



THE DIRT

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NORTH DAKOTA MASTER GARDENER PROGRAM NEWSLETTER

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B is for Butterfly

By Corinne Frey, vcfrey@yahoo.com

Squeals of excitement and laughter rippled through McKayla Wagner's kindergarten classroom at TGU/Towner (ND) as a Monarch butterfly fluttered around the room.

"It's a daddy, it has two black spots!" several of the students exclaimed in unison.

A short time later, the butterfly was taken outside where the kindergarten class and other students and teachers assembled to release it. As the Monarch clung to the finger of one of the teachers, multiple concepts the students had been presented a couple weeks prior, were reviewed.

As a retired elementary teacher and current Master Gardener Intern, helping teach the next generation about the importance of taking care of our environment and helping pollinators survive, is a personal priority. It is my experience that most teachers appreciate help in the classroom, so I contacted Mrs. Wagner, my granddaughter's teacher, to let her

know I was a willing volunteer. I also told her my flowerbeds currently had an abundance of Monarch activity. She graciously agreed to have me come into the classroom, teach the students about Monarchs and their role in pollination. She allowed me to set up a butterfly habitat in her room so students would have hands-on access.

Prior to arriving at the school, butterfly eggs and caterpillars at varying stages of development were collected. Most eggs are found on the under side of a milkweed leaf, usually one per leaf. The eggs are small, roughly the size of a pencil lead (Fig1).

Yellow, black, and white striped caterpillars or larvae hatch from the eggs in 3-5 days (Fig 2). During our activity, students used magnifying glasses to witness caterpillars seemingly growing as they ravenously consumed milkweed (Fig 3). The caterpillars definitely grow at a rapid rate, increasing in size more than 2500 times, in just 10-14 days. They

NDSU EXTENSION SERVICE

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Fig 1 A monarch egg next to a pencil tip for size reference (photo courtesy of Corinne Frey)



Fig 2 A newly hatched monarch caterpillar (photo courtesy of Corinne Frey)



Fig 3 Students used magnifying glasses to observe Monarch caterpillars eating butterflyweed (photo courtesy of McKayla Wagner)



Fig 4 A large monarch caterpillar near the end of the larvae stage (photo courtesy of Corinne Frey)

shed their skin five times as they grow. At the end of the larvae stage, caterpillars are a little bigger around than a pencil, and about 2 inches long (Fig 4). The students were able to witness multiple caterpillars crawl to the top of the habitat and attach themselves to the netting by discharging silk. After attaching, the caterpillar will suspend its body in a J. Hours later, the caterpillar will pupate and form a chrysalis or pupae. A Monarch butterfly will emerge from the chrysalis in 10-14 days (Fig 5).



Fig 5 Before laying more eggs, a female monarch butterfly rests on a milkweed leaf (photo courtesy of Corinne Frey)

The importance of teaching the next generation about pollinators and their impact on our lives and livelihood is evidenced in The United States Department of Agriculture pamphlet "Be a Friend to Pollinators": Three-fourths of the world's flowering plants depend on pollinators to reproduce. Most fruit and vegetable crops — and other plants that provide fiber, medicines, and fuel are pollinated by animals.

Some scientists estimate that one out of every three bites of food we eat exists because of animal pollinators like bees, butterflies and moths, birds and bats, and beetles and other insects.

It is my experience that young children ask thought provoking questions, are excited to learn new things, and love to share their knowledge. We all need to work together to get the word out about pollinators and their importance to our lives — what better way than getting the next generation excited about nature and the world around us?

Sources:

NDSU Extension Booklet E-1266 "Butterfly Gardening in North Dakota Janet J. Knodel, Gerald M. Fauske, and Ronald C. Smith October 2004

"Be a Friend to Pollinators" Natural Resources Conservation Service United States Department of Agriculture PA2046 October 2010 Reprinted February 2017

www.nrcs.usda.gov/pollinators
<https://www.monarch-butterfly.com/>

Facebook for Master Gardeners

Ask Questions and Answer Questions

By Laura Kourajian, lkourajian@yahoo.com

So, what is that vine that started twining itself around your mailbox? You should know it, right? You're a certified Master Gardener. You're the person your neighbors and acquaintances come to when they want to know the name of that vine.

Welcome to the NDSU Master Gardener Exchange group on Facebook. This Facebook group is a closed group, meaning people who want to join the group must request to join and be accepted. There are 161 members in the group, out of about 250 certified Master Gardeners and Master Gardener interns. If you're a Master Gardener and not a member of this group, log on to Facebook, find the group and request to join it.

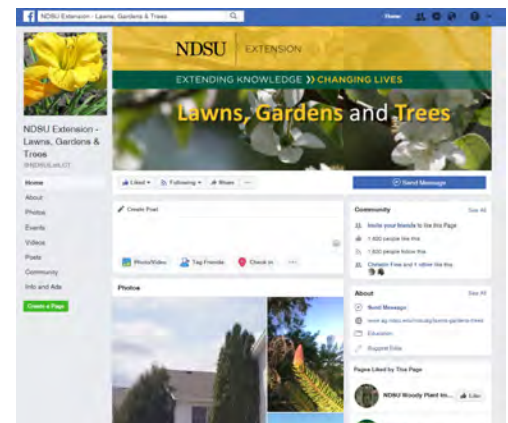
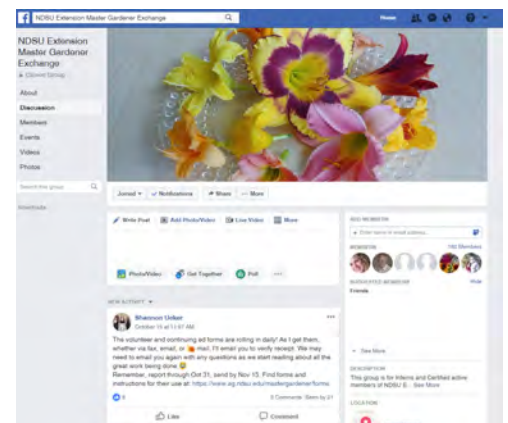
When Esther McGinnis, NDSU Extension horticulturist, started the Facebook group, her intention was to create a confidential and stress-free way for Master Gardeners to ask questions of each other. "A lot of times we get questions from everybody else, and we're expected to know everything," she said. "I wanted a closed group where we could ask questions of each other and not be worried about appearances." So go ahead, take a

picture of that vine growing around your mailbox, post it on the page and ask your fellow Master Gardeners what it is. You're sure to get an answer.

The NDSU Extension Lawn, Garden and Trees is an open Facebook group, meaning anyone can follow it, and has about 1,600 followers. McGinnis, Joe Zeleznik, NDSU Extension forestry specialist, and Tom Kalb, NDSU Extension horticulturist for western North Dakota, are typically the people who post on this page.

There are a slew of other gardening groups on Facebook that can help feed your gardening information appetite. Statewide, there is Gardening Fun in Zones 3/4 North Dakota on Facebook. Check with your local county extension agent to see if there is a group for gardeners in your county. In Burleigh County, for instance, Master Gardeners can participate in Garden Gossip from Burleigh County, Bismarck Area Gardeners, Burleigh County Master Gardeners and, if they are members, in the Bismarck Mandan Garden Club group.

Facebook can help you learn from other gardeners and who knows, you just might have the answer to another gardener's question.



Master Gardener Awards Ceremony

The Master Gardener Awards Banquet was held at the 2018 Extension Master Gardener Conference on the evening of July 13th. The Awards Banquet celebrated the notable accomplishments of Master Gardener interns and volunteers.

To be eligible for an award, volunteers or interns had to be in good standing as demonstrated by submitting their volunteer hours and continuing education forms (for MG volunteers only) on time. With the exception of the 100-Hour and 200-Hour Service Clubs, Master Gardeners cannot win the same award two years in a row.

100-Hour Service Club

Presented to those individuals that volunteered 100 or more hours but fewer than 200 hours in 2017

Kathleen Johnson
Barbara Keyes
Cindy McLean
Joan Zettel
Stephanie Sevigny
Lynnette Vachal

200-Hour Service Club

Presented to those individuals that volunteered 200 or more hours in 2017 (Fig 1):

Mary Heyerman
Terrie Mann
Marlene Maxon
Kris Schipper
Penny Seifert
Anne Smith
Nola Storm

Innovation Award: for most creative Master Gardener Project

Awarded to Pat Weinberg from Bismarck for her work in founding Growing Recreational Opportunities With friends (G.R.O.W.), a program that teaches gardening and cooking skills to adults with disabilities.

Public Garden Award: for best designed and maintained public garden

Awarded to the Master Gardener team that designed and cared for the Sensory Gardens at the Red River Valley Zoo, Fargo (Fig 2).

Adult Education Award: for best Master Gardener project that promoted adult horticulture education

Awarded to Lynne Eckroth for hosting the 2017 Spring Fever Forum in Morton County at her workplace.



Fig. 1 Nola Storm, Marlene Maxon, Terrie Mann, and Penny Seifert received the 200 Hour Service Club Award.



Fig 2 Kathy Christianson and Rhonda Miller were part of the Red River Zoo Sensory Garden team.



Fig. 3 Terrie Mann received the Communication Award.



Fig. 4 Joyce Larson, Carol Burley, Julie Vetter, Deb Miller, and Joan Faust received the Feeding the Hungry Award.



Fig. 5 Joe Zeleznik received the Friend of the NDSU Extension Master Gardener Award.

Youth Education Award: for a Master Gardener project that promoted youth horticulture education

We had two individuals with equally strong youth projects. The awards were given to Sara Johnson from Hatton and Stephanie Sevigny from Grand Forks.

Communications Award: for horticultural outreach by traditional or non-traditional media

Awarded to Terrie Mann from Grand Forks for her work in publicizing horticultural programming across North Dakota through her listserv (Fig 3)

Working with Underserved Populations: for best project that benefited a nontraditional group

Awarded to Celeste Ertelt and Christine Blanchfield for their work in designing a pollinator garden and educational program to benefit the North Dakota School for the Deaf in Devils Lake.

Feeding the Hungry Award: for best project that alleviates food insecurity in our communities

Awarded to the Veggies for the Pantry Group that has collected fresh produce from the community to benefit local food pantries in Fargo and Moorhead (Fig 4).

Ron Smith Community Service Awards: this is our highest individual award that celebrates the power of community service

Awarded to Jack Wood of Fargo for his work in establishing Growing Together, an organization that feeds and educates New Americans in North Dakota.

Friend of the NDSU Extension Master Gardener Award: presented to an individual that has provided exemplary support for the program

Awarded to Joseph Zeleznik, NDSU Extension Forester, for educating Master Gardeners in the Core Course, Diagnostician Course, and in continuing education workshops (Fig 5).



Master the Journey

ND Master Gardener Conference 2018

By Rachel Brag, rbinndak@gmail.com

Master Gardeners from North Dakota and Minnesota gathered on the NDSU campus Thursday, July 12th through Saturday, July 14th to attend the Master the Journey Conference.

Interesting and educational workshops were offered with some including hands on experience. Tree Identification (Fig 1 & 2), Making Salsa (Fig 3), Hydroponic Salad Tables and A Low Tunnel Kept My Spinach Alive in -31 Degrees were several of the workshop topics to choose from. The time was well spent learning new information from knowledgeable speakers (workshop/seminar time can be counted towards the yearly Master Gardener educational requirements).

The Making Salsa workshop explained that many salsa recipes do not meet the acidic requirements to be safely canned. In addition, a number of the new tomato varieties are not as acidic as older varieties. A fabulously delicious peach/apple salsa was also made and canned (Fig 4). Each attendee took home a jar of tomato salsa and peach/apple salsa. These recipes and other pertinent information can be found in the NDSU bulletin titled Food Preservation-Let's Preserve Salsa (FN 1492).

Guest speaker, Lynn M. Steiner, has been a professional garden writer since 1987 focusing her writing since 2003 on native plants and how to bring them into home landscapes. In her Friday morning seminar, she spoke on effective and acceptable ways to use natives in gardens and landscapes. After the seminar, there was a book signing event by Steiner. Steiner also did a photo presentation Friday afternoon about tours she took in the gardens of Paris and the Loire Valley which wowed all in attendance.

In addition to education, tours, hands on workshops, there was fabulous food! Meals included a salad bar with a variety of unique and tasty salads prepared by NDSU Food Service, boxed lunches and a delicious banquet on Friday night. Many comments were heard about the savory food served.

The next ND Master Gardener Conference will be in 2020. In summer of 2019, the International Master Gardener Conference, Digging into our Roots, is being held June 17-21, at Valley Forge Casino Resort, Valley Forge, PA. Much can be said about the learning, friendship, and experiences that come from attending a conference whether local or on a national level.



Fig 3 Making salsa



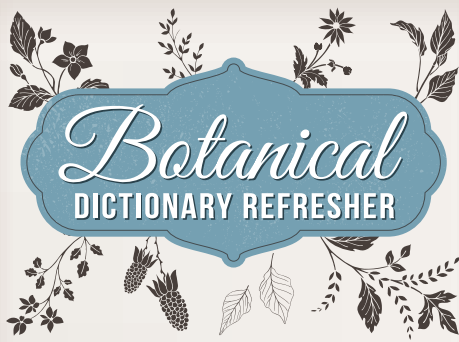
Fig 4 Peach/Apple salsa



Fig 1 Tree Identification workshop



Fig 2 Tree Identification workshop



By Lila Hlebichuk,
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Terms from articles in the current issue:

Hibiscus: The ancient Greek and Latin name for a mallow-like plant

Sinensis: from China; *Hibiscus rosa-sinensis* or Rose of China

Castings: earthworm manure also referred to as vermicast

Vermiculture: the process of garden composting using worms

Oligochaetology: The study of earthworms

Earthworms are grouped into where they live in the soil (referred to as their niche).

The three groups are:

Epigeic: surface dwelling worms; composting worms are in this group

Endogeic: topsoil dwelling worms.

Anecic: subsoil/deep burrowing worms



Palmer amaranth, a particularly devastating form of pigweed, can grow up to 8 feet tall. (NDSU Photo)

Palmer Amaranth Update

Nasty weed found in North Dakota fields

By Laura Kourajian, LKourajian@yahoo.com

Palmer amaranth, a particularly nasty type of pigweed that has been infesting farm fields in neighboring states, has been found in North Dakota. It was identified in early September in a field in McIntosh County, south central North Dakota, and has since been found in at least five more locations scattered across the state. Palmer amaranth is proving resistant to herbicides, and can grow from 4 to 8 feet tall – several inches a day. It is competitive with crops grown in North Dakota and robs yield.

There are likely multiple sources for the Palmer amaranth seed that sprouted the plants found in North Dakota, according to Brian Jenks, a weed scientist at NDSU's North Central Research Extension Center in Minot. He has been keeping a watchful eye out for this weed for several years, observing as it crept closer and closer to North Dakota. "We know that at least one (source) is custom combiners," Jenks said. Additional sources may include railroad cars, given that the weed has been found in one spot growing along railroad tracks with no infestation in the fields around the tracks.

Jenks said the goal once the weed is identified is to pull, bag and burn it before it goes to seed, and then watch that field closely in ensuing years to ensure the weed is eradicated. Backyard gardeners are not likely to find this rangy, tall member of the pigweed family in their backyards, but can be on the lookout for it in fields, ditches and other open land. If you spot pigweed that is a little taller than usual or causes you concern, promptly notify your local county extension agent.



Palmer amaranth has a petiole that is as long or longer than the leaf, which differentiates it from water hemp, another member of the pigweed family that isn't welcome in North Dakota. (NDSU Photo)



A distinguishing feature of Palmer amaranth is a hair-like spike sometimes found on the tips of the leaves. (NDSU Photo)

Water hemp, a close cousin of Palmer amaranth and in the pigweed family, is also on the list of weeds to watch for. It looks similar to Palmer amaranth, but has a shorter petiole (leaf stem).

As you travel around your area and the state, be on the lookout for either of these aggressive plants so another nasty weed doesn't "take root" in North Dakota.

DON'T FORGET!

Be sure to send your volunteer hours and continuing ed hours to Shannon.Ueker@ndsu.edu by November 15 (for hours accrued between Nov. 1, 2017 and Oct. 31, 2018) to earn or maintain your certified Master Gardener status! Hours must be submitted by Nov. 15 to be considered for awards such as 100 hour/200 hour, Master the Journey, etc.

(If you miss the deadline, please send volunteer hours anyway so we can track Master Gardener contributions to our state!)

Shannon.Ueker@ndsu.edu

Vermicomposting

By Caitlin Stegmiller cait.steg@gmail.com



Fig 2 A single red wiggler worm takes a break from composting. (Photo by Christian Guthrie, allispossible.org.uk)

What sold me was the cute bin; a stout rectangular box with rounded corners and wood legs. It resembled something of a 1950s era ottoman. If I was going to host some one thousand worms in my home, at least it wouldn't look like it. So, I clicked 'order' and a few weeks later, the two-foot high, two tier, purple plastic bin was set up in my mudroom (Fig 1). The bottom tier of the bin contained coconut coir, shredded paper, kitchen refuse and a writhing mass of one-thousand red wiggler worms. After overcoming a bit of squeamishness, the process of watching the worms break down our leftovers into nutrient rich compost was fascinating. A few months later, when the bin was full of castings, my plants benefited from these decomposers too.

Like traditional compost, vermicompost (compost made from the excrement of worms) has many benefits. Most notably, worm castings (manure) are incredibly nutrient rich. As a worm excretes its castings, it sends with them a host of bacteria and enzymes beneficial to plants. Vermicompost can be created relatively quickly (my first batch of vermicompost, about three gallons worth, was ready in two months). Worm compost bins can also be sustained on a smaller scale than most traditional compost methods. Consider the average recommended size for a traditional compost pile is about three cubic feet, compared to a 1.5 cubic foot worm tower. Finally, worm compost bins can and, in colder climates, should be kept indoors. This is particularly useful in the Midwest, as traditional compost methods grind to a halt once frost sets in. A well balanced vermicompost bin will produce no noticeable odor, and keeping a bin in your home makes feeding the worms incredibly convenient. The same basic compost guidelines apply for feeding worms – eggs, dairy, and meats are a no-go. Additionally, excessive amounts of citrus and coffee grounds should be avoided, as they can make the habitat too acidic for the worms. My bin functions as a garbage disposal, feeding the worms delicious scraps of vegetables and papers after Sunday dinner. However, keeping a vermicompost bin indoors is more than just convenience.

In nature, composting worms live in the leaf litter on top of the soil (known as the epigeic niche). This niche makes them incredibly sensitive to temperature changes. Worms kept in an outdoor compost pile will be happy over the summer months, but will die off once the temperature dips below 40 degrees Fahrenheit. Of the epigeic worms, red wigglers (*Eisenia fetida*) (Fig 2) and redworms (*Lumbricus rubellus*) are generally the top species choice for composters. These

worms feed on the bacteria working to break down food, making compost bins and piles prime compost worm real-estate.

If you choose to keep worms indoors, there are a number of options for vermicompost bins. Most commercially produced bins follow the same basic structure: two to five trays stacked vertically, each tray having a perforated base. The worms begin in the bottom tray, and once filled with castings, they work their way up through the holes in the next tray. This makes it incredibly easy to harvest the worm castings, by simply emptying the contents of the vacated tray, and then replacing back on top of the stack.

You can also easily create your own bin. Many different designs for D.I.Y. bins exist on the internet, the most simplistic being a storage tote (or any large container), with moistened, shredded, newsprint, a few cups of soil, food scraps and compost worms. The bin is then loosely covered and the worms get to work. Bins in this form do require a little extra labor when it comes time to harvest the castings, as the worms will need to be manually separated from the castings.

Either method will produce the same, nutrient rich end product. Once castings are harvested, they can be mixed with potting soil as a fertilizer, or spread directly in the garden and raked into the soil. There is also a somewhat more labor intensive "worm tea" which can be created by essentially steeping castings in water, then using the solution as a liquid fertilizer.

It has been nearly two years since I first set up my worm bin. The little effort that goes in to caring for the worms has become second nature. But every few months, when it comes time to harvest the castings, I am reminded of the astonishing work being carried out in that cute purple bin.



Fig 1 Style and function, this unassuming bin houses over one-thousand red wiggler worms. (Photo by Caitlin Stegmiller)



Overwintering Mandevilla

An update reporting success

By Rachel Brag, rbinndak@gmail.com

The first time I saw the beautiful pink blooms of a Mandevilla plant, I fell in love! What a stunning beauty! The past several years Mandevilla plants have been more readily available in the nurseries featuring a variety of bloom colors. It appears that prices have come down as this tropical beauty has gained popularity.

Mandevilla is a genus of tropical and subtropical flowering vines belonging to the dogbane family, *Apocynaceae*. It was first described as a genus in 1840. A common name is rocktrumpet. Mandevilla species are native of the Southwestern United States, Mexico, Central America, the West Indies and South America, not our cold zone 3/4!

Due to being frugal and also hating to see the cold kill this tender plant, I have overwintered my Mandevilla for the past three winters. Here's the process I follow for overwintering:

- Gradually let the plant become acclimated to cool temps. It has been said that Mandevilla plants can't survive temps below 40-45 degrees F. I have left my plant out in temps as low as 35 degrees F but make sure to cover or bring in before freezing occurs. Allowing it to remain outside in cool fall temps, it is beyond prime aphid season. I would still recommend an inspection of the Mandevilla for all pests.
- Store in a cool, heated building out of direct sunlight. Expect severe leaf yellowing and leaf drop. I use our detached garage which is well insulated and draft free except when my husband opens the large overhead door for access. Upon occasion, the remaining green leaves have looked froze from the blast of

cold air. The in-floor heat in the building is set at 41 degrees F.

- Water sparingly throughout the winter. There is no schedule for watering, only when I think about it which is probably every 6 weeks. Being on the dry side has been better for the roots than spending the winter in cold, wet potting soil.
- Bring outside when spring daytime temps are in the high 40's to mid 50's. Give the Mandevilla a "severe haircut." Water thoroughly and apply a well-balanced fertilizer. I use a 12-10-10 fertilizer with iron. I do not re-pot it but use regular fertilization throughout the growing season to give it the necessary nutrients. It will green up from the thicker part of the vine to the tips (Fig 1). Do not fret if it appears dead. As it comes to life in the sunshine and warmth, you'll notice "dead" tendrils becoming pliable and green. New side shoots will develop and with each passing year it will get fuller which results in more blooms. (Fig 2 & 3)

I've even over wintered the Dusty Miller that resides in the pot with the Mandevilla. It has produced interesting small yellow blooms the second year. Due to our colder than usual fall with early snow in parts of the state, this information is too late to use this year. However, remember these tips next fall, experiment with your Mandevilla and success is likely. Don't be afraid to give overwintering a try because if it doesn't survive, it wouldn't have survived anyway if left outside!

Source

<https://en.m.wikipedia.org/wiki/Mandevilla>



Fig 1 June 12 - coming to life



Fig 2 August 24 - blooming beauty



Fig 3 October 8 - not liking the cold fall

Preserve the Fruits of your Labors with Dehydration

By Cathy Ruebel, Foxtail2400@gmail.com

The harvest season is winding up with gardeners making sure summer's bounty is stored at its peak. Dehydrating offers another option to canning and freezing, with the added bonus of less space needed to store your food. Retailers and mail order offer a wide range of dehydrators to fit most budgets: from beginner's models around \$40, adjustable and expandable models under \$100, and more expensive programmable units with various accessories (Fig 1). Dehydrating foods can also be done in the oven, but it will take longer, is harder to keep the temperature at optimum, and for those with small children or pets, could pose a safety risk.

North Dakota State University Extension Service released two updated pamphlets earlier this year by Julie Garden-Robinson, Food and Nutrition Specialist, entitled Food Preservation-Drying Fruits (FN 1587) and Drying Vegetables (FN 1588). These pamphlets will guide you through the best fruits and vegetables for drying, preparation, approximate drying times, and packaging and storing tips.

The key to successful dehydrating is selecting the best quality fruits and vegetables for drying – save the scratch and dents for immediate use. Thoroughly clean and inspect

the fruit or vegetables. Blanching may be needed to prevent the enzymes from discoloring during the drying process. Citric acid, fruit preserver (in the canning section at the grocery), or lemon juice can also help preserve the color of your fruit or vegetable.

How thick to slice depends on the water content of the fruit or vegetable, generally between $\frac{1}{8}$ and $\frac{1}{2}$ inch thick. A mandolin or food processor can help maintain uniform thickness, which is very important to ensure all pieces will dry in the same amount of time. Drying times vary greatly; ambient temperature and humidity can also be big factors. Tomatoes, for example, have a very high water content (Fig 2). Too thinly sliced, tomatoes might dry to almost nothing (Fig 3). If the peel is left on, it will take a quite a bit longer to fully dry.

When drying onions, garlic, or chives, consider where to place your dehydrator. Many fruits and vegetables will become more aromatic or pungent as the drying process continues for hours. While the aroma of cinnamon apples filling your home will be welcome, onions and garlic might chase you out and linger for hours or days afterwards. Make sure there is good ventilation throughout the drying process. Additionally, the smell



Fig 1 Apples

of onion or garlic likely won't wash off your dehydrator anytime soon, especially if your machine has a lot of plastic components. Having a dehydrator dedicated just to onions and garlic might be the solution. While a little onion flavor in dried potato or peas can be worked in, onion-infused fruit might be tougher to camouflage.

Following your dehydrator's instructions for temperature and drying times is crucial to minimize any mold or bacteria developing during storage. For example, when dehydrating apples, break or tear apart a slice. If there is any visible moisture – look for a shiny texture, more drying time is needed (Fig 4). Fully dehydrated apples will be leathery. Fruits can also be pureed and dried on sheets (Fig 5). As the puree dries, flavors intensify and the natural sugars are concentrated – a perfect snack for on the go! (Fig 6)

Dried tomato slices or wedges can also be pulverized into a powder and used in recipes



Fig 2 Tomato sliced



Fig 3 Tomato dried



Fig 4 Apple Dryness



Fig 5 Peach Puree

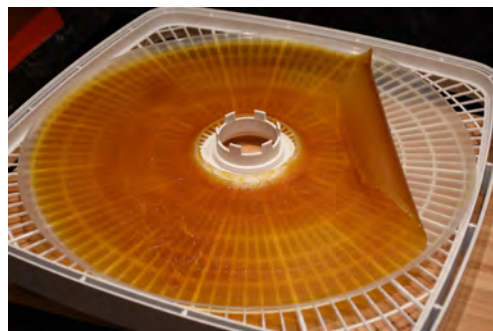


Fig 6 Peach Leather



Fig 7 Parsley wet

calling for tomato paste. Dried herbs can also be ground using a fine or coarse grain to your exact preference (Fig 7)

Pack your cooled, dried fruit and vegetables in small glass jars, moisture proof containers or sealable bags (Fig 8). Store in a cool, dark, dry pantry, or in the refrigerator or freezer. Dried fruits and vegetables can be rehydrated

by covering with boiling water and simmering until tender.

Dehydration added to your food storage practices will provide another preservation choice during a hectic harvest season. There's a bounty of great vegetables and fruits waiting for you at the local markets right now. Give it a try!

Fig 8 Fruit packages



Bringing the Tropics to North Dakota

By Lila Hlebichuk, lilahl@yahoo.com

Picture a beautiful tropical island with palm trees, the ocean and a lovely lady with a beautiful flower in her hair. That flower is most likely from the hibiscus plant. The hibiscus is the state flower of Hawaii and the national flower of Malaysia.

The modern hybrid tropical hibiscus is thought to originate from eight species native to Mauritius, Madagascar, Hawaii, Fiji, China and possibly India. "It was brought back to Europe by explorers in the 1700s. Carl Linnaeus, who gave us the Latin-based taxonomy of plants that became the standard, collected at least one specimen of *Hibiscus rosa-sinensis* and gave it that name in 1753 when he released his famous books, *Species Plantarum (Species of Plants)*. He described a red double flower in that first naming of hibiscus. Most modern day hibiscus, although sometimes called *Hibiscus rosa-sinensis*, are actually hybrid crosses of the eight original species.

Tropical hibiscus in North Dakota are showy potted plants. They are meant to be grown in temperatures higher than 50 degrees (F). The first hard frost will kill this tropical plant. A ten- to fourteen-inch pot is typical for the indoor plant. A south, sunny window, evenly moist soil, fertilizer and judicious pruning will turn this shrub into a stunning houseplant with abundant blooms in almost every color.

Although the older species can grow up to 15 feet and live 50 years or more, modern hybrids tend to be both slower growing and have shorter life spans. Pruning can be done as you would do for most outdoor shrubs; in

the spring about one third of the way back leaving two or three nodes on the branches.

If placed outdoors for the summer, the plant should be brought in before nighttime low temperatures fall to 50 degrees (F). Be prepared for yellowing leaves and leaf drop as they adjust to the change in environment. A properly cared for hibiscus can bloom year round. Blooms last from one to three days depending on the

variety and they put on a spectacular show. The hibiscus is not toxic to humans, but its effects on pets are not known so it is best to keep them away from all parts of the plant including any dropped leaves and blooms. Hibiscus tea is delicious and there are claims that it is healing for many ailments although that may not be scientifically documented.

The tropical hibiscus will have glossy, dark green leaves and three- to six-inch flowers. The spectacular blooms on the tropical hibiscus come in shades of red, orange, yellow, blue, purple, pink, white, brown and bi-colors and multi-colors.

This plant can often be found in local garden centers in season as well as online. Purchasing this plant may need to wait until spring, but once you have one or more you



Brilliant Red Tropical Hibiscus with red geranium Photo by Lila Hlebichuk

can enjoy the tropics in the middle of winter in North Dakota.

Hardy hibiscus will be featured in the next issue of The Dirt.

Sources:

<http://www.exotic-hibiscus.com/misc/history.htm>

<https://www.ndsu.edu/pubweb/chiwonlee/plsc211/student%20papers/articles01/kwanner/hibiscus.htm>

Online sources to purchase tropical hibiscus include:

<http://www.hiddenvalleynaturearts.com/acatalog/index.htm>

<https://www.logees.com/growinghibiscus>

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Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa@ndsu.edu.



Have a story idea?

Email Rachel Brag, rbinndak@gmail.com or contact one of our writers directly.