

SDSU Seednews

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Special points of interest:

- Watertown Farm Show Feb 7th thru 11th.
- Samples Due for State Crop Show Feb 2nd
- SDCIA Spring Board Meeting Feb 24th

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Seed ID – Palmer Amaranth

Doug Miller Executive Director Illinois Crop Improvement Association

It is a misnomer that Palmer amaranth can be definitively identified by visual analysis of the seed. The NRCS website lists 49 *Amaranthus* species. Other weedy members of the genus include smooth pigweed, redroot pigweed, Powell amaranth, spiny amaranth, tumble pigweed, prostrate pigweed and waterhemp. These amaranths have similar seed morphology requiring additional analysis to definitively differentiate seed to the species level.

However, seed analysts are being asked to analyze samples of feed, seed, and other agricultural commodities originating

from areas where Palmer amaranth is common. Currently the seedling growout method is the most readily available technique for identification to the species level. Molecular testing of leaf tissue samples can be performed (University of Illinois) and the direct testing of *Amaranthus* seeds appears promising but is still under development (California Department of Food & Agriculture). Time, space and cost make any identification technique an added investment to seed testing.

Editorial

Amaranthus palmeri can be spread by agricultural products like feed, mulch, seed and equipment as well as wildlife, in particular ducks and geese. Most seed companies that work across state lines ask for an "all states noxious weed exam." Only a few states currently classify Palmer amaranth as a noxious weed. Lab reports may state Amaranth species, or pigweed, due to the inability to definitively differentiate the species visually. Along with resistance to multiple classes of herbicides Palmer amaranth is a prolific seed producer making an ounce of prevention worth a pound of cure.

Inspecting production fields, equipment and storage facilities under NAISMA's Weed Free Forage program would be one way to address the challenges of postharvest weed seed exams in the lab.

Regardless of the method of analysis it is impossible to test the entire lot of seed in question. Identify the risk and manage your seed products pre and post-sale to help slow the establishment of Palmer amaranth in your sales territory.

Doug Miller, Illinois Crop Improvement Association

Palmer Amaranth Continued

The cotyledon leaves of Palmer amaranth are relatively long compared with other *Amaranthus* species. Like all weedy *Amaranthus* species in Illinois, the true leaves (those produced after the cotyledon leaves) of Palmer amaranth have a small notch in the tip. The stems and leaves have no or few hairs and the stems feel smooth to the touch. Leaves are alternate on the stem and are generally ovate or egg-shaped with prominent white veins on the underside. As plants become older, they often assume a poinsettia-like appearance and sometimes have a white or purple chevron on the leaves. Leaves are attached to the stem by petioles that are usually as long, or longer than, the leaf.

Guidelines for the Identification and Management of Palmer Amaranth in Illinois Agronomic Crops 2013 Aaron G. Hager



Photos: University of Illinois. Prepared by Illinois Crop Improvement Association Oct 2016. All rights reserved. www.ilcrop.com

Note on previous article

While it may seem like Illinois is half way across the United States to South Dakota, the problems that they are facing with Palmer Amaranth (Palmer Pigweed) are tough ones. At the present time there is not a problem in South Dakota but just across the line into Minnesota there is one. Minnesota Department of Ag has implemented very good measures to control and contain the areas where this is a problem. This article from Doug Miller with Illinois Crop Improvement does a very good job in explaining the problems that the industry will and is facing regarding the identification and control of Palmer Amaranth.

State Crop Contest

This year the State Crop Contest will be held during the Watertown Winter Farm Show, February 7th thru the 11th. Every year SDCIA hosts the Crops Contest and for several years now the number of entries has been declining. In an effort to increase interest in the show the SDCIA will be sponsoring a \$1000.00 donation. Anyone who enters to contest is eligible for the drawing. The winner of the drawing will get to designate a South Dakota 4-H Club or FFA Chapter that will receive the donation. The classes and entry requirements are posted on the Watertown Chamber of Commerce web site: www.watertownsd.com and will be posted on the Watertown Winter Farm Show web site (www.watertownwinterfarmshow.com) at a later date.

Watertown Winter Farm Show and State Crop Contest

This year the Watertown Winter Farm Show will be February 7th through the 11th. Held in conjunction with the Farm Show is the State Crops Contest. The classes for the show have been reworked as follows:

Classes:

Grain Crops – Plaque for Champion and Reserve Champion

Small Grains – Ribbon for top 3

Spring Wheat, Winter Wheat, Durum Wheat, Oats, Rye, Barley, Flax

Row Crops - Ribbon for top 3

Corn – Shelled, Corn – Dent (10 Ears Required), Corn – Flint (10 Ears Required), Corn – Pop (10 Ears Required), Soybeans, Sorghum, Safflower, Sunflowers – Oil Seed, Sunflowers – Confectionary Seed

Forages – Plaque for Champion and Reserve Champion

Hay - Ribbon for top 3

Alfalfa, Legume and Grass Mixture, Prairie Hay, Tame Grass Hay

Silage - Ribbon for top 3

Corn Silage, Legume and grass Mix Silage, Sorghum Silage, Small Grain Silage, Alfalfa-Haylage, High Moisture Corn

Winter Wheat Breeding Program Receives USDA Grant

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SDSU winter wheat breeding program got a USDA-NIFA grant to search for wheat yield genes. Fifteen wheat breeding programs in the US including SDSU were funded (WheatCAP) to work on identifying a gene that can increase wheat productivity. Each breeding program will receive a support of \$430,000 for the next 5 years to work towards cloning and characterization one gene that can enhance wheat yield and make wheat more profitable and sustainable. One PhD student will work on this project for the next five years.

Fax Number and E-mail Addresses

The Fax number for SDCIA has changed to 605-688-5249. With the changes in technology and the little use that our dedicated fax line was being used we are sharing with the State Seed Lab for the fax line.

If you would like to **receive our newsletters and directories electronically please send me the e-mail address that you would like to use at Neal.Foster@sdstate.edu.** This fall there was a problem with the printers, their folding machine was down resulting in several days delay for the winter wheat directory. Your e-mail address will be kept confidential and only used for SDCIA business.

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• STATE CROP SHOW ENTRY RULES •

1. No entry fees will be charged.
2. All entries must have been grown in South Dakota in 2016 by the Exhibitor.
3. An exhibitor may make as many entries as they wish.
4. All exhibits must conform to the amount specified. Smaller exhibits will be displayed but will not be eligible for awards.
5. Every exhibit must be properly labeled with (a) name of exhibitor, (b) address, (c) county, (d) variety/hybrid and (e) lot entry number.
6. All entries shipped must be received by Thursday, February 2, 2017.

Entries should be shipped to:

**Watertown Winter Farm Show
c/o Codington County Extension Office
1910 West Kemp Avenue Watertown,
SD 57201-3048**

Allow sufficient delivery time for UPS or mailed shipments.

7. Exhibits personally brought to the show must be entered by 12 noon, February 3, 2017.
8. Exhibits must be removed from 2 to 4 pm on Saturday, February 11, 2017.
9. Three ribbon placing's will be made. Plaques will be awarded for Grand Champion and Reserve Champion for Grain Crops and Forages.
10. Each entry made by a contestant will be eligible for a prize drawing of a \$1000.00 donation, made by the South Dakota Crop Improvement Association in the contestants name to a South Dakota 4-H Club or FFA Chapter of their choice.