

Farm to School Efforts: Innovations and Insights

—Tim Galarneau, Suzanne Millward, and Megan Laird

WHY FARM TO SCHOOL?

It is not only the convergence of agendas and the addition of new voices that make this the time for school food reform. It is also the urgency of the underlying concerns to which school meals are addressed. Hunger is on the rise. Our children's health is deteriorating. The environment is under assault. School food reform holds the promise of addressing all of these issues. That is why it cannot wait.

—Janet Poppendieck, *Free for All: Fixing School Food in America* (2010)

Across the United States, individuals from all different walks of life are getting involved in *alternative food system projects*¹ in an attempt to challenge the institutional practices currently operating within our food system. These projects have arisen in response to a number of factors, including environmental degradation by major producers and distributors, concern for the welfare of local economies, as well as concern for general health and the diet-related diseases affecting youth today.^{2, 3, 4} At a time when the federal government is proposing substantial cuts in Food & Nutrition Service programs such as the Supplemental Nutrition Assistance Program (SNAP), hunger is on the rise as access to healthy meals for children becomes increasingly difficult for the 150 million Americans who live at or below the poverty line.⁵ Ensuring that adequate daily nutrition is available for children is a Farm to School program imperative that looks to lessen the burden at home while ensuring students have the energy to focus, be challenged, and succeed in their education at school.

Within the alternative food system movement, health and agriculture advocates, parents, community members, farmers, teachers, chefs, Food Service Directors (FSDs) and various other stakeholders see the potential for Farm to School (FTS) programs to improve both the health of children and stability of local economies.⁶ Farm to School programs in-

troduce more fresh fruits and vegetables into school meals and snacks while connecting regional farms with schools. They also enhance nutrition education, and more broadly and positively change children's understandings of and relationship to their food. Beyond the classroom, FTS programs can also affect school staffs: they re-orient the skill base of cafeteria workers by providing ingredients to re-introduce "from scratch" and "speed scratch" meal preparation with advanced fresh preparation equipment.

Farm to School is a diversely applied concept that has quickly gained popularity nationwide. Over 2,300 schools were known to be implementing FTS programs in 2011, as compared to just 400 FTS programs that were underway in 2004.⁷ FTS programs seek to provide all children access to healthy, nutritious food while simultaneously bringing attention to how small- to medium-scale regional farmers can reinvest in K–12 markets.

In order to teach children about complex concepts such as agriculture as well as health and nutrition, FTS programs often include activities such as taste tests, recycling and composting programs, and trips to farms and gardening projects.⁸ These efforts help children make connections to the world and reinforce a message calling for greater awareness and interest in fresh, culturally appropriate foods. Such efforts play out against a backdrop of abundant, cheap junk food and product marketing that invests over \$4 billion annually targeting children with messages and products that can lead to unhealthy life-long eating habits.⁹ These unhealthy habits are contributing to greater prevalence in children of Type 2 diabetes, heart disease, impaired cognitive functioning (decreased concentration, attention, and motivation), distorted body image, and low self-

esteem.¹⁰ To improve and ingrain healthy eating habits, hands-on, experiential education is as important as the healthier food that FTS projects provide in the school cafeteria and classroom.

While the motives for FTS efforts generally focus on changing the health and eating habits of children as well as supporting local economies, their success can be difficult to quantify because they are being implemented in a variety of ways in diverse settings. Outcomes of FTS programs have included students becoming more willing to eat produce that they would normally resist trying, as well as becoming more knowledgeable about how food is produced. Students involved in FTS programs have also come to recognize the seasonality of local foods, have cut back on the amount of un-

healthy foods and beverages such as sodas they consume, and have incorporated exercise into their daily routine.^{11, 12, 13}

In this article we review the benefits and challenges of Farm to School efforts, and describe some of the innovative ways that Food Service Directors (FSDs) on California's Central Coast are working to overcome several of those challenges by forming effective partnerships with food banks, produce distributors, and other school districts. We also describe how efforts to formalize a regional school food alliance as well as share innovations via California-wide FTS trainings have further contributed to advancing FTS programs. We close with suggestions for "next steps" to consider in developing effective FTS efforts.

Farm to School: Who Benefits?

Farm to School programs can generate a variety of benefits for a number of groups:

Children: Farm to School programs are about more than just healthier meals in school; these efforts can help children gain a deeper connection to the earth and where food comes from. Successful models that incorporate elements such as hands-on education concerning health and nutrition can actually change the behaviors of students so they can make living healthy and active lifestyles a life-long habit. A healthy, balanced diet in childhood can result in enhanced learning and can positively influence our children's education, income, and quality of life.^{14, 15, 16}



Central Coast School Food Alliance

Partnerships can help advance the Farm to School agenda. The Central Coast School Food Alliance (CCSFA) is a collaborative initiative that emerged in February 2010 when the UC Santa Cruz Center for Agroecology & Sustainable Food Systems (CASFS) and Second Harvest Food Bank of Santa Cruz County convened a forum on school food, featuring Janet Poppendieck, author of *Free For All: Fixing School Food in America*.

The forum brought together more than 120 Food Service Directors and staff, public health officials, state and federal elected officials, non-profit partners, farmers, and concerned citizens to envision how to start working together to ensure that K-12 students in Santa Cruz, San Benito, and Monterey Counties have access to fresh and wholesome food at schools.

The CCSFA has been active for more than three years, providing resources and training, and hosting programs to promote a food system in which young people will thrive with access to nutritious foods in a community working to bring about healthy change.

Goals of CCSFA include:

- Provide the education and nutrition needed to ensure every child has the opportunity to grow up healthy and successful.
- Create comprehensive and accessible school food programs that focus on healthy, fresh, and culturally appropriate meals that nourish all children.
- Identify and promote Food Service Directors' innovative practices in existing school food programs to enhance efficiency and sustainability, starting with the elementary schools.
- Cultivate a school and community partnership network to build a strong base that is solution oriented.



CCSFA Core Team Meeting, May 2013



Live Oak Unified School District After School Program, Planting Activity

Parents/Families: The majority of children in the US do not eat the daily recommended 2 ½–6 ½ cups of fresh fruits and vegetables or 2–3 ounces of whole grains. Many children’s diets include too many “empty calories” and high sodium levels. Often this is because families cannot afford to feed their children nutritious foods: the Federal Interagency Forum on Child and Family Statistics states that twenty-two percent of children lived in food-insecure households in 2010. FTS programs can help support families that are unable to consistently provide nutritious meals to their children due to family hardships.^{17, 18, 19, 20, 21}

School Food Services: In many school districts, food services must generate their own operating funds, since they are not supported by the district’s overall funds. FTS programs generally increase participation in school food services by both students and school faculty. Higher participation can lead to increased revenue for food service operations through the national school lunch program as well as reimbursements from the government for breakfast, snack, and supper programs. Additionally, efforts show that production planning with regional growers can provide greater ease in budgeting.²²

Teachers: Short attention spans and lower academic performance are associated with undernourished children, whether this is the result of hunger or poor diet quality. Moderating fat intake and increasing the amount and variety of fruits and vegetables children eat have been highlighted as integral to improving student nutrition and academic performance. Further, introducing breakfast programs, snack, and supper programs ensures that children have access to adequate meals at regular intervals to support both their in-class work and homework.²³ In addition, integrating Garden Enhanced Nutrition Education, which introduces experiential academic lessons in an outdoor classroom, into FTS efforts has been proven to impact children’s eating habits in school and at home, as well as their academic performance.^{24, 25, 26}

Farmers-Produce Distributors: Farm to School programs can provide increased revenue and a consistent, three-season market to local growers. Many FTS programs also include an educational component that teaches children and their families about locally produced food and the farmers who grow it; this can further encourage families to “buy local” via retail and farmers’ markets.²⁷

What Are Some of the Challenges of Farm to School programs?

Despite the benefits, there are a number of obstacles that have been noted concerning serving fresh, local produce in schools. These include, but are not limited to:

- Increasingly narrow state budgets and funding for food service programs.^{28, 29}
- Supply reliability and seasonal restrictions for regional fresh fruit and vegetable sourcing.^{30, 31}
- Food safety and handling perceptions of small- and mid-scale grower operations.³²
- Children continuing to choose and consume unhealthy options in the cafeteria and at home (in this case, the habits of a child’s family often needs to be addressed, which can be a challenge in itself).^{33, 34}

The cost of food and labor, however, is one of the most frequently reported barriers by FSDs. Administrators and FSDs are often concerned that food brought in by FTS programs may require more preparation (in regards to both time and labor) and may also be unaffordable in comparison to food obtained through a national distributor.³⁵

Obstacles can serve as fertile grounds for building new insights and programs to address the difficulties, as well as increase opportunities for incorporating healthy, fresh food in schools. Current actions to address obstacles through school districts and non-governmental partnerships include:

- Incorporating supplemental activities such as nutrition education and physical fitness programs into the school curriculum.³⁶
- Revising federal and state regulations on regional sourcing and fresh fruit and vegetable procurement.³⁷



- The creation of trusting and positive cooperative efforts amongst stakeholders involved in production, distribution, and procurement through “values-based supply chains,” which aim to enhance value for all parties involved in a supply chain and make information throughout all aspects of the chain easily accessible to all partners³⁸ (see more on page 7).
- Developing new marketing and social media approaches to incentivize school food program participation.^{39, 40}

Additional examples have shown that sourcing food from local farms can be both affordable and reliable, especially when costs can be adjusted through innovative program models such as the two discussed below.⁴¹

Innovations to Increase Access and Improve Affordability

SANTA CRUZ COUNTY-SECOND HARVEST FOOD BANK FARM TO SCHOOL PARTNERSHIP

In January 2012, the USDA announced new nutrition standards that required schools to double the amount of fresh fruits and vegetables served in school meals. Schools are also under increasing pressure from parents and community members to serve more local, organic produce. As a result, Food Service Directors are looking for ways to cover the costs of buying and preparing more fresh fruits and vegetables.⁴²

In Santa Cruz County, the local food bank has stepped in to partner with regional schools and alleviate some of the cost challenges. In Fall 2011, the Second Harvest Food Bank—which has been recognized for its success in distributing fresh produce—began providing approximately 1,000 pounds a week



Santa Cruz City Schools, Snack Program with citrus from Second Harvest Produce Donation Program

of fresh fruits and vegetables to Soquel Union Elementary School District; in spring 2012, San Lorenzo Valley Unified School District in Santa Cruz County joined the pilot program. This weekly delivery of mixed produce is donated and delivered—free of charge—to the two pilot school districts. Second Harvest also provides smaller amounts of fruits and vegetables to after-school programs at several schools (particularly in the Pajaro Valley Unified School District).⁴³

Delivery is free for these two districts because each orders about 1,000 pounds of produce per week,

and Second Harvest delivers free of charge with an order of 500 pounds or more. Smaller-scale after-school programs often do not order enough food to receive free delivery, so FSDs generally have someone from their staff go to Second Harvest’s warehouse to pick up their order. Second Harvest also has three designated “shopping days” when people can go to the warehouse and select the food they want; these orders are then transported by the programs themselves, noted Brooke Johnson, Chief Operations and Program Officer.⁴⁶

The relationships stemming from the Central Coast Food Alli-

Handling Food Bank Donations

“It’s like getting a mixed Christmas present every Monday,” says Cathy Giannini, Child Nutrition Services Supervisor of the Soquel Union Elementary School District, which receives a weekly donation from Second Harvest Food Bank. “There is no warning as to what’s coming,” Giannini continues, “so you need to re-start and re-plan the menu once the delivery comes.”⁴⁴ Although making changes to the menu each week can be challenging, staff members have been enthusiastic about working with the donations from Second Harvest. They have also received regional grant support from the Central Coast School Food Alliance to buy fresh prep equipment such as section wedgers (used to cut fruit into sections) salad spinners, stainless steel prep tables, and a robot coupe (a continuous feed fresh prep device for grating, shredding, slicing, and dicing fruits and vegetables), along with funding for additional food safety and food handling training for their staff.⁴⁵

ance's (CCSFA's) work have played a major role in the partnership between Second Harvest Food Bank and local schools. The school distribution effort came about thanks to the leadership of Second Harvest's CEO Willy Elliott-McCrea, who participates in the CCSFA and served as co-chair of the steering committee for the initiative's first two years. After working with Cathy Giannini of the Soquel Union Elementary School District through the CCSFA, Elliott-McCrea proposed that Second Harvest could start shipping free produce to the schools. In exchange, Giannini committed to reinvesting their cost savings in regional, high quality agricultural products and other healthy food efforts for her district.⁴⁷

Another member of the CCSFA, Amy Hedrick (Director of Student Nutrition Services for San Lorenzo Valley Unified School District), heard through both Giannini and Elliott-McCrea about how successful sourcing food from Second Harvest had been. In March of 2012, the San Lorenzo Valley Unified School District also began receiving donations of fruits and vegetables from the food bank.

As this example illustrates, while food banks such as Second Harvest must be able to provide food to their many partnerships within the non-

Impact of Food Bank Donations

Amy Hedrick of the San Lorenzo Valley Unified School District already considers the arrangement with the Second Harvest Food Bank a tremendous help for school food services, explaining that, "For a while there, we had been out of funds to purchase from Shumei Farms [a small, local organic farm], but thanks to our relationship with Second Harvest we are now able to purchase from them again. Without these donations, our budget would allow us to serve less fresh fruits and vegetables, and instead school meals would contain more canned and frozen vegetables [which include more salts and additives] and some USDA products [which include a light sugar-based syrup]."⁴⁸

Receiving donations from Second Harvest also allows both school districts to serve a larger variety of produce, and while Hedrick feels that it's too soon to tell whether the new program at the San Lorenzo Valley Unified School District has affected students' eating habits, Cathy Giannini has already noticed the program's impact in Soquel's elementary schools. "Kids are tasting things they've never had before," she says. "Most of the time they like it, and I think they are eating more fresh fruits and produce, I really do."⁴⁹

profit community, they may also be able to distribute some produce to school districts to help alleviate the costs of serving fresh fruits and vegetables. However, Second Harvest believes that schools should still try and procure food from local farms, as their intention is not to undermine the hard work of farmers and the local food system.

During 2012–2013 this pilot project expanded to include 5 school districts in Santa Cruz County, with Second Harvest Food Bank dis-

tributing over 100,000 pounds of fresh fruits and vegetables.⁵⁰ Given the nature of menu planning and regulatory oversight for school nutrition programs, often these fresh fruits and vegetables are considered additional/supplemental to their meal standards and requirements. Thus, districts are able to offer more choices for children, support further healthy snack offerings, and increase the experience of food service staff in preparing and serving more fruits and vegetables.

Just south of Santa Cruz, in Monterey County, stakeholders—including the Second Harvest Food Bank, Health Department, and non-profit partners—are meeting to determine how to undertake a similar program partnering with county districts. These efforts can help defray the costs of food served in school meals, especially the costs of locally grown fresh fruits and vegetables, and encourage stronger regional relationships and partnerships.



Central Coast School Food Alliance Farmer to Food Service Marketing Cards



CENTRAL COAST FOOD AND NUTRITION PURCHASING GROUP

The daily meal costs per student for school districts that serve up to 30,000 meals daily can be considerably lower than those for smaller districts serving several hundred to several thousand meals a day. To benefit from economies of scale, smaller districts can combine their purchases, leading to lower costs and lower pricing on competitive bids. Major urban districts (e.g., Chicago, New York, Los Angeles) work together in buying groups, spending over \$530 million annually; regional networks that lack that level of cumulative purchasing power can still reduce costs and realize significant savings.⁵¹ Collective buying that allows for joint purchasing agreements amongst districts can also streamline bidding and Request for Proposals (RFP) processes.

School districts can also work together to strengthen inter-district relationships that advance FTS efforts. In 2007–2008 Food and Nutrition Service Directors from San Lorenzo Valley, Scotts Valley, and Soquel Elementary Unified School

Districts (USDs) in Santa Cruz County joined together as the Central Coast Purchasing Group and initiated a shared bidding process for RFPs for all products (excluding commodity food items) for their meal programs. Since then the group has grown to include eight districts: Aromas-San Juan, Gonzales, Live Oak, Northern Monterey, Pacific Grove, San Lorenzo Valley, Scotts Valley, and Soquel Union Elementary USDs.

Through working together to compare their RFP bids and pricing they recognized the potential for significant savings on a variety of items, from paper goods to prepped, processed, and fresh food. “The growth of the group is based on how we have realized tens of thousands of dollars in savings to our programs annually, which makes a difference when you have a smaller budget . . . and if you have the time to work together on buying it just makes sense,” noted Cathy Gianinni, one of the pioneers of the Central Coast group of school districts.⁵²

Although the group assumed that its collective purchasing effort

would attract greater attention from suppliers, the fact that the volume they’re seeking is often still equivalent to or in some cases less than that of one mid-sized to large district means that suppliers are not as forthcoming as the group had expected. Responses to the Central Coast Purchasing Group RFPs from broadline suppliers and produce suppliers have varied, with only half of seven to eight of them responding to the bid each year. Sysco has responded without being able to commit to contract pricing on fresh specialty crops, whereas its subsidiary is able to guarantee contract pricing to allow better budget planning for group members when it directly responds.

Further, some suppliers even respond with ultimatums to the districts on what they should include in the contract in order for the supplier to consider the bid. E.g., Gold Star Foods, a signature food and nutrition service broadline supplier, refuses to bid on the Central Coast RFP unless the group includes its commodity dollars (funds available through the federal school lunch program). The way those commodity dollars are used varies from district to district, and at present they cannot be used to provide additional collective purchasing leverage. Identifying these inconsistent responses to RFPs has prepared the group to better understand their own preferences and who can best accommodate their needs.

FTS Partnerships for School Districts on the Central Coast

Efficient procurement systems are also key to successful FTS efforts. However, the nature of trying to source local, sustainable food may make procurement challenging.

Collective Menu Planning

The inter-district Central Coast Purchasing Group has been in place for five years, but only recently has the group initiated collective menu planning as a way to help schools realize savings and develop strategies for working with regional specialty crop producers.

Efforts to effectively menu plan across districts stem from peer Food Service Directors such as Sandy Curwood of Ventura Unified School District. Curwood has served as a nutrition ambassador and presenter for trainings across California, in partnership with the California Department of Education’s Nutrition Services Division, encouraging innovation to increase healthy food offerings in school meal programs. She has also coordinated a regional collective buying and menu planning group that offers useful methods and models to her peers.⁵³ The menu planning, which includes a focus on fresh fruits and vegetables, provides new opportunities to work with small- to large-scale regional growers and increase understanding of the in-season, fresh products that can best fit with school meals.

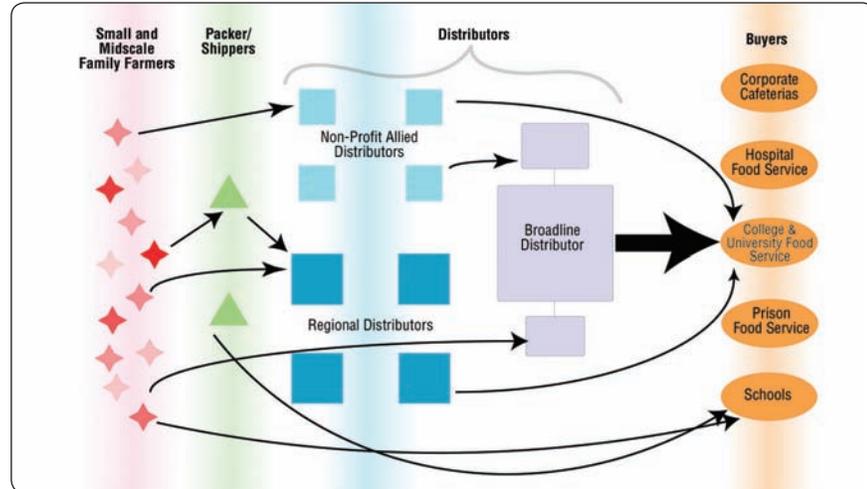
FURTHERING HEALTHY FOOD SYSTEMS IN CALIFORNIA

Buying locally grown produce can mean purchasing from many farms, especially for large school districts that require large, consistent supplies. Farms involved with “local food” efforts are often relatively small, and one or two combined may still not come close to providing enough food to feed the children in large school districts.⁵⁴ This means that FSDs determined to serve fresh, local produce in school meals may need to buy from multiple farms, leading to multiple invoices and deliveries to arrange. To avoid this extra work, more efficient buying relationships with local producers are needed.⁵⁵

School food services that choose to buy local, fresh, organic produce are purchasing what can be referred to as a “values-based product.” Values-based supply chains have emerged with the increasing demand for foods that can be identified with merits such as “sustainable,” “family farmed,” “organic,” and “local.” These supply chains focus on the environmental and societal benefits of supporting small to midscale sustainable farmers. In contrast to traditional long-distance based distribution systems, partners in these values-based supply chains work as a team to optimize the value for all parties involved (which includes workers receiving fair wages and producers maintaining honest profit margins).^{56, 57}

The extent of supply chains can vary; some may involve just the producer and buyer, while others can entail a multiple-step process that includes packers/shippers and distributors. The majority of products, however, go through some sort of supply chain before reaching their final destination.

The continued growth and implementation of FTS programs



Farm to Institution Sourcing Map from: Feenstra, et al. Using a supply chain analysis to assess the sustainability of farm-to-institution programs. *Journal of Agriculture, Food Systems, & Community Development*. Spring-Summer 2011, vol. 1 issue 4. pg.72-73.

depends on clear, easily accessible information flow for and amongst all parties in a supply chain—from producer to buyer to consumer. Research has shown that farmers need information on how to best access school markets, and school food services could likewise benefit from information to help them find new sources of local, sustainable fruits and vegetables.

One recent study that focuses on the opportunities and challenges of, and possible solutions for strengthening farm-to-institution programs, has noted that distributors can help aggregate produce from small and midscale farms.⁵⁸ This type of service both supports smaller farms that are unsure about their ability to meet the demand of any given school district and makes procurement easier for school food services, thus promoting local buying efforts. Thanks to their close relationships with farmers, regionally based, mid-tier food distributors hold the potential to greatly support FTS programs. Advocates for FTS efforts should thus be working with food distributors to help both schools and farmers achieve their goals.⁵⁹

Below is an example of an alternative non-profit allied distributor based in the Salinas and Parajo Valleys of Monterey and Santa Cruz Counties that works within a values-based supply chain.

ALBA ORGANICS

ALBA Organics is an offshoot of the Agriculture and Land-Based Training Association (ALBA) in Salinas, California, a training program for those hoping to establish their own farms. “Serving a primarily Latino audience, ALBA’s work is grounded by the belief that in order for limited-resource and aspiring farmers to gain a foothold within California’s highly competitive farm sector, they must have access to information, operating capital, and opportunities to access land.”⁶⁰

The program established ALBA Organics in 2002 to serve as a licensed distributor of fresh fruits and vegetables, as well as to support and assist the program’s beginning farmers. Not only does ALBA Organics provide marketing education, but it also helps new farmers develop their revenue streams across direct, wholesale, and institutional markets.



Live Oak Unified School District After School Program, Healthy Food and Family Activity

ALBA Organics purchases produce from both regional and ALBA farmers, then distributes these products (at competitive prices) to wholesale and retail buyers, as well as certain food service sectors, including schools, colleges, universities, and health care facilities, as well as corporate cafeterias such as those on the Google campus.⁶¹

Schools benefit in unique ways from purchasing through ALBA Organics. Buyers may request to have particular crops and products that they would like to serve in the cafeteria “custom grown” by ALBA farmers. The Community Alliance with Family Farmers’ (CAFF’s) Farm to School program works with ALBA Organics, along with other local farmers, to source their Harvest of the Month products for regional nutrition education efforts across hundreds of classrooms.⁶² And as a result of ALBA Organics’ partnerships with schools, students are encouraged to visit ALBA farms to learn about where their food comes from and who is growing it.

Santa Cruz City Schools began sourcing from ALBA Organics in

fall 2009 when Jamie Smith became the Food Service Director. “I had a vision of bringing regional, organic, and fresh food into our program here to deliver from-scratch recipes with value, integrity, and a commitment to supporting our local producers,” noted Smith. While Smith has participated in Second Harvest’s fresh fruit and vegetable donation program he also has looked at how to increase his Farm to School sourcing for Surf City Café, a branding concept for his school meal program. “Fresh, delicious, and in alignment with our meal regulatory framework, is a goal that at times is not seemingly possible, however it’s the excitement to find the answers to maintain a strong and healthy vision that allows myself and others to keep pressing forward,” says Smith.⁶³

Tony Serrano, ALBA Organics’ general manager, has been a vital partner in this effort. “Providing organic and local product to schools such as those in Santa Cruz City and across the region is an inspiring act of feeding the larger community and our growers at ALBA. Balancing the needs of both providing the best

price for our small growers with the needs of many important markets in our communities, such as schools, is what I am tasked to do,” he says.⁶⁴

CENTERPIECE FOR A HEALTHY SCHOOL ENVIRONMENT (CHSE): Increasing Fresh Fruits and Vegetables in California’s School Food & Nutrition Programs

Since its start in 2009, the Centerpiece for a Healthy School Environment (CHSE) program has provided free, innovative, Farm to School trainings for over 2,000 school Food Service Directors, staff, educators, community partners, produce growers and distributors at more than 25 locations across California. This program has helped school food affiliates develop creative ways to increase consumption of local fresh fruits and vegetables within California K–12 schools by providing information on best methods on FTS sourcing, as well as cooking, serving styles, promotions, and garden-enhanced nutrition education.

Workshops offered by CHSE include best practices in advancing regionally and locally themed salad bars, menu development that aims to increase fresh fruits and vegetable consumption during school meals, establishing compost and waste management programs, tips for specialty crop planning within campus gardens, and connecting academic subject areas to garden-enhanced nutrition education.⁶⁵ The Central Coast School Food Alliance co-sponsored the region’s CHSE trainings and June 2012 Culinary Camp that took place at New Brighton Middle School in Capitola, California, bringing forty Food Service Directors and staff together with growers, distributors, and behavioral economics specialists, and providing technical assistance to advance FTS efforts.



Centerpiece for a Healthy School Environment (CHSE) Statewide Food Service Director Training co-sponsored by CCSFA, June 2012

Post-training surveys speak to the effectiveness of the effort, as more than 40% of Food Service Directors participating in the 2011–2012 CHSE trainings purchased more fresh fruits and vegetables than prior to the trainings.⁶⁶ “The training was a great source of networking; I was able to secure three salad bars for my schools to enable us to serve fresh fruits and vegetables everyday. It also gave ideas for working with local farmers where we now procure organic fruits and vegetables for our salad bars!” noted one survey respondent. As a result of the 2011–2012 trainings, 48% of respondents have also increased their promotional efforts, and children taking part in school meal programs are eating nearly 60% more fresh vegetables and 65% more fresh fruit.⁶⁷

The trainings are coordinated through the UC Santa Cruz Center for Agroecology and Sustainable Food Systems (CASFS) in partnership with UC Davis Agriculture Sustainability Institute’s School Gardens Program, Resource Conservation District of Greater San Diego County, and the California Department of Education Nutrition Services Division. CHSE’s workshops feature school nutrition and food service consultants whose districts have created successful models

that advance the sourcing and use of fresh fruits and vegetables. Training materials posted to the CHSE website include lessons on sourcing fruits and vegetables from school gardens into cafeterias and Farm to School garden-based education and nutrition curricula, as well as preparation, serving, and wellness policies pertaining to produce sourcing and procurement.⁶⁸

Next Steps in Improving Farm to School Programs

From advancing the science of school food and the intelligent design of the cafeteria to strengthening partnerships, there are innumerable ways to advance school district’s Farm to School efforts. Cafeteria meals are just one piece of the FTS program. A true cost/benefit analysis of FTS efforts should consider the education and health benefits that students and the community at large experience, as well as changes in perceptions of the school meal program.⁶⁹

Although these factors are challenging to quantify and assess, districts can partner with faculty and graduate students from university and college departments (e.g., health and nutrition, planning, environmental studies and sciences, and

policy based programs) to help analyze programs and provide technical assistance. Districts across California’s Central Coast have benefited from graduate and degree program interns from San Jose State University’s Nutritional Science Masters Programs to Bauman College’s Holistic Nutrition and Culinary Arts certificate program, who have helped research and advance FTS efforts.

Ensuring that FTS partnerships extend from the county to broader efforts can enhance resources, best practices in implementation, and overall impact for the school district. Recent funding from the USDA and the Economic Research Service to study behavioral economics in child nutrition programs has led to new research with school food services nationwide and created new opportunities for improving FTS efforts. The Cornell University Center for Behavioral Economics in Child Nutrition Programs has been at the forefront of this work, looking at how to improve the school lunch program and establish cost-effective ways to encourage children to make healthier choices.⁷⁰ Activities include “nudging” techniques such as providing healthy-food-only convenience lines and branding and using attractive names to influence fresh fruit and vegetable consumption.⁷¹

Partners in the Central Coast School Food Alliance (CCSFA) include California Food Policy Advocates (CFPA), a group working in Los Angeles through a Community Transformation Grant on RENEW School Meals to look at how nutritional science and behavioral economics can advance changing eating patterns. Further, Central Coast school districts and CCSFA are partners in CFPA’s REAL (Real Eats for Academics and Life) School Food Initiative, which brings stakeholders



Staff Support for New FTS Programs

When it comes to implementing new programs, “in-house” partnerships and staff buy-in are critical to success. Programs that include serving food outside the cafeteria can bring new challenges in the form of district and site-specific resistance. For example, Breakfast In the Classroom (BIC) programs have challenged many districts as teachers and janitorial unions raise concern over the feasibility of having food in the classroom. Issues of cleanliness of the class space, time it takes to provide a meal, and overall impact for students are juxtaposed with the way that BIC can reduce stigma, contribute to reducing tardiness/absences, and improve academic focus and performance.^{77, 78, 79}

In addition, districts that are union or non-union vary on how parents can be involved in furthering the consumption of fruits and vegetables at school. Developing shared agreements and mutual support amongst teacher unions, janitorial and grounds unions, and Food Service Directors in advance of introducing new programs may help alleviate potential tensions. Unions should be brought on board to support FTS programs, from BIC to parent “veggie encouragers” and other peripheral roles for promoting kids’ interest in eating fresh and healthy food items.

together statewide to work on strategies and policy opportunities to support freshly prepared meals made from whole and minimally processed ingredients and to improve the appeal of school meals.⁷²

Recent assessment of FTS programs nationally have revealed a wide range of beneficial impacts, from children and the broader community, to the supply chain of farmers and distributors, to district officials and parent groups.^{73, 74} The research suggests that increasing collaboration and cooperation amongst agencies (both public and private), parents, healthcare professionals, and schools is necessary for a successful movement.^{75, 76}

While FTS programs increase healthy food offerings and education for children, the kitchen and waste end of the food system still lacks efficiency and good design. A 2010 study by the Minnesota Pollution Control Agency found that food waste accounted for 23.8% of the

waste stream generated by schools, and that over 78% of school waste could be diverted through recycling and composting programs.⁸⁰

Developing a robust waste diversion plan not only increases efficiency, it can save districts tens to hundreds of thousands of dollars annually. In California, Davis Joint Unified School District found that if a model program that composted food waste from three elementary schools were implemented district wide, the district would save over \$32,490 annually.⁸¹ The Davis program models how to advance cost savings and behavior change with waste prevention, diversion, reduction, and recycling.⁸²

Moving from reducing waste to improving energy and kitchen efficiency can also help reduce program costs, as kitchens use six times more energy than any other part of a school building. The Food Service Technology Center (FSTC) provides districts across California with online energy

savings tools, kitchen equipment rebates and evaluations, as well as free in-person site consultations.⁸³ A free technical advisory partner like FSTC can also help maximize energy savings when replacing outdated equipment or addressing deferred maintenance. Such a multi-pronged approach ensures that FTS efforts in procurement and promotions align with other sustainability goals, from waste reduction to a viable bottom line.

For Farm to School programs to accomplish their wide-ranging goals, we need everyone to be on board! This means nutrition, agriculture and food education activities in the classroom, parents reinforcing what’s taught in school, good marketing strategies both inside and outside of school, Food Service Directors dedicated to increasing the health of children through school meals, and coordination through both local and statewide arenas. From the field to the fork and through composting and waste diversion, a systems approach to FTS efforts allows a greater base of stakeholders to participate in fostering a healthier school environment.

ADDITIONAL RESOURCES

Alliance for a Healthier Generation
schools.healthiergeneration.org/wellness_categories/healthy-cafeterias/

California Farm to School Network
www.cafarmtoschool.org/

California School Garden Network
www.csgn.org

Centerpiece for a Healthy School Environment
www.healthyschoolenvironment.org

Central Coast School Food Alliance
www.schoolfoodalliance.org/

Harvest of the Month Resources
www.harvestofthemonth.cdph.ca.gov/EdCorner/activities.asp

Rethinking School Lunch
 Publication Resources
[www.ecoliteracy.org/downloads/
 rethinking-school-lunch-guide](http://www.ecoliteracy.org/downloads/rethinking-school-lunch-guide)
 Smarter Lunch Rooms—Cornell
 Center for Behavioral Economics
smarterlunchrooms.org/resources
 USDA FNS Child Nutrition
 Programs [www.fns.usda.gov/child-
 nutrition-programs](http://www.fns.usda.gov/child-nutrition-programs)

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