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## **BAKING PANS IN FOODSERVICE** written by **Bill McCoy, Sales Manager - Smallwares Products** **Chicago Metallic - THE BAKEWARE COMPANY**

### ***FOODSERVICE BAKING TRENDS***

After first choosing which fresh bakery items to add to the menu, the foodservice operator must then assess the operational requirements of the chosen bakery products. At the least, bakery smallwares items are added to his next order. More extensive baking plans may call for the purchase of additional refrigeration or bakery equipment ranging from a simple proofer to a new mixer, oven or even major dough production equipment. In multi-unit operations, choosing fresh-baked bakery items for the menu may ultimately result in major facility design changes. Some chains have added even more emphasis (and appeal) to their new fresh bakery menu selections, by including bakery display and merchandising cases as a customer focal point.

Surprisingly, after adding fresh bakery items to their operation, many foodservice operators found that their overall volume increased by a percentage greater than just the added sales of their new fresh-baked items. They discovered that, not only did their customers like the higher-quality of the new freshly baked bakery items, the customers were also willing to spend a little more money or come back more often.

This important discovery, when coupled with the rising number of two wage-earner families that are using dining-out time as quality family time and the increasing popularity of "comfort foods", has resulted in more and more fresh bakery menu choices. Foodservice operators are seeking to provide more convenience and value in the **comfort food** and **home meal replacement** foodservice market segments, with a special emphasis on the appeal of these foods to children. This focus on comfort foods, value and convenience in the foodservice marketplace looks very attractive to those in the baking industry today.

According to a recent National Restaurant Association's *Foodservice Industry Forecast*, "In-house baked goods are on the rise as restaurateurs look for ways to heat up menu sales. According to the [National Restaurant] Association's *Tableservice Operator Survey*, about nine out of 10 tableservice operations with average per person dinner checks of \$25 or more and roughly seven out of 10 operations with checks of less than \$25 offered in-house baked goods."

In-house baking is also enhanced by the consumer's perception of fresh-baked bakery items. Despite all of today's references to low-fat and low-calorie foods, fresh-baked goods are perceived to be healthful and nutritious, as well as tasty and delicious. The government's Food Guide Pyramid recommends six to 11 servings from the Bread and Cereal Food Group *every day!* Add to all this the perfect convenience of individually portioned bakery treats that can also be taken home to share and enjoy, and you can see why this trend is expected to continue. "Just like mom used to bake" is the battle cry!

Foodservice operators need to look no further than their own customers (and their competitors!) in order to discover which fresh-baked bakery products can be profitably added to their operation. As always, the customer will vote with their dining-out dollars.

### ***SOURCES OF BAKED GOODS FOR FOODSERVICE OPERATORS***

For the foodservice operator, there are only six ways to obtain fresh baked goods for the foodservice customer: bake them from scratch, bake them from a mix, bake them off from a frozen or refrigerated dough and/or batter product, buy and thaw previously-baked or par-baked frozen products, buy fresh-baked products from an off-premise source, or utilize a combination of sourcing methods.

Whichever choice is made, the operator must produce the perception of a high quality fresh-baked product. This is because most foodservice operators know that their customer's first and last impressions of menu quality and dining experiences come from the perceived quality level of the bread basket or dessert items they are served.

### **SCRATCH BAKING**

Control over the quality and cost of desserts, breads and many other "baked" items served by any foodservice facility is a very important component of any successful operation. For lower-volume operations with limited cooking equipment, foodservice operators are trending towards the purchase of commercially baked products. However, many other establishments are preparing all, or a part of their bakery requirements. There are several economic advantages of having a properly equipped bakery as part of a foodservice operation. In smaller facilities, the baking process may be done in a small area of the general cooking area. However, if the demand for baked products is high, the bakery is often a separate, fully equipped, and independent department.

## MIXES

Some operators purchase high-quality mixes that can be baked off and finished in a unique way, thereby creating their own "signature" fresh-baked specialties. Mixes are convenient and usually quite good, but often add a higher margin of cost to the finished bakery item, in return for the savings in skilled labor costs. Mixes are a good choice when labor options are few.

## FROZEN DOUGH AND BATTER PRODUCTS

Frozen dough products have only been around since about 1969. For the first twenty years, the frozen dough business remained a small company niche business, with only three major producers supplying the national market. In 1989, after spectacular growth of frozen dough product sales to in-store supermarket bakeries, and, with the promise of increasingly larger frozen dough sales to foodservice operators, the market became large enough to attract the interest of large domestic and international food companies.

Many of these large companies bought their way into the frozen dough business by making strategic acquisitions of smaller companies over the next six years. By acquisition, they attempted to get a head start in the frozen dough business by buying companies with proven product lines. In the meantime, newer start-up businesses entered the market and began to focus on higher-quality niche products (bagels, pretzels, gourmet cakes, etc.). The quality of frozen dough products continued to improve, as the prices came down due to escalating competition and newer, more efficient manufacturing processes.

In the beginning, frozen dough was initially seen as a product that solved the "lack of a skilled baker" problem. With a shrinking supply of master bakers willing to work the long, hot, early-morning hours doing the baking, many supermarkets and some foodservice bakers (usually hotels or chains back then) found that they needed baked products that took less knowledge and training to produce.

Over time, the frozen dough product line evolved into a product line that needed almost no knowledge and training to produce a range and quality of products that otherwise might have required many skilled bakers to produce. These new products helped to spark consumer demand in the supermarket bakery. This increased demand and a seemingly endless variety of higher quality products, created higher and higher sales and profit levels, spurring more competition and real growth in the supermarket baking industry.

This same trend is being repeated in the foodservice industry today. Restaurant operators

are listening and responding to their customer's demands for the same fresh high-quality bakery products they can get at the supermarket. Frozen dough products can help operators satisfy their customer's demand for high-quality fresh-baked products.

#### OFF-PREMISE SOURCES - FRESH, FROZEN OR PAR-BAKED

Some foodservice operators go to great lengths to feature off-premise baked "signature" bread and dessert items, often bringing them in at great expense from an acknowledged quality leader (e.g. sourdough bread from San Francisco, fresh bagels from the local bagel shop, gourmet desserts from the local pastry shop, etc.). These products can be fresh or frozen, par-baked or finished. These are great products and are usually found at the higher check average end of foodservice operations.

#### SUMMARY

The foodservice operator is now able to select any source of fresh baked goods without having to sacrifice quality. The operator is now free to choose the right source of these products according to the needs of his customers, the product's costs and the demands placed on his operation. Foodservice operators can now prepare and serve almost any high-quality baked product, regardless of source, utilizing relatively new and unskilled employees to do the baking.

#### **BAKING PANS**

Baking pans are considered to be one of a baker's most important assets, and over the years, one of the foodservice bakery's largest investments. With this thought in mind, it is easy to see that the proper selection and ongoing care of baking pans is a critical component of any foodservice baking operation.

There are a wide variety of baking pans available for use in today's foodservice baking operations. Some of the most readily available pan styles include open top bread pans (both single and multiple ("strapped") bread pan sets), single and strapped pullman (sandwich loaf) pans, hearth bread pans, baguette pans, bun and roll pans, cupcake and muffin pans, specially-constructed perforated baking sheets, sheet pans (both solid and perforated), display pans (for the display case), pizza pans, cake pans, pie pans and many other types of specialty baking pans. Custom-made baking pans are also an option, especially for higher-volume chain operators, but higher minimum order quantities, large one-time tooling charges and longer lead times apply to most custom-engineered baking pans.

## RAW MATERIALS

Baking pans are generally made from three different types of material: aluminum coated (also called aluminized) steel, tin plated (also called tinned) steel, or aluminum (in either cast or sheeted forms). For many years, tinned steel served as the most practical material used for the manufacturing of baking pans because of its availability, cost and general acceptance as a food contact surface. In the last few years however, aluminized steel has gained more acceptance primarily because of its greater initial resistance to corrosion. With proper care, either pan material will perform exceptionally well.

Most baking pans will darken with use. *Dark pans bake better!* Baking pan heat absorption properties are particularly important when baking breads and cakes [or muffins]. Breads benefit from darker pans by achieving greater sidewall strength in the loaf (less sagging after cooling), while cakes and muffins benefit by getting better "spring" from the batter, resulting in greater cake volume and less batter required. Dark pizza pans can help eliminate soggy pizza crusts. But, just in case you haven't thought a lot about it, the color is only important if it is on the outside of the pan, where the heat transfer takes place in the oven. So, don't ever clean baking pans without first obtaining permission from the kitchen or bakery manager!

Pure aluminum can withstand temperatures up to 1220°F, so unglazed aluminum and aluminized steel baking pans can be used for high temperature baking. Glazed bakeware can be used when baking temperatures are less than 400°F, typical of the temperature ranges used for most bakery products. In foodservice applications, high temperature acceptance is not usually a critical factor, unless the operator wants to bake higher temperature products like pizza or hearth breads. Aluminized steel, aluminum or hard-coat anodized aluminum pans work best for those products.

Since the fifties and sixties, aluminum has for the most part, replaced tin plated steel in sheet pans, pizza pans and certain types of cake pans such as angel food cake pans or springform pans. If you are old enough to remember "tin foil" rather than today's "aluminum foil", then you may remember tin plated steel sheet pans! The use of aluminum in other types of commercial baking pans is limited, primarily because sheet aluminum is lighter and softer than the same thickness of steel and pans must therefore be made from thicker (and more expensive) aluminum in order to withstand the rigors of baking. In terms of raw material costs, aluminum is much more expensive to manufacture than steel, therefore, aluminum historically has had a much higher cost per pound than either tinned or aluminized steel, which are both priced about the same.

In foodservice, the choice of pan materials usually comes down to the specific product being baked, the operator's or baker's preferences, and the pan's cost or availability. In automated wholesale bakeries, aluminized steel pans are much more important because of the trend in that industry toward shorter baking times at elevated temperatures.

## PAN COATINGS

All commercial pan companies use the same source of *silicon release coating* (usually just called *glaze*) for their pans. This silicon is the only release coating that, when cured, meets the FDA provision of 21 CFR 175.300 for repeated food contact use when used as continuous coating on metal surfaces. The release coating's primary purpose in baking is to provide lubricant-free or reduced-lubricant product bakes, depending on the amount of fat or sugar in the baked product.

For a brand-new pan, a successful product bake results in a satisfactory separation of the product from the bakery pan once the product has been baked, with a minimum of "crumb" left in the pan. As the glaze gradually wears out, the operator can use a little more lubricant a little more often and extend the pan's remaining glaze life. Eventually, the glaze will wear completely off and will cease to be effective. At this point the operator must weigh the additional labor costs and oil costs of having to fully lubricate the pan for each bake cycle, against the costs and down-time of sending the pans to a pan "reglazing" plant for cleaning and reglazing. If he chooses to reglaze, his pans will come back clean and shiny, looking and baking as good as when new. By having his pans reglazed regularly, a foodservice operator can keep his baking pan investment paying off for many years, reducing each pan's average "cost per bake". The cheapest baking pan is often the one that lasts the longest!

According to one manufacturer of this type of silicon release coating, "The life of [the] glaze coating is dependant upon the use and the abuse the coating receives." The manufacturer goes on to suggest that several factors, including proper glaze application, will affect the life of the glaze. These include "higher [bakery] use temperatures", noting that "at 600°F, only a few hours will degrade the coating", "constant exposure to certain chemical solvents or high moisture", "in bakery release applications, the use of some oils at elevated temperatures will degrade the coating" and, "high-sugar-content food will shorten the life of the coating." Learning how to interpret these cautions is covered later, in the USE AND CARE section.

Most baking pans must be "seasoned" before their first product bake, whether they are

glazed or not. This is accomplished by applying a pan lubricant or spray to the baking surfaces of the pan and then allowing the pan to be heated to 350°F (without product in the pan), for a period of about five or six minutes. This step can be repeated as needed. These days, most pans are purchased with a silicon release coating to help reduce the amount of pan lubrication that might be needed. Glazing is almost always the best option for foodservice bakers. A freshly glazed surface and proper pan lubrication will serve the foodservice baker well, by eliminating non-sellable or non-useable baked goods [stickers] and, therefore, keeping the overall costs of the bakery department in line. The operator's food vendors can make specific recommendations as to which pan lubricant to use. Try to avoid any lubricant or spray that lists "water" as an ingredient.

The use of other types of "non-stick" coatings on baking pans is primarily limited to the use of coated household-weight pans designed for light-duty use at home. DuPont's SilverStone® coating is one notable exception that, when applied to sheet pans, has been used successfully in foodservice, but only for limited cooking and baking operations. One thing to remember in the future when choosing between "non-stick" coatings on bakeware, even on household-weight baking pans, is that it is usually better to choose a coating that has been applied to coiled sheets of metal ("coil-coated") *before manufacturing into pans*, than to choose a coating that has been painted on after the pan has been manufactured. Because coil-coated non-stick finishes are applied by machines specifically designed for the optimal coating result, non-stick coatings applied in this way will adhere more tenaciously to the underlying metal, and will last measurably longer than the post-manufacturing application of non-stick finishes.

Unfortunately, despite coating manufacturers' success with other types of foodservice products, most applied coatings will ultimately scratch, peel or flake off bakery pans, and thus will lose their effectiveness as a bakery release coating. It is almost prohibitively expensive to have this type of coating reapplied, due as much to the methods of removing the old coating, as much as the inherently higher coating costs. Therefore, the use of these types of applied coatings is not recommended in either commercial or foodservice baking operations.

Some new PTFE-type proprietary coating processes have been developed and used in automated wholesale bakeries producing specific hamburger bun or roll products, but have not found general acceptance in other baking product segments. PTFE coatings don't work well with high-sugar bakery products, they have a shorter working life than is desirable, and, at current price levels, add too much of a premium to the cost of pans. Teflon® is one brand name of PTFE coatings.

## REGLAZING

There are many pan reglazing facilities located in the United States and Canada. Pan reglazing plants are geared to the wholesale baking industry's need for a fast pan cleaning and reglazing cycle. Reglazing plant managers are accustomed to the demands of their wholesale bakery customers to return multiple thousands of reglazed baking pans to the bakery almost immediately after reglazing, sometimes with the pans still warm from the curing ovens!

This is because wholesale bakery Plant Managers and Engineers monitor their pans' glaze life very carefully, product by product, and plan their reglazing needs according to the expected glaze life of their pans. Experienced foodservice bakers must learn to do the same thing, after first getting to know the requirements of their local reglazing company and the expected glaze life for their particular bakery products.

## USE AND CARE OF BAKING PANS IN FOODSERVICE OPERATIONS

After the foodservice operator purchases the required pans and places them into operation, it is important that proper care be given to the pans, in order to maximize their usable life. Pan life can be prolonged with a preventative maintenance program designed for each particular pan. The key to success of any foodservice baking pan maintenance program is that management must first develop a philosophy about the care of pans, establish a definitive pan-care training program, and insist that all associated with the use of the pans follow the designed program.

***Pan Exposure*** - Bakery pans should never be exposed to water, humidity, condensation or cold temperatures.

***Use Warm Pans*** - Warm pans eliminate the moisture of condensation on pans. This procedure also enables the glaze to release better and even helps to prevent pan corrosion due to contact with sticky doughs. Warm pans also shorten proofing times and reduce the amount of pan lubrication that is necessary. Using warm baking pans will also give the baker greater control of baked product uniformity. In short, many bakers will tell you that warmed or preheated pans help produce better quality baked products.

***Pan Storage*** - Pans should always be stored in a warm, dry area of the facility, far away from the dish machine or pot and pan sinks. Pans should be protected against moisture and humidity, drafts, windows and doors. Pans should not be stored in a cool or cold place in order to avoid possible moisture condensation on their return to the kitchen. Pans can

be stacked on a pan truck, pan dolly or pan carrier and rolled into a convenient storage area. Always store pans upside down. Pans should never be stacked wet. Allow pans to completely dry in a warm oven, if storing pans immediately after contact with moisture of any type.

***Depanning*** - Bakery pans should not be used for storage of baked products. All baked products should be depanned as soon as possible after removal from the oven. If baked products are allowed to cool in the pan, steam from the product will penetrate the glaze and may cause glaze lifting, premature glaze failure and/or corrosion damage to the surface of the pan.

***Pan Cleaning*** - Do not use metal utensils, harsh cleansers, highly alkaline or highly acidic chemicals, scouring pads or any other abrasive cleaning aid that could damage the glaze. Use of abrasive cleaning methods such as scratching and scouring may cause glaze lifting, premature glaze failure and/or corrosion damage to the surface the pan. Do not soak pans in water. Do not wash pans in automatic dishwashers. Clean pans as you go - usually just wiping still-warm pans with a dry soft cloth is all that is necessary. Sometimes it may help to apply a little pan lubricant to the towel first. Avoid pan washing whenever possible. If absolutely necessary, wash pans with a soft towel and a mild soap and water solution. Lightly rinse but thoroughly towel dry all pans immediately. Cross-stack pans in a warm oven and allow them to thoroughly dry, especially if pans were immersed. **Immediately after washing, re-season pans with pan lubricant and bake the empty pan in the oven for five to six minutes at 350°F.**

***Pan Straightening*** - Bakery pans should be kept as straight as possible. Operators should inspect and straighten pans periodically to prevent them from becoming severely damaged. Severely damaged pans are a safety hazard and should be replaced.

## SUMMARY

Foodservice operators should thoroughly review their foodservice baking operations and immediately incorporate any relevant suggestions into their training and operation manuals. By focusing attention on the proper use and care of baking pans, they will insure the fastest return of their baking pan investment and the highest quality of fresh-baked products for their customers.