Kids, Compost, Crops and Consumption

The Situation
According to the Centers for Disease Control and Prevention, 92 percent of children in North Dakota do not eat enough vegetables. Also, the average American consumer is three to four generations removed from agriculture.

Extension Response
Youth participating in the Kids, Compost, Crops and Consumption program learned about nutrition, agricultural production and where their food comes from. This program was piloted to 80 third- and fourth-graders at a low-income school in the Fargo School District.

The program consisted of six lessons taught once a month throughout the school year. Each lesson focused on a different part of the food cycle:

- Livestock production (Kelcey Hoffmann)
- How compost recycles plant and livestock manure into a valuable resource for crop production (Mary Berg)
- How soil supports livestock and crop production (Alicia Harstad)
- Root development, required nutrients for plant growth and photosynthesis (Todd Weinmann)
- Health benefits of vegetables and how to incorporate vegetables into their diet (Nikki Johnson)

The final lesson was a review of the previous lessons. Each student was provided with a square foot garden and all of the necessary supplies and information to grow spinach during the summer. Students also received two recipes for using spinach and tasted those recipes before the lesson ended. Every lesson also promoted daily physical activity.

Impacts
Success of this program was measured with pre and post evaluations as well as a follow-up evaluation three months following the final lesson.

Students improved their knowledge of nutrition, composting and agriculture by participating in this program. For example:

- 97 percent know livestock use plants as food.
- 78 percent know paper can be composted, compared with 41 percent before the program.
- 68 percent correctly defined photosynthesis as the life cycle that uses sunlight energy and carbon dioxide to make sugar and oxygen.
- 75 percent correctly answered that sand is the largest soil particle, compared with 20 before the program.
- 85 percent indicated they are more willing to try new fruits and vegetables.
- 91 percent know fruits and vegetables contain vitamins and minerals that help our brain, eyes, heart, skin and teeth.

Follow-up evaluations were completed by 63 students three months after the last lesson and indicated students applied the knowledge they gained:

- 73 percent planted the square-foot garden that was provided by the program.
- 37 percent harvested the plant and the majority ate it as a salad.
- 57 percent planted another garden besides the one the program provided.
- 62 percent had a parent participate in the garden activity.
- 29 percent consumed 2 serving of vegetables per day during the summer break months.

Feedback from Teachers

- “We appreciate all of your work and patience with our students. You made it hands-on, interesting and something they will remember. Thank you for all of your work and effort!”
- “The most valuable part of the program was exposing the students to agriculture in ways they have not experienced. Very hands-on and having something to take home to try was excellent. As one student said, ‘Showing us real life.’”
Public Value Statement
Educating students about food production and the nutritional requirements of a balanced diet may empower them to make healthy choices and begin to provide food security.

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Resource Links
I3-Corps Blog part 1

I3-Corps Blog part 2