The purpose of this grant is to bring regional and national expertise to Michigan for educational programs that enhance the competitiveness of vegetable growers. As planned, the venue used for these programs was the Great Lakes Fruit, Vegetable and Farm Market Expo, which was held in Grand Rapids, Michigan on December 8-10, 2009. The Expo offered three days of sessions that provided information for improving vegetable production and marketing practices.

A number of researchers from Michigan State University presented information at the 2009 Expo. In addition, the following out-of-state speakers were used to make the presentations listed below (in parentheses after each session listing are the attendance and presentation evaluation results which show the percentage of respondents that found the presentation very helpful/somewhat helpful/not helpful):

Dr. George Abawi, Department of Plant Pathology, Cornell University
- Carrot Session (47/83%/17%/0%): “Biology, On-farm Assessment, and Management of Root-knot Nematodes on Carrots”
- Fresh Edible Legumes Session (97/78%/22%/0%): “Root Diseases of Beans and Peas and the Impact of Soil Health Management Practices”
- Organic Vegetable Production Session (53/58%/37%/5%): “The Cornell Soil Health Assessment Protocol and the Connection Between Soil Health and Root Health”

James Adkins, University of Delaware Research and Education Center, Georgetown, DE
- Pickling Cucumber Session (63/50%/36%/14%): “Efficiency and Economic Returns with Current Pickle Harvesters”

Dr. Mark Bennett, Department of Horticulture and Crop Science, Ohio State University
- Transplant Production Session (184/52%/38%/10%): “Vegetable Transplant Tactics for Improved Crop Establishment”

Dr. David Francis, Ohio Agricultural Research and Development Center, Wooster, OH
- Tomato, Pepper, Eggplant Session (160/43%/51%/6%): “Overview of the SolCAP and Great Lakes Vegetable Working Group Tomato Heirloom Projects”
- Transplant Session (153/40%/35%/25%): “Grafting of Tomatoes for High Tunnel and Open Field Production”

Dr. Amanda Gevens, Department of Plant Pathology, University of Wisconsin
- Potato Session (65/50%/40%/10%): “Late Blight in 2009: A National Outbreak with Local Consequences”

Dr. Lewis Jett, West Virginia University Extension, Morgantown, WV
- High Tunnels and Low Tunnels Session 150/no evaluation results): “Future Trends for High Tunnels in the U.S.”

Ed LaClair, NSF-Davis Fresh Technologies, Lake Placid, FL
- GAP Audits Session (130/no evaluation results): “NSF/Davis Fresh Audits”
- Vine Crops Session (NA/18%/70%/12%): “The Future of GAP in Cucurbits”
Klass Martens, Lakeview Organic Grain, Penn Yan, NY
- Fresh Edible Legumes Session (97/25%/75%/0%): “Edamame: Varieties and Production Practices”
- Organic Opportunities and Markets Session (30/76%/24%/0%): “Is Organic Farming Stepping Back in Time or Is it the Key to the Future?”
- Organic Vegetable Production Session (60/83%/17%/0%): “Organic Weed and Soil Management: Insights from a New York Vegetable and Grain Farmer”

Dr. Brian Nault, Department of Entomology, Cornell University
- Onion Session (NA/92%/8%/0%): “Onion Thrips Control in New York”

Dr. Stephen Reiners, Department of Horticultural Sciences, Cornell University
- Fresh Edible Legumes Session (97/36%/55%/9%): “How We Grow Snap Beans in New York”
- Organic Vegetable Production Session (63/72%/28%/0%): “Sweet Potatoes: The Next Big Crop for Up North”

Dr. Mark VanGessel, Department of Plant Science, University of Delaware
- Fresh Edible Legumes Session (97/60%/10%/30%): “Getting the Most Out of Our Bean Herbicides”
- Pickling Cucumber Session (73/48%/48%/4%): “Tank Mixes, Higher Rates, and Crop Rotation to Improve Weed Control in Continuous Pickle Production”
- Sweet Corn Session (175/72%/28%/0%): “Strategies for Weed Control”
- Vine Crops Session (NA/81%/13%/6%): “Weed Management in Cucurbits: Update”

Dr. Celeste Welty, Department of Entomology, Ohio State University
- Vine Crops Session (NA/44%/53%/3%): “Efficacy and Cost Comparisons of Using Insecticide Seed Treatment on Cucurbits”

In addition to the session evaluations, a general survey of Expo attendees was conducted (a copy of the survey results is being sent with this report). The answers to questions about speakers from outside Michigan are reported on pages 12-14 of the survey report. Here’s a summary of the results:
- 44% of respondents were influenced in their decision to attend the Expo by the large diversity of expert speakers from around the country.
- 86% of respondents attended at least one presentation by a speaker from outside Michigan.
- 96% of respondents intended to incorporate information gained from out-of-state speaker presentations into production and/or marketing practices.
- 99% of respondents thought the Expo should continue to invite experts from around the country to make presentations at the Expo.

Some out-of-state attendees responded to the session evaluations and the general Expo survey, but the large majority of responses were by attendees from Michigan. It is clear from the survey results that attendees found value in the presentations which should help them be more competitive in growing and marketing their vegetable crops.
Survey Results

For

2009 Great Lakes Fruit Vegetable & Farm Market EXPO
Participant Questionnaire

Vegetable AoE Team
Michigan State University Extension

January 2010
Is this your first time to visit the Great Lakes Expo?

If 'No', how many times have you visited the Expo before?

80% were recurring visitors, which totaled 152 individuals; of this 80% the vast majority (54%) has attended the conference within the last 5 years.
Great Lakes, Vegetable and Farm Market Expo

Reason for Attending

What is the main reason for attending the Expo?

![Bar chart showing reasons for attending the Expo]

What state, province or country do you come from?

<table>
<thead>
<tr>
<th>State of residence</th>
<th>Number of individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan</td>
<td>107</td>
</tr>
<tr>
<td>Missouri</td>
<td>4</td>
</tr>
<tr>
<td>Illinois</td>
<td>1</td>
</tr>
<tr>
<td>Nebraska</td>
<td>5</td>
</tr>
<tr>
<td>Iowa</td>
<td>1</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>8</td>
</tr>
<tr>
<td>Ohio</td>
<td>2</td>
</tr>
<tr>
<td>Kentucky</td>
<td>19</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1</td>
</tr>
<tr>
<td>South Dakota</td>
<td>6</td>
</tr>
<tr>
<td>Indiana</td>
<td>1</td>
</tr>
<tr>
<td>Ontario, Canada</td>
<td>8</td>
</tr>
<tr>
<td>Windsor, Canada</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
</tr>
</tbody>
</table>

30% of the participants came to the EXPO because of seminars and trade show. Of the total number of participants that indicated their place of origin (164), 65% (107) reside within Michigan followed by the next closest Kentucky (12%) with all other states representing single digits. Canada produced 9 participants with the majority of these residing in Ontario, Canada.
Changes in Operation

What changes have you made in your operation from attending previous Expo's?

Increased sales
Improved marketing
Increased yields
Better business management
Increased quality
Decreased costs
Improved food safety
Improved labor management
Improved worker protection
Participated in programs previous unknown
Other

Increased sales was the overwhelming change implemented by participants who have attended previous conferences, with the next closest majority showing changes of improved marketing, increased yields, better business management, and increased quality. General improvement in food safety and labor had the least amount of improvement; showing possible avenues the conference could pursue within the future events.
Profitability

Has the information received at the Expo help increase profitability?

94% of Expo participants indicated that they have seen an increase in profitability, while 5% indicated there was no increase and 1% was unsure if they have seen an increase their profitability.
Great Lakes, Vegetable and Farm Market Expo

*Sustainable Operations*

Have the educational programs you’ve attended allow you to run your operation in a more sustainable manner?

- 94% Yes
- 6% No

If “Yes”, what practices that you’ve learned helped you achieve this?

- Better fertilizer management
- Adoption of IPM practices
- Utilization of resistant cultivars
- Improving rotations
- Utilization of cover crops
- Transitioning to organic production
- Other

94% of the participants in this survey indicated that the educational programs were helpful in improving sustainability of their operations. Of that 94%, the practices most helpful were better fertilizer management, and an adoption of an IPM program, followed closely by utilization of resistant cultivars, improved crop rotation, and utilization of cover crops.
Great Lakes, Vegetable and Farm Market Expo

Expo Programs Importance

Please rate the importance of the following Expo programs for your management process:

- Educational posters
- Fruit
- Organic
- Farm Market
- Vegetable
- Trade show exhibits

The trade shows, vegetable, and fruit programs were rated very high by participants.
Great Lakes, Vegetable and Farm Market Expo

**MSU Extension**

Are you aware that MSU Extension plans the educational sessions?

![Pie chart showing 86% Yes and 14% No]

Of all of the surveyed individuals 86% were aware that Michigan State University extension plans the educational sessions, while only 14% were unaware of Michigan State University’s involvement.
Great Lakes, Vegetable and Farm Market Expo

**MSU Extension Assistance**

Do you feel MSU Extension provides you with enough assistance?

If 'No', please explain how they could assist you better by improving their services:

- Better awareness of opportunities
- More hands on sessions
- Fewer classroom professors
- Need speakers with hands-on experience
- Not up-to-date
- Being out of state, we only partial benefit from research & publications at this conference
- IPM Management classes
- Hotline for questions
- Need more basic research on fertility w/new varieties
- Not enough greenhouse contact
- Request for information goes unanswered
- More farm Visits
- Less variety trials – let it to seed companies
- From IN and work through Purdue, but MSU does a better job w/Expo
- Need someone in Allegan County that cares about vegetable farmers
- They are eliminating most of it in our area and the other areas are far
- Not interested in news speakers – especially from outside of academia

90% thought that Michigan State University provided sufficient assistance within their educational seminars. Of the 9% who indicated, “No”, the general thought was that more hands on experience was needed.
Profession

What do you consider yourself?

---

Expo participants overwhelmingly consider themselves as full-time farmers (46%). 20% consider themselves part-time farmers, while 13% consider themselves as full-time or part-time marketers.
**Farming Income**

About what percentage of your annual gross income comes from farming or marketing?

- 20% Less than 25%
- 14% 25-49%
- 18% 50-74%
- 49% More than 75%

If you do not actively farm, how would you describe your interest in agriculture?

- Marketer
- Hobby farmer/gardener
- Rural landowner
- Retail grocer
- Governmental agency
- Interested but not currently involved
- Other

Of the farming community represented at the Great Lakes, Vegetable and Farm Market Expo 49% obtained 75% or more of their gross income from their farming practices.
Great Lakes, Vegetable and Farm Market Expo

*Expo Presentations*

Did the large diversity of expert speakers from around the country affect your decision to attend the Expo this year?

![Pie chart showing 56% Yes and 44% No]

Did you attend a presentation by a speaker from outside of Michigan?

![Pie chart showing 14% Yes and 86% No]

The large diversity of speakers at the Expo played a role in the decision of 56% of the participants to attend. 86% of the participants attend a presentation from a speaker from outside of Michigan.
List information, knowledge, or production strategies that you learned at the Expo this year from presentations by speakers from outside of Michigan?

- Ohio State
- Using the store as a marketing tool
- New Equipment/methods
- Grafting tomato advantages
- Info about frost protection for strawberries
- Strawberry growing
- IPM
- Market
- Strawberry production strategies
- Branding
- Pear trends
- Greenhouse pest management
- Mechanical harvest
- Received lots of info related to late blight (5)
- Poling-row cover & temperature importance in strawberries
- Dave Francis (2)
- Rootstock
- Germination
- Troubleshooting
- S. Reiners planting helped with beans
- Hardy grape cultivars for southwest Ohio
- Cover Crop
- Information on updates & neatness on farm
- Pay neutral strawberry production (2)
- New marketing strategies
- Using new internet methods
- Thrips control in onions (3)
- Nematode control in carrots
- Judy Sharpton – excellent learned marketing tools
- Combo planting good session – could have been more in depth
- Would like greenhouse roundtable, liked Farm
- Market roundtable – could have been longer
- Liked Tom Bunford
- Bio control in greenhouses
- Seed treatment – cucurbits (Ohio)
- Virus info from Clemson (SC)
- New Products & farm productions
- Helpful to do my job more effectively
- Winter injury protection in Strawberry
- Better seed & more choices
- Better growing practices
- Mark Bennett
- Mark VanGessel
- James Adkins
- Sales
- New equipment
- Farming priorities
- Better field selection
- High & low tunnel production (5)
- Tomato growing in containers
- Weed control
- Current trends in U.K.
- Strawberry cultivars types & properties
- Veg transplants
- Spraying decisions
- Types of spray
- Cultivars for grapes
- Different strategies
- Plant height control
- Greenhouse insect management
- Jane Eckert
- The Kuipers
- Greenhouse ideas, market ideas
- Container vegetables
- Strawberry production
- Varieties
- Statistics related to web interaction
- Irrigation management
- Farm market branding
- Sprays for weeds in berries
- Viruses on stone fruit
- Confirmed knowledge about growing tomatoes in high tunnel
- Insect & disease control
- Marketing
- Practice in other part of country
- Secondary pest management
- Better recordkeeping
- Better equipment to make better use of time & less back work
- Viral disease management
- Pepper crop strategies
- Transplant production
- Diversify your ideas & networks
- Managing nematodes in carrots
- Closely monitor the business structure
Great Lakes, Vegetable and Farm Market Expo

*Expo Presentations*

Do you intend to incorporate information you gained into your production and/or marketing?

![Pie Chart: 96% Yes, 4% No]

Do you think the Expo should continue to invite expert speakers from around the country?

![Pie Chart: 99% Yes, 1% No]

96% of the participants intend to use the information learned at the EXPO in their farming and/or marketing practices. When asked if the Expo should continue to invite expert speakers the overwhelming majority (99%) said "Yes".
Great Lakes, Vegetable and Farm Market Expo

*Expo Ratings*

In comparison to other conventions or Expo's you've attended, this Expo was what?

<table>
<thead>
<tr>
<th>Better</th>
<th>Same</th>
<th>Weaker</th>
</tr>
</thead>
</table>

25% Better, 75% Same

In comparison to other conventions the Great Lakes, Vegetable and Farm Market conference was agreeably better with a 75% approval rating and 0% disapproval rating.
Expo Ratings

How could we improve this Expo in future?

- Improve weather
- More booths with interactive learning
- Less organic
- Better handouts or all info provided in sessions
- More education & resources for starting ag business for people new to ag
- Could be one day price not $85
- Expo should stay open until 6 p.m.
- Trade show should open at 89 a.m., morning meetings at 10 a.m., show closes at 6 p.m. (2)
- Need speakers about smaller farms
- More about farmers markets, rules, grants, sampling, parking
- Need more direct marketing info
- Hard to attend meetings scheduled at the same time (2)
- Make meeting on Thursday worth recertify credits not just CCA credits
- More wine marketing
- More horticulture in trade show
- More in depth classes – seem to be for beginners
- More classes on herb & flower growing & harvesting
- More greenhouses
- Speakers that speak louder and clearer
- Everyone turn off cell phones at sessions
- This is a great lake & there are at least 30 states represented less info about MI
- Panel discussions including successful growers are very helpful
- More equipment
- More in depth vegetable seminars – seed, weed, disease comp.
- More booths
- Cost
- Appreciates handouts for adding comments from presentation
- Have same topics in morning & afternoon – so one can hear both
- Pretty day at times
- Stop all organic courses – of no value (2)
- Go back to Lansing
- More geographic diversity of speakers
- Day sessions are very long
- Solicit product reviews from growers
- Door prize to encourage visitation to all booths in trade show
- Try to alter date so not to conflict w/MWFPA convention
- Needed more advanced warning
- Greenhouse /veg good together
- Put the specific veg growing class at different times
- Lower cost to get in
- More vendors
- Sessions geared to new or smaller orchards on important next steps
- Most sessions accommodated big orchards
- Keep onion & carrot sessions at separate times
- Move show to Jan/Feb – still very busy in Dec. (2)
- Have a better description of classes in schedule
- More beginners in farming & greenhouse business sessions
- Would like speakers of 10 a.m. & 3 p.m. session to offer group
- Roundtable & networking with other people in workshop to share ideas and email
- Printed copies of posters or abstracts
- Powerpoint & abstracts available online afternoons
- Be able to pay for one day
- More opportunity/panels on growers
- More crop discussions (more commodities)
- More info sessions for juice grape growers
- Appreciate GAP info
- Found out about lunch buffet to late
- Like table set up by gallery rooms
- Is Grand Rapids only site to consider – weather often a factor
- How to grow vegetable better
- Show in November
- More machinery
- Continue to invite the best/most qualified speakers no matter where they are located
- Put tape or something over door latches to reduce noise
- Local speakers on local situations I think would be better
- Continue cutting edge technology seminars
- Marketing topics
- More sessions on fruit besides, apple/grapes – need info on raspberries/blackberries etc.
- Bring more money
- Something other than tea & water on buffet
- Don't have speakers dwell on experiments – give results that work
- No drainage
- Seminars at different times so we could attend more of them
- More detail on plug production start to transplant
- Speakers need field experience in our climate
- Keep on the same track, but stay current with issues
- Variety of different speakers
- Continue to expand chemical free/all natural – organic session
- More specialty crop management class