

YARD & GARDEN REPORT

July 31, 2015

Vol. 3, No. 9

Perfect perennials

North Dakota is a land of prairie grasses. Our soils and climate are made for growing grasses. That's one reason why ornamental grasses are perfect for us. They are loaded with other great features too:

Ornamental grasses are easy to maintain. They rarely need watering or fertilizing. Just cut the plants back every spring—that's it!

They have almost no pest problems. Insects or diseases rarely bother ornamental grasses. Believe it or not, deer don't like them! That's too good to be true!

They grow fast. Many grasses will grow up to their mature height, even up to 8 feet, within two growing seasons.

They look good all year. You'll enjoy a changing canvas of color from the emergence of tender grass in the spring to a display of roughened textures and brilliant colors in fall and winter. As a bonus, their seedheads attract lively and colorful birds to our yards.

'Karl Foerster' feather reed grass is one of the most popular perennials grown today (Fig. 1). Plants grow 5 feet tall and provide a striking vertical dimension to flower beds. Its carefree habit has made it a staple in low-maintenance landscapes—even at gas stations!

The variegated leaves of 'Overdam' and 'Avalanche' (a bud sport of 'Karl Foerster') are eye-catching (Fig. 2). Their silvery plumes turn gold in fall.



Figs. 1–4. From top left, clockwise: 'Karl Foerster' feather reed grass is the king of grasses; 'Overdam' has creamy white leaf stripes. Among switchgrasses, the red accents of 'Shenandoah' and golden fall color of 'Northwind' are spectacular.

'Northwind' switchgrass was awarded the prestigious Perennial Plant of the Year award in 2014 ('Karl Foerster' won in 2001). 'Northwind' has olive-green foliage and a sturdy upright habit. Another showy switchgrass is 'Shenandoah', noted for its stunning burgundy leaves and plumes in autumn.

INSIDE THIS ISSUE

- ◆ Ornamental grasses 1
- ◆ Bee-friendly gardens 2
- ◆ Mason bee houses 3
- ◆ Dakota blackberries? 3
- ◆ Shady lawn care 3
- ◆ Survey of problems 4
- ◆ Weather almanac 5

Bee friendly

The undisturbed prairies of North Dakota once made it a haven for bees and honey producers. But the landscape of North Dakota is rapidly changing. The oil boom, increased pesticide use, mites and diseases are threatening bees and other pollinators. We can no longer take these insects for granted.

Bees are vital for a productive garden. We need them for cucumbers, melons and squash. We need them for berries, apples, cherries and other popular fruits.

We can take steps to make our landscapes bee friendly. Our yards can be places where bees forage for food, build nests and rear their young. In return, our landscapes will be healthier and more productive.

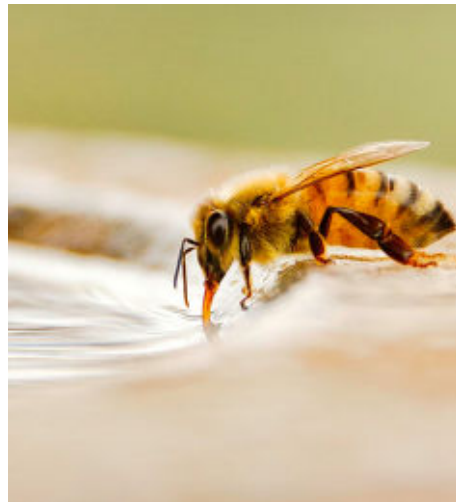
Bees are just like every other creature on earth. They need food, water and a safe shelter.

Bees need food to survive. *Grow lots of different flowers.* Bees will forage on flowers from the first crocus in spring until the last aster in fall (Fig. 5). Native plants are especially well suited for attracting native bees and other pollinators.

Preferred perennials include beebalm, blazing star, coreopsis, blanketflower, sedum, goldenrod and aster. Useful annuals include sunflower, salvia, snapdragon and cosmos. Herbs such as borage, basil, catnip, chives and lavender are welcome in a bee-friendly garden.

Plant flowers in clumps. A four-foot-wide clump of salvia (for example) will be more attractive to bees than a scattering of salvia plants. Bees are reported to favor flowers in shades of blue, purple, white and yellow.

Bees need water. Bees will drink from rims of bird baths (Fig. 6). A piece of wood in the bath can serve



Figs. 5–7. We can encourage bees to visit our landscape by providing nectar sources and water, and limiting the use of pesticides.

as a landing platform for bees. You can make a bee bath by placing a shallow plate on the ground, lining it with rocks. Keep the water fresh.

Bees need a safe shelter. Bees generally do not need help in constructing nests, but bee houses are easy to construct (see next page). Many bees nest in soil so allow some bare patches in the garden.

Avoid pesticides. Bees are insects and insecticides kill bees. Dust and wettable powder formulations are especially dangerous because they collect in the hair of bees. Insecticides that are relatively safe for bees include *Bacillus thuringiensis*, neem and horticultural oils. Chemicals should be applied in the evening when bees are not active.

Avoid products with long residual activity such as soil drenches of imidacloprid.

Reconsider the value of a pristine green lawn. Weed-free lawns are not natural and the toxic chemicals in herbicides may harm bees. Dandelion and clover blossoms are great food sources for bees (Fig. 7). No one expects you to abandon your lawn and grow a wildflower prairie, but perhaps there is some room for compromise. Perhaps having a few flowers in the lawn is not so bad. Perhaps limiting spraying to once a year in fall can make both you and the bees happy.

The Xerces Society (www.xerces.org) is a good source of information on attracting pollinators.



MASON BEE HOUSES

The decline of honeybees has spurred interest in native pollinators. Mason bees live in hollow reeds or tree cavities. The bees are gentle and rarely sting unless squished.

The female lines her nest in mud and fills it with nectar and pollen. An egg is laid and she seals the chamber with mud. Wooden frames filled with bamboo poles can be made or purchased. Houses may be built using a 4-inch x

6-inch piece of untreated wood. Use a 5/16-inch drill bit. Drill 5 inches deep, 3/4 inches apart. Place traps on the SE side of buildings. Mud can be provided near the house to help the bees. For more information, go to crownbees.com or www.xerces.org.

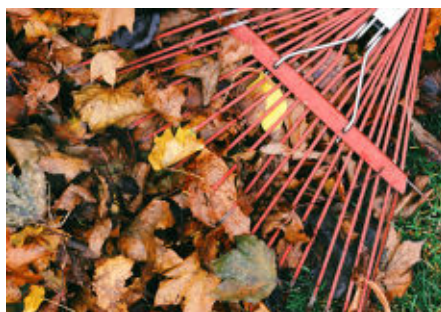


DAKOTA BLACKBERRIES?

Standard blackberries bloom and bear fruit on TWO-year-old canes. These varieties cannot survive our winter and live to bearing age. New varieties from Arkansas bear

fruit on ONE-year-old primocanes in fall. NDSU researchers report 90% survival of primocanes when mulched with corn stover over winter. Other management strategies are under development. Growers in other northern states cut primocanes to the

ground in April. Tips are pinched when canes are 15 inches high and again at 30 inches high in summer to increase yield. 'Prime Jim' is the hardiest primo-cane variety and matures 12–14 days before popular variety 'Prime Ark 45'.



SHADY LAWN CARE

Shady lawns may be thin, weedy and mossy. Give them special care. Overseed with fine fescue (not Kentucky bluegrass). Water deeply when needed. Frequent, light

watering leads to disease. Maximize sunlight to the area. Rake or mulch fallen leaves promptly in autumn. Trim lower limbs of trees. Reduce fertilizer rates in half compared to normal turf situations.

High rates suppress root growth. If all else fails, forget turf. Use shade-tolerant groundcovers (lily-of-the-valley, hosta, sweet woodruff, wildginger, bugleweed, vinca and ferns), stones or wood mulches.

Problems found in North Dakota yards and gardens:

TREES



Fig. 18. Wetwood

Bacteria feed on core of cottonwood, elm, willow and other trees. The slime damages bark and may attract insects. Wood is slightly weakened and growth is slowed. No treatment. Reduce other stresses and trees may adapt to it.



Fig. 19. Cottony scale

Cottony masses of eggs hatch into sap-feeding crawlers on maple, linden, and other woody plants. Sooty mold develops. Lightweight oils, carbaryl, acephate or cyfluthrin kill crawlers. A drench of imidacloprid is an option.



Figs. 20, 21. Heat scorch

Sweltering temps can cause leaves to scorch along edges. Newly planted trees are especially sensitive. Irrigate deeply. Rock mulches generate heat and should be avoided; shredded bark is vastly superior for plant health.



Fig. 22. Early leaf drop of poplar

Poplars and aspens subject to leaf blight are shedding leaves now. Rake leaves to get fungi out of the area. Pruning helps to reduce humidity and diseases in canopy; do this in March.



Fig. 23. Fall webworm

Caterpillars eat leaves but cause little long-term damage to trees. Larvae are young and may be controlled with *Bacillus thuringiensis* (Dipel, Thuricide) or carbaryl (Sevin).

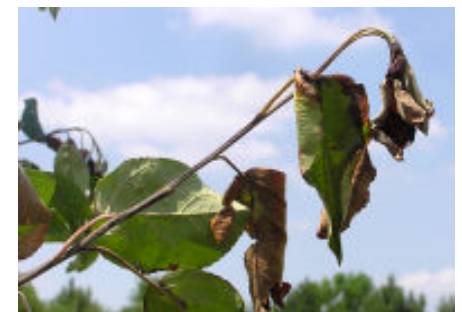


Fig. 24. Fire blight

Branch tips die back, often showing a "shepherd's crook." Prune out dying tips. Sterilize pruners between cuts. Delay any major pruning until winter.

ROSES

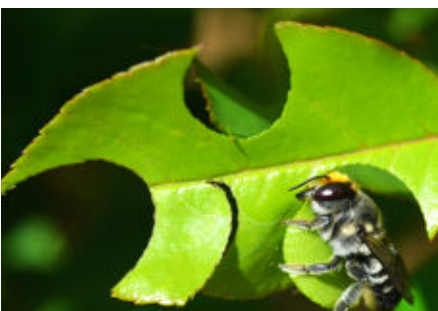


Fig. 25. Leaf cutter bees

Females cut circular pieces of leaves to build nesting cells for eggs. This native bee is a valuable pollinator and not aggressive. Damage to plants is low. No control is recommended.



Fig. 26. Black spot

Round dark spots with fringed margins. Surrounding tissues turn yellow. Remove infected foliage. Avoid overhead watering. Apply fungicides. Grow disease-resistant varieties.



Fig. 27. Pear slugs

Slimy larvae skeletonize leaves of rose, chokeberry, pear and cherry. Control with carbaryl, cyfluthrin or insecticidal soap. No treatment is needed on mature plants in most cases.

More problems found in North Dakota yards and gardens:

VEGETABLES



Fig. 28. Blossom end rot

Caused by calcium deficiency; often prevalent on first fruits. Keep soil moist and do not damage roots when cultivating. Mulch vines. Root growth will lead to more calcium uptake. Calcium sprays are not needed.



Fig. 29. Bacterial speck, spot

Dark, corky, sometimes raised spots develop on green and red fruits. Spots develop on vines. Avoid working in garden and wounding vines when wet. Spray with copper.



Fig. 30. Early blight on tomato

Pick off infected foliage. Protect with fungicides chlorothalonil, mancozeb, or copper. Avoid overhead irrigation. Clean up garden. In future, look for resistant varieties. Stake vines.



F. 31,32. Potato flowers, berries

It is natural for potato vines to produce flowers and seedpods. These seedpods are toxic. Remove or ignore.



Figs. 33, 34. Cabbageworms

Moths lay eggs on cabbage and broccoli. Eggs hatch into larvae that create tunnels. Spray with *Bacillus thuringiensis* while caterpillars are small. Carbaryl is used on mature caterpillars.



F. 35,36. Colorado potato beetle

Beetles attack potato family, including eggplant, pepper and tomato. Pick larvae (inset) or adults and throw in pail of soapy water. Neem, spinosad, cyfluthrin or carbaryl sprays may be effective when pests are young.

LAWNS



Fig. 37. Yellowing

Non-irrigated lawns go dormant due to summer heat. Avoid fertilizing and using herbicides. Mow tall, if needed. Lawns will awaken when temps cool in fall.



Fig. 38. Grubs

Grubs eat roots, creating dead spots. Peel back damaged turf to reveal pests. If more than 3 grubs per square foot, treat with carbaryl or trichlorfon. Irrigate deeply to get chemical in soil.



Figs. 39, 40. Red thread

Pink threads grow on blades. Spray with chlorothalonil or propiconazole. Irrigate deeply when needed. Fertilize this fall. This fungus does not damage roots; turf may heal quickly.

Weather Almanac for July 17–30, 2015

Site	TEMPERATURE				RAINFALL				GROWING DEGREE DAYS ^{1,2}			
	July 17–30				July 17–30				2015			
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	68	69	88	46	0.86	1.03	7.39	11.70	240	247	1187	1223
Bowman	69	71	98	47	0.91	0.90	9.20	10.76	238	273	1158	1222
Carrington	69	70	85	50	1.38	1.37	11.49	12.80	257	273	1264	1334
Crosby	67	68	93	50	0.30	1.10	7.09	10.18	227	233	1203	1117
Dickinson	71	70	94	51	0.90	1.01	8.69	11.35	256	260	1240	1218
Fargo	73	71	89	55	1.39	1.09	13.80	13.40	298	286	1439	1438
Grafton	71	68	88	55	2.14	1.07	15.95	12.26	278	244	1299	1245
Grand Forks	71	69	88	51	1.52	1.28	9.77	12.27	274	252	1336	1279
Hazen	70	72	97	48	0.11	0.96	8.80	11.31	251	273	1235	1364
Hillsboro	70	71	86	51	1.80	1.33	11.38	13.14	262	273	1335	1348
Jamestown	71	71	88	54	0.49	1.31	14.95	12.30	271	273	1369	1323
Langdon	68	66	85	50	0.84	1.31	10.32	12.23	239	218	1162	1053
Mandan	70	71	92	50	0.57	1.39	11.95	11.70	263	275	1321	1304
Minot	70	69	88	54	0.20	0.99	11.51	11.95	257	247	1277	1194
Mott	70	71	95	46	0.18	0.77	10.43	11.29	248	273	1225	1281
Rugby	70	68	92	50	0.35	1.43	8.89	12.88	258	241	1235	1229
Wahpeton	71	72	88	53	0.62	1.25	11.77	13.31	273	288	1380	1494
Watford City	71	71	98	53	0.29	0.94	7.47	10.11	259	269	1316	1246
Williston	71	73	96	54	0.54	0.91	7.02	9.55	264	286	1341	1406
Wishek	70	69	90	51	0.38	1.30	11.60	13.60	252	247	1250	1186

DAYLENGTH (July 31, McClusky, center of ND)³

Sunrise: 6:18AM | Daylength: 15h 1m
 Sunset: 9:19PM | Change since July 17: -32m

LONG-TERM OUTLOOKS⁴

Aug. 5–9: Temp: Below Normal; Precipitation: Above Normal
 Aug. 7–13: Temp: Below Normal; Precipitation: Above Normal

¹ GDDs for garden vegetables are not available. GDD data in this table are for corn, which responds to temperature as most vegetables grown in gardens. Data begin May 1 with base minimum and maximum temperatures of 50 and 86°F., respectively.

^{2,3,4} Sources: North Dakota Agricultural Weather Network, www.sunrisesunset.com, and National Weather Service, respectively.

Credits

National Wildlife Federation. 2015. How to build a bee house. Accessed online at www.nwf.org. National Wildlife Federation: Merrifield, VA.
 Nourse Farms. 2015. Catalog and Planting and success guide. Accessed online at www.noursefarms.com. Nourse Farms: Whately, MA.
 Stack, L.B., F. Drummond and A.C. Dibble. 2015. How to create a bee-friendly landscape. Accessed online. Univ. of Maine: Orono.
 Stier, J.C. 2001. Lawn maintenance. Pub. A3435. Univ. of Wisconsin: Madison.
 Photos were made available under Creative Commons licenses specified by the photographers: 1. daryl_mitchell, www.flickr.com/photos/daryl_mitchell/3973205399/; 2. Kansas St. Univ., www.prairiestarflowers.com; 3. Gwendolyn Stansbury, www.flickr.com/photos/gwendolyn_stansbury/8238349003/; 4. Scott Weber, www.flickr.com/photos/24516237@N00/11210368925/; 5. Michael Frank Franz, www.flickr.com/photos/nwater/15084760879/; 6. Pam Link, www.flickr.com/photos/pamelalink/9137352042/; 7. John Spooner, www.flickr.com/photos/johnspooner/4034761178/; MASON BEES: naturalflo, www.flickr.com/photos/vizpix/4548578260/; Max Westby, www.flickr.com/photos/

max_westby/4554341394/; estonia76, https://www.flickr.com/photos/estonia76/3672197199/anneheathen, www.flickr.com/photos/annethelibrarian/3636406383/; BLACKBERRY: Martin LaBar, www.flickr.com/photos/martinlabar/3928635758/; Great Lakes Bioenergy Research Center; www.flickr.com/photos/glbrc/3571205370/; Colin, www.flickr.com/photos/colinsd40/6178792926/; SHADE Sílvia Padrão, www.flickr.com/photos/pink-pink/4675563450/; Joe Barnas, www.flickr.com/photos/josephbarnas/10656153234/; jjj56cp, www.flickr.com/photos/25171569@N02/7182622612/; 18. Joseph O'Brien, USDA Forest Service, Bugwood.org; 19. Eugene E. Nelson, Bugwood.org; 20, 21. Karla Ryan, NDSU; 22–24. Tom Kalb, NDSU; 25. Jack Skipworth, www.flickr.com/photos/theangryblender/6805396270/; 26. John Hartman, Univ. of Kentucky, Bugwood.org; 27. Lesley Ingram, Bugwood.org; 28. Mark, www.flickr.com/photos/35387910@N04/6011378943/; 29, 30. Clemson Univ. - USDA Coop. Ext. Slide Series, Bugwood.org; 31. Irene Graves, NDSU; 32. Andreas., www.flickr.com/photos/124330160/771727580/; 33. Whitney Cranshaw, Colorado St. Univ., Bugwood.org; 34. Margrit, www.flickr.com/photos/27126314@N03/3791962615/; 35. Brad Smith, www.flickr.com/photos/57402879@N00/197680164/; 36. green.thumbs, www.flickr.com/photos/greenthumbs/158662917/; 37. Tom Kalb, NDSU; 38. JB, www.flickr.com/photos/harvardavenue/3517642232/; 39, 40. John Kaminski, www.flickr.com/photos/3812277971 and .../8053860938/.

Written by Tom Kalb, who expresses gratitude to the NDSU educators who contributed to this report: Lindy Berg, Irene Graves, Harlene Hatterman-Valenti, Bill Hodous, Angie Johnson, Kasia Kinzer, Scott Knoke, Julie Kramlich, Esther McGinnis, Megan Minten, Allison Monsen, Julianne Racine, Karla Ryan, Steve Sagaser, Yolanda Schmidt, Kelsey Sheldon, Ashley Stegeman, Todd Weinmann, Kathy Wiederholt and Joe Zeleznik.

The information given herein is for educational purposes only. References to a commercial product or trade name are made with the understanding that no discrimination is intended and no endorsement by the North Dakota Extension Service is implied.

NDSU Extension Service, North Dakota State University of Agriculture and Applied Science, and the U.S. Department of Agriculture cooperating. Chris Boerboom, Director, Fargo, North Dakota. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. We offer our programs and facilities to all persons regardless of race, color, national origin, sex, handicap, age, Vietnam era veterans status, or sexual orientation; and are an equal opportunity employer. This publication will be made available in alternative formats for people with disabilities upon request (701) 231-