

# YARD & GARDEN REPORT

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## Explore the world of garlic

This is a great time of year. We're enjoying fresh beans from the garden and the first tomatoes are ripening. We're not even tired of zucchini yet.

If you want to take your garden to the next level, think about growing garlic. It can add amazing flavors to your meals next summer.

Fall is the time to plant garlic and NOW is the time to order your bulbs. If you wait until September to look for bulbs, some of the best varieties will not be available.

Garlic types include hardneck, softneck and elephant. Hardneck types are hardiest and most suitable for us in North Dakota.

There are many wonderful hardneck types available from around the world. There are robust varieties from Germany and Spain, bold flavors from the Middle East, crisp flavors from Siberia, and mild varieties from Vietnam. The bulbs come in an attractive array of solids and stripes in shades of pearl white to royal purple.

Garlic grows best in a rich, well-drained soil. Add an inch of compost to the site and up to 3 pounds of 10-10-10 per 100 square feet. Work this into the soil.

Bulbs are planted soon after the first hard frost, which is usually in late September or early October.

Separate cloves from the bulbs a day before planting. Set cloves upright in the furrow, 4–6 inches apart and 2 inches deep. Space rows 18–30 inches apart.



*Figs. 1, 2. Garlic bulbs and scapes add zest to meals. Order your bulbs now.*

Water deeply to activate the bulbs. The bulbs will push out roots and underground shoots this fall. Mulch with 4 inches of straw in November. This straw will insulate the soil and protect the sprouted bulbs.

The flower buds (scapes) can be harvested in June. They are mild in flavor and great in stir fries.

Harvest the bulbs in July. Then get ready for some of the most delicious meals you have ever eaten!

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## Selecting lawn seed

Now though mid-September is the best time of the year to sow grass seed. The ground is warm and the seed will germinate quickly. Weeds are less of a problem in fall-sown lawns since weed seeds rarely germinate this late in the growing season.

The best grass species for North Dakota lawns are Kentucky bluegrass, the fine-leaf fescues, and perennial ryegrass.

Kentucky bluegrass is hardy, durable, and will develop a thick turf. Kentucky bluegrass is the principal component of most quality lawns.

Fine-leaf fescues (hard, chewings red, and creeping red fescues) are hardy and tolerate shade better than bluegrass.

Perennial ryegrass germinates quickly. It can get established in 5 days, compared to 21 days for Kentucky bluegrass. It is a good component of all seed mixes since it can stabilize the soil quickly. Unfortunately, it is marginally hardy and may not survive a brutally cold winter.

Match the grass seed to the environment it will grow in. Key questions include: Is the area sunny or shady? How much care is the lawn going to receive? Will you accept a good looking lawn or must it be the best lawn in the neighborhood?

For a shady site, make sure the lawn mix specifies it is suitable for shade. These seed mixes will consist of fine-leaf fescues with some shade-tolerant Kentucky bluegrass added.

For sunny sites, the predominant seeds in the mix should be Kentucky bluegrass cultivars. "Improved" varieties respond well to regular fertilization, irrigation and mowing. These varieties are numerous, and most seed mixes sold today include them.



*Fig. 3. This is the best time of year to sow grass seed.*

"Common" Kentucky bluegrass varieties adapt well to lawns that are rarely fertilized and irrigated. Varieties include 'Kenblue', 'Newport', 'Park', 'South Dakota Certified', 'Ram I' and 'Monopoly'. These varieties will provide a decent, easy-care turf, but lack the vigor and fullness of improved types.

Crested wheatgrass is a popular choice for low-maintenance lawns grown under dry and more saline conditions. Popular cultivars include 'Fairway' and 'Ephraim'. It is often mixed with common Kentucky bluegrass in rural lawn seed mixes.

Crested wheatgrass has performed well in NDSU trials in western North Dakota.

Native grasses such as blue grama grass and buffalograss are drought tolerant and slow growing. They require minimal maintenance, but are slow to green up in spring and quickly go dormant in fall.

Stay away from zoysiagrass; it will not survive the rigors of North Dakota. Annual ryegrass will die over its first winter, too. Most tall fescue varieties are too coarse and clumpy for a quality lawn.

## Pause on fertilizing

Seal the fertilizer bag—it is time to stop feeding plants in our landscapes.

The days are getting shorter and our landscapes are beginning a period of transition. The explosive growth of spring and summer is over. Plants need to start preparing for winter.

Trees, shrubs, roses and perennials should not be fertilized now. We do not want to stimulate new growth. This growth would be succulent in fall and subject to injury over winter. Instead, allow these plants to harden off.

We'll open the fertilizer bag again in late fall when it's time to feed the lawn.

## Sweet corn without the worms

Fresh sweet corn is one of the best tastes of the summer. Put a little butter on an ear and chomp away!

The only thing that ruins this experience is when you open up the husks and find a worm inside.

We have tools to control earworms and borers. Insecticides such as carbaryl (Sevin) can be used, but most families prefer not to use toxic chemicals in their gardens. There is a safer way.

In the 1940s—before the age of synthetic insecticides—gardeners put a dab of mineral oil on the silks at the tips of the ears. It worked. The worms suffocated on their trek from the silk tips down to the kernels.

Today, vegetable or corn oil is recommended. Even better, add a touch of *Bacillus thuringiensis kurstaki* (Btk) to the oil. Btk is a natural bacterial insecticide that is widely used by organic growers (trade names include Dipel and Thuricide). Neem is another organic product that works well.

A formulation of 1 part Btk or Neem with 20 parts oil is recommended. Apply 5 drops (0.5 ml) from an eyedropper directly to the top of each ear.

Timing is critical. Spray when silks have reached their full length and began to wilt and turn brown (this is 5–6 days after 50% of the corn has begun to show silks). Earlier applications can interfere with pollination and lead to poorly filled ears. Later applications will lead to poor control, as the earworms will have escaped into the ears by then.

On a side note, did you know earworms are cannibalistic! Cool! That's why you usually see only one worm at the tip of the ear. Let's kill that merciless cannibal!



Fig. 4. Corn earworm is a major pest of sweet corn.

Commercial growers in the Midwest are finding earworm moths in their traps now (Figs. 5, 6). Moths are tan and often have a dark spot on each wing. The later we go in the season, the more likely the cobs will be visited by the earworm moths.

Borers can be a problem, too. They burrow in the stalk and tunnel into ears (Fig. 7). Look for shotholes or brown frass in the whorls at the time the tassels appear (Figs. 8, 9). If 15% or more of the plants show damage, spray inside the whorls with Btk, neem, or carbaryl. Spinosad is another organic option.



Figs. 5, 6. Pheromone trap used by growers to monitor for earworm moths.



Figs. 7–9. European corn borers tunnel down stalks into ears. Look for frass in the whorl; larvae feed on leaves inside the whorl; shotholes appear as these leaves emerge out of the whorl.

## Rotten tomatoes

Tomatoes are ripening now and some gardeners are finding unpleasant surprises on the vines. Here is a sampling of the most common problems found on tomato fruits in North Dakota:



### F10. 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.



### F11. Catfacing

Bulging tissues develop on the bottom of the fruit and deep scars are formed. Caused by cool temps harming the development of flowers. Large-fruited heirlooms are most often affected.



### F12. 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.



### F13. Tomato fruitworm

Corn earworm (*Helicoverpa zea*) larvae hatch from white eggs on vines, feed on foliage and tunnel into fruits. Discard infested fruits. Next July/August, scout for eggs and larvae before they enter fruits. Carbaryl or *Bacillus thuringiensis* kill larvae.



### F14. Anthracnose

*Colletotrichum coccodes*. Sunken, dark, round lesions with concentric rings appear on overripe fruits. Pink spores. Remove infected fruits. Avoid overhead watering. Harvest regularly. Stake and mulch plants. Chlorothalonil or copper can protect future fruits.



### F15. Sunscald

Bleached white or tan, papery spots occur on sun-exposed fruits. More likely on staked plants with lack of foliage. Promote healthy vine growth by keeping insect pests and diseases in check. Avoid excessive pruning.



### F16. Early blight

*Alternaria solani*. Dark, leathery lesions develop near top of fruits. Large, irregular, brown lesions with concentric rings and yellow margins develop on foliage. Avoid overhead irrigation. Chlorothalonil, mancozeb or copper will protect plants.



### F17. Bacterial speck

*Pseudomonas syringae* pv. *tomato*. Tiny, dark, sometimes raised specks develop on green and red fruits. Occurs under cool (60s to low 70s) temps. Spots develop on vines. Avoid working in garden when wet. Spray with copper.



### F18. Bacterial spot

*Xanthomonas campestris* pv. *vesicatoria*. Dark, corky spots (diameter of pencil eraser) on green and red fruits. Occurs under warm (mid 70s–80s) temps. Spots develop on vines. Avoid working in garden when wet. Spray with copper.

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

### TREES AND SHRUBS



#### F19. Wetwood on cottonwood

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.



#### F20. Chlorosis on hackberry

Hackberry island chlorosis causes white to yellow blocky lesions, often surrounded by green tissue. No treatments needed. Maintain tree vigor.



#### F21, 22. 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.



#### F23. Chlorosis on silver maple

Leaves yellow, often with green veins. Foliar feed with soluble fertilizer containing iron. Avoid overwatering in spring. Get soil tested to assess pH.



#### F24. 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.



#### F25. Leaf spot and melting out

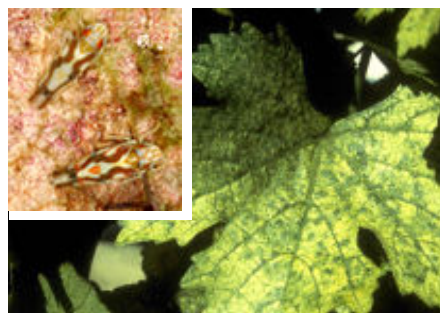
Purple spots develop into tan lesions with purple borders. Attacks crowns in summer. Mow tall. Water deeply but infrequently. Prevent spread with chlorothalonil or propiconazole. Overseed with improved cultivars.

### FRUITS



#### F26. Virus on elderberry

Tomato ringspot virus starts as yellow streaks or blotches in leaves. Causes plants to weaken, lose productivity, and die. No cure for infected plant.



#### F27, 28. Leafhopper on grape

Small (1/8-inch) wedge-shaped pests pierce and suck juices, creating yellow spots. Leaves may turn brown; in such cases, control pests with carbaryl or pyrethrin. Keep vineyard floor clean.



#### F29. Brown rot on apricot

Gray, powdery spores appear on rotting apricots, plums, cherries. Fruits shrivel. Remove infected fruits from area. Protect healthy fruits with captan or copper. Prune trees every winter.

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

### VEGETABLES



#### F30. Septoria on tomato vines

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



#### F31. 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.



#### F32, 33. 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.



#### 34. Potato berries

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



#### F35. 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'.



#### F36. Blooming onions

Bolting occurs when sets are sown or when onion plants are stressed (often due to night temps in the 40s). Harvest and use promptly. Flowering onions will not store over winter.

### WEEDS



#### F37. Purslane

Low-growing, drought-tolerant annual. Thrives in heat. Pull out, being careful not to drop any foliage or stems from which it can re-establish. Mulch to cool soil and smother seedlings.



#### F38. Foxtail

Annual grass will die from frost. Mow foxtails growing in the lawn, or pull plants from the garden to prevent seed dispersal. In lawns, apply fertilizer with crabgrass preventer next spring.



#### F39. Canada thistle

Thorny perennial. Cut down to prevent seed dispersal; expect plants to resprout. Spot spray with dicamba or glyphosate. Fall applications best to move herbicide throughout its roots.

# Weather Almanac for August 3–9, 2014

Site	TEMPERATURE				RAINFALL				GROWING DEGREE DAYS <sup>1,2</sup>			
	Week				Week				Week		2014	
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	69	69	86	49	0.13	0.54	12.26	12.37	133	133	1282	1413
Bowman	67	71	87	52	3.20	0.35	10.92	11.22	117	147	1260	1432
Carrington	67	70	84	48	0.00	0.60	9.39	13.55	113	140	1320	1534
Crosby	70	68	87	56	0.25	0.42	10.39	10.72	140	126	1272	1297
Dickinson	68	70	85	56	2.12	0.45	9.25	11.92	124	143	1313	1424
Fargo	71	71	86	52	0.11	0.57	12.04	14.11	145	147	1609	1649
Grafton	69	71	85	51	0.00	0.74	14.94	13.40	135	150	1415	1657
Grand Forks	68	69	85	48	0.02	0.70	12.56	13.14	127	133	1501	1469
Hazen	68	72	86	50	0.66	0.45	11.98	11.89	125	147	1336	1574
Hillsboro	68	70	86	47	0.14	0.63	12.47	13.95	126	143	1471	1554
Jamestown	68	70	86	51	0.02	0.50	10.86	12.93	117	141	1394	1527
Langdon	68	66	84	48	0.00	0.71	8.03	13.10	127	113	1208	1217
Mandan	68	71	85	55	1.07	0.64	9.53	12.52	121	147	1400	1514
Minot	68	69	82	52	0.02	0.52	12.66	12.60	125	133	1329	1384
Mott	67	71	86	53	2.43	0.39	11.27	11.78	117	146	1304	1490
Rugby	69	68	84	52	0.05	0.63	10.31	13.69	134	130	1355	1416
Wahpeton	69	72	87	50	0.00	0.52	12.57	13.97	128	154	1545	1714
Watford City	71	70	88	58	0.47	0.40	7.48	10.62	145	143	1413	1452
Williston	72	73	90	60	1.21	0.40	7.49	10.07	149	154	1462	1626
Wishek	68	69	84	53	0.71	0.64	9.34	14.41	122	132	1311	1375

## DAYLENGTH (August 9, McClusky)<sup>3</sup>

Sunrise: 6:29 AM | Daylength: 14h 36m

Sunset: 9:05 PM | Change since August 2: -19m

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

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

8–14 Day: Temp: Below Normal; Precipitation: Above 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](http://www.sunrisesunset.com), and National Weather Service, respectively.

## Credits

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