

Annual Evaluation Report

Davis Farm to School &
Davis Joint Unified School District
School Lunch Program
School Year 2013 – 2014

Prepared under contract with
Davis Farm to School
Yolo Farm to Fork

By

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Executive Summary

This report, prepared by the University of California Sustainable Agriculture Research and Education Program (UC SAREP), evaluates progress on three goals that comprise an agreement between Davis Joint Unified School District (DJUSD) and Davis Farm to School (DF2S) for the 2013-2014 school year:

- 1) Promote farm fresh foods in schools
- 2) Reduce solid waste through a comprehensive district recycling program
- 3) Provide school garden and farm-based education opportunities

This report will also address activities related to a fourth goal that is not included in the recently updated Memorandum of Understanding between DJUSD and DF2S, but which is an ongoing goal that has been outlined in previous reports and will be highlighted here as well:

- 4) Research and evaluate programs and provide information to the community

Goal 1: Promote farm fresh foods in schools

Procurement

The purchasing records for school year 2013-2014 show that **55.4%** of produce purchases were sourced locally, up from 52.7% in 2012-2013¹. DJUSD changed their primary produce distributor from Fresh Point to Rohrer Brothers in November 2013. Rohrer Brothers provides produce to the district directly and also through the Department of Defense Fresh Fruit and Vegetable Program.

Participation

Participation in the school lunch program is expressed as a percentage of total student enrollment. In 2013-2014, participation averaged 21.1% overall for the lunch program, slightly down from previous years (21.7% in 2012-2013; 22.1% in 2011-2012). Of those students eligible for free or reduced lunch, 56% (free) and 45% (reduced) participated in the program.

School Food Environment

New USDA Meal Pattern

The new USDA school food pattern took effect in 2012-2013, and has primarily impacted salad bar offerings, grain-based offerings (bread, pizza, etc.), and sodium content in meals. Redesigned salad bars include more orange and red options and also now include legume options. All grain-based products must now be at least 51% whole grain and the new sodium limit is reduced. SNS staff report that students are less likely to accept food prepared under the new pattern.

¹ Percentages are based on the cost of produce in dollars, adjusted for inflation, as detailed on distributor invoices

“From Scratch” Offerings

Student Nutrition Services (SNS) Director Dominic Machi is committed to reducing consumption of processed foods by increasing the percentage of meals made from scratch at the Davis Central Kitchen, and is also looking to expand local menu options to include local proteins and bread products.

Professional Development Cooking Classes

Three professional development cooking classes were offered again in 2013-2014 as a part of a Yolo County Farm to School grant aimed at increasing district procurement of local fruits and vegetables. The classes were well received by SNS staff.

Taste Testing

More than 500 elementary school students participated in taste testing activities in the spring of 2014 and student response was overwhelmingly positive. The most popular recipe was gnocchi in a vegan marinara sauce with olives, spinach, and navy bean puree.

Goal 2: Reduce solid waste through a comprehensive district recycling program

Both DavisRISE and the ALL Compost program continued in 2013-2014, and a new community service program supporting these programs is scheduled to be piloted in 2014-2015.

Recycling Is Simply Elementary (DavisRISE)

DavisRISE coordinators reported a successful year that included high levels of student engagement and steady or increasing levels of waste reduction.

ALL Compost Program

The ALL Compost Program maintained the levels of waste reduction that were achieved in the pilot year across all participating schools. The total waste that has been reduced (redirected to compost) since the program started in 2012 is 1,296 cubic yards.

Community Service for Elementary and Middle Schools

Community Service for Elementary and Middle Schools is a program that has been in development for the last two years and will be piloted during the 2014-2015 school year. It is being developed to recognize the contributions of students to both the DavisRISE and ALL Compost programs.

Goal 3: Provide school garden and farm-based education opportunities

Garden-based Education

Davis Farm to School awarded \$4,000 to school garden programs through the School Garden Matching Grant program in the 2013-2014 school year. A total of 16 schools received grants of \$250 each. Three of these schools were located in Woodland and are not included in data presented in this report.

Of the 8 DJUSD schools reporting back, total garden income (not including the garden grants) was \$28,309, well over last year's total of \$10,400². Matching funds and additional income came from grants, donations, and fundraising. Many schools also reported in-kind donations of supplies and expertise from community members, businesses, or other organizations.

About 1300 students, 35 teachers, 30 parents, and 260 volunteers participated in some aspect of gardening at these 8 schools.

Farm Visits

Three schools participated in Farm Visits in the spring of 2014: Marguerite Montgomery (3 classes), Cesar Chavez (4 classes), and Birch Lane (2 classes). A total of 229 students participated in these tours, slightly down from 250 students last year. Classes visited three regional farms – Capay Organic, The Center for Land-Based Learning's Farm on Putah Creek, and Good Humus. Feedback from teachers was positive.

School-to-Cafeteria Pilot Program

A School-to-Cafeteria program was piloted in 2013-2014 at two schools, Harper Junior High and Birch Lane Elementary. Harper Junior High sold over 700 lbs. of broccoli and cauliflower to SNS in spring 2014, which was used in soups and on the salad bar. Birch Lane Elementary sold small batches of lettuce to SNS that were then returned for use on their own salad bar.

² Last year's total of \$10,400 was based on 6 schools reporting back. The average garden income per school participating in the garden grant program this year was \$3,538.63 (2013-2014), compared to \$1,733.33 the previous year (2012-2013).

Goal 4: Research and evaluate programs and provide information to the community

Community Connections

As in the past, DF2S sponsored and/or participated in a number of community events. Signature events included:

- **Village Feast:** The 9th Annual Village Feast, held under the sycamore trees in Central Park, raised \$14,743³ this year (August 2013).
- **Tour de Cluck:** This spring event was popular once again, and brought in \$7,603⁴ to support Davis Farm to School. (May 2014).

Yolo Farm to Fork also helped to promote and market the efforts of DF2S and DJUSD in a variety of ways, including through various media outlets (television, radio, print, web, and social media) and outreach events.

SUMMARY OF RECOMMENDATIONS

Goal 1: Promote farm fresh foods in schools

Procurement

- Continue regular check-ins with the SNS Director regarding local purchasing and “from scratch” cooking.
- Encourage SNS to expand relationships with growers in the Yolo/Solano/Sacramento region; e.g., continue discussing the idea of purchasing from UC Davis Russell Ranch.
- Consider providing funds to SNS to offset some of the costs of local food procurement.

Marketing to Increase School Lunch Participation

- Identify specific ways in which DF2S could support the SNS Director’s efforts to increase participation rates, especially among students who are eligible for Free & Reduced Priced meals. This could be via PTAs, parent groups, or the district’s Wellness Policy.
- Discuss with the SNS Director how DJUSD could use menus more for marketing school lunch, regional purchasing, and scratch cooking. Emphasize the importance of highlighting Harvest of the Month items.
- Continue seeking opportunities for DF2S to become more visible in the Davis community (more media mentions, etc.)

³ This is down from \$18,000 in 2012-2013

⁴ This is down from \$20,000 in 2012-2013

- Support the SNS Director's outreach and engagement activities with the community and consider providing funds to DJUSD to support this goal.

School Food Environment

- Meet with the SNS Director to discuss the Cornell Center for Behavioral Economics in Child Nutrition Program's *Smarter Lunchroom Movement*, which aims to create sustainable research-based lunchrooms that guide healthier student choices. Support the SNS Director in incorporating any ideas that seem feasible, possibly through a pilot program at 1-3 schools. Consider involving UC Davis interns.
- Discuss how DF2S could support the SNS Director's efforts to address concerns that school lunch program participation is limited by students not have enough time to eat their meal and also enjoy recess. Efforts could include finding ways to move students through lunch lines more quickly, providing more healthy "finger food" options that can be eaten quickly or carried outside, or looking into the possibility of extending the lunch period.

Professional Development

- Continue to support the offering of professional development cooking classes for food service staff.

Nutrition Advisory Committee

- Explore with SNS Director how he might use the Nutrition Advisory Committee to achieve his goals for Student Nutrition Services. Assist as appropriate.

Taste Testing

- Continue to support SNS Director's Taste Testing program.

Goal 2: Reduce solid waste through a comprehensive district recycling program

Recommendations taken largely from program evaluation forms filled out by RISE Coordinators:

- Explore ways DF2S could work with DJUSD to integrate recycling and waste management more thoroughly into the curriculum, with the garden program, the school lunch program, and into the school culture.
- Continue holding meetings of RISE Coordinators dedicated to challenging issues such as recruiting volunteers, managing children at the lunch site.
- Continue the ALL Compost Program and consider expanding it to additional schools.
- Consider purchasing more recycling bins to have near all trash cans (this was reported as a particular need at Da Vinci).

- Consider a districtwide “Recycling Challenge” (friendly competition) to achieve recycling goals.
- Conduct regular student trainings at each school about how to participate.

Goal 3: Provide school garden and farm-based education opportunities

School Garden Program

- Continue garden and custodial awards. Involve as many teachers and parents as possible.
- Continue Walkabouts to identify and address challenges collaboratively.
- Explore ways to involve more teachers in school gardens.
- Continue the practice of the DF2S Program Coordinator checking in periodically with garden coordinators to assess progress and challenges. This resulted in a better return of annual reports in 2014 and gave DF2S a clearer picture of needs for school gardens.

Farm Visits

- Begin communication with teachers in the fall about the spring tours.
- Davis Farm to School Steering committee needs to re-visit the structure and content for the farm visits, including the pre-trip classroom visits and post-trip evaluations.
- Review the curriculum connections between the farm visits and classroom. Ensure that appropriate lessons are being presented in the pre-trip sessions and that instructors are comfortable with content.
- Clear instructions and expectations need to be laid out for volunteers.
 - Volunteers need to be thoroughly trained.
 - Internship expectations need to be very clearly explained and discussed at the beginning of the internship.
 - Pursue farmer training to help them with appropriate on-farm activities for students. Suggest more produce tasting.
 - Be sure teachers know about payments and schedule for payments. Complete all payments by the end of the School Year.

School to Cafeteria Pilot Program

- Rethink the program from the ground up. Involve all parties from the beginning and establish clear roles, including a role responsible for ensuring clear communication among all parties. Challenges should be addressed collaboratively.
 - Increase and improve communication
 - Discuss back-up plans for garden produce if sales to SNS do not go through as planned for any reason.
 - Discuss with SNS how to increase institutional commitment and financial support, if possible.

Goal 4: Research and evaluate programs and provide information to the community

- Continue to take advantage of statewide and national opportunities for promoting the Davis Farm to School program.
- Continue to develop relationships with local and Yolo County organizations through Yolo Farm to Fork.
- Continue discussing how to best implement our signature fundraising events: The Village Feast and Tour de Cluck.

Program Development

- Continue conducting short- and long-term planning to assess program personnel duties in light of changing priorities and coordination with Yolo Farm to Fork.

Full Report

Overview

In November 2008, the Davis Joint Unified School District (DJUSD) and Davis Farm to School (DF2S) entered into an agreement, a Memorandum of Understanding (MOU), to collaboratively support the health and education of all DJUSD students. The MOU identified four major goals:

1. Increase farm fresh food in school food offerings
2. Reduce solid waste through a comprehensive district recycling program
3. Provide education opportunities to promote a healthy lifestyle and develop the whole child
4. Research and evaluate programs and provide information to the community

During the 2012-2013 school year, negotiations took place to update and amend this original agreement. The new agreement was finalized in September of 2013, and outlines the following three goals:

1. Promote farm fresh foods in schools
2. Reduce solid waste through a comprehensive district recycling program
3. Provide school garden and farm-based education opportunities

This report, prepared by the UC Sustainable Agriculture Research and Education Program (UCSAREP), includes outcomes and recommendations related to all stated goals in the updated MOU with a special focus on results relating to the promotion of farm fresh foods in schools (Goal 1), including data relating to procurement, participation, and the overall school food environment. In addition, the report includes data related to outreach and evaluation, previously (and for the purposes of this report) referred to as Goal 4: Research and evaluate programs and provide information to the community.

DJUSD is a medium sized district of approximately 8,600 students located in Yolo County.⁵ It has 16 schools, including nine elementary schools, three Junior Highs, two high schools and one Continuation school. Student Nutrition Services (SNS) participates in the National School Lunch Program, and serves approximately 1,800 meals per day. The Free and Reduced Lunch eligibility rate is 20.9% (2013-2014), as compared to a county-wide rate of 54.0% (CDE, 2013-2014). The cost of a full lunch meal at DJUSD is \$3.25 in elementary schools and \$3.50 at junior high and high schools. Reduced price meals are 40 cents regardless of grade level.

⁵ Most recent data from CDE (2013-2014): Student enrollment: 8,539; Demographics: 56% White, 18.5% Hispanic or Latino, 15.5% Asian, 2.8% Black or African American; 7.2% Other. Free & Reduced Priced eligibility: 20.9% (compared to Yolo County at 54.0%). Note: 20.9% Free and Reduced for DJUSD has been calculated based on monthly Student Eligibility Reports provided by DJUSD that reflect monthly changes to both eligibility and enrollment. The CDE Free and Reduced eligibility for the 2013-2014 school year at DJUSD was 22.5%, based on a slightly different calculation.

Methodology

Procurement data for this report were gathered from DJUSD's produce invoices from distributors and individual farmers. Participation data was gathered from DJUSD's monthly Student Eligibility Reports, Sales and Participation Reports, and School Food Service Days Calendar.

Program data were summarized from internal records, interviews with program coordinators and volunteers, and program evaluation surveys and reports.

An in-depth interview was also conducted with the Student Nutrition Services (SNS) Director Dominic Machi in December of 2014.

Goal 1A: Increase farm fresh foods in school food offerings

The goal outlined in the 2008 MOU between DJUSD and Davis Farm to School was to increase the amount of local produce in the school meal and snack programs to 60% of total district produce by 2010. This was amended to 40% in the 2013-2018 MOU.

The purchasing records for school year 2013-2014 show that **55.4%** of produce purchases are locally sourced, as defined below. This is up from 52.7% in 2012-2013 and 29.5% in 2011-2012. Table 1 and Figure 1 both show the percentage of produce locally sourced over time (2002-2014).

Definition of "local"

For the 2013-2014 school year, "local" was defined as the following:

- 1) Products are grown within a 300-mile radius from Davis **AND** one of the following:
 - a) DJUSD has a direct relationship with the small to mid-scale growers selling the product **OR**
 - b) The distributor provides state-level origin information and the product is **BOTH**
 - i) identified by the distributor as being grown in California, **AND**
 - ii) locally seasonal according to both of two different seasonality charts.⁶

This differs from last year's definition because DJUSD's current distributor Rohrer Brothers, unlike previous distributors, has not provided origin information on their invoices at a greater level of detail than the state of origin. Fresh Point invoices from the first part of the 2013-2014 school year provided more detailed origin information and were evaluated according to 2012-2013 criteria.⁷

⁶ Seasonality charts used were provided by (a) Community Alliance with Family Farmers (CAFF), based in Davis, CA, and (b) the Center for Urban Education and Sustainable Agriculture (CUESA), based in San Francisco, CA

⁷ "1)" and "a)" were the same in 2012-2013, "b)" was: *The distributor provides transparent, verifiable information about the farmers, their production practices, and where the product is grown.*

Sourcing Local Produce

Rohrer Brothers Distributor

For the last several years, Student Nutrition Services (SNS) procurement of fresh produce was made primarily through Fresh Point (FP), a subsidiary of Sysco. Beginning in November 2013 and continuing for the remainder of the school year, Rohrer Brothers became the primary produce distributor for DJUSD. The last FP invoice from the 2013-2014 school year was dated October 2013. Rohrer Brothers provides produce directly and also administers the Department of Defense Fresh Fruit and Vegetable Program.

- Data gleaned from examining all produce invoices indicated that 47.1% of produce purchased from Rohrer Brothers during the 2013-2014 was identified as local. This is compared to 44.4% last year with Fresh Point.

As mentioned previously, Rohrer Brothers is not able to identify the exact origin of produce on their invoices, but does indicate which items are sourced from within the state of California. To determine which items were likely to be local according to DJUSD's definition of 300 miles, California-origin items were compared to two regional seasonality charts – one created by the Community Alliance with Family Farmers (CAFF), based in Davis, CA, and another created by the Center for Urban Education and Sustainable Agriculture (CUESA), based in San Francisco, CA. To be designated as local, California-origin items had to be currently in season on **both** charts for that month. (See Appendices 1 and 2)

Other Sources: Local Farmers

In 2013-14, SNS purchased only 11.6% of total produce directly from local farmers, representing 21% of total local produce purchases. The remaining 79% of local food purchases were made through a regional distributor (either Fresh Point or Rohrer Brothers). Figures 2 and 3 compare the percentage of local produce to the source of that local produce over the last four school years.

SNS has an ongoing relationship with kiwi grower Frank Stenzel and purchased \$3000 worth of produce from him in 2013-2014, down from \$4,700 in 2012-2013. SNS did not purchase strawberries from SaeLee Strawberries or Simply Sweet Berries as they had in previous years, but did add purchases from both Harper Junior High (\$877) and Birch Lane Elementary (\$75). The majority of purchases from local growers were through Capay Organic, who operates as both a farm and a local/regional distributor.⁸

Procurement Trends

There are several different ways to look at local produce procurement trends. For the purpose of this report, we will look at three primary questions:

1. What percentage of total produce purchased each year is sourced locally and how has this changed over time?
2. What percentage local produce is sourced from distributors versus directly from individual farmers and how has this changed over time?

⁸ Capay Organic is both a grower and a distributor for other local farmers. For the purpose of our calculations, purchases from Capay Organic that were categorized as local were counted as purchases from an individual farm; purchases categorized as non-local (originating in Capay Organic's Southern California fields) were counted as distributor purchases.

3. How have local and non-local produce expenditures changed over time, as measured in inflation-adjusted dollars?

Table 1 shows all produce purchases (local and non-local) since 2002.

Table 1: Produce Purchases for DJUSD School Years 2002 – 2014, Adjusted for Inflation⁹

School Year	PPI factor (2013-2014 base year)	Local Purchases (Farmer + Distributor)	Local Purchases (Farmer + Distributor) Adjusted (2013/14 \$)	Nonlocal Purchases (Distributor)	Nonlocal Purchases (Distributor) Adjusted (2013/14 \$)	Total Produce Purchases	Total Produce Purchases Adjusted (2013/14 \$)	% of Total that is Local
2002 – 2003	1.653	\$17,062	\$28,203	\$32,304	\$53,399	\$49,366	\$81,602	34.56%
2003 – 2004	1.531	\$16,201	\$24,804	\$25,970	\$39,760	\$42,171	\$64,564	38.42%
2004 – 2005	1.317	\$20,806	\$27,402	\$21,141	\$27,843	\$41,947	\$55,244	49.60%
2005 – 2006 [1]	1.35	\$9,105	\$12,292	\$22,251	\$30,039	\$31,356	\$42,331	29.04%
2006 – 2007	1.16	\$6,934	\$8,043	\$34,732	\$40,289	\$41,666	\$48,333	16.64%
2007 – 2008	1.104	\$15,028	\$16,591	\$52,594	\$58,064	\$67,622	\$74,655	22.22%
2008 – 2009	1.207	\$21,378	\$25,803	\$56,616	\$68,336	\$77,994	\$94,139	27.41%
2009 - 2010	1.078	\$41,763	\$45,021	\$43,388	\$46,772	\$85,151	\$91,793	49.05%
2010-2011	1.072	\$29,494	\$31,618	\$49,477	\$53,039	\$78,971	\$84,657	37.35%
2011-2012	1.127	\$21,782	\$24,548	\$52,133	\$58,754	\$73,915	\$83,302	29.47%
2012-2013	1.081	\$40,786	\$44,090	\$36,637	\$39,605	\$77,423	\$83,694	52.68%
2013-2014	1	\$42,732	\$42,732	\$34,385	\$34,385	\$77,117	\$77,117	55.41%

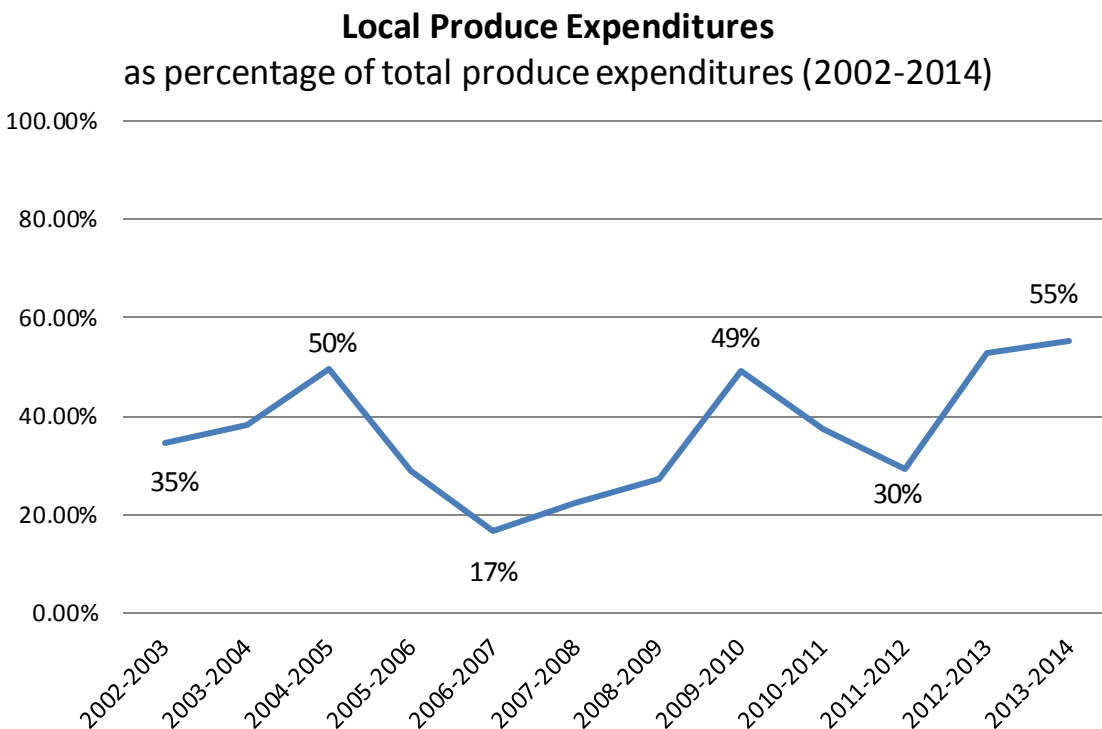
[1] Data missing: February 2006 – June 2006 Local Farmer purchases and Middle School/High School distributor purchases. Totals for local farmer and total produce purchases were extrapolated based on ~ 30% local produce purchased for August 2005 – January 2006.

⁹ Highlighted columns are adjusted using the Producer Price Index (PPI), Farm Products-Fruits & melons, fresh/dry vegs and nuts, not seasonally adjusted, averaged for Sept-June in each year.

Local Produce Purchases as a Percentage of Total Produce Purchases

One of the most straightforward ways to measure local procurement is to compare the amount a district spends on local produce to its total produce expenditures. DJUSD’s local procurement rate, as measured in this way, can be seen in Figure 1. It has been variable over time, ranging from a low of 17% in 2006-2007 to a high of 55% in 2013-2014. The rate has been increasing steadily over the last three school years (since 2011-2012), likely due to the commitment of the SNS Directors during that time period to source locally, and also to an increased ability to source locally through large distributors (see Figure 3). The previous spike in local procurement (2009-2010) has been attributed largely to the services of a forager who kept in close contact with DJUSD’s regional distributor at that time (Produce Express) and with the DJUSD Kitchen Manager, facilitating conversations and consulting on menus and the use of seasonal produce.

Figure 1: Local Produce Expenditures as a percentage of total produce expenditures (2002-2014)



Local Produce Sourcing

Although the percentage of local versus non-local produce was at an all-time high in 2013-2014, the sourcing of local produce underwent a significant shift from individual growers to large distributors. In 2010 – 2011, about 69% of local produce came from individual growers (the remaining 31% came from Fresh Point). In 2012 – 2013, 28% came from individual growers (72% from Fresh Point), and in 2013-2014 the percentage of local produce sourced directly from farmers was only 21% (79% from

distributors) These shifts can be seen in Figures 2 and 3. This shift to buying local produce primarily through the district’s main distributor has likely contributed to the steadily increasing levels of local procurement seen since 2011-2012.

Figure 2: Local Produce Expenditures as a percentage of total produce expenditures (2010-2014)

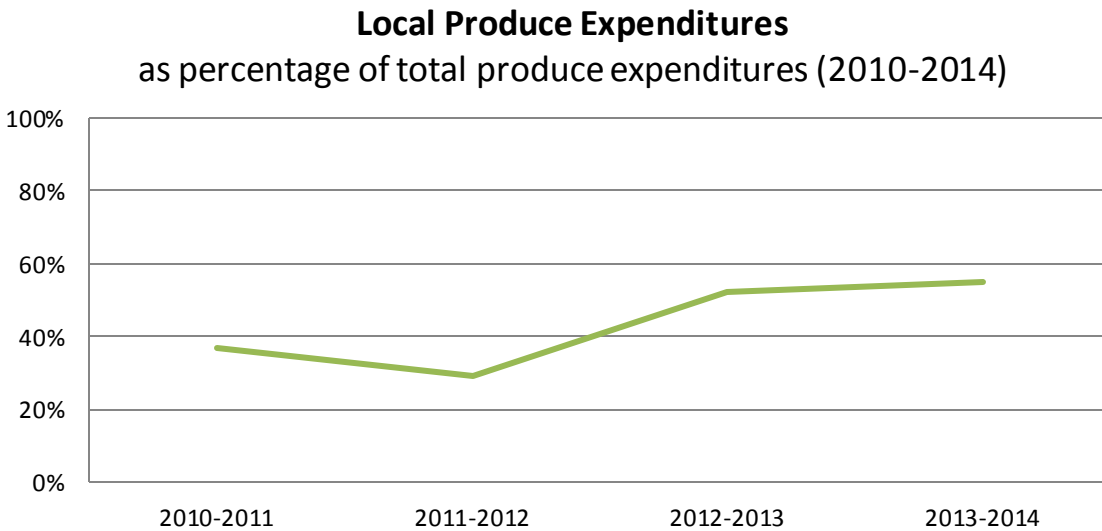
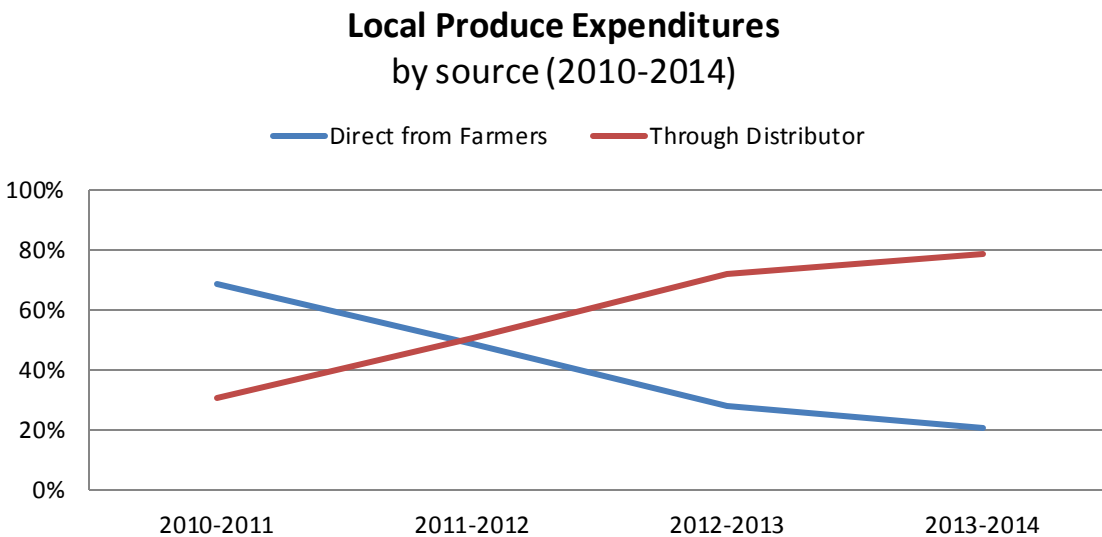


Figure 3: Local Produce Purchases by source (2010-2014)¹⁰



¹⁰ Local produce source data (individual farmer versus distributor) is not available for the 2011-2012 school year. Data points shown here represent the averages of 2010-2011 and 2012-13 levels. This was done in order to create a straight line between known points.

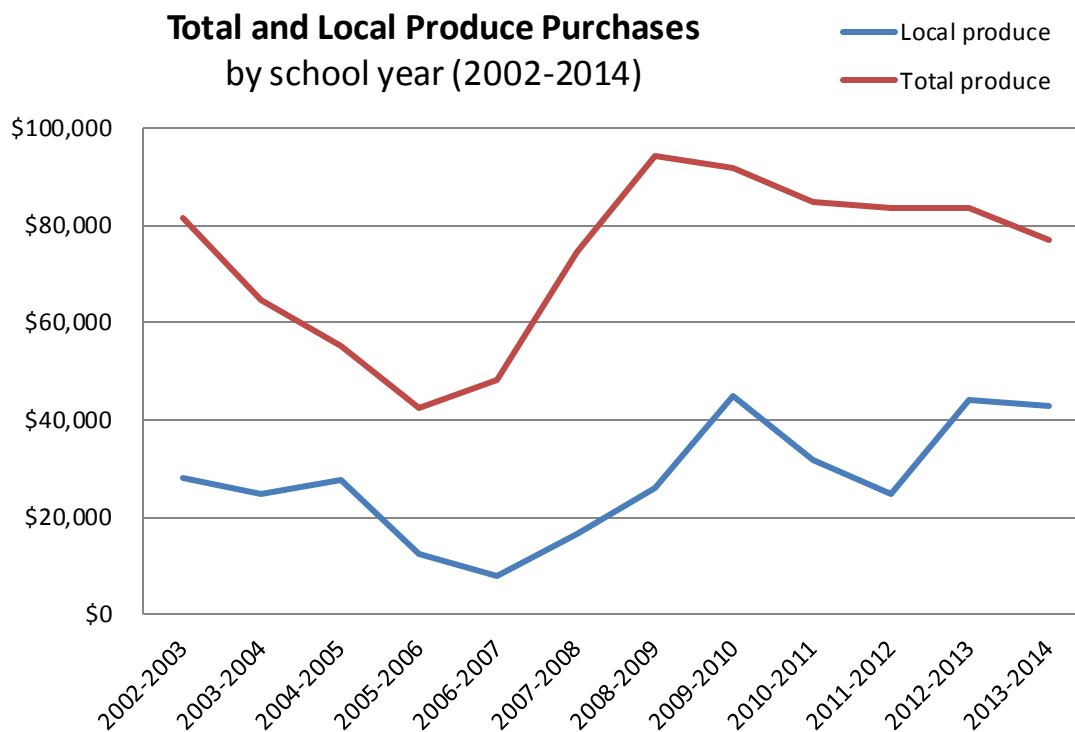
In terms of individual, identified growers, DJUSD sourced directly from 2 private growers in 2013-2014, Frank Stenzel and Capay Organic, and from the Birch Lane Elementary and Harper Junior High school gardens. DJUSD stopped ordering from Capay Organic in December 2013 and did not place any additional orders for the remainder of the school year. Capay Organic is both a local grower (fields north of San Francisco), a non-local grower (fields in Southern CA), and a regional distributor. For the purpose of this report all local purchases through Capay Organic are designated as direct-from-farmer rather than as through a distributor. If DJUSD chooses to order from Capay Organic again in the future, any orders originating from other farms that are distributed through their network can be listed individually.

DJUSD's current Food Service Director, Dominic Machi, is committed to increasing purchases through individual local farmers, but reports significant challenges to meeting this goal. Challenges include many small farmers not having distribution infrastructure, farmer fears about liability issues in selling to a school district, and the additional time and labor that is necessary to handle the increased logistical demands of working with multiple individual farmers.

Produce Expenditures in Adjusted Dollars (Local and Non-Local)

Although the **percentage** of local produce relative to total produce has been increasing for several years, total produce **expenditures** (including local expenditures) are actually down from the previous school year, as shown in Figure 4. This fits with a trend of total produce expenditures gradually decreasing since the 2008-2009 school year. While Figure 4 shows that local produce expenditures are also down slightly from the previous year (all in adjusted dollars), the percentage of local produce continued increasing in 2013-2014 because total produce expenditures went down more than local produce expenditures. In other words, the actual dollars spent on local produce is down from 2012-2013, but the percentage of local produce relative to total produce has increased due to a drop in total produce expenditures.

Figure 4: Total and Local Produce Purchases by school year¹¹



Goal 1B: Increase Participation in School Lunch

School Lunch Participation

There are two ways that we calculate school lunch participation. The first is on an “Average Daily Participation” (ADP) basis, which is the average number of lunches served per day. This is calculated based on monthly Sales and Participation Reports provided by DJUSD. The total number of lunches served each school year is divided by the number of food service days that year to get the average daily participation.¹²

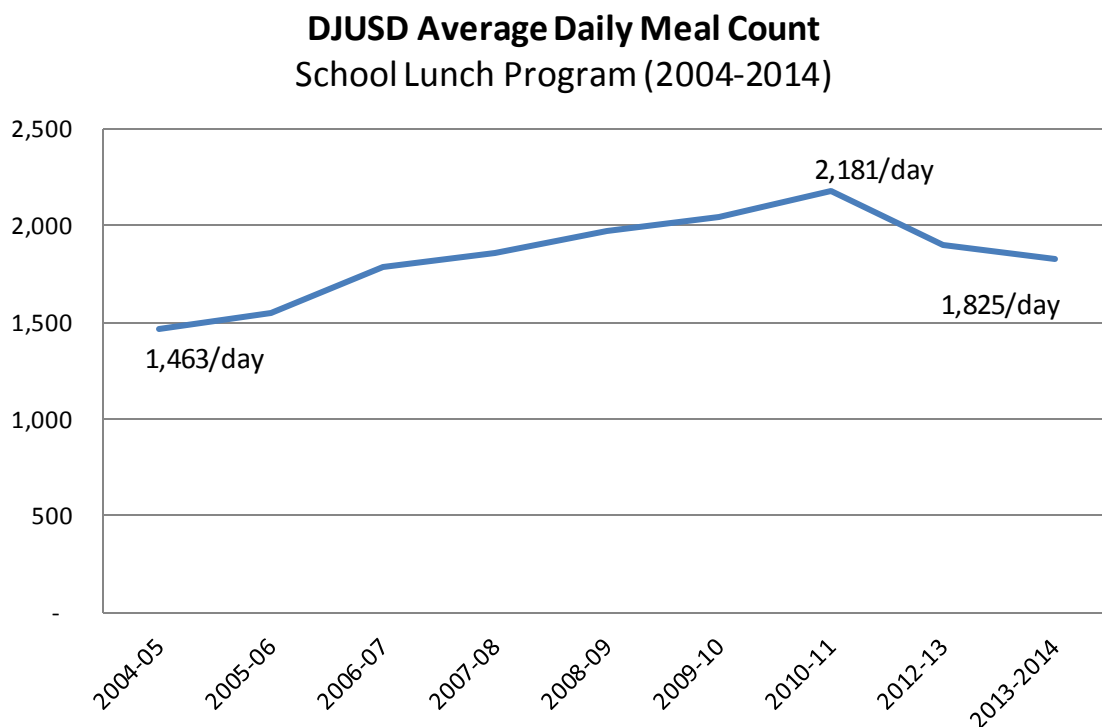
¹¹ Adjusted for inflation using the Producer Price Index (PPI), Farm Products-Fruits & melons, fresh/dry vegs and nuts, not seasonally adjusted, averaged for Sept-June in each year.

¹² A calendar with the number of “Food Service Days” per month was provided by DJUSD. All participation data is by month and thus can also be calculated on a monthly basis. Rates detailed in this report are all annual averages.

Figure 5 shows that between 2004-2005 and 2010-11, ADP increased steadily. That is, SNS served more lunches, on average, every day. Since then, meal counts have gone down. Total lunches served from August 2013 through June 2014 amounted to 346,666.¹³ Average Daily Participation for 2013-14 was 1,825 lunches per day, only very slightly down from last year’s 1,895 lunches per day. Enrollment has been fairly steady at DJUSD for the last several years at around 8600, so this decrease is largely due to fewer students buying lunch, rather than fewer students attending DJUSD schools. In 2010-2011, when the meal count peaked at 2,181, enrollment was actually lower (8507)¹⁴ than in 2013-2014 (8625)¹⁵.

SNS Director Dominic Machi believes that there are several dynamics at play that may be negatively impacting participation rates. One is the newly implemented USDA school meal pattern, which required changes to menu items that were generally not popular with students. In addition, the limited, combined time available for students to eat and socialize at recess appears to serve as a disincentive for choosing school lunch, which requires standing in line during recess time. Machi also reported a perceived association among students that those who choose school lunch are experiencing financial hardship, creating a stigma around participation. Machi suggested addressing these issues through (1) increased marketing of school lunch as an attractive, healthy option for all students, and (2) finding creative ways to mitigate the time constraints that may currently be disincentivizing participation.

Figure 5: Participation trends based on average daily participation from 2004/05 to 2013/14



¹³ DJUSD Student Nutrition Services Meal Counts, August 1, 2013 – June 31, 2014. Average daily lunch count is calculated by dividing the total number of lunches for the year by the number of “Food Service Days”.

346,666/190 days = an average of 1825 lunches per day

¹⁴ From CDE data from 2010-2011

¹⁵ Calculated based on actual enrollment as reported on monthly Student Eligibility Reports.

The second way that participation is calculated is as a percentage of total school enrollment. Figure 6 shows participation rates by type of meal purchased in the 2013-2014 school year.

Figure 6: School Lunch Program Participation, calculated as a percentage of average district enrollment during the 2013-2014 school year

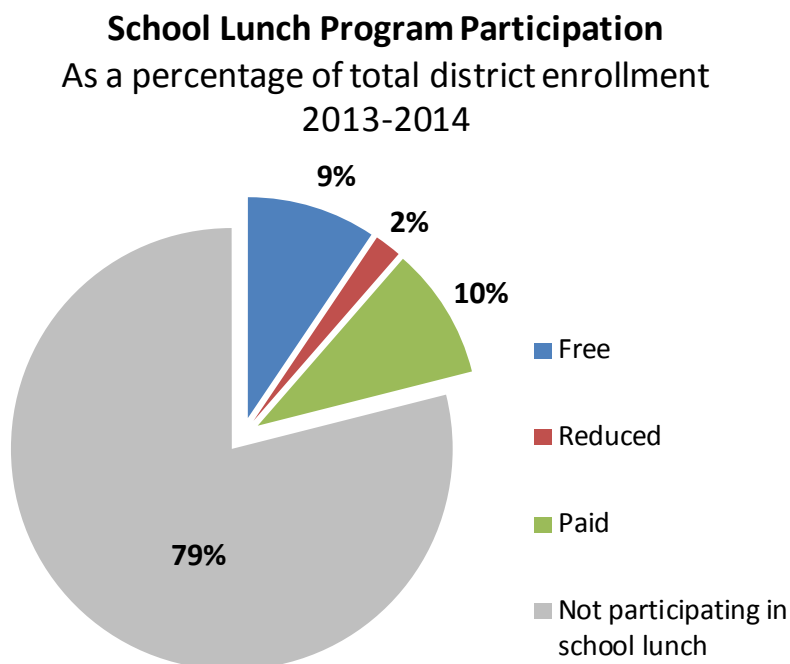


Table 2 shows the average annual participation rates for free, reduced, and paid lunches over the past four school years.

Table 2: Participation as a percentage of total school enrollment

	2010-11	2011-2012	2012-2013	2013-14
Average Free Participation	10.6%	10.7%	10.2%	9.4%
Average Reduced Participation	2.1%	1.5%	2.2%	2.0%
Average Paid Participation	13.0%	9.9%	9.3%	9.7%
Average Overall (F/R/Paid) Daily Lunch Participation	25.8%	22.2%	21.7%	21.1%

To better see these trends, Figure 7 shows free, reduced, and paid lunch participation not as a percentage of total enrollment (as in Table 2), but instead as a percentage of total lunch program participation. Since participation is only 21% of total enrollment, looking only at actual participants gives a clearer view of the distribution of free, reduced, and paid meals, as well as shifts in these distributions overtime.

Figure 7: Trends in the distribution of Free, Reduced, and Paid lunches among School Lunch Program participants

Free, Reduced, and Paid Participation in School Lunch
as a percentage of total participation (2010-2014)

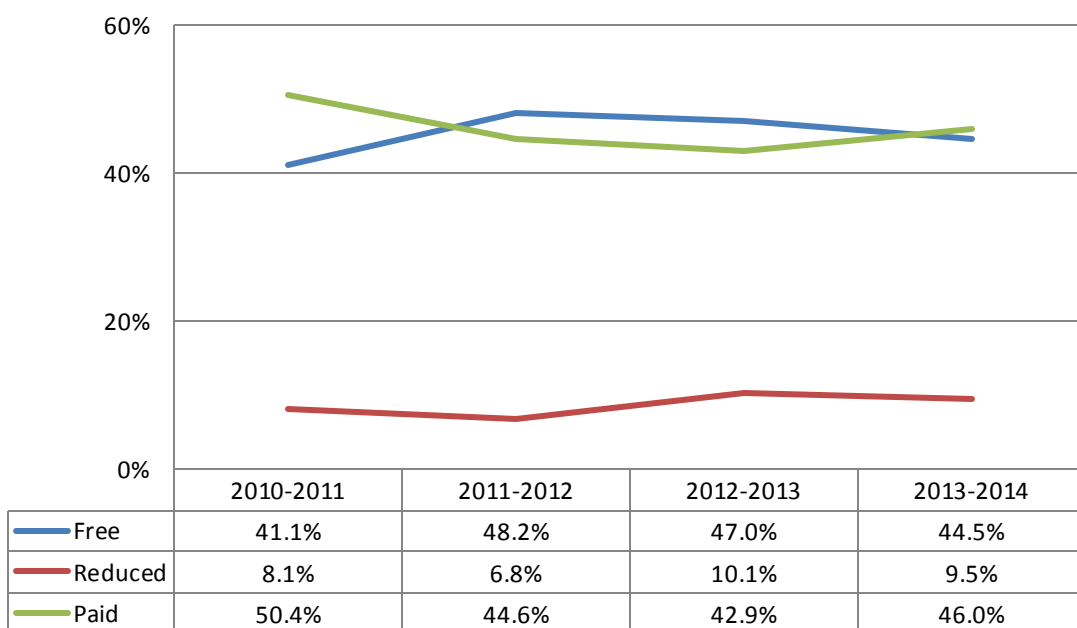
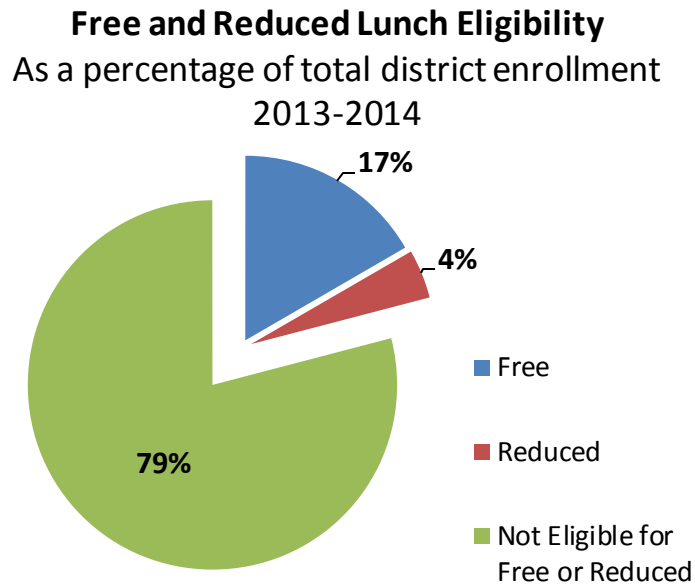


Figure 7 shows that the relative number of paid students increased in 2013-2014 relative to the previous two years, though not quite to the level seen in 2010-2011. Free and reduced participation are both down from last year, with free lunches decreasing the most.

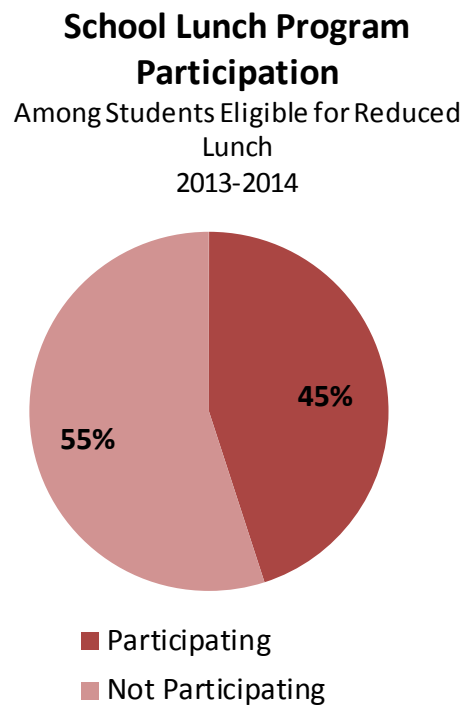
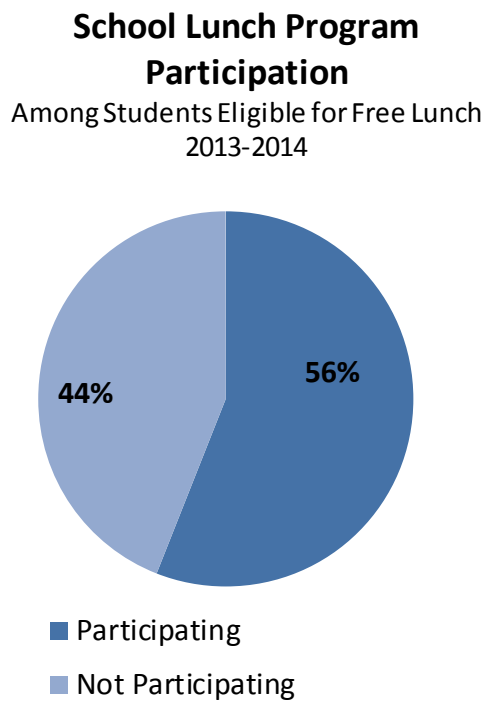
Free and Reduced Lunch Program Eligibility and Participation

An ongoing goal of the district is to make sure that all children who are eligible for free or reduced lunches participate in the Free and Reduced Lunch Program. Figures 8 and 9 show the percentage of students in DJUSD who are eligible for free or reduced lunch compared to the percentage of eligible students that are actually participating in the program. Participation is calculated based on meals of each type that are sold as a percentage of a theoretical “full participation” for each meal type, i.e. The number of meals that would be sold if every eligible student purchased a meal on every food service day.

Figure 8: Percentage of enrolled students who are eligible for free or reduced lunch



Figures 9: School Lunch Program participations rates among students who are eligible for free or reduced meals



The drop in participation seen here relative to previous years is of concern¹⁶, particularly because the bulk of the decrease has occurred among low income students. Providing all students, but particularly those who may be experiencing food insecurity at home, with at least one healthy meal each day is a major objective of the School Lunch Program. It is critical that the reason(s) for the participation decline at DJUSD are explored and addressed in order to reverse this trend.

Goal 1C: Encourage Increased Consumption

School Food Environment

New Meal Requirements

New meal requirements were instituted by USDA during the 2012-2013 school year and SNS has worked hard to conform to the new requirements while still offering fresh and appetizing options to students. Changes to the school lunch program as a result of these new requirements have included putting more red and orange options on salad bars, including legumes on salad bars, reducing sodium, and ensuring that all grain products are at least 51% whole grain.

Highlights of DJUSD's Student Nutrition Services School Lunch Program

- Every elementary school offers a salad bar daily stocked with some local produce.
- Farm-to-School pizzas, including a vegetarian one, are freshly made and served every week at both elementary and secondary schools.
- Every day at every school, one or more made-from-scratch item is available on the menu.
- SNS offers a variety of culturally appropriate dishes, e.g., beef teriyaki, empanadas, etc.

Professional Development Cooking Classes

In the past, DF2S has supported professional development cooking classes for food service staff through the services of Evans & Brennan, LLC. One goal of these classes is to encourage school food service departments to increase their procurement and cooking of local and seasonal fruits and vegetables, and overall the classes have been popular.

This year, 2013-2014, Davis Farm to School did not fund these classes. However, three classes were delivered to DJUSD staff via a grant project of the Yolo County Farm to School Yolo Program.

Staff responses to the professional development cooking classes were positive. During this year we focused on behavioral outcomes—i.e., whether food service staff have used any of the recipes they learned in previous classes, either at home or at school. In addition, we wanted to determine whether

¹⁶ For comparison, in the 2012-2013 school year 64% of students eligible for Free Lunch participated in the School Lunch Program and 55% of students eligible for Reduced Lunch participated.

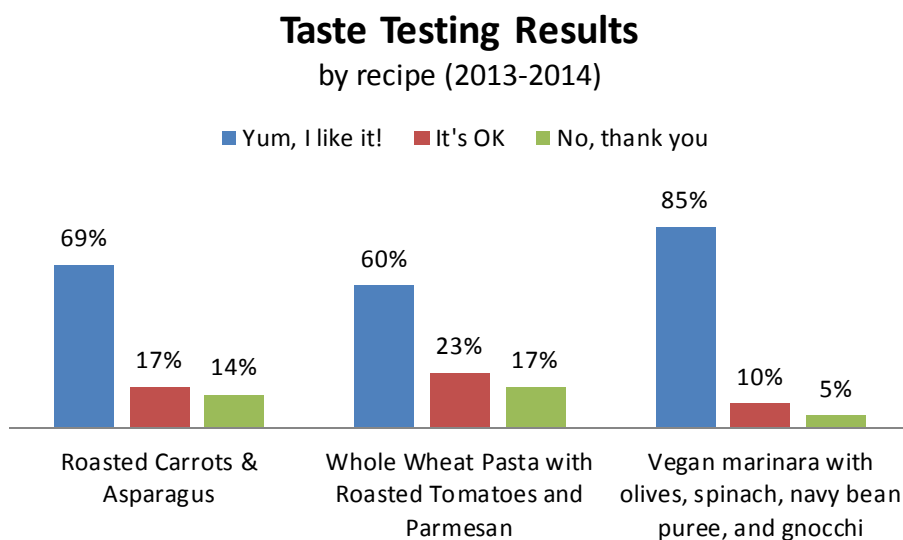
staff felt they had learned anything new about California specialty crops. This could be a new way to use a fruit, vegetable, herb, etc. or it could simply be to have become more aware of a crop.

The recipes were well liked, particularly the Asian recipes, and most staff reported trying something that they learned either at home or at school after taking the class. One featured recipe, a barley dish with asparagus, edamame, and sugar snap peas, was prepared for the School Board. Staff engaged actively in the classes by suggesting and even trying out modifications to make the recipes more palatable to students. Staff reported wide use of featured fruits and vegetables at home and at school.

Taste Testing Program

Over 500 students at Cesar Chavez Elementary participated in a total of 4 taste testing activities during April and May of 2014, and the recipes sampled were popular. The most well-liked recipe was a gnocchi dish with vegan marinara sauce with olives, spinach, and navy bean puree. Data was only available for three of the four tastings. Figure 10 shows student responses to taste testing surveys on these three dates (a different recipe was highlighted on each date).

Figure 10: Taste Testing Results by Recipe



Responses were gathered primarily through a dot survey, in which students were given a sticker to place on a board with their response (Figure 11). The stickers were color-coded by grade level¹⁷ to allow for trends to emerge between upper and lower grades. This seemed to work well; however, volunteers did express some concerns that peer pressure may have influenced student choices with this “public” method of soliciting feedback. As a result, the last tasting of the year utilized a blind voting box¹⁸ (Figure 12) to reduce any social pressure that might be influencing results.

¹⁷ Grades K-3 got one sticker color and grades 4-6 got another

¹⁸ Methods used at each tasting: Roasted Carrots & Asparagus: dot method; Whole Wheat Pasta with Roasted Tomatoes and Parmesan: dot method; Gnocchi with Vegan Marinara with Olives, Spinach, and Navy Bean Puree: blind voting box

Figure 11: Taste Testing - Dot Survey

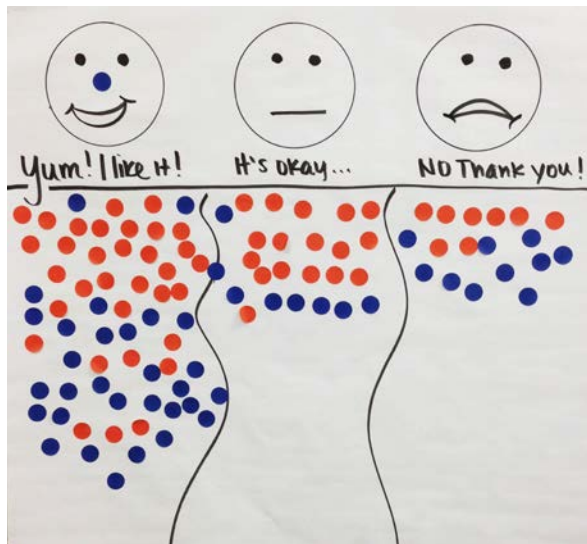


Figure 12: Taste Testing - Blind Ballot Box



Nutrition Advisory Committee (NAC)

The goal of the Nutrition Advisory Committee in 2012-2013 was to develop an updated Wellness Policy in collaboration with the DJUSD School Board. The NAC also decided to produce a weekly nutrition newsletter, "Nutrition Nook," to be distributed to the schools for inclusion in their school newsletters.

The current status of the NAC is unclear. Data regarding meetings and "Nutrition Nook" newsletters were not available at the time this report was written.

Marketing school lunch

Marketing has been identified as a critical area for improvement for the DJUSD in order to increase participation in the School Lunch Program. Data regarding marketing efforts that took place during the 2013-2014 school year were not available the time this report was written.

Recommendations for Goal 1: Promote farm fresh foods in schools

Procurement

- Continue regular check-ins with the SNS Director regarding local purchasing and “from scratch” cooking.
- Encourage SNS to expand relationships with growers in the Yolo/Solano/Sacramento region; e.g., continue discussing the idea of purchasing from UC Davis Russell Ranch.
- Consider providing funds to SNS to offset some of the costs of local food procurement.

Marketing to Increase School Lunch Participation

- Identify specific ways in which DF2S could support the SNS Director’s efforts to increase participation rates, especially among students who are eligible for Free & Reduced Priced meals. This could be via PTAs, parent groups, or the district’s Wellness Policy.
- Discuss with the SNS Director how DJUSD could use menus more for marketing school lunch, regional purchasing, and scratch cooking. Emphasize the importance of highlighting Harvest of the Month items.
- Find more opportunities for DF2S to become more visible in the Davis community (more media mentions, etc.)
- Support the SNS Director’s outreach and engagement activities with the community and consider providing funds to DJUSD to support this goal.

School Food Environment

- Meet with the SNS Director to discuss the Cornell Center for Behavioral Economics in Child Nutrition Program’s *Smarter Lunchroom Movement*, which aims to create sustainable research-based lunchrooms that guide healthier student choices. Support the SNS Director in incorporating any ideas that seem feasible, possibly through a pilot program at 1-3 schools. Consider involving UC Davis interns.
- Discuss how DF2S could support the SNS Director’s efforts to address concerns that school lunch program participation is limited by students not have enough time to eat their meal and also enjoy recess. Efforts could include finding ways to move students through lunch lines more quickly, providing more healthy “finger food” options that can be eaten quickly or carried outside, or looking into the possibility of extending the lunch period.

Professional Development

- Continue to support the offering of professional development cooking classes for food service staff.

Nutrition Advisory Committee

- Explore with SNS Director Dominic Machi how he might use the Nutrition Advisory Committee to achieve his goals for Student Nutrition Services. Assist as appropriate.

Taste Testing

- Continue to support SNS Director's Taste Testing program.

Goal 2: Reduce solid waste through a comprehensive district recycling program

Recycling is Simply Elementary (DavisRISE)

ALL Compost Program

In school year 2012-2013, DJUSD expanded the ALL Compost Program, piloted by Cesar Chavez in 2011-12, to all elementary schools. With this program, students learned to recycle many items that they previously could not, such as milk and juice cartons. The ALL Compost Program has shown consistent savings to the district, and it is reducing the amount of waste going into the landfill.

Nine schools participated in the ALL Compost Program in 2013-2014, eight elementary schools and one junior high school.¹⁹ All schools were able to successfully maintain their waste reduction levels from the pilot year, with a total of 1,296 cubic yards of material being composted or recycled that would previously have been thrown away. This amounts to a weekly reduction of between 2-4 cubic yards of waste per school, for an average reduction of 38%.²⁰

DavisRISE at school sites²¹

Over 2,200 students participated in the DavisRISE recycling program this year. In addition, 67 teachers, 2 parents, 11 custodians, and 2 others participated.

Most schools (83%) reported an emphasis on recycling and waste reduction over and above lunch site recycling. Recycling and waste management were integrated into garden programming at some schools (Harper, Patwin), but not in others. North Davis reported that the recycling and garden programs had previously been integrated, but were not anymore.

¹⁹ Participating elementary schools: Birch Lane, Cesar Chavez, Korematsu, Montgomery, North Davis, Patwin, Pioneer, and Willet; Harper Junior High

²⁰ Cesar Chavez Elementary, where the ALL Compost Program was piloted, is excluded from this calculation, which is based on the difference between weekly waste totals in 2011-2012 and weekly waste totals in 2013-2014. Cesar Chavez implemented the ALL Compost Program in 2010-2011, thus their totals in 2011-2012 were already reduced.

²¹ Data based on reports from 6 schools: Da Vinci High, North Davis Elementary, Cesar Chavez Elementary, Harper Junior High, Emerson Junior High, and Patwin Elementary

Achievements

- High levels of student involvement, with students taking ownership of the program and working hard to help all classrooms participate.
- Older students helped recycle from kindergarten classrooms
- Cut back on waste produced during lunches, pizza parties for volunteers, and evening events
- Reduced the number of waste bins used
- Continued and maintained waste reduction levels from the previous year

Challenges

- Shortage of sturdy recycling bins to place near all trash cans and limited staff time to regularly empty bins if they were to be installed
- One school reported that students are not allowed to recycle at lunch until the bell rings, which makes it harder for students to recycle
- Several schools reported challenges related to staff capacity – from finding a coordinator, to existing coordinators not feeling that they have the time, knowledge, and/or experience to do more with the program and get more participation.
- Running the program with substitute custodians was reported as a challenge at one school

Goals and resources needed for 2014-2015 (as reported by coordinators)

- Increased RISE stipend for coordinators of the ALL Compost program
- Provide more training and reminders for students to increase correct participation
- More integration with garden programming
- Da Vinci High reported needing sturdy recycling bins to place next to all trash cans
- A goal at North Davis Elementary is to maintain current levels of waste reduction with the added waste from their newly implemented breakfast program
- Cesar Chavez plans to implement an ALL Compost recess pilot through a “Recess Recycle Cart”

Recommendations for Goal 2: Reduce solid waste through a comprehensive district recycling program

Recommendations taken largely from program evaluation forms filled out by RISE Coordinators:

- Explore ways DF2S could work with DJUSD to integrate recycling and waste management more thoroughly into the curriculum, with the garden program, the school lunch program, and into the school culture.
- Continue holding meetings of RISE Coordinators dedicated to challenging issues such as recruiting volunteers, managing children at the lunch site.
- Continue the ALL Compost Program and consider expanding it to additional schools.
- Consider purchasing more recycling bins to have near all trash cans (this was reported as a particular need at Da Vinci).
- Consider a districtwide “Recycling Challenge” (friendly competition) to achieve recycling goals.
- Conduct regular student trainings at each school about how to participate.

Goal 3: Provide school garden and farm-based education opportunities

School Garden Programs

The 2013-2014 school year was productive for many of the DJUSD garden programs. A summary of the district-wide school gardening program is below, based on eight returned annual reports.

Table 3: School Garden Program Income (N=8)

Total income received by school garden programs	\$30,309 ²²
DF2S Garden Grants awarded*	\$2,000
Matching grants PTA/O	\$2,000
Other grants	\$15,000
Fundraising activities: [flower bulb sales, plant sales, Davis Farmers Market Carousel]	\$509
Donations: [Davis Bridge Foundation; Monsanto; private]	\$10,800

*Note: the total amount given out in garden grants for this year was \$4,000; not all schools receiving grants reported back and not all schools reporting back were counted in this report (i.e. schools located in Woodland).

Garden coordinators reported that approximately 1,300 students, 35 teachers, 30 parents, and 260 volunteers participated in some aspect of gardening at these 8 schools. Activities varied by site. Some successes reported this year include the following:

- New pollinator garden at Marguerite Montgomery Elementary
- Collaboration with Good Humus to provide parents and volunteers with plant starts at Cesar Chavez
- Creation of new garden club at Emerson/Da Vinci Junior High
- 300% increase in participation and \$13,000 of grant funding at Harper Junior High
- 700 lbs. of broccoli and cauliflower grown at Harper Junior High sold to DJUSD's Student Nutrition Services (SNS)
- New irrigation and fencing installed at Da Vinci High
- Increased student engagement and sense of ownership/pride in garden at King High
- Science lessons and craft activities in the garden at North Davis Elementary

²² This differs from the total of \$28,309 listed in the executive summary because this figure also includes the DF2S garden grant funds and the previous figure did not.

Outstanding Garden-based Educator Awards

Each year, **GROW Awards (Garden Recognition for Outstanding Work)** and a small stipend funded by DF2S are given to garden coordinators, parents, or other individuals who make outstanding contributions to their programs and to the district during the year. This year's GROW Award recipients were:

Ximena Diez-Jackson, Carrie Juchau, Miyuki Carson, Yamilet Arambula, Ellie Michel

Custodial Awards recognize the crucial role that custodial staff plays in facilitating the school gardens and recycling efforts. Custodial awards went to:

Jim High of North Davis Elementary, Stan Hagen of Marguerite Montgomery Elementary, Felix Krupa of Patwin Elementary, Lester Lasker of Harper Junior High, and Ike Collins of Davis Senior High.

Garden Walkabouts

Every odd-numbered year, schools are invited to host site "Walkabouts" in order to facilitate communication between DJUSD Maintenance & Operations Staff (M&O) and DF2S garden and recycle leaders. Findings, issues raised, and agreements are documented.

- In 2013, Walkabouts took place at 12 schools, including: Marguerite Montgomery Elementary, Korematsu Elementary, Birch Lane Elementary, Holmes Junior High, Pioneer Elementary, Harper Junior High, North Davis Elementary, Davis Senior High, Cesar Chavez Elementary, Patwin Elementary, Emerson Junior High, and King High.
- Issues addressed in 2013 included challenges related to irrigation, weeding, pest control, tree trimming, fencing, and infrastructure development and repair.

Farm Visits

Three schools participated in Farm Visits in the spring of 2014: Marguerite Montgomery (3 classes), Cesar Chavez (4 classes), and Birch Lane (2 classes). A total of 229 students participated in these tours, slightly down from 250 students last year. Classes visited three regional farms – Capay Organic, The Center for Land-Based Learning's Farm on Putah Creek, and Good Humus. Feedback from teachers was positive.

School to Cafeteria Pilot Program

The School to Cafeteria Pilot Program began in 2013-2014, and was partially funded by a donation of \$1500 from DF2S. Through this pilot, fresh produce grown in school gardens was sold to the district's school lunch program for the first time in DJUSD's history. The two school garden programs that participated in the pilot were Harper Junior High and Birch Lane Elementary.

Accomplishments

Harper Junior High

The school garden at Harper Junior High School includes over 2 acres of production – three quarters of an acre dedicated to raised beds and fruit trees, one acre of cover crops and wildlife habitat, and half an acre dedicated to the School-to-Cafeteria Pilot Program. There are rental plots on site available to school families (1/3 reserved for low income families) that were fully utilized in 2013-2014, and the program currently also includes composting and vermicomposting, water reclamation, and aquaculture and hydroponics. Approximately 400 students, 15 staff members, and 250 volunteers participated in the program during the 2013-2014 school year.

Major accomplishments related to the School-to-Cafeteria Pilot include the following:

- “Harper Harvest” was established as a direct marketing sustainability program, including both the School-to-Cafeteria Pilot Program (S2CP) and all other sales from the garden program, including produce sold at markets, wreaths, etc.
- An internal accounting process was implemented for tracking program expenses and incoming funds.
- Permits were obtained at the end of the 2013-2014 school year from the Yolo County Agricultural Commissioner’s Office to allow for the safe and legal use of pesticides (in this case, organic pesticides) at the garden site in future years.
 - Restricted Materials Permit was obtained, allowing the application of pesticides on site
 - Operator Identification Number was issued for use on Harper’s pesticide use report (also referred to as “Grower ID”)
 - Harper’s Garden Coordinator received a Qualified Applicator Certificate (QAC), which is required for anyone who is in the business of gardening and performs pest control in the course of that work.
- An internal pesticide application reporting procedure was established with Maintenance and Operations.
- 700 pounds of broccoli and cauliflower were delivered to SNS for use in menu items and on the salad bar.
- Sales of broccoli, cauliflower, and lettuce to SNS produced enough program income to fund all supplies for garden operations in 2014-2015. Harper’s total income from the pilot was \$877²³.
- Harper’s Garden Coordinator received a stipend for the first time in 2013-2014, after coordinating the program for the previous 4 years on a volunteer basis.
- Harper’s garden program received \$13,000 in grant funding in 2013-2014, in part due to the appeal of the School-to-Cafeteria Pilot Program and other sustainability elements included as part of “Harper Harvest.”
- The Harper school garden is now on the list of DF2S field trip destinations for second graders.

²³ \$645 in February 2014 and \$233 in March 2014.

Birch Lane Elementary

The School-to-Cafeteria Pilot Program was Birch Lane's first attempt to generate revenue through sales of the produce grown in their school garden. Birch Lane has 46 raised beds, and prior to the pilot each class managed their own small garden plot. In 2013-2014 the whole school worked on the garden together in support of the School-to-Cafeteria Pilot Program. A list was maintained of projects that everyone worked on, and overall the garden was more organized than in previous years due to this change in structure. Because Birch Lane garden sites are shaded, the coordinator chose to focus primarily on growing lettuce for the school salad bar. Lettuce was harvested and field washed, sent to SNS, and then served on the salad bar at Birch Lane. The lettuce was very popular with students. Teachers reported that students asked what happened to "the good lettuce" when the season was over and the salad bar lettuce was stocked through the main produce distributor again.

The Birch Lane garden is funded by the Birch Lane PTA. The budget, including the Garden Coordinator's stipend, came from and was administered by the PTA in 2013-2014. Produce sales did not have a significant impact on the program budget in the pilot year, but did serve as vehicle for increasing garden organization and coordination and expanding the educational value of the program -- both by increasing educational opportunities for students in the garden and by making the connection for students between growing and eating food. The coordinator reported her belief that this kind of sustainability project could also have a positive financial impact in the future.

In part due to the School-to-Cafeteria Pilot, Birch Lane is currently looking at options to expand production and curriculum in the future. The Birch Lane Garden Coordinator will be working at both School-to-Cafeteria sites (Birch Lane and Harper) in 2014-2015.

Challenges

Weather

Drought conditions required additional labor to manage irrigation, including putting irrigation back out that was put away in the fall.

Drought conditions also contributed to the early maturation of the brassica crops ordered from Harper Junior High by SNS. SNS was not able to accommodate the harvest prior to the pre-arranged delivery date and Harper Junior High had scheduled all their harvest volunteers for that date as well, resulting in crop loss between when the crop was actually ready to harvest and when Harper had access to volunteer labor and SNS was able to accept the delivery. In addition, Harper Junior High did not have the permitting necessary to apply pesticides to protect the crop in 2013-2014, resulting in additional crop loss and reduction in quality due to pest damage between early crop maturation and the pre-arranged delivery date. SNS honored their agreement to purchase the broccoli crop on the prearranged date, but was not able to use about half of what was delivered due to this pest damage (primarily aphids).

Funding/Budgeting

Current budgeting for coordinators may not be sufficient to support expanded School-to-Cafeteria activities. The Garden Coordinator at Harper reported working an average of 35 hours per week to support the program (including School-to-Cafeteria and other pre-existing garden programming and maintenance), and had to take personal vacation time from her position as a paraeducator to coordinate harvests and deliveries. The yearly compensation for this position in 2013-2014 was \$4250, the same as any other student activities coordinator (yearbook, athletics, leadership, etc.). DF2S also contributed \$1500 to the program for supplies.

Volunteers

Managing volunteers was a significant challenge, particularly for the Garden Coordinator at Harper, who was responsible for training and managing large numbers of volunteers, as well as creating procedures/documentation for Food Safety, Harvest Techniques, etc.

Summer Maintenance

Maintaining gardens and moving produce during the summer months is always a challenge in a school setting. The summer after the 2013-2014 school year the garden coordinators did a total of 5 farmer's markets in order to earn program income and avoid food waste from the gardens. Both programs had donated produce to SNS the previous summer, but last year neither program planted specifically for/during the summer, but instead just harvested what was already there and sold it at markets. Garden coordinators were not compensated for these summer activities, which may present challenges to their future sustainability.

Communication

There were significant communication challenges in the 2013-2014 pilot year, primarily related to limited opportunities for direct communication between SNS, garden coordinators, and DF2S.

Ordering and Delivery

Delivery days and times (Fridays before 1 pm) were set in advance by SNS in 2013-2014 in line with their operating schedule. However, the date/time chosen ended up presented challenges for garden coordinators to accommodate on their schedules. A significant reason that the Garden Coordinator at Harper had to take personal vacation time to deliver produce was in order to meet the pre-arranged delivery schedule.

Delivery logistics were also made more challenging by limited supplies (bins) available to meet harvest and transport needs. The supplies that were originally purchased to support the program by DF2S were not sufficient to support the scale of harvest activities conducted at Harper. The under-availability of harvest and transport supplies required more trips between sites and thus more labor from coordinators.

Differing expectations about the ordering process also presented challenges in the 2013-2014 pilot year. After the original broccoli order, SNS ordered onion and carrots, which were subsequently planted to

order at the Harper site. Shortly before the planned harvest of these crops, SNS cancelled the order due to summer downsizing. While this is reasonable from SNS perspective and would likely not present any significant challenges to a traditional distributor, Harper was left with no buyer and no way to recoup costs expended on the crops.

These challenges that arose around ordering and payment could likely have been averted by having all participants meet together with Fiscal Services at the beginning of the school year to determine systems and logistics, as well as prioritizing keeping communication channels open among participants throughout the year.

Pricing

Neither Harper Junior High nor Birch Lane Elementary knew the price they would be paid for their crop in advance, or were involved in negotiating that price. Though the funding situations and budgeting processes were different at each school, both reported that the unknown price point made planning and budgeting for their programs more challenging. Both coordinators felt that SNS offered a fair price in the end, but would have preferred to have at least an idea of the price in advance (or at least how it would be determined) so that they could budget more accurately for program profitability.

Current Status

At the time of the writing of this report (January 2015), SNS is purchasing lettuce from Birch Lane Elementary but has not purchased from Harper Junior High School during the 2014-2015 school year. The stipend for coordinating the School-to-Cafeteria Program has been increased from \$4250 to \$6000, and is now being split by the two coordinators, who are collaborating across sites.

Farm Visits

Nine 2nd Grade classes participated in Davis Farm to School sponsored farm visits this past year. This amounted to 229 students (37% of all 2nd Grade students)²⁴ taking advantage of trips to three of Yolo County's farms: Good Humus, Center For Land-Based Learning's Farm at Putah Creek, and Capay Organic. Three schools participated in these visits: Marguerite Montgomery (3 classes), Cesar Chavez (4 classes), and Birch Lane (2 classes).

Two teachers returned evaluations. Feedback from the farm visits was generally positive:

- Both reporting teachers said they would participate in the program again next year
- Both teachers had visited multiple farms as part of the program
- Both reported that the pre-trip classroom visits were helpful, with some suggestions for improvement (see below)
- Both reported that their expectations were met and that the trips were a good value

²⁴ CDE shows DJUSD 2nd grade enrollment for 2013-2014 as 622 students.

Areas for improvement:

- While both teachers reported that the pre-trip presentation was helpful, one said that the presenters did not seem comfortable giving the presentation
- One teacher suggested that the tours would be improved by giving students the opportunity to taste more products
- One teacher noted that adults had to pay for the first time in 2013-2014 and wondered why that change was made

Recommendations for Goal 3: Provide school garden and farm-based education opportunities

School Garden Program

- Continue garden and custodial awards. Involve as many teachers and parents as possible.
- Continue Walkabouts to identify and address challenges collaboratively.
- Explore ways to involve more teachers in school gardens.
- Continue the practice of the DF2S Program Coordinator checking in periodically with garden coordinators to assess progress and challenges. This resulted in a better return of annual reports in 2014 and gave DF2S a clearer picture of needs for school gardens.

Farm Visits

- Begin communication with teachers in the fall about the spring tours.
- Davis Farm to School Steering committee needs to re-visit the structure and content for the farm visits, including the pre-trip classroom visits and post-trip evaluations.
- Review the curriculum connections between the farm visits and classroom. Ensure that appropriate lessons are being presented in the pre-trip sessions and that instructors are comfortable with content.
- Clear instructions and expectations need to be laid out for volunteers.
 - Volunteers need to be thoroughly trained.
 - Internship expectations need to be very clearly explained and discussed at the beginning of the internship.
 - Pursue farmer training to help them with appropriate on-farm activities for students. Suggest more produce tasting.
 - Be sure teachers know about payments and schedule for payments. Complete all payments by the end of the School Year.

School to Cafeteria Pilot Program

Increase and improve communication

Regular, direct communication among all participants should be a high priority for School-to-Cafeteria Program activities, as this type of programming requires (1) developing and maintaining systems that work for actors with unique needs, capacities, and schedules, and (2) incorporating regular feedback to improve outcomes.

- Establish terms and expectations in advance

Large garden programs like Harper, who devote significant resources to growing crops specifically for School-to-Cafeteria, would benefit from a formal “Forward” or “Grow-Out” contract. Such a contract could set a minimum price and guaranteed minimum pay-out if a crop is ordered, and allow garden coordinators to plan and budget for profitability. It would also provide an opportunity to negotiate harvest and delivery logistics that are agreeable to both parties. Smaller programs like

Birch Lane could likely function well with a simple MOU. DF2S could assist in negotiating and drawing up these agreements.

- Establish a shared language

It would be helpful to determine a way to bridge the gap between the language of SNS (pounds, servings) and that used by garden coordinators (number of plants/rows/feet). The garden coordinator at Harper has begun weighing harvests to create guidelines, but there may be existing resources that could be drawn upon or this could be a project that could be taken on by DF2S or a student intern.

- Involve all participants in decision making

School garden coordinators, like all farmers, face numerous and unique challenges each year in bringing their crops to market. Unlike many other farmers, however, this is something they do in addition to their primary roles as educators. School food services, tasked with providing daily healthy meals to large numbers of students on a tight budget, also face unique challenges compared to private food service providers. Bringing these two parties together to grow and buy/sell produce within the framework of a public institution creates additional challenges for both, and successfully running a School-to-Cafeteria program will likely require flexibility and trial and error over time. It will be key to the success of this program that all parties are involved in decision making as the program grows and evolves, insuring that it meets the needs of both the students and the DJUSD staff members. Many of the challenges faced in the pilot year could likely have been avoided or minimized by the collaborative development of systems and program budgets in advance, something which DF2S could assist with in the future.

Increase flexibility to reduce risk

It is probably not realistic to hold school garden programs to the same standards as professional growers, but this does not mean that school gardens cannot provide quality produce to SNS. Increased flexibility on the part of SNS regarding delivery dates and times would reduce the risk incurred by garden programs that rely on many variables out of their control (weather, pest/disease pressure, the availability of volunteers, etc.) and improve the likelihood of quality school-grown produce making it to students. If SNS does not have the capacity to be more flexible with orders and delivery timing, DF2S could offer support by helping to create and implement a back-up plan for selling any produce that cannot be purchased by SNS as planned.

SNS and Birch Lane have already started working together to improve delivery systems. The garden coordinator there started using inter-district mail for deliveries in 2013-2014, and now in 2014-2015 has begun coordinating deliveries via email two days in advance, rather than on a set day. This works well with the small, frequent harvests at Birch Lane, though it may not be practical for the larger harvests that Harper is capable of producing on their larger site. Assisting Harper in planning staggered plantings aimed at creating a steadier, lower-volume supply of produce might be an option worth considering if harvest and delivery logistics can otherwise be worked out in a way that is beneficial to all parties.

Increase institutional commitment

School-to-Cafeteria activities are currently conducted by dedicated individuals with the support of the schools where they work, but are not a required part of any individual's job description. This lack of institutional-level commitment puts the sustainability of the program at risk if individuals were to leave the district or decide that the program is too much trouble to coordinate. If School-to-Cafeteria is something that DJUSD wants to see continue, including supporting activities as required elements of garden coordinator job descriptions at participating schools will be an important step moving forward. DF2S could work with DJUSD, garden coordinators, and the SNS Director to develop recommendations for what to include in such job descriptions.

Increase financial support

School-to-Cafeteria programming in the pilot year required significant labor resources beyond what was planned for and beyond what the garden coordinators were compensated for. Reliance on volunteer labor (either community volunteers or staff working beyond paid hours) weakens the sustainability of the programming, puts undue stress on coordinators, and makes it harder to deliver the quality produce that SNS requires. Increased financial support for programs and coordinators could come through grants, fundraising, or other revenue-generating activities conducted by schools, the district, or DF2S.

It is not yet clear whether School-to-Cafeteria activities will generate enough revenue to be profitable to participating DJUSD garden programs in the long term. It remains up to DJUSD to determine whether this is a major concern. As an educational program, the School-to-Cafeteria Pilot appears to deliver benefits to participating students and schools that go beyond generating income for school gardens, and as a result, should not be judged on profitability alone. Also, based on Harper's experience fundraising in the pilot year, the program seems to have significant potential to leverage grant funds in addition to the funds generated directly through produce sales. DF2S could assist DJUSD in weighing the costs and benefits of the program moving forward by working with the program coordinators to conduct regular assessments, including a basic School-to-Cafeteria financial report. This pilot can also be included in future DF2S-DJUSD Evaluation Reports.

Goal 4: Research and evaluate programs and provide information to the community

Davis Farm to School continued to expand its community presence and involvement during 2013-2014, especially through its website. Events are designed to maximize cross-marketing and to reinforce the shared values of Davis Farm to School and community partners in a variety of local venues.

Community events

Highlights of events organized and/or hosted by Davis Farm to School in the past year include the following:

- **5th Annual Tour de Cluck, May 2014:** The Tour de Cluck, a bicycle tour of local chicken coops in Davis, has become an iconic event that has put Davis on the national map. This year, the event's income was significantly down from the previous year; yet more than 700 participants (adults and children) enjoyed themselves.
 - Approximately \$8,000²⁵ was raised, with all proceeds going to support Davis Farm to School
 - A Tour de Cluck video was produced and appears on the Yolo Farm to Fork website: <https://www.youtube.com/watch?v=27WRImIUqYc>.
- **9th Annual Village Feast:** The Village Feast is Davis Farm to School's signature community event and fundraiser. Each summer on the last Saturday in August, community members and visitors sit together under the sycamore trees in Central Park and enjoy a meal together of local meats, nuts, wine, fruit, and vegetables. At this event DF2S's annual awards are given to teachers and volunteers who support the school gardening programs.
 - In 2013, Village Feast brought in approximately **\$15,000**.²⁶
- **Hoes Down Harvest Festival, fall 2013:** Again, DF2S featured a "Grain to Bread" pizza crust making activity that involved a creative artisan-made bicycle milling machine. It was tremendously popular with the kids.
- **COOL Davis Festival:** Davis Farm to School hosted a table where children made paper pots and planted fava bean seeds at this event featuring energy efficiency. This activity was also conducted at the **Yolo County Fair** in August.

²⁵ \$7,603

²⁶ \$14,743

- **Art & Ag:** As in previous years, DF2S assisted with Yolo Arts Commission's Art and Ag event, ArtFARM in November 2014. Each year, Art & Ag has expanded. DF2S/YF2F has received more money from the event this year than ever before for its role in partnership.
- **Davis Farmer's Market Harvest Festival:** DF2S participated in this annual festival held in October 2013.

Outreach

As in years past, information about Davis Farm to School was shared through statewide, national, and professional outreach conducted by Davis Farm to School and Yolo Farm to Fork members.

Gail Feenstra, Yolo Farm to Fork Board member, participated in the following events:

2014

- "Local food systems and farm to school programs," speaker/convener for the Rural Development Leadership Network Institute at UC Davis, Davis, CA, May 30, 2014 (*Feenstra - 7 attendees*).
- "Farm to School: Connecting agriculture and community," speaker at the Cal/Neva Region IX Annual Conference, Sacramento, CA, April 30, 2014 (*Feenstra - 10 attendees*).
- "Local and regional food systems: Opportunities for community engagement," keynote speaker at the University of Arizona Food System Network Conference, Tucson, AZ, April 29, 2014 (*Feenstra - 200 attendees*).
- "Farm to School: Strategies for building community beyond the schoolyard," speaker and session organizer at the National Farm to Cafeteria Conference, Austin, TX, April 16, 2014 (*Feenstra - 75 attendees*).

2013

- "Procurement of local produce," moderator, speaker at the Northern California Farm to School Conference, San Joaquin County, Stockton, CA, November 20, 2013 (*Feenstra - 10 attendees*).
- "Community-Based Regional Food Initiatives," seminar presentation at University of Arkansas, Fayetteville, AR, November 13, 2013 (*Feenstra - 150 attendees*).
- "Food Justice: An interdisciplinary approach to growing durable food systems," keynote at the University of Arkansas Academics of food Justice conference, University of Arkansas, Fayetteville, AR, November 13, 2013 (*Feenstra - 150 attendees*).
- "Sustainable food systems," presentation to the Policy Fellows Program, UC Davis, October 30, 2013 (*Feenstra - 55 attendees*).
- "Food education and the role of the school food environment," panel presentation at National Food Day event, Sacramento State University, Sacramento, CA, October 24, 2013 (*Feenstra - 60 attendees*).
- "Evaluation of Farm to School," presentation at Visit of USDA AMS Administrator Anne Alonzo, Davis Joint Unified School District, Davis, CA, September 19, 2013 (*Feenstra - 15 attendees*).

Yolo Farm to Fork supported DF2S and DJUSD in a variety of ways, including:

Traditional Media (television, radio, print)

- “Volunteers needed for Harper’s broccoli harvest.” The Davis Enterprise. January 28, 2014. <http://www.davisenterprise.com/features/next-generation/volunteers-needed-for-harpers-broccoli-harvest/>
- “Nugget Markets announces 2014 school garden grant recipients.” Woodland Daily Democrat. May 15, 2014. http://www.dailydemocrat.com/news/ci_25768180/nugget-markets-announces-2014-school-garden-grant-recipients
- Tour de Cluck 2014 was featured live on Good Day Sacramento, a CBS local news program (Davis, CA, May 2014).

Social Media & Web Promotion

- Yolo Farm to Fork and Davis Farm to School are both active on social media, including multiple Facebook and Twitter posts each week. Articles and social media posts were forwarded to DJUSD for repost on their Facebook page as well.
- Regular e-newsletters were sent to YF2F’s subscriber list featuring efforts by DF2S and DJUSD SNS.
- Yolo Farm to Fork put together an educational video featuring DF2S’s Dorothy Peterson and DJUSD’s Dominic Machi that can be viewed on the YF2F website: <http://bit.ly/XXGtDz>. The video has also been highlighted on social media and YF2F e-newsletters.
- Articles posted about DF2S on the on YF2F website include:
 - “Davis Farm to School” <http://yolofarmtofork.org/davis-farm-to-school/>
 - “Volunteers harvested 700+ pounds of broccoli in February” <http://yolofarmtofork.org/harperharvest/>
 - “Birch Lane Elementary harvest a success” <http://yolofarmtofork.org/birch-lane-elementary-harvest-success/>
 - “Davis’ Dominic Machi cooks from scratch for flavor, better bottom line.” <http://yolofarmtofork.org/davis-dominic-machi-cooks-scratch-flavor-better-bottom-line/>
 - “Carrie Juchau honored for Harper Harvest Project.”²⁷ <http://yolofarmtofork.org/carrie-juchau-honored-harper-harvest-project/>
 - “Birch Lane’s garden-to-table connection.” <http://yolofarmtofork.org/birch-lanes-garden-table-connection/>

²⁷ The last two articles listed were published during the 2014-2015 school year, but were included because they reference activities that took place during the 2013-2014 school year.

Outreach Events

- Dorothy Peterson presented on the history of DF2S at the Green Schools National Conference. (Sacramento, March 2014)
- Yolo Farm to Fork sponsored a Davis Chamber of Commerce luncheon in March of 2014. The luncheon was catered by SNS Director Dominic Machi, who also spoke during YF2F's allotted 5 minutes of public speaking time.
- Dorothy Peterson and other volunteers promoted DF2S at the Davis Farmers Market throughout the year.

Program Development

Davis Farm to School is now operated under the parent organization, Yolo Farm to Fork (YF2F). Yolo Farm to Fork is still in its developmental stage, and Davis Farm to School remains its "flagship" program. Other Yolo County communities are developing their local programs, and YF2F is expanding.

As a program of Yolo Farm to Fork, Davis Farm to School reports to YF2F's Board of Directors monthly and looks to the Board for approval of some aspects of its program. DF2S maintains its own, separate website. Some program activities during 2013-2014, especially website development, were carried out by Tabari Lucas under the Direction of Dorothy Peterson, Chairperson of the DF2S Committee. Lucas also played a key role in coordinating school gardens and farm tours, and assisted Beth Harrison, Executive Director of Yolo Farm to Fork, in organizing the Tour de Cluck and Village Feast events. Harrison was also responsible for putting together the majority of media publicity supporting these signature events and DF2S activities more broadly.

Recommendations for Goal 4: Community Connection and Engagement

- Continue to take advantage of statewide and national opportunities for promoting the Davis Farm to School program.
- Continue to develop relationships with local and Yolo County organizations through Yolo Farm to Fork.
- Continue discussing how to best implement our signature fundraising events: The Village Feast and Tour de Cluck.

Program Development

- Continue conducting short- and long-term planning to assess program personnel duties in light of changing priorities and coordination with Yolo Farm to Fork.