

# YARD & GARDEN REPORT

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## Bumpy leaves

Bumps are appearing on the leaves and branches of trees. These outgrowths are *galls*, and were produced in response to attacks from mites and other pests this spring.

Galls are forming on ash, linden and silver maple leaves (Figs. 1–3). These galls were caused by eriophyid mites (*Eriophyes* spp.) that punctured the emerging leaves this spring.

These mites also nipped on male flowers of ash trees, creating fuzzy clusters on branches (Fig. 4). These clusters will turn brown and may persist through next year.

Nipple galls may be found on the underside of hackberry leaves (Fig. 5). These galls are created by psyllids (*Pachypsylla* spp.).

Pesticide applications are not recommended. This damage is mostly aesthetic and will not cause significant harm to the tree. There are no long-term effects.

Canopies of trees affected with these galls remain full of leaves that will produce lots of food for the plants this summer.



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Figs. 1–5 (top to bottom). Leaf galls on ash and linden; red bladder galls on silver maple; flower gall on ash; and nipple gall on hackberry. This damage is aesthetic and no treatments are needed.

## Twisted tomatoes

There are twists and turns to every gardening season. These successes and failures make gardening both enjoyable and challenging.

But when *our plants do the twisting and turning*, there is cause for alarm. In most cases, this indicates our plants were exposed to a herbicide, and usually a dandelion killer.

Now is not a good time to kill dandelions and other broadleaf weeds in the lawn. Nevertheless these herbicides are sprayed by persons pursuing the “perfect” weed-free green carpet.

Once affected, there is little you can do. You cannot wash the chemical off your plants. Once you see curling, the chemical has been absorbed into the plant, including the harvested portions.

Then you are faced with the inevitable question as to whether or not the produce is safe to eat.

There are no easy answers here. It depends on the concentration, toxicity and persistence of the chemical. As the summer progresses, the herbicide concentration may decline, but the chemical can still be there. Laboratory tests are valuable; however, these tests are very expensive and not readily available.

Acute poisoning from vegetables affected with herbicide drift is unlikely, but long-term effects such as developing cancer are difficult to assess (Masiunas, 2012). It makes sense to minimize our exposure to toxic chemicals and not to consume herbicide-tainted vegetables.

In the future, avoid spraying herbicides when your garden is growing. If spraying is necessary, spray only during calm winds. Avoid spraying with a fine mist. Do not spray on hot days since herbicides are more likely to volatilize in the heat.



Fig. 6. Herbicide injury on tomato.

Do not use clippings in lawns that have been recently treated with herbicide. Lawns should be mowed at

least three times after a herbicide application before using the clippings for mulch.

## Herbicides in manure

Aged manure is great for gardens—unless it is full of herbicide.

Pyridine herbicides are widely used to control weeds in pastures. Manure from a pyridine-treated pasture is hazardous since the pyridine can pass through the animal's system without breaking down.

Tomato, potato, pepper, bean and pea are especially sensitive to pyridine, but other vegetables including carrot, lettuce, spinach and beet are also sensitive. Rose, dahlia, and annual flowers such as marigold and sunflower are sensitive.

Pyridine chemicals may break down in a few weeks or, in some cases, in a few years. Moisture, heat and exposure to sunlight can accelerate its decomposition.

Gardeners who suspect their soil is contaminated can periodically



Fig. 7. Pasture manure is a potential source of herbicide.

cally test their manure by growing beans in pots containing a 1:1 mixture of the manure with potting soil. If the potted beans grow well, the pyridine has likely broken down to acceptable levels.

Another way to monitor for pyridine in your garden is to grow short rows of beans and peas scattered throughout the garden. Monitor for unusual growth (Davis *et al.*, 2010).





Figs. 8–10. The yellowheaded spruce sawfly can defoliate spruce trees.

## Spruce sawflies on the attack

The larvae of yellowheaded spruce sawfly (*Pikonema alaskensis*) are emerging. They have a yellow to reddish-brown head and six grayish-green stripes running down their olive green bodies (Fig. 8).

Larvae will defoliate spruce trees (Fig. 9), beginning with the younger needles. Prompt attention is required since complete defoliation can kill a tree. Partial defoliation that

occurs over several consecutive years may also cause death.

Feeding occurs in large groups and for up to six weeks. Insecticidal soap can kill young larvae. Conventional pesticides are recommended for large outbreaks or to kill mature larvae. Insecticides include carbaryl, acephate, malathion, permethrin, or synthetic pyrethroids such as cyfluthrin and deltamethrin.



## Carpenter ants swarming

Winged carpenter ants are swarming. These king and queen ants are leaving their old colonies to mate and establish new colonies.

Carpenter ants (*Camponotus* spp.) are large and dark. The workers are 3/8 to 1/2 inch long and the queens can be 1 inch long. They have one node (bump) between their thorax and abdomen.

The population of a colony can rise to 3,000 ants after a few years. Then the colony will produce 10–400 winged ants to start new nests. These winged ants are emerging now. Their appearance as a swarm is sudden and dramatic.

After mating, the queen will rip off her wings and find a site to nest. Sometimes she will wander in our homes looking to establish a nest. This by itself should not worry us. However, if we see a *swarm* indoors, the original nest is likely in our home and we need to take action.

Outdoor nests are of less concern, but still require attention. Carpenter ants will nest in rotting wood. Perhaps the firewood pile or an old wooden structure should be cleaned up. If there is significant ant activity inside a tree, the tree should be evaluated for its integrity and susceptibility to storm damage.

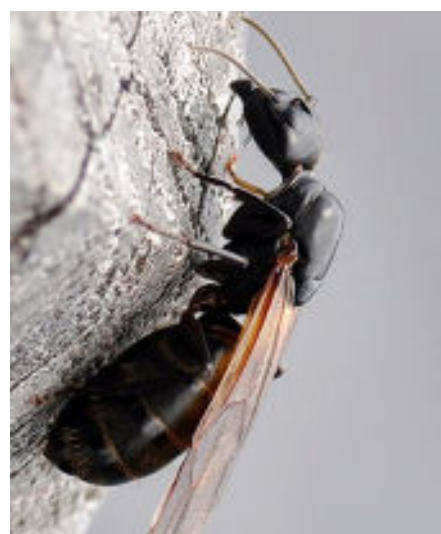


Fig. 11. Winged carpenter ants are looking for nesting sites.

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

### TREES AND SHRUBS

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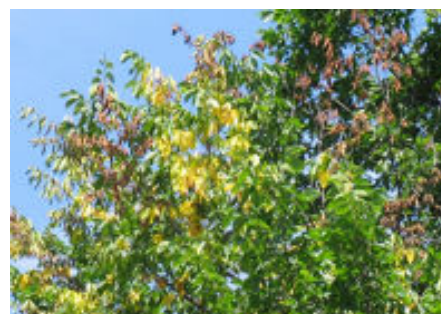
#### F12. Ash rust

Orange lesions and galls appear on ash. Damage is minor and no treatments are needed. Rust spores came from cordgrass or marsh grass.



#### F13. Ash anthracnose

Lesions appear on leaf margins; leaves curl and drop. Shaded areas in canopy are most affected. Rake fallen leaves. Fertilize, if needed. Prune in winter to reduce humidity in canopy.



#### F14. Dutch elm disease

Major branch shows yellowing and wilting. Prompt removal of tree is often best. Tree may be saved by pruning and/or injecting fungicides if detected early.



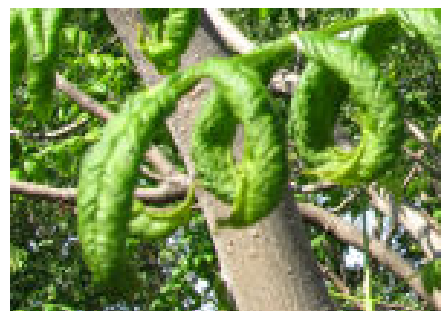
#### F15. Winter kill on evergreens

Focus on branch tips. If new shoots are emerging, the plant can outgrow the problem. If not, the branch may be dead. Trim dead branches.



#### F16. Winter injury

Use a knife or thumbnail to scratch the young bark. If you see green tissue (shown at right), there is life in the tree. Be patient and hope for the emergence of new buds.



#### F17. Herbicide injury

Leaves become elongated, curled or cupped. Most woody plants survive. In the future, use herbicides only when needed. Spray when wind is minimal; use heavy droplets; avoid hot days.

### TREES, SHRUBS, FRUITS

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#### F18. Pear slugs

Slimy larvae skeletonize leaves of rose, chokeberry, pear and cherry. Control with Sevin or insecticidal soap. No treatment needed on mature plants.



#### F19. Mushrooms in lawns

Organic matter (tree roots, stump, or construction lumber) in soil is decomposing. May emerge for years. Rake mushrooms; do not eat.



#### F20. Flea beetles on greens

Tiny (1/8-inch) pests create shotholes. Young seedlings are very sensitive. Consider spraying (carbaryl, spinosad or malathion) if 10–30% defoliation.



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

## FRUITS



### F21. Shotholes in chokecherry

Bacterial or fungal lesions drop out of leaves, creating holes. Rake leaf litter. Avoid irrigating foliage. Inspect branches for cankers; remove if found.



### F22, 23. Scars on cherries, plums

Plum curculio weevils scrape young fruits and lay eggs inside. Grubs feed inside fruits; fruits later drop. Pick up fallen fruit. Spray adult curculios with malathion when petals fall next spring.



### F24. Plum pockets

Plums become deformed and hollow. Pick off and remove infected plums from area. Spray with lime sulfur just before buds break open next spring.

## WEEDS



### F25. Foxtail barley

Short-lived, shallow-rooted perennial found in recently disturbed sites such as new residential areas. Cultivate or pull out. Spot spray with glyphosate.



### F26. Black medic

Cloverlike annual plant with yellow blossoms. Its taproot makes it hard to pull. Thicken turf (fertilize, mow tall) to choke out medic seedlings. Spray with Trimec before flowers mature.



### F27. Field bindweed

Aggressive, persistent perennial with spade-shaped leaves and white or pink blooms. Deep rooted, making pulling difficult. Spray with glyphosate or dicamba. Fall applications best.

## Credits

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