

HIDDEN COSTS THAT INCREASE OVERALL PRODUCTION EXPENSES

A White Paper by Unifiller Systems Inc.

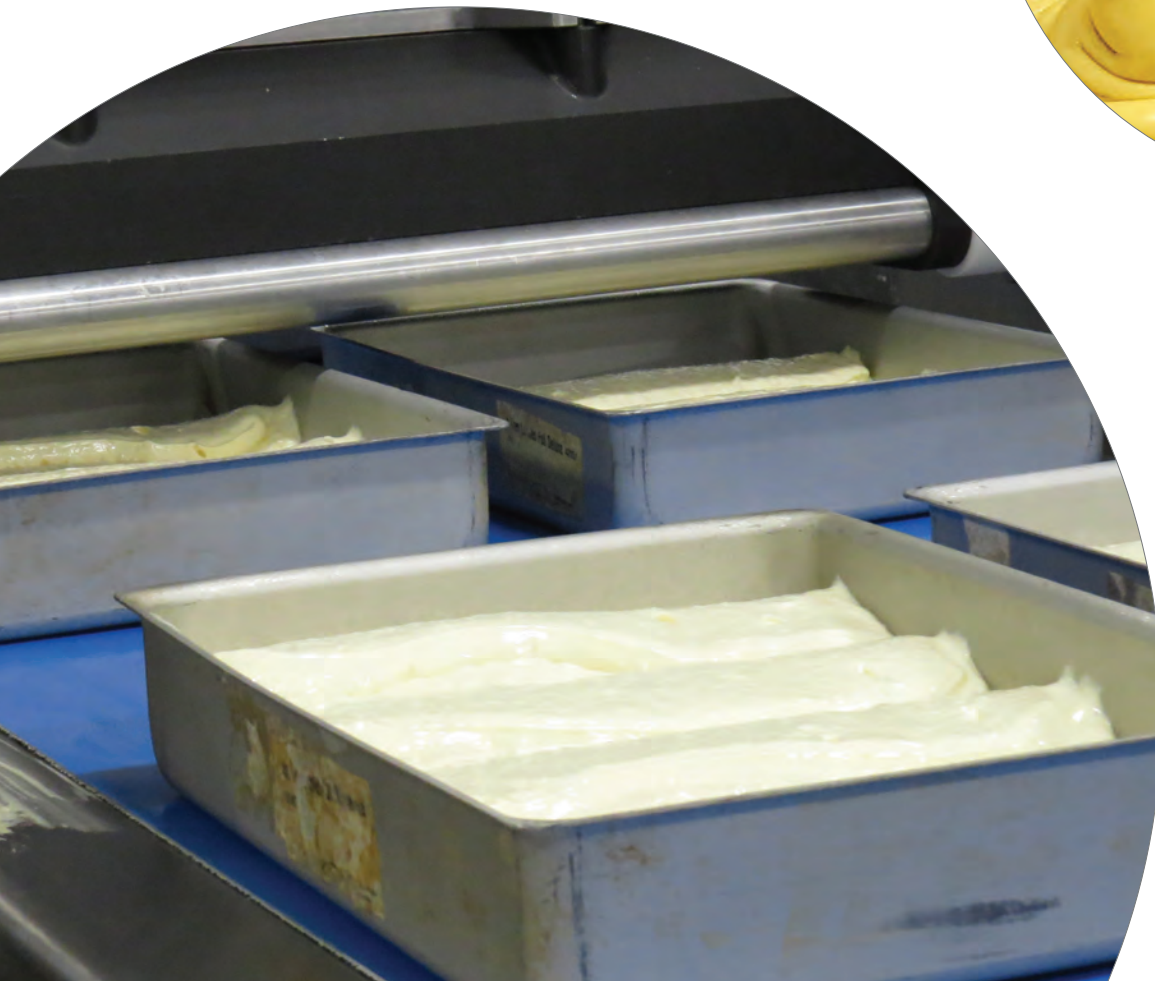
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INTRODUCTION: UNDERSTANDING THE HIDDEN COSTS OF PRODUCTION

The hidden costs of production are not always obvious in business metrics. However, they are cumulative, both financially and productivity-wise, so it's important for food and bakery plant owners to regularly comb through their processes, whether they're in regards to employee training, the supply chain, production, or post-production. Most of these expenses indicate a larger underlying problem that must be addressed at the root. Let's take a look at some of the factors that contribute to a higher overall cost of production.



EMPLOYEE TRAINING

It is no secret that training new employees is a time- and money-consuming process. Even though employee training is a necessary expense (especially for food safety, equipment handling, and sanitation), it is important to note the finer details of this training and their costs because they can add up to a hefty number. ADP, an American HR company, warns, “There can be [hidden costs of training new employees](#) that business owners should watch out for. These include the costs of instruction materials, equipment and time for formal training, and the cost of a mentor’s time, if a mentoring system is in place. Other hidden costs include a loss of productivity until the new hire masters the job and the cost of time and travel for employees to network and collaborate.”



Businesses in the bakery and food industry tend to suffer from high turnover, staffing shortages, and a lack of skilled workers. This is not news to anyone. However, it is interesting to consider that the root of this problem might actually lie with employers. On The Fabricator, [Dick Kallage](#) shares a new perspective: “Great companies make it a very big issue to track the real reasons people leave, simply because they are aware of the replacement costs. Often people are fired for inefficiency, but you need to know what is causing the inefficiency. Is it really the person—or is it because of some of the factors described here?”

EMPLOYEE INJURIES

Accidents and injuries are unfortunately common incidents at food processing plants. The nature of manual labor paired with an environment comprised of heavy machinery, sharp objects, and hazardous chemicals presents a playground ripe for injuries to happen. Pan Demetrekakes at [Food Processing Magazine](#) shares some discomfiting statistics: “According to surveys by the Food Chain Workers’ Alliance, 65% of food processing workers have reported being hurt or made sick on the job. The most common complaints were cuts, experienced by 37.8% of all injured workers, followed by repetitive motion injuries (34.6%), slips and falls (26.8%) and back injuries (25.2%).”



The occurrences of injuries and cost of injuries are not predictable things to calculate, but they can be a heavy blow to a company’s bottom line when they do occur. Amy Lowe, Vice President at PSSI, notes that the “cost per medically consulted injury”-- including “estimates of wage losses, medical and administrative expenses, and employer costs” -- was USD 39,000 in 2017, according to the National Safety Council. The cost per death was cited at USD 1,150,000. In 2018, [the NSC shares that the numbers were even higher](#); each medically consulted injury came at a cost of USD 41,000 while each death amounted to USD 1,190,000.

Employee injuries may not be an essential part of the production process but they sure do add to the overall expenses when they happen. “With a 60 percent higher rate of occupational injury and a lost-time injury rate more than twice as high, workplace injuries are one of the most concerning and costly issues inside a food processing facility. Sanitation work in particular has even higher figures, given the nature of the work with dangerous chemicals and large, complex equipment in wet environments,” says Lowe. Downtime, insurance premiums, and investigation expenses may be part of the direct financial hit to the company as a result of these injuries, but Lowe also warns that there are other indirect costs that can’t be measured in money: low employee morale and negative brand perception.



FOOD WASTE

Dr. Manoj Dora, a researcher at Brunel Business School of Brunel University London, led [a study of 47 food manufacturers in Belgium to find the root cause of food loss](#) during production. The study found that these manufacturers lose or waste 1 ton of food for every 35 tons they produce; 10.9 percent of this loss was due to human error, 13 percent to product changes, 8.7 percent to product defects, and 6.4 percent was attributed to buyer contracts.

In addition to providing these numbers, Dr. Dora points out that the pre-production and post-production stages are critical points during which food might get wasted. In regards to food waste occurring before production, his study identified three main drivers:

1. Wrong food orders (e.g., wrong ingredients were ordered, inaccurate amounts ordered)
2. Improper storage of food (e.g., not storing at the optimal temperature or environment, which leads to spoiling)
3. Improper inventory management (e.g., not keeping track of expiration dates, overstocking, cross-contamination)

After production, the causes of food waste include:



Naming these causes of food waste perhaps makes the root problem seem obvious, but Dr. Dora found that companies were quite oblivious to how much food (and, essentially, profitability) they were wasting. He reveals, “I was really surprised to learn how only a few companies measure how much they were throwing away, and they were surprised to see in monetary terms how much they’re losing because of food loss.”

That being said, it’s clear that these inefficiencies in the supply chain and production process are largely due to human error. Poor judgment calls, disorganized processes, and a lack of training on the workers’ part are things that can severely impact a food plant’s productivity and profitability but can easily be corrected. According to [IWI Consulting](#), “food companies could increase their profits by as much as 10% simply by reducing food waste.”

CHANGEOVER

Many food and bakery manufacturers already utilize the newest technology and equipment in their production lines; this being said, things like the design of the equipment, cleaning schedules and processes, production schedule, and a variety in product offerings are all additional factors that affect the duration of changeover time.

Some equipment is easier to clean between products than others; for example, machines designed with many parts tend to take longer to wash and sanitize because they require more time to disassemble and reassemble. It is also worth noting that due to the intricacies of their parts, they also have a higher risk for cross-contamination between products if not cleaned properly (which is a another, much more expensive problem).

Long changeover times during which machines remain idle equates to time not making product. Not only is this a drain on resources like energy and time, it directly lowers your company's profitability.



Ideally, operators should aim for quick changeover between products, as efficient changeover lends to faster recovery and tighter quality control. In turn, this would also help to increase production volume, meet demand, and minimize food waste and inventory costs—the latter of which is another hidden driver of higher-than-necessary production expenses.

ALL-IN-ONE SOLUTION FOR COST REDUCTION

Thankfully, effective technology is available to fill in the gaps left by human error (or even a lack of human workers!). Automated or semi-automated portioning equipment is an excellent solution for long-term production cost reduction, as it can do the following:

Offer manufacturers the opportunity to establish standardized processes and implement process control.

- Cut staffing costs while fortifying labor shortages
- Reduce employee strain or injury from doing repetitive, laborious tasks
- Ensure better quality control
- Ensure a high standard of food safety
- Provide accurate portioning to save food waste (and therefore save overhead costs)

Choosing well-designed portioning equipment will also save time during product changeover. The trick is to select machines specifically designed for efficiency in mind; they would have been made with a minimum number of parts for easy cleaning and reassembly. If you choose to go with a machine that runs on servo technology, you reap another benefit: recipe recall. According to Miguel Lutz, Territory Sales Manager at Unifiller Systems, “[Servo technology] gives way to very fast change-ups between production runs, making for less downtime and higher productivity. Servo machines have more power and that helps to deposit thicker products.”

Without the support of automation, portioning and filling are repetitive, boring tasks for human workers. They can also be stressful on the body, especially if the product is dense and thick. It’s easy to see how employee morale might suffer in these conditions.



“Taking care of staff by automating some aspects of production, like depositing, can lead to lower incidences of injury and greater morale, while decreasing the risk of contamination from human interaction,” says [Sonia Bal](#), Director of Marketing at Unifiller Systems.

FINAL NOTE

Food processing and manufacturing facilities are a bustle of activity; there are often people, delivery trucks, and machines in motion. Amidst all this work, it's important for company leaders to keep a diligent and watchful eye on where money may be silently leaking from process or human inefficiencies. Hidden costs can lie at all stages of the production process, so it's ideal to establish effective organizational and management systems to keep track of things like food waste, changeover time, and even employee training.

For food and bakery business owners seeking to leverage automated portioning equipment, it may initially feel counterproductive to try to reduce production expenses by investing in expensive, and sometimes intimidating, machinery. However, the long-term and consistent value offered by quality portioning equipment outweighs the initial cost.

As automation increasingly becomes the norm in many industries, the question for businesses is not a matter of if they should automate their processes but when. The future of food is already here—it's time to decide whether you want to participate in it.



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