

**Breakfast on the Farm**, an educational farm tour, improves consumer trust in animal care, food safety and modern conventional dairy production.



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The Dairy Practices Council  
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# Objectives

- To educate the general public about modern food animal production
- To improve consumer perception of dairy farming
  - Build public trust
- To assess educational farm tour impact on consumer trust in
  - animal care
  - food safety
  - modern food production



Michigan



Ohio



Vermont

# Background- Breakfast on the Farm (BOTF)

## Educational Farm Tours

- 2009- Inaugural event in Clinton County Michigan
  - 1,500 attended
- Michigan 8 year total
  - 34 Farms
  - 74,740 Participants
    - Average 2,198 participants/event
    - Some events over 3000
- In 2015 dairy events added in Ohio and Vermont



# Exit Survey Results

2015

7 Dairy Farm Events

Michigan (5), Ohio (1) and Vermont (1)

# Table 1. Who comes to Breakfast on the farm?

| State | Participants | Exit Surveys | % Surveys | % 1st dairy farm visit | % Female |
|-------|--------------|--------------|-----------|------------------------|----------|
| MI    | 12068        | 1406         | 12        | 37                     | 63%      |
| OH    | 3009         | 578          | 19        | 60                     | 63%      |
| VT    | 550          | 220          | 40        | 25                     | 68%      |

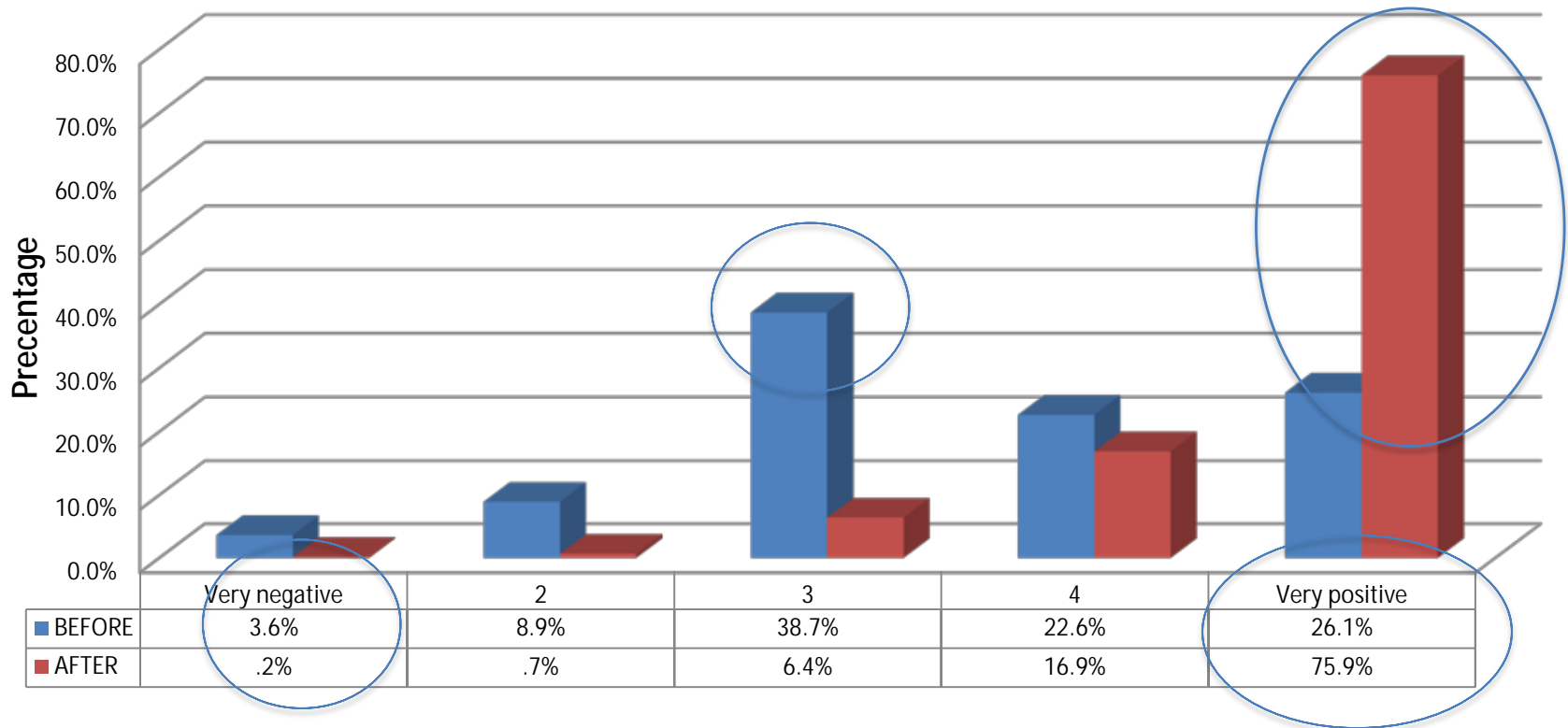




# Changing ***IMPRESSIONS***



## Impressions about Housing provided for dairy animals – 1st-time visitors (N=610; 2010-2011 Surveys)



### 1st-time visitors

BEFORE: 23% and **26%** were Positive and Very Positive - (49%)

AFTER: 17% and **76%** were Positive and Very Positive - (93%)

Source: Ted Ferris, MSU Department of Animal Science – 2010-11 dairy farm data

# Increasing public *TRUST*



**BEFORE and AFTER Tour assessment of the level of trust that producers will do the right thing with regard to:**

- Providing housing for dairy animals
- Caring for the environment
- Treating food-producing animals
- Steps to safeguard milk
- Protecting water quality



Table 2. Level of trust that producers will do the right thing with regard to providing good housing for dairy animals

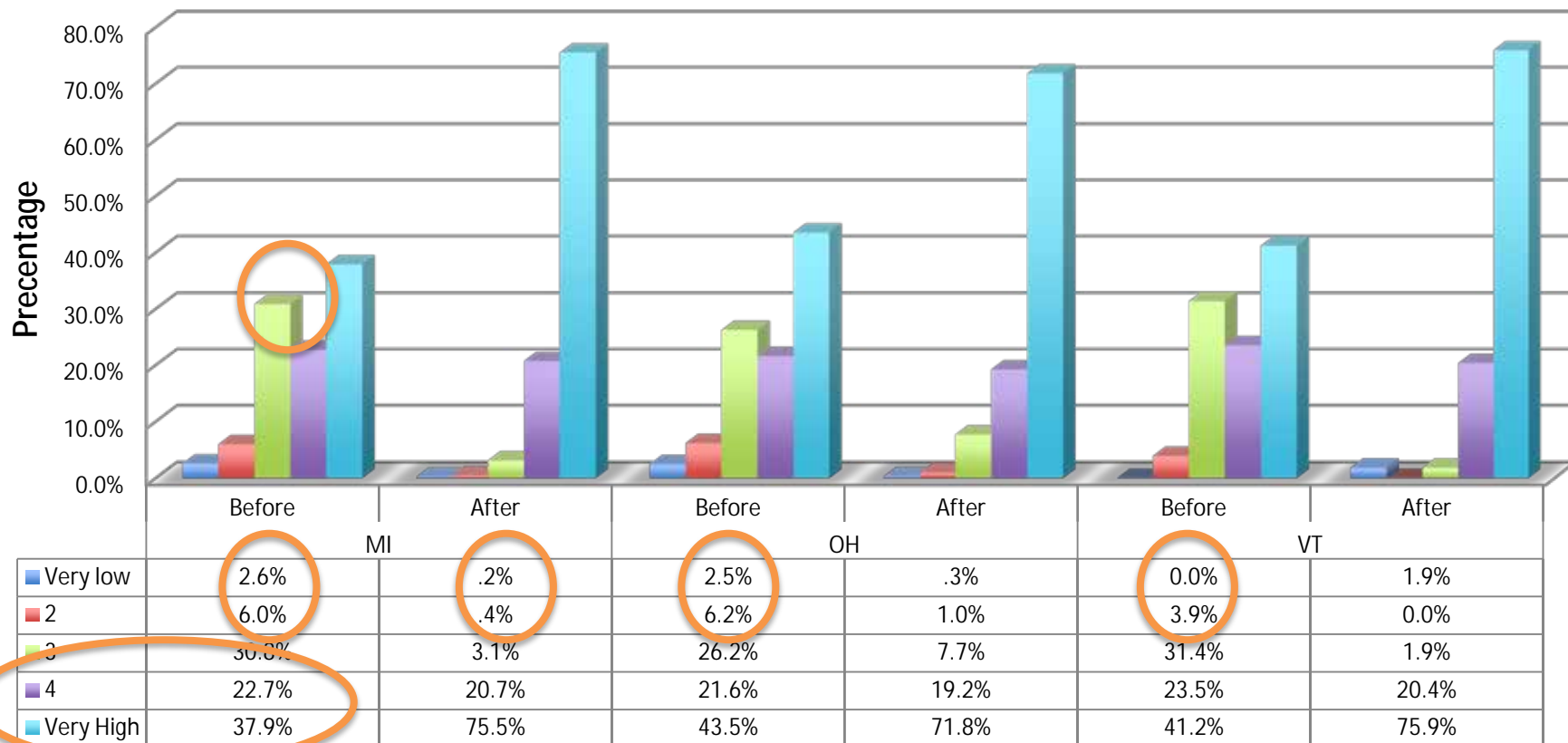
ALL respondents

|       | BEFORE Tour |       | AFTER Tour |      | Paired Differences | Paired-t |      |                 |
|-------|-------------|-------|------------|------|--------------------|----------|------|-----------------|
| STATE | Mean        | SD    | Mean       | SD   | Mean               | t- Value | df   | Sig. (2-tailed) |
| MI    | 4.17        | .969  | 4.73       | .578 | .551               | -22.7    | 1245 | .000            |
| OH    | 4.11        | 1.009 | 4.64       | .658 | .537               | -14.1    | 522  | .000            |
| VT    | 3.98        | .986  | 4.58       | .727 | .596               | -11.0    | 212  | .000            |

1st time visitors to a dairy farm in 20 years

Greater increase in 1<sup>st</sup>-time visitors

Figure 1. Shift in level of trust that dairy farmers will do the right thing with regard to providing good housing for dairy animals-  
1<sup>st</sup> time visitors



**Table 4. Change in means (After - Before) for level of trust in 5 management areas**

| STATE                                                | After - Before Paired Mean Difference <sup>a</sup> |                          |                           |                           |                                | N <sup>b</sup> |
|------------------------------------------------------|----------------------------------------------------|--------------------------|---------------------------|---------------------------|--------------------------------|----------------|
|                                                      | Environ-<br>ment                                   | Caring<br>for<br>Animals | Safe-<br>guarding<br>milk | Housing<br>for<br>animals | Protecting<br>water<br>quality |                |
| <b>ALL respondents</b>                               |                                                    |                          |                           |                           |                                |                |
| MI                                                   | .476                                               | .484                     | .467                      | .551                      | .555                           | 1242           |
| OH                                                   | .525                                               | .532                     | .509                      | .537                      | .574                           | 523            |
| VT                                                   | .568                                               | .533                     | .355                      | .596                      | .517                           | 209            |
| <b>1st time visitors to a dairy farm in 20 years</b> |                                                    |                          |                           |                           |                                |                |
| MI                                                   | .725                                               | .750                     | .732                      | .860                      | .851                           | 433            |
| OH                                                   | .579                                               | .645                     | .607                      | .652                      | .683                           | 303            |
| VT                                                   | .706                                               | .686                     | .490                      | .647                      | .540                           | 50             |

a-All mean differences significant  $P < 0.0001$ ; 5-pt scale: 1 = very low trust; 5 = very high trust

b-N = Minimum number of respondents for the 5 questions

**Table 5. Change in means (After - Before) for level of trust for 3 statements.**

| STATE                                         | After - Before Paired Mean Difference <sup>a</sup> |                                       |                                      | N <sup>b</sup> |
|-----------------------------------------------|----------------------------------------------------|---------------------------------------|--------------------------------------|----------------|
|                                               | Level of trust in modern food production           | Level of trust in milk as a safe food | Confidence in State's dairy products |                |
| ALL Respondents                               |                                                    |                                       |                                      |                |
| MI                                            | .580                                               | .464                                  | .430                                 | 1215           |
| OH                                            | .628                                               | .505                                  | .466                                 | 513            |
| VT                                            | .570                                               | .354                                  | .292                                 | 207            |
| 1st time visitors to a dairy farm in 20 years |                                                    |                                       |                                      |                |
| MI                                            | .895                                               | .735                                  | .671                                 | 417            |
| OH                                            | .766                                               | .616                                  | .595                                 | 299            |
| VT                                            | .627                                               | .412                                  | .314                                 | 50             |

a- All mean differences significant  $P < 0.0001$ ;

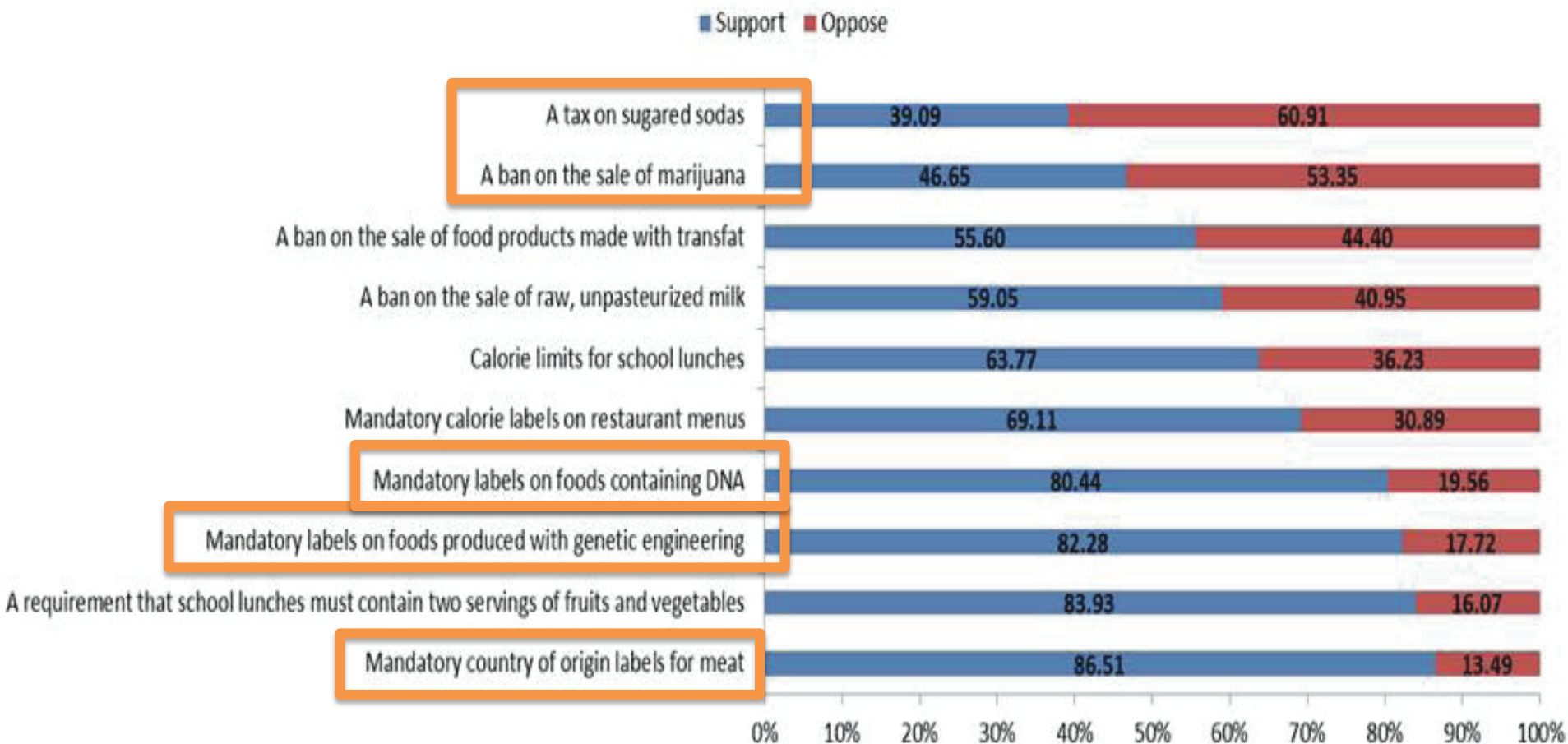
5-pt scale 1 = very low trust; 5 = very high trust

b- N = minimum number of respondents for the 3 questions

# Trust increased for those who came with concerns about food production methods

- 16.4% w/ concern: Michigan
- For the 4 management areas and 3 statements:
  - Means for those w/ Concerns increased between .65 to .84 (5-pt scale)
    - Increased from 53 to 84% having Very high + High trust in Modern food production
  - Those Not concerned had mean increase of .39 to .53
    - Increased from 69 to 90% having Very high + High trust in Modern food production
- 28.0% w/ concern: Ohio
- For the 4 management areas and 3 statements:
  - Those w/ Concerns increased from .63 to .88
  - Those Not concerned increased from .40 to .53
- Those w/ concerns had lower trust before but increased more
- Greatest increase in trust was for
  - Housing of animals
  - Level of trust in modern food production

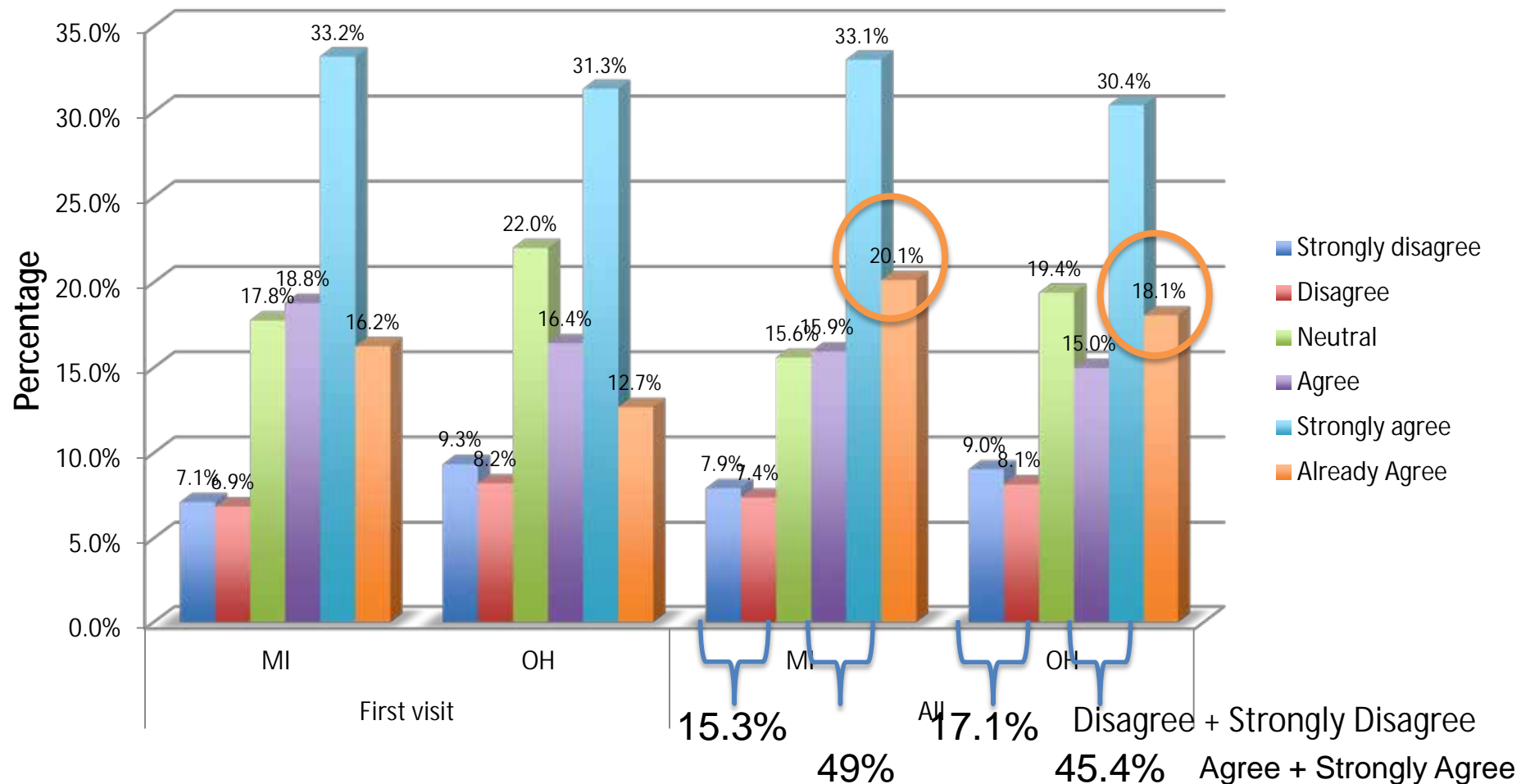
# Do you support or oppose the following government policies?



Source: Food Demand Survey – Vol 2, Issue 9, 1/16/2015

Jayson Lusk –Department of Ag Econ Oklahoma State University

Figure 2. As a result of the farm tour, I am more comfortable with genetically modified crops (GMO's)



# Why did their trust increase?

**Table 8. Percentage that indicated the following reasons for increasing trust was a major factor**

| MI    | OH    | VT           | Reasons for increasing trust                                                                |
|-------|-------|--------------|---------------------------------------------------------------------------------------------|
| 41.8% | 44.4% | <b>64.7%</b> | My comfort with how animals are housed and managed                                          |
| 43.1% | 43.7% | <b>57.6%</b> | The openness of the tour to see how things are done on a modern farm                        |
| 44.7% | 41.6% | 40.6%        | How farmers prevent milk from cows treated with antibiotics from being sold to the consumer |
| 41.6% | 43.9% | 51.0%        | My understanding of how the environment is being protected                                  |
| 38.7% | 37.6% |              | Reading the educational signs and displays                                                  |
|       |       | <b>58.7%</b> | Interacting with volunteers                                                                 |

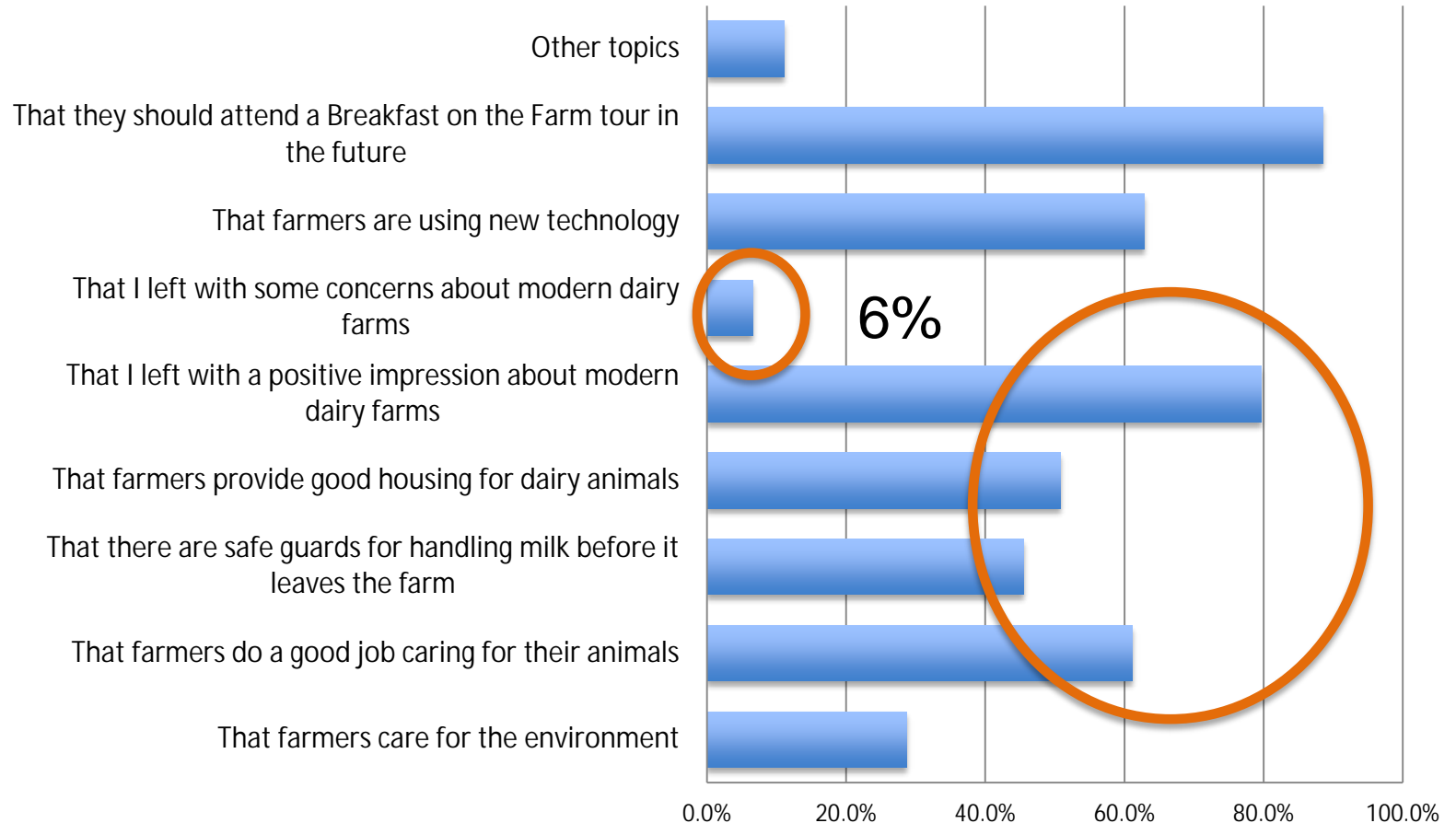
# 20% Increased Dairy Product Purchases

|                      |             |              |                   |             |         |                            | Avg Household Increase/Wk |              |                 | Estm. Annual Value |
|----------------------|-------------|--------------|-------------------|-------------|---------|----------------------------|---------------------------|--------------|-----------------|--------------------|
| Survey Year*         | Dairy Farms | Participants | People/ household | House-holds | Surveys | % That Increased Purchases | Milk (Gal)                | Cheese (Lbs) | Yogurt (6-8 oz) |                    |
| 2012                 | 7           | 15,319       | 2.71              | 5653        | 228     | 20                         | 0.20                      | 0.20         | 0.33            | \$404,340          |
| 2013                 | 4           | 9,232        | 2.71              | 3407        | 126     | 24                         | 0.26                      | 0.29         | 0.33            | \$321,519          |
| 2015                 | 5           | 12,068       | 2.71              | 4453        | 183     | 17                         | 0.2                       | 0.23         | 0.37            | \$341,545          |
| Unit Value (\$) ---> |             |              |                   |             |         |                            | \$3.00                    | \$3.00       | \$0.50          |                    |

\*Online follow-up surveys

# They Are Talking to Others

## Topics they have discussed with others



Online follow-up survey 2012 data

# SUMMARY

- There was significant improvement in the mean level of trust that farmers will:
  - Care for animals
  - Provide good housing
  - Safe-guard milk
  - Protect water quality
  - Care for the environment
- Trust levels shifted:
  - from 61% to 65% to 91% to 96% for High + Very high trust
- Reasons for increased trust:
  - Comfort with how animals are housed and managed
  - The openness of the tour
  - Discarding milk from cows treated with antibiotics
  - Understanding how the environment is being protected
- 17-24% of BOTF participants increase dairy product purchases

# CONCLUSIONS

- Educational farm tours allow for transparency, personal observations, education and conversations!
- *Transparency builds TRUST*



# THANK YOU



Michigan

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**Table 6. Difference in change in means (After - Before) for level of trust in 5 management areas between those with and without concerns about food production methods**

| GROUP                                   | After - Before Paired Mean Difference |                    |                    |                     |                          | N <sup>a</sup> | %    | % Support Ag | % that are 1st time visitors |
|-----------------------------------------|---------------------------------------|--------------------|--------------------|---------------------|--------------------------|----------------|------|--------------|------------------------------|
|                                         | Environ-ment                          | Caring for Animals | Safe-guarding milk | Housing for animals | Protecting water quality |                |      |              |                              |
|                                         | Michigan                              |                    |                    |                     |                          |                |      |              |                              |
| Concerned about food production methods | .729                                  | .731               | .721               | .813                | .804                     | 214            | 16.4 | 21.0%        | 45.0%                        |
| Not Concerned                           | .424                                  | .432               | .414               | .496                | .503                     | 1028           | 83.6 | 78.9%        | 34.8%                        |
| Difference                              | .305                                  | .299               | .307               | .317                | .301                     |                |      | Overall      | 36.5%                        |
| Sig. (2-tailed)                         | .0001                                 | .0001              | .0001              | .0001               | .0001                    |                |      |              |                              |
|                                         | Ohio                                  |                    |                    |                     |                          |                |      |              |                              |
| Concerned about food production methods | .684                                  | .725               | .662               | .760                | .779                     | 146            | 28.0 | 27.0%        | 64.0%                        |
| Not Concerned                           | .462                                  | .456               | .448               | .451                | .492                     | 374            | 72.0 | 73.0%        | 58.1%                        |
| Difference                              | .222                                  | .269               | .214               | .309                | .287                     |                |      | Overall      | 59.8%                        |
| Sig. (2-tailed)                         | .009                                  | .002               | .018               | .001                | .001                     |                |      |              |                              |

a- N= Minimum number of respondents for the 5 questions

5-pt scale: 1 = very low trust; 5 = very high trust

**Table 7. Difference in change in means (After - Before) for level of trust in 3 statements between those with and without concerns about food production methods**

| GROUP                                   | After - Before Paired Mean               |                                       |                                      | N <sup>a</sup> | %    | % Support Ag | % that are 1st time visitors |
|-----------------------------------------|------------------------------------------|---------------------------------------|--------------------------------------|----------------|------|--------------|------------------------------|
|                                         | Level of trust in modern food production | Level of trust in milk as a safe food | Confidence in STATE's dairy products |                |      |              |                              |
|                                         | Michigan                                 |                                       |                                      |                |      |              |                              |
| Concerned about food production methods | .841                                     | .663                                  | .646                                 | 205            | 16.4 | 21.0%        | 45.0%                        |
| Not Concerned                           | .527                                     | .424                                  | .386                                 | 1010           | 83.6 | 78.9%        | 34.8%                        |
| Differnce                               | .314                                     | .240                                  | .259                                 |                |      | Overall      | 36.5%                        |
| Sig. (2-tailed)                         | .0001                                    | .0001                                 | .0001                                |                |      |              |                              |
|                                         | Ohio                                     |                                       |                                      |                |      |              |                              |
| Concerned about food production methods | .875                                     | .682                                  | .630                                 | 144            | 28.0 | 27.0%        | 64.0%                        |
| Not Concerned                           | .531                                     | .435                                  | .402                                 | 369            | 72.0 | 73.0%        | 58.1%                        |
| Difference                              | .344                                     | .248                                  | .228                                 |                |      | Overall      | 59.8%                        |
| Sig. (2-tailed)                         | .0001                                    | .0020                                 | .0020                                |                |      |              |                              |

a-N = Minimum number of respondents for the 3 questions

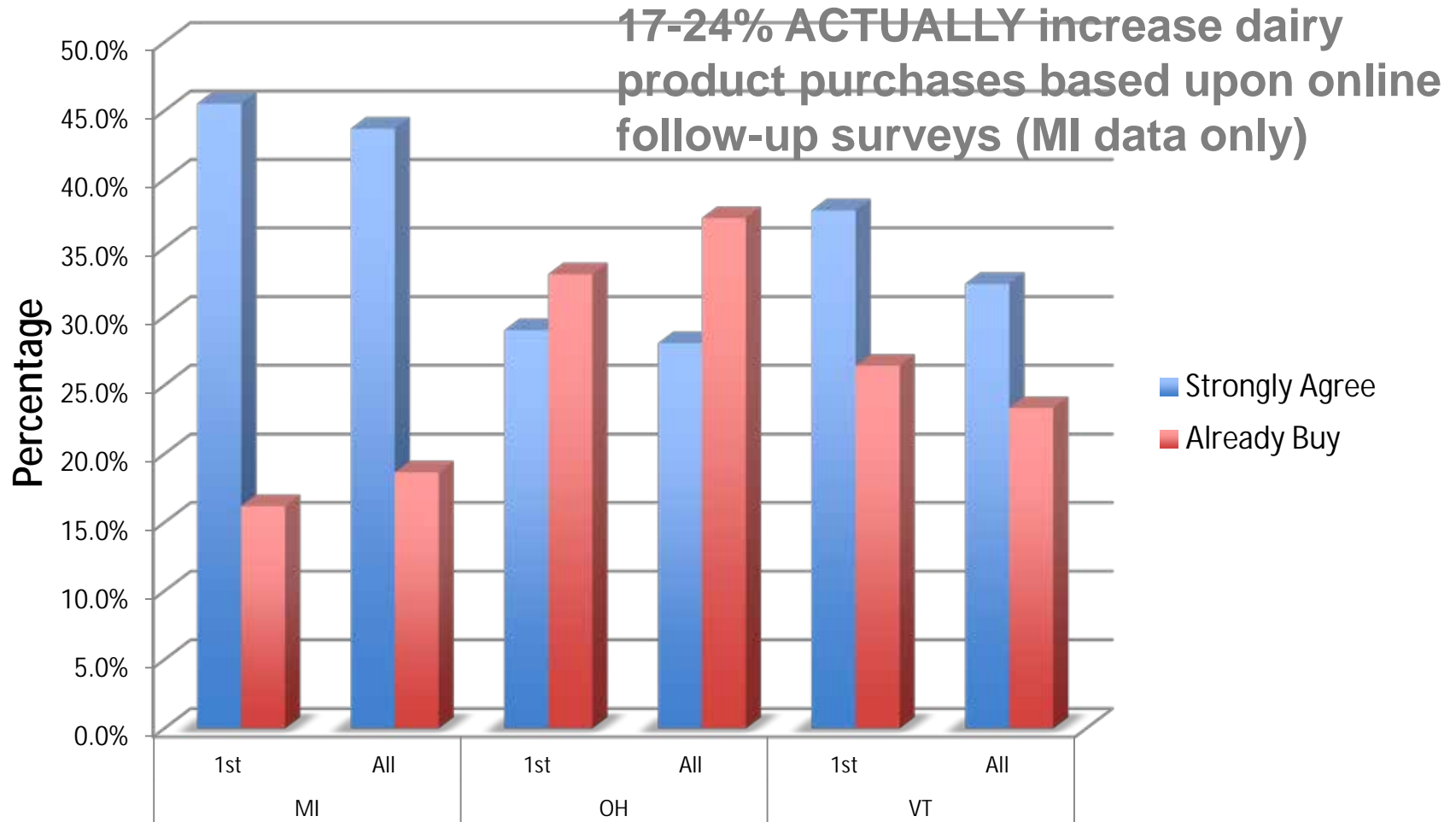
5-pt scale: 1 = very low trust; 5 = very high trust

# How much individuals shifted in trust

Table 3. Number of participants who's level of trust changed FOR dairy farmers will do the right thing with regard to providing good housing for dairy animals

|               |             | (Units increased or decreased) |       |       |       |     |      |           |           |      | N    |
|---------------|-------------|--------------------------------|-------|-------|-------|-----|------|-----------|-----------|------|------|
| State         | Group       | -4.00                          | -3.00 | -2.00 | -1.00 | .00 | 1.00 | 2.00      | 3.00      | 4.00 |      |
| MI            | First visit | 0                              | 1     | 1     | 2     | 199 | 115  | <b>97</b> | <b>15</b> | 6    | 435  |
|               | All         | 1                              | 0     | 3     | 6     | 727 | 279  | 156       | 21        | 9    | 1202 |
| OH            | First visit | 0                              | 0     | 4     | 4     | 157 | 81   | 48        | 10        | 1    | 305  |
|               | All         | 0                              | 0     | 4     | 6     | 307 | 121  | 63        | 12        | 2    | 515  |
| VT            | First visit | 0                              | 1     |       | 0     | 25  | 15   | 9         | 1         |      | 51   |
|               | All         | 0                              | 1     |       | 1     | 108 | 69   | 25        | 3         |      | 207  |
| MI<br>2010-11 | First visit | 0                              | 0     | 1     | 3     | 197 | 168  | 172       | 32        | 12   | 585  |
|               | All         | 0                              | 0     | 2     | 10    | 640 | 411  | 295       | 50        | 17   | 1425 |

Figure 3. Percent that STRONGLY AGREE that as a result of the farm tour, they are likely to buy more milk or other dairy products  
DATA FROM EXIT SURVEY



# Level of trust in modern food production Before and After for those who came with and without concerns about food production methods



High + Very High Trust

|      |      |      |    |
|------|------|------|----|
| 52.5 | 84.1 | 68.8 | 90 |
|------|------|------|----|

# Background: Consumer concerns

- 60% Strongly Agree - If farm animals are treated decently and humanely, I have no problem consuming meat, milk and eggs.
- 53% Strongly Agree - I would support a law in my state to ensure the humane treatment of farm animals
- 25% Strongly Agree - U.S. meat is derived from humanely treated animals
- 27% Strongly Agree - I don't care where my food was produced and long as it is affordable, safe and wholesome

## Background: Consumer concerns

### Big vs Small

- 28% Strongly agree: Farm families are likely to put their interests ahead of my interests
- 50% Strongly agree: Commercial farms are likely to put their interests ahead of my interests
  - Survey does not define big or small

# Methods

- Use a place based educational event on dairy farms hosted by farm families to increase awareness about modern food production
- Use visual observation and educational stations on a self-guided tour to provide basic understanding and information about animal care, housing and various farm management areas including milk safety and environmental management
- Engage agricultural organizations and the community to fund, organize and run the events.
  - (involving 100-400 Volunteers)



Michigan



Ohio



Vermont