Title:
2015 Vegetable PWT Research and Extension Priority Survey

Project leader(s):
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Cooperator(s): All survey participants.

Abstract:
A survey to establish fresh market vegetable research and extension priorities was developed by Cornell Cooperative Extension’s Vegetable Program Work Team (PWT). It was administered through Qualtrics, Cornell’s survey tool, and had a total of 187 respondents. The survey consisted of several general questions and a list of potential priorities. The priorities were divided into 7 major categories (pest management, soil management, cultural practices, food safety, cover cropping, marketing, and wildlife damage) as well as an other category. The priority that ranked the highest was pest management with 30% of respondents choosing this as their primary challenge in vegetable production. Cucurbit was the crop that gave respondents the most problems. The second biggest priority for vegetable growers was wildlife management, specifically deer in sweet corn, followed by damage to cucurbits. For rankings of all priorities see the results and Appendices below. With priorities established extension educators and faculty can better target the needs of growers when seeking external funding, and conducting research or extension activities.

Background and justification:
The Vegetable PWT has had mechanisms in place to establish research and extension priorities for processing vegetables through annual advisory committee meetings, but there has not been a mechanism in place for fresh market vegetable growers. To better serve these growers a list of research and extension priorities was essential. With a comprehensive list of priorities based on responses from fresh market vegetable growers in NY faculty and extension educators can seek funding and better address the problems our growers face.

Objectives:
1) Develop and distribute a survey that will determine the research and extension priorities of fresh market vegetable growers in NY.
2) Analyze the results of the survey
3) Present final results of survey to the Vegetable PWT and post them online so the priorities can be used to better meet the needs of fresh market vegetable growers.

Procedures:
1) A list of 53 questions was established with input from faculty and extension educators. These questions were put into Qualtrics, Cornell’s survey tool. To ensure that respondents who experience many challenges were able to list more than one priority, the survey allowed all respondents to loop through and list up to 3 major priorities.
Once complete the survey was submitted to the IRB (Institutional Review Board) for exemption. An exemption was granted and the survey was distributed in January of 2015. The survey was advertised through newsletters, listservs, the 2015 Producers Expo, and online. The survey remained open until May 31, 2015.

2) After the survey closed results were downloaded into Excel. The three separate priorities listed by respondents were collated before presented. Results were also separated into organic growers and conventional growers and growers in counties that participate in a regional vegetable program and those who do not farm in a county belonging to a vegetable program.

3) The final report will be presented to the Vegetable PWT at the next meeting scheduled March 29, 2016.

Results and discussion:
Below are the results to the 53 survey questions. These results are for all respondents unless otherwise indicated. The raw data can be seen in Appendix A for all respondents. The data were also separated into responses from Organic growers and responses from Conventional growers. Those responses can be seen in Appendix B and C respectively. The responses were then also separated by respondents that farm in counties that belong to a vegetable program (Cornell Vegetable Program or Eastern NY Commercial Horticulture Program) and those that do not. Those responses can be seen in Appendix D and E respectively.

Vegetable Priority Survey Results:

1. Vegetable Program Work Team (PWT) Survey Consent.
   Yes, continue with survey - 187    No - 2

   Of respondents how many farmed in counties belonging to vegetable program:
   36% CVP    39% ENYCH    25% did not belong to vegetable program

   Of respondents:
   39% grow organic    44% grow conventional    17% grow both

2. What counties do you farm in (select all that apply)?
3. How long have you been farming (years)?

![Bar chart showing the number of respondents grouped by years of farming. The chart indicates a peak in respondents who have been farming for 0-5 years and a significant decline as the number of years increases.]

Source: dynmaps.net (c)
4. How much total acreage do you manage?

![Graph showing total acreage managed by respondents with different acreage ranges.]

5. How much total vegetable acreage do you manage?

![Graph showing total vegetable acreage managed by respondents with different acreage ranges.]

All respondents
6. What other crops do you grow (select all that apply)?
7. What percentage of your vegetable acreage is devoted to cover cropping during the growing season?
8. Do you use season extension (high tunnel, low tunnel, row cover, greenhouse)?
   Yes - 69%      No - 31%

9. How many square feet, on average of each do you use?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Average Value (ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>high tunnel</td>
<td>3,480</td>
</tr>
<tr>
<td>low tunnel</td>
<td>501</td>
</tr>
<tr>
<td>row cover</td>
<td>39,726</td>
</tr>
<tr>
<td>greenhouse</td>
<td>2,929</td>
</tr>
</tbody>
</table>
10. How do you sell your produce? List approximate percentages for each of the following (total should equal 100)

![Bar chart showing sales percentages for different types of sales channels.]

11. Do you do any winter marketing?
   Yes - 42%  No - 58%

12. Do you have a food safety plan?
   Yes - 45%  No - 55%

13. Are you certified in food safety?
   Yes - 39%  No - 61%

14. Do you grow:
   Organically - 39%  Conventionally - 44%  Both - 17%

15. Did you start as a conventional grower (responses from organic growers only)?
   Yes - 30%  No - 70%

16. Please select from the categories listed below, the area that you feel you have challenges with in vegetable production. Results based on 347 responses
THE FOLLOWING QUESTIONS (17-24) FOLLOW THE SELECTION OF PEST MANAGEMENT IN QUESTION 16: results based on 102 responses

17. Please select if this is a challenge controlling a pest with currently available practices or an issue with pesticide application technology.

18. Please describe the challenge you are having with pesticide application.  
   See Appendix A question 18 for list of responses

19. Is this challenging pest in the field or in a high tunnel or greenhouse?
20. Please select the crop on which there is a pest you are having problems controlling (field) with currently available practices. Once you have selected the crop you can then select the pest group (Disease, Insect, or Weed) and then narrow it down to a specific pest.
Once you have selected the crop you can then select the pest group (Disease, Insect, or Weed) and then narrow it down to a specific pest. (See Appendix A question 20 for list of specific pests)

21. What management practices are you currently employing (field) to manage this pest problem? (select all that apply)
22. Please select the crop on which there is a pest you are having problems controlling (high tunnel/greenhouse) with currently available practices.

Tomatoes - 60%  
Lettuce - 40%

Once you have selected the crop you can then select the pest group (Disease or Insect) and then narrow it down to a specific pest. (See Appendix A question 22 for list of specific pests)

Insects - 60%  
Diseases - 40%

23. Please describe the specific problem you have controlling this pest.

See Appendix A question 23 for list of specific problems
24. If you are not sure what your pest is and you have an image you would like to upload of your specific pest, please do so here.
   No files were uploaded

THE FOLLOWING QUESTIONS (25-26) FOLLOW THE SELECTION OF SOIL MANAGEMENT IN QUESTION 16: results based on 44 responses

25. If you were going to contribute $10,000 to research in soil management how would you allocate that money? You may allocate all money to one subject or choose to divide funds between multiples, as long as the total adds up to $10,000.

<table>
<thead>
<tr>
<th>Answer</th>
<th>Min Value</th>
<th>Max Value</th>
<th>All responses</th>
<th>Organic</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover crop research related to soil health</td>
<td>0</td>
<td>$10,000</td>
<td>$2,765</td>
<td>$2,653</td>
<td>$2,394</td>
</tr>
<tr>
<td>Cover crop research related to fertility</td>
<td>0</td>
<td>$5,000</td>
<td>$1,426</td>
<td>$1,384</td>
<td>$1,600</td>
</tr>
<tr>
<td>No-till and reduced till research</td>
<td>0</td>
<td>$10,000</td>
<td>$1,353</td>
<td>$1,806</td>
<td>$717</td>
</tr>
<tr>
<td>Research related to the Cornell Soil health test</td>
<td>0</td>
<td>$5,000</td>
<td>$1,031</td>
<td>$743</td>
<td>$1,583</td>
</tr>
<tr>
<td>Research to fine-tune organic fertility recommendations</td>
<td>0</td>
<td>$8,000</td>
<td>$1,350</td>
<td>$1,588</td>
<td>$689</td>
</tr>
<tr>
<td>Research to fine-tune conventional fertility recommendations</td>
<td>0</td>
<td>$10,000</td>
<td>$1,084</td>
<td>$491</td>
<td>$2,211</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>$10,000</td>
<td>$990</td>
<td>$1,336</td>
<td>$806</td>
</tr>
</tbody>
</table>

   See Appendix A question 26 for list of specific problems

THE FOLLOWING QUESTIONS (27-28) FOLLOW THE SELECTION OF CULTURAL PRACTICES IN QUESTION 16: results based on 23 responses

27. If you were going to contribute $10,000 to research in cultural practices how would you allocate that money? You may allocate all money to one subject or choose to divide funds between multiples, as long as the total adds up to $10,000.

<table>
<thead>
<tr>
<th>Answer</th>
<th>Min Value</th>
<th>Max Value</th>
<th>All responses</th>
<th>Organic</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover crops for weed control</td>
<td>0</td>
<td>$10,000</td>
<td>$1,538</td>
<td>$2,188</td>
<td>$1,667</td>
</tr>
<tr>
<td>Cover crops for erosion control</td>
<td>0</td>
<td>$1,000</td>
<td>$131</td>
<td>$167</td>
<td>$167</td>
</tr>
</tbody>
</table>
28. Please explain in detail your specific challenge with Cultural Practices.
   See Appendix A question 28 for list of specific problems

THE FOLLOWING QUESTIONS (29-37) FOLLOW THE SELECTION OF FOOD SAFETY IN QUESTION
16: results based on 32 responses

29. Are you interested in learning more about Good Agricultural Practices (GAPs) as it pertains to farm food safety?
   Yes - 83%          No - 17%

30. Are you currently certified through USDA for GAPs or HGAPs?
    Yes - 16%          No -84%

31. What are the obstacles to you obtaining food safety certification?
32. How much do you think it costs to put a plan together, implement the practices and go through the audit and certification process?

<table>
<thead>
<tr>
<th>Answer</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $500</td>
<td>0%</td>
</tr>
<tr>
<td>Between $500 and $1000</td>
<td>0%</td>
</tr>
<tr>
<td>Between $1000 and $2500</td>
<td>50%</td>
</tr>
<tr>
<td>Between $2500 and $5000</td>
<td>0%</td>
</tr>
<tr>
<td>More than $5000</td>
<td>50%</td>
</tr>
</tbody>
</table>

33. How much financial improvement have you seen in sales due to certification?

<table>
<thead>
<tr>
<th>Answer</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>25%</td>
</tr>
<tr>
<td>Less than $1000 gain</td>
<td>0%</td>
</tr>
<tr>
<td>Between $1000 and $2500</td>
<td>50%</td>
</tr>
<tr>
<td>Between $2500 and $5000</td>
<td>0%</td>
</tr>
<tr>
<td>More than $5000</td>
<td>25%</td>
</tr>
</tbody>
</table>

34. If you were certified through the GAPS/HGAPs process, what affect do you think this would have on your future opportunities to sell produce?

- Increase - 42%
- Decrease - 0%
- Remain the same - 58%

35. Do you know about the FDA Food Safety Modernization Act?

- Yes - 70%
- No - 30%
36. Do you think it (Food Safety Modernization Act) will apply to your operation or do you think you will be exempt?

Will apply - 71%  I will be exempt - 29%

37. Please explain in detail challenges that you have with Food Safety issues.

See Appendix A question 37 for list of specific problems

THE FOLLOWING QUESTIONS (38-39) FOLLOW THE SELECTION OF COVER CROPS IN QUESTION 16: results based on 13 responses

38. Please rank the following Cover Crop concepts in order of importance by allocating a total of $10,000 research dollars to the subjects. You may allocate all money to one subject or choose to divide funds between multiples, as long as the total adds up to $10,000.

<table>
<thead>
<tr>
<th>Answer</th>
<th>Min Value</th>
<th>Max Value</th>
<th>Average Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choosing cover crops for different goals</td>
<td>$0</td>
<td>$8,000</td>
<td>$1,858</td>
</tr>
<tr>
<td>Way to kill cover crops</td>
<td>$0</td>
<td>$2,500</td>
<td>$583</td>
</tr>
<tr>
<td>Using killed cover crops in no-till</td>
<td>$0</td>
<td>$2,000</td>
<td>$300</td>
</tr>
<tr>
<td>Estimating nutrient release from cover crops</td>
<td>$0</td>
<td>$3,000</td>
<td>$1,092</td>
</tr>
<tr>
<td>Using cover crops for weed suppression</td>
<td>$0</td>
<td>$3,000</td>
<td>$1,883</td>
</tr>
<tr>
<td>How to avoid negative impacts from grain rye cover crops</td>
<td>$0</td>
<td>$1,000</td>
<td>$83</td>
</tr>
<tr>
<td>Avoid negative impacts from cover crops</td>
<td>$0</td>
<td>$3,500</td>
<td>$1,158</td>
</tr>
<tr>
<td>How to include cover crops without giving up production</td>
<td>$0</td>
<td>$10,000</td>
<td>$2,442</td>
</tr>
<tr>
<td>Other</td>
<td>$0</td>
<td>$4,000</td>
<td>$600</td>
</tr>
</tbody>
</table>

39. Please explain in detail your specific challenge with Cover Crops.

See Appendix A question 39 for list of specific problems
THE FOLLOWING QUESTIONS (40-48) FOLLOW THE SELECTION OF MARKETING IN QUESTION 16: results based on 47 responses

40. Do you have challenges finding markets?

41. Are you interested in additional information in finding markets?
   Yes - 80%  No - 20%

42. Are you interested in winter marketing?
   Yes - 48%  No - 52%

43. What are your challenges to entering winter markets?
44. Do you have challenges in deciding the best mix of market outlets for your operation?
   Yes - 61%  No - 39%

45. What best describes your challenges?

46. Do you set your prices based on accurate record keeping and analysis of costs?
   Yes - 58%  No - 42%

47. Would you like to learn more about cost of production?
   Yes - 58%  No - 26%

48. Please explain in detail your specific Marketing challenge.
   See Appendix A question 48 for list of specific problems

THE FOLLOWING QUESTIONS (49-51) FOLLOW THE SELECTION OF WILDLIFE DAMAGE IN QUESTION 16: results based on 56 responses

49. Please select the crop you are having wildlife damage in:
50. The damage is being caused by:

![Bar chart showing percentage of responses for different types of damage-causing animals.]

51. Please explain in detail your specific Wildlife Management problem.
    See Appendix A question 51 for list of specific problems

THE FOLLOWING QUESTION (52) FOLLOWS THE SELECTION OF OTHER IN QUESTION 16: results based on 30 responses

52. Please explain in detail what other challenges you are having.
    See Appendix A question 52 for list of specific problems

THE FOLLOWING QUESTION WAS SEEN BY EVERYONE AS A FINAL WRAP-UP QUESTION
53. If you have any additional comments that you would like to make that were not addressed in this survey please do so here.

   See Appendix A question 53 for list of specific problems