

### What Students Are Eating (And Not Eating) For the Universally-free Breakfast Program (UBP) at Two Elementary Schools

The mission of the Thompson School District (TSD) Nutrition Services Department is to feed every child, every day, nutritious and affordable meals. In an ongoing effort to improve our services to students, we have partnered with Colorado State University (CSU) Department of Food Science and Human Nutrition to evaluate the Universally-free Breakfast Program (UBP). This breakfast program was launched at two elementary schools that have a large free and reduced eligible student population during the 2010-2011 school year. All students are provided free breakfast every day, regardless of income. Students in both schools have a 15-minute period to eat breakfast in the classroom while participating in morning classroom activities. Our goal in working with CSU is to understand student’s likes and dislikes, student’s eating habits, and how to encourage students to make healthy breakfast choices now and in the future. The purpose of this project was to 1) determine how the UBP compared to the standard school breakfast program (served in the cafeteria), 2) determine what foods students chose for breakfast, and 3) estimate how much of those foods they were discarding (plate waste).

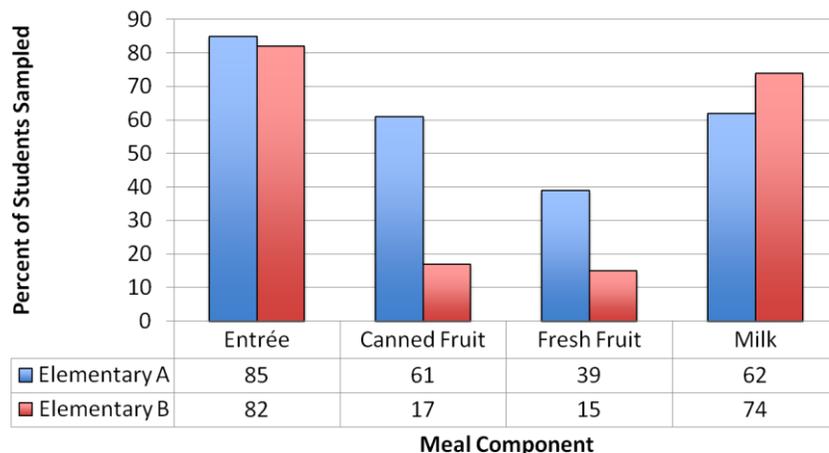
#### Plate Waste: How it was measured

Plate waste was collected for a 14 day period in each elementary school (February/March 2011). A total of 111 4<sup>th</sup> grade elementary students participated in the study, half of which were boys. Plate waste was calculated by weighing each student’s waste by individual food item on a digital scale to determine the percentage of food discarded (and indirectly eaten).

#### What did we find?

First, we wanted to know if UBP increased student participation in school breakfast. We found that on a typical school day, 70-80% of 4<sup>th</sup> grade students participated in the UBP. On average, these 2 schools’ monthly breakfast participation rates **increased by 250%** with the implementation of the UBP, compared to the previous year with the traditional school breakfast program. We also wanted to assess student food preferences and consumption patterns, which is presented in the figure below, which illustrates, on average, what the students chose for breakfast separated by each breakfast component.

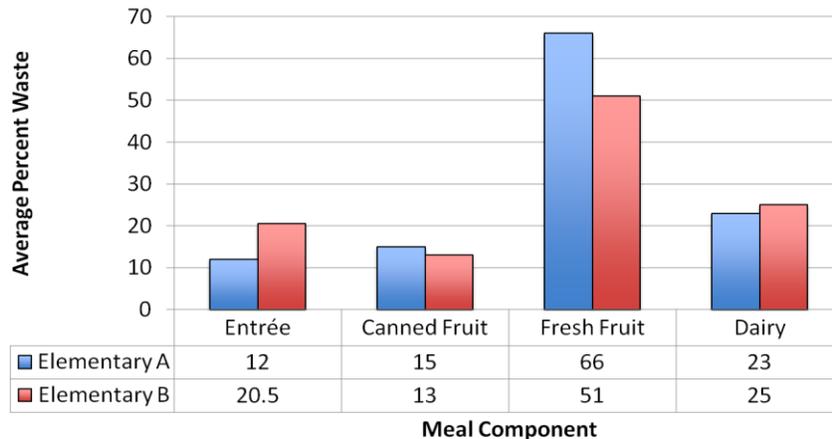
**Student Food Choices at Breakfast**



We found that fresh fruit had the highest percent of waste at 58.5%, while canned fruit had an average percent waste of 14%. Milk had an average waste of 24% and grain product, or entrée, had an average waste of 16%.

The figure below illustrates the average 4<sup>th</sup> grade student waste of selected foods: Entrée (grain), canned fruit, fresh fruit, and dairy and separated by school.

### **Percent of Each Menu Item Wasted (Uneaten)**



#### **What does this mean?**

School breakfasts are planned to ensure students receive at least one-fourth of their daily nutrition needs from breakfast. However, if students do not take and eat fruit, as these results show, they may be missing out on important nutrients, such as Vitamins A and C, potassium, iron and fiber. And, other studies have shown that children typically do not make up for this shortfall later in the day<sup>1,2</sup>.

#### **Practical Uses for This Information**

There are several ways the TSD Nutrition Services staff can use this information.

Observations made during this study highlight several strategies that may affect food choices

- Fruit cut into smaller, bite-size pieces was wasted less than whole fruit.
- Smaller portioned grain products appeared to be more completely eaten than larger options (e.g., oatmeal round (~2.3 oz) versus muffin (~3.7 oz) and
- More convenient packaging (e.g., squeeze yogurt containers versus conventional yogurt containers) appeared to influence how much children ate.
- Days with the lowest waste and highest participation were days when more options were available for the students to choose from.

As parents, there are ways you can help encourage your children to enjoy more fruit with breakfast:

- Ensure they are eating a nutritious breakfast every day, at home or school. For healthy breakfast tips go to: <http://teamnutrition.usda.gov/resources/eatsmartactivitiesheets.html>
  - Ask your children if they would like to eat breakfast at school. Review the menu to let them know all the great breakfast items available.
  - If your children qualify for free/reduced price meals at lunch, they are also eligible for free/reduced priced breakfast.
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1. Chitra UR, Radha C: The role of breakfast in nutrient intake of urban schoolchildren. *Public Health Nutr* 2006, 10(1):55-58.
2. Rampersaud GC, Pereira MA, Girard BL, Adams J, Metz J: Breakfast habits, nutritional status, body weight, and academic performance in children and adolescents. *Journal of the American Dietetic Association* 2005, 105(5):743-760.

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