

YARD & GARDEN REPORT

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The Epsom Salt Myth

Many of us have a few tricks we've developed in growing a great garden. One trick is to put a scoop of Epsom salt into each hole when planting tomatoes. Some gardeners swear it prevents blossom end rot.

It's time to debunk that myth. Epsom salt doesn't stop blossom end rot—it leads to **more** of it.

Blossom end rot is caused by a deficiency of calcium. Epsom salt contains magnesium sulfate—no calcium at all.

Adding Epsom salt to the soil may create more rot since magnesium and calcium ions compete for uptake into the plant. The more magnesium in the soil, the less chance that calcium will be absorbed.

So what can we do to prevent blossom end rot?

Don't focus on the soil. Most soils in ND have plenty of calcium.

Focus on watering. The uptake of calcium depends on the uptake of water.

Irrigate regularly. Avoid the extremes of waterlogged soil and droughty soil. **Mulch** to maintain consistent levels of moisture in the soil.

Cultivate shallowly. Don't damage the roots of your vines. We need these roots to absorb calcium.

Avoid overfertilization, especially with ammoniacal nitrogen fertilizers (ammonium nitrate and most complete fertilizers such as 10-10-10). Ammonium competes with calcium for uptake. Calcium nitrate is a better choice.



Figs. 1–3. Epsom salt does not prevent blossom end rot.

Vines should be green but not lush. Lush vines are more likely to suffer rot since actively growing leaves take calcium from the vine before the fruits get it. As a general rule, don't sidedress a vine until after its first fruits set. Pinch suckers.

Calcium sprays might (or might not) help. Mix 4 tablespoons of calcium nitrate per gallon of water. Spray fruits, not leaves, two to three times a week. The key time is when tomatoes are dime-sized or smaller.

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Online Plant Doctors

Gardeners face new threats every year. There are mysterious diseases and new insects invading us from all corners of the world. Don't forget about the powerful whims of Mother Nature. Her frosts, floods, drought and hail add to the unpredictability of the season.

Keeping plants healthy can be a challenge, but you are not alone. There is plenty of help available 24/7 at your fingertips.

The most comprehensive diagnosis tool for gardeners is "What's wrong with my plant?" (<http://www.extension.umn.edu/garden/diagnose/plant/>) (Fig. 4).

Let's say you have a sick tomato plant. Start by clicking on the type of plant (in this case, "Vegetables"), species of plant ("Tomatoes") and general description of problem ("Distorted, curled leaves"). The tool will lead you to your enemy (aphids, virus, herbicide injury, etc.) and strategies for remedying the problem.

Ask-An-Expert is available from Cooperative Extension (<https://ask.extension.org/ask>). Type in your questions. An Extension educator will promptly reply. As a member of the "Ask-An-Expert" team, I encourage you to include digital photos of your sick plant or mysterious pest.

Search engines such as Google (www.google.com) are full of information—including lots of *wrong* information. Add "university" to your keywords and this will lead you to accurate information.

Don't forget about your local NDSU County Extension Agent. Pick up the phone and get unbiased, research-based advice. Find your local office at <https://www.ag.ndsu.edu/extension/county-extension-offices>.



Fig. 4. There is much information available online. Some of it is wrong. Look for research-based information from NDSU and other universities.

Warmer Than Normal Summer?

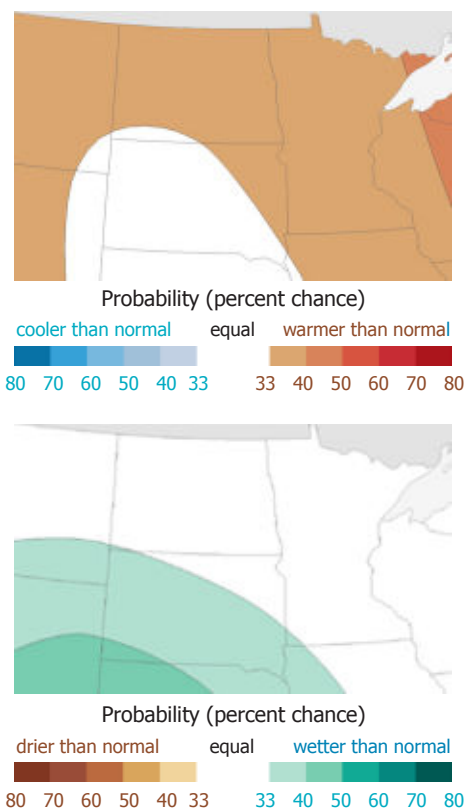
The weather in North Dakota is harsh. It is extreme. It is highly unpredictable—but we still try to predict it.

The National Oceanic and Atmospheric Administration predicts our 2016 growing season may be warm with normal amounts of rain.

The probability for an unusually warm summer is 33–40% (Fig. 5). This is slightly higher than the probabilities for normal temps (33%) or a cool summer (27–33%).

As for rainfall, there is a 33% chance it will be normal, 33% it will be wetter than normal, and 33% it will be drier than normal (Fig. 6). No trend there.

Mid-latitude sea surface temperatures in the Pacific and Atlantic Oceans are responsible for these trends. El Niño and La Niña do not have much influence upon summer climate. The full report is available at www.climate.gov.



Figs. 5, 6. Temperature and precipitation probabilities for June through August 2016.

Hort Shorts



FOOLPROOF FRUIT: ARONIA

Aronia may be the easiest to grow fruit. It is hardy and adaptable to our prairie soils. It does not need bees for pollination. It suffers from no major pests (even birds won't bother them).

The shrubs themselves are beautiful in landscapes. They are adorned with white flowers in spring. The foliage is glossy green in summer, turning orange-red in fall.

Aronia is productive (15 lbs./plant) and precocious. The fruits are high in anti-oxidants. Use them in jam, juice, yogurt and bread. See NDSU video: <https://youtu.be/VuWD11NZ6OY>.



LAWN MOWING BASICS

Mow *tall* and let grass clippings *fall*. Put your mower on a flat surface and set the blade so it cuts at the highest height you can accept (at least 2.5 inches). Tall lawns develop deep root

systems, smother emerging weeds and keep the soil cool. Tall lawns stay green longer into the summer.

Mulch, don't bag your clippings. The clippings recycle nutrients back into the soil (it is a free fertilization

every year). The clippings mulch the soil, keeping it cool and moist.

Use a sharp blade and mow when the grass is dry. Lawns with frayed tips were mowed with a dull blade. Sharpen or replace blades annually.



MESSY CRABAPPLES

Crabapple blooms are spectacular in spring but their fruits may create a mess in autumn. Fallen fruits are a slippery hazard on sidewalks and patios. They attract stinging wasps. Avoid this problem by growing a

cultivar that does not produce fruit, such as 'Spring Snow'.

Another option is to thin out young fruits by spraying the tree with carbaryl (Sevin) after petals have fallen. Carbaryl will thin fruits less than 3/5 inch in diameter. Ethephon

can be added to increase thinning.

Another option is to grow cultivars with "persistent" fruit. Fruits on these trees stay on the tree through fall and into winter. The fruits become a food source of birds. Google the crabapple chart from JF Schmidt for more info.

Survey of problems found in North Dakota yards and gardens:

TREES AND SHRUBS



Fig. 16. Frost injury

Leaves become shriveled with browned tissue. New leaves are most sensitive. Plants usually survive and may send out new sprouts. Partially injured leaves are functional.



Fig. 17. Pinching pines

Two-thirds of the new growth of mugho pine shrubs can be pinched back to give the plants a more formal appearance. Spruce or pine trees generally do not need pruning.



Fig. 18. Galls on silver maple

Red bumps are caused by mites feeding on leaves earlier this spring. The mites are gone; thus pesticides are not useful now. These galls cause very little stress to the tree.



Figs. 19, 20. Cedar apple rust

Orange, slimy galls on junipers (cedar) spew rust onto leaves of crabapple, apple (inset) and hawthorn. Mature trees tolerate rust. Prune susceptible leafy trees and spray fungicides next spring to avoid infection, if needed.



F. 21,22. Sapsucker/ woodpecker

These birds are destructive in spring as they peck to mark territory and seek food. This pecking destroys the rings where water and nutrients flow. Wrap hardware cloth or burlap around the pecked area of trunk. The bird will move to another tree.



Fig. 23. Forest tent caterpillar

Note beige "keyhole" spots on back. Larvae defoliate aspen, oak, elm, cottonwood and other leafy trees. Trees are weakened but recover with new leaves later this year. Insecticides are warranted only when damage occurs several years in a row.

MISCELLANEOUS

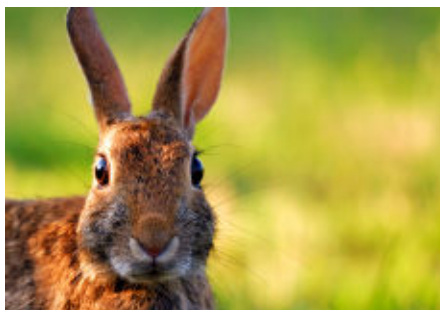


Fig. 24. Rabbits

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. 25. Field pennycress

One of the first weeds to bloom, this annual is found wherever soil is disturbed. Kill before seeds mature. Tillage is recommended. Broadleaf herbicides and glyphosate will kill it.



Fig. 26. Fertilize the lawn

This is a good time to fertilize the lawn. Lawns are actively growing now. Fertilizing done earlier in the spring promotes top growth (more mowing) and has little long-term benefit.

Weather Almanac for May 31–June 6, 2016

Site	TEMPERATURE				RAINFALL				GROWING DEGREE DAYS ^{1,2}			
	Week				Week		2016		Week		2016	
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	61	60	79	40	1.84	0.78	3.96	5.92	77	67	400	333
Bowman	61	58	84	42	0.28	0.72	5.00	6.23	86	62	376	298
Carrington	60	61	79	42	0.17	0.88	4.03	6.50	74	71	388	353
Crosby	60	58	80	41	1.71	0.63	4.41	4.98	77	63	370	301
Dickinson	60	58	82	41	0.41	0.79	4.12	5.94	83	66	380	321
Fargo	62	63	80	44	0.57	0.84	4.16	7.54	78	81	457	381
Grafton	60	60	78	45	1.48	0.76	7.92	6.56	67	71	417	346
Grand Forks	61	61	78	43	1.97	0.74	6.43	6.38	70	72	441	352
Hazen	61	61	81	42	0.28	0.75	5.04	6.09	83	76	417	387
Hillsboro	62	62	82	44	0.46	0.78	4.82	7.03	76	74	439	355
Jamestown	60	61	80	41	0.59	0.75	6.62	6.28	74	70	407	340
Langdon	58	58	76	42	1.49	0.80	5.29	5.92	56	60	356	275
Mandan	61	61	80	43	0.16	0.73	6.10	5.87	82	67	403	326
Minot	61	60	77	45	0.39	0.78	5.00	6.67	76	63	396	301
Mott	59	59	81	42	0.17	0.58	4.30	6.83	77	67	383	327
Rugby	62	60	78	46	1.32	0.74	4.18	6.77	78	71	411	346
Wahpeton	63	64	83	44	0.44	0.69	5.29	7.52	79	87	457	409
Watford City	60	59	82	40	0.98	0.66	4.49	5.16	81	67	383	330
Williston	62	62	81	41	0.68	0.60	4.09	4.93	84	75	399	382
Wishek	59	59	78	41	0.18	0.76	5.83	7.69	68	60	353	300

DAYLENGTH (June 6, McClusky, center of ND)³

Sunrise: 5:46 AM | Daylength: 15h 49m
 Sunset: 9:35 PM | Change since May 31: +9m

LONG-TERM OUTLOOKS⁴

June 13–17: Temp.: Above Normal; Precip.: Normal
 June 15–21: Temp.: Above Normal; Precip.: Below 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

Sources:

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