

# YARD & GARDEN REPORT

August 4, 2014

Vol. 2, No. 10

## Aronia:

### Awesome and awful

Aronia is one of the most promising fruits for gardeners in the Midwest. It is productive and very easy to grow.

Aronia is a beautiful shrub with white blossoms in spring, glossy green foliage in summer, and orange-red color in fall. It is often used in native landscapes.

Aronia is virtually pest free, which makes it popular among organic growers. Rarely do insects bother it.

Birds usually threaten fruit crops, but they leave Aronia alone. No netting or scarecrows are needed!

The production of Aronia is reliable. It blooms in June, escaping damage from late spring frosts. It doesn't need bees for pollination.

Aronia is awesome. Then why doesn't everyone grow it?

It tastes awful. The raw fruits have a dry, sharp flavor. Aronia is also called "chokeberry." That's not a very appetizing name.

Europeans love Aronia for its nutrition (high in anti-oxidants), and they use it to make juices, syrups and preserves. Processing breaks down the bitterness of the raw fruits and Aronia products are delicious.

Varieties include 'Nero', a 4-foot shrub from Russia. 'Viking' grows 6 feet tall and was bred in Scandinavia. These are widely available from nurseries and catalogs.

'McKenzie' grows 6–10 feet tall and is widely used as a windbreak. It was released in North Dakota and



*Figs. 1–3. Aronia is a beautiful shrub. It is an amazing and reliable producer of highly nutritious fruits. Processing removes the bitterness of the raw fruits.*

is available from local nurseries and soil conservation districts.

Our research plots in Carrington have found Aronia to be precocious and productive. Two-year-old stands of 'Nero' and 'Viking' average 7.8 pounds of fruit per plant. These stands produce 13.6 pounds per plant after six years. Give it a try!

### INSIDE THIS ISSUE

- ◆ Aronia: Awesome, awful 1
- ◆ Summer lawn care 2
- ◆ Potter wasps 3
- ◆ Survey of problems 4
- ◆ Weather almanac 6

## Summer lawn care

It's summertime, a great time to go outside and enjoy our landscapes! Unfortunately, not everything in the backyard is happy now. Our lawns hate the heat.

Most lawns in North Dakota turn yellow and go dormant in the summer heat. This is a natural way for our lawns to survive.

There is nothing wrong in letting your lawn take a summer nap. You can take a break from lawn care, too. You can both be happy.

But many of us don't like a yellow lawn in summer. If this includes you, let's talk about summer lawn care:

The first concern is watering. There's an old trick to see if your lawn is thirsty. Take a walk across your lawn and look back. If you can see your footprints in the grass, the lawn needs a drink.

Lawns need 1 to 1 1/2 inches of water per week, either from you or Mother Nature. **Water deeply.** It's better to give your lawn a big drink of water rather than a series of sips.

Roots grow where the water is. If you water deeply, you will develop a deep root system. If you only sprinkle the surface of the soil, you will create a shallow root system.

If you have a clay soil, irrigate only once or twice a week. Sandy soils can't hold a full inch of water. These soils should receive a half-inch of water two or three times per week when needed.

Now you may be asking: How do I measure inches of water?

Here's how: Set some containers around the lawn. Turn on the sprinkler and measure the time it takes until the proper amount of water falls into the containers. Use this as your base time for watering.



Fig. 4. Lawns need deep, but infrequent irrigation to stay green during summer.

**Watering in the morning is best.** The grass plants are active and will absorb the water they need. Any extra water will evaporate, keeping the grass blades dry and preventing diseases. Watering during the afternoon is not recommended since much of the water will evaporate before the plants absorb it. The worst time to irrigate is in the evening since the lawn will stay wet all night, leading to diseases.

**Let your grass clippings fall to the ground.** These clippings will shade the soil, keeping it cool.

**Mow your turf tall.** A tall turf will shade the soil. A taller turf develops

a deeper root system. The first lawns in the neighborhood that turn yellow are those mowed short.

**Avoid using herbicides in summer.** Herbicides add stress to lawns, which are already under stress from the heat. There is a risk of herbicide drifting into your garden.

**Don't burn the lawn with fertilizer.** Dormant lawns do not need fertilizer; but if you irrigate all summer, a light fertilization might be helpful. Use one-half the normal rate. Organic fertilizers are especially useful in summer since they are less likely to burn the grass.



Fig. 5. Mow tall and let clippings fall to the ground. This keeps the soil cool.



Fig. 6. A light fertilization can help but only if you irrigate regularly.

## The coolest insecticide!

Hardy Fruits Specialist Kathy Wiederholt discovered something interesting in her research plots last week. It was the nest of a potter wasp on a currant twig (Figs. 8, 9).

Curious Kathy cracked open the nest and discovered it was packed with caterpillars. Cool! After she shared this finding, we needed to find out more. We discovered the coolest insecticide in North Dakota:

Potter wasps are not aggressive. They'll sting you if you handle them, but who wants to handle a wasp?

Potter wasps feed on flower nectar; not people. They are pollinators; they are our friends.

Potter wasps are solitary insects. They do not develop scary colonies like hornets or yellowjackets.

Now comes the cool stuff: After mating, a female potter wasp constructs nests to lay eggs. She goes back and forth carrying drops of mud to build the nests (Fig. 7). When completed, the nests look like clay pots hand thrown on a potter's wheel; thus the name "potter" wasp.

After making a nest she fills it with caterpillars, typically 1–12 caterpillars. She hunts down each caterpillar and then stings it with just enough venom to paralyze it, but not kill it. She then carries the caterpillar and drops it into nest. This hunting can take several days. Some of the literature reports the mother knows how many caterpillars to put in the nest: five or fewer for a male egg; more for a female.

Finally, she will lay the egg into the nest, suspending it at the top. She closes the nest with mud and flies away to prepare another nest.

The egg will hatch and then feed on the paralyzed caterpillars. After eating for a couple weeks it pupates.



Fig. 7. A potter wasp carrying mud to build a nest.

Later it will burrow out of the nest as an adult wasp (Fig. 10). Emerging females will mate and destroy dozens of caterpillars for their eggs.

This potter wasp is harmless to us, but can help control caterpillar pests. It is a natural insecticide!

Every time we see a bug on a plant, we don't need to freak out. We don't need to spray it with poison. The vast majority of the insects in our yard are neutral or beneficial to us. Insecticide sprays can be very useful, but we need to use them judiciously. We don't want to be harming potter wasps, ladybugs or other beneficial insects.

In addition to killing caterpillars, potter wasps can be valuable as pollinators. A Canadian scientist recently reported they are experimenting with pruning old raspberry canes down to five inches instead of the normal practice of pruning to the ground. The stubs would be used as sites for nest building by potter wasps. Such strategies are used where the lack of bee pollination is reducing yields. I am not sure I agree with this—a clean orchard is important to prevent pests and diseases—but this is interesting nonetheless.

The bottom line: Nature is cool!



Figs. 8–10. Wasp nest on a currant twig. Inside are a larva (arrow) and paralyzed caterpillars. The larva will eventually become an adult and burrow out.

# Survey of problems found in North Dakota yards and gardens this week:

## TREES AND SHRUBS



### F11. Eriophyid gall on viburnum

Eriophyid mites feed on leaves in early spring. This causes a hormonal reaction, leading to leaves curling and developing pink streaks. Damage is cosmetic. No pesticides are needed.



### F12. Chlorosis on silver maple

Leaves yellow, often with green veins. Associated with high pH and the unavailability of iron. Foliar feed with soluble fertilizer containing iron. Get soil tested to assess pH and long-term strategy.



### F13, 14. Dutch elm disease

Major branch shows yellowing and wilting. Look for brown streaking in sapwood and beneath bark. Removal of tree is most effective strategy.



### F15, 16. Petiole galls on poplar

Bumps appear on petioles; leaves may drop. Aphids develop inside galls and later feed on mustards. Defoliation is minor. Rake leaves. No pesticides.



### F17. Powdery mildew on lilac

Gray blotches appear on leaves. Lilac, rose, honeysuckle are often affected, especially in shady spots with poor air circulation. Rake fallen leaves. Prune to increase sunlight and air movement.



### F18. Leaf spot and melting out

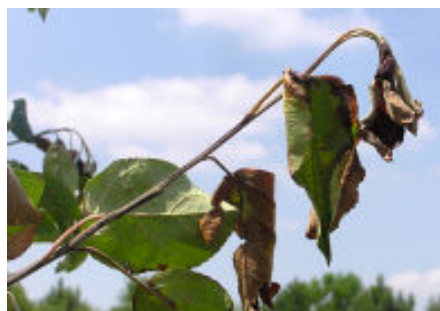
Purple spots develop into tan lesions with purple borders. Attacks crowns in summer. Mow tall. Water deeply but infrequently. Prevent spread with chlorothalonil or propiconazole. Overseed with improved cultivars.

## FRUITS



### F19. Spotted wing drosophila

Tiny white maggots appear in fruits; often detected when refrigerated. Set out traps with apple vinegar to monitor. Spray if needed. Harvest regularly. Keep orchard clean of weeds.



### F20. Fire blight on apple, pear

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



### F21. Powdery mildew on grape

Gray powder develops on fruits and foliage. 'Valiant', a leading variety, is susceptible. Remove infested clusters. Sulfur sprays prevent spread. Prune vines in winter to increase air movement.

## Survey of problems in North Dakota yards and gardens (continued)

### VEGETABLES



#### F22. Blossom end rot

Caused by calcium deficiency. Keep soil evenly moist and do not damage roots when cultivating. Mulch vines. As root system develops it finds calcium ions. Future fruits are fine.



#### F23. Early blight on tomato

Brown lesions with concentric rings; yellow regions develop near lesions. Pick off infected foliage, protect with fungicides chlorothalonil, mancozeb, or copper. Avoid overhead irrigation.



#### F24, 25. Cabbageworms

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



#### 26. Potato berries

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



#### F27. Potato scab

Bacteria create scars on tubers. Peel off scars. In future, prevent scab by keeping soil evenly moist for 4–6 weeks after flowers appear. Avoid fresh manure. Use resistant cultivars: 'Redgold', 'Superior' and 'Gold Rush'.



#### F28, 29. Thrips on onion

Thrips feed on stalks, creating silvery blotches. These tiny pests hide within leaf folds. Jet sprays of water into folds can dislodge them. If damage is severe, spray malathion into folds.

### WEEDS



#### F30. Common toadflax

A.k.a. "butter and eggs," this perennial thrives in sandy soils along roads, railroad tracks and waste areas. Invades prairies. Cultivate, or spray with glyphosate or dicamba in fall.



#### F31. Field bindweed

Aggressive, persistent perennial with spade-shaped leaves and white or pink blooms. Its deep roots make pulling difficult. Spray with glyphosate or dicamba. Fall applications best.



#### F32. Perennial sowthistle

Perennial may grow 4 or more feet tall. Cut to prevent seed dispersal. Its deep roots make pulling difficult. Spot spray with dicamba or glyphosate. Fall applications are most effective.

# Weather Almanac for July 27–August 2, 2014

Site	TEMPERATURE				RAINFALL				GROWING DEGREE DAYS <sup>1,2</sup>			
	Week				Week		2014		Week		2014	
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	64	69	84	45	0.00	0.47	12.14	11.91	95	114	1149	1280
Bowman	67	71	91	46	0.00	0.39	7.72	10.92	105	126	1143	1285
Carrington	64	70	84	47	0.00	0.58	9.39	13.03	92	123	1207	1394
Crosby	67	68	82	53	0.09	0.46	10.14	10.36	110	108	1132	1171
Dickinson	69	70	89	51	0.00	0.44	7.14	11.53	117	123	1189	1281
Fargo	68	71	86	51	0.01	0.50	11.93	13.61	111	130	1464	1502
Grafton	67	72	85	49	0.00	0.62	14.94	12.76	106	132	1280	1507
Grand Forks	68	69	85	50	0.03	0.61	12.56	12.52	109	114	1374	1336
Hazen	66	72	87	41	0.00	0.44	11.33	11.50	106	126	1211	1427
Hillsboro	67	71	86	49	0.12	0.62	12.45	13.41	104	126	1345	1411
Jamestown	67	71	86	53	0.02	0.53	10.86	12.50	109	126	1277	1386
Langdon	64	66	81	48	0.00	0.59	8.03	12.48	89	102	1081	1104
Mandan	67	71	86	46	1.29	0.64	8.45	11.96	108	127	1279	1367
Minot	66	69	82	51	0.30	0.46	12.64	12.15	103	114	1204	1251
Mott	67	71	89	44	0.00	0.34	8.84	11.44	109	126	1187	1344
Rugby	66	69	84	48	0.00	0.63	10.26	13.15	103	114	1221	1286
Wahpeton	66	72	87	48	0.00	0.53	12.57	13.52	102	132	1417	1560
Watford City	70	71	89	52	0.03	0.40	7.01	10.28	126	126	1268	1309
Williston	70	73	88	53	0.05	0.41	6.28	9.72	129	132	1313	1472
Wishek	67	69	86	49	0.32	0.58	8.95	13.85	107	114	1189	1243

## DAYLENGTH (August 2, McClusky)<sup>3</sup>

Sunrise: 6:20 AM | Daylength: 14h 55m  
 Sunset: 9:16 PM | Change since July 26: -18m

## LONG-TERM OUTLOOKS<sup>4</sup>

6–10 Day: Temp: Normal; Precipitation: Normal  
 8–14 Day: Temp: Below Normal; Precipitation: Below Normal

<sup>1</sup> 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.

<sup>2,3,4</sup> Sources: North Dakota Agricultural Weather Network, www.sunrisesunset.com, and National Weather Service, respectively.

## Credits

### Sources:

- Grissell, E.E. 2013. Potter wasps of Florida. Univ. of Florida: Gainesville.
- North Dakota Department of Agriculture. 2014. Yellow toadflax. Accessed online 7/31/2014, nd.gov/ndda/weed/yellow-toadflax.
- Wiederholt, K. 2014. Northern Hardy Fruit Project - Yearly Production Records. North Dakota St. Univ.: Fargo.
- Wikipedia. 2014. Potter wasp. Accessed online 7/31/2014, en.wikipedia.org/wiki/Potter\_wasp.
- Zuk, A., J. Knodel and R. Smith. 2011. Home lawn problems and solutions for North Dakota. North Dakota St. Univ.: Fargo.
- Photos were made available under Creative Commons licenses specified by the photographers: 1. outdoorPDK, www.flickr.com/photos/21202718@N00/4076481649/; 2. rachelgreenbelt, www.flickr.com/photos/rachelgreenbelt/13019081225/; 3. Tatters, www.flickr.com/photos/tgerus/10171396773/; 4. Justin Chiaratti, www.flickr.com/photos/theredjoke/39969286/; 5. Michael McGimpsey, www.flickr.com/photos/

- michaelmcgimpsey/9962709565/; 6. warrenski, www.flickr.com/photos/warrenski/4144692330/; 7. Natasha Mhatre, www.flickr.com/photos/natasha\_mhatre/479846622/; 8, 9, 10. Kathy Wiederholt, NDSU; 11, 12, 18, 20. Tom Kalb, NDSU; 13. Sarah Crimmins, NDSU; 14. Bruce Watt, Univ. of Maine, Bugwood.org; 15. Jon Marshall, www.flickr.com/photos/jon\_marshall/2659245229/; 16. Herbert A. 'Joe' Pase III, None, Bugwood.org; 17. William M. Ciesta, Forest Health Management International, Bugwood.org; 19. Hannah Burrack, North Carolina St. Univ., Bugwood.org; 21. Julie Beale, Univ. of Kentucky, Bugwood.org; 22. Mark, www.flickr.com/photos/35387910@N04/6011378943/; 23. Clemson Univ. - USDA Coop. Ext. Slide Series, Bugwood.org; 24, 29. Whitney Cranshaw, Colorado St. Univ., Bugwood.org; 25. Margrit, www.flickr.com/photos/27126314@N03/3791962615/; 26. Irene Graves, NDSU; 27. Angela Johnson, NDSU; 28. Yolanda Schmidt, NDSU; 30. Peter aka anemoneprojec..., www.flickr.com/photos/anemoneprojectors/3959820419/; 31. Colin Jacobs, www.flickr.com/photos/30854310@N02/3607546094/; 32. Jerry Oldenettel, www.flickr.com/photos/jroldenettel/7559420756/.

Written by Tom Kalb, who expresses gratitude to the NDSU educators who contributed to this report: Mary Berg, Brad Brummond, Sarah Crimmins, Irene Graves, Angela Johnson, Scott Knoke, Tyler Kralicek, Jared LeBoldus, Gerri Makay, Karla Ryan, Steve Sagaser, Yolanda Schmidt, Kelsey Sheldon, 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) 231-7881.