



YARD & GARDEN NEWSLETTER- APRIL 2016

Raingarden Review

Barb Maher, MN River Valley Master Gardener

Fourteen years ago a new environmental technique called a Raingarden was encouraged as way of keeping water run off clean. Studies showed that if deep rooted plants were growing in low areas leading to storm sewers the water reaching the sewer outlet was cleaned of sediments, oil and chemicals. It was a win-win situation; inexpensive, attractive and effective. The deep rooted plants best suited for the job are our native prairie plants.

The Minnesota River Valley Master Gardeners got a grant from Minnesota Department of Natural Resources in 2002 to give a seminar on Raingardens and to plant one a year later. We partnered with the City of Mankato and the DNR to pick a site chose plants and get them planted and maintained. Thirteen years after the planting we have a living plant barrier on Victory Drive and Fair Street. The 1400 tiny seedlings are now towering sheaths of big bluestem, clumps of woody white spirea, New England astera for butterflies and 12 more species of flowers and grasses.

Thousands of cars drive by the gardens daily and a walking path runs along the inner side with a sign with the plant names on it. We planted in clusters of about 50 plants of each species but they no longer grow in neat patches but have found their own niche. We even have a large area of Indian hemp that probably came from mislabeled seedlings. Keeping the garden functioning over the past years mean yearly maintenance by the Master Gardeners with the help of the Park Department and Fire Department.



Picture of Bluestem at Raingarden in the fall
Submitted by Barb Maher

We have had a yearly burn to dispose of the tall stalks each spring for the past nine years. If you drive by now you may see a blackened patch of ground. The burn takes place from late March to mid-May depending on weather conditions. The whole mass of dried plant material burns in about 15 minutes, less if there is a wind. What a terror prairie fires can be. The plants are rejuvenated by the seasonal fire just as our prairies were hundreds of years ago. Stop by for a “plant break” and enjoy the array of working plants, as they emerge from the blackened ground to full blooming glory through the summer.

If you see a how area near a road or hard surface area that is planted with grasses and native plants it is a planned, natural way of reducing fast drainage of runoff and purifying the rainwater before it reaches a lake or stream. On the East side of the Mankato hospital there is a raingarden between several parking areas and Riverside Park also has one. They provide a rich area for our local pollinators; the bees, butterflies, and birds to enjoy.

Extension Corner

Is Spring 2016 a repeat of Spring 2012?

K. Foord, UMN Extension Educator

The warm temperatures encountered in the first half of March of 2016 are reminiscent of the extreme early spring encountered in 2012. However, if you compare this year's spring temperatures with the 30 year average, we are above average but nothing like 2012.

One way to compare temperature data among years is to create a statistic called a Heating Degree Day (HDD). This number is created by taking the average temperature for the day and subtracting 65 degrees. The average temperature for the Twin Cities yesterday March 21st was 41 degrees, and thus the HDD was $(41-65 = -24)$. The idea being that in that day the heat required providing for the 24 degree difference between the 65 degree reference building temperature and the 41 degree average outside temperature was 24. So the HDD for March 21, 2016 was 24. The 30 year normal for March 21st is 35 F, so the HDD for the average is -30. If we sum these numbers for all the days in a month then we can compare months between years.

Heating Degree Days (HDD) Minneapolis, MN									
Month	Year								
	2012	2013	2014	2015	2016*	30 year Ave.	2012	2016	2014
Departure from ave.									
Jan	1,285	1,482	1,762	1,481	1,463	1,531	246	68	-231
Feb	1,072	1,280	1,568	1,501	1,156	1,236	164	80	-332
Mar	524	1,166	1,217	906	502*	998	474		-219
Apr	442	716	662	451		530	88		-132
May	112	250	244	199		218	106		-26
Totals	3,435	4,894	5,453	4,538	2,619	4,513	1,078		-940

* as of March 21, 2016

The summed HDD for the month of January for the years 2012, 2014, 2016, and the 30 year average were 1,285, 1,762, 1,463, and 1,531, respectively. The lower the number the less heat required. 2012 was 246 days lower than the average and 2016 was 68 lower than the

average. In 2014 the HDD for January was 231 more than the average and thus a relatively cold month.

If we compare the HDD for the month of March for the same years 2012, 2014, 2016, and the 30 year average we get the following (*with the understanding that we still have 10 days left in March of this year) 524, 1,217, 502*, 998, respectively. So we are early but not like 2012.

FREEZE DAMAGE DEPENDS ON BUD STAGE

Damage experienced from late spring frosts is a function of the temperature sensitivity of a bud which in turn depends on its type and its stage of growth. For example: A tight strawberry bud can tolerate temperatures down to 22 F. As the bud begins to open and approaches a "popcorn stage" the critical temperature rises to 26.5 F. The fruit's critical temperature is 28 F, and the flower itself is most sensitive with its critical temperature being 30 F.

Deciduous fruit trees follow a similar pattern although the temperatures will not be exactly the same. See the following [link](#) to get more detailed information.

The extent of frost damage depends on the low temperature reached and the time it spends at that temperature.

KNOW YOUR LOCAL MICROCLIMATE

To some extent frost protection becomes a local phenomenon and depends on the microclimate experienced by the plant. This is determined by your exact location and its topographical characteristics. Is your plant protected in some way by your home? Large bodies of water moderate air temperatures and urban areas with buildings and pavement as heat syncs that can radiate heat back at night. Topography is a factor. Southern facing slopes with early spring warmth can encourage fruit trees to flower earlier and be more vulnerable to late spring frosts. Air drainage is important. Fruit trees planted in an area where cold air collects can experience colder temperatures then plants on the upper part of slopes.

In terms of the year, yes we are early and we need to keep an eye on things. That being said the predicted upcoming cooler weather with lows in the high 20's and low 30's will likely not damage many buds and will slow plant growth reducing our risk of late frost damage.

Master Gardener Opportunities Available:

TREE PLANTING AT FRANKLIN SCHOOL

The Tree Trust is conducting a tree planting project at Franklin Elementary School on Wednesday, May 11. They are looking for 6-8 volunteers to assist and lead classrooms on planting day. They will be planting all day from 9:30 am-4:00 pm, but they are splitting the work into half-day shifts.

I (Diane) will be helping in this capacity that day and would encourage other Master Gardeners to come help with the youngsters. My experience is that these elementary school tree planting events are a lot of fun and a great chance to connect with youth and adults who want to know more.

Please let me know if you can help: [507-384-1745](tel:507-384-1745), or stouf002@umn.edu

ACES SCHOOL GARDENS ASSISTANCE

The ACES after school summer program, in connection with the Mankato Schools, will be planting gardens at six area elementary schools.

The ACES summer staff will supervise the students doing the gardening, but they need our help to train those 15-20 staffers.

Training will be held on Friday, May 20, and Master Gardener help is requested.

Diane will be organizing the day, and needs some MG assistance.

In addition, ACES has asked if Master Gardeners would help by adopting a garden or two to visit weekly during the summer to ensure that things are going smoothly.

The garden plots will be 4x12 raised beds at six schools: Kennedy, Rosa Parks, Eagle Lake, Franklin, Roosevelt and Hoover.

Please contact Diane to assist: [507-384-1745](tel:507-384-1745), or stouf002@umn.edu

SUMMER GARDEN HELP AT THE CHILDREN'S SCIENCE MUSEUM IN MANKATO

Summer Adopt-A-Garden at the Children's Museum of Southern MN

Rochelle Koberoski at the Children's Science Museum, 224 Lamm Street, Mankato, is looking for some Master Gardener expertise at their outdoor "farm" this summer. They will be planting and growing vegetables in three 4x4 raised beds. They need someone to help plant & maintain a garden, and to teach a one-hour composting lesson at one of their education days this summer.

IF YOU ARE INTERESTED IN BEING INVOLVED, PLEASE CONTACT ROCHELLE AT [507-344-9107](tel:507-344-9107) OR EMAIL AT ROCHELLE.KOBEROSKI@CMSOUTHERNMN.ORG

ASSISTANCE AT THE VINE LANDSCAPING

Our friend Darlene Shorn and another Master Gardener have been caring for the VINE Community Center landscaping since it was planted three years ago.

There is an opportunity to help with this effort this summer. The landscape is planted with perennials and other repeat performers, so the task is as simple as keeping things clean and checking it regularly. If you would like to help, please contact the Extension Office at [507-304-4326](tel:507-304-4326) or Darlene.



Annual Plant Sale

Minnesota River Valley Extension Master Gardeners

May 14th, 2016

9am—11am

Caledonia Curling Club

*600 Hope St. 1 block north of Madison Avenue - behind Walgreens
Corner of Caledonia & Hope Street*

***Purchase Plants** (Cash or Check Only)

***Ask a Master Gardener
your gardening questions**

***Proceeds go to the many community projects that the
Extension Master Gardeners conduct throughout the year.***



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