

B Equipment Selection

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If you could time travel back to, say, 2008, you'd be astonished by all the changes that have taken place in the school nutrition profession over

the last 15 years! Ever-evolving meal pattern requirements (and other regulations), unprecedented supply shortages, crippling numbers of position vacancies, unpaid meal debt and many other challenges make it more difficult than ever to keep your school meal operation dynamic and innovative in meeting the needs of your student customers. Management of food and labor costs—and increasing revenue through greater participation—continue to be the top financial considerations for school nutrition departments. But it's important not to overlook another line item on your expense spreadsheet: Equipment. Aging facilities, new construction and increased expectations for menu items that are prepared from scratch or with a speed-scratch approach mean that school nutrition professionals need to understand how to get the best pieces of equipment for their needs—at the best value.

Like other aspects of our industry, foodservice equipment has evolved with the times. New food preparation techniques, more sophisticated equipment, multi-use equipment and the need to serve meals (especially at high schools) from multiple points of sale—these changes have had an enormous impact on the way we do business and the way we procure the tools that we need in school kitchens. The Institute of Child Nutrition (*www.theicn.org*) contracted with us, along with Ursula Saqui, PhD, to update the 2009 Facility Design and Equipment Purchasing for School Nutrition Programs manual, and the timing could not be better! This article will provide a sneak peek into the nearly 300-page document coming soon that will help anyone—from the beginner to the seasoned professional—make better

QUICK TIPS: Equipment Using a Water Supply

Combi Ovens, Steamers, Dishmachines, Pot and Pan Washers, Ice Machines

- Obtain your local municipal water report before purchasing the system. Provide it to the filtration company to help you evaluate options and select the best unit that will improve performance, minimize maintenance and repairs and maintain the warranty.
- 2 Identify steam temperature ranges of any combi oven under consideration—some units are not adjustable.
- B Review adequate water pressure for dishmachines. It should run at least 20 psi for the final rinse.
- 4 Identify the pros and cons of high- and low-temperature dishmachines. These include:

High-temperature

- ↑ PRO: No sanitizing chemicals required
- ↑ PRO: Hot water may help remove soil
- Low-temperature
- ↑ PRO: Generally, lower energy costs
- **↑** PRO: Lower unit cost

- $\mathbf{\Psi}$ CON: Requires a booster heater
- $\mathbf{\Psi}$ CON: Higher unit cost
- ↓ CON: Dishes may take longer to dry
- ↓ CON: Chemicals may damage dishware and decrease the life of the unit

5 Know the temperature of the water coming into the ice machine. For every degree above 70°F, ice yields are diminished.

6 Know the differences in steamer options.

A pressure (boiler-based) unit has the fastest cook time, but the door cannot be opened during cooking, and it uses the most gallons of water.

A pressureless (convection) unit uses less water and doors may be opened during cooking, but ventilation is required.

Connectionless steamers may be the least expensive option and not require a hood, but research whether cook times will meet batch cooking needs. You may need more than one unit to keep up.

Source: Section Two: Making Equipment Selections, Facility Design and Equipment Purchasing for School Nutrition Programs (revised), publication pending, The Institute of Child Nutrition



equipment planning and purchasing decisions.

The comprehensive manual contains 10 chapters organized in three major sections:

- Introduction to Facility Design and Equipment Procurement, including organizing the planning team, trends and layout and space guidelines;
- » Large and Small Equipment Selection, with general specifications and available special features by type; and
- The Procurement Process, emphasizing federal regulations, the bidding process, ethics and training.

The manual is designed to be a resource for school nutrition professionals at any level of experience, providing them with insights to better understand the basics of facility design and equipment purchasing. Such understanding is essential in using equipment to improve efficiencies in labor, space and energy and can deliver further value, including increased participation.

Guiding Principles

In our work on this update, we've distilled **11 top tips** that we believe can—and should—be applied to virtually any equipment purchasing scenario. Review the boxes throughout this article for advice that is specific to purchasing particular categories of equipment.

1. Play the long game! To make the most of the opportunity to equip a new, renovated or existing kitchen, dining area or point of service location, you'll want to plan carefully. Consider all your sites. What is the age and status of the current equipment? How often do you use it? How many meals are prepared at each location? Are there things you want to serve but can't because you don't have appropriate equipment? What are the district's plans for new school construction, expansions or renovations? What's your budget for equipment, and how does it change from year to year? What equipment solutions catch your eye? Are they versatile for the long haul or do they seem trendy for today? You want to build a value-added plan that will go the distance.

2. Don't go it alone. Work with a planning team no matter the size of the project, whether it's equipment replacement or building a brand-new kitchen. Consider the following staff to be potential members of this team: school nutrition managers and employees, superintendent(s), principals,

QUICK TIPS: Oven Equipment

Combi, Convection, Conveyor, Impinger

- Request combi oven training to learn how to make the most of each of the three modes: steamer, convection oven and combination heat/steam. This unit is much more than an oven and a steamer in one.
- 2 Determine the best energy source for convection ovens: A gas unit is typically more expensive, but often enjoys lower energy costs over time.
- 3 Consider synchronized convection double doors that open and close simultaneously.
- 4 Determine the capacity needs (length of belt) and belt system when purchasing a conveyor or impinger oven. You'll find single and split-belt systems (belt splits may be 50/50, 70/30 or 65/35). Some belts run in either direction.
- S Research an impinger style oven for the fastest cook times. Impinger ovens use pressurized jets to break through the cold halo that forms inside the oven chamber and heats food from above and below.

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> purchasing director, maintenance director, custodial services director and school board members. It's also helpful to identify some field experts who can serve on your planning team. Does your district use the same building contractor and architect on school construction projects? Maybe there is an electrical, mechanical or structural engineer on staff. You can also turn to manufacturers, interior designers and foodservice consultants.

3. Let your menu be your guide. Equipment purchases should be based on current and upcoming cycle menus, as well as the

type of food production that is in place at the site: scratch, speed-scratch or heat and serve (convenience). For example, roasting precut, frozen sweet potato chunks requires a freezer and an oven. Turning large quantities of fresh, whole sweet potatoes into roasted chunks or dices requires a mechanical food processor and an oven. Of course, if major menu changes are a part of the overall plan, be sure to turn to consultants—as well as peers in other districts already executing what you'd like to implement—to determine essential and optional equipment.

4. Dive into labor hour calculations.

Learn how improved kitchen automation will impact staffing and help you better manage inevitable position vacancies.

5. Consider food and worker safety.

New equipment can help minimize risks of foodborne illness, as well as employee injury. Be sure to ask questions about features and options designed to address these concerns.

6. Look to the "stars" and reduce your "invisible" costs through energy conservation. The Energy Star® program certifies products that meets standards set forth by the U.S. Environmental Protection Agency (EPA). Even if you are not responsible for direct or indirect costs for utilities, it's the right thing to do!

7. Seek out other certifications. When purchasing equipment, you'll want to ensure pieces are appropriate for the heavy duty

expectations of commercial use. Look to the Occupational Health and Safety Administration (OSHA) for an approved list of organizations such as the National Sanitation Foundation (NSF), Underwriters Laboratory (UL) and Edison Testing Laboratories (ETL).

8. Compare total cost of ownership.

This includes evaluating warranties, projecting the costs of parts and repair and calculating the equipment's anticipated useful lifetime. Don't overlook other associated expenses, such as the costs for water filters, cleaning supplies and batteries.

QUICK TIPS: Refrigeration Equipment

- Determine storage space requirements: 28 pounds of food will fit into one cubic foot of freezer storage space.
- Identify the type of insulation used in the unit: Polyurethane and extruded polystyrene (XPS) are common options. XPS is less resistant to water issues than polystyrene.
- Know your condenser cooling requirements:

Air-cooled

These do not operate well in extremely hot climates or conditions.

These tend to have a shorter lifespan, and they may require more repairs than water-cooled units.

These are less expensive.

Water-cooled

These tend to operate well in warmer kitchens and ambient air.

These usually last longer.

These are often more expensive.

Know your refrigerant type:

Chlorofluorocarbon (CFC): These are ozone depleting and are being phased out of production.

Hydrochlorofluorocarbon (HCFC): These are less damaging to ozone; they are a common replacement for CFC.

Hydrofluorocarbon (HFC): These are not specifically ozone-depleting, but they are considered a potent greenhouse gas, with a greater potential for damage than carbon dioxide.

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9. Be ethical. Refresh your awareness of unethical procurement actions that could jeopardize the program or your position of authority. Check out SNA's online course: "What Should You Do? Ethical Decision-Making in School Nutrition."

10. Develop a preventive maintenance schedule. This will help protect your investment and help you continue to plan for the future.

11. Get approvals for any project that involves purchasing new equipment—

even if you're simply upgrading an existing space. Obviously, you will need permission to move forward from school and district administrators. But state and local health departments also play a role in reviewing preliminary and final facility design plans, as well as kitchen equipment specifications, to ensure compliance with current regulations and health codes. In addition, the state agency that is responsible for administering school nutrition programs should be able to provide guidance on allowable and unallowable costs associated with equipment procurement, renovations and new construction of school kitchens.

QUICK TIPS: Small Equipment

- Rate your blenders. As a rule of thumb, prioritize horsepower (HP) if you'll regularly be processing heavy, thick foods, or revolutions per minute (RPM) if you're more likely to be quickly blending lighter foods.
- Rate your food processors. The higher the RPM, the less precise the cut.
- Identify the metal gauge for pots and pans that is best for your operation. The lower the number, the thicker the gauge for stainless steel and aluminum.
- Marry your perforated and solid steamtable pans. These two pans should fit tightly together without excess space beneath the perforated pan.
- Determine the weight capacity needed for carts.

Heavy duty: 400-649 pounds

Medium duty: 200-399 pounds

Standard duty: Less than 200 pounds

- Buy a knife sharpener. Research the benefits of both manual and mechanical (which is more expensive) options.
- Choose a cutting board thickness that resists high-temperature warping.
- Determine your needs for portion and receiving scales. Receiving scales, for example, typically can weigh items up to 60 or more pounds and may be used to calculate leftovers or servings in a pan.

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Now, We're Cooking!

It's been almost 15 years since the publication of the last comprehensive facility and equipment manual, and while there are many time-honored elements of food prep that haven't changed over that period, your needs as a school nutrition professional certainly have! Whether your next equipment purchase is slated for this budget year or you're in the initial stages of new construction that won't be open for business for quite a while, make time to improve your knowledge and awareness of current and future options. It will make you well-equipped for success! **SN+**

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