

Background

In California, nearly three million students participate daily in the National School Lunch Program (NSLP).¹ School districts that operate the NSLP receive both federal and state reimbursements for each meal served, the value of which depends on the eligibility status of the student for a free, reduced-price or paid meal.² The districts also receive direct food assistance through the Child Nutrition USDA Foods Program (formerly known as “commodities”). USDA Foods account for approximately one-fifth of all food served as part of school lunch.³

As part of the federal Healthy, Hunger-Free Kids Act of 2010, new meal standards for the NSLP now require schools to serve increased variety and/or quantities of fruits, vegetables and whole grains, while maintaining age-appropriate weekly averages for calories, sodium, and saturated fat. USDA Foods are a key resource for districts as they strive to successfully implement the new meal standards within tight budgets. In California, over 80 percent of USDA Foods ordered by school districts are meats and cheeses, and about 55 percent of USDA Foods are diverted by school districts to manufacturers for processing.⁴ Many schools choose to receive some of their USDA Foods order directly for use in the district as part of a basic, minimally processed meal – frequently referred to as “scratch cooking”. The degree to which a district can prepare food in-house varies greatly, and depends on facilities, equipment, staff training and program management. Some districts have reported success with using USDA Foods in-house as part of freshly prepared meals, and have cited that the significantly lower food costs of the minimally processed ingredients made up for any potential increases in labor costs.

Study Overview

California Food Policy Advocates partnered with the Atkins Center for Weight and Health at the University of California, Berkeley and the Sarah Samuels Center to understand the differences between meals made in districts with minimally processed USDA Foods compared to processed meals made by diverting USDA Foods to manufacturers.⁵ The primary goal of this research study was to determine whether costs and nutritional quality of NSLP entrées differed when USDA Foods were diverted to processors outside the district versus when USDA Foods were **not** diverted and were used to prepare meals from scratch within the district. The research team collected extensive food and cost data on meals served in elementary schools in ten districts that participated in the study. The team restricted the study to elementary school menus because of their usual simplicity as compared to middle and high school menus.

The districts varied in the extent to which they employed scratch cooking, and every district had a mix of scratch-cooked and externally-processed entrées. For each entrée in the study that contained a USDA Food ingredient (a total of 146 entrées), the research team calculated cost and nutrient values, as well as a scratch cooking level, based on cooking methods and the ingredients used. Scratch cooking levels were then tested for association with cost and nutrient content.

In addition to the cost and nutrient analysis, the research team conducted 19 stakeholder interviews to gather input and perspectives on the challenges and benefits of using USDA Foods to prepare school

For more than 20 years, California Food Policy Advocates (CFPA) has been the state's trusted food policy advocacy organization dedicated to increasing low-income Californians' access to healthy food at home, at school, and throughout entire communities. CFPA's advocacy agenda draws on the anti-hunger, nutrition, and health movements. Working as both a policy leader and supportive policy ally, CFPA continues to build on its long history of success.

meals. The stakeholders included a variety of professionals familiar with USDA Foods, such as food service directors, state and federal administrators, and USDA Foods processing manufacturers.

During a daylong convening held in October 2012, the preliminary research findings from these analyses were presented and policy implications were discussed with a diverse group of relevant experts, including state and federal school meal program administrators, school food service directors, researchers, and nutrition advocates. Key findings from the stakeholder surveys and the policy convening were used to inform policy recommendations to support the use of USDA Foods in healthy school meals.

Principal Findings

Scratch cooking and on-site food preparation is a cost-effective strategy to expand the variety of healthy school lunches prepared with USDA Foods. A wider variety of school entrées provides the benefit of exposing children to an array of healthy meal options.

- Entrées that involved more scratch cooking included a wide range of dishes such as entrée salads, soups, stews, roasted meats, and Asian-style rice or noodle dishes.
- In contrast, nearly 50 percent of entrées that were convenience-prepped (heat and serve processed foods) were chicken/meat nuggets or pizza.
- Entrées prepared with higher levels of scratch cooking tended to have less *trans* and saturated fat.
- Contrary to assumptions that students will reject healthy options and only accept “fast-food” type entrées, the use of scratch cooking did not significantly affect the number of meals chosen by students. This suggests that scratch-cooked entrées were acceptable to students in this study.

Entrées made from scratch with USDA Foods had significantly lower food costs and slightly higher labor costs when compared with convenience-prepped entrées. Districts may realize larger savings if their labor costs are fixed and sufficient to support scratch cooking.

- The food costs for scratch-cooked entrées were \$0.043 less per 100 calories than that of convenience-prepped entrées, while labor costs were \$0.017 higher per 100 calories.
- Overall (food and labor costs), scratch-cooked entrées cost less on average than the convenience-prepped entrées, but this difference was not statistically significant.
- The other two scratch cooking levels (i.e., “almost scratch” and “minimal prep”) showed a similar pattern of lowered food costs and increased labor costs as compared to convenience-prepped, but the differences were not statistically significant.

Several types of entrées were less expensive when prepared from scratch.

- Pizzas were the least expensive entrée, and were even less expensive when made from scratch. Pasta and rice dishes were more expensive overall, but also cost less when prepared from scratch.

Entrées made from scratch with USDA Foods were more likely to include a vegetable and/or fruit within the entrée, and were much more likely to incorporate a variety of vegetables or legumes.

- 42 percent of entrées made from scratch contained a legume or a vegetable other than potatoes.
- Only 2 percent of convenience-prepped entrées contained a legume or a vegetable other than potatoes.
- The inclusion of vegetables in scratch-cooked entrées was not significantly associated with an increase in food, labor, or total costs. This suggests that the inclusion of vegetables in the entrée is a cost-effective way of serving vegetables with a school meal.

- Incorporating vegetables into the entrée has the potential to reduce waste by increasing the likelihood that these vegetables are consumed by students.

Case Study: An Example of the Benefits of Preparing USDA Foods In-House

Salida Union School District (USD) in the Central Valley of California has 2,700 students, of which approximately 60 percent qualify for a free or reduced price school lunch. Salida USD's Nutrition Services Department takes full advantage of the value and flexibility that USDA Foods offer. Salida USD uses USDA "brown box" (i.e., unprocessed) pork and slow-cooks it in the district kitchen with a simple site-prepared barbeque sauce to produce BBQ Pulled Pork that is a fraction of the price of an equivalent commercially prepared product. The commercially purchased product made with diverted USDA Foods pork costs \$0.40 per serving, while the district-made product using unprocessed USDA Foods pork costs only pennies per serving (the cost of shipping and handling).



This recipe is quick and easy to prepare and does not increase scheduled labor hours. With these cost savings, Salida USD is able to purchase increased quantities of higher quality produce for school meals.

Policy Recommendations

Based on the study results, stakeholder interviews and feedback provided during the convening, the research team recommends the following to support scratch cooking of USDA Foods in schools to optimize nutritional quality of school meals and maximize costs savings.

Federal Policy Recommendations

USDA:

1. Develop a streamlined system for soliciting input and feedback on the current and future USDA Foods products. Food Service Directors expressed great interest in participating in the development of the list of available USDA Foods.
2. Develop a portal for Food Services Directors to share tips, recipes, and reviews of USDA Foods.
3. Encourage, promote, and support the use of unprocessed USDA Foods in schools and discourage the diversion of products to processors. Include nutrient specifications for minimally processed USDA Foods to better facilitate menu planning.

Congress:

1. Authorize investment in the modernization of school food infrastructure to enable schools to cook fresh, healthy meals. Establish a loan program within USDA to help schools improve kitchen and dining infrastructure, and provide targeted grants for schools to acquire the needed equipment.

State Policy Recommendations

Administrative Agencies:

1. Promote and encourage the use of unprocessed USDA Foods within districts to reduce costs and improve nutritional quality of school meals.

2. Investigate ways to incentivize scratch cooking and fresh preparation within districts to improve the nutritional quality of school food.
3. Work with leaders in curriculum development to ensure that students receive adequate nutrition education. Nutrition education in the classroom and in the cafeteria helps students to better understand, accept, and fully benefit from the improved meal standards required under the Healthy, Hunger-Free Kids Act of 2010.
4. Establish meaningful opportunities for Food Service Directors to meet, stay connected, share recipes, trainings, and expertise with each other to increase the amount of scratch cooking and freshly prepared foods.

Research Recommendations

1. Conduct a larger-scale study to increase the generalizability of the findings.
2. Examine influences--such as entrée type-- on meal costs, nutritional value and student consumption in order to identify complementary strategies that maximize costs savings and nutrition quality when scratch cooking .
3. Specifically investigate the impact of scratch cooking of USDA Foods on student consumption of vegetables. Determine if vegetable consumption increases when vegetables are integrated into the meal rather than served on the side.
4. Investigate the impact of scratch cooking of USDA Foods on participation rates and plate waste.
5. Investigate the impact of scratch cooking of USDA Foods on students' and adults' perception of school meals. Do students and adults look more favorably on school meal programs that utilize cooking and preparation of meals within the district?
6. Examine school districts over time as they switch from serving primarily processed foods to a menu of scratch cooked foods in order to better understand the transition and maintenance costs involved and the impact on meal participation over time.

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¹ California Food Policy Advocates. (2012). Analysis of 2010-11 SY data provided by the California Department of Education. http://cfpa.net/ChildNutrition_CFPAPublications/SchoolMealAnalysis-StateSummary-2010-11.pdf

² S. 3307--111th Congress: Healthy, Hunger-Free Kids Act of 2010. (2010). In www.GovTrack.us. Retrieved January 17, 2013, from <http://www.govtrack.us/congress/bills/111/s3307>

³ USDA/FNS. (2008a). White Paper: USDA Foods in the National School Lunch Program. Alexandria, VA: USDA/FNS. <http://www.fns.usda.gov/fdd/ppt-slides/whitepaper08-29-07.pdf> (accessed January 17, 2013).

⁴ Hecht, K., Samuels, S., Sharp, M., Boyle, M., Beller, D., Stone - Francisco, S., Shimada, T. (2008). *The Federal Child Nutrition Commodity Program: A Report on Nutritional Quality*. Oakland, CA: California Food Policy Advocates. Retrieved January 20, 2013, from http://cfpa.net/ChildNutrition/ChildNutrition_CFPAPublications/CommoditiesSchoolMeals-FullReport_2008.pdf

⁵ Woodward-Lopez G, Kao J, Kiesel K, Lewis Miller M, Boyle M, Drago-Ferguson S, Braff-Guajardo E, Crawford P. Is Scratch-Cooking a Cost-Effective Way to Prepare Healthy School Meals with US Department of Agriculture Foods? *J Acad Nutr Diet*. 2014; 114(9): 1349-58.