administration.”

“Always rinse fresh produce under running tap water, even those with peelings we do not eat. However, commercial salads can be used directly from the bag,” she added.

“You do not need to be an Extension Master Gardener to help others in need,” says Esther McGinnis, NDSU Extension Horticulturist. “Every home gardener should consider planting an extra row or two of vegetable crops in your garden for donation to local food pantries. If you are container gardener on your apartment balcony, consider adding an extra container. With widespread unemployment and food insecurity across the state, we will be feeding our friends and neighbors.”

Fresh vegetable crops that are in the most demand at food pantries include beans, peas, beets, carrots, cucumbers, onions, peppers,

tomatoes, and melons.

To find your local food pantry, consult the North Dakota Department of Agriculture Hunger Free Garden Project website. The Department of Agriculture maintains and has updated its online produce donation site map to help gardeners and commercial producers find and support their local food pantries: <https://www.nd.gov/ndda/marketing-information-division/local-foods/hunger-free-nd-garden-project>

Jamie Good, Local Foods Specialist at the North Dakota Department of Agriculture, invites additional food pantries to contact him to be included on the Department’s Hunger Free Garden Project website.

In addition, Good states, “vegetable donations from commercial producers are welcome but local food pantries may not be able to handle large volumes. Instead, the commercial producer should contact either the Great Plains Food Bank or the North Dakota Department of Agriculture to coordinate the donation.”



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