

# YARD & GARDEN REPORT

October 1, 2015

Vol. 3, No. 14

## Seeking balance

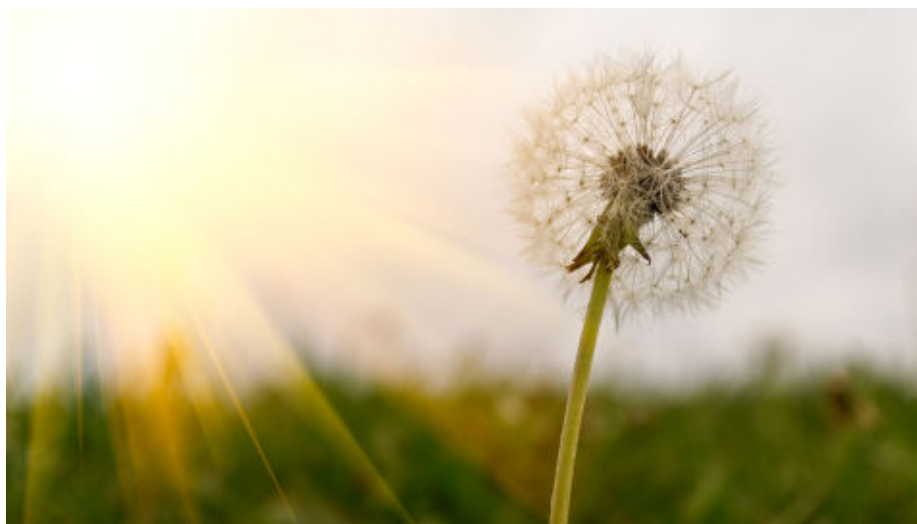
The #1 problem in our yards and gardens this year has been the misuse of herbicides. There have been countless situations of twisted tomato vines, curled tree leaves, dead flowers, and neighbors pointing fingers at one another.

In most cases these situations arise from unrealistic expectations over their lawns. A weed-free lawn is not natural. Furthermore, it's unhealthy for us and our children to reside in a landscape regularly sprayed with poisonous chemicals.

Children are especially sensitive to the toxic effects of pesticides. Their brain, nervous system and organs are still developing. They spend more time near the ground and are more likely to stick objects in their mouths. They take more breaths per minute and consume more food per pound of body weight compared to adults (*National Pesticide Information Center, 2013*).

In recent years, more persistent chemicals are being included in popular lawn herbicides. Dicamba, for example, controls many broadleaf weeds but persists in soil for 3–12 months (*University of Minnesota, 2015*). Dicamba is very mobile in the soil and can be accidentally absorbed by trees and nearby garden plants, causing harm.

Natural alternatives are available but their benefits are limited. Corn gluten meal (Preen Organic) can prevent a good percentage of new weeds from emerging but cannot control existing weeds (*Naeve, 2005*). Iron chelates (EcoSense, Fi-



*Figs. 1. Let's use herbicides sparingly and wisely. Now is the most effective time to kill weeds in lawns. A single spray in fall will control most weeds.*

esta) control many broadleaf weeds (*Smith-Fiola and Gill, 2014; Chinery et al., 2012*). Unfortunately, both products are much more expensive and require more applications than synthetic products.

*Our challenge is to balance our desire to have a quality lawn while minimizing our exposure to toxins. Synthetic pesticides are useful but we need to use them judiciously.*

That said, *now* is the most effective time to spray weeds in the lawn. Weeds are sending their nutrients down into their roots in preparation for winter. If we spray now, a weed will naturally send the herbicide down into its root system. Goodbye weed!

A single spray done this time of year can control weeds and minimize our exposure to harmful chemicals in our yards. For most situations

this seems like a good balance of benefits and risks.

Another sensible strategy is to spot-spray in trouble areas rather than spraying the entire yard. Always read and follow the directions on the label.

Other cultural practices can reduce our dependence on toxic pesticides. Mowing tall, letting clippings fall, and fertilizing the lawn can create a thick turf that smothers emerging weeds.

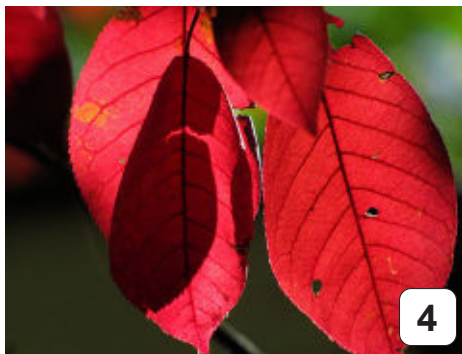
### INSIDE THIS ISSUE

- ◆ Lawn weed management 1
- ◆ Tree leaf ID quiz 2
- ◆ Frost watch 3
- ◆ Growing herbs indoors 3
- ◆ Ripening tomatoes indoors 3
- ◆ Golden larches 3
- ◆ Survey of problems 4
- ◆ Weather almanac 6

# Do you know your leaves?

Did you ever collect leaves for a school project when you were a child? My son is doing this now. We are walking through our neighborhood collecting leaves and then pressing the leaves under heavy books. Here are leaves of popular trees in North Dakota. See how many you recognize. The answers are on page 6.

- |       |                   |       |                 |
|-------|-------------------|-------|-----------------|
| _____ | Ash, Green        | _____ | Elm, American   |
| _____ | Basswood (Linden) | _____ | Honeylocust     |
| _____ | Buckeye           | _____ | Maple, Silver   |
| _____ | Chokecherry       | _____ | Oak, Burr       |
| _____ | Cottonwood        | _____ | Willow, Weeping |



## Jack Frost is late

Hooray! It's October and nearly all gardens in North Dakota have avoided a killing frost. Most gardens have not experienced any frost whatsoever (*Table 1*). The long-range forecast is calling for above normal temperatures, too. This is wonderful news, but we all know Jack Frost will arrive any day and mercilessly destroy our gardens.

Frost kills plants by exploding their cells. When cells freeze, they expand and their cell walls burst open. It's like putting a can of soda in the freezer. The liquid expands and the can bursts! Frost-damaged plants looked water-soaked and mushy (*Fig. 12*).

Garden plants differ in their abilities to tolerate frost. The most sensitive vegetables include tomato, pepper, cucumber and squash. These plants require protection. Cabbage, kale and root crops (carrots and radish) tolerate light frosts.

The most sensitive flowers include geranium, impatiens, begonia, zinnia, portulaca and coleus. Hardier



*Fig. 12. Frost struck this pumpkin patch, causing vines to collapse and die.*

flowers include aster, cosmos, morning glory, marigold and petunia.

How do you protect your plants? That's easy. Pretend **YOU** are outside in the garden. What would you wrap around yourself to stay warm?

I would like a blanket and so would your plants. Some gardeners use newspaper—that's okay. Some use plastic—that's terrible! I wouldn't want a sheet of plastic wrapped around me on a cold night.

Consider using layers of protection. Just like we use layers of clothes to keep warm, garden plants benefit from layers of protection. Two blankets are better than one.

This protection may give you an extra week of gardening. But when a hard frost (28°F or below) is expected, nothing will save your sensitive plants. Run outside and harvest whatever you can!

*Table 1. Coldest temperature to date this fall, and probabilities of frosts. To use an example, there is a 10% likelihood the first killing frost in Bottineau will occur before 9/20, a 50% likelihood before 10/01, and a 90% likelihood by 10/13.*

| Site        | Coldest temp | Light (32°F) | Killing (28°F) |       |       | Site         | Coldest temp | Light (32°F) | Killing (28°F) |       |       |
|-------------|--------------|--------------|----------------|-------|-------|--------------|--------------|--------------|----------------|-------|-------|
|             | Fall 2015    | 50%          | 10%            | 50%   | 90%   |              | Fall 2015    | 50%          | 10%            | 50%   | 90%   |
| Bottineau   | 28           | 9/23         | 9/20           | 10/01 | 10/13 | Harvey       | 28           | 9/24         | 9/21           | 10/03 | 10/14 |
| Bowman      | 35           | 9/23         | 9/18           | 10/01 | 10/14 | Hillsboro    | 30           | 9/30         | 9/24           | 10/09 | 10/27 |
| Carrington  | 30           | 9/26         | 9/22           | 10/03 | 10/16 | Jamestown    | 36           | 9/25         | 9/22           | 10/03 | 10/17 |
| Carson      | 28           | 9/23         | 9/18           | 10/01 | 10/16 | Killdeer     | 33           | 9/22         | 9/18           | 9/30  | 10/14 |
| Cooperstown | 30           | 9/19         | 9/16           | 9/28  | 10/10 | Langdon      | 29           | 9/21         | 9/19           | 9/29  | 10/12 |
| Crosby      | 34           | 9/23         | 9/19           | 10/01 | 10/14 | Mandan       | 33           | 9/25         | 9/20           | 10/03 | 10/16 |
| Devils Lake | 33           | 10/04        | 10/01          | 10/12 | 10/23 | Minot        | 34           | 9/26         | 9/23           | 10/05 | 10/17 |
| Dickinson   | 41           | 9/17         | 9/12           | 9/25  | 10/07 | Mohall       | 33           | 9/19         | 9/14           | 9/27  | 10/11 |
| Ellendale   | 33           | 9/29         | 9/25           | 10/08 | 10/21 | Stanley      | 30           | 9/20         | 9/16           | 9/28  | 10/11 |
| Fargo       | 35           | 9/29         | 9/25           | 10/07 | 10/23 | Towner       | 32           | 9/19         | 9/16           | 9/28  | 10/10 |
| Forman      | 37           | 9/29         | 9/25           | 10/07 | 10/22 | Tuttle       | 32           | 9/23         | 9/19           | 10/01 | 10/14 |
| Garrison    | 40           | 9/22         | 9/18           | 9/30  | 10/13 | Watford City | 35           | 9/20         | 9/16           | 9/28  | 10/12 |
| Grafton     | 30           | 10/02        | 9/29           | 10/12 | 10/28 | Williston    | 38           | 9/26         | 9/21           | 10/04 | 10/17 |
| Grand Forks | 28           | 9/23         | 9/21           | 10/02 | 10/17 | Wishek       | 38           | 9/24         | 9/20           | 10/03 | 10/16 |

*Sources: National Oceanic and Atmospheric Administration and Weather Underground.*



## INDOOR HERBS

Sow seeds of cilantro, dill, basil and parsley. Clumps or cuttings of chives, thyme, sage and rosemary may be taken from the garden and repotted. Repot in containers with drainage holes. Use potting soil mix. Small (3–



4 inch) pots work well on a windowsill. Larger pots can be used with plant stands. Fertilize monthly.

Set near a sunny (south) window with at least 6 hours of sun per day. Full spectrum fluorescent (grow) lights is another option. Keep them



on for at least 12 hours daily and set lights close (6–15 inches) to plants.

Winter homes are dry. Set pots together on a tray filled with gravel and then add water to the tray. A humidifier and regular misting can help. Room temps are fine.



## RIPENING TOMATOES

Any tomato showing a blush will ripen off the vine. Clean fruits and discard any with spots or cracks.

Set tomatoes on a sheet of newspaper, and then place another



newspaper sheet over the fruits. This traps ethylene, which tomatoes emit when ripening. Some gardeners wrap each tomato to trap ethylene. Other gardeners place apples nearby since the fruits emit ethylene.



Keep tomatoes out of direct sunlight. A windowsill (shown) is not recommended. If placed in a sunny area, the outer skin will redden before the inner flesh develops flavor. Room temps develop fullest flavors.



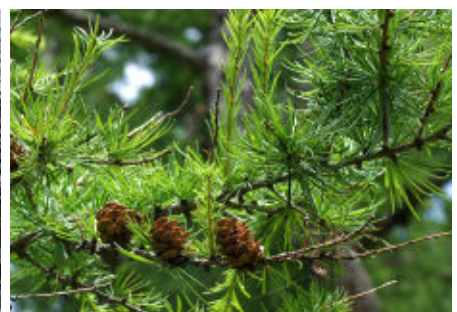
## GOLDEN LARCHES

The showiest “evergreen” in autumn is the one that isn’t green. It’s the larch a.k.a. tamarack. Its green needles turn golden in fall. Stunning! Then the needles drop to the ground.



As beautiful as the larch is in fall, it is equally as ugly all winter. The barren branches appear lifeless. Don’t worry, the tree is only sleeping.

The gentle spring rains will awaken the tree, creating a new flush



of emerald green needles. This new growth is a welcome site that marks the end of winter and the beginning of a new season! Larch prefers sunny, moist sites.

# Timely topics in North Dakota yards and gardens:

## VEGETABLES



### F22. Clean garden debris

Remove or deeply bury any diseased plants or fruits in the garden. This will reduce the likelihood of infection next year.



### F23. Plant garlic now

Divide cloves and set 4–6 inches apart. Cover with 2 inches of soil. Irrigate. Cover with 4 inches of straw in November. Hardneck varieties are most hardy.



### F24. Harvest winter squash

Light frosts will not harm the fruit, but harvest before a killing frost (28°F). Leave a few inches of stem attached. Except for acorns, cure in a warm (80°F) spot for 10 days for long-term storage.

## FRUITS



### F25. Frosty apples

Apples on trees can tolerate temps approaching 25°F before freezing damage occurs. If they freeze, wait to thaw before picking. Use promptly.



### F26. Storing apples

Apples store best in a cool (near 32°F), humid (90% RH), dark place. A refrigerator is best, but a cool root cellar or garage is acceptable. If refrigerated, store in perforated plastic bags to increase humidity.



### F27. A new berry patch

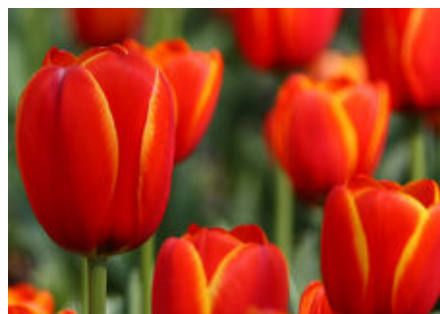
Now is the best time of year to prepare land for next year's garden or berry patch. Spray glyphosate (Roundup) on turf or a weedy area. Cultivate the land in two weeks and you will be ready for spring.

## FLOWERS



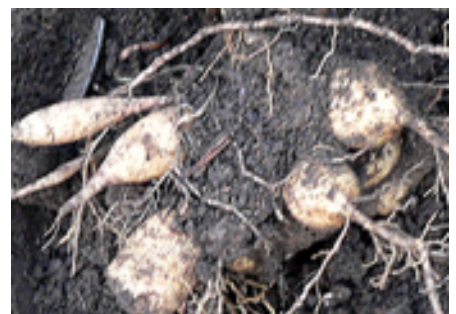
### F28. Overwinter geraniums

Dig and place into 6- to 8-inch pots. Cut back to 1/3 height to keep plants compact and bushy. Set near a bright sunny window. Cool temps (60°Fs) are best. Water sparingly.



### F29. Plant tulip bulbs

The bigger the bulbs, the better. Small, bargain bulbs might not bloom. Plant in clumps of six or more bulbs for impact. Avoid wet spots. Add slow-release bulb fertilizer. Irrigate. Mulch in mid November.



### F30. Dig nonhardy bulbs

After frost, cut gladiolus stalks to the ground, dahlia stalks to 3 inches and canna stalks to 6 inches. Dig bulbs; shake off soil. Dry bulbs for a week in the garage. Brush off remaining soil. Trim and store in sand or peat moss at 40°F.

# Timely topics in North Dakota yards and gardens:

## TREES AND SHRUBS



### F31. Fall needle drop

Don't worry; old needles (located near the trunk) are supposed to turn brown. As long as the young needles (located near the tips of branches) are healthy, the tree is full of life.



### F32, 33. Wrap young trees

Place tree guards (left) or wrap Kraft paper around trunks of young trees. This prevents cracking (right) and protects against wildlife. Linden, maple, mountainash, and fruit trees are very sensitive.



### F34, 35. Rutting deer

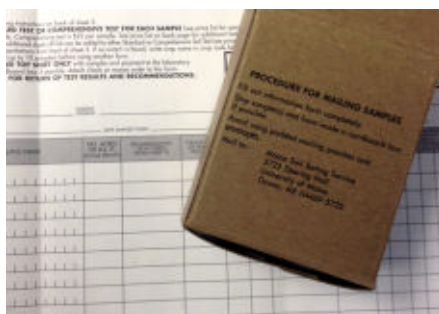
Bucks rub antlers on trees to remove velvet and attract females. Young trees are most susceptible. Fencing is the best way to prevent damage but tree guards and repellent sprays can help. Damaged trees become stunted and are often removed.

## SOIL IMPROVEMENT



### F36. Safe manure

Aged manure is great for a garden unless it is laden with herbicide. Talk to the farmer or landscaper who provides you with manure. Make sure it is free of herbicide or your garden may be fruitless for years!



### F37. Test your soil

A soil test can lead to higher yields in the garden and healthier plants in the landscape. You will learn nutrient levels, acidity, salinity and organic matter levels. Extension offices have soil testing materials.



### F38. Add peat moss

Almost every garden in ND would benefit from the addition of an inch of sphagnum peat moss to the soil. It loosens the soil, helps it to hold onto water and nutrients, and acidifies the land. Mix it into the soil this fall.

## LAWNS



### F39. Dormant seeding

Filling in bare spots? Don't sow now; the seedlings won't survive winter. Wait until November; this seed will sprout in spring. Sow seed, lightly incorporate in soil, and irrigate once.



### F40. Last mowing

A tall turf is bad over winter. It attracts rodents and is subject to mold. Cut your turf at normal height or slightly lower (1.5–2.0 inches).

- Tree Leaves Matching Answers:**
1. Oak, Burr (*Quercus macrocarpa*);
  2. Elm, American (*Ulmus americana*);
  3. Basswood (Linden) (*Tilia americana*);
  4. Chokecherry (*Prunus virginiana americana*);
  5. Willow, Weeping (*Salix babylonica*);
  6. Buckeye (*Aesculus glabra*);
  7. Honeylocust (*Gleditsia triacanthos*);
  8. Ash, Green (*Fraxinus pennsylvanica*);
  9. Maple, Silver (*Acer saccharinum*);
  10. Cottonwood (*Populus deltoides*);

# Weather Almanac for September 16–30, 2015

| Site         | TEMPERATURE     |      |     |     | RAINFALL   |      |       |       | GROWING DEGREE DAYS <sup>1,2</sup> |      |       |      |
|--------------|-----------------|------|-----|-----|------------|------|-------|-------|------------------------------------|------|-------|------|
|              | September 16–30 |      |     |     | Sep. 16–30 |      | 2015  |       | Sep. 16–30                         |      | 2015  |      |
|              | Avg             | Norm | Max | Min | Total      | Norm | Total | Norm  | Total                              | Norm | Total | Norm |
| Bottineau    | 56              | 53   | 85  | 28  | 2.74       | 0.66 | 12.11 | 15.14 | 152                                | 112  | 2084  | 2073 |
| Bowman       | 61              | 54   | 91  | 35  | 0.83       | 0.69 | 13.14 | 13.18 | 189                                | 126  | 2168  | 2160 |
| Carrington   | 59              | 55   | 85  | 30  | 0.05       | 0.86 | 13.99 | 17.10 | 167                                | 124  | 2204  | 2235 |
| Crosby       | 57              | 51   | 86  | 34  | 0.29       | 0.59 | 12.86 | 12.99 | 146                                | 106  | 2101  | 1927 |
| Dickinson    | 62              | 53   | 89  | 41  | 0.23       | 0.75 | 10.40 | 14.46 | 196                                | 130  | 2305  | 2142 |
| Fargo        | 62              | 56   | 91  | 35  | 1.26       | 1.13 | 17.55 | 18.60 | 181                                | 123  | 2507  | 2386 |
| Grafton      | 59              | 53   | 89  | 30  | 0.87       | 1.09 | 26.05 | 17.79 | 155                                | 118  | 2238  | 2089 |
| Grand Forks  | 62              | 54   | 94  | 28  | 0.04       | 0.95 | 12.62 | 17.28 | 189                                | 116  | 2359  | 2137 |
| Hazen        | 59              | 56   | 90  | 26  | 0.69       | 0.72 | 11.69 | 14.50 | 187                                | 148  | 2238  | 2357 |
| Hillsboro    | 60              | 55   | 92  | 30  | 0.40       | 1.05 | 13.31 | 17.91 | 173                                | 116  | 2316  | 2253 |
| Jamestown    | 61              | 54   | 90  | 36  | 0.15       | 0.97 | 16.50 | 16.75 | 176                                | 116  | 2378  | 2212 |
| Langdon      | 58              | 51   | 84  | 29  | 3.40       | 0.89 | 16.74 | 16.69 | 146                                | 94   | 2029  | 1782 |
| Mandan       | 62              | 55   | 88  | 33  | 0.31       | 0.74 | 13.63 | 15.48 | 192                                | 123  | 2381  | 2227 |
| Minot        | 59              | 53   | 87  | 34  | 0.80       | 0.69 | 14.17 | 15.45 | 165                                | 104  | 2226  | 2028 |
| Mott         | 61              | 54   | 88  | 33  | 0.64       | 0.67 | 13.11 | 14.18 | 190                                | 136  | 2261  | 2238 |
| Rugby        | 58              | 52   | 85  | 32  | 0.94       | 0.88 | 12.24 | 16.91 | 160                                | 115  | 2170  | 2069 |
| Wahpeton     | 63              | 57   | 94  | 32  | 0.11       | 1.33 | 13.23 | 18.74 | 191                                | 133  | 2443  | 2494 |
| Watford City | 60              | 53   | 91  | 35  | 0.40       | 0.48 | 11.28 | 12.59 | 170                                | 127  | 2331  | 2152 |
| Williston    | 59              | 56   | 91  | 38  | 0.13       | 0.57 | 10.53 | 12.39 | 163                                | 145  | 2364  | 2428 |
| Wishek       | 61              | 54   | 88  | 38  | 0.35       | 0.97 | 14.83 | 18.01 | 171                                | 114  | 2259  | 2034 |

## DAYLENGTH (Sep. 30, McClusky, center of ND)<sup>3</sup>

Sunrise: 7:38AM

Daylength: 11h 47m

Sunset: 7:26PM

Change since Sep. 16: -48m

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

Oct. 6–10: Temp: Above Normal; Precip.: Normal

Oct. 8–14: Temp: Above Normal; Precip.: 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, and National Weather Service, respectively.

## Credits

### Sources:

- Bratsch, A. 2008. Protect valuable landscape trees from rutting deer. University of Illinois Extension.
- Chinery, D.C. Schmitt, W.Nelson and J. Kao-Kniffin. 2012. Examination of a new iron-based herbicide for broadleaf weed management. Cornell University Report.
- Naeve, L. 2005. Corn gluten meal—A natural weed and feed for lawns and gardens. Iowa State University.
- National Pesticide Information Center. 2013. Pesticides and children. <http://npic.orst.edu/healthy/child.html>.
- Smith-Fiola, D. and S. Gill. 2014. Iron-based herbicides: Alternative materials for weed control in landscapes and lawns. University of Maryland Extension.
- University of Minnesota. 2015. Materials for composting. University of Minnesota Extension.

Photos were made available under Creative Commons licenses specified by the photographers. Prefixes of photos are "www.flickr.com/photos/" unless noted otherwise: 1. Csaba Deli; **TREES:** Marilylle Soveran, .../86953562@N00/10247325426/ and .../86953562@N00/7402633474/; .Bambo., .../bambolia/4542334907/; Marilylle Soveran, .../

86953562@N00/8017986027/; Ronald Kielb, .../53874483@N03/5085525306/; Bob Gutowski, .../versicolor/5091156544/; Dendroica cerulea, .../dendroica/6235979340/; arbyreed, .../19779889@N00/7441778268/; NatureServe, .../natureserve/13412216795/; Ecology Resource, .../132494215@N07/17889449154/; 12. outdoor PDK, .../21202718@N00/305305281/; **HERBS:** YoungDoo M. Carey, .../youngdoo/173896654/; Rick Bolin, .../92425664@N07/8686706886/; Julia Manzerova, .../julia\_manzerova/4702121098/; **TOMATOES:** Andrea R., .../andrea\_r/41992649/; Dan Polley, .../polleydan/8077679838/; Chris Campbell, .../cgc/1198276457/; **LARCHES:** Margrit, .../27126314@N03/4113654687/; Anneli Salo, [https://commons.wikimedia.org/wiki/File:Larix\\_sibirica\\_-\\_Siperianlehtikuusi,\\_Sibirisk\\_%C3%A4rk,\\_\\_Siberian\\_larch\\_IMG\\_9213\\_C.JPG](https://commons.wikimedia.org/wiki/File:Larix_sibirica_-_Siperianlehtikuusi,_Sibirisk_%C3%A4rk,__Siberian_larch_IMG_9213_C.JPG); Tatters, .../tgerus/7818907532/; 22. LearningLark, .../44282411@N04/6964960817/; 23. Provence | Garlic Market, .../fxp/1170887606/; 24. Michael Leland, .../mleilandpix/8044954745/; 25. Fredrik Alpstedt, .../alpstedt/11025803586/; 26. wongaboo, .../27146806@N00/15228654692/; 27. the\_green\_squirrel, .../the\_green\_squirrel/5544154272/; 28. Parshotam Tal Tandon, .../13070711@N03/7704032882/; 29. TexasEagle, .../texaseagle/8648316311/; 30. F. D. Richards, .../50697352@N00/2927867581/; 31–33. Tom Kalb, NDSU; 34. Tom, .../amayzing/14981393460/; 35. David Mooter, Prairie

Silvics, Inc., Bugwood.org; 36. Malene Thyssen, <http://commons.wikimedia.org/wiki/User:Malene>; 37. Kate, .../blueberryfiles/11818771983/; 38. Kevin, .../idiolactor/14839675/; 39. Matt Lowden, .../matthewlowden/3594670268/; 40. Michael McGimpsey, .../michaelmcgimpsey/9962709565/.

Written by Tom Kalb. Thanks to Adnan Akyuz for contributing to the report.

The information given herein is for educational purposes only. References to a commercial product or trade name are made with the understanding that no discrimination is intended and no endorsement by the North Dakota Extension Service is implied.

NDSU Extension Service, North Dakota State University of Agriculture and Applied Science, and the U.S. Department of Agriculture cooperating. Chris Boerboom, Director, Fargo, North Dakota. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. We offer our programs and facilities to all persons regardless of race, color, national origin, sex, handicap, age, Vietnam era veterans status, or sexual orientation; and are an equal opportunity employer. This publication will be made available in alternative formats for people with disabilities upon request (701) 231-7881.