



Technology Advances in Food and Equipment

by Michael T. Roddey, CDM, CFPP

During my frequent travels to conferences, trade shows, and professional development activities I've been fortunate to gain insight into many advances in our industry which benefit our profession. These advances include both the food we prepare and the equipment we use. In addition, there are ground-breaking advances in the areas of computer software, inventory and ordering controls, and cost management.

While outlining several advances here, I can only scratch the surface of the many product and technology break-

throughs available. I urge you to absorb what you need, identify areas to research further, and share the information with your peers.

FOOD TECHNOLOGY ADVANCES

There have been many advances in the foods you can serve to your customers. Customers' expectations and diet choices are growing, which demands that we respond to their needs with quality products. Manufacturers are responding by creating innovative products that allow us to meet the needs of our customer base.



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Gluten-Free Baked Goods

The baking industry has made great strides in delivering many varieties of gluten-free products. These options stand up to and match the quality of their traditional counterparts. Manufacturers are able to combine alternative grains, rice and legumes to achieve a product that we can all appreciate—regardless of our dietary expectations. Many applications utilize the whole grain version of the ingredient, which affords a more nutritious product.

Kinnikinnick Foods produces white, cinnamon raisin, whole and multi-grain breads that have a great texture and structure along with the mouth feel of a typical bread. They also make sweet items, one of which is a Vanilla Wafer that has a wonderful bite and flavor that matches our childhood favorite Nilla Wafers. You'll find many types of muffins, cookies, cakes and the like now offered gluten-free from a growing number of manufacturers.

Pasta is another product that has taken off in the gluten-free category. A company named *ProHealth Pasta* produces pasta selections made from one flour source using lentils, rice, corn, or black beans. Another company, *truRoots*, makes an ancient grain pasta from a blend of quinoa, amaranth, and brown rice. This one even had my father talking about it during and after we had dinner. He enjoyed it so much he couldn't believe it was gluten-free.

When approaching a gluten-free product maintain an open mind about what you will be tasting. Take advantage of any opportunity available to sample some of the many gluten-free options on the market. You'll be surprised by the selection and quality of products now offered.

Nut-Free Butters

A variety of alternatives to nut butter are now on the market. Chickpea is one, and I recently tasted a yellow lentil peanut butter substitute that offered great flavor and texture.

Food Safety

Advancements have also been made in the safety of some products commonly linked to foodborne illness. We all know that pasteurization destroys the bacteria in milk. Now there is a whole egg on the market that is pasteurized. *Davidson's Safest Choice* offers pasteurized eggs in the shell. The eggs are naturally pasteurized through the company's patented technology without coagulating any of the raw egg. This is a great way to help improve customer satisfaction by permitting use of undercooked eggs, while eliminating the risk of bacteria associated with using non-pasteurized shell eggs.

Continued on page 30



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EQUIPMENT ADVANCES

Food Preparation

Food processor and blender technology has evolved dramatically for both home and professional kitchens. Blenders have become so powerful that you can grind wood into sawdust. Not that we have that need in our kitchen, but it speaks to the power and durability of the units today. *Robot Coupe*, *VitaMix* and *BlendTec* are leaders in the blender category. Speaking to the power of their blenders, they generate so much friction that liquids can be made hot and steaming through multiple minutes of blending. Emulsifications are an afterthought as these will emulsify most anything.

Dynamic is a company that makes manual dicing machines, immersion blenders, and salad spinners. With the manual dicers, one is able to pick the size of the dice from multiple heads, add the ingredient, turn the handle and out will come your diced product ready for the next step in

the recipe. As for the immersion blenders, you can puree a large batch of soup or sauce without difficulty.

Equipment Sanitation

After you prepare the food items, you'll be happy to know that your knives can be stored in a new germ-free knife sterilization storage holder. Your ice maker is sometimes a place that is neglected as it does not get dirtied. However it does provide a place for bacteria to grow. For this reason, *Manitowoc*, *Fresh-Aire UV*, and other companies have introduced an ultraviolet ice maker sanitation system. The UV light eliminates the germs that promote bacteria growth within the system.

COOKING EQUIPMENT ADVANCES

The category of cooking equipment is likely the area of the most growth in innovative applications. Everything from our ovens and griddles to steamers and fryers has received attention. These advances are often related to cost savings and product quality. Anytime we can approach advances in this manner it is better for the industry as well as the customer.

Oven Technology

The myriad of choices in the oven category can be confusing for some. The industry still offers the classic conventional and convection ovens, but oftentimes there are new aspects to the classic appliances. Combination (Combi) ovens from many manufacturers are now commonplace in many operations. The ability to use both steam and heat to cook, bake, prepare and re-thermalize foods offers both user and customer benefits. These systems can be programmed for certain food items and can be executed with the push of a button and sometimes paired with the insertion of a thermometer. Others offer impinged air (high speed heated air) features for quick cooking, while *TurboChef* adds microwave to impinged air to facilitate a high speed cook for both baked goods and hot foods. Look for these advanced ovens from *Alto-Shaam*, *Henny Penny*, *Ovention*, *O XO*, *Rational*, and other manufacturers.

Blast Chill Technology

The ability to drop the temperature of a food product out of the danger zone does a few things.

1. Reduces the chance of bacteria growth which could cause foodborne illness



Advances in food preparation, food sanitation, cooking and chilling equipment are making foodservice operations safer and more efficient.

2. Helps to retain moisture content resulting in a higher yield
3. Helps to maintain peak flavor

When we move into a blast freeze we are also helping to ensure product quality by the quick freeze of items, thus limiting the degradation of the products.

Cook-Chill Technology

The ability to cook and chill in the same piece of equipment is a time saving convenience. When the equipment works for you by going from cook to chill, this is a recognizable savings. This is accomplished through jacketed kettles and, on another level, with cook-chill cavities. In these processes you now have the product quality through the quick chill aspect and safety aspect of not having to move the product to and from a hot piece of equipment, both of which save labor. A top performer in this class is *Iriinox* for blast chill, blast freeze, and cook-chill.

Steam Technology

Steaming of foods is being approached from a cost savings aspect. Steaming has progressed from boiler injected, to boilerless, and now to a PowerSteam or Steam Vector both from *AccuTemp*. These technologies cut both energy consumption and cook time. *AccuTemp* also manufactures steam jacketed kettles and has introduced a steam powered griddle. I had the opportunity to see the design and learn about the benefits of this griddle. It offers even and consistent heating from side to side, no hot spots, and it has a quicker recovery time for large cook loads. In addition, it doesn't require chemicals to clean the cook surface, only water.

Hot Holding Technology

There are numerous ways to keep food hot for service. Your approach will be determined by your style of service. If you utilize a remote buffet that is loaded in the kitchen and set up in a different area, *Burlodge* offers a mobile holding unit that will keep food hot during transport and service on the buffet top. They also offer a tray cart that will allow you to tray both the hot and cold food, load it into a cart that is separated to keep hot food hot and cold food cold, and transport for ease and consistency of service. If you do plated meals, *Aladdin Temp-Rite* has released their Heat on Demand system. This is a heated base that reaches temperature in 12 seconds. The base will heat a room temperature plate during plated food holding. The system offers over an hour of hot holding time. *Dinex A Carlisle Company* is another leader in induction heating systems for traylines and room service.

Additional Interests

A couple of additional noteworthy pieces include full HACCP cooler and temperature monitoring systems that integrate into your computer and smart phone. Pressure fryers or ultra-fryers allow a healthier, quicker fry. Retherming soup and sauce units that will hold after the reheat. Broil-vection units circulate heat for more even cooking of broiled items. The *TurboPot* is a heavy clad-bottomed pot that is groove-cut on the bottom to allow for maximum heat absorption.

As noted earlier, the items I touched upon are only a sneak peek at the new opportunities in technology that are available to you. Stay current with these new developments, and be ready for the next innovations on the horizon. **E**



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