Palmer Amaranth (Amaranthus palmeri)
Management in Minnesota Conservation Plantings

Shane Blair
Noxious Weed and Hemp Programs
Minnesota Department of Agriculture

Curtis Olson, University of Minnesota Extension; Monika Chandler, Minnesota Department of Agriculture; Donald Opdahl, Minnesota Department of Agriculture; Dustin Looman, Conservation Corps Minnesota and Iowa; Zachary Dieterman, Conservation Corps Minnesota and Iowa; Anthony Cortilet, Minnesota Department of Agriculture
Palmer Amaranth Background

- Native to the southwestern US and Mexico
- Annual with high seed production
- Dioecious - both male and female plants
- Reproduces by seed - estimated up to ½ million/plant
- Spread over large areas by farm equipment, livestock, and forages
- A problem in row crops
  - Herbicide resistant to multiple modes of action
Minnesota Noxious Weed and Seed Law

• In 2014, The commissioner approved the emergency recommendation of the Minnesota Noxious Weed Advisory Committee to list Palmer amaranth as a Prohibited Noxious Weed on the Eradicate List.

• 2016 - November - Listed Palmer Amaranth listed as a Prohibited Weed Seed (zero tolerance) for seed sold in Minnesota, STAT AUTH 21.85 subd 11- HIST:9 SR 693, 1510.0271 - Signed November, 2016
Status of Palmer amaranth

- Added as a prohibited noxious weed seed in 2016
- Genetic testing developed to identify the species
- All seed must be tested appropriately to ensure that Palmer amaranth or any other prohibited noxious weed seed is not a contaminant
- Genetic testing is required if any pigweed seed is found in a seed lot
- Routine seed sampling is used to determine compliance with the MN Seed Law
2016 Initial Surveys
Sanitation
Spring 2017 Site Burns
Spraying Palmer in Yellow Medicine County 6/08/17
2018 Spring Burn
2018 Spring Burn
DNA SAMPLES FOR GENETICS AND HERBICIDE RESISTANCE

• In 2016 and 17, MDA collected both leaf and seed samples from all counties to confirm genetics

• No resistance to glyphosate or PPO classes within the conservation plantings

• 2 new finds in row crops by farmers in the last month. Herbicide resistant to at least Glyphosate.
Working with the University of Minnesota Extension to explore the use of remote sensing.

- Only have imaged fields to date

Uninhabited Aerial Vehicle (UAV)
Partners

- Private Landowners and Growers
- Crop Consultants
Acknowledgement to:

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