

Dangerous Weed Invades ND

A very aggressive weed has been discovered in North Dakota. Palmer amaranth was detected in a farmer's field in McIntosh County.

The Weed Science Society of America voted Palmer amaranth as the most troublesome weed in the USA. Retired NDSU Extension Weed Specialist Rich Zollinger claims Palmer amaranth is the most serious weed threat that farmers in North Dakota have ever faced.

Why is everyone worried?

Adapts Quickly to Stresses. Each Palmer amaranth plant has either male or female flowers; but not both. This forces each plant to cross with a different plant and prevents inbreeding. This genetic diversity allows it to adapt quickly to different climates and stresses.

For example, one herbicide-resistant male plant can spread its pollen to female plants throughout the field, increasing levels of herbicide resistance in millions of their seeds.

This desert weed from Mexico has adapted to the climates of the Mississippi Delta and Upper Midwest. It has developed resistance to Roundup and many herbicides.

Grows Aggressively. It grows up to 3 inches a day and 8 feet tall. The plants can overwhelm crops and damage farm equipment. The seeds germinate all summer and pieces of cut plants as small as 1 inch may resprout.



Palmer amaranth towers above a field of soybeans. Its stalks are massive and can damage equipment. This weed can be identified by its long petioles (note the petiole has been folded and is much longer than the leaf blade) and a spine on each leaf tip.

Produces Many Seeds. Each female can produce 100,000 or more seeds.

What does it look like?

It is a relative of redroot pigweed, waterhemp and love lies bleeding. It can be distinguished by its leaf petiole, which is long as or longer than its leaf blade. Its leaves have spines on their tips (see photos).

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Bumper Crop of Crabgrass

Do you love summer? Crabgrass does. *Crabgrass loves the heat.* That's why it grows near driveways and sidewalks.

Last year was great for crabgrass. While our home lawns turned gold and crispy during the drought, crabgrass grew strong and produced lots of seeds.

These seeds germinated this spring and grew well during our unusually warm summer. Crabgrass can be seen everywhere now. Its seedstalks are shooting out like fingers reaching for the sky.

Crabgrass a.k.a. fingergrass, may be thriving today, but not for long. Every crabgrass plant in your yard today will die from the first hard frost.

The key to controlling crabgrass is to prevent it from dropping its seeds before the frost strikes. The plants can be easily pulled out or you can mow off the seedstalks.



Crabgrass thrives in hot spots. Its finger-like seedheads are showy now.

To prevent crabgrass from being a problem next year, you can use a herbicide that kills it before it emerges. Lawn fertilizers sold in spring often include a crabgrass preventer (for example, Scotts Turf Builder with Halts Crabgrass Preventer). These types of fertilizers need to be applied *before* the crabgrass emerges, which is in early May.

Another option is to use a broadleaf weed killer that contains

quinclorac (for example, Weed B Gon Plus Crabgrass Control). It will kill young crabgrass plants as well as dandelions and other broadleaf weeds.

New Weed

(continued from page 1)

Will we ever see Palmer amaranth in our gardens?

It's possible. The tiny seeds are readily spread by birds, wind, manure and equipment. Seeds may contaminate bird seed mixes, potting soil and hay.

How do we control it?

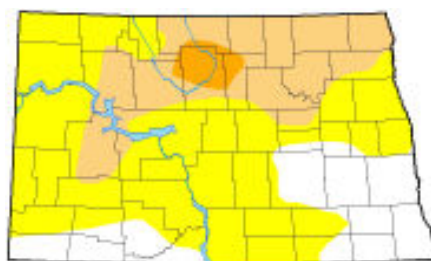
The same way we control other weeds in the garden: a sharp hoe. Kill the weed before it goes to seed. Pick up the cut weeds since they can resprout.

Palmer amaranth resists the most commonly used herbicides used in gardens: trifluralin (Preen) and glyphosate (Roundup). Deep plowing and the use of cover crops can help. Frost will kill the plants in fall.

Contact your local NDSU Extension agent if you ever see it. More information is available at <https://www.ag.ndsu.edu/palmeramaranth/>.

Drought Persists

Little has changed across the state over the past week. Soils in most of North Dakota remain dry. Drought conditions persist in the north with hardest hit areas being in the central region. Temperatures have cooled off but we still need more rain.



August 28, 2018

- Moderately dry (*crop growth slowed*); 80% of state.
- Moderate drought (*crop damage, voluntary water use restrictions*); 26% of state.
- Severe drought (*crop losses likely, water use restrictions*); 3% of state.
- Extreme drought (*major crop losses, widespread water use restrictions*); 0% of state.
- Exceptional drought (*widespread crop losses, water emergencies*); 0% of state.

Plant Health Care

Fruits and Vegetables



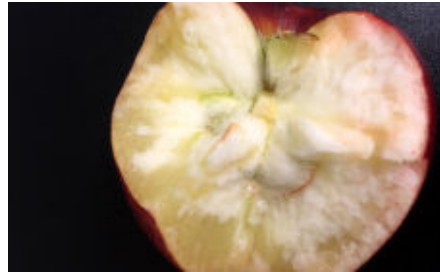
Harvesting Apples

Harvest when the background color (seen at the top of fruit) turns from green to yellow. The fruit will come off easily. Use an upward and twisting motion to avoid damaging the knobby spurs, where next year's fruits develop.



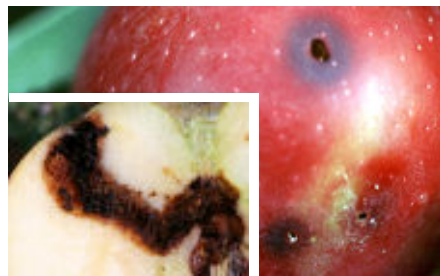
Anthracnose

Black, sunken spots appear on ripe fruits, especially those resting on soil. Harvest regularly to prevent overripe fruits. Keep soil clean of rotting fruits. Stake/cage vines to get fruits off the soil. Avoid overhead watering. Clean debris in fall.



Watercore

Air pockets inside the fruit become filled with sugary liquid. Fruits are very sweet but will not store long. Many factors may cause watercore, including the susceptibility of the cultivar, low calcium, high nitrogen and poor yield.



Codling Moth

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.



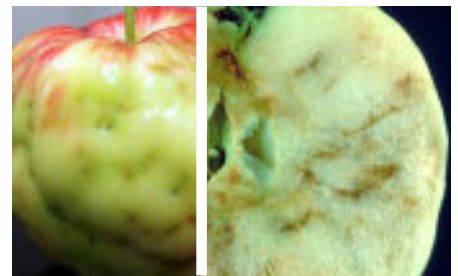
Bacterial Spot

Corky spots (diameter of pencil eraser) appear on fruits. Occurs under warm temps (mid 70s to 80s). Spots develop on vines. Stay out of garden and wounding vines when vines are wet. Copper sprays will prevent spread.



Wasps

Wasps are looking for food and will be attracted to wounded/cracked fruits. Be cautious when harvesting fruits or picking up fallen fruits. The wasps will die after a hard frost.



Apple Maggot

Fruits develop dimples where flies laid eggs (*left*). Maggots hatch and burrow trails inside (*right*). Pick up fallen fruits. Hang traps in July to monitor for flies. Insecticides can protect fruit next year.



Forked Carrots

Usually found in rocky or compacted ground, or when fresh manure is used. A loose, fertile seed bed is critical. Thin seedlings to avoid overcrowding.

Plant Health Care

Trees and Shrubs



Bacterial Blight on Lilac

Brown spots appear on leaves in spring; branches die back during summer. Trim out infected branch tips going several inches into symptomless wood. Sterilize pruners between cuts. Spray copper sulfate 2–3 times at 7–10 intervals beginning when buds swell next spring.

Hydrangea Leaf Scorch

Notice the brown edges. New shrubs are especially sensitive. Irrigate deeply when needed. Rock mulches generate heat and should be avoided; shredded bark or wood chips are better. Avoid locations with harsh afternoon sun.

Fire Blight on Mountainash

Branch tips wilt and look scorched. Use the “ugly stub” technique: Prune tips going 8 or more inches into symptomless wood, leaving a stub of at least 4 inches in 2-year or older wood. Sterilize pruners between cuts. Mark the “ugly stubs” with paint and remove in winter.



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.

Powdery Mildew

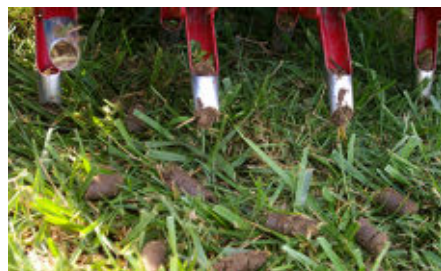
Gray blotches appear. Rose, lilac and honeysuckle are affected, especially in shady spots with poor air circulation. Rake fallen leaves. Prune next year to increase sunlight and air movement.

Lawns



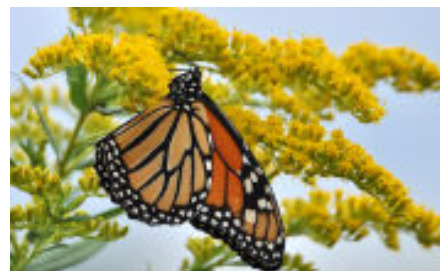
Fertilize

Early September is the most critical time to fertilize the lawn. This feeding will repair damage caused by summer, develop a thicker turf and stronger root system, and prepare the lawn for winter.



Aerate

Fall is the best time to aerate a lawn. Use a self-propelled unit with vertically operating, hollow tines. Two to four passes are best. Aeration is especially beneficial in compacted or thatchy soils.



Wildflower Meadows

Kill a patch of lawn with glyphosate. Cultivate two weeks later and sow seeds. Seeds will germinate next year. Sowing guides are available online from northern prairie seed companies.

Weather Almanac for August 26–September 1, 2018

Site	TEMPERATURE ¹				RAINFALL ^{1,4}				GROWING DEGREE DAYS ^{1,5}			
	Aug 26–Sep 1				Aug 26–Sep 1		2018		Aug 26– Sep 1		2018	
	Avg	Norm	Max	Min	Total	Norm	Total	Norm	Total	Norm	Total	Norm
Bottineau	60	64	91	36	0.71	0.40	8.85	11.87	77	84	1931	1788
Bowman	59	65	90	38	0.38	0.20	10.51	10.04	71	91	1863	1845
Carrington	61	65	86	41	0.19	0.51	8.88	13.47	79	89	2077	1929
Crosby	58	62	89	39	0.12	0.33	7.62	10.37	71	81	1923	1654
Dickinson	61	64	91	39	0.32	0.34	10.13	11.45	75	91	2026	1822
Fargo	65	66	80	49	1.92	0.65	13.96	13.52	90	97	2366	2073
Grafton	63	64	81	44	0.50	0.72	10.85	13.35	78	84	2066	1795
Grand Forks	63	64	80	47	0.71	0.62	11.89	13.28	75	85	2153	1847
Hazen	61	66	94	38	0.65	0.35	7.25	11.64	77	97	2003	2004
Hillsboro	62	65	80	44	0.62	0.56	11.64	13.57	78	91	2152	1959
Jamestown	60	65	82	44	0.11	0.56	16.92	12.79	70	88	2015	1921
Langdon	60	62	81	40	0.97	0.53	8.35	13.45	71	73	1847	1539
Mandan	62	65	85	41	0.54	0.40	13.09	12.59	79	91	2119	1923
Minot	60	64	90	40	1.13	0.43	8.25	11.92	76	84	2050	1761
Mott	60	65	94	35	0.25	0.31	8.22	10.83	77	94	1994	1901
Rugby	60	63	89	40	1.10	0.41	9.47	13.19	75	82	1985	1781
Wahpeton	64	67	80	44	0.26	0.67	13.97	13.95	85	103	2283	2159
Watford City	61	64	88	43	0.55	0.28	8.69	10.10	77	87	2027	1841
Williston	61	67	88	42	0.47	0.33	9.78	9.89	77	103	2039	2077
Wishek	62	64	84	44	0.70	0.42	12.49	11.53	74	85	1988	1747

DAYLENGTH (Sep 3, McClusky, center of ND)²

Sunrise: 7:03 AM Daylength: 13h 17m
 Sunset: 8:20 PM Change since Aug 27: -23m

LONG-TERM OUTLOOKS³

Sep 8–12: Temp.: Normal; Precip.: Above Normal
 Sep 10–16: Temp.: Normal; Precip.: Normal

^{1,2,3} Sources: North Dakota Agricultural Weather Network, www.sunrisesunset.com, and National Weather Service, respectively.

^{4,5} Rain data begin April 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.

Credits

Sources:

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- Bugwood.org; NDSU, www.ag.ndsu.edu/palmeramaranth/. **Page 2:** Joseph Berger, Bugwood.org; Steve Dewey, Utah State University, Bugwood.org; Drought Monitor, University of Nebraska-Lincoln.
- Page 3:** Desertrose7 via Pixabay; Ron and Kathy Wiederholt, NDSU; Nathan Feir, www.flickr.com/photos/vanmorbo/1580524725/; Whitney Cranshaw, Colorado State University, Bugwood.org; Ward Upham, Kansas State University, Bugwood.org; Kelsey Deckert; E.H. Glass, New York State Agricultural Experiment Station, Bugwood.org; Sheldon Gerhardt, NDSU; Mary Ann Hansen, Virginia Polytechnic Institute & State University, Bugwood.org; Samuel Huckins, www.flickr.com/photos/samuelhuckins/5825270283/. **Page 4:** Alicia Harstad, NDSU; William Jacobi, Colorado State University, Bugwood.org; Beth Burdolski, NDSU; Tom Kalb, NDSU; Scot Nelson, www.flickr.com/photos/scotnelson/8274383448/; Hans via Pixabay; Paul Tukey, <http://www.safelawns.org/blog/2010/10/now-is-the-time-to-aerate-if-you-must/>; Putneypics, www.flickr.com/photos/38983646@N06/4988268821/.
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