

Education and Leadership

III. Education for Primary and Secondary School Audiences in Agriculture, Environment, Food & Nutrition

Summary

This initiative aims to provide California's children and youth with experiences, knowledge and skills to better understand agriculture and food systems and make choices about their activities and diets that will enhance their own health and, ultimately, that of the environment and society at large. This work takes advantage of the current growing public interest in food and farming and recent successes in school gardening to increase young Californians' experiential learning opportunities in these areas. ASI activities include providing learning opportunities directly to primary and secondary students, delivering educational programs for teachers, food service personnel and others involved in educating and providing food to California's students and conducting research on the effectiveness of these types of programs. Collaborations with many partners inside UC and other organizations throughout California are integral to ASI's work in this area.

Problem statement/ Baseline

- Our children and youth need appropriate experiences, information, knowledge and skills to help them understand agriculture, food production, nutrition and healthy eating and make decisions that will contribute to their individual and collective health and well-being.
- There is a great need and opportunity to provide large numbers of California's primary and secondary school students with appropriate learning experiences through school gardens and educational programs at their schools, on farms and in related settings.
- There is a complementary need and opportunity to make it easier for young students to make healthier food choices by increasing the availability and affordability of healthy, nutritious and appealing food in their schools and other areas of their lives.

Structural issues/ Broad drivers shaping change

- Rates of obesity, Type 2 diabetes, and other nutrition-related health problems continue to increase at alarming rates in children and youth. Lifestyle changes, including more sedentary habits, and lack of access to health care has contributed to an increase in diet-related diseases. These problems tend to occur at higher rates in lower-income communities.
- Well financed aggressive marketing of unhealthy food to vulnerable segments of the population, including children, has contributed to poor dietary choices and habits that have long-term negative impacts on individuals and society.

- Very few children, parents and teachers come from farm backgrounds; thus there is widespread lack of understanding of agricultural systems and food production. Similarly, relatively few children have significant experience based knowledge and understanding of, and connection to, nature and ecological processes.
- Mandatory testing along with reduced funding for education shapes and limits curricula and opportunities for meaningful experiential education related to food, nutrition, agriculture and the environment.

Strategic opportunity

- Awareness of the rising human, social and economic costs of diet-related health problems has increased significantly in recent years.
- The many instructional school garden successes in California demonstrate that such gardens have the potential to enhance children's agricultural and ecological literacy, promote their healthy food choices and improve their eating habits and overall health and well being. These successes can be replicated and amplified.
- There is a growing interest in sustainable agriculture and food systems among current high school students and teachers as well as a growing number of organizations that are working to meet the educational needs and interests of these students and also are interested in partnerships with colleges and universities.
- There is a current opportunity to increase consumption of the state's fruit and vegetable crops within California schools, thus simultaneously promoting students' healthier food choices and the economic viability of California farmers.

Desired outcomes

- Primary and secondary school students will more fully understand and appreciate agriculture and the environment through experiences in school gardens, on farms and in related programs; this will shape their life-long attitudes and behavior and result in better stewardship of our states' agricultural and natural resources.
- Students will have meaningful experiences through garden-based learning and farm-to-school programs that lead to healthier food and activity choices over their lifetimes; their families and communities will be influenced positively to make similar healthy choices.
- Excellent instructional school gardens will spread and flourish throughout California; food and agriculture will be integrated in effective, rigorous and stimulating curricula in all primary and secondary schools. Teachers, educational leaders and policy makers will embrace the use of science-based curricula and experiential teaching methods in garden-based learning.
- Healthy, nutritious and appealing food will be readily accessible in all California schools; this will include food produced locally and regionally and there will be well integrated programs in agricultural, environmental and nutrition education, food services and waste management, including composting.

- There will be strong collaborative relationships between those involved in primary and secondary education, public, private and non-profit organizations working in youth education, colleges and universities, food production and handling, and waste management. Beneficial impacts of garden-based learning, farm-to-school projects and other educational programs will be well-documented and California's programs will continue to serve as models for other regions.

Key Partners

- Primary and secondary schools and school districts and associated students, educators, parents and volunteers
- Non-profits and other organizations involved in agricultural, environmental and nutrition education with children and youth and promoting school gardens (e.g., , California School Gardens Network, Life Lab, FARMS, Soil Born Farms, 4-H, FFA, Ag in the Classroom)
- California state agencies and departments, including Education, Food and Agriculture, Health Services, Integrated Waste Management
- University California Cooperative Extension: Specialists, advisors, county staff and volunteers in nutrition, agriculture, and youth programs including Master Gardeners and 4-H
- Faculty, staff, graduate and undergraduate students in agriculture, environmental sciences, child development, nutrition, education and other related areas
- California food producers and handlers and organizations that support them (e.g., Community Alliance with Family Farmers, Western Growers, Farm Bureau, specific commodity groups)
- Foundations and other financial supporters

Activities

- Maintain and enhance the Student Farm (SF) and Russell Ranch (RR) as accessible and dynamic educational sites
- Provide educational tours for primary school students through the SF's Children's Garden Program (CGP)
- Provide appropriate learning experiences and resources for middle and high school students, both on and off campus, particularly through collaborations with partnering schools and organizations
- Use the CGP and activities with secondary students as vehicles for UC Davis students to further their understanding and participation in food systems education
- Develop and deliver educational programs and materials focused on garden based learning, school garden management, nutrition education and related areas for educators and other appropriate audiences
- Develop and deliver educational programs and materials focused on school food systems for food service providers, educators, administrators and others
- Work within various ASI Food and Society initiatives to integrate school garden and farm-to-school concepts for schools and school districts
- Collaborate on researching various aspects of school garden and farm-to-school programs

Resources needed for 5 years

Total need: \$1.2 million¹

- Provide tours and learning experiences for primary & secondary students: \$450K
 - Children's Garden Program Tours and for primary students
 - Learning experiences for secondary students
 - Facility maintenance and enhancement
- Educational programs for educators, food service providers, etc.: \$600K
- Collaborations with Food and Society initiatives and research: \$150K

Current extramural grants: \$125K

Additional need: \$1.075 million¹

¹Not included above: \$150K from Student Farm state funding or income from crop sales