

# ITHACA CITY SCHOOL DISTRICT AND NEW YORK-GROWN ORGANIC DRY BEANS AND TOFU

## Overview

The Ithaca City School District (ICSD) is located in Ithaca, New York, 225 miles northwest of New York City. Nestled at the southern end of Cayuga Lake in the Finger Lakes Region, Ithaca's beautiful bucolic setting and proximity to an abundance of farmland has been credited with inspiring a food culture that prioritizes local, fresh and often vegetarian cuisine.

ICSD serves 5,400 students in grades K-12 with eight elementary schools, two middle schools, one high school, and one alternative middle school/high school. ICSD's Child Nutrition Program serves 3,400 meals every day (3,000 lunch and 400 breakfast), with 37 percent of students eligible for free and reduced-price meals. The district draws students from both urban and rural areas and has a student population that is 69 percent white, 12 percent Asian, 11 percent Black or African American, five percent Hispanic or Latino, 0.7 percent American Indian, and 2.3 percent Other.

ICSD's central kitchen facility has two combi ovens that offer three methods of cooking: steam, convection heat, and a combination of the two. They also have two 80-gallon kettles, ovens, and ample freezer and refrigeration space. Notably, each school is able to do a significant amount of on-site preparation and the high school and alternative school do all of their own food preparation.

The district's Farm to School efforts began in 2010 with a focus on procuring New York-grown organic beans that were used in plant-based entrees as meat alternates. The program has since expanded to include local tofu as well as produce that can be prepared during the harvest season and frozen for use during the school year (for example, tomatoes made into tomato sauce and basil made into pesto).

## Expanding the Reach of "Farm-to-School"

Denise Agati, Director of the Child Nutrition Program,<sup>1</sup> is a long-time supporter of local procurement and Farm to School education. Thanks to her vision of expanding local offerings on school menus, Denise led ICSD in partnering with the Coalition for Healthy School Food,<sup>2,3</sup> a nonprofit organization whose mission is to expand plant-based foods and nutrition education in schools. The Coalition's<sup>4</sup> Cool School Food initiative is a Farm to School program that helps bring plant-based

recipes to school cafeterias by connecting growers, distributors, and chefs with school districts, and by conducting on-site taste tests and Farm to School education. The Coalition's partnership in Ithaca includes ICSD, Moosewood Restaurant, Wood's Earth and Cayuga Pure Organics.

Beginning in the 2010-2011 school year, ICSD partnered with the Cool School Food initiative to develop, test, and menu four plant-based recipes that featured locally grown organic beans. Coalition members helped connect the district with Cayuga Pure Organics,<sup>5</sup> a local grower, processor, and distributor of grains and beans, and one of the only businesses of its kind in New York. The company is conveniently located seven miles south of Ithaca. Founder Erick Smith,<sup>6</sup> inspired by the idea of students eating healthy organic food, sold dry, organic beans to the school district at cost until 2013 when a fire interrupted Cayuga's operations. Cayuga resumed production in the fall of 2014.

## Taste Testing and Food Prep

**DRY BEANS:** Ithaca opted to introduce locally grown dry beans as meat alternates in recipes including the Black Bean ("Beanie") Burger, Fiesta Mexican Lasagna (black beans), Tuscan Tomato Pie (white beans), Mrs. Patel's Rajma (kidney beans), Pasta Fazool (white beans) and Roy's Cuban Wrap (black beans). Each entrée contained one half cup of cooked beans in order to comply with USDA regulation for meat alternates.

The dry beans were soaked overnight and then steamed in the combi oven for 20 to 45 minutes depending on the recipe, a preparation method that staff found to be much easier than boiling. To reduce waste, any bean-based entrées that



Dry beans

were not consumed were made available the following day as a vegetable side. During their first year of menuing, ICSD purchased 2,000 pounds of dry beans from Cayuga Pure Organics and continued to purchase New York-grown beans until the interruption of Cayuga's operations in 2013.

**TOFU:** With the expansion of the USDA's definition of tofu as a meat alternate in 2012, the district began using local organic tofu in two new recipes during the 2012-2013 school year. Tofu was purchased from Ithaca Soy, grower of organic soybeans and processor of tofu and soy-based products. Ithaca Soy was started in 1981 and quickly gained a reputation as the best tofu around, eventually becoming a staple at renowned Moosewood vegetarian restaurant.<sup>7</sup>

Tofu was incorporated into newly developed recipes including Chinese Stir-fry and Golden Croquettes with Orange Ginger Sauce. (Recipes are provided at the end of this case study and at [www.healthyschoolfood.org/recipes.htm](http://www.healthyschoolfood.org/recipes.htm)). Preparing tofu required some staff training, after which staff report that food preparation was easily accomplished using existing equipment. ICSD uses approximately 2,000 pounds of tofu per year and anticipates continuing to purchase tofu from Ithaca Soy.

After creating the new recipes, taste tests were conducted at each of the eight elementary schools to determine if the recipe was popular enough to place on the menu, and if so, how many servings should be prepared. The Coalition coordinated the taste tests including donating food, creating marketing materials (recipe cards, fliers, voting ballots and boxes) and providing volunteers to help conduct the taste tests. If a recipe was received well, it was menued the following month.

While implementation began in the district's elementary and middle schools, it expanded to include the high school during the 2014-2015 school year.

## Cost and Performance

Once staff became proficient at new methods of preparation, they found that the cost of using local, certified organic tofu or beans to be about equal to that of a conventional, non-local meat item—approximately \$0.50 per entrée, according to Denise Agati. In addition, food service staff report that the organic, local product has a superior flavor, texture, and cooking ability when compared to alternative products, and that developing new recipes keeps them engaged and committed to their work.

The district continues to develop new plant-based recipes—roughly two per year. Recipes are menued each Thursday during the school year. As students' palates have developed,



Tuscan tomato pie at the Ithaca

staff have seen an increase in purchasing of plant-based entrees by students: during the 2013-14 school year about 10 percent of meals served (roughly 300) were plant-based meals served each Thursday.

Although student's palates have started to shift toward less processed, more scratch-cooked and plant-based foods, ICSD foodservice staff are keenly aware that change doesn't happen overnight. As a result, staff menu bean- and tofu-based entrees along side meat-based options. This gives students a range of choices and helps ensure participation rates stay level. The district hopes to expand plant-based options slowly over time.

At the same time, participating farmers report feeling inspired, knowing their products are being served in schools, and have been willing to take a smaller profit margin in order to offer prices that can work for the schools. And while this initial volume represents only modest sales for these vendors, the potential for growth with Ithaca and other districts represents a significant market opportunity for local growers.

## Best Practices

- Find local partners that can help explore new locally grown foods and assist with the introduction of new recipes and recipe testing.
- Make sure to conduct thorough taste-testing with students of different ages before introducing new local items that students may be unfamiliar with.
- Allowing students to see, smell, and touch the raw ingredients increases their interest in trying the new recipes.

# Ithaca City School District

Recipe: 000103 CHINESE STIR FRY  
 Recipe Source: COOL SCHOOL  
 Recipe Group: ENTREES

Recipe HACCP Process: #2 Same Day Service

Alternate Recipe Name:  
 Number of Portions: 50  
 Size of Portion: SERVINGS

902471 KETCHUP..... 050383 OIL, VEGETABLE..... 012698 SESAME BUTTER,TAHINI,KRNLS UNSPEC..... 011215 GARLIC,RAW..... 002030 PEPPER,BLACK..... 016126 TOFU,FIRM,PREP W/CA SULFATE&MAGNESIUM CHLORID..... 050451 RICE, LONG GRAIN, BROWN, COOKED, WITHOUT SALT..... 016424 SOY SAU MADE FROM SOY&WHEAT (SHOYU),LO NA..... 011130 CARROTS,FROZEN,UNPREPARED..... 051459 BROCCOLI, FROZEN, FLORETS..... 011590 WATERCHESTNUTS,CHINESE,CND,SOL&LIQUIDS.....	2 1/2 CUP 3 CUP 1/4 CUP 2 CUP 1 TBSP, ground 14 LB 50 .5 CUP 2 1/2 CUP 3 GAL, slices 3 GAL 1 GAL, slices	1. BLEND OR WHISK TOGETHER ALL THE SAUCE INGREDIENTS 2. CUT TOFU INTO SMALL CUBES WITH THE SAUCE AND ALLOW THE MIXTURE TO MARINATE OVERNITE. 3. THAW FROZEN VEGETABLES, DRAIN, THEN ADD TO TOFU AND STEAM FOR 10 MINUTES 4. FOLLOW RICE DIRECTIONS 5. SERVE OVER RICE
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\*Nutrients are based upon 1 Portion Size (SERVINGS)

Calories	463 kcal	Cholesterol	*0.00* mg	Protein	*20.98* g	Calcium	*415.87* mg	*40.25%*	Calories from Total Fat
Total Fat	*20.72* g	Sodium	727.86 mg	Vitamin A	*2624.43* RE	Iron	*4.88* mg	*6.73%*	Calories from Saturated Fat
Saturated Fat	*3.46* g	Carbohydrates	55.58 g	Vitamin A	19289.70 IU	Water <sup>1</sup>	*269.55* g	*0.00%*	Calories from Trans Fat
Trans Fat <sup>1</sup>	*0.00* g	Dietary Fiber	*13.80* g	Vitamin C	*76.51* mg	Ash <sup>1</sup>	*4.54* g	47.98%	Calories from Carbohydrates
								*18.11%*	Calories from Protein

\*N/A\* - denotes a nutrient that is either missing or incomplete for an individual ingredient  
 \* - denotes combined nutrient totals with either missing or incomplete nutrient data  
<sup>1</sup> - denotes optional nutrient values

Miscellaneous	Attributes	Allergens Present	Allergens Absent	Allergens Unidentified
Meat/Alt.....	oz			? - Allergen 1
Grain.....	oz			? - Allergen 2
Fruit.....	cup			? - Allergen 3
Vegetable.....	cup			? - Allergen 4
Milk.....	cup			? - Allergen 5
<b>Moisture &amp; Fat Change</b>				? - Allergen 6
Moisture Change.....	0%			? - Allergen 7
Fat Change.....	0%			? - Allergen 8

**NOTICE:** The data contained within this report and the NUTRIKIDS® Menu Planning and Nutritional Analysis software should not be used for and does not provide menu planning for a child with a medical condition or food allergy. Ingredients and menu items are subject to change or substitution without notice. Please consult a medical professional for assistance in planning for or treating medical conditions.

- Marketing materials such as flyers, PA announcements, and recipe-specific lesson plans help promote new recipes.

- Monitor the impact of local foods not only on costs but also on participation and the impact on your overall costs and revenues.

- Make sure to provide adequate training for foodservice staff as you explore new foods and motivate staff to motivate students to try something new.

- Experiment with alternative cooking methods. As the Ithaca Public Schools found out, steaming dry beans proved to be a less time-consuming approach for their staff than the more traditional methods of boiling dry beans.

2. Amie Hamlin, Coalition for Healthy School Food, personal communications, various dates, April and May, 2014.

3. <http://www.healthyschoolfood.org/about.htm>

4. [http://www.healthyschoolfood.org/project\\_cool\\_school\\_food.htm](http://www.healthyschoolfood.org/project_cool_school_food.htm)

5. <http://cporganics.com/>

6. Erick Smith, Cayuga Pure Organics, personal communications, June 13, 2014.

7. Nick Gardener, Regional Access, personal communications, June 10, 2014.

## Endnotes

1. Denise Agati, Ithaca Public Schools, personal communications. May 17, 2014.

