

The National Gardening Association surveyed the 2011 Syngenta IPM In-school Garden Grant recipients to capture quantitative and qualitative data on the program’s impact. The following is a summary of the results.

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Five programs received grant packages totaling \$1,500 in supplies and funding. Three of the five programs have responded to date. Below is a summary of the data:

Types of programs responding:

Private schools 2
 Alternative education programs 1

Location:

Suburban 100%

Type of Audiences participating in these programs:

- In school
- After school
- Special needs

Following is a summary of the highlights from those responses.

Total number of program participants:

9th grade 12
 10th grade 15



The garden was really cool to make and maintain. I was glad to be able to do this because it was a good learning experience for the High School side of the school. We are thankful for the opportunity to have a school garden since LEC is a smaller school for students who don’t do well in a normal school setting.”

- student from Lighthouse Education Center

11th grade	16
12th grade	6
Total active student participation	54

Several students in 7th and 8th grades participated in a mentoring program.

Ethnic/cultural makeup

European American	30%
Latino	46%
African American	19%
Native American	1%
Asian	1%
Other	3%

Eligible for free or reduced lunch program (average):

100% of the students participating in garden program receive free/reduced lunch

Hours per week a participating child/youth was involved in gardening activities:

Average time 5.5 hours / week

Months of the year respondents conducted gardening programs:

Average time 8 months / year

Program continuation:

100% of respondents indicating they plan to continue their program next year.

Subjects taught through the gardening programs:

Science	100%
Health and nutrition	100%

Community service	100%
Intra / Interpersonal relationships	100%
English	33%
Math	33%
Physical Education	33%

Amount of time spent on instructional techniques:

Lecture	50%
Collaborative project work	41%
Student-led investigation	32%
Adult-led investigation	27%
Independent learning	10%

Programs cited using the following types of curriculum:

Curriculum written by school district	33%
Curriculum from a nonprofit	33%
Curriculum combined from numerous locations	33%
Created an original curriculum	33%
Program used links provided by sponsor	33%

** Program coordinators also cited workshop presentations both in the United States and internationally.*

Compliance with State and National Education Standards:

66% of respondents said they connected their gardening program to State and National Education Standards.

Importance of linking to the standards for respondents:

Mandatory	33%
Somewhat important	33%

Teaching about IPM:

York Adventist Christian School reports:

Students had many wonderful experiences learning about IPM. These experiences include:

- Real life practical experience in scientific experimentation
- Recording daily observations in a journal
- Realizing the significance of where produce comes from. The potential effects of pesticides on our food
- Properly cleaning and storing foods
- Students participated in sharing the observations with younger students
- The entire school became gardening observers and wrote down their observations during their recess breaks

Lighthouse Education Center:

- Students studied farming methods
- Students studied the difference in organic and industrial farming as it relates to IPM
- Students applied the knowledge identifying best practice methods of farming in the local environment and the relation of those practices on locally grown produce

Vine Street Community Day School:

- We had an infestation of worms in our cabbage (Red & Greens, Broccoli, and Cauliflower beds). We researched through Rodal Press and determined to physically remove the infested leaves then use a flour



I think the fun thing about the garden is picking the radishes and the tomatoes and eating them. I also like planting and weeding the garden. I learned how to put up a fence around the garden. I can't wait to plant next spring."

- student from Lighthouse Education Center

and salt mixture they recommended

- We had a really wet spring so we removed the damaged leaves and reapplied the flour/salt mixture after each storm set and had passed on
- The cabbage, broccoli/ cauliflower beds were infested with earwigs so we cultivated the soil around the base of the plants and got rid of them that way. The Cauliflower bed failed because of the earwig infestation which kept them from maturing so we had to pull-up the bed, but that was the only completely failed bed we had
- We used the weedblock when we set-up the new beds. The students physically removed the weeds and we put down recycled paper shreds from the shredder used in the office
- We also were given recycled prunings in the form of woodchips from the district which we used to keep the dust down and hinder weed growth
- All of the infested and damaged plant materials were taken off site and not composted
- In the orchard we have some fireblight. When those trees go dormant the plan is to cut off the afflicted areas and put bleach on it. Next we will use a Vollmer organic oil to spray as a preventative



I really enjoyed working in the garden. It was fun because we were able to watch everything grow. I liked it because my garden was better, but when we got pests we removed them by hand. Plus no chemicals were used making it an eco-friendly garden."

- student from Lighthouse Education Center

Guest Speakers featured at programs:

York Adventist Christian School reports:

- Mike Link from TruGreenChemLawn visited to discuss trees, shrubs and gardening techniques
- Jeff Harman, a local IPM specialist, discussed pest management locally

Vine Street Community Day School

- No speakers to date, this is a court-ordered community day school

Lighthouse Education Center

- Tyson Lemon, a local farmer, provided a two-hour discussion on IPM options as it relates to commercial farming in Southwest Michigan

IPM Field Trips:

Lighthouse Education Center

- Visited Lemon Creek Farm and viewed apple and grape picking. Students engaged in discussions about fertilizing, IPM and harvest with farmers on site.

Program leaders noted participant improvements in these characteristics:

Environmental attitudes	100%
Nutritional attitudes	100%
Community spirit	33%
Self confidence	100%
Social skills	100%
Leadership skills	33%
Attitude towards school	66%
Volunteerism	66%
Scholastic achievement	66%



I liked working in the garden for many reasons. One reason is that it helped me to earn a credit. Another reason is that it was the greenest way to learn something in school. Last reason is that it is good to be outside. That is good for me."

- student from Lighthouse Education Center

Motor skills 33%

Reported evidence documenting the effectiveness of these gardening programs:

Positive responses from participants 100%
 Positive responses from administrators 66%
 Positive responses from family members 66%
 Positive community responses 33%
 Donations and financial support 33%
 Decrease in disciplinary actions 33%
 Positive survey results 33%
 Increase in attendance 33%

Average percentage of funding these programs received from other sources:

Grants 53%
 Donations 8.33%
 School or School District Funds 25%
 Parent or Volunteer Organizations 0%
 Fund Raising 3%
 Instructor's pocket 6%
 Other 0%

Approximate amount of money spent on these gardening programs:

\$251 to \$500 33%
 \$501 to \$1000 33%
 \$1001 to \$1500 33%

Approximate value of in-kind donations of these gardening programs:

Less than \$250 66%
 Between \$501 to \$1000 33%



"I personally enjoyed having the garden. I thought that it helped my peers see nature differently. It showed me how much work it takes to grow one vegetable let alone a whole garden. It was a nice change of pace to be able to learn while being outside. The overall experience was fun and educational. We had good team work and communicated with one another."

- student from Lighthouse Education Center

Media Attention:

York Adventist Christian School reports the following media attention:

- 5 Newsletter articles
- 2 Newspaper articles
- 2 website features

Lighthouse Education Center reports the following media attention:

- 2 Newsletter articles district wide

Vine Street Community Day School reports:

- No media attention due to court orders to not publicize school activities. Many former gang members participate in this program. Adult-led investigation/hands-on activities

Garden Package Materials

“All of the items in the award package were wonderful, the most useful items included the raised bed, potting mixture, and the insect identification book.”

“The most useful items included gardening tools, the raised bed, and compost barrel.”

“The equipment, especially the wheelbarrow, compost trays, shovels, rakes were very useful. The gift card allowed us to buy soil and more plants. When the materials arrived it was like Christmas, everyone was very excited and couldn’t wait to get out and put the gifts to use.”



I really enjoyed working on the garden. It was fun to pick food. I also like seeing the watermelon grow. We learned how to grow our own food. Pesticides can be bad because they can get you sick. I think we should grow more things in the garden. ”

- student from Lighthouse Education Center