

YARD & GARDEN REPORT

August 21, 2016

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Maximizing the Harvest

Most gardens in North Dakota look great! Rains have been timely and the plants are flourishing. Tomatoes are ripening, the bean plants are loaded with pods, and the harvest of summer squash is already overwhelming (Figs. 1–3).

Our gardens are at their peak. Now it's our challenge to keep the harvest going as strong as possible for as long as possible.

The first spots of blight are appearing on vines (see page 5). It's critical to keep the leaves dry. Avoid overhead sprinkling, especially at night. Deep, infrequent watering (weekly) is usually best. Sprays of copper or chlorothalonil can prevent most diseases from spreading.

Harvest regularly, even if you are not sure what to do with the fruits. Regular harvesting will lead to higher yields. Food banks will welcome any extra produce.

Annual weeds (see page 2) can be a problem now. Cultivate when needed. Weeds lead to more insect pests and diseases in the garden—we don't need those problems. One weed plant can produce hundreds of seeds (future weeds)—we don't need those problems either.

I hesitate to say it, but we must be prepared for frost. Frost can strike northern portions of North Dakota in late August and the rest of the state by mid-September. Stay alert to frost warnings. Protect tender plants with blankets when the first wave of frost threatens and you



Figs. 1–3. Gardens are at their peak now. Maximize your yield by harvesting regularly and confronting pests and frost.

can extend your harvest for a couple weeks or longer. For expected frost dates in your area, go to <https://www.ndsu.edu/ndscodata/30yearaverage/fallfrost/>.

For now, let's all enjoy the fruits of our labors. I'll be enjoying a fresh salad tonight and a big slice of zucchini bread for dessert. Life is good!

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Do You Know Your Annual Weeds?

These annual weeds are causing mischief in our lawns and gardens. Don't worry—these troublemakers are on death row. Jack Frost will soon kill all of them. In the meantime, let's cultivate them or pull them out before they set their seeds. How many of these weeds can you recognize? Answers are on page 5.

- | | |
|--|---|
| <input type="checkbox"/> Barnyardgrass | <input type="checkbox"/> Pigweed |
| <input type="checkbox"/> Black medic | <input type="checkbox"/> Prostrate knotweed |
| <input type="checkbox"/> Crabgrass | <input type="checkbox"/> Prostrate spurge |
| <input type="checkbox"/> Foxtail | <input type="checkbox"/> Purslane |
| <input type="checkbox"/> Lambsquarters | <input type="checkbox"/> Sandbur |



Landscaping in Salty Soils

North Dakota has vast areas of salty land. This includes thousands of home landscapes. Saline soils become gray and crusty, and are associated with high water tables and low rainfall. It's a harsh environment.

Plants hate salty soil and landscaping in these soils is a challenge. The salts will burn plant roots and prevent them from absorbing water needed for healthy growth. Salts lead to compacted ground with poor aeration and poor drainage.

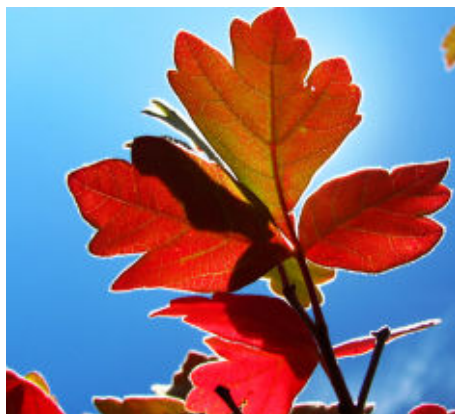
Young plants are especially sensitive. Scorched leaf margins and needle tips are the initial symptoms of distress.

The best way to cope with a salty soil is to **grow plants that tolerate it**. Among *leafy shrubs*, the most tolerant plants include caragana, buffaloberry, silverberry, sea buckthorn, common lilac, golden currant, 'Freedom' honeysuckle and skunkbush sumac (Figs. 4–8). The best *evergreen shrubs* are junipers; these include Rocky Mountain juniper and Eastern red cedar (Fig. 9).

The most tolerant *leafy trees* include green ash and Russian olive. These trees are found in abundance across the state but are rarely used in landscapes today. Leafy trees with moderate tolerance to salty soil include honeylocust, catalpa, coffeetree, corktree and hawthorn. Ponderosa pine is the most tolerant *evergreen tree*, but spruces and other pines show some tolerance.

We can take some steps in our landscape practices to minimize the impacts of saline soil.

Irrigate deeply and infrequently, rather than shallowly and frequently. In most cases, a single irrigation of one inch of water per week is sufficient for healthy growth. Deep watering promotes a deep root



Figs. 4–9. No plants like salty soil but some will tolerate it. Salt-tolerant shrubs include (shown top to bottom, left to right) caragana, buffaloberry, common lilac, golden currant, skunkbush sumac and juniper.

system and flushes harmful salts away from roots.

Mulch your plants. This will reduce evaporation, which leads to the accumulation of salts.

Fertilize plants only when needed. Fertilizers contain salts.

Add organic matter (compost or sphagnum peat moss). In new land-

scapes, you can an inch of organic matter and till it into the soil. In established landscapes, one strategy is to core aerate the soil, filling the holes with organic matter.

Flush out salts when they appear on the surface. Apply 2 inches of water over a 2–3 hour period, stopping if runoff occurs. Repeat again in 3 days if the salts reappear.

Survey of problems found in North Dakota yards and gardens:

TREES AND SHRUBS



Aphids

Leaves curl. Pry open the leaf to reveal pests. The excrement is sticky and glistens; it may attract ants. Damage is minor. Jet spray with water. Acephate may be justified for young trees.



Canker on honeylocust

Fungus stops flow of water and nutrients, causing branches to die back. Discoloration often found where main branches connect to trunk. Prune out, going at least 6–8 inches below canker. Tree is usually removed.



Root girdling

Roots (near or below ground) strangle trunks. Tree die back. Notice the lack of root flare at trunk base. Associated with planting trees too deeply. Treatment is difficult if not impossible in most cases.

LAWNS



Thin lawns

Now through mid September is the best time to overseed. Ground is warm and seed germinates quickly. Rake soil and scatter seed. Rake to cover seed. Keep moist for 3 weeks.



Summer patch

Soil fungi create dead areas, often with green centers. Associated with compacted soil, excessive thatch and heat stress. Aerate or dethatch in September. Promote deep roots by raising mower height. Fertilize in fall.



Mushrooms

Recent rains created this outbreak. Mushrooms are decomposing organic matter in soil; it's natural and can't be stopped. Leave alone or rake. Do not eat. No spray is useful.

FRUITS



Spotted wing drosophila

White maggots in fruits. Malathion, carbaryl, pyrethrins and spinosad are among recommended insecticides. Harvest regularly. Remove overripe fruit. Keep orchard clean of weeds.



'Honeycrisp' leaf yellowing

Starches fail to move out of leaves. Affects 'Honeycrisp' trees with light fruit loads. Does not affect long-term productivity. Thin crops if needed in late spring for consistent yields year to year.



Codling moth on apple

Slice the fruit to reveal the tunnel and worm. Remove fallen fruits. Use traps in spring for monitoring. Spray insecticide after petal fall and 7–10 days later. Spray again if needed.

Survey of problems found in North Dakota yards and gardens:

VEGETABLES



Powdery mildew

Lesions with gray powder appear on leaves. Avoid getting foliage wet. Protect with fungicides chlorothalonil (Daconil, Bravo), mancozeb (Dithane), or copper. Use resistant cultivars.



Septoria on tomato

Small (1/8-inch), numerous spots begin on lower leaves. Remove infected foliage. Avoid getting foliage wet. Fungicide sprays (chlorothalonil, mancozeb, copper) prevent spread.



Bacterial spot on tomato

Dark, corky spots (diameter of pencil eraser) on fruits. Occurs under warm (mid 70s–80s) temps. Spots develop on vines. Avoid working in garden when wet. Prevent with copper sprays.



Cracking

Caused by rapid growth of fruits, often due to rains after period of drought. Cracks may become infected. Mulch plants to maintain uniform moisture conditions. Use resistant varieties.



Blossom end rot

Initial fruit clusters are susceptible to this calcium deficiency. Keep soil evenly moist; mulching helps. Do not damage roots when cultivating. Occurs less frequently later as developing roots find calcium in soil.



Smut on corn

Tumor-like galls form on ears. Remove galls from planting. Avoid wounding stalks when cultivating. Remove or bury diseased stalks. Some varieties are more susceptible than others.



Cabbageworms

Moths lay eggs on cabbage, kale and broccoli. Larvae consume crops. Spray with *Bacillus thuringiensis* while larvae are small. Carbaryl, pyrethrin or spinosad will control mature larvae.



Potato scab

Bacteria create scars on tubers. Peel off scars. In future, prevent scab by keeping soil evenly moist for 4–9 weeks after flowers appear. Avoid fresh manure. Use resistant varieties: 'Redgold', 'Superior' and 'Goldrush'.

- Annual Weeds Matching Answers**
1. Prostrate knotweed (*Polygonum aviculare*);
 2. Sandbur (*Cenchrus* spp.);
 3. Lambsquarters (*Chenopodium album*);
 4. Black medic (*Medicago lupulina*);
 5. Pigweed (*Amaranthus* spp.);
 6. Barnyardgrass (*Echinochloa crus-galli*);
 7. Purslane (*Portulaca oleracea*);
 8. Foxtail (*Setaria* spp.);
 9. Prostrate spurge (*Euphorbia supine*);
 10. Crabgrass (*Digitaria* spp.).

Weather Almanac for July 28–August 19, 2016

Site	TEMPERATURE				RAINFALL				GROWING DEGREE DAYS ^{1,2}			
	July 28–August 19				Jl 28–Ag 19		2016		Jl 28–Ag 19		2016	
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	66	68	94	42	1.15	1.52	13.43	13.04	373	407	1581	1592
Bowman	71	70	99	47	2.27	0.96	10.09	11.57	426	450	1804	1630
Carrington	69	69	91	48	3.53	1.75	13.69	14.31	420	430	1707	1722
Crosby	69	67	95	48	0.57	1.24	11.78	11.22	406	387	1611	1468
Dickinson	71	69	95	47	1.11	1.25	9.17	12.43	443	436	1825	1614
Fargo	72	71	89	53	1.52	1.72	13.03	14.93	480	455	1998	1849
Grafton	69	68	88	52	2.19	2.11	22.71	14.17	417	395	1752	1602
Grand Forks	70	68	89	51	2.90	2.11	16.28	14.14	439	408	1816	1649
Hazen	69	71	96	46	2.09	1.32	13.77	12.47	413	457	1772	1779
Hillsboro	70	70	89	50	2.14	1.85	12.13	14.76	430	441	1842	1747
Jamestown	68	70	87	51	3.74	1.53	17.44	13.60	407	435	1751	1716
Langdon	66	66	85	48	2.84	1.96	19.08	13.95	360	352	1505	1371
Mandan	70	70	95	50	2.56	1.81	15.49	13.25	437	449	1818	1710
Minot	70	69	93	50	1.29	1.50	11.97	13.27	429	408	1694	1564
Mott	69	70	97	43	0.81	1.15	10.61	12.33	409	447	1731	1686
Rugby	69	68	91	48	1.90	1.76	12.71	14.40	413	400	1700	1591
Wahpeton	70	72	89	50	3.61	1.66	14.45	14.76	445	472	1922	1922
Watford City	72	70	100	48	0.47	1.15	7.65	11.11	451	436	1819	1640
Williston	71	72	97	51	0.52	1.24	8.91	10.63	446	477	1807	1839
Wishek	69	68	91	49	1.58	1.82	16.24	15.20	422	403	1684	1551

DAYLENGTH (August 19, McClusky, center of ND)³ LONG-TERM OUTLOOKS⁴

Sunrise: 6:43 AM | Daylength: 14h 4m | Aug 26–30: Temp.: Below Normal; Precip.: Below Normal
 Sunset: 8:48 PM | Change since July 28: –1h 3m | Aug 28–Sep 03: Temp.: Normal; Precip.: 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

Appleton, B., V. Greene, A. Smith, S. French, B. Kane, L. Fox, A. Downing and T. Gilland. 2005. Trees and shrubs that tolerate saline soils and salt spray drift. Virginia Tech: Blacksburg.
 Herman, D.E. and V.C. Quan. 2006. Trees and shrubs for Northern Great Plains landscapes. North Dakota St. Univ.: Fargo.

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