

Going green with school milk

by Pat Rheel

Long an untapped supply of HDPE, milk bottles are finding a niche home among school recycling programs.

Over seven billion units of milk are sold in U.S. schools each year, so recycling just makes sense. Two common types of milk packaging are offered to schools, the traditional cardboard carton and the plastic re-sealable bottle, which is usually made from high-density polyethylene (HDPE).

Both packages can be recycled; however, coated paper cartons are not usually recycled, because few companies capable of recycling this material exist. Additionally, paper milk cartons sent to landfills do not decompose easily. Recycling the plastic bottles, as opposed to the paperboard cartons, is simply more cost and energy efficient.

This is good news, because offering plastic bottles of milk at school is a growing trend. In 2001, very few schools offered milk in plastic packaging, as compared to over 7,400 schools today. Kids prefer the modern container, which is similar to other beverage containers they purchase, and the School Milk Pilot Test (SMPT) found that kids will drink up to 37-percent more milk if it is served in plastic packaging in a variety of flavors. This is commonly referred to as the New Look of School Milk (NLSM).

The SMPT also found that average milk sales increased by 18 percent. The combination of improved milk sales and better nutrition for the students, during a time of concern for improving student health and wellness, has fueled the popularity of plastic packaging for school milk.

Save the environment, save the bottom line

Along with this growing trend, emphasizing the importance of a recycling program for each school to capitalize on the volume of recyclable HDPE plastic containers is critical. The U.S. Environmental Protection Agency (Washington) has set a national goal to recycle 25 percent of our national waste. A school milk bottle recycling program, if replicated across the nation, can be an important part of achieving this goal.

Often, plastic milk bottles can provide the critical mass necessary for a school or district to set up a recycling program. Furthermore, when a school or district has a successful multi-material or single-stream recycling program, its waste volume diminishes, reducing both trash pick-ups and waste disposal costs. Recycling not only saves the environment, but also saves the school money.

The *Drink It Then Sink It!* school recycling program

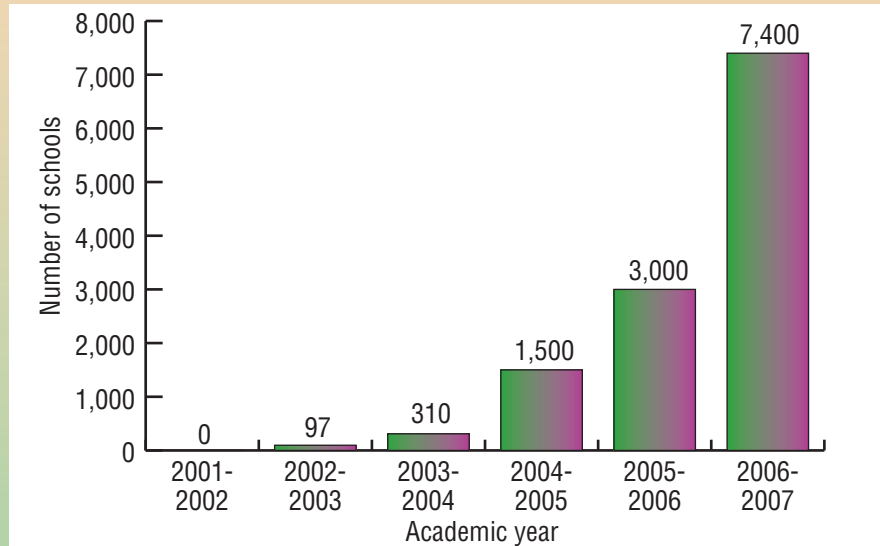
The National Dairy Council (Rosemont, Illinois) has pioneered a school plastic milk bottle recycling program, *Drink It Then Sink It!*, which serves as a guide to assist schools in developing their own recycling program. *Drink It Then Sink It!* has been successfully piloted in three school districts, showing that the model can work for schools, the community and the environment.

The first pilot involved school districts in

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Figure 1 Growth of plastic milk bottle recycling programs



Source: Dairy Management Inc., 2007.

Williamsburg, Virginia and San Antonio. One elementary, middle and high school per district participated in a three-month *Drink It Then Sink It!* pilot. The schools sought endorsement of the program from key school leaders and the community, and partnered with a collection contractor to obtain Dumpsters and arrange for regular pick-up.

After each school meal, students emptied their remaining milk into disposal bins and threw their empty bottles into the decorated *Drink It Then Sink It!* recycling receptacle. The combined total weight of plastic bottles collected in the three-month period was 62,352 pounds, or the equivalent of 7.71 pounds per student per school year.

The second pilot took place in the Knoxville School District in Tennessee. The district has 82 schools, all selling milk in HDPE bottles, which would potentially amount to 279,000 pounds of HDPE.

Thirty six of the schools are currently participating in the test, which has yielded preliminary results of approximately two million recycled bottles, for a total of 31.4 tons of collected bottles thus far, amounting to approximately one pound per student per pick-up

(every 10 to 14 days).

This is a comprehensive effort by a number of partners, including the National Dairy Council, Southeast United Dairy Industry Association, Keep Knoxville Beautiful, Knox County Solid Waste Division (all of Knoxville, Tennessee), American Chemistry Council (Arlington, Virginia), SP Recycling (Atlanta) and Flavo-Rich Dairy (London, Kentucky). Knox County won a U.S. Department of Agriculture (Washington) award for its recycling program.

Successful recycling models for plastic milk bottles in the school setting have been demonstrated. Below are some useful key findings from the pilot programs that others can use to start a similar program.

Recovery findings

- ◆ Plastic bottle recovery is viable with minimal contamination issues (low residual liquid and food contamination).
- ◆ Single-stream collection helps achieve critical mass for pick-up and economic viability (collection of plastic bottles, old corrugated containers, office and mixed paper, and bulk plastic and steel containers from food and janitorial services).

- ◆ Comprehensive education is essential to the success of all key players – school administrators, school nutrition staff, custodial staff, teachers and students.

General findings

- ◆ Develop partnerships with preferred recycling service providers.
- ◆ Establish parameters for implementing collection programs in all schools within the district.
- ◆ Link recycling service providers with local dairy councils and schools to assist schools in setting up a recycling program. Local dairy council representative can be found at www.NutritionExplorations.org in the "School Nutrition Professionals" section.
- ◆ Promote a comprehensive recycling program of all school-generated recyclables, not plastic bottle exclusively, which supports the single-stream collection model.

The results of the *Drink It Then Sink It!* pilot tests should inspire recycling companies to work with local school districts and dairy councils to allow the trend of "going green with milk" to continue growing.

Offering milk in plastic containers at school accomplishes several goals:

- ◆ Plastic containers can be recycled.
- ◆ Plastic containers are the most efficient milk container to recycle.
- ◆ Plastic containers offer an untouched market of HDPE plastic, with a high recovery rate (up to 90 percent in elementary schools).
- ◆ Children will drink more milk from plastic containers, and, therefore, choose it more often.
- ◆ Schools can start a recycling program to teach children the value of giving back to the environment and reducing landfill waste.
- ◆ Schools save money on their trash disposal bill by recycling. Schools pay for trash disposal by the cubic yard, so with less volume from the plastic milk containers, trash costs decrease. Recycling bottles may reduce trash volume by 10 percent or more.

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