

YARD & GARDEN REPORT

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Cold spring

Our growing season is off a late start this year. Cold, rainy weather delayed the planting of many gardens to late May. Tree buds have been slow to sprout, and perennial flowers have been reluctant to emerge out of the chilly ground.

Soil temperatures remain cool. The North Dakota Agriculture Weather Network show average soil temperatures only in the 60s over the past week (Fig. 2).

These temperatures are acceptable but less than optimum for germination of vegetable seeds (Table 1). Seeds of warm season crops such as melons, cucumbers and supersweet corn will be especially sensitive to these cool temps. We can expect slow germination and poor seedling stands in some cases.

Looking ahead, most gardens would benefit from a heat wave now. Unfortunately, the 6–10 day forecast by the National Weather Service calls for below average temperatures across much of the state.



Fig. 1. Gardens are off to a slow start.

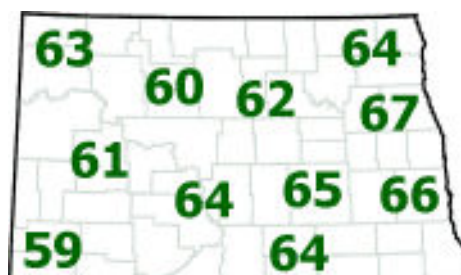


Fig. 2. Average bare soil temperatures (°F) for the week of June 1–7, 2014. Source: North Dakota Agricultural Weather Network.

Table 1. Soil temps (°F) required for germination of popular vegetables

Vegetable	Minimum	Optimum Range	Optimum
Bean	60	60–85	80
Beet	40	50–85	85
Carrot	40	45–85	80
Corn ¹	50	60–95	95
Cucumber	60	60–95	95
Muskmelon	60	75–95	90
Pea	40	40–75	75
Pumpkin	60	70–90	90

¹For supersweet corn, 60 °F is recommended for fungicide-treated seed; 75°F for untreated seed.

Sources: Maynard and Hochmuth, 1997; Johnny's Selected Seeds, 2014.

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Winterkill woes

The winter of 2013–2014 was long and cold. Snow cover was less than ideal and many plants were exposed to the frigid weather.

We are noticing significant levels of dieback on marginally hardy trees, shrubs and perennials.

Evergreens were especially susceptible to injury since their needles were exposed to the drying winds of winter (Fig. 3). The tips of affected needles have turned brown. The south and west sides of trees are typically most damaged; the east side is least affected as it is sheltered from the fiercest winds and afternoon sun.

The key to the long-term health of the evergreens is seen on the tips of the branches. Although the needles may be damaged, the buds have a waxy coating that can protect them from winter.

Evergreen buds are just starting to open. If these buds are opening, the branch is full of life and can recover from the winter damage (Fig. 4). If these buds are dried and dead, the branch is severely weakened or dead and will likely need to be pruned out.



Figs. 3, 4. The thin, broad needles of arborvitae (see top photo) make it especially sensitive to the drying winds of winter. Many needles of this spruce (see bottom photo) were killed, but its buds were protected and are now releasing this year's needles. This spruce will recover.

Fertilizing lawns

Memorial Day is generally a good time to fertilize the lawn. Since spring has arrived late this year, now is a good time to feed your turf.

Lawns are actively growing now and they are hungry. We want our lawns to be healthy going into the stressful, hot days of summer.

Fertilizers applied earlier this spring provided little long-term benefit. Such early applications promote top growth, which simply leads to mowing the lawn more frequently.

Springtime fertilizers often contain a crabgrass preventer (typically pendimethalin). There is little use of such fertilizers now since crabgrass has already germinated in most lawns. These fertilizers should not be used if you plan on overseeding this year. Pendimethalin will kill all emerging grass seedlings.

The best time to fertilize a lawn is in fall—this is when turf roots grow. The key to a thick lawn is a vigorous root system.



Fig. 5. Now is a good time to fertilize a lawn. Fertilizer applied earlier in spring provided little long-term benefit.

Spraying dandelions

Dandelions seeds are blowing everywhere and some gardeners are taking action to kill these weeds. Dandelions create amazing amounts of seeds: an individual dandelion seed head can have 180 seeds and individual plants can produce over 2000 seeds!

Killing dandelions is easy, but maintaining a weedfree lawn is difficult if not impossible. It requires regular applications of toxic chemicals on the lawn.

Let's talk about how to maintain an attractive (but not weedfree) lawn with a judicious use of herbicides:

There are two major groups of lawn weeds: broadleaves and grasses. Dandelion is a broadleaf, along with clover, ground ivy and thistle. The most popular herbicides used to kill broadleaf weeds in lawns are Trimec formulations. These products consist of a combination of three herbicides (2,4-D, mecoprop and dicamba).

Trimec formulations are powerful and useful, but they are poisonous. They should be used only when necessary, and then only when most effective.

Herbicides are most effective when used in fall (not in spring).

The key to killing weeds is to get the herbicide down into the roots. In fall, weeds naturally channel their nutrients down into their roots in preparation for winter. If sprayed in fall, the weeds will naturally send the herbicide, along with their nutrients, down into the roots.

Herbicides sprayed in spring will not be as readily transported through a weed's root system. Repeated applications may be required.

Dicamba is particularly effective, but it can persist in the soil and



Fig. 6. Countless dandelion seeds are blowing in yards now. It is unrealistic and unnatural to have a weedfree lawn.

cause damage to nearby trees, shrubs and perennials. This is all the more reason why herbicides should be limited in their use.

Besides herbicides, we can use other approaches to minimize weed problems. Cut your turf tall and let the clippings fall. The tall blades will shade out the emerging weeds and prevent them from getting established. The clippings can smother

out emerging weed seedlings. The clippings can also promote a stronger, thicker turf by keeping the soil cool and moist, as well as recycling nutrients back into the soil.

An additional problem with spraying herbicides in spring is drift. Most garden plants have been in the ground for only a couple weeks, and cases of herbicide injury are already being reported (Fig. 8).

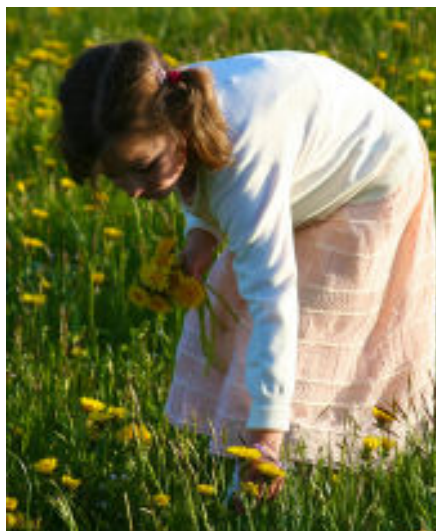


Fig. 7. Children are naturally drawn to the beauty of dandelions in bloom. Perhaps we need to reconsider whether a few flowers in the lawn can be tolerated.



Fig. 8 Herbicides need to be applied carefully. This young tomato plant was killed by exposure to a lawn herbicide. Note the extreme curling and distortion of leaves and stems.

Knock, knock

Woodpeckers threaten the health of trees all year, but they are especially destructive in spring. Male woodpeckers bang on trees in spring to attract a female mate and scare away other males. Once a male woodpecker finds a tree that creates a virile sound when it is pecked, it will continue going to that same tree.

This pecking into the tree can cause great harm. The young rings of a tree—located just beneath the bark—are precious. This is where much of the tree's water and nutrients flow. Damage to these rings can limit the flow of water and nutrients, thereby stunting and sometimes killing the tree.

If a woodpecker pecks around the tree enough times, it can completely destroy these young rings and stop the flow of water and nutrients beyond that point. This leads to severe stunting and dieback of the tree above the wounded area.

Birds are creatures of habit and once they find a good tree, they may keep going to it. We need to move the bird to another tree.

Wrap a shield of protection around the damaged area of the trunk. Hardware cloth or burlap is most often used.

Scare devices such as a child's pinwheel, shiny aluminum pie tins, a plastic owl or snake, or a scare-eye ball can be hung near the tree. These gadgets often work for a day or two.

If you hear the woodpecker, you cannot kill it, but you can spray it with water.

Woodpecker damage can be distinguished from damage caused by borers by the *regular spacing* of the holes (Fig. 10). Holes created by exiting borers are *randomly spaced* (like a shotgun blast).



Figs. 9, 10. The regular spacing of holes indicate this damage was caused by a woodpecker. Prompt action is required to prevent severe damage to trees.

If there is a suspicion of borers in the tree, a drench of imidacloprid (Bayer Advanced Tree and Shrub Insect Control) can kill the borers.

This should not be a regular practice for trees visited by honeybees. We are concerned with the exposure of honeybees to imidacloprid.

Assessing deer damage

Deer cause major damage on trees and shrubs over fall and winter. Besides nibbling on branch tips, deer scrape bark off trees as they mark their territory and clean their antlers of summer velvet (Figs. 11, 12).

Just beneath the bark are young rings where the tree's nutrients and water flow. When the bark is damaged and these rings are exposed, the flow of water and nutrients becomes severely restricted. Such damage can take decades to heal.

In the meantime, the tree's growth is severely stunted.

In cases of significant damage, it may be better to remove the damaged tree and start over with a healthy tree. What is "significant" damage? This is a bit subjective, but a conservative estimate would be if more than one-third of the circumference of the trunk of a young tree has been damaged, you should consider replacing the tree.



Figs. 11, 12. Deer damage to spruce and birch.

Ants on the march

Ants often invade homes in spring (Fig. 13). These ants are hungry and having a hard time finding food outdoors this time of year.

You may prevent ants from entering the home by sealing cracks along doorways and windows. Keep kitchen counters and floors clean.

An insecticide spray can be applied in a 3-foot swath around the home to repel or kill the ants. Synthetic pyrethroids such as permethrin, bifenthrin, cyfluthrin or deltamethrin are commonly used for this purpose. This will provide a couple weeks of protection.

Baits can also be used. The worker ants will carry the poisonous bait back to the colony, and hopefully kill the queen. Baits often come in plastic capsules, which minimize our exposure to the toxic chemicals. On the negative side, baits can take several days to work.

In a few weeks there will be an abundance of food outside and visits from ants will be less common.

Outdoor ant colonies rarely cause significant damage to landscapes and the tolerance of a few ants in the yard is encouraged. Major infestations of ants can be controlled with insecticides. These products come in liquid or granular formulations. Carbaryl and the synthetic pyrethroids mentioned above are most commonly used. We need to get the chemicals down deep into the nest and kill the queen. One half gallon of insecticide mix may be needed to kill a nest. Keep in mind these insecticides will only provide a few weeks of protection.

Outdoor ant colonies are often associated with thin lawns. You can discourage the establishment of outdoor ant colonies by thickening the turf. This is a good time to overseed and fertilize the lawn.



Fig. 13, 14. Hungry ants often invade homes in spring. Outdoor ant colonies are often associated with thin, weedy lawns.

June beetles are flying

The first flights of June beetles are being reported. These beetles will mate and lay eggs that hatch into grubs. Such grubs will feed on turf roots and cause damage to the lawn.

June beetles are attracted to light. You can reduce populations by turning off lights in the yard.

Don't panic over a few June beetles. It is natural for a lawn to have a few grubs, and treatments to kill grubs are rarely needed.

Grubs gnaw on turf roots. A good defense to minimize the impacts of grub feeding is to grow a lawn with a strong root system. Strategies to promote strong root development include cutting the turf tall, irrigating deeply, and fertilizing in fall.



Figs. 15, 16. June beetles are beginning to fly now. They will lay eggs in turf, which can hatch into damaging grubs.

A plastic noose

Plastic rings are used in landscapes to keep mulch in place around trees and shrubs. These rings keep the landscape looking tidy, but they can inhibit root growth. In some cases, tree roots will grow to the edge of the ring and then be forced to turn back (Fig. 17). In some cases the limitation of root growth within the plastic ring is comparable to growing a tree inside a sunken pot.

Roots provide physical support to a tree. Trees with constricted root systems are susceptible to falling over in storms.

In these cases, it is best to remove these plastic rings.

Landscape fabric and twine can also constrict the development of trees. Now is a good time to inspect your trees and shrubs to make sure they are not being strangled.

Credits

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Figs. 17, 18. Plastic tree rings can inhibit root development. The flare root is now growing sideways, trapped along the inside of the ring. The tree is unstable and subject to wind damage.

Flea beetles on fruits

Flea beetles are being found on apple trees and grape vines. Beetles and their subsequent larvae can feed on developing leaves and bud tips, causing holes in the foliage. Damage is typically minor and does not require treatment. Major infestations can be sprayed with carbaryl (Sevin) or malathion. Insecticides should not be sprayed when these plants are blooming since you may kill visiting honeybees.



Fig. 19. Flea beetles are appearing on the foliage of fruit trees and vines.

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