

WHITE PAPER, by Ken Hynes

Better Packaging Solutions

Put Profits in the Bag



© CMS, Carroll Manufacturing, LLC

This white paper, conceptual rendering and all attachments that may have been included are and remain the property of CMS (Carroll Manufacturing and Sales).

WHITE PAPER: MEAT Packaging and Facility Audits

Better Packaging Solutions Put Profits in the Bag

By: Ken Hynes, CMS

Every industry veteran knows that profitable meat and poultry processing operations have "quality" written all over them, from the wholesome cuts or carcasses straight through to the customer satisfaction that blooms at first sniff, first sight and first bite.

Between start and finish, quality goals are aided by plant logistics -- engineering, production lines and machinery -- and an army of skilled meat and poultry cutters, chefs, cooks and techs working in sync to turn those cuts and carcasses into the essential nourishment that fuels human life.

So what could throw a wrench into this expert system for serving up quality and profits for your operation? Poor packaging choices. Packaging that allows product quality to fall short of production, protection and customer benchmarks can cut profit to the bone. Here's how selecting better packaging options can beef up your bottom line.

Match Packaging to the Application

The best packaging is "just right" for your product, production lines and processing tasks. Throw in transport, storage, marketing and end-user needs and it becomes clear that packaging must effectively address several objectives beyond merely encasing food.

Start by considering the end-state of each of your products. When they reach the retailer or end-user are they raw or cooked? A prepared food, a value-added product (e.g., stuffed pork chops) or a raw ingredient? Fresh, frozen or cured? Chilled or at room temperature? Whole (such as a game hen) or fabricated into subprimal cuts? Will end-users cook the product without removing the packaging (e.g., "cook and strip", boilable or roasting bags?) Is the convenience of packaging color-coded to contents a marketable advantage in a tight institutional or commercial niche?

Next, give a thought to your current style of packaging. Do you use forming or

non-forming materials? Are your lines and product(s) geared to horizontal or vertical form fill and seal machinery? Is any product hand- or vacuum-packed? Deliberately reviewing your products with these considerations in mind is bound to point up features that call for packaging choices that not only better suit each product's characteristics and use but boost profits as well.

Take appearance, for example. If, as all industry pros know, visual appeal is key to customer selection of case-ready cuts, any unprinted areas of roll-stock film or pre-made bag that are less than perfectly transparent will cloud the profit picture -- retail customers want to eyeball the marbling of that steak or the color of that chicken fat themselves. As case-ready continues to grow in market share (particularly in red meats), your products can't afford to not shine in the case.

Take processing. You may, for example, be inadvertently using an expensive puncture-resistant bag for a frozen product that runs little risk from handling, or moisture-permeable or seal-resistant roasting bags that let juices -- and higher yields and profits -- escape.

Take the packing task itself. Automated packing and sealing demand packaging materials that work flawlessly with your machinery and each other. If finished packages exit the clip-seal process with punctures, tears or faulty seals, the culprit may be bag, the clip or the pairing of the two. The cost? Spoiled product (perhaps even liability claims), unusable product or "only" costly lost production time due to repeated attempts to achieve a tight seal.

Packaging that over- or under-performs for your particular applications, lays waste to schedules, undermines customer satisfaction or, worse, threatens product integrity, is unacceptable . . . and avoidable. The right packaging delivers great results on all counts.

When It Comes to Packaging, Science Matters

The seeming simplicity of bag and film function -- wrapping a product -- belies the technology that creates these strip-off, throwaway containers that safeguard contents from temperature extremes, contaminants and the rigors of handling, storage and end-use.

Scientifically speaking, the bags and films used for food processing operations today are, in fact, a kind of highly complex equipment that must perform to exacting standards -- forming upon demand (or withstanding attempts to form no matter what the

demand); shrinking when cued by a target temperature; crisply accepting labeling inks; resisting accidental puncture but readily giving way to an intended cut; allowing moisture and oxygen permeability at pre-determined rates and degrees. The best packaging puts this wealth of polymer (plastics) science at the service of your product and production planning.

Selecting packaging materials with the right array of high-performance, engineered options is as indispensable to optimal processing and profits as your cutting blades, computerized controls and chilling units.

Use Packaging that Fits the Product

Because product comes in all sizes and requires different degrees of protection, packaging must "fit" product on both counts. Too much or too little bag can't hold costs in check.

Mils -- the thickness (or gauge) of the packaging sheet measured in microns -- can affect product and profit for better or worse in several ways. Bags and film, even if made of identical plastics to exacting performance specs -- say, the ability to withstand acidic ingredients or boiling -- are typically available in a range of thicknesses.

The advantage gained by choosing a film with certain specs, while vital, can be negated if film thickness hasn't been figured into the equation. No matter how good the polymer science behind it, a bag or pouch of the wrong gauge can speed spoilage, prevent adequate chilling or promote freezer burn, lose true vacuum or interfere with perfect heat or clip seals -- each failure a fast route to bogged-down profits.

A more obvious but often overlooked matter of dimension is mismatching the size of the packaging to the size of the product. Any "extra" material beyond what's needed for total enclosure, proper sealing and aesthetic considerations is money no operation can afford to purposely throw away. Select packaging materials that fit products and watch profits shape up.

Size matters, too, when the product is in the bag and it's time to, well, seal the deal. For the best clipped seals, take care that fastener dimensions -- width, prong length, strength/ malleability and gauge -- are compatible for use with your clipping machines, bag thickness and pliability and so on. If it's a heat-seal process, it is imperative that the thickness and thermal qualities of the plastic of all your bags and film respond to your particular sealing units by quickly creating a complete and durable seal.

Packaging Is Meant to Protect -- Does Yours?

The public has a right to wholesome food and it's your business to produce it. A large part of the job is ensuring that the product -- whether fresh, frozen, cooked, cured or incorporated into prepared foods such as chili and stews -- stays wholesome (not to mention appetizing) all the way to the plate. Fail on this score and stand ready to squander your profits on everything from goodwill replacement and coupons all the way to product recalls and a legion of customer service reps and lawyers to deal with enraged customers, consumer advocate groups, state and federal government agencies, bad press and lawsuits.

Packaging provides a barrier to a host of assaults that affect processing, shelf life and edibility. While careful implementation of Hazard Analysis and Critical Control Point (HACCP) protocols can lessen contamination for pathogenic organisms during processing, the mechanical barrier protection offered by superior packaging materials helps keep incidental contamination at a minimum both during certain processing tasks and after wrapping -- in transit, on the shelf and in the kitchen.

Films and bags typically provide low-, medium- and high-barrier properties meant to protect against specific risks. Before you buy, identify the elements that pose a threat to your products during and after production. The major offenders include:

- Microorganisms that infect and cause serious illness in people who eat the contaminated product (e.g., Campylobacter and E. coli) or those that produce illness-causing toxins (e.g., Clostridium perfringens and Staphylococcus aureus).
- Moisture passing out of or into product (e.g., dehydration, frank leakage and "freezer burn")
- Plastic quality and seal degradation at high cooking temperatures
- Oxidation (rancidity)
- Environmental contaminants from processing and handling (e.g., unwashed hands, grease, particulate matter, chemicals, gases)
- Environmental abuse (punctures, tears, etc.)

Know your risks and you'll know the appropriate barrier quality issues to discuss with manufacturers' reps. Inadequate barrier performance can mean the difference between profit and very expensive problems.

Get an Expert Analysis of Your Packaging Program

Packaging materials may ultimately be "throwaways" but their role in product integrity, efficient processing and bankable earnings is absolutely indispensable.

But how to choose? Approach your packaging program with the same kind of serious consideration that goes into engineering the line or balancing the books -- seek the advice of experts.

Manufacturers worthy of your interest will be happy to review your operation, fielding your questions and concerns and casting a professional eye on your products, processing, current stock packaging and machinery.

Consider, too, that roll stock film and bags are just part of your packaging program. Some manufacturers offer a catalogue of products -- clips, clipping machines, bone protectants (for vacuum packaging), labels, vented crates and so on -- specifically designed to work in tandem with their wrapping materials. Together they can create a system of packaging solutions that effectively address those often "hidden" glitches that hold your operation hostage.

Opt for expert packaging solutions and you'll find that tasty profits are pretty much in the bag.

-- 30 --

About the author: Ken Hynes is a twenty year, industry veteran and part of the group management team at CMS. CMS specializes in packaging and food processing supplies for the meat and food industry. Specialties include cook/chill supplies; shrink bags, cooking bags, film, netting, and pouches; spices, rubs, oils, and other ingredients; and employee protective gear. For more information, please contact CMS at 35179 Avon Commerce Parkway, Avon, OH 44011. Phone: 440-937-3900 or toll free: 866-769-1500; Fax: 440-937-3901. On the web: www.cmsflavorseal.com. E-mail: info@carrollmfg.com.