

## 2014 Survey of Michigan Organic Vegetable and Field Crop Growers

The goal of this survey is to better inform Michigan State University researchers on the production practices, and needs of organic growers. It is intended to inform research by the Sustainable Vegetable Lab at Michigan State University. Your participation in this survey is voluntary and will provide information to be used in the design and implementation of horticultural and agronomic production research projects so they may more accurately reflect the current practices, resources and priorities of organic farmers in Michigan.

**Your responses to this survey are voluntary and will be kept confidential.** Your responses, or any information that may be traced to you, will not be disclosed in reports on survey results. **Completion of this survey is entirely voluntary;** you may withdraw from the survey at any time. You will not incur any penalty or loss of benefits for choosing to not take this survey or from withdrawing from the survey. **Respondents will be compensated with \$15,** which will be mailed to participants upon receipt of the survey. Results summarizing responses of all participants may be published in scholarly journals or extension bulletins.

We estimate it will take you approximately 30 minutes to complete this survey. You must be at least 18 years of age. We encourage your participation even if you are not organically *certified*, but a portion of your land (owned or rented) must be farmed according to the National Organic Program Certification Standards.

If you have any questions about the research you may contact:

Carolyn Lowry, PhD Candidate- Michigan State University Dept. of Horticulture [lowrycar@msu.edu](mailto:lowrycar@msu.edu)

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If you have questions about your rights as a research participant, or are dissatisfied at any time with any aspect of this work, you may contact – anonymously if you wish – Gail Drummer, PhD, Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone: (517) 355-2180, fax (517) 432-4503, email: [ucrihs@msu.edu](mailto:ucrihs@msu.edu), or postal service: 202 Olds Hall, East Lansing, MI 48824

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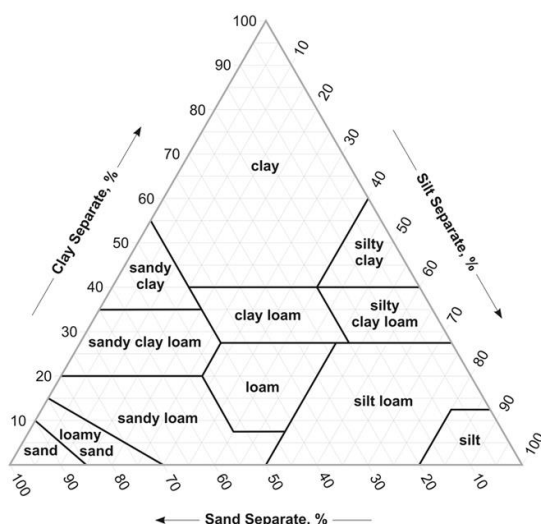
**By checking this box, you are affirming that you have read the information above and voluntarily agree to participate in this survey.**

**DUE DATE: March 20, 2014**

**Please return your completed survey in the enclosed pre-addressed envelope. We will mail \$15 to you upon receipt of the survey.**

**Section 1: Farm Characteristics:**

- How many years have you been farming?  
☐ 5 years or less    ☐ 6 to 10 years    ☐ 11 to 15 years    ☐ 16 to 20 years  
☐ 21 to 30 years    ☐ 31 to 40 years    ☐ 41 to 50 years    ☐ over 50 years
- How many years have you been farming using organic methods or practices?  
☐ 5 years or less    ☐ 6 to 10 years    ☐ 11 to 15 years    ☐ 16 to 20 years  
☐ 21 to 30 years    ☐ 31 to 40 years    ☐ 41 to 50 years    ☐ over 50 years
- Which category best describes you (*please check one*):  
 owner of farm operation on owned land \_\_\_\_\_  
 owner of farm operation on rented land \_\_\_\_\_  
 manager of farming operation \_\_\_\_\_  
 owner of farm operation and partial land owner \_\_\_\_\_
- Are you organically certified... yes or no? \_\_\_\_\_
- What percent of a typical workweek do you devote to farming? \_\_\_\_\_
- In 2013, what percentage of your net family income came from farming?  
☐ 1 to 25%    ☐ 26 to 50%    ☐ 51 to 75%    ☐ 76 to 100%
- How would you describe the soil type on your farm: *Please mark an 'X' on the triangle below where you think your farms soil type best fits* (if more than one - please mark multiple X's)



Other soil types (e.g. peat, muck) please fill in here \_\_\_\_\_

- How many total acres did you have in production of all **cash crops** (*any field or vegetable crop grown for sale*) in the following years? *Please specify if you can remember...*

2013: \_\_\_\_\_

2012: \_\_\_\_\_

9. What equipment is currently available to you (own, rent, borrow)? See page 11-12 for pictures of these tools. *Please check all that apply.*

<u>Tillage Equipment</u>	<u>Check</u>	<u>Tillage Equipment</u>	<u>Check</u>
Moldboard plow		Field cultivator	
Chisel plow		Row crop cultivator	
Rototiller		Flextine weeder	
Disc		Rotary hoe	
Harrow (spring or spike tooth)		Regi weeder (=ECO weeder)	
Soil Finisher		Finger weeder	
Spader		Basket weeder	
Bed former		Rolling cultivator	
Strip tiller			
Other (specify) _____		Other (specify) _____	
Other (specify) _____		Other (specify) _____	
Other (specify) _____		Other (specify) _____	

10. Do you own a tractor.... yes or no? \_\_\_\_\_

11. If yes, please list the model and horsepower range on separate lines...

Model

Horsepower

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. How does your farm's gross sales break down by product type (e.g. 10% vegetables; 50% livestock; 40% hay)?

\_\_\_ vegetables      \_\_\_ hay      \_\_\_ beans

\_\_\_ tree fruit      \_\_\_ livestock      \_\_\_ grains

\_\_\_ small fruit

\_\_\_ other (please list: \_\_\_\_\_)

13. Please list all of the cover crops you have grown on your farm in the past two years; list cover crops in order from those with the greatest land area to those with the least.

1. \_\_\_\_\_

5. \_\_\_\_\_

2. \_\_\_\_\_

6. \_\_\_\_\_

3. \_\_\_\_\_

7. \_\_\_\_\_

4. \_\_\_\_\_

8. \_\_\_\_\_

**Section 2: Standard practices**

The goal of this section is to characterize specific practices used by organic farmers. In order to do this, we would like to look in depth at typical production inputs and operations for only **ONE** crop grown on your farm. It may be helpful to have your farm records on-hand.

**Please choose (and circle) 1 of the crops below.**

Field corn                      OR                      Soybean                      OR                      Dry bean

**For the following questions, please specify the practices you employed in 2013 within the crop selected above. Refer only to the acreage of that crop produced according to organically certified practices.**

1. How many total acres (*of the crop selected above*) did you grow in 2013?
2. How many acres (*of the crop selected above*) did you grow in 2013 according to organic guidelines?
3. What was planted in the area preceding this crop?  
Please list the cash crops that preceded this crop starting with the most recent ...  
2012 crop \_\_\_\_\_  
2011 crop \_\_\_\_\_
4. What will be planted in the area after this crop?  
Please list the two crops that will most likely follow this crop starting with the most recent ...  
2014 crop \_\_\_\_\_  
2015 crop \_\_\_\_\_

### **Organic Production Worksheet for Field Crops**

<b><u>Field preparation:</u></b>	
What forms of tillage did you utilize to prepare the field before planting the selected crop? <i>Please specify the number of passes for each implement used...</i>	
<b>Refer to p. 10-11 for pictures of common tillage implements.</b>	
<b><u>Tillage type</u></b>	<b><u># passes (may be a range)</u></b>
Moldboard plow	
Chisel plow	
Rototiller	
Strip till	
Ridge till	
Spader	
Disc	
Harrow	
Bed former	
Soil Finisher	
Other: ( <i>please specify</i> )	

**Soil Amendments:** Please specify rates in specific units: lbs/acre; ft<sup>3</sup>/ft<sup>2</sup>; yards<sup>3</sup>/ft<sup>2</sup>

What soil amendments (if any) did you apply to improve crop productivity?

**Rate Applied:**

- Manure

- Compost (purchased off farm)

- Compost (made on farm)

- Commercial organic fertilizer

If you used a preceding cover crop, please specify which:

**Please list which commercial fertilizers (if any) you applied:**

### **Weed Management**

**Response:**

**Cultivation. Please specify the number of cultivation events for each cultivation type (see pictures on page 10-11):**

**# cultivation events (may be a range)**

Flextine weeder

Rotary hoe

Regi weeder (=ECO weeder)

Finger weeder

Basket weeder

Rolling cultivator (e.g. Lilliston cultivator with spider gangs)

Row crop cultivator (e.g. S-tine cultivator with sweeps)

Other: \_\_\_\_\_

Other: \_\_\_\_\_

Other: \_\_\_\_\_

### **Organic herbicides:**

**Response:**

Did you use organically approved herbicides on the selected crop?

If yes, ... *please specify*

number of applications

which herbicide products were used?

timing of herbicide application during crop growth ?

### **Flame Weeders**

Did you flame weed the selected crop?

If yes, ... *please specify*

number of events

timing of flame weeding during crop growth ?

<b><u>Pest Management (all pests but weeds):</u></b>	<b><u>Response:</u></b>
How many insecticide applications did you make to your selected crop?	
How many times did you apply disease control products?	
<b><u>Please list which products (for insects or disease) were used on the selected crop:</u></b>	

<b><u>Labor:</u></b>	<b><u>Number of hours:</u></b>
Approximately how many hours in total were spent performing the following activities in your selected crop.... <i>please specify in either total hours or hours/ acre</i>	
field preparation	
planting	
weeding by hand or with hoe	
scouting and spraying products	
side-dressing	
irrigating	
harvesting	
<u>Other:</u>	

5. If you eliminated your primary tillage for the selected crop, what do you think would be the primary challenge, if any?

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6. If you transitioned your primary tillage within the selected crop to strip-tillage (tillage in narrow strip only where the crop is planted), what do you think would be the primary challenge, if any?

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7. Are there other crops grown on your farm that you think would be better suited for reduced-till practices? If yes, which ones?

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**Section 3: Attitudes towards tillage**

1. How interested are you in implementing the following forms of reduced-till practices within **any** crop on your farm? *Please specify on a scale from 0 to 7...*

	<b>Not at all</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Extremely</b>
Complete no till		0	1	2	3	4	5	6	7	
Rotational tillage		0	1	2	3	4	5	6	7	
<i>(till before certain crops and not before others)</i>										
Strip or Zone tillage		0	1	2	3	4	5	6	7	
<i>(till narrow strip directly where crop will be planted)</i>										
Permanent bed systems		0	1	2	3	4	5	6	7	
<i>(establishment of tilled beds for the crop and untilled pathways between beds)</i>										
Ridge tillage		0	1	2	3	4	5	6	7	
<i>(shallow tillage that involves the formation and scraping of ridges)</i>										
other (please specify): _____										

2. How knowledgeable do you feel you are regarding the use and implementation of the following reduced-tillage practices? *Please specify on a scale from 0 to 7...*

	<b>No Knowledge</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Very knowledgeable</b>
Complete no till		0	1	2	3	4	5	6	7	
Rotational tillage		0	1	2	3	4	5	6	7	
<i>(till before certain crops and not before others)</i>										
Strip or Zone tillage		0	1	2	3	4	5	6	7	
<i>(till narrow strip directly where crop will be planted)</i>										
Permanent bed systems		0	1	2	3	4	5	6	7	
<i>(establishment of tilled beds for the crop and untilled pathways between beds)</i>										
Ridge tillage		0	1	2	3	4	5	6	7	
<i>(shallow tillage that involves the formation and scraping of ridges)</i>										

3. What is the likelihood that the following benefits could result from reduced-tillage adoption? *Please specify on a scale from 0 to 7...*

	<b>Not at all</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>Extremely</b>
<b><u>Economics</u></b>										
Reduced fuel use		0	1	2	3	4	5	6	7	
Decreased labor costs		0	1	2	3	4	5	6	7	

Increased yields	0	1	2	3	4	5	6	7
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Soils

Reduced soil erosion	0	1	2	3	4	5	6	7
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Increased soil organic matter	0	1	2	3	4	5	6	7
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Improved soil tilth	0	1	2	3	4	5	6	7
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Decreased soil compaction	0	1	2	3	4	5	6	7
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Increased water infiltration	0	1	2	3	4	5	6	7
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Increased soil water holding capacity	0	1	2	3	4	5	6	7
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Pests

Reduced insect pressure	0	1	2	3	4	5	6	7
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Reduced disease pressure	0	1	2	3	4	5	6	7
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Reduced weed pressure	0	1	2	3	4	5	6	7
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Other (please list)

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4. What do you believe are the potential challenges or barriers that limit reduced-tillage adoption?  
Please specify on a scale from 0 to 7...

	Not a barrier	0	1	2	3	4	5	6	7	Extreme barrier
<u>Economics</u>										
Cost of Equipment	0	1	2	3	4	5	6	7		
Lack of appropriate equipment (e.g. for small scale or diversified farms)	0	1	2	3	4	5	6	7		
Lack of information	0	1	2	3	4	5	6	7		
Challenge of learning new practices	0	1	2	3	4	5	6	7		
Increased labor costs	0	1	2	3	4	5	6	7		
Reduced yields	0	1	2	3	4	5	6	7		
<u>Soils</u>										
Soil fertility management	0	1	2	3	4	5	6	7		
Crop/cover crop residue management	0	1	2	3	4	5	6	7		
Poor crop establishment	0	1	2	3	4	5	6	7		
<u>Pests</u>										
Increased insect pressure	0	1	2	3	4	5	6	7		
Increased disease pressure	0	1	2	3	4	5	6	7		
Increased weed pressure	0	1	2	3	4	5	6	7		
Other (please list):										

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**Section 4. Research Objectives.**

The goal of this section is to gain a better understanding of what agronomic research topics organic farmers feel would be most beneficial.

Pretend you are the deciding vote on a panel determining which organic research grants should be funded. It is your role to decide what outcomes of the proposed projects would be most beneficial in providing information for your farm, considering all grant proposals were of equal scientific merit. Below are a series of outcomes that would result from these research projects.

*For each set of outcomes below, please rank in order of importance the outcomes that you feel would be most beneficial to organic farmers. 1=most important and 3= least important. Some options are duplicated.*

1. Enhanced soil biological activity \_\_\_\_\_  
Reduced soil erosion \_\_\_\_\_  
Increased soil organic matter \_\_\_\_\_
2. Enhanced soil fertility \_\_\_\_\_  
Improved water drainage \_\_\_\_\_  
Increased soil water holding capacity \_\_\_\_\_
3. Reduced insect pressure \_\_\_\_\_  
Reduced disease pressure \_\_\_\_\_  
Reduced weed pressure \_\_\_\_\_
4. Enhanced soil biological activity \_\_\_\_\_  
Enhanced soil fertility \_\_\_\_\_  
Reduced insect pressure \_\_\_\_\_
5. Reduced soil erosion \_\_\_\_\_  
Improved water drainage \_\_\_\_\_  
Reduced disease pressure \_\_\_\_\_
6. Increased soil organic matter \_\_\_\_\_  
Increased soil water holding capacity \_\_\_\_\_  
Reduced weed pressure \_\_\_\_\_

Identify other specific production problems that you would like to see addressed through research:

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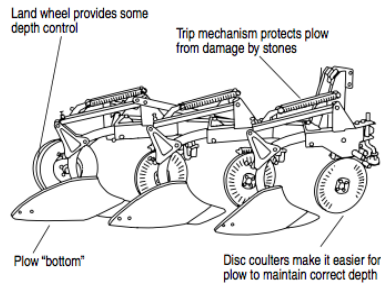
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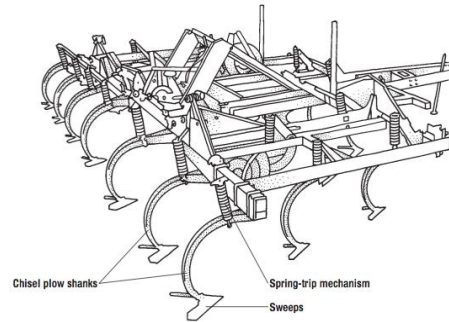
# Tillage Equipment

## Moldboard Plow

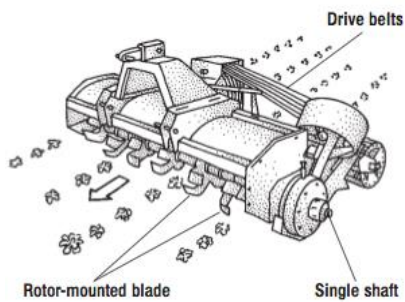


b. Moldboard plow

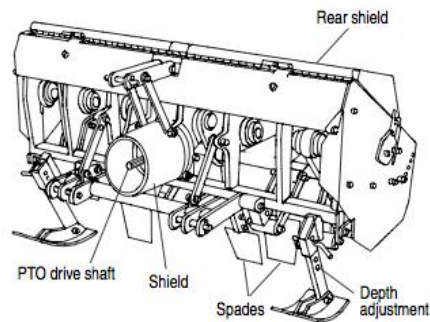
## Chisel Plow



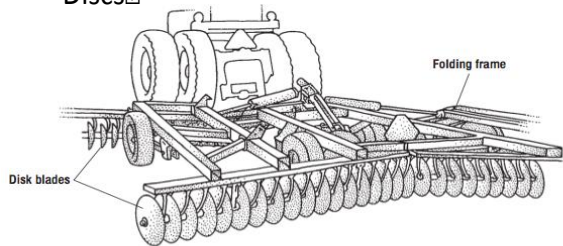
## Rototiller



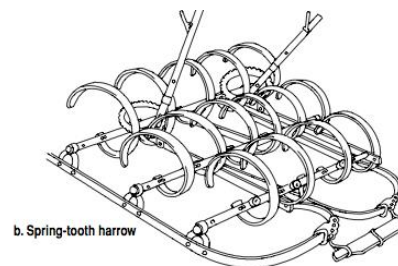
## Spader



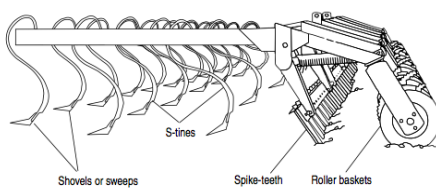
## Discs



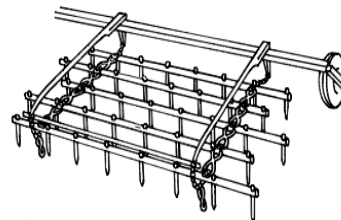
## Spring-tooth harrow



## Soil Finisher

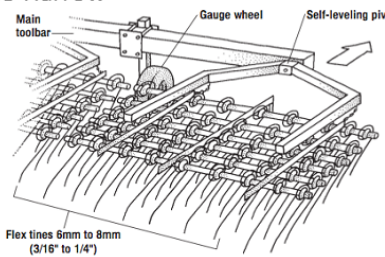


## Spike-tooth harrow

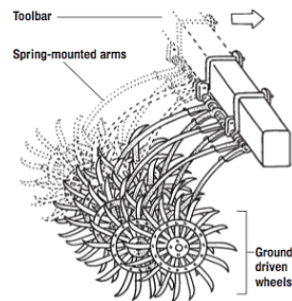


# Cultivation Equipment

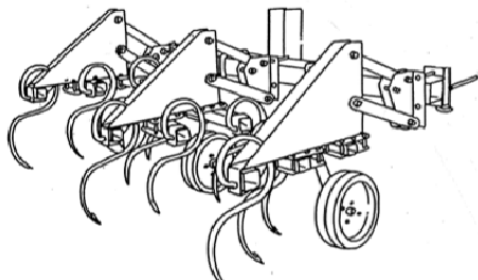
Flextine-Harrow



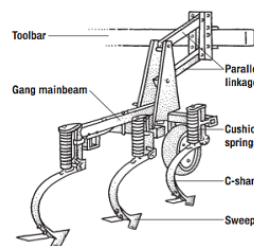
Rotary Hoe



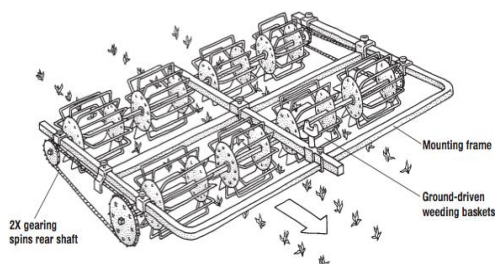
Row Crop Cultivator



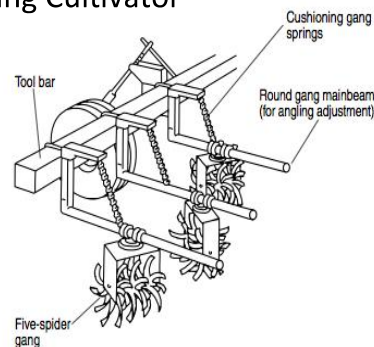
Tine cultivator



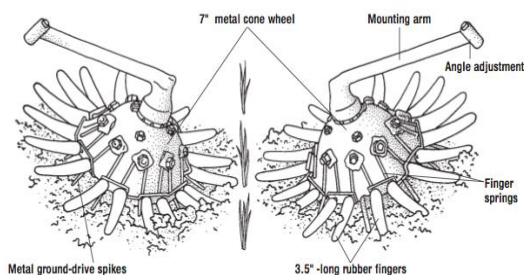
Basket Weeder



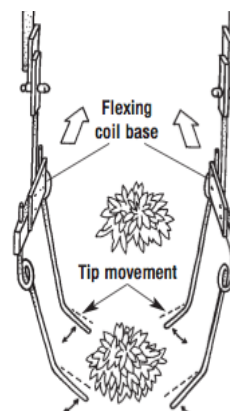
Rolling Cultivator



Finger Weeder



Torsion Weeder



\*The above pictures were taken from:  
Sustainable Vegetable Production From Start-Up to Market. NRAES-104, by Vernon P. Grubinger, and published by NRAES (1999)

Steel in the Field: a farmer's guide to weed management tools. 2002.  
edited by Greg Bowman. (Sustainable Agriculture Network handbook series; 2).