

YARD & GARDEN REPORT

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Ash trees are dropping leaves

Cool, wet weather during bud break has created an outbreak of anthracnose disease on ash trees.

The fungus (*Gnomoniella fraxini*) first appears as brown spots that develop on young shoots and leaves. Brown blotches develop along the margins of leaves and cause them to curl. Severely damaged leaves will drop to the ground (Figs. 1–3). This fungus will only infect ash.

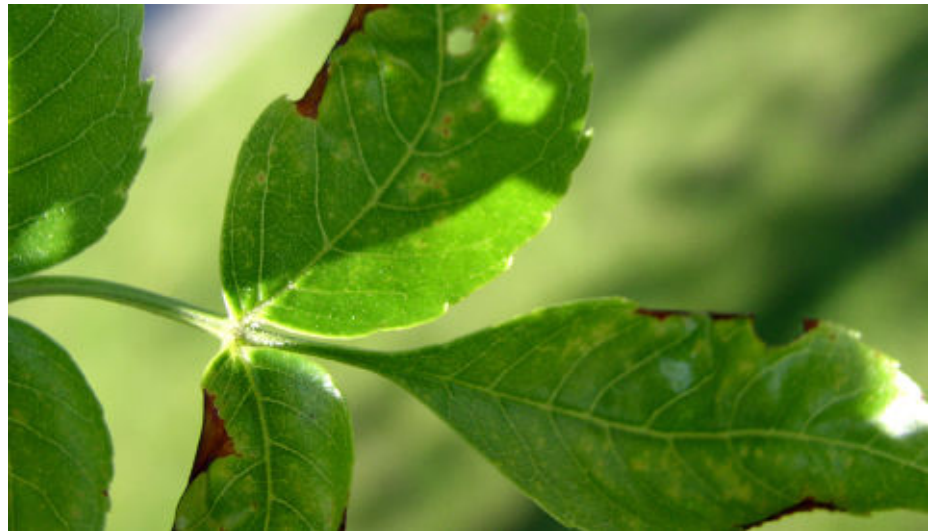
The leaf drop can seem dramatic but in most cases the homeowner is under more stress than the tree. Usually less than 25% of foliage is shed. Even if every leaf dropped tomorrow, the tree can send out new leaves later this spring.

The fungus thrives in shade and humidity. For that reason, lower branches are more likely to be infected. The top of the tree will be healthiest since it gets good sunlight and air movement.

Anthracnose will spread if wet weather persists. Let's rake fallen leaves to get the fungus out of the area. The disease survives winter on fallen leaves as well as dead and dying branches. This autumn it will be important to rake the leaves and prune out unhealthy branches.

Established trees can tolerate anthracnose. It would take several consecutive years of infection to seriously weaken the tree. This weakening will make it susceptible to damage from more severe diseases, insect pests, and drought.

Fungicides can be sprayed to protect healthy foliage from becom-



Figs. 1–3. Infected leaves develop brown lesions and may later curl and drop.

ing infected, but is difficult to get good coverage of a fungicide on a big tree. Since the disease is not life threatening, we usually do not recommend spraying established trees. The spraying of young trees makes more sense, but there aren't many young ash trees in landscapes since nurseries stopped selling them due to worries of emerald ash borer.

A fertilization (4 pounds lawn fertilizer per 1000 square feet under the

tree's canopy) can help to promote new growth this spring.

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Do trees need fertilizer?

We fertilize our lawns and we fertilize our gardens. Then it makes sense that we need to fertilize our trees. Right? Not so fast, my friend.

Most landscape trees in North Dakota do not need fertilizer, especially if the lawn is fertilized. Let's briefly discuss how to keep trees in our landscapes properly nourished.

Is my soil fertile?

A soil test is the best way to understand the fertility of your land. Taking a soil test is easy. Send the sample to the NDSU Soil Testing Lab. For \$18 you will find exactly what your trees need for optimal growth. Forms and instructions are available at http://www.ndsu.edu/soils/services/soil_testing_lab/.

Another way to gauge the fertility of the soil is to see how much growth your trees are showing. If new shoot growth is 6 inches or more, a tree probably has access to sufficient nutrients. If less than that and especially if less than 2 inches, a tree might benefit from fertilization.

Look at the tree leaves. If they appear yellow or pale, this may be a sign of a hungry tree (Fig. 5).

When to fertilize?

Trees want to be fertilized in early spring when they send out their major flush of growth. The spring feeding season goes from April to early July.

The worst time to fertilize is in late summer (late July through August). This stimulates new shoots that are subject to winter injury.

If you fertilize your lawn in spring (May) and in late autumn, you probably do not have to worry about fertilizing your trees.



Fig. 4. When you fertilize your lawn, you are likely fertilizing your trees, too.

As for autumn, wait until you see the onset of fall color, which is a sign the trees are going dormant and will not produce any new shoots that year. Columbus Day (October 12) is a good target date.

How to fertilize?

Keep in mind your tree's roots are shallow and extensive. The vast majority of a tree's roots are within the top 18 inches of the soil (in many cases within the top 6 inches of the soil). This is where the nutrients, air and water are most abundant. The spread of roots on a mature tree may extend two to four times the diameter of the crown of the tree. That's pretty far!

The simplest and most effective way to fertilize most trees is to use a lawn fertilizer and broadcast it under the tree's canopy. Lawn fertilizers are high in nitrogen which promotes growth.

Apply 1–3 pounds of *actual nitrogen* per 1000 square feet per year. Most lawn fertilizers are approximately 25% nitrogen. An example would be 25-4-8. Using this example, you would need 4–12 pounds of *fertilizer* per 1000 square



Fig. 5. This maple needs iron. A root feeding, trunk injection, or foliar feeding would help.

feet per year. The low end of the rate is for tree maintenance. The high end of the rate is to promote rapid growth.

Do not exceed 1 pound of actual nitrogen per 1000 square feet for any single application unless you are using a slow-release or organic fertilizer; otherwise, you will burn the turf. The soil should be watered after application to move the nutrients down into the soil.

More tips:

When planting trees, do not put quick-release fertilizer in the planting hole or in the soil you use to backfill the hole. This will burn tree roots. Apply fertilizer around the backfilled area. Slow-release products are preferred.

Foliar feeding can help young trees get established and overcome transplanting shock. It can satisfy immediate needs of a tree showing nutrient deficiencies.

Root feeders can be valuable at providing nutrients quickly to plants.

Tree fertilizer spikes are expensive and do not move fertilizer well throughout the root system.

How to grow a giant pumpkin

Growing your own pumpkins can be a lot of fun. With a little extra care, you can grow huge pumpkins that will amaze yourself and your kids!

Sunshine. Grow pumpkins in full sun. Vines get their energy from the sun and we need lots of energy to produce a big pumpkin.

Soil. Your pumpkin patch needs a rich soil. Add an inch or two of compost or rotted manure to the land and work it into the topsoil.

Fertilizer. Start by broadcasting 20 pounds of 10-10-10 per 1000 square feet. Foliar fertilizers (such as Miracle-Gro) may be applied regularly during the growing season.

Seed. Look for a variety that produces big pumpkins. 'Atlantic Giant' will produce the biggest fruits, but they are flesh-colored, misshaped and ugly. 'Prizewinner' and 'Big Moose' will produce orange, well-shaped pumpkins up to 100 pounds. Seeds are available from garden centers, catalogs and NDSU (<http://www.ag.ndsu.edu/homegarden/varietytrials>).

It's best to start seeds indoors, but it's too late for that now. Seed can be directly sown in the garden in early June.

Space. You need a big vine to produce a big pumpkin. We usually grow pumpkins in hills 8 feet from one another. To grow a giant pumpkin, space individual vines at least 20 feet apart.

Shelter. Protect vines from the wind. A snow fence works well. An option is to make a burlap fence at least a foot high all around your pumpkin vine. Keep it there until vines grow at least 4 feet long.

Water. Your vines need one inch of water per week. If the weather is



Fig. 6. You can grow big pumpkins by using the right seed, a rich soil, and a little extra care.

dry, give each pumpkin vine up to 20 gallons of water twice per week. Irrigate near the base of the plant. A soaker hose or watering wand works well. Keep the vine leaves dry to avoid mildew diseases.

Pollination. Pumpkins have male and female flowers. The female flowers have a baby fruit attached to the bloom. Hand pollination can be done, but most growers let bees do the work.

Make sure the vine is well established before you allow any fruits to set. The vine should be at least 10 feet long. You may need to pinch off the first female flowers.

Thinning. The biggest pumpkins will form when the vine has only a few (or better yet, one) pumpkin to nourish. When fruits get the size of a softball, choose the most vigorous one. Look for a pumpkin whose stem is growing perpendicular to the vine. It should be well-shaped and have plenty of room to grow.

Champion pumpkin growers select pumpkins located about 10 feet from the base of the plant.

Remove the other pumpkins and continue removing female flowers through the summer.

Pruning vines. Vines will naturally send out roots at their leaf nodes. This is good since these roots stabilize the vine and mine more nutrients from the soil.

We want to prune off roots that form on the vine within four feet of both sides of the pumpkin. This will allow some wiggle room for the vine to grow. Prune vine tips if they exceed 25 feet long.

You may need to carefully adjust the vine during the summer so the vine does not interfere with the growth of the pumpkin. Avoid moving the pumpkin itself.

Shade. Sun and wind will cause the pumpkin shell to harden. This is bad. We want the shell to stay moist and allow it to expand as long as possible. A tent using shade cloth can be placed over the pumpkin. Some gardeners cover their pumpkins with a white cloth.

Harvest. Harvest fruits before a hard frost arrives. A hard frost will cause pumpkins to become mushy.

Roll the pumpkin out of the garden and enjoy the biggest pumpkin in the neighborhood. Trick or Treat!

Survey of problems found in North Dakota yards and gardens:

FROST INJURY



Fig. 7. Rhubarb

Rhubarb can tolerate a light frost. The stalks are edible if they are firm and erect. Frost-damaged stalks will be soft or mushy. Injured stalks may be toxic and should be snapped off.



Fig. 8. Potato

Tissue becomes blackened. Seed tubers and belowground sprouts are usually protected from frost and will usually resprout. Dig to confirm the tuber is firm and sprouts are green.



Fig. 9. Leafy trees and shrubs

Leaves become shriveled w/ browned tissue. New leaves are most sensitive. Established plants usually survive and may send out new sprouts. Damaged leaves with green tissue are functional.

TREES AND SHRUBS



Fig. 10. Suckers

Prune or pull when 6–12 inches tall. Do not spray with herbicide or you may stress the tree. NAA sprays (Tre-Hold, Sucker Stopper) may be applied when suckers are 6–12 inches tall.



Fig. 11. Fungal cankers

Fungi disrupt flow of water and cause dieback. No sprays are useful since the disease is inside the wood. Prune infected branches/trunk going at least 6 inches into healthy tissue.



Figs. 12, 13. Pine needle scale

Young crawlers are emerging out of protective shells now. They are vulnerable to insecticides such as acephate (Orthene), carbaryl (Sevin), cyfluthrin (Tempo) and summer oils.

MISCELLANEOUS

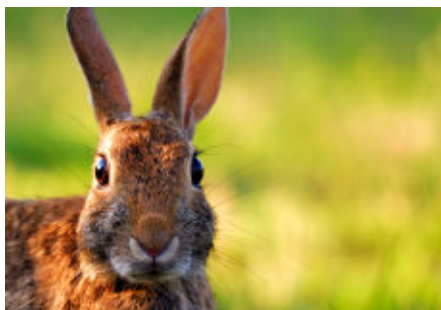


Fig. 14. Rabbits

Fencing is recommended. Make it 3 feet tall (4 feet for jackrabbits) and bury 6 inches deep. Mesh should be 1.5 inches or less. Repellents, guard dog, and live trapping may help.

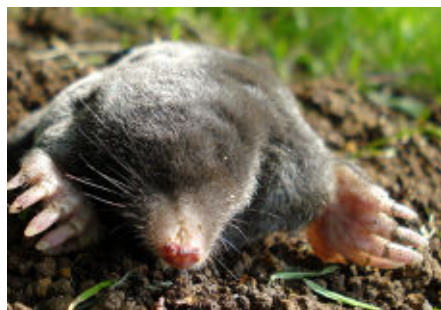


Fig. 15. Moles

Step on tunnel to see if it is active. If it rises up overnight, set up a harpoon trap. Flooding is not effective. Application of grub killing chemicals in lawn will reduce their food source.



Fig. 16. Mushrooms

Mushrooms are decomposing organic matter (typically tree roots, stump or lumber). It's natural and may continue for years. Leave mushrooms alone or rake. Do not eat. No spray is useful.

Weather Almanac for May 22–28, 2015

Site	TEMPERATURE				RAINFALL				GROWING DEGREE DAYS ^{1,2}			
	Week				Week		2015		Week		2015	
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	63	57	83	41	0.38	0.58	3.54	4.94	87	60	213	233
Bowman	56	56	78	38	0.79	0.62	3.29	5.31	55	54	164	206
Carrington	63	58	83	39	0.17	0.69	4.96	5.38	90	64	218	249
Crosby	62	55	82	43	0.17	0.54	1.73	4.18	86	55	206	208
Dickinson	59	56	78	43	0.48	0.58	2.75	4.94	63	59	182	224
Fargo	64	60	85	42	1.81	0.69	8.12	6.47	87	67	242	264
Grafton	64	61	84	40	0.67	0.66	6.37	5.48	92	68	227	256
Grand Forks	64	58	85	39	0.37	0.65	4.19	5.41	95	64	243	247
Hazen	60	59	82	34	0.41	0.59	3.16	5.14	77	69	213	275
Hillsboro	63	59	83	39	0.27	0.63	4.51	6.02	89	65	232	248
Jamestown	64	58	83	41	0.50	0.63	6.08	5.31	92	62	227	237
Langdon	63	55	84	43	0.10	0.67	3.79	4.89	85	52	201	188
Mandan	62	58	83	42	0.46	0.64	4.97	4.93	80	60	227	227
Minot	63	57	81	46	0.18	0.66	3.59	5.68	87	55	202	208
Mott	58	57	79	38	2.05	0.56	5.00	6.06	64	59	192	229
Rugby	63	57	83	42	0.34	0.67	2.94	5.81	85	63	212	242
Wahpeton	63	62	87	39	2.38	0.75	6.44	6.62	87	73	243	283
Watford City	62	56	82	43	0.85	0.57	1.87	4.30	80	60	206	231
Williston	63	59	80	46	0.52	0.52	2.17	4.14	82	68	216	271
Wishek	61	56	80	43	1.20	0.63	7.07	6.70	70	54	194	211

DAYLENGTH (May 28, McClusky, center of ND)³

Sunrise: 5:52 AM | Daylength: 15h 34m
 Sunset: 9:26 PM | Change since May 21: +15m

LONG-TERM OUTLOOKS⁴

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

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