

## **Southern Region Small Fruit Consortium**

### **Progress Report: Fostering Strawberry Gardens in Schoolyards**

#### **Name, Mailing and Email Address of Principal Investigator(s):**

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#### **Objective**

Our objective was to develop an elementary school curriculum based on the annual strawberry production system used by growers in the southeastern U.S.

#### **Justification**

The Strawberry Garden Project was developed as a program to enhance student knowledge of growing strawberries in the southeast and to create a broader understanding of plant growth and development concepts through agricultural production of small fruits. The strawberry garden is a means to connect the students to the farms, it mimics production on a scale they can understand and it helps them understand where and how their fruit is produced.

Research studies have suggested that school gardens can play a significant role in engaging youth in a number of positive ways. School garden programs encourage increased consumption of fresh fruits and vegetables and a willingness to try new foods. A correlation between increased science achievement on standardized exams and experiences in the school garden have been shown. Youth have demonstrated more positive attitudes towards science when using a school garden to learn plant biology concepts.

A school strawberry garden can provide many impacts with the benefit of being easily managed by a classroom teacher or two. Schools trying to grow a garden with a traditional summer recess have logistical challenges in managing resources to maintain watering, weeding, fertilizing, and harvesting. A strawberry garden modeled on the southeast annual production system, however, fits well in to the traditional year calendar for elementary schools located in the Southeastern U.S. In this system, students begin school in late August and finish the school year in June. This meshes with the annual strawberry system in which strawberry plants are set in late September or early October, and fruit is harvested in May. The production schedule enables students to observe the growth of the strawberry plant over a period of time through multiple seasons. The students can simultaneously monitor weather and its impacts on the strawberries, as well as pests and diseases.

#### **Methodology**

A program utilizing the annual strawberry production system of the southeastern US, including all of the states in the Southern Region Small Fruit Consortium as a model for a unit of study for elementary schools had been proposed. Eight school strawberry gardens were identified to be

pilot sites to refine a school production methodology and incubate lesson ideas. The lead teachers at each of the sites are implementing lessons and working to develop them into pieces to be collectively shared with other educators. Teachers are working closely with their local County Extension agents, who in turn identify growers that provide plants and other supplies needed for the gardens. Working towards the creation of a comprehensive curriculum that includes a production guide with a complementing series of lessons targeted for grades K-3. Each grade level has specific learning standards that will be addressed, not only in science, but math and literacy as well. Currently, teachers are focusing their efforts on aligning their lessons to their own North Carolina learning standards. The primary focus is on science lessons emphasizing concepts like developing experiments, asking questions, drawing conclusions and content like plant growth and development, soils, insects and ecology. Additional lessons in math and literacy are also underway.

### **Results**

Using the lessons learned over the past two years, a production guide has been developed to give step-by-step instruction to teachers for building and managing a school strawberry garden. It details specific ideas for building strawberry beds, the cultural practices that need to be implemented and a calendar that shares tasks for students to complete throughout the year. The production guide has been through the peer review process, is currently being scrutinized by editors at the college Communications department and has been assigned a contract with a local graphic design firm. The production guide will be a numbered NCSU Cooperative Extension publication, available as an online, free downloadable document.

A School Strawberry Garden Project website has been created to provide educators with easy access to download the production guide, try some of the pilot ideas and as a public face for the project. As lessons are refined and finished, media pieces edited, all will be available on the website for use in classroom teaching. The website is <http://strawberrygardenproject.blogspot.com/>.

Our project brings together a team of 4-H and Horticultural County Extension Agents, local farmers, the NC Farm Bureau, the North Carolina Strawberry Association and elementary school teachers. Agents are the primary liaison between teachers and growers, the NCSA provides the book "Strawberry Time" to the elementary schools to use in their classroom. And in 2010, a teacher from Gates County presented her experiences with the project at the annual training of the NC Farm Bureau, Ag in the Classroom during the summer of 2010.

### **Conclusion and Future Plans**

The project continues to grow with plans to further develop curricular materials. 2011-2012 will focus on bringing together the experiences and rough draft lessons of the pilot and develop it into finished print and electronic educational materials. Primary investigators and lead teachers will collaborate to continue to create the curriculum. Interactive videos including grower interviews, time-lapse movies that illustrate specific plant growth concepts and horticultural how-to webisodes related to strawberry production. Resource lists of local growers/nurseries interested in working with the schools will be developed for North Carolina. Additional funding opportunities continue to be sought after to provide the means to accomplish the project goals.