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<http://www.co.yellowstone.mt.gov/extension/horticulture/mastergard.asp>

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Send your submissions for newsletter to ymastergardener@gmail.com by the 15th of the month for submission in following month's edition

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YELLOWSTONE MASTER GARDENER NEWSLETTER



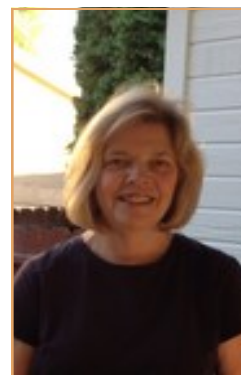
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Featured Master Gardener—Linda Rutherford

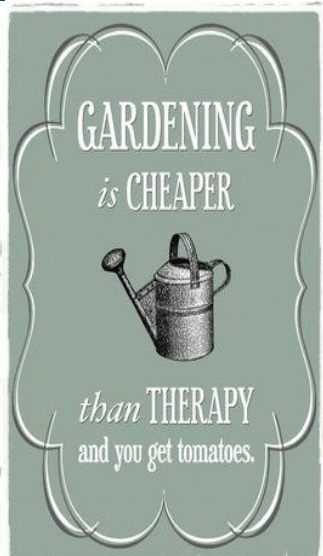
It's September already and summer is coming to an end. For this newsletter I got to talk to Linda Rutherford. Linda is new to our group this year and is enjoying her experience with the Master Gardeners. When Linda was a little girl she would watch her grandpa and mother work in their gardens, which started her love and interest in gardening. After her father passed away, her mom did not have time for gardening so Linda didn't garden for years. Then in the 1980's, she rekindled her interest in gardening with her mother-in-law and her garden. Linda has worked at Mountain Bell selling advertising for the yellow pages, selling advertising for a radio station, and a real estate appraiser. After these jobs, Linda returned to teaching Family Consumer Science at Senior High and has been doing that for the past 23 years. Linda wanted to attend the Master Gardener classes to learn how to start gardening the right way. When she found out we had an evening class, she was excited and signed up for Monday night. Linda was glad she learned how to begin a garden at the classes, how to do a square foot garden, and she attended the hands on seminars that Tom Kress, Corry Mordeaux and Murry Lyda facilitated as extra learning opportunities. She has learned (and this is good for all of us to remember) that anything in our yards and gardens can be changed if what we do the first or second time does not work out. Now, after going through the classes and talking to other Master Gardener's, she has started planning out her gardens for

next year, which include the Square Food Gardening strategy and possibly raised beds. This year Linda does have a few tomato plants but watch out next year. Linda says since she is in the early stages of gardening her passion right now is in planning for next year. She is also looking forward to the challenge of watching plants grow and keeping them healthy. Because of her love and excitement about our program, Linda has volunteered at the Moss Mansion, St. Andrews Community Garden, the Billings Farmers Market, the Thursday night farmers market at Riverstone Health and worked at the Master Gardener's table at Montana Fair. Linda has achieved logging all her hours for level 1 and level 2 (which is 50 hours) since the end of class in June. When not spending time with her family or working, she enjoys quilting, sewing and cooking as her other hobbies. Linda is married to Chuck and has one daughter and 4 grandchildren. Her mother Thelma, lives in Billings also and is 99 years old. Linda's tip of the month is to quit procrastinating and get your yard work done before winter (dividing flowers, planting perennials and bulbs for next year, etc.). Winter, including snow and cold, will be here before you know it – remember we live in MONTANA, after all! Cont. p. 4



MURRY'S TIPS

Do not wait until the first frost date to set up any plant covers. Usually the gardener gets caught running about frantically realizing the outside temperature has crashed and the plants are not prepared. Start the cover setup and place the covers nearby around September 1st. Early it seems. I figure the garden will be ready for that first freeze soon to follow.



WHAT'S GOT MY ONIONS

Submitted by Corry Mordeaux

What's Got My Onions?

If something is amiss with your onions, identifying the issue can help you determine what to do. The photos and links in the [Common Onion Diseases](#) section of our Web site is a good place to start. In hot, humid weather, be on the lookout for:

- *Blue-green mold*, dusty green spores that develop along the mid ribs and under the surface when wet weather occurs before harvest.
 - *Black mold*, a similar fungus with black spores common when there's excessive heat before harvest.
 - *Neck rot*, which causes necks to turn soft and brown inside.
 - *Fusarium basal rot*, a soil-borne disease fostered by high temperatures.
 - *Bacterial rots* such as slippery skin and sour skin, which cause a softening of the inner layers of the onion.
- Regular application of [fungicides](#) during the growing season can prevent many of these problems. After harvest, thorough drying, curing, and proper storage will help you maximize your yields.

Harvesting and Drying

When you harvest, pull the onions in the morning and let them air dry until late afternoon. Be sure to pick a day when rain isn't forecast, and don't leave them out so long that dew falls on them. Move them into the shade on hot days.

We usually suggest "windrowing" during the drying process -- covering the bulb of one onion with the leaves of another to prevent sunscald. Avoid this practice during wet weather, as it may promote fungal diseases. Turning your onions frequently while they're drying is also helpful.

If you dry your onions indoors, be sure to spread them out in a well-ventilated area with plenty of room for airflow between the onions. Drying indoors may take longer than outdoor drying, but

2-3 weeks is usually sufficient with full circulation.

The drying process is complete when the neck is tight, the outer skin is dry and makes a rustling sound when handled, and the skin color is uniform.

Storage Tips

Inspect your onions carefully before storage, and remove any diseased ones so problems don't spread. Providing cool, dry air conditions and adequate air flow will keep your storage onions happy for months. For ideal storage conditions:

- Maintain temperatures of 40-60 degrees F and relative humidity of 65%-75%.
- Keep onions one foot away from walls to maintain good air flow.
- Consider using a fan to promote good air flow.
- Immediately remove any diseased onions.
- Avoid storing onions in direct sunlight.
- Never store onions with potatoes, which emit moisture.
- Don't store onions in plastic bags, which restrict air flow. Instead use [mesh bags or nets](#). Follow these simple instructions, and you'll be enjoying your onions for months to come. With proper care, sweet onions will store for up to three months, and storage types will last the entire winter.

Info from : Dixondale Farms | P.O. Box 129 | Carrizo Springs | TX | 78834



Metra Demonstration Garden Winners

First Place \$50—Terri Kelleher

Second Place \$25—Rick Shotwell

Third Place—\$10—Merita Murdock and Joyce Hendricks

Congratulations and a special thanks to Diana Halverson, Teresa Bessette, and Rosemary Power who took time out from their busy schedules to be this year's judging committee. Thanks to all who competed...all the gardens are lovely and made an excellent display. Fairgoers can see what can be done in a small 4x4 ft. growing area. Amy Grandpre



WELWITSCHIA MIRABILIS

Welwitschia mirabilis

Taxonomy: *Welwitschia* is classified as a gymnosperm. Gymnosperms are non-flowering seed producing plants, for example conifers. *Welwitschia* are classed its own family (Welwitschiaceae) in a small order of gymnosperms called the Gnetales. It shares this order with two other families each containing one genus: the Gnetaceae (*Gnetum*, 30 species) and the Ephedraceae (*Ephedra*, 40 species). The relationship between these three genera is remote. There is nothing else like *Gnetum*, and of the three, *welwitschia* is the most isolated taxonomically (only 1 extant species) and the most geographically restricted. According to the South African National Biodiversity Institute's (SANBI) website, the *welwitschia* is a relic from the Jurassic period (200-145 million years ago when gymnosperms dominated plant life). The ancestors of the *welwitschia* adapted to an environment that gradually became more and more arid. Presumably, its relatives did not adapt to the increasing aridity resulting the *welwitschia* being isolated today.



Current Distribution: *Welwitschia* occur in isolated communities in the Namib Desert (mean annual precipitation 10- 100 mm but some areas get none), in a narrow strip, about 1,000 km along up the coast from the Kuiseb River in central Namibia to Mossamedes in southern Angola. The plants are seldom found more than 100 to 150 km from the coast, and their distribution coincides with the fog belt. According to SANBI, *welwitschia* are still common in this habitat and they ascribe the current distribution of *welwitschia* to the moisture provided by the fog. The current plant communities show healthy variability. *Welwitschia* are neither endangered nor rare, but they are protected by law.

Common names: *welwitschia*, *tumboa*, *n'tumbo* (Angolan), *tweeblaarkanniedood* (Afrikaans), *!kharos* (Nama/Damara), *nyanka* (Damara), *khurub* (Nama), *onyanga* (Herero). The Herero word translates as desert onion. Both the Bushman (Nama, Damara) and the Bantu speaking Herero used the *welwitschia* (roasted roots) as food.

A *welwitschia* consists of two leaves, a stem base and roots. The two leaves are permanent. They are formed when the plant is a seedling. They continue to grow and are never shed. Visually, they are leathery and broadly strap-shaped. As the leaves age, wind action causes tears that results in a tattered ribbon like appearance. The stem is a hollowed-out woody inverted cone. It grows to about 500 mm in height. The *welwitschia* have tap roots that are approximately the same length as the total combined length of the two leaves. In some cases these roots may allow the plants to reach underground water sources.



On average, *welwitschias* are 500-600 years old, although some of the larger specimens are thought to be 2000 years old. Their estimated lifespan is 400 to 2500 years.

The sexes are separate, i.e. male plants and female plants. The male cones are salmon-coloured, small, oblong cone-like structures, and the female cones are blue-green, larger and more tapering.

The male flower has a sterile, modified pistil-like structure, which exudes nectar (50% sugar content) from a modified stigma-like structure (SANBI). The female cone has exposed stigmas and also produces a nectar droplet.

We saw them blooming in the Namib desert in mid-June (Namibian winter). The nectar attracts the *welwitschia* bug (*Odontopus sexpunctatus*) a yellow beetle with black spots. The nymphs are bright red, with much less distinct dark spots. According to some local experts the beetles facilitate pollination. Other experts suggested that some kind of wasp is the major pollinator (SANBI).

SUBMITTED BY SHERRI DEAVER

CAR POOL

The MT Nursery & Landscape Association Fall Tour is September 6th, 2013, in Kalispell. If you are going, and would like to car pool, please contact Vi Hills at 628-8037.

*Everything is
funny as long
as it is
happening to
somebody else.
- Will Rogers*

VOLUNTEER HOURS

Keep sending in your volunteer hours and food donations to the

state at
[http://
mtmastergarden-
er.org/](http://mtmastergarden-er.org/)

Also keep a paper copy for Amy's use.

TOM KRESS GARDEN TOUR

There was a lovely turnout on Saturday, August 3rd at Tom and Barb Kress's truck farm/garden. Tom showed us the greenhouse where he starts plants, garden equipment that he uses for different operations, his **HUGE** and very successful composting set-up, the gardens with all the different varieties of vegetables and their beautiful yard. Tom explained his successes and failures and why. It is always



great spending the morning with them and learning so much. Corry Mordeaux captured some great pictures.

Continued—Linda Rutherford

I know I am guilty of this and am always saying "I have to get that done". Linda has a lot of enthusiasm for our program. She is a great volunteer and asset to the Master Gardeners. As Linda says the best part of the Master Gardeners is just being around such knowledgeable people. The way she achieves this is by volunteering and going on the planned field trips with our group. Thank you Linda for all you do to help us out and your enthusiasm. I know that the Master Gardeners will just keep getting stronger and better with people like you.

Submitted by Bob Wicks

Links that you may find Interesting

- ◆ UNL Extension: Backyard Farmer— <http://byf.unl.edu/home>
- ◆ FDA/USDA Collude to Eliminate True Organic Egg Production at [http://
www.cornucopia.org/2013/07/fdausda-collude-to-eliminate-true-organic-egg-
-production](http://www.cornucopia.org/2013/07/fdausda-collude-to-eliminate-true-organic-egg-production)
- ◆ Everything You Wish You Didn't Have to Know About Monsanto at [http://
www.cornucopia.org/2013/07/the-monsanto-menace](http://www.cornucopia.org/2013/07/the-monsanto-menace)
- ◆ Up to Date Bee News— Catch the Buzz @ [http://www.beeculture.com/content/
catch_buzz.cfm](http://www.beeculture.com/content/catch_buzz.cfm) or <http://home.ezine.com/1636/>
- ◆ MT. Nursery & landscape Association Summer Leaflet at <http://www.flipsnack.com/9C8C686BDC9/fdplwkph>

FROST COMING SOON ?

Last year, we were caught off guard with an early frost, September 12th. This gave us 97 good growing days. Our usual Fall frost date is around September 20 to 25th. Soon we will have to make decisions and preparations as to what can be saved and how it will be achieved.

FRIENDSHIP HOUSE

The Friendship house is in need of help with Bob Short being gone for awhile. They will need help harvesting, supervising and advising the kids on what, how and when to harvest. If you could be there any Tuesday and/or Friday to help please call The Friendship House at 259-5569 and ask for Jessica or Matt.

Bob Short

<http://www.co.yellowstone.mt.gov/extension/horticulture/mastergard.asp>

HAPPY BIRTHDAY

Linda Walters	9/23
Teddi Shorten	9/23
Robert Bales	9/24
Vikki Fosjord	9/25
Judy Miller	10/1
Joyce Schwartz	10/2
Cindy Meccage	10/10
Laura McElhinny	10/14
Nick Nicoll	10/14
Gloria Ervin	10/15
Lauren Asmus	10/15
Bob Short	10/26

**CHOCOLATE ÉCLAIR CAKE**

1 CUP FLOUR	2 1/2 C. MILK+3-4 TAB MILK
1 STICK MARGARINE	8 OZ CREAM CHEESE, SOFTENED
1 CUP WATER	3 OZ CHOCOLATE CHIPS
4 EGGS (ROOM TEMPERATURE)	2 TAB MARGARINE
2 PKG. CHOCOLATE INSTANT PUDDING (3.9 OZ.)	1 CUP POWDERED SUGAR
	12 OZ COOL WHIP (THAWED)

BOIL WATER AND ADD 1 STICK MARGARINE UNTIL MARG. IS MELTED. ADD FLOUR ALL AT ONCE. BEAT TILL A BALL FORMS. ADD EGGS ONE AT A TIME. BEAT WELL. SPREAD IN UNGREASED 15X10" PAN. BAKE AT 400 DEGREES FOR 25-30 MINUTES. REMOVE FROM OVEN AND PUSH BUBBLES DOWN WITH A FORK WHILE HOT. COOL COMPLETELY.

BEAT THE SOFTENED CREAM CHEESE WELL AND ADD THE PUDDING MIX AND COLD MILK, MIXING WELL. SPREAD ON CRUST. TOP WITH COOL WHIP. MELT THE CHOCOLATE CHIPS & 2 T MARGARINE. MIX IN SUGAR AND 3 T MILK UNTIL A THIN GLAZE. DRIZZLE ON TOP.

Submitted by Sheri Kisch

MOSS MANSION; Get paid to garden!

We will soon be losing Daniel, our summer teen age garden worker, who was provided to us by HRDC, as he will be heading back to school. Since the flowers and grounds will still need regular attention and watering, we are looking for an experienced gardener, The person would be paid \$10/hr to work 2 hours a day, Monday through Friday—\$100 a week from August 26 through September 13. After that date, depending on weather, we may still need someone for an hour a day or an hour Monday, Wednesday and Friday till the end of the month. The work schedule is flexible as far as time of day. With warm days, I'm thinking early morning or evening. Please let me know if you are interested and if not, please pass the information on to anyone you know who might be interested. Call - Stacey @ 855-3387

YELLOWSTONE COUNTY MASTER GARDENER ASSOC. PICNIC

Yellowstone County Master Gardeners met at Zoo Montana on July 17th for their 2nd annual picnic. Special recognition was given to Murry Lyda, Merita Murdock, & Bob Wicks for all their contributions, making our program the success that it is today. Thank you.

We also celebrated three July birthdays, Amy, Merita and Bob.



You can find out more about the Yellowstone County Master Gardener Association on their facebook page at <https://www.facebook.com/YCMGA>



GROWING CORN

I find growing great corn almost as interesting as learning how honeybees maintain their hives. Of course corn takes second place in importance to tomatoes in my garden. But still, to know what it takes to grow tall, dark green, hardy stalks with beautifully pollinated ears, is about as exciting as it gets.

Corn has been grown for thousands of years, possibly starting in South America and Mexico. Native American Indians had been growing popcorn, sweet, dent, and flint corn for hundreds of years before Columbus arrived.

Popcorn – Ears and kernels are smaller than sweet corn. The kernels pop when heat expands the moisture in the center of the kernel. Most varieties need 90 to 100 days to mature.

Flint – We don't hear much of flint corn, but it is a delicious staple corn, good for year-round storage. The kernels can be ground to produce a sweet meal of muffins, cornmeal, crackers and bread. It needs a longer growing season, 110 to 120 days.

Flour – Varicolored like flint corn, flour corn has much more soft starch. It grinds to a fine flour.

Super-Sweet – Most new varieties are not only sweeter than standard corn, they also hold their sugar content for a longer time after picking. Breeders are still working on problems with spotty germination, lower vigor and incomplete ears. Growing time can be from 53 to 87 days..

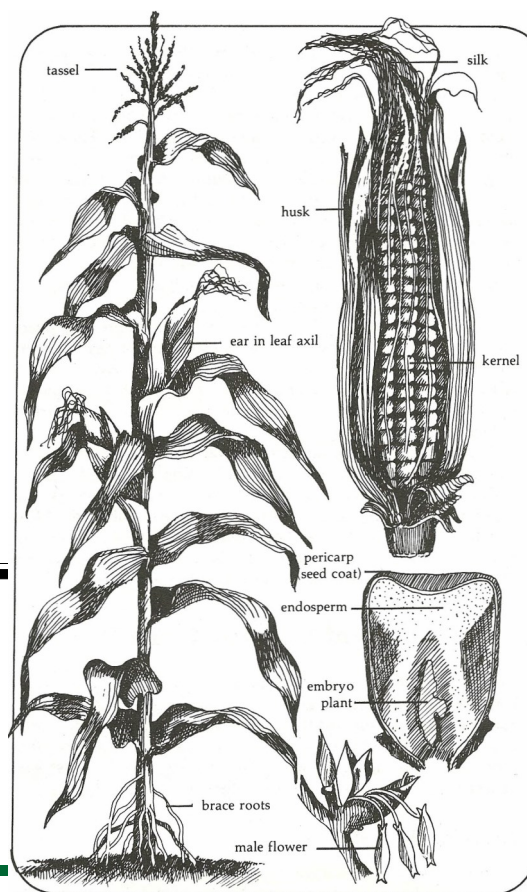
High-Lysine – This corn looks promising as a source of better quality vegetable protein. It is commonly grown as field corn for animals, but can be eaten by people, too.

Corn is a member of the grass family. To support the rapid development of a stout stalk, long stiff leaves, and heavy ears, corn needs a ready supply of plant food, especially nitrogen. Corn needs your richest soil. If possible in the fall, plow in a green manure crop. Humus-rich soil contains more air spaces making it easier for roots to grow. It also acts as a sponge, holding five to ten times its weight in water, releasing as needed. Corn also needs a good supply of lime, 2-3 pounds per 1000-1200 sq. feet every 3 to 4 years. Corn needs a lot of nitrogen. If possible, plant corn right after a legume crop (peas, beans, lima or soybeans) to make the best use of free fertilizer. For spectacular corn, side-dress the plants with liquid plant food such as diluted fish emulsion or manure tea. Water is essential at the time of tasseling and when kernels are forming. Soak the soil to at least 4 inches deep. Shallow roots will quickly die. A full grown plant can lose a gallon of water a day in hot summer weather by evaporation through its leaves.

Pollination, this is the neat part. Of course corn is pollinated by the wind, which blows from the **tassels** of one plant to the **silks** of another. **Each silk must receive a grain of pollen.** You can even tap the stalks with your hand or end of a hoe to encourage pollination. It is best to plant corn in blocks at least four rows wide. For continuous harvest, make repeated plantings, every two to three weeks. It is usually safe to plant early corn about a week before the date of the last expected frost. Corn seed will not germinate when the **soil** temperature is below fifty degrees, even if you wish it to be so.

Submitted by Sheri Kisch

*"If you truly love
nature, you will find
beauty everywhere."
– Vincent van Gogh*



SEPTEMBER/OCTOBER CHECK LIST

Vegetable Garden

- Harvest pumpkins and winter squash after light frost, but before a heavy freeze. Cut fruit from the vine with about a 3-inch portion of the stem attached. Cure by placing in a heated, ventilated area at 75-80 degrees for two weeks. This hardens the shell for storage. (Do not cure acorn squash). Store pumpkin and squash at 40-50 degrees after curing.

Trees and Shrubs

- Homeowners should refrain from watering established trees and shrubs from mid September to mid November (or when trees start turning their fall color). This helps encourage dormancy. Heavy irrigation, nitrogen fertilizers and pruning (except for dead wood) all can cause trees to break dormancy and begin new growth, making them susceptible to winter injury. If however the fall turns out to be long, hot, and dry, irrigation may again be needed. Continue irrigating newly transplanted trees and shrubs (up to three years after being planted) as usual.
- Put tree wraps on tender, dark barked trees, to prevent sun scorch.
- Save fallen leaves to add to garden directly or to compost.

Lawns

- Aug. 15 to Sept. 15 is one of the best times for lawn grass seeding. If you need to do some reseeding, try to get to it before mid September.
- Continue watering lawns throughout the autumn season. Fall, with its long cool evenings, favors the dense, vigorous growth of Kentucky Bluegrass.
- Continue mowing right up till winter sets in. Long, matted grass invites winter disease problems.
- Fertilizing lawn around Labor Day and again around Columbus Day. General lawn fertilizer recommendations: 6-7 lbs. of 24-4-4 per 1,000 square feet of lawn.
- If you have perennial weeds in the lawn, such as dandelion, bindweed, clover or thistle, fall is a very effective time to use products containing 2,4-D, such as Weed-B-Gone.

For a more complete list of Fall gardening activities –go to Grapevine on Yellowstone County Master Gardener's web site www.co.yellowstone.mt.gov/extension/horticulture/grapevine.asp

FALL LEVEL ONE CLASSES BEGIN

For the first time, the Level One Master Gardener Classes will be offered in the Fall. Also new, will be the meeting place. Billings Health and Rehab has offered their facilities at 2115 Central Avenue, Billings. Classes will run from Monday, September 9th through Monday, November 4th from 7 till 9pm. As usual, previous Master Gardeners are welcome to attend. Contact Amy if you know of any prospective students, 256-2828.



YELLOWSTONE VALLEY WOMAN'S MAGAZINE

Pick up a copy to find Master Gardeners, Amy Grandpre, Susan Betz, Teresa Bessette, Julie Halverson, Nan Grant, and Pat Morrison in articles from June through September. You can also access articles in their archives online at <http://www.yellowstonevalleywoman.com/archives>