

Four Keys to Efficient Food Wrapping

by Ron Downing
Vice President, Marketing and Sales
George Gordon Associates

The biggest issue facing those involved in the food packaging operations is the transition and movement of product with controlled orientation and integration.

Upstream of packaging, processing yields a product—whether it's pizza, fish fillets, cookies or candy bars. These items are produced via various methods tailored to that particular product. Sometimes that means a cooking and/or freezing process. Most often the product is coming down the conveyor to the packaging operations in a random pattern in various orientations.

Providing these processes with the necessary “assist” to keep all its parts moving in sync for better efficiency can be improved if one knows the key ingredients to production and packaging efficiency for these products. Understanding and utilizing these tricks of the trade can greatly enhance a production line and often dramatically increase efficiency. Keep in mind that many of these intertwine and are essential to proper integration of a system.

Ideally, a properly integrated system should offer:

- High up-time percentage;
- Low-cost operation;
- Low-cost spare parts;
- Tool-free access to a machine's key areas;
- Quick, easy recipe recall;
- Quick, easy roll changes (small change);
- Quick, easy film-size changes (medium change);
- Quick, easy module changes/configurations (large change); and
- Short learning curve/training time.

First Key: Proper Orientation

The first consideration should be orienting a product just enough to get the packaging running smoothly. Sounds simple enough: turn the product to the best orientation to travel through the packaging process. But you should also realize the importance of orienting the product for the necessary aesthetic presentation. It's vital to maintain this orientation throughout the process and to make it a one-step method as much as possible.

Waste results from not properly addressing this concern. A classic example is the sight of a half-dozen employees eyeing a line to prevent frozen pizzas from shingling because orientation was not considered upfront and has only been addressed as a labor-intensive afterthought. It wastes a lot of manpower to have employees monitoring a system that's supposedly automated.

Four Keys to Efficient Food Wrapping

Page 2

This ties into integration, a vital component in achieving a successful “big picture” operation running at peak efficiency. The whole system needs to be examined to ensure it’s truly integrated.

Sometimes, companies can achieve integration themselves. But company leaders need to determine whether it’s right for them. Often a third party can be a great help.

However, if a company wants to perform its own integration, it’s imperative to assign someone (with a manufacturing/engineering degree) within the operation to accomplish it. You need to enlist someone whose primary job will be achieving integration until that task is accomplished.

Of course, third-party experts (manufacturers with an integration focus) can prove helpful, especially in situations in which two companies are attempting to mesh their separate operations into a cohesive whole.

And remember: integration has to be done in your plant. A third party can simulate production conditions at his location, but the final test must occur in the customer’s plant.

Second Key: Timely Delivery

Another “key” involves speed. The product needs to be effectively taken away at the right speed to keep up with production. The good news is today’s electronics allow intelligent control from oven to package, permitting speeds to be observed and synchronized.

The aim is to have an overall intelligence throughout the system so that a smooth startup occurs with a flowing, uninterrupted operation. Servo systems also are a tremendous improvement, and can help achieve results inconceivable just five years ago.

Unfortunately, unlike their Japanese and European counterparts, many U.S. companies utilize equipment that’s less than state-of-the-art. Company leaders can’t be afraid to buy into today’s technology. You certainly don’t have to be ultra-experimental and assume the risk of being the first one with new gear, but you need to be up to date.

And, a word of caution: speed is not the end-all. Simply boosting speed often winds up hiking the scrap rate. Speeds need to be optimized as part of the system as a whole. For example, wrapping-material specifications are a big part of the picture as the time/heat/pressure element always determines the speed to make a good seal. Think system optimization, not speed alone.

Third Key: People and prevention

Speaking of efficiency, it’s imperative that training and *cross-training* of personnel occur so a system isn’t dependent on one key individual.

Four Keys to Efficient Food Wrapping

Page 3

Plus, that personnel training should encompass not only pushing product through, but keeping the machines from breaking down via effective preventive maintenance. Have a clear plan in place for keeping your equipment running at peak levels.

Today's electronic machines are amazing. They can speak to inform you what needs to be done and explain where a problem exists. Much can be built into a machine today. Systems exist possessing 100 different recipes employees can click into the system—whether it's switching from blueberry to cranberry muffins, or changing from 12 inch to 6 inch pizzas.

With the impressive advances of automation, a system can even prompt the operator to do all the right changes. If a film roll requires changing, for example, a machine can remind the operator to change it and tell him what film to use. The system will not allow a start up until the operator acknowledges the changes are made. The system can inform employees that a film roll changeover is imminent and, once the new roll is installed, will again prompt the employee to verify the correct film was installed before starting back up.

With the safeguards of good people and good systems, preventive-maintenance measures become almost intuitive. When it is easy, the job just gets done without a struggle or reluctance. People program the machine for proper maintenance; the machine becomes the "squeaky wheel" with prompting; people perform any needed maintenance; and machine efficiencies go way up.

Good people will always be important. With the fantastic touch screens tools, good people and machine all work together for peak performance. From operator to front office, everybody is happy.

Fourth Key: Consider Contingencies

This leads us to another element in the preventive planning process: the realization that "contingencies happen."

One way to deal with this is determine what you are willing to bear regarding downtime and purchase a level of spare parts meeting that goal. Plus, a big-picture contingency plan certainly increases up time and saves money.

One of the best ways to formulate such a plan is to ask yourself all the "what ifs" before buying that new integrated system. What if the wrappers fail? Where does the product go? Let's say you're producing pizzas. Do you halt the entire upstream process? You can't have pizzas burning. You have to have a plan, such as running product into a freezer until the wrapper is repaired.

Four Keys to Efficient Food Wrapping

Page 4

Or, consider that you've run out of ingredients up the line. Suddenly, no product is made. Do you shut down the wrapper? Or, do you pull items out of a freezer to keep the package line operating?

The ideal to strive for is the least possible amount of disturbance to the product flow when things go wrong. Of course, certain tradeoffs exist. Sometimes, covering all the "what ifs" isn't cost-effective. Company leaders need to brainstorm internally and communicate the chosen contingency plan to the people performing the integration.

A fully integrated system requires integrated planning and culling expertise from many disciplines. The business-management leaders need to be involved from the get-go. The wrong way is to have the attitude that "we'll let the engineers get it done, and then we'll look at it." By being involved at the start, business managers can anticipate future changes that might occur and purchase equipment capable of accommodating their dynamic business model with great ease and low cost.

For example, if you make 100 pizzas daily, a \$300,000 wrapper certainly would be overkill. But, if you're a 100-pizza-a-day operation and some big contracts are imminent, then you might want to purchase a more-expensive wrapper capable of meeting an expanded output. Many times, company leaders don't plan forward enough to get the necessary speeds and capacities that will allow a company to grow.

After all, that's how you grow a business—by accommodating change.

George Gordon Associates, Inc.

Merrimack, New Hampshire

Phone: **603-424-5204**

Web: www.ggapack.com

E-mail: rond@ggapack.com