

Chocolate, Nuts and Co-packing Success

Pat Huffman runs Warrell Corp. operations with a sweet tooth and the heart of a plant manager.

By Bob Sperber, Plant Operations Editor

The first confectionery job Pat Huffman had more than 40 years ago was to go out into the plant, pick product samples off the line and bring them to top managers of the company. “And every place I’ve worked since, I’ve made sure that happens so we can see and understand the range of product we’re making every single day,” he says.

Oh, the places he’s been. Huffman has worked for Grace Cocoa (now ADM), Wilbur Chocolate (now Cargill), Beich (now Nestle) and Jelly Belly Candy Co., where he was president, before joining The Warrell Corp. (www.warrellcorp.com), Camp Hill, Pa., a decade ago.



As part of Warrell’s hot panning operation, freshly produced butter-toasted caramelized peanuts are cooled before packaging. This is in the 215,000-sq.-ft. main plant in Camp Hill, Pa.

NEW TECH, USED EQUIPMENT SERVE DUAL NEEDS

What are confectioners seeking: the latest and greatest technology or cost savings?

“First and foremost, it’s production efficiency,” says Bob Limburg, managing partner at Sollich North America (www.sollichna.com), a Miami Beach, Fla., supplier of confectionery equipment. This, along with food safety demands have given rise to systems that meet traceability requirements.

In the plant, for instance, he cites a “reworktemper” system that prevents a major drain to chocolate plant efficiency and profitability. Reworks that sit too long to be melted and reintroduced to the product stream end up being wasted. The system meets traceability standards accommodating reintroduction of rework back to the product stream in essentially real time, during production of the same lot.

Sustainability, too, is in demand, led by solutions that Limburg says “use less electricity and steam, and recapture energy for secondary use in the plant.” One example is the Chocotech Ecograv system, which can reduce steam/energy costs up to 50 percent in processing hard candy, chewies, foam syrups and fondants

In addition to new technology, used systems seem

to be appealing to more companies of late, even the confectionery leaders who traditionally buy new, according to John Frain, vice president of operations for Chicago-based Frain Group. Packaging machinery is especially popular, with flexible stand-up pouch systems, palletizers, case packers and case erectors among the “largest movers over the past 12 months. The other thing that’s just amazing,” he adds, “is that we’ve sold more palletizers in the past 18 months than we have in the previous 20 years.”

Services play a big role in the used market, too. Since the economic downturn started in 2008, technical services from start-up training to ongoing maintenance contracts, are on the rise. “We’ve beefed-up that portion of our field service because many companies have had cutbacks, but still need to keep their lines running,” Frain says.

Calls for reconditioning services have “gone through the roof,” up 50 percent or more, and not just for recent purchases but for pre-existing equipment on the plant floor. As a result, the company has grown its technical services staff about a third to a staff of 35 – and the company’s still seeking more engineers and technicians.

Today, as Warrell's president and chief operating officer, Huffman keeps the plant running at a steady clip all year long. The candy business is generally a seasonal affair, with 58 percent of candy sales – a projected \$6.7 billion this year – clustered around Valentine's Day, Easter, Halloween and Christmas, ac-

ording to the National Confectioner's Assn. (www.candyusa.com). But at Warrell, outside of some specialty tins and other holiday products, business is relatively steady year-round, says Huffman, bolstered by some "counter-seasonal" production of snacks, cereal bars and other items.

Making it by the millions

The company, making fine confections since 1965, produces product under its own brands (Pennsylvania Dutch Candies and Katherine Beecher), but private label and contract manufacturing comprise the largest side of the business.

To churn out products for all manner of customers, including some of the largest names in the business, the company maintains a 215,000-sq.-ft. plant in Camp Hill, which makes most products, plus a 38,000-sq.-ft. facility in York, Pa., dedicated to taffy and caramel products. The company runs eight distinct processes.

At Camp Hill, the chocolate enrobing operation can coat up to 17.6 million lb/yr of pretzels, cookies, peanut brittle and other goodies in chocolate as well as yogurt, caramel and peanut butter, all in regular, sugar free, low-carb and other formulations.

Hot panning operations for non-chocolates have capacity for 14 million lb/yr using 16 rotating pans, or gas-fired copper kettles, which are crucial for proper sugar caramelization. A continuous brittle/crunch line, also with 14 million lb/yr capacity, mixes and blends candy with nuts, fruits and other ingredients to produce small bits through full bars.

Additionally, a batch operation produces specialties such as flaky, handmade peanut butter "pillows." Two continuous dry roasting lines handle 11 million lb/yr of peanuts and tree nuts. For that, totes of shelled nuts are dumped in, roasted, cooled and typically sent for chocolate panning, or are used in brittle/crunch or sold in bulk.

The plant's 13-million lb/year chocolate panning operation includes both traditional and high-capacity belt coating machines for the flexibility to apply various centers and coatings. Centers can include roasted nuts, dried fruits, pretzel balls, peanut brittle pieces, and specialty centers. Coatings can be produced with multiple colors and flavors including "dusted" or "pearlized" coatings. The sugar mints operation produces up to 5 million lb/yr of butter mints, after-dinner mints and more.

The smaller Classic Caramel (brand) plant in York, acquired in 2009, includes two continuous systems and a batch line that produce up to 20 million lb/year of caramel products shipped in everything from one-ton totes for bulk ingredient use to cut and

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Nuts and other centers exit a high capacity belt system in the final, polishing, stage of panning.

flexibility we need to run some of the new flexible films,” which can be problematic on older machines at high speeds. Additionally, newer machines tend to accommodate faster changeovers, provide greater flexibility with more modular attachments and are better suited to current quality and process control

technologies.

Process control meets human touch
Huffman’s background provides a very human perspective on the industry, even when addressing technology.
Automation – from instrumentation and

wrapped candies for retail sale. The plant also hosts a 4-million lb/yr batch taffy and nougat operation offering infinite color, flavor and texture variations.

Overall packaging productivity, accuracy and flexibility are served by multiple makes of machinery, from high-speed combination weighers to packaging lines using barrier films and nitrogen-flush systems.

As a co-packer, the company also maintains multiple distribution options, shipping to customer distribution facilities or directly to customers’ customers such as supermarket warehouses, domestically and globally.

Adapting to trends

With so many processes, the company has a broad operational footprint, which helps it cater to customer demands and ultimately consumer trends. In addition to product variety, Warrell’s operations require plenty of packaging versatility.

Addressing the trends, Huffman sees a “tremendous push” among leading brands toward more 100-calorie snack packs, although “more and more, calories are not as important as convenience,” he says. This led him to pay attention to conventional, horizontal pillow-pack and stick-pack wrappers.

For larger-sized products, Huffman notes the popularity of the stand-up pouch and integrated, recloseable zipper – but he also acknowledges the film is expensive. He reports multiple calls recently for flat-bottom bags, which may constitute a growing trend, particularly if the weak economy requires companies to reduce costs.

The company is now looking into a “generational” upgrade to new vertical form/fill/seal baggers, because some of Warrell’s older machines are more cost-effective to replace than to maintain. Another reason, Huffman says, is that newer machines “have all the

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Automation, whether applied to new or existing systems, can provide “very real financial benefits,” often achieving a return on investment “by simply making the company’s existing assets, whether they be equipment or people, work more efficiently,” says Dave Loesche, industry business leader for Maverick Technologies (www.mavtech-global.com), Columbia, Ill. The company provides services from plant control engineering through business system integration.

Using a phased approach to evaluate areas with the greatest payback, Loesche says working collaboratively with one food company identified “several million dollars worth of savings across the operation.” The emphases were on process controls in the energy center of the facility, followed by systems to support continuous improvement elsewhere.

“In another case, our engineers worked with a large soft drink manufacturer to debottleneck their production line and provide the visibility needed for the opera-

tors to minimize downtime on the line. This resulted in improving the overall equipment efficiency of the line of line from 40 percent to 70 percent.

Compared to other food and beverage industry segments, Loesche says the confectionery segment generally is slower to adopt new technologies. This leads companies to “place more emphasis on continuous improvement and cost reduction strategies to drive profitability” when they invest, he says.

The trend for food & beverage companies across the board is toward solutions that enhance visibility of information, from plant floor to board room – such as “KPI dashboards that enable these manufacturers to identify and address process variables that need attention, to eliminate bottlenecks or to prevent product quality issues and really drive efficiency in their processes.” He also cites sustained demand for systems to advance sustainability initiatives and food safety standards and regulations.

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controls to plant automation and information systems – has come a long way since the early days of data processing and “green bar paper” Huffman used in the 1970s. Today, Huffman says, Warrell is making upgrades from plant-floor sensors to a new enterprise resource planning system.

“Sensors have improved dramatically,” he says, especially those for time and temperature, weighing, blending, level and moisture. They account for both moisture cooked out of the product as well as the effects of ambient humidity. He’s especially high on mass flowmeters’ ability to accurately meter syrup

while maintaining precise moisture content. “For that, we need to measure the mass not just the volume of what goes through a pipe.

“The control that you maintain in your process can make the difference between having a piece of candy that’s great and easy to run and a piece of candy that’s sticky and turns off the consumer, because it can’t be unwrapped,” he continues.

Two things he stresses are the need to calibrate instruments on a regular basis and to never forget the “analog” or human side of process control, which is why he’s firm in his policy of managers walking the plant and sampling products every day.

“We have all kinds of measurement and control technologies; we have a GFSI [Global Food Safety Initiative] certificate; we are BRC rated and AIB inspected; we have every inspector on the face of the earth walking through our plant. But if we don’t go out into our plant every day, how will our people know we care?” 

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