

# San Diego Unified School District

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## Farm to School Evaluation

Prepared for the County of San Diego Health and Human Services Agency (HHSA) for the Healthy Works project

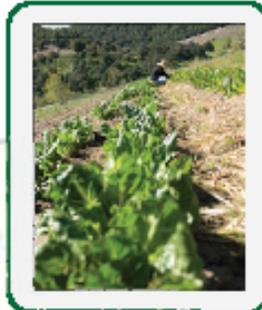


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## **Executive Summary**

The San Diego Unified School District (SDUSD)'s farm to school program was created in September 2010 under the guidance of the Food Services Director and a newly hired Farm to School (FTS) Specialist. The program was implemented to increase the local produce served in the school district's cafeterias, support regional growers, and offer children new fresh produce choices. From June 2011-September 2012, a research team from the University of California Sustainable Agriculture Research and Education Program (UC SAREP) was hired to conduct an evaluation of SDUSD's farm to school program. The research team conducted both quantitative and qualitative research in order to understand 1) the extent to which the program has been successful, 2) the challenges that have emerged, and 3) the changes that have been implemented to address challenges and new opportunities.

Understanding how local produce was defined by the SDUSD Food Services Department (FSD) was important in tracking the local produce procurement trends. In the 2010-2011 school year the FSD clearly defined two tiers of local including 1) SD local (25 miles from the San Diego County line) and 2) regional (250 miles from the SDUSD Food Services distribution center). In the following school year, 2011-2012, the FSD introduced a third tier-- CA-grown (grown in California). For all three tiers, the relationship with the grower was a key component. Produce was labeled local in one of the three tiers if 1) the FTS Specialist and/or the distributor identified the farm from which the produce originated, and 2) the FTS Specialist built a relationship with the grower.

From the beginning, the FSD clearly outlined production standards for local growers which were valued by the FSD. These production standards include the farm's size, crop diversity, mechanization, organic or sustainable growing practices, and location within the

United States border. Local growers are not required to meet these standards in order to supply produce to the FSD; however they are desired attributes.

Tracking of local produce purchases during the baseline 2009-2010 school year and the 2010-2011 and 2011-2012 change years revealed a slight increase in local produce procurement. During the 2009-2010 school year, the SDUSD FSD did not purchase any local produce (as defined by the FSD). In the 2010-2011 school year, 5.52 percent of all produce purchased was local (comprised of SD local and regional); 5.28 percent of all produce purchases were SD local and 0.24 percent of all produce purchases were regional. During this period, the FSD purchased about 271,346 pounds of local produce, spending about \$173,711. The purchases reflect the economic benefits to 8 local growers (including the distributor's markup).

During the 2011-2012 school year, the FSD very slightly increased local produce procurement. The FSD also expanded its definition of local to include CA-grown. In this second school year, 2011-2012, 5.88 percent of produce purchased was local (comprised of SD local, regional, and CA-grown). There was a 0.36 percent increase in local produce procurement compared to the previous school year. Broken down into the three tiers, 1.99 percent of produce was SD local, 2.49 percent of produce was regional, and 1.40 percent of produce was CA-grown. The decrease in SD local produce compared to the 2010-2011 school year was due to challenges faced by the FSD in obtaining the desired supply of SD local produce.

During this school year, the FSD purchased about 172,081 pounds of local produce, spending about \$168,327. The purchases reflect the economic benefits to 8 local growers (including the distributor's markup). Two of the eight growers had supplied produce for the SDUSD farm to school program during the previous school year (2010-2011).

For both years together, (September 2010-August 2012), SDUSD purchased about 443,426 pounds of local produce, spending about \$342,038 on its purchases. The purchases reflect the economic benefits (including the distributor's markup) to 14 local growers.

In a short period of time, the FSD has successfully increased its local produce procurement. Interviews from 25 stakeholders cited the importance of the role of a FTS Specialist in making the program successful. The majority of growers' sales to the district represented 1% or less of the growers' annual income. While growers did not always significantly benefit financially from the transactions, they generally were interested in continuing to work with the district. Growers maintained their involvement because they wanted to support the farm to school program, as well as gain other benefits such as increased public relations or increased business with other customers.

The distributor and the FSD staff were generally happy with the quality of the produce. Interviews with FSD staff suggested mixed opinions on whether or not students were consuming more produce, yet some cited the necessity of more time to gauge changes. There is no significant increase in the number of students participating in the school lunch program. Further monitoring of the students' consumption patterns and the correlation to health status and obesity prevention is necessary to understand the impact of this program on students.

There were several lessons learned from the evaluation which the research team offers as suggestions for other districts interested in a farm to school program.

- 1) A full-time FTS Specialist who is part of the FSD staff is important to the program's success. The FTS Specialist ensures that there is a key person dedicated to recruiting growers, communicating information, and mediating between all stakeholders.

- 2) The FTS Specialist has taken on other responsibilities within the FSD department beyond local produce procurement. (These roles are described in more detail in the following sections.) Due to the expansion of the job description, the FTS Specialist's salary is now partially paid for by the FSD and the role has become more institutionalized.
- 3) The buy-in from the distributor and the FSD upper management is necessary for the program's success.
- 4) A back-up plan that ensures a reliable produce supply is essential in case the expected amount of local produce is not available when needed. In the case of the SDUSD FSD, the distributor sourced from the LA Terminal Market if the local produce was not available.
- 5) It is critical for food service departments to identify what they want regarding local procurement. The department will never know what is possible until it identifies what it wants and then reaches out to companies and growers to assess the options.
- 6) The implementation of a clear communication system is necessary to guarantee that information is received by all stakeholders involved, particularly students and staff. In the case of SDUSD, communication about the program needs to be channeled to 1,300 FSD staff and over 6,000 teachers and 134,400 students (SDUSD, 2011).
- 7) A system that aggregates large amounts of local produce for a school district is important to consider when thinking about addressing problems with predictability and availability of supply.
- 8) Clearly stated goals and definitions of local are important in understanding what the FSD strives for and evaluating their progress. Clear definitions were also instrumental when the Request for Proposal (RFP) for the FSD's produce company was drafted.

While the SDSUSD FSD has effectively achieved the first five lessons learned, the department is still working on improving the communication system. The district's scale creates barriers in ensuring that information will be effectively channeled to the large numbers of FSD staff, SDUSD staff, and students throughout the year.

In addition, the FSD has faced challenges with the supply of local produce. The amount of SD local produce purchased decreased from between the 2010-2011 and the 2011-2012 school years. One FSD upper management interviewee attributed this decrease to challenges finding growers who could supply the volume of produce needed for a district of SDUSD's scale. There are not enough large scale vegetable (specialty crop) producers in San Diego County that can meet the FSD demand for local vegetables. The FSD has had difficulties with targeting more growers to increase the aggregation of local produce. Interviews also revealed the difficulty in meeting the needs of all participants including growers, the FSD, and the distributor in regards to scheduling and predictability of produce supply. Additionally some growers felt the price points weren't always adequate which could impact the amount of produce they were able to sell to the FSD.

Finally, the FSD launched its farm to school program with a very clear definition of local produce during the 2010-2011 school year. With the expansion of its definition of local to include CA-grown during the second school year, the FSD's criteria for local produce in this tier became less clear. It is not clear how the FSD will continue to define whether produce purchases meet the CA-grown criterion in the future. As the program continues to grow, the research team recommends that the FSD revisit and clarify the criteria used to define local produce so they can continue to measure progress if they so choose.

Since September 2010, the SDUSD FSD has effectively increased local produce procurement, providing an example to other districts interested in farm to school programs. Kicking off the 2012-2013 school year by expanding even further, SDUSD's farm to school program continues to move forward in trying to meet its goals. With support from growers, the distributor, and additional community partnerships, the FSD has increased fresh, local produce offered in school meals. The FSD remains dedicated to increasing students' consumption of fresh produce while strengthening the local and regional food system.

## **Introduction and Background**

### San Diego County

San Diego County has about 3.1 million residents, the majority of whom live in the city of San Diego (County of San Diego, n.d.). With \$5.1 billion in revenue, agriculture is an important economic driver of the rural parts of the county (San Diego County Farm Bureau, n.d.). According to the San Diego Food System Assessment (Ellsworth and Feenstra, 2010) the county's total acreage of farmland has decreased from 1987 to 2007. However, there has been a 31.5 percent increase in the number of farms from 1978 to 2007. The majority of these farms are small, from one to nine acres, often growing ornamental or nursery crops due to their ability to gain higher revenues. Large farms have decreased from 1987 to 2007 which Ellsworth and Feenstra (2010) partially attribute to the high water costs. Water costs have risen substantially in the last twenty five years, creating a large stress to growers. Commodity prices have remained consistent which has made it difficult for larger farms producing these products to stay in business.<sup>1</sup>

Ellsworth and Feenstra (2010) explain the county has the highest number of certified organic growers compared to any other county in the United States. In addition, the number of farms with direct sales has slightly increased from 1982 to 2007. The large presence of organic growers and the increase in direct sales suggest opportunities for school districts interested in farm to school programs in San Diego County. Fruit and vegetable consumption of San Diego residents has been declining, particularly with teenagers. Farm to school programs, in which foods are sourced from regional producers, provide an opportunity for improving children's

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<sup>1</sup> The information within this paragraph and the following paragraph comes from the San Diego Food Systems Assessment (Ellsworth and Feenstra, 2010) unless referenced otherwise.

nutrition while opening a market for regional small and mid-sized growers (Joshi, Azuma, & Feenstra, 2008).

In 2010, Whole Foods Market (WFM) Hillcrest in San Diego was instrumental in convening the SDUSD FSD and local growers to consider opportunities for serving local produce in the school meals (San Diego County Childhood Obesity Initiative, n.d.). The group has since expanded to support and encourage farm to school across the county with the support of the San Diego County Childhood Obesity Initiative (COI), facilitated by Community Health Improvement Partners (CHIP). The group operates under the name of the San Diego County Farm to School Task Force. Bringing together growers, food service directors, distributors, public health advocates, and farm to school supporters, the task force is facilitated by WHM, the COI, and the San Diego Hunger Coalition.

#### San Diego Farm to School Program: How it Works

In March 2010, the County of San Diego Health and Human Services Agency (HHSA) was awarded a \$16.1 million CDC *Communities Putting Prevention to Work* grant for obesity prevention through policy, systems, and environmental change. The San Diego County Office of Education received the contract for Healthy Schools and funded six districts to implement wellness policies and nutrition activities. In SDUSD, a priority was made to institutionalize farm to school through hiring a FTS specialist. Few other health departments have supported farm to school programs as an obesity prevention measure. The program was implemented in the 2010-2011 school year.

SDUSD is the second largest school district in California with a \$60 million annual food budget (SDUSD, 2011). SDUSD had over 134,400 students and 6,000 teachers in 2011, and

61% of students were eligible for free or reduced price meals (SDUSD FSD, 2011). Showing the immense scale under which it operates, the SDUSD FSD served daily about 50,000 breakfasts, 78,000 lunches, 12,200 snacks, and 8,000 suppers according to 2011 data. In order to put its scale in perspective, keep in mind that San Diego State University served about 15,000 meals daily (City of San Diego, 2011). SDUSD purchases huge quantities of fruits and vegetables each month. In May 2012 for example, the SDUSD FSD purchased about 90,100 pounds of oranges, 14,503 pounds of grapes, 49,412 pounds of pears, and 481 pounds of avocados. The district has the potential to have a huge impact on local and regional growers. However, the large scale makes it difficult for small growers to meet the fruit and vegetable volume needed by the district.

The SDUSD farm to school program was initiated in September 2010 with the support of the Food Services Director and a newly hired FTS Specialist. The program was implemented to increase the local produce served in the school cafeterias.

#### *Distributor*

The SDUSD FSD's produce distributor has played a major role in the farm to school project. The distributor has acted as an intermediary between the growers and the FSD. All of the produce is channeled through the distributor who is in charge of purchasing and delivery agreements with support from the FTS Specialist.

#### *Farm to School Specialist and growers*

The FTS Specialist acts as a facilitator between the distributor, FSD, and growers. The Specialist advertises the FSD's produce needs, recruits growers, and visits farms to assess production practices. To guarantee a stable produce supply, maximum orders of local products are agreed upon by the growers and the FTS Specialist. A fixed price is agreed upon for the season. The rest of the produce that the FSD needs of that particular item is then purchased by

the distributor on the market. Sometimes growers will plant a crop specifically for the FSD which can help the department to overcome challenges with supply. No written contract is established with the local growers, and the agreements rely on trust built between the stakeholders. With the success of the SDUSD farm to school program, growers who the FTS Specialist has not had previous contact with are now contacting the FTS Specialist to express their interest.

In addition, the FTS Specialist has developed operating protocols and trained FSD staff on preparing and serving local produce. Due to the farm to school program's success, the FSD expanded the FTS Specialist's role beyond local produce procurement in the 2011-2012 school year. The FTS Specialist's role also now includes managing all produce purchases, waste, and inventory; recipe development; staff trainings to order, manage, use, and serve produce; and staff trainings regarding the salad bars. The FTS Specialist now handles calls about all produce and the salad bar, managing the products' quality. While the FTS Specialist was originally funded as part of the CPPW grant, the FSD is now providing part of the money for this position. By expanding the role of the FTS Specialist beyond procuring local produce, the FSD was able to hire the FTS Specialist using its own funds. This has helped to begin institutionalizing the farm to school program within the FSD.

Prior to the program's start in September 2010, the SDUSD FSD's distributor did not source from local growers, as defined by the FSD's definition of local produce. There has been an interest for the distributor to take a more active role in sourcing local foods in order to help institutionalize the program. However this is a project that is still underway, and the FTS Specialist continues to take the lead on sourcing local produce.

*Food service staff*

The prep kitchen is where the FSD staff order the produce from the distributor; accept the distributor's produce deliveries; redistribute to the prep kitchen's group of satellite schools and points of service (known as a cluster), and sometimes preps produce for the schools. There can be over twenty points of service per campus, which refers to the points where the students actually obtain the food. Every satellite school's kitchen has different capacities for processing the food. Satellite kitchens often prepare the produce for their site's salad bar. Some schools do not have their own kitchen facilities and the prep kitchen must wash and prep all of the produce for these schools.

The area managers and prep kitchen managers are responsible for ordering produce with the distributor based on the menu that is set by district staff. The managers forecast how much of the products should be ordered for the satellite school sites by predicting the needs of the schools based on the menus and recipes. Once they develop a history of what the schools generally consume, the managers estimate an amount of how much they should order of that particular item in the future.

Upon harvest, the growers are responsible for getting the produce to the distributor's warehouse. The distributor then delivers all of the food to the district's 20 prep kitchens. The food is redistributed and delivered to each prep kitchen's satellite schools and points of service. Local food is placed on salad bars, installed several years prior to the program, for students at every SDUSD school. Whole local fruits are served at satellite points of service.

*Local produce selections, local produce communication*

In the 2010-2011 school year, there was one local “Harvest of the Month” produce item placed on the salad bar once a week for all four weeks during the month. The “Harvest of the Month” refers to the local produce item that the FSD highlights each month, featuring information about the local grower who they sourced the product from. Since the start of the program, the frequency of the local foods offered on the salad bar has increased. The program expanded to include additional local items that are not highlighted as the “Harvest of the Month.” If the supply was available, the FSD tried to offer 2-3 local produce items a week during the 2011-2012 school year. Increasing the weekly offerings of local produce has not always been easy due to the difficulty in sourcing new product supply.

Information about all local produce (both the “Harvest of the Month” and additional local items) is sent to the department’s managerial staff about two months in advance to prepare them for the upcoming purchases. The staff first hears about the information in an electronic communication tool entitled “Communique”. The nutritionist later follows up with another e-mail entitled “Production Pointers” which explains how to process the produce item being purchased. In addition, the FSD has produced and distributed farmer trading cards, banners, and posters in order to identify produce origins of the “Harvest of the Month” to students and staff; the marketing materials contain pictures and names of the farmers and their products. Food service employees are asked to place marketing materials within the cafeteria so information about the farm and the “Harvest of the Month” can be shared with staff and students. While the trading cards, banners, and posters only highlight the “Harvest of the Month,” the FSD often serves other local produce items that have not been identified as the “Harvest of the Month”.

Food service staff is also asked to advertise to students that these additional products are local.

As of September 2012, the FSD is now serving the “Harvest of the Month” item for two to three months, but advertises the item as the “Harvest of the Month” for the first month only.

#### *Criteria for local produce procurement*

In the early years of the program, SDUSD FSD identified the importance of establishing clear protocols and definitions for local produce in order to maintain rigorous standards. The FSD’s clear definitions were instrumental to the research team when starting the evaluation in summer 2011. In the 2010-2011 school year, the FSD’s definition of local included two tiers: SD local (25 miles from the San Diego County line), and regional (250 miles from the SDUSD Food Services distribution center).

In the 2011-2012 school year, the FSD expanded its definition of local to include a third tier--CA-grown (grown in California). The research team worked with FSD upper management staff to identify how CA-grown produce would be defined for the sake of the evaluation. The FSD likely already purchases a large amount of produce grown in California. Due to time constraints, it was not possible for the team to conduct a comprehensive assessment to determine every produce item grown in California that was purchased by the FSD. In addition, it was too time-consuming for the distributor to track every produce item that has been grown in California that was purchased by the FSD. Therefore, produce grown in California was only labeled as CA-grown if 1) the FTS Specialist and/or the distributor identified the farm from which the produce originated, and 2) the FTS Specialist built a relationship with the grower through a phone call (or farm visit if possible). It is not clear how CA-grown produce will continue to be defined by the FSD in the future.

Within all three tiers of local, the relationship built between the FSD and the growers was emphasized. The FTS Specialist visited all SD local farms, but due to resource constraints was not able to visit all farms whose products were regional or CA-grown. However, the Specialist tried hard to visit sites located further than 25 miles from the San Diego County line when possible. For example, the Specialist has visited several regional farms and one regional grower's packing shed. As of September 2012, the FSD has only worked with one farm whose products were identified as CA-grown. The Specialist plans to visit the farm in the future, but as of now has connected with the grower many times over the phone and they email one another frequently.

The FSD has drafted a RFP for their produce company in which they wish to work not only with local farms, but those that meet their valued production standards. These production standards include the farm's size, crop diversity, mechanization, organic or sustainable growing practices, and location within the United States borders. The FSD does not require local growers to meet these standards, and the department does not officially track whether or not a farm meets their valued standards. Nevertheless, these are highly desired.

The FTS Specialist tracked all local produce items in the 2010-2011 school year. In the 2011-2012 school year, the distributor began to track local purchases that fit into the FSD's definition of local. The FSD has felt it crucial to have clear standards and definitions, which was critical in measuring the impact of their program.

#### *Farm Bus*

Besides increasing access to local produce in SDUSD schools, the FTS Specialist has been working on piloting a Farm Bus program. The program will bring a "farm" to the schools, as the goal is to grow produce in a bus that travels between school sites serving as an educational

tool. At this point, the FSD is currently awaiting more funds before the farm bus can become operational.

#### *Groceries marketing local produce in concert with schools*

A pilot program was launched in 2011 in which local stores would sell a local product that was also being offered in the SDUSD school lunches. The schools advertised in which stores to buy the produce and vice versa. For example, in winter 2011, oranges from a local farm were sold both in the schools and in a few select WIC-Only stores. WIC-Only stores sell only foods that have been approved as WIC (Women, Infant, Children) eligible purchases (USDA FNS, 2007). Customers use WIC coupons to obtain the food. The impacts of this project have not yet been measured.

#### *Garden to Cafeteria Program*

The SDUSD farm to school program has also played a role in supporting the county's pilot Garden to Cafeteria Program. A small portion of produce grown in the school garden is used in the cafeteria. This program was piloted at the end of the 2011-2012 school year, but will continue to grow during the 2012-2013 school year. Any SDUSD school site interested in using school garden produce in the cafeteria needs to obtain approval from the FSD, sign an agreement with the FSD, and register with the FTS Specialist. Whether or not a school site participates in the Garden to Cafeteria Program, any site that has obtained the required approval may also collect salad bar waste to compost on site. The school site must follow the designated composting protocol and system.

#### *New menu changes support local produce*

As the 2012-2013 school year starts up, the SDUSD FSD has many exciting new projects that are being unveiled. With the Healthy, Hunger-free Kids Act of 2010, food service

departments across the nation have been revising their menus. As the regulations have come into effect in the last few months, SDUSD FSD has also changed their menus for the 2012-2013 school year. The menus were designed so that each season, new seasonal produce will be substituted into the menus. The goal is that there will be local foods offered every day in the cafeterias. While the FSD values purchasing produce that is grown within a close proximity to San Diego, it has been hard to meet their desired supply from simply the SD local tier. The CA-grown tier will likely be important in helping to increase their supply of fresh, local produce for their new menu changes.

In addition, the salad bar now includes two new slots to support sourcing local produce. In addition to the previously implemented Harvest of the Month, the salad bar also contains 1) a “flexibility” slot and 2) a slot for seasonal, fresh foods. Four out of the five days a week, the managers, area managers, and/or site leaders can decide which food is offered within the flexibility slot. One day a week, the “Harvest of the Month” is offered instead of the flexibility slot. The flexibility slot allows each cafeteria some autonomy over what is used, but it was designed with the idea of supporting schools that want to participate in the Garden to Cafeteria program. For the seasonal fruit slot, once a month the FTS Specialist is selecting a new fresh seasonal fruit to place in the salad bars. In addition to the salad bar changes, there is a fruit bowl with three different seasonal SD local, regional, and/or CA-grown fruits available. The fruit bowls are placed at various points of service to reach older students who bypassed the salad bar during lunch.

The FTS Specialist also worked with FSD staff to launch a pilot program called the “dipper bar” for the 2012-2013 school year. The dipper bar is being piloted in one cluster, and if successful it could expand to other school sites. The dipper bar offers students an opportunity to

mix and match different combinations of pieces of produce with healthy dips. The FSD hopes the dipper bar will help younger students who have a hard time making their own salads, while appealing to older students who want something different than a salad.

The FSD is now offering local foods in some hot meals during the 2012-2013 school year. For example, they are serving local tofu. Additionally, local micro-greens are featured at some of the schools in an “Asian Chicken Salad”. The FSD will begin to offer breads from a local bakery and Food Alliance certified legumes, and are pursuing the idea of offering foods produced from California companies on the a la carte menu. Organic soymilk will also be available. The FSD’s goal is to increase the amount of CA-grown produce in their menus over the upcoming months.

#### *Staff professional development*

In addition to the menu changes, there will be new changes with the staff training programs. In the 2011-2012 school year, the FSD hosted a back to school training for FSD upper management, area managers, and prep kitchen managers. The farm to school program was highlighted throughout the day with presentations given by local growers and chefs to help those attending better understand the significance of buying local, fresh produce for school meals and increase the speed of scratch cooking techniques. During the 2012-2013 school year, the FSD hosted back to school trainings for all employees that highlighted information about the farm to school program. The FSD included all 1,300 FSD staff in the trainings which previously had not been the case. There was also an important change in the way that the FSD conducted training for staff as they prepared for the upcoming school year. Whenever the FSD sent training material or conducted trainings, they also mentioned 1) farm to school, 2) the importance of seasonal and local produce, and 3) the Garden to Cafeteria program. Due to the large support from the upper

management, there has been a strong push towards discussing the farm to school related projects with the FSD staff.

As mentioned earlier, the Garden to Cafeteria program supports the use of school garden produce in the school cafeterias. The Garden to Cafeteria program was implemented last year, but the official trainings for it will now be offered this year in conjunction with a community partner. Training will be offered to interested garden sites and cafeteria staff regarding food safety regulations and using school produce in the kitchens. The trainings will start this fall, and will help to support any sites that want to start a Garden to Cafeteria program.

#### *Additional community partnerships*

The FSD has forged additional community partnerships which help to foster educational opportunities for school children and support the local food system. For example, the FSD is offering farm tours for students in conjunction with local growers and Slow Food Urban San Diego. The FSD has identified the importance of forming community partnerships across the county to support the local food system and county residents' health; the FSD played a key role in the creation of the San Diego Food System Alliance as an initial convener. With funding from the California Endowment, the Alliance was started with the help of the Ag Innovations Network and created due to a recommendation of the San Diego Food System Working Group (Ag Innovations Network, 2012). The goal of the Alliance is to bring together community members to work on strengthening San Diego County's food system (Ag Innovations Network, 2012). For the first eighteen months several key issues will be examined, including the reduction of childhood obesity; policy and infrastructure development to support and strengthen the regional food system; and partnerships to improve community members' health.

Finally, a five year Community Transformation Grant (CTG) was awarded to the San Diego County HHSA from the U.S. Department of Health and Human Services in the fall of 2011 (County of San Diego, n.d.). The CTG will be important in helping to continue to support the SDUSD farm to school program. For example, a second FTS Specialist at SDUSD will be hired and supported 100% by the CTG. A second FTS Specialist will strengthen the FSD's continued efforts to increase local produce served in the school meals. As the 2012-2013 school year begins, the SDUSD FSD continues to break ground in finding new opportunities for increasing local food in the school cafeterias.

## **Methodology**

The SDUSD FSD supported an evaluation of its farm to school program, particularly local procurement, funded by Healthy Works and led by a research team from UC SAREP. The FSD's clear definition of local has been an essential component of the data collection. UC SAREP collected both quantitative and qualitative data for the baseline year (2009-2010) and two years of change (2010-2011 and 2011-2012).

### Quantitative Methods

In 2009-2010, the SDUSD FSD had not purchased any local produce (as defined by the FSD). A monthly payment summary sent from the distributor to the FSD was sufficient to calculate how much money was spent on produce items for the year. The monthly payment summary listed the monthly total amount of food purchased from the distribution company. In 2010-2011, the FSD began to purchase local items. It became necessary for the research team to understand exactly what items were purchased and the expenditures of each individual item. The

FSD had this information available, but the information was broken down and recorded for each individual prep kitchen. It was too time consuming to obtain monthly expenditure information from all twenty prep kitchens. An alternative method of obtaining the expenditures (broken down by item purchased) was devised.

The research team first obtained the usage reports provided by the distributor to the FSD. The usage reports listed the amounts purchased monthly of each individual produce item, but no prices. The research team then collected all of the monthly LA Terminal Market reports sent to the FSD from the distributor. The market reports stated how much each item cost at the LA Terminal Market during a particular day.<sup>2</sup> The team multiplied the average monthly cost of the terminal market prices for each item purchased times the number of units purchased from the usage report.

In the 2010-2011 school year, the FTS Specialist tracked the local food purchases and the price paid per item.<sup>3</sup> In the 2011-2012 school year, the distributor tracked and identified on the usage reports which items were local. The research team then called the distributor to find out the prices paid per unit of each local produce item.

The usage reports had the FSD catering purchases embedded within them. In the 2010-2011 school year, the research team worked with the FTS Specialist to estimate items that had been purchased by the catering department. The team then omitted the estimated items from the produce expenditures spreadsheet.<sup>4</sup> During the 2011-2012 school year, the FSD catering

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<sup>2</sup> The prices of the processed produce items stayed the same as part of a three year contract. Therefore, those prices did not need to be obtained from the market reports.

<sup>3</sup> In 2010-2011 the usage reports did not state whether or not an item was local. If the research team had any questions about the local items purchased, the distributor answered the team's questions by looking at the company's records.

<sup>4</sup> Any unusual items not typically served in the cafeterias and some items purchased in very small quantities were estimated as catering purchases. Some items which were typically purchased for catering events remained embedded within the spreadsheets. For example, if the usage report stated that a large quantity of lettuce was purchased in the

department staff sent the research team monthly catering reports that stated 1) which produce items were purchased and 2) how many units were purchased. The exact items purchased were then subtracted from the expenditures spreadsheet.<sup>5</sup>

Utilizing the produce expenditures spreadsheet, the team was then able to calculate the total cost of FSD produce purchases and the percentage of local produce purchased.<sup>6</sup> In order to account for any possible errors, the research team double-checked their work. The team's monthly and annual totals were measured against the monthly and annual produce expenditures (not broken down by food item) provided by the SDUSD FSD.<sup>7</sup> The research team found the final expenditures to be very similar. For example, in 2010-2011, the first method showed that 5.52% of produce purchased was local whereas the second method showed that 5.54% of produce purchased was local. In 2011-2012, the first method showed that 5.88% of produce purchased was local whereas the second method showed that 5.83% of produce purchased was local. The research team used the numbers calculated from the first method described for the final report, as it was important to have the expenditures broken down per item.

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month of October, the research team did not estimate whether or not part of the lettuce had been purchased for a catering event. It was too time-consuming to verify each catering purchase with the distributor.

<sup>5</sup> Sometimes there were questions about whether an item had been a catering item, and the distributor helped to verify that information. If necessary, the research team occasionally estimated that an unusual item was a catering purchase based on similar criteria from the year before.

<sup>6</sup> There were possibilities for slight error using this methodology. The research team often used the average monthly cost and not the actual cost at the time of purchase. With some items, this could lead to a greater error. For example, the price of grapes is more likely to fluctuate throughout the month. The team's calculated cost of grapes could vary greatly if a large quantity of grapes was purchased during the day when the price of grapes was highest versus the day when the price of grapes was lowest.

<sup>7</sup> These monthly expenditures contained all items purchased from the distribution company including catering and non-produce items. During the 2010-2011 school year, the FSD catering staff estimated the cost of catering purchases. The following school year, 2011-2012, the FSD catering staff sent the exact monthly expenditures to the team. The research team subtracted the costs of both the catering and non-produce items purchased in large quantities (like tortillas) from the monthly total produce expenditures.

In addition, the research team calculated the total weight of each type of local produce purchased.<sup>8</sup> If an item was purchased locally during the year, the research team figured out the total weight purchased of that item (both local and non-local purchases) for the entire year. The research team was then able to calculate (by weight) the percent of particular types of produce purchases that are local. This information could be useful to potential new growers who want to supply the district with local products.

Finally, the research team collected meal participation rates for the 2009-2010, 2010-2011, and 2011-2012 school years. A claims summary from the FSD explained how many students obtained school meals (free, reduced price, or purchased) and the number of registered students per month. The research team calculated the percent of total students enrolled who obtained a meal each month. Meal participation rates do not definitively show whether or not students are increasing their produce consumption. However, this data was an important preliminary step in understanding students' participation in the school lunch program. Graphs were created from this data in order to visually display the annual trends of student meal participation rates.

### Qualitative Methods

In addition, the research team interviewed twenty five stakeholders. Interviews were conducted with twelve FSD staff; nine growers; three community members from San Diego County; and the FSD's distributor. The FTS Specialist was interviewed twice to understand how the program has changed over the course of the year. The twenty six interviews were conducted

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<sup>8</sup>The weights were calculated by using information from the usage and market reports and conversations with the distributor.

on the phone. Twenty three interviews occurred between January and February, 2012 while three interviews occurred between July and August, 2012.

The research team contacted interviewees via e-mail to request an interview. If an e-mail address was not available or the person did not respond to the e-mail, the research team called the potential interviewee. Twenty six people were contacted for an interview, only one of whom the research team was not able to interview. The interview answers were typed up, and the data was aggregated to examine trends. Nobody was identified by name.

## **Findings**

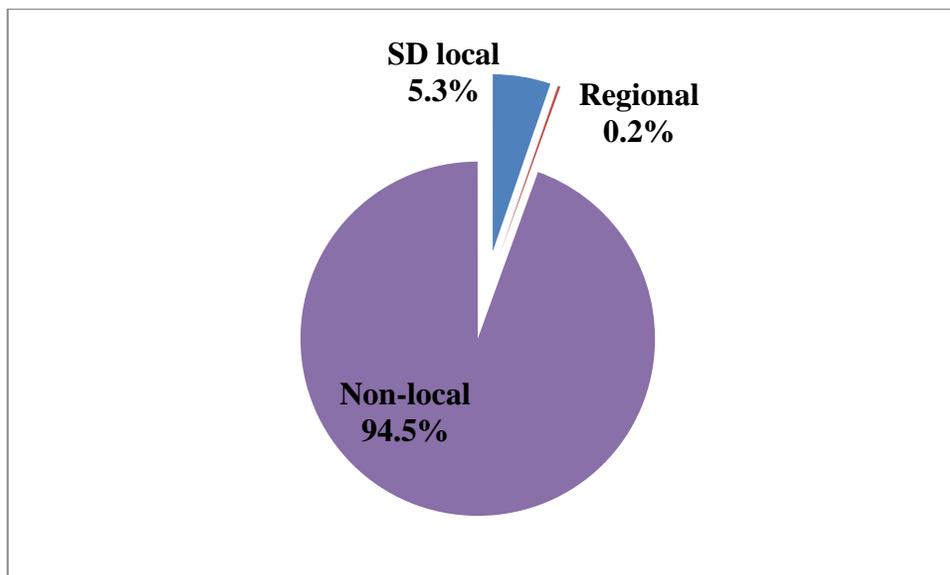
### **Local Produce Procurement**

The research team calculated 1) the percent of local produce purchased, 2) the weight of local produce purchased, and 3) the total expenditures of local produce for the 2009-2010 baseline year and the 2010-2011 and 2011-2012 change years. From the 2009-2010 school year to the 2010-2011 school year, the percent of local produce purchased increased from 0% to 5.52%, as defined by the FSD's definition of local. SD local produce was purchased within 25 miles from the San Diego County line and regional produce was purchased within 250 miles from the SDUSD Food Services distribution center. Breaking down the FSD's purchases to represent each tier of local, 5.28% was SD local and .24% was regional during the 2010-2011 school year (Figure 1).

In this school year, the FSD spent \$173,711 on local produce purchases, which reflects the payments made to 8 local farms (including the distributor's markup). The distributor acted as the intermediary between the grower and the FSD and therefore, a percentage of the

aforementioned expenditures went to the distribution company. About 271,346 pounds of local produce were purchased during the 2010-2011 school year.

**Figure 1: Percent of SDUSD FSD total produce purchases that are local, 2010-2011**

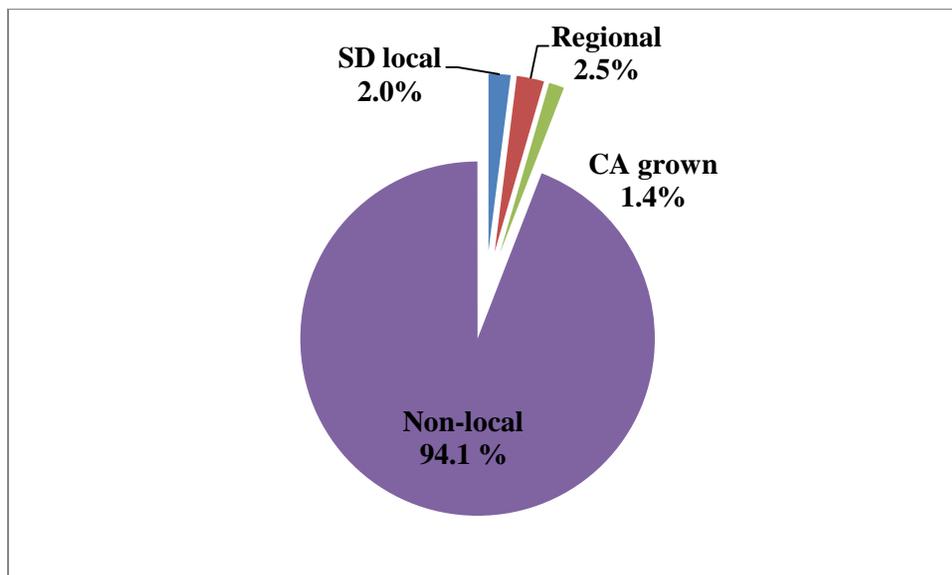


In the 2011-2012 school year, the FSD's definition of local produce expanded. In addition to SD local and regional, the FSD introduced a third tier, CA-grown. Produce grown in California was only labeled as CA-grown in the 2011-2012 school year if 1) the farm from which the produce was sourced was identified by the FTS Specialist and/or the distributor, and 2) the FTS Specialist built a relationship with the grower through a phone call (or farm visit if possible). In the 2011-2012 school year, 5.88 percent of the produce purchased was local (SD local, regional, and CA-grown); there was a 0.36 percent increase in local produce purchased since the previous school year. Broken down into the three tiers, 1.99 percent of produce was SD local, 2.49 percent of produce was regional, and 1.4 percent was CA-grown (Figure 2).

In the 2011-2012 school year, the FSD purchased about \$168,327 of local produce, which reflects payments made to eight farms (not including the distributor's markup.) Two of the eight growers had supplied produce for the SDUSD farm to school program during the previous school

year (2010-2011). About 172,081 pounds of local produce were purchased during the 2011-2012 school years.

**Figure 2: Percent of SDUSD FSD total produce purchases that are local, 2011-2012**



While the SD local purchases decreased from the 2010-2011 to the 2011-2012 school years, the regional purchases increased. One FSD upper management interviewee explained why the FSD had difficulty obtaining SD local produce; 1) there are few vegetable growers in San Diego County, and 2) there are few fruit or vegetable growers in San Diego County that can provide the supply needed for SDUSD's scale (unless there are growers who have not been identified).

The interviewee explained why despite a large amount of effort, there was not a significant increase in local produce purchased from between the 2010-2011 and the 2011-2012 school years. There are a few items that the FSD purchases regularly in very large quantities, including oranges and grapes. During the 2010-2011 school year, the FSD purchased oranges from one SD local grower during both the fall and the spring; about 175,200 pounds of SD local oranges were purchased. In the 2011-2012 school year, the FSD purchased oranges in the fall

from the previous year's orange grower. Due to unforeseen circumstances the supply desired by the department was not available. Only about 5,640 pounds of SD local oranges were purchased. In August 2012, the FSD began to purchase oranges from a regional orange grower. During the second school year, September 2011- August 2012, only about 19,405 pounds of local oranges were purchased in total. The FSD also bought about 51,831 pounds of grapes from a regional grower during the fall of the second year. While the grapes represented another large local purchase, the FSD only bought grapes once during the second year, compared to the local oranges purchased twice in large quantities during the first year.

Therefore, the shift in the local orange supply significantly affected the amount of produce the FSD was able to purchase locally. In the 2012-2013 school year, the FSD has continued to work with the regional orange grower. If all goes according to plan, the district could increase their local orange purchases from the 2011-2012 school year. The story of the local oranges shows the challenge that the FSD has faced with supply. It is difficult to obtain the desired volume of produce for a district of SDUSD's scale.

On the other hand, in 2011-2012, the FSD typically offered greater variety of local produce each month compared to the monthly offerings during the first school year. The FSD offered on average of between 1-2 local items each month in the 2010-2011 school year. By contrast, the FSD offered on average of between 2-3 local items each month during 2011-2012 school year.

In summary, from September 2010-August 2012, the FSD purchased \$342,038 of local produce, which reflects purchases made to 14 farms (excluding the distributor's markup). From September 2010-August 2012, the FSD purchased about 443,426 pounds of local food. Local items offered during both the 2010-2011 and the 2011-2012 school years included tomatoes,

tangerines, avocados, oranges, and Kabocha Squash. Several items purchased locally the first year were *not* purchased during the second year including blackberries, strawberries, apples, broccoli, and salad mix. This simply reflects upon the product availability and/or price points during the second year. Every local item that the FSD purchased the first year was seen as successful enough to continue buying the second year if price point and availability allowed.

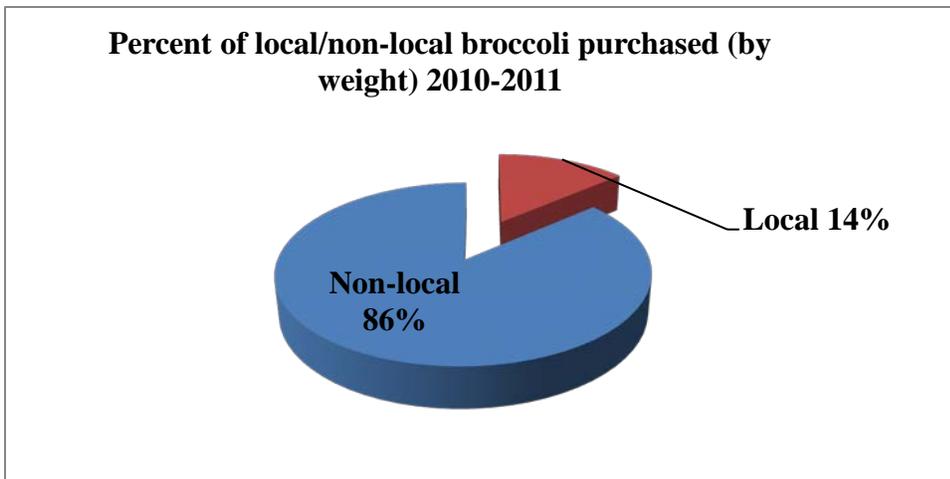
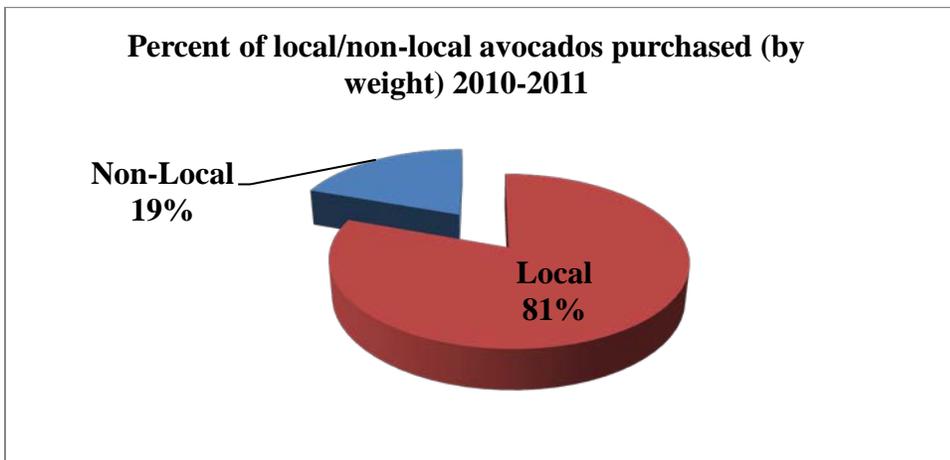
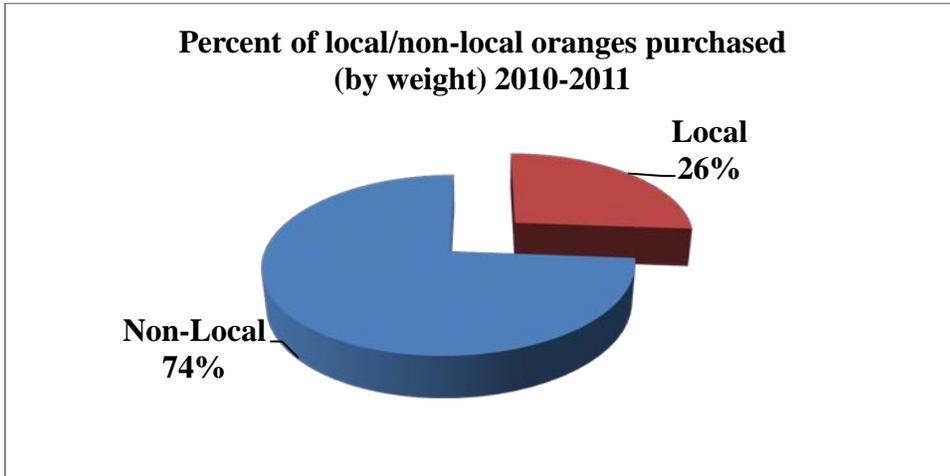
Apples, grapes, oranges, broccoli, avocados, and tomatoes were items typically purchased every month by the FSD, sometimes through non-local sources. When supply was available, the FSD sometimes also sourced the aforementioned items through local sources. The program also encouraged the introduction of new types of products into the cafeterias. For example, the FSD purchased blackberries, raw shredded Kabocha Squash, strawberries, spring mix, kumquats, nectarines, persimmons, plums, Asian Pears, and micro-greens.<sup>9</sup>

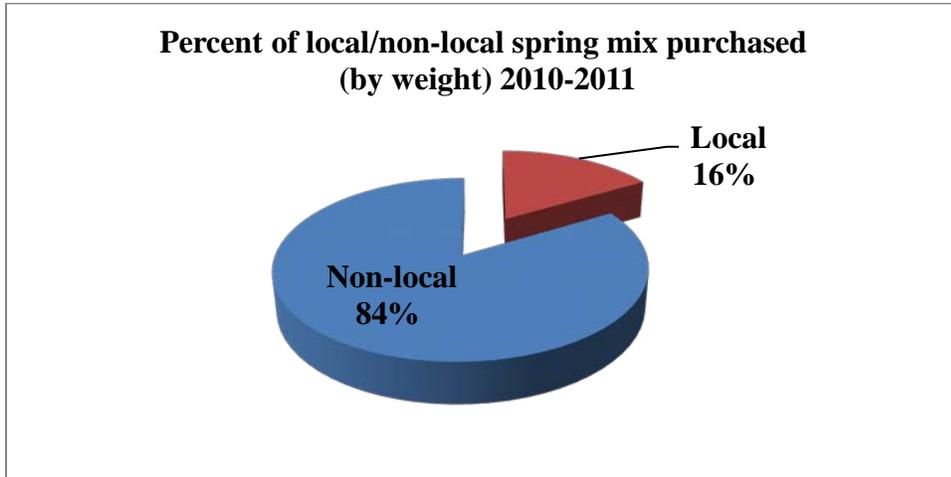
The following figures show the percent (by weight) of a few key items purchased locally and non-locally during the 2010-2011 (Figure 3) and the 2011-2012 school years (Figure 4).

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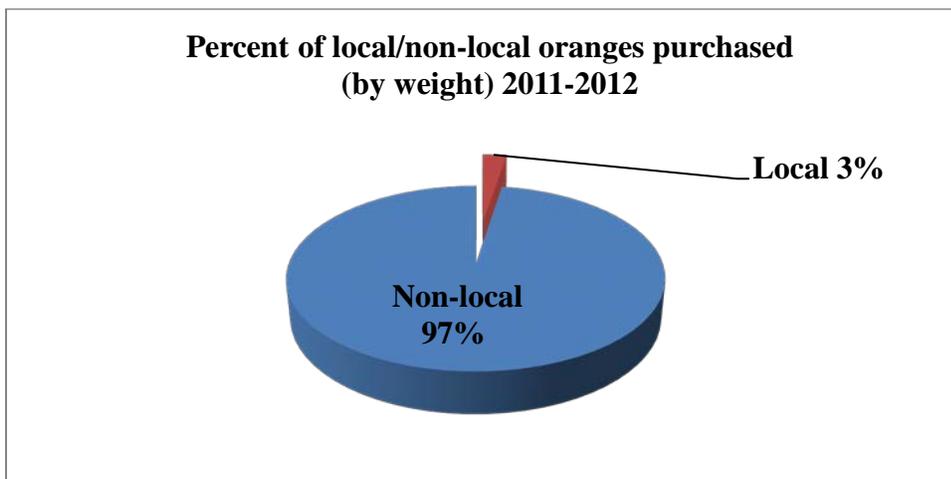
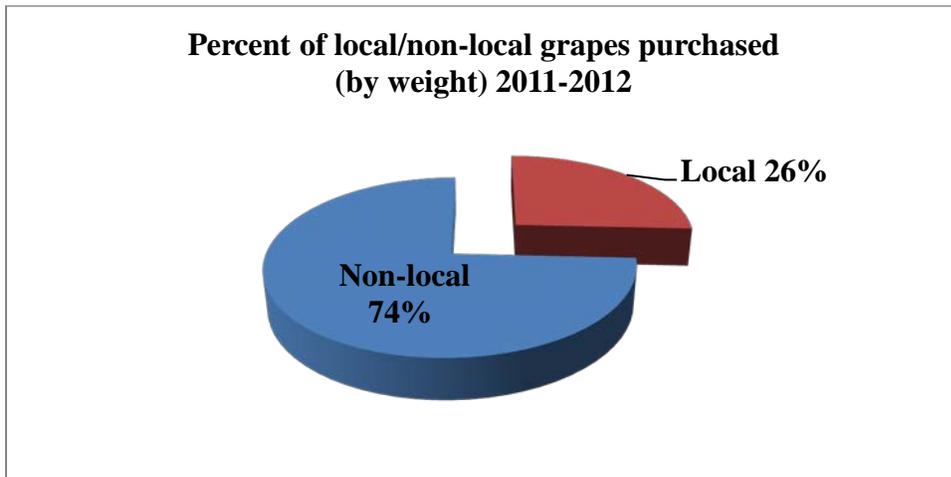
<sup>9</sup> While the research team has no evidence that SDUSD has *never* purchased these items prior to the program, during the years that these items (except for the spring mix) were purchased locally, 100% of the items listed were from local sources. Therefore, it can be surmised that without that particular purchase, the FSD would not likely have served that specific item in the school meals. This was not the case with spring mix, as the FSD purchased both local and non-local sources of spring mix. However, spring mix was identified by FSD staff as a new item during the 2010-2011 school year.

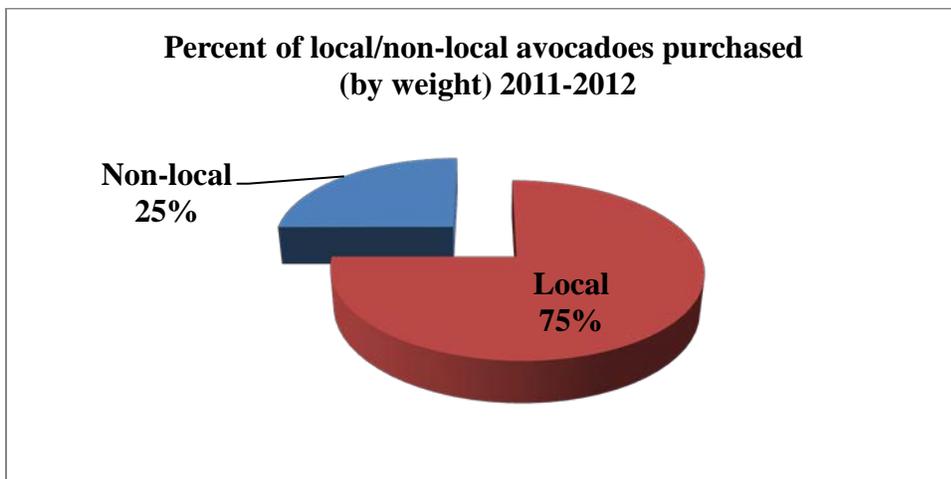
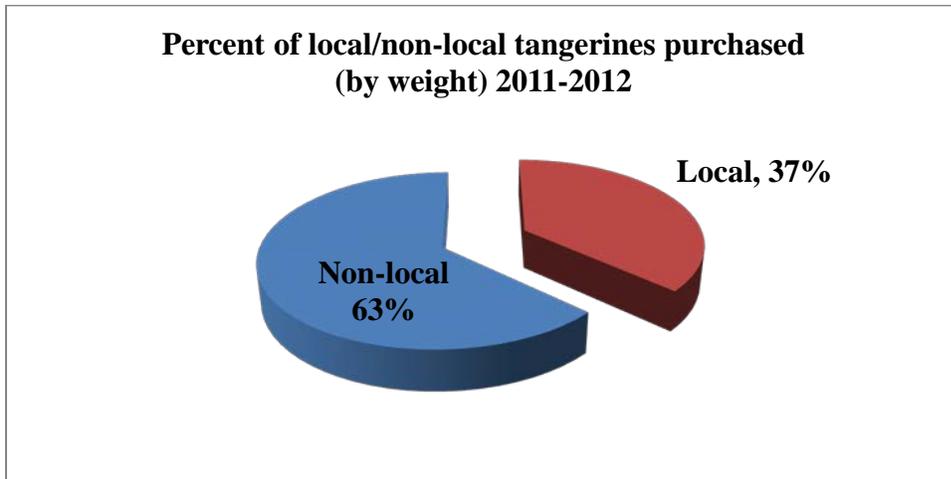
**Figure 3: Percent of SDUSD FSD total produce purchases that are local, 2010-2011 (by type of produce)**





**Figure 4: Percent of SDUSD FSD total produce purchases that are local, 2011-2012 (by type of produce)**





In addition, Table 1 shows the number of pounds of local produce purchased by type in the 2010-2011 and the 2011-2012 school years.<sup>10</sup>

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<sup>10</sup> When applicable, weights are based on the average weight of a case. The weight of the strawberries and tomatoes are based on the approximate weight of a pint.

**Table 1: Pounds of local produce purchased by SDUSD FSD, 2010-2011 and 2011-2012**

| <b>Type of Produce</b>   | <b>Number of Pounds Purchased Annually, 2010-2011 School Years</b> | <b>Number of Pounds Purchased Annually, 2011-2012 School Years</b> |
|--------------------------|--|--|
| Apples                   | 5,280  | -  |
| Asian Pears              | -  | 28,450   |
| Avocado                  | 17,600   | 13,000   |
| Blackberries             | 349  | -  |
| Broccoli                 | 3,885  | -  |
| Grapes                   | -  | 54,831   |
| Kabocha Squash, shredded | 2,061  | 4,218  |
| Kumquats                 | -  | 3,050  |
| Micro-greens             | -  | 26   |
| Nectarines               | -  | 14,525   |
| Oranges                  | 175,200  | 19,485   |
| Persimmons               | -  | 9,280  |
| Plums                    | -  | 7,616  |
| Salad Mix                | 5,115  | -  |
| Strawberries             | 50,784   | -  |
| Tangerines               | 10,100   | 14,675   |
| Tomatoes                 | 972  | 2,925  |

### The Growers

The nine growers interviewed generally had small to mid-size farms, from between 10-300 acres except for one grower who had 8,000 acres. Out of the growers interviewed, three sold to the district during the 2010-2011 school year only. Five sold to the district during the 2011-2012 school year only, and one grower interviewed sold foods during both school years. Two growers interviewed were part of a larger group of many growers that aggregate their produce.

While the majority of growers planted no additional acreage for SDUSD, two growers interviewed planted between 1-3 acres more crops devoted specifically to SDUSD. Generally the growers did not change the particular crops already grown on their land to meet the program's needs. However, in addition to the aforementioned growers who planted additional acreage, one grower mentioned changing his/her crop plan due to SDUSD's request.

The majority of growers estimated that their sales to SDUSD made up approximately 1% or less of their annual income. Two growers estimated sales at 5-10% of their annual income. The growers had mixed opinions on the price points offered by the FSD, with a little less than 50% (four growers) feeling satisfied. However, sometimes even if growers were originally satisfied with the price point given, obstacles such as weather could result in the growers losing money. All but one grower interviewed was interested in continuing their partnership, citing additional benefits such as public relations or increased business with other customers. A few also mentioned an interest in supporting school districts, students' health, or sustainability. One grower interviewed gained 8 additional customers as a result of [his or her] SDUSD partnership.

The majority of growers were interested in increasing the volume sold to SDUSD. However, they recognized the challenges preventing them from doing so, including price points,

the necessity for increased planning, or the farm's limited capacity for supplying more produce. Additional challenges included weather and scheduling. It was not easy to predict exactly when particular items would be ready in order to meet the school district's needs. As one grower explained,

“Some crops are predictable. I can promise you that I will have 50,000 pounds of squash by July 1. But the broccoli will come in when it's ready. The weather has to be just right for the broccoli.”

Other challenges included “growing pains” and the realization that the program was still new. In addition, there were occasional problems in communication or ordering. The FTS Specialist was identified as an important asset, and one who has helped to effectively smooth over some of the ordering glitches. A few growers mentioned the risk involved on their part, which emphasizes the importance of building trust. As one grower stated, “I have my life savings in my farm.”

Another challenge for a few growers further away was transporting the produce to San Diego, although they have found ways to get around that obstacle. In addition, processing was a challenge mentioned by one grower, because there were limitations on what type of produce the FSD could buy. For example, one grower felt it would not be possible to sell carrots to the school district, because the FSD couldn't process them. The FSD and farmers found that the most successful items were those that needed the least amount of work to prep.

There was very little dissatisfaction amongst growers in regards to the ordering, delivery, and payment systems required by working with SDUSD. Several mentioned the extra costs of having to pack according to the FSD's regulations and driving the produce to the distributor. However, the majority felt that cost was nominal or that the benefits outweighed that cost.

Only 1 out of 9 growers was involved in selling a value-added product to the school district, which was shredded Kabocha Squash. The school district did not have the equipment to process the winter squash on site. A California-based company processed the product, and then sold the item to the distributor. The distributor then sold the item to the school district, enabling raw shredded Kabocha Squash to be offered on the salad bar.

When asked how the program could be improved to better meet the needs of growers, the growers responded in various ways. Two growers wished that students could come to visit their farm. (The FTS Specialist explained this has occurred in some cases if the school site staff is interested and the trip is a possibility financially.) Two growers desired a clearer protocol and/or a written contract if growing food for the SDUSD FSD. One grower felt that the program couldn't be improved in any way while another grower felt that the program simply needed more time to improve. However, the predominant answer was a desire for SDUSD to increase the price point offered to growers for the produce.

The growers noted several successes in the program including hiring the FTS Specialist, exposure of produce to students, and the fact that SDUSD FSD was able to purchase local produce for the cafeteria. The majority of growers interviewed mentioned the hard work of the FTS Specialist, with several explicitly stating that the FTS Specialist's role was critical to the success of the program.

### The Food Services Department

Twelve SDUSD FSD staff were interviewed including the Food Services Director, the FTS Specialist, area managers, prep kitchen managers, and full-time and part-time kitchen staff. The interviewees played different roles in the program including promoting the farm to school

program; recruiting growers; ordering the produce; accepting the produce deliveries; advertising the local produce; prepping the produce; and stocking the salad bar. Ten of the interviewees worked at prep kitchens or school sites, representing 9 different schools within the elementary, middle, and high school level.

Each school site had different experiences with their school's farm to school program with some schools having higher levels of parent and student activity. If the kitchen staff was more excited about the program it could affect the reactions of others towards the program, particularly students. The prep kitchen managers, area managers, and FSD upper management had mixed ideas regarding their staff's opinions of the program, citing kitchen staff as supportive, proud, uninterested, or originally resistant. One prep kitchen manager stated,

“When I make a big deal out of it, they [his/her staff] will follow my lead. I have to take the lead, and this is part of staff training.”

As one upper management interviewee stated, some prep kitchen and area managers were very supportive of the program while others were less interested. The interviewee felt that FSD upper management has been very supportive of the program. Varying levels of enthusiasm of the twelve FSD staff interviewed were noted by the research team, but there were no negative reactions to the program overall. Several FSD interviewees (representing different job classifications) mentioned their interest in providing healthy foods to the students, and a few mentioned trying the produce themselves. The majority of all FSD employees interviewed said they supported the program and had few suggestions for improvement. The few FSD interviewees who cited challenges were generally upper management and occasionally prep kitchen or area managers.

As SDUSD is such a large school district, it is difficult to channel the communication effectively to about 1,300 FSD staff; 6,000 teachers; and 134,400 students<sup>11</sup> (SDUSD, 2011). There are 174 schools (elementary, middle, and high school) that are part of SDUSD. This number doesn't include charter schools, the pre-K's, child development centers, and additional sites in the community, all of which the SDUSD FSD is responsible for providing food for. The SDUSD FSD is providing food to over 200 sites, making it difficult to guarantee that all students and staff at each site know about and understand the farm to school program. It is virtually impossible for the FTS Specialist to visit all of the district's school cafeterias even once within the year, let alone individually meet with the school and kitchen staff at each site.

A few FSD staff members, generally the kitchen staff, were not able to accurately identify which produce was local while others had misperceptions of the program. For example, a couple of interviewees brought up the idea that the "local" pears or lettuce were not of the desired quality, yet those items were not actually local. One misperception noted by an upper management interviewee was the belief by some that the program takes away jobs from the teachers due to funding or increased spending on produce. However, the FSD and school district budgets are different.

The way that the information has typically been disseminated to staff has provided challenges for the FSD. The upper management and the prep kitchen and area managers meet, and the managers then pass on any necessary information to the full-time kitchen staff. The full-time kitchen staff then disseminates the information to the part-time kitchen staff. The FTS Specialist and the nutritionist also send out information through e-mail explaining the local produce to the area managers and prep kitchen managers. The information then needs to be

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<sup>11</sup> The numbers of teachers and students stems from 2011-2012 school year data, as the 2012-2013 school year data was not yet available for the research team.

passed on to the kitchen staff via the area managers and prep kitchen managers through word of mouth, as many employees don't have e-mail access. This system of communication provides many difficulties in ensuring that everybody learns the correct information. Communication glitches within the FSD department have led to at least one case in which the local produce that was supposed to be placed on the salad bar for the week was overlooked and not put out.

Additional challenges included ensuring the visibility of the information about produce origins and serving products unfamiliar to students or staff. Several interviewees suggested that many students were still unaware of the program. In addition, forecasting the produce was occasionally seen as a challenge. For example, the FSD staff might be accustomed to estimating how many bags of processed broccoli should be purchased. If the department switches to purchasing whole broccoli with stems, it will take time to understand how much of that product should be ordered. Also, while the distributor aggregates the products of many small to mid-size growers, the FSD continues to have difficulty in recruiting new growers and obtaining the desired quantity of local foods. Finally, there is a challenge in navigating the pricing needs between the growers and the FSD.

The FTS Specialist offers help to any staff members who want to learn how to process a new type of produce. However, the FTS Specialist has rarely been taken up on the offer. In the beginning of the 2011-2012 school year, prep kitchen and area managers underwent a training program involving both local growers and chefs. The prep kitchen and area managers interviewed were typically positive about the workshop, with some explaining it helped them learn more about the food. Two area and/or prep kitchen managers interviewed stated an interest in also going on a field trip to a farm and learning more about how the food is harvested and distributed. In the beginning of the 2012-2013 school year, the SDUSD FSD put on a training

for all 1,300 FSD employees. The farm to school program was highlighted and emphasized in the trainings in order to try to counteract some of the misperceptions or lack of knowledge about the program.

Since the district orders items that require little processing, the transition to using local foods has been fairly smooth. The majority of prep kitchen managers, area managers, and kitchen staff interviewed felt that no change in kitchen equipment was necessary to work with the local produce. About half of the FSD employees who were asked the question (kitchen staff, prep kitchen managers, and area managers) felt there is no difference in the time needed to prep the local produce versus non-local. Those who didn't agree with that statement said the time difference was generally very small or that the time difference depended on the product. The item most commonly cited as most difficult to process was the local whole broccoli. A few interviewees felt that it took more time, was dirtier, and provided a large amount of wasted product since the stems were thrown away.

Upper management interviewees explained that the local produce isn't necessarily more expensive for the FSD. A fairly small portion of the produce procured is local. The local produce is generally substituted for the non-local produce offered in the salad bar. The department will substitute the local item for an equally (or more expensive) non-local item which helps to keep down costs. For example, in January 2012 the department substituted their typical non-local grape purchases for local persimmons once a week. In addition, a contract amendment was created in winter 2012 that limits how much mark-up the distributor can charge for local produce. The distributor's profit margin was capped in order to make local produce more affordable for the SDUSD FSD.

The Food Services Director and other upper management were seen as very supportive by one upper management interviewee. This support was identified as an important part of the program's success. An attempt to create collaborative experiences that promoted trust came through in a few of the interviews. One upper management interviewee explained that the district helped to support a grower who had delivered a local produce item covered in aphids. In lieu of deciding to *not* keep the product, the district worked with the grower to create a better washing process for the produce. Another upper management interviewee questioned, "Do local farmers conform to the SDUSD system or vice versa? Or is there a compromise?"

The majority of all FSD staff members interviewed were happy with the quality of the produce, specifically mentioning taste and freshness. Area managers, prep kitchen managers, and kitchen staff interviewed had mixed opinions on the program's success at increasing students' produce consumption, but some mentioned the length of time it takes to see that change. On the other hand, a few of the interviewees felt that students were trying new foods. Teachers and FSD staff were identified as playing an important role in encouraging students to try the produce. The upper management interviewees felt that an important success was that they were able to procure local produce, especially in such a short period of time. Several FSD interviewees suggested that the program could be improved by doing more outreach to students.

Prior to the established farm to school program, the FSD was not able to purchase local foods due to obstacles with time and infrastructure. A few FSD interviewees identified that the program's success was contingent on the role of the FSD Specialist.

### The Distributor

The distributor was approached by the FSD about the department's interest in sourcing local foods in 2010. Although initially not sure how the program would fare, the distributor has been supportive of the program as its success has become apparent. The distributor has been pleased with the price points and with the quality of the produce. The program is seen as successful because it has helped some local growers.

The distributor purchased foods prior to the program that he/she saw as local. However, the produce was never tracked as local; there were no definitions set to define it as local, nor were the valued production practices part of the RFP. Now, the distributor is purchasing and tracking local foods. It is not possible for the distributor to track the source of each item that comes through the company as this would be far too much work. Therefore the distributor tracks local foods that fall under the FSD's definition of SD local, regional, or CA-grown. The research team and the FSD worked together to establish that for the sake of the evaluation the distributor needed to know from which farm the produce originated in order to track an item as SD local, regional, or CA-grown. The FTS Specialist values building relationships with growers and making visits to all local farms from which the distributor purchases; however, it is not always possible for the Specialist to visit every local farm located outside of San Diego County due to resource constraints. The FSD's production standards are valued by the FSD, but growers are not required to meet these standards in order for the distributor to track an item as local.

The main challenge lies in providing the desired amounts of produce for such a large district. Due to the district's size, it is difficult to source all of one particular item as a local item. For example, the district purchases large amounts of grapes and lettuce. In May 2012, the SDUSD FSD purchased about \$69,695 of apples, \$30,286 of grapes, and \$32,287 of lettuce and

salad mix. It would be difficult for the distributor to provide the majority of grapes or lettuce from local sources. In addition, the majority of produce is delivered to the SDUSD FSD on a Monday, resulting in the need for growers to deliver products to the distributor's warehouse by the preceding Saturday. It may be more difficult for small-scale growers to provide the FSD with the products purchased in large quantities (apples, grapes, etc.) if the majority of their products must be delivered by one particular day of the week. Perhaps items that are typically sourced in smaller amounts might be more successful in being 100% local.

The distributor mentioned that one challenge he faced was that the distribution company was more likely to receive less advance warning on product availability when sourcing locally. This trend has resulted in the distributor needing to put more work into negotiating how the produce is sourced and makes it difficult for the distributor to always rely on the local produce. However, a back-up supply of a product is always available for the company to use just in case it is necessary. While the distributor has no major concerns, the consistency and predictability of products varied depending on the grower.

In some cases, the farm to school program allowed the distributor to increase local purchases for other customers. For example, one grower had a surplus of produce beyond what SDUSD wanted. The distributor then purchased and sold this product to other school districts. The distributor has also forged new business relationships with growers and other supply chain partners. The distributor, the FTS Specialist, and a local grower worked with a California processor to add a value-added product-- shredded Kabocha Squash-- to the salad bar during the 2010-2011 school year. The distributor is generally happy with the ordering, invoicing, and delivery systems in place. The invoicing system required one small change, which was that a new invoice code needed to be created in order to track the local produce.

The program could be strengthened if the growers were able to supply the items that the school district already uses or items that would be popular with students, such as strawberries and watermelon. The distributor was identified as a critical part of the program's success by a FSD upper management interviewee. At the same time, the distributor felt that the FTS Specialist was also important to the program's success.

### The Community Members and Organizations

The research team interviewed three community members, often affiliated with an organization, who have played a role in supporting farm to school efforts within San Diego County. The community members revealed the enormous influence that SDUSD has had on school districts across the county. SDUSD FSD provides an example of how to clearly set goals and define local, while showcasing how local food procurement can be successful, according to these interviewees. Providing inspiration to other districts, SDUSD has also fostered more opportunities for other districts to buy from local growers.

The community members interviewed see a need for more communication with teachers, students, and principals to increase the program's visibility. One interviewee suggested that there could be stronger connections between the classroom and what is happening in the cafeteria. Sometimes teachers were not aware that the program was in existence.

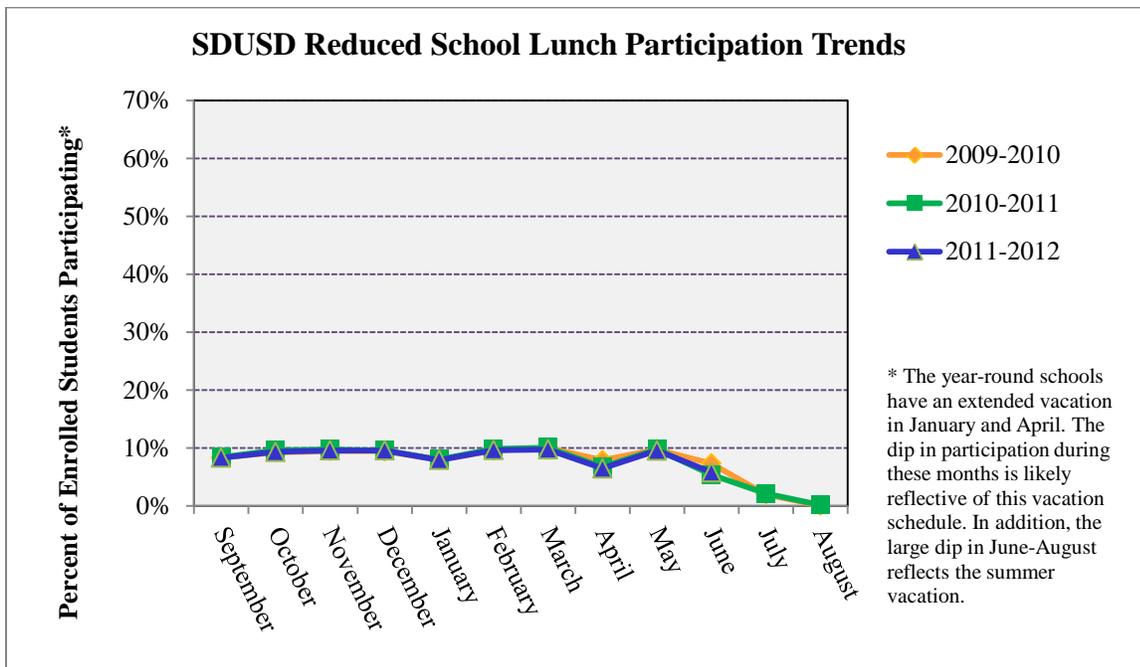
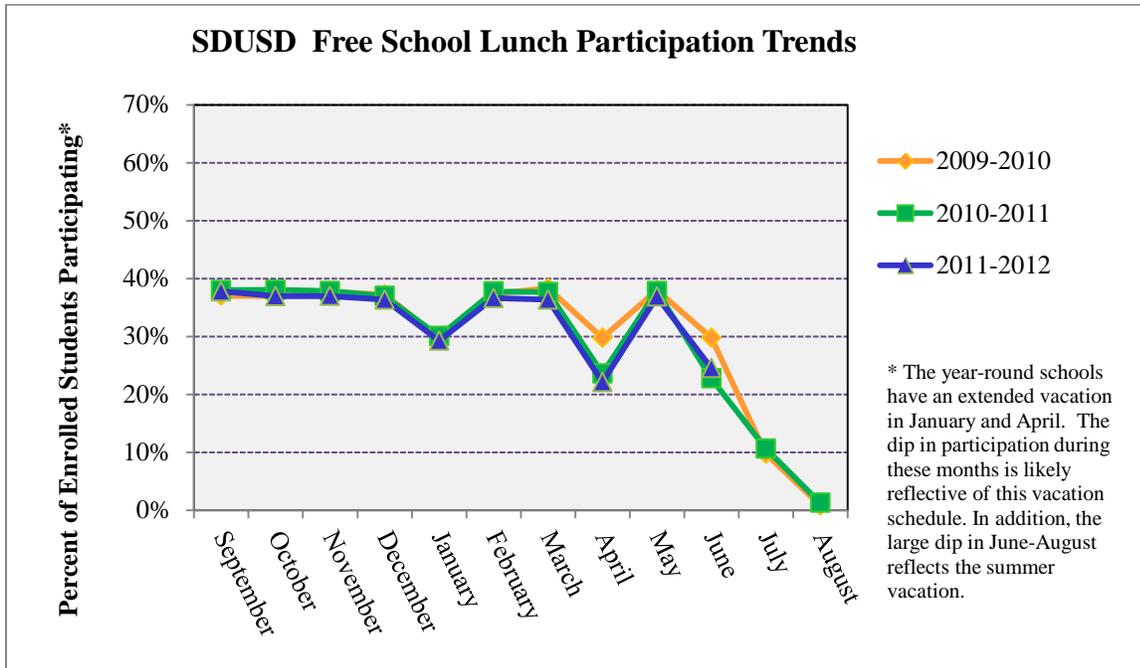
The community members interviewed were supportive of the local growers, excited about growers who are playing a role in aggregating local produce. However, an informal conversation with one interviewee from a different stakeholder group suggested it is always best to have more than one aggregator.

The community members interviewed were very satisfied with what change has already occurred in such a short amount of time. One interviewee explained that some school districts had to rely on parents or other volunteers in order to procure local foods, but this was not the case with SDUSD. The FTS Specialist was seen as a crucial position in the SDUSD program's success.

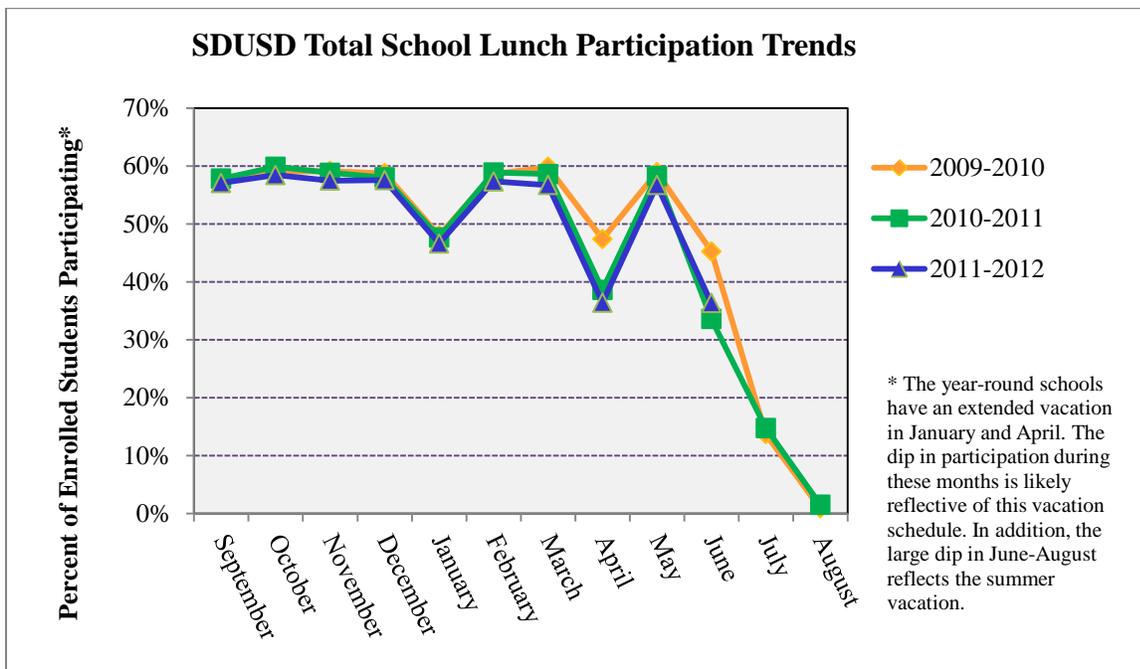
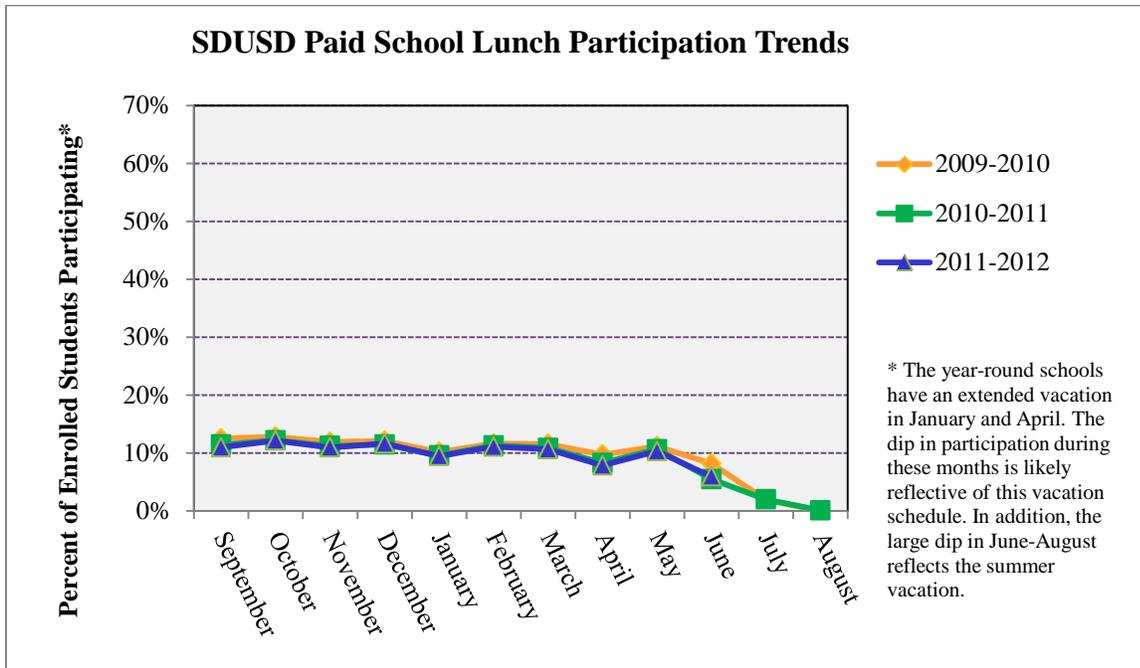
### School Lunch Participation Trends

The research team tracked school lunch participation trends to determine if the farm to school program may have contributed to more students participating in school lunch. However, there was no appreciable increase in student participation in the school meals between the baseline 2009-2010 and 2010-2011 and 2011-2012 trend years (Figure 5). There is currently limited research examining the connection between farm to school and children's health status. As the program grows, continued tracking of meal participation and the correlation to consumption patterns and health trends is essential.

Figure 5: School lunch participation trends<sup>12</sup>



<sup>12</sup> The July-August 2012 meal participation data was not available before the completion of the evaluation.



## **Lessons Learned and Suggestions for the Future**

In about two years, SDUSD FSD has increased local food procurement providing a leadership role to districts across San Diego County. There is enthusiasm district-wide about how much has been accomplished in such a short period of time. The success of the program depends on all parties in the district's produce supply chain, and the role of a paid FTS Specialist is seen as integral to the process.

This evaluation specifically focused on changes in procurement. Due to resource constraints, the evaluation team was not able to measure knowledge, attitude or behavior changes in children (aside from overall school meal participation). Nor was it able to measure changes in health status as a result of the farm to school program. Understanding how to make local procurement successful is a good first step for school districts interested in providing access to fresh, seasonal produce.

While there are not conclusive data showing an increase in school meal participation or consumption, the program's impacts on health and nutrition should continue to be evaluated as the program progresses. Several farm to school studies conducted nationally have shown an increase in children's consumption of produce (Center for Health Promotion and Disease Prevention, 2011; LaRowe et al., 2012) and it is possible SDUSD could see a similar trend over time. Yet further research is necessary to understand farm to school programs' impacts on long-term dietary changes (Joshi & Azuma, 2009), obesity, and health status of children.

There were several lessons learned from the evaluation which the research team offers as suggestions for other districts interested in a farm to school program.

- 1) A full-time FTS Specialist who is part of the FSD staff is important to the program's success. The FTS Specialist ensures that there is a key person dedicated to recruiting growers, communicating information, and mediating between all stakeholders.
- 2) The FTS Specialist has taken on other responsibilities within the FSD department beyond local produce procurement. Due to the expansion of the job description, the FTS Specialist's salary is now partially paid for by the department and the role has become more institutionalized.
- 3) The buy-in from the distributor and the SDUSD FSD upper management is necessary for the program's success.
- 4) A back-up plan which ensures a reliable produce supply is essential if the expected local produce supply is not available. In the case of SDUSD, the distributor sourced from the LA Terminal Market if the local produce was not available.
- 5) It is critical for food service departments to identify what they want regarding local procurement. The department will never know what is possible until it identifies what it wants and then reaches out to companies and growers to assess the options.
- 6) The implementation of a clear communication system is necessary to guarantee that information is received by all stakeholders involved, particularly students and staff.
- 7) A system that aggregates large amounts of local produce for a school district is important to consider when thinking about addressing problems with predictability and availability of supply.
- 8) Clearly stated goals and definitions of local are important in understanding what the FSD strives for and evaluating their progress. Clear definitions were also instrumental when the FSD drafted the RFP for the FSD's produce company.

While the SDSUSD FSD has effectively achieved the first five lessons learned, the department is still working on improving the communication system. In the 2012-2013 school year, the FSD has worked on disseminating farm to school information to all 1,300 FSD employees during a back-to-school training. However, the district's large scale provides difficulties in ensuring that farm to school information will be adequately channeled to the large numbers of FSD staff, SDUSD staff, and students throughout the year. Three interviewees suggested the creation of paid positions or other resources to support any school district within the county interested in farm to school. As the FSD plans to hire a second FTS Specialist in the future, the extra support could be used to help channel information about the farm to school program to parents, students, and staff and possibly to other school districts.

In addition, while the distributor aggregates the products of many small to mid-size growers, the FSD continues to have difficulty in recruiting new growers and obtaining the desired quantity of local foods. One FSD upper management interviewee explained the difficulty in finding vegetable growers to work with in SD County, in addition to fruit and vegetable growers that can provide the quantities necessary for SDUSD's scale. Interviews also revealed the difficulty in meeting the needs of the growers, the FSD, and the distributor in regards to scheduling and predictability of produce supply. Additionally, obstacles remain in ensuring economic benefits to growers, which may impact the supply of produce available to the FSD. Despite the intentions of shared benefits, it is difficult to ensure that all parties receive satisfactory financial gains.

Finally, the FSD launched its program with a very clear definition of local produce. As the program expanded in the second year to include produce grown in California (CA-grown),

the FSD's definition of local became less clear.<sup>13</sup> It was unclear how the FSD decided upon which farms located in California they would establish a relationship with and therefore, label as CA-grown, and which farms located in California would not be identified as CA-grown. It could be confusing to the public to say that the FSD only purchased produce from one farm labeled as CA-grown, when the FSD likely purchased products from more than one farm located in California.

Due to resource and time constraints, the research team was not able to conduct a comprehensive analysis of *all* produce grown in California purchased by the FSD. The team worked with the FSD to establish a definition of CA-grown produce for the 2011-2012 school year. The definition required that in order to be labeled as CA-grown, 1) the FTS Specialist and/or the distributor would identify the farm from which the produce originated, and 2) the FTS Specialist would build a relationship with the grower. It is not yet clear whether after the evaluation, the FSD will continue to define CA-grown based on the definition set in partnership with the research team. In addition, it is not clear whether building a relationship between the grower and the FSD will continue to be important as the program expands. If the distributor does take on more of a leadership role in identifying and contacting local growers, the FSD will need to identify whether or not the relationship built between the FSD and the growers will remain important to the FSD.

The clear definitions of local that were set by the FSD before the research team started the evaluation were critical in maintaining rigorous standards of evaluation. The research team

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<sup>13</sup> If all of the farms located in California that the FSD purchased produce from were labeled as CA-grown, then the final report would likely show the percent of CA-grown produce purchased to be higher. However, only one farm was identified as CA-grown based on the definition decided upon by the FTS Specialist and the research team. This may be confusing in the future when trying to explain how much produce grown within California the FSD purchased.

suggests that the FSD continues to identify clear definitions of local, particularly as the department looks towards expanding their selection of CA-grown produce.

By providing an opening and infrastructure in a market that typically excludes small and mid-size growers, the FSD has tried to strengthen the local and regional food system while also increasing student's consumption of fresh produce. There are questions that remain about whether they can achieve 1) shared economic benefits for all stakeholders in the supply chain, 2) optimal circulation of food origin information, and 3) aggregation of the desired supply. In addition, the change in student's produce consumption patterns are not yet clear as the research team did not measure this. However these aspirations take time, something noted by several interviewees. Attempting to engage in business relationships that emphasize trust and collaboration, the SDUSD FSD is making inroads in increasing local, fresh produce in school meals.

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