

2023 WATERHEMP QUESTIONNAIRE

PURPOSE: Waterhemp is a prolific and competitive weed that has biotypes resistant to multiple herbicide groups. The purpose of this survey is to gather information on the distribution of waterhemp and associated farming practices to inform the development of effective management programs. Location information will be used for research purposes only; mapping of the distribution of waterhemp for publication purposes will only be done at the level of the municipality.

INSTRUCTIONS: Fill out the tables below to the best of your ability for a single field. If multiple fields have waterhemp present, please fill out additional questionnaires.

Please forward the completed questionnaires to the following email address:

CPHCsecretariat@gmail.com.

We thank everyone who participates in this initiative!

Date: _____

Farm name:			
Producer name:			
Phone number:			
E-mail:			
Field Address:		Field #:	
Municipality:			

1. Waterhemp Presence		
1.1. What was the percentage cover of waterhemp in the field?		
<1%	1-5%	6-25%
26-50%	51-75%	>75%
1.2. What was the predominant stage of waterhemp found?		
Seedling: 2 true leaves or less		
Vegetative < 10 cm (vegetative stage measuring less than 10 cm)		
Vegetative > 10 cm (vegetative stage measuring more than 10 cm), no flowers present		
Vegetative > 10 cm (vegetative stage measuring more than 10 cm), flowers or seeds present		
1.3. What was the general distribution of waterhemp in field?		
Isolated plants	Plants in rows	
Patches of plants	Randomly distributed plants	
1.4. Has waterhemp been present in this field in the past? If so, what year do you think it was present in this field?		
NO		
YES <i>If yes, specify year of first detection:</i>		
1.5. What other species of pigweed (amaranth) are present? Please check all that apply		
Redroot pigweed	Green pigweed	Prostrate pigweed

Smooth pigweed Other:	Tumble pigweed Unidentified species	None I do not know
1.6. Are you aware of the presence of waterhemp elsewhere within the municipality that you farm?		
NO YES		
1.7. Have you changed any on-farm practices in response to the detection of waterhemp within your municipality or field?		
NO YES <i>If yes, please list changes:</i>		
1.8. Do you plan to test the waterhemp population for herbicide resistance?		
NO YES		
1.9. How does the presence of waterhemp (herbicide resistant or not) affect your business? Choose all the options that apply to you.		
No effect Increased production cost Loss of crop quality Loss of opportunity to have (receive) contractor services Loss of opportunities to offer contractor services Reduction of crop marketing opportunities (loss of market) Other (specify):		
1.10. What is the estimated average cost of waterhemp on your farm, caused either by loss of yield or crop quality or increased inputs (e.g., herbicides)?		
Less than \$10/ha \$31-40/ha There is no cost	\$11-20/ha \$41-50/ha I don't know	\$21-30/ha More than \$50/ha

2. Current Crop (2023 Growing Season)
2.1. What crop and variety is currently being grown in the field? Please note any hybrid technologies.
2.2. When was the crop planted?

3. Tillage Methods

3.1. Was the field tilled in the fall or spring? Please select the tillage method used and specify the number of times that you used each implement.

No (please skip to question 4)

Method	# of Times fall / spring <i>e.g. 1/0</i>
Conservation/reduced tillage	
Conventional/deep tillage	
Other methods	

4. Cover Crops

1.1. Please indicate if you planted a cover crop. *List all crops and provide details on planting.*

Cover Crop	Planting Details (e.g., underseeded, off season)

5. Weed Management

5.1 Please fill out the table with information regarding herbicide products applied for the current crop.

Herbicide Name	Date
I. Herbicide(s) applied pre-harvest last year:	
II. Herbicide(s) applied post-harvest last year:	
III. Herbicide(s) applied pre-emergence this year:	
IV. Herbicide(s) applied post-emergence this year:	

5.2. Do you rotate herbicides?

NO

YES

If yes, please describe the rotation you use:

5.3. Do you do hand weeding?

NO

YES

If yes, please estimate the number of hours spent weeding per hectare:

6. Fertilizer Practices

6.1. Do you bring in manure or municipal compost from outside the farm? *Please check.*

NO *If no, please skip to section 7*

YES

6.2. In relation to any externally sourced manure/municipal compost, please specify its:

Type	Source	Rate of Application

7. Field History

7.1. What crops have been grown and herbicides used in the field in the past 3 years? *Please specify crop and variety and note any hybrid technologies.*

Year	Crop and Variety	Herbicides applied:
2022		Before seeding or crop emergence
		After crop emergence
		Pre-harvest
		After harvest
2021		Before seeding or crop emergence
		After crop emergence
		Pre-harvest
		After harvest
2020		Before seeding or crop emergence
		After crop emergence
		Pre-harvest
		After harvest

8. Service Contracting

8.1. Do you use any agricultural service contractors and/or do you provide any services to other farms? Please check.

NO *If no, please skip to question 9.1*

YES

8.2. If you checked “yes”, please list the services being contracted out and/or provided (e.g. tillage, seeding, weeding, spraying, etc.)

Agricultural service contractors used on farm

Services provided to other farms

8.3. Do contractors clean their machinery before entering the fields?

NO

YES

I don't know

9. Biosecurity Measures to limit the dispersal of weeds

9.1. What biosecurity measures do you implement on your farm?