

PACKAGING GUIDE

for Scaling Food Businesses



Most packaged food businesses start in a similar manner, with an entrepreneur producing at home or in a shared kitchen, hand packing products into relatively simple, often store-bought packaging, and selling at a farmer's market or self-distributing to a handful of stores. However, as these businesses grow, their packaging needs to evolve. Whether the business will continue to self-produce or enlist a contract manufacturer or co-packer, the packaging must change to support distribution through a supply chain, allow retailers to effectively merchandise the product and differentiate itself from other products on the shelf. While every business is unique, there are many common packaging considerations that will help an entrepreneur as they seek to scale their business.

While a myriad of topics needs consideration with regard to packaging, they generally can be broken into three primary groups following chronological order through the value chain, including food protection and safety, interaction of package and product, and visual differentiation.

- Food protection and safety - ensuring the package helps maintain desired shelf life and physical integrity.
- Protection through the supply chain - aggregating and presenting the product in a manner that satisfies each member of the value chain (e. g. distributors, retailers and end users).
- Differentiating in the marketplace through packaging - ensuring the product delivers the intended impact to effectively compete in the marketplace.

Glossary

A glossary of packaging terms is included at the back of this guide.

Food Protection and Safety

Packaging plays an integral role in protecting a food product, ensuring it gets to consumers with the intended taste, quality and texture. However, a number of variables work against that product experience goal. Moisture, oxygen, light and temperature can all negatively impact a product's quality. Package type, its properties and fabrication, as well as the product manufacturing process, can impact the ability of the package to provide a barrier against these variables.

Moisture

Product moisture has a profound impact on product quality throughout its shelf life. Often, this is a defining characteristic of the product's texture consumers describe as "dry," "soft," or "moist."

From a scientific point of view, moisture in a system (for example, breakfast cereal in a pouch) flows from areas of high concentration to low concentration, as that system attempts to achieve equilibrium with its environment. For example, breakfast cereal in an opened pouch gets "soggy" or "stale" when exposed to a humid environment – the cereal gains moisture from the air until it reaches that same moisture content as the air. Product packaging cannot stop this transfer, but its barrier property, known as the water vapor transmission rate (WVTR), describes how the package can slow down the speed with which this transfer happens. It's important to consider a primary package substrate (in direct contact with the product) that minimizes the WVTR to slow down moisture migration while optimizing packaging cost.

Oxygen

Oxygen within a package's headspace coming in contact with food also impacts quality. The oxygen reacts with compounds in the food to cause oxidation and is a major contributor to food quality deterioration due to formation of undesirable off-flavors or aromas. Packaging substrate or format is a critical consideration in protecting product from oxygen. Similar to moisture, oxygen flows from areas of high concentration to low concentration. In this case, as the oxygen inside the package is consumed by reacting with the product, oxygen in the air outside the package flows into the package headspace to replace that which was consumed (thereby achieving equilibrium, with the same oxygen concentration in the package as outside the package). Product packaging cannot stop this transfer, but its barrier property can slow down the speed with which this transfer occurs. Oxygen Transmission Rate (OTR) describes how the package affects the speed of this transfer. It's important to consider a primary package substrate that minimizes the OTR. However, selecting packages with these barrier properties can often cost more, so striking a balance between cost and performance is important. Also, in some cases, manufacturers can replace the oxygen in the packaging headspace with an inert gas, such as nitrogen, to delay the oxidation reaction.

Light

In some categories, such as cheese, the ability for consumers to see the product is important in their decision to purchase. Transparent packaging can promote consumer trust, creating a sense of "what you see is what you get." However, light can negatively impact product appearance by accelerating changes in color, impact flavor by accelerating oxidative rancidity and result in vitamin

Working with a Co-packer

Working with a co-packer presents some unique challenges for entrepreneurs. While a co-packer can provide added scale, many entrepreneurs wrongly assume it will manufacture their product exactly as they are making it today. In reality, most co-packers have far less flexibility. They're often specialized around a limited number of product types and may have further limitations to packaging substrates and sizes. Particularly in the early stage of a food business, an entrepreneur needs a co-packer more than the co-packer needs the entrepreneur. To be successful, a co-packer focuses on how to run an efficient production facility. That calls for limiting variables and demanding large enough product runs to be cost effective. Both of these can challenge the entrepreneur's vision for their business. Entrepreneurs should be prepared to consider using package formats, sizes and materials common to the co-packer in order to achieve a successful pricing strategy.

Kakookies uses a highly realistic photo of the product instead of a window in order to eliminate the negative impacts of light.



consumers to see the product. Finally, minimizing the size of the window reduces light impact.

Temperature

Temperature state plays an important role in preserving food safety and quality; and it should influence packaging decisions. For example, a frozen product will dry out over time due to the low humidity in most freezers. Conversely, a product subjected to elevated temperatures will suffer from accelerated oxidation, resulting in faster formation of off-flavors. Packaging can help limit some of these impacts. Further, be aware that while the intent is to hold a product at a particular temperature, it is not uncommon for temperature fluctuations to occur within the distribution chain in which a product may become warmer or colder than intended. These fluctuations impact product quality and must be a consideration in packaging decisions. In addition, ensuring that packaging does not suffer temperature-related graphics quality or structural degradation is important to consider with respect to the supply chain.

In addition to protecting the product from environmental forces that degrade its quality, another primary function of packaging is to protect the product during distribution, on the retailer shelf, and in-home both before and after the consumer opens the product. Two core considerations of this safeguard are related to protection from adulteration and physical damage.

Adulteration

The most unnerving of food safety scenarios is the risk of intentional alteration of a product with the intent to harm. Such an event could be catastrophic for a small food entrepreneur in the short term due to recall costs and long-term resulting from damage to the brand reputation. Many packages today have some level of tamper evidence, some of which are so common, we as consumers don't often think of them in that way. A heat-sealed bag or glued carton offer a basic level of protection against adulteration. More advanced methods include tamper evident components such as a pop-up button on a jar of jam, a plastic collar on a bottle or a heat-sealed lid.

Protection from Physical Damage

People and machines repeatedly handle a product as it moves from point of production, through the chain of distribution and to the consumer's home. Each handling creates an opportunity for damage. Packaging needs to not

only protect the product from chemical changes, but also physical ones such as breakage or discoloration. It is important to consider how susceptible to crushing, spillage, leakage or breakage a product may be and select packaging that helps prevent such damage. When working with a packaging vendor, it's important to discuss the strength of the actual package substrate and the strength of glues or seals in order to ensure protection from damage through the supply chain while balancing cost of production. Failed packaging – crushed boxes, ripped bags or broken seals – become a financial liability for the food entrepreneur, not the co-packer or retailer.

In addition to the primary packaging, protection from physical damage can come from the product's master case. Often made of corrugated materials, the master case, or shipper, will add additional protection against damage from drops or impacts. One hidden consideration of the master case is stacking



strength. Most products ship on pallets where cases stack as high as a dozen layers. Master cases must be able to withstand the weight of all the product stacked on top of it – including the potential of another pallet. As online sales continue to increase, protection of the product through that supply chain is also important. While an online retailer may likely purchase in case quantities, they may sell to consumers in single

unit quantities. The product may get repackaged into another corrugated box for shipment and may be comingled with other products. This scenario places added strength requirements on the primary packaging.

Shelf Life Fundamentals

The definition of a food product's shelf life is the length of time for which it remains useable, fit for consumption, or saleable. Using this definition, an entrepreneur should consider that a food product's shelf life is only as long as the product meets the experience the entrepreneur expects to deliver to consumers. Two primary components characterize a product's quality and resulting shelf life:

- Microbiological spoilage refers to yeast, mold, or bacterial growth that change product attributes but are not a food safety concern. Typically, processing steps, product pH (acidity/alkalinity), and water activity (the amount of water available to hydrate microorganisms) limit growth. If not limited by any of these factors, refrigeration and/or preservatives can slow down the rate but will not prevent growth.
- Chemical and physical changes are additional considerations in defining a product's shelf life. The impact of these changes is determined by a study which evaluates the product taste and texture over time at typical storage

A Note on Food Safety

Oftentimes, consumers misunderstand shelf life as “how long a food product is safe to consume,” in addition to product quality changes over time. It is important to build in food safety, or a product free from pathogens, into both the product design and process control schemes. The more generic term “shelf life,” unless specified, describes how the product quality changes over time. For assistance in assessing your product or process, consult with a food safety professional (AURI can provide referrals).

Additional Shelf Life Resources

For more information on shelf life, see the below resources:

1. Shelf Life Guide: stilltasty.com/
2. USDA Food Safety Inspection Services Food Dating Guide: fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/food-labeling/food-product-dating/food-product-dating

conditions for that product. As a product ages, or is exposed to heat and/or light, it will demonstrate changes in taste, texture, or appearance. While not harmful to the consumer, he/she may not purchase a product again should the experience not be to his/her expectations while it is still in code date. For example, consider peanuts or almonds: age, heat, and light exposure force a chemical change, resulting in a paint-like taste/smell. This is an example of oxidative rancidity and will ruin the experience of the product for the consumer. While not a food safety issue, this will deliver a poor experience, resulting in damage to the brand reputation.

Code Dating Basics

The world of code dating is confusing, with many different constructs used to help consumers understand the freshness and quality of their foods. In almost all cases, these dates are not a reflection of food safety (as outlined above), but help consumers understand the period of time for optimal product quality.

The Food Marketing Institute and Grocery Manufacturer’s Association have recently taken a leadership position on the issue, proposing voluntary use of two phrases:

- “BEST if used by” is an indication of the last date for optimal product quality (as defined by the brand owner/entrepreneur), but where the product would be safe to consume or use beyond that date. The USDA Food Safety and Inspection Service generally recommends manufacturers and retailers use this code dating approach.
- “USE by” to indicate the latest date a manufacturer recommends consumption of a product for the few products that are highly perishable and/or have food safety concerns over time.

In addition to the consumer-facing code dating, the product will also need to contain additional manufacturer coding that tracks production location and date for food safety recall protection. For example, in Minnesota, eggs must carry a “pack date”, the date of egg grading and packaging for sale. Often the location of this information is a function of manufacturing equipment and it’s important to understand where on the package graphics this information will appear in order to not interfere with other primary communication.

Protection Through the Supply Chain

In addition to protecting the food inside, packaging plays an important role in delivering the product through the distribution system and enabling use by consumers. While easiest to consider are the attributes that impact the consumer, a number of product/package interaction issues related to the supply chain also exist.

Consumer Considerations

How consumers intend to interact with a product is an important consideration for any food business as it influences packaging decisions.

■ Purchase location. Where the consumer purchases the product will impact product count, graphics and even item size. For example, energy bars bought in a store may need packaging for sale by the carton or individually, while the same bar sold for home delivery may be aggregated in a case of a dozen, and yet the same bar sold through a vending machine would require branding and nutritional information on the primary package.

■ Consumption occasion and location. Where and how the consumer is intended to use the product will also drive different packaging decisions. In addition to size and count, consumption occasion and location drive decisions on package durability, resealable closure type, and ease-of-use features such as a pour spout, handle or ergonomic shape. For example, a juice intended for consumption at home may come in a large carton or resealable jug that enables multiple usages and repeated storage before product depletion. On the other hand, that same juice sold in a foodservice location or convenience store for a single use may be smaller and not feature a resealable package.

Retailer Considerations

Retailers have an additional set of considerations to be aware of in determining product packaging.

■ Case pack out. As retailers stock their shelves, they need to be able to fit the contents of a full case of product on the shelf in the allocated space. Knowing the retailer will likely still have product on shelf at the time they restock, it's common for retailers to want to get case and a half pack out on their shelf. For example, if a retailer can fit 12 of an item on shelf in a single facing, an entrepreneur may want to seek a case count of 8 items in order to allow the retailer to put a full case of goods on shelf while there are still up to four units remaining. In addition, it's important to consider the amount of product in a single case compared to sales velocity and shelf life.

■ Product orientation. Retailers seek to maximize their sales per linear foot of shelf space. As such, they want products to make the most efficient use of that space. Packages may not always display with the primary product face forward. At times, stores may turn products so a secondary display panel faces the consumer – a side or a back, for example, to allow the retailer to fit more items on their shelf. This creates an important implication for developing package graphics that allow for display in various positions while not sacrificing ability to communicate to consumers.



This maple syrup uses a proprietary shape to differentiate from competition and reinforce the product attributes; i.e., "this is 'real' maple syrup."



GoGo Squeez responds to intended consumption occasion with an easy to handle, disposable pouch with a twist off top.

Learn from Competitors

One of the most valuable steps in determining what type of package to use is to investigate competitive items. Unless a product is completely new to the world, there are likely category norms that will drive many of the packaging choices; sometime driven by protection issues and in other cases because of how consumers expect to purchase or use the product. Companies already competing in the category have likely addressed many of the core packaging issues. Actively considering the current category's packaging attributes and whether there is value in challenging any of these norms can simplify entrepreneurs' packaging decisions.

In addition, entrepreneurs can gain valuable business insights by visiting the store section. For example, observing how many facings the store allocates to each competitor or the space allocated to the entire category can provide insight for what entrepreneurs can expect for their business.

Free Case Fill

Retailers often seek “free case fill” – a case of product for each store in lieu of slotting fees. While a larger case may be more cost effective to produce on a per unit basis, a smaller case will minimize the cost of meeting retailers’ case fill requirements.



DiGiorno provides brand and variety information on the side label which provides retailers flexibility in how they merchandise products at shelf.

- Product display. As mentioned previously, retailers may stack products in order to display more units. In addition, other display methods have implications for product selection. Sometimes, products sell in dump bins thus requiring a strong enough package to absorb more aggressive handling by store employees and consumers. Retailers may also want to utilize the product case itself for display. This may be a small display case that organizes multiple products, while at other times, it may be a tray or a perforated case that allows the retailer to remove a portion of the case and slide the product onto the shelf as a means of saving labor.

Wholesale and Distributor Considerations

Wholesalers and distributors largely focus on logistics. Chief among their goals is to quickly and efficiently move product through their system. It’s important to understand that the entrepreneur or brand owner is largely responsible for the product while it travels through the supply chain. Wholesalers and distributors, despite handling the product, bear limited liability for the product’s quality. This dynamic should impact the entrepreneur’s packaging decisions.



Candy packages often come in a branded tray that allows the retailer to easily display the product.

- Case/Pallet turns. Wholesalers measure the success of a product in case and pallet turns – how long it takes to go through a pallet of product. An appropriately sized case is important to ensuring the product moves through their system quick enough while minimizing the handling and storage cost per case.
- Pallet fit. While an entrepreneur hand packing goods can use a variety of case sizes, running through a professional logistics system requires product be palletized. For wholesalers and distributors, maximizing the space product cases use on a pallet is important. Case sizes that leave unused space on a pallet are undesirable as they often reduce the amount of goods a wholesaler can fit on a single truck. So too are pallet configurations that have product overhanging the edge as these create significant risk for damage in transport. Further, cases must be able to withstand stacking on a pallet as high as eight feet high, driving a need to optimize the strength of the case versus the added cost of using pallet level strength modifiers, such as corner posts.

Differentiating in the Marketplace Through Packaging

One of the most critical functions of packaging is the ability to help sell a product. For many entrepreneurs, marketing funds are limited, and product packaging becomes the primary vehicle by which to differentiate their product from competition, communicate benefits and ultimately drive sales. Entrepreneurs can use a number of different packaging techniques to drive that needed differentiation.

It's often said in the packaged goods industry that consumers need to be able to select a product in five seconds from five feet away. Consumers are rapidly moving through the store with multiple distractions. A successful package will grab their attention, quickly communicate its primary benefit and make variety selection easy. But how?

Color

Color palette plays an important role in communication. Colors alone can convey attributes, such as white for pure and clean, black for premium or green for fresh and natural. Colors can also provide differentiation from competition (e.g. Coca-Cola's iconic red or Pepsi's contrasting blue). Further, colors are useful in assisting consumers in selecting varieties among a brand. Two common approaches to color are to depend on a two-tone color scheme with a core brand color that leverages different colors for variety differentiation, or to create a rainbow with each variety having a different dominant color. Competitive set and how consumers shop the category can influence this decision. Keep in mind that some brands have legal protection (a trademark) on their iconic color – meaning that other brands cannot use it on their packages without consent.

Message Hierarchy

In any given category, consumers generally follow a common path to making a product selection based on factors like price, size, variety and brand. This order of consideration differs among categories. Understanding how consumers make

their decision can help guide what information to prioritize on a package. This is another instance where looking at the category incumbents, in addition to consumer research, can help drive a good decision. The more prominent the messaging element, the more impact it has on a consumer purchase decision, thus guiding package graphic development.

Product Claims

Statements of product benefits on packaging are, of course, a great way to differentiate a product from competition. That said, a number of factors should influence a decision to add a product claim to packaging. First and foremost, claims must be factual—they cannot be false or misleading. Second, the language of claims is regulated. For example, claiming a product is a “good” or “excellent” source of a particular nutrient requires a specific percent of the recommended daily value; whereas a factual statement of grams per serving is always acceptable. The Food and Drug Administration and the US Department of Agriculture regulate claims, depending on the category. The FDA provides a good primer on package claims at [fda.gov/food/labelingnutrition/ucm111447.htm](https://www.fda.gov/food/labelingnutrition/ucm111447.htm). Finally, consider the position and number of claims. Too many claims on a single package can compete against each other for attention and result in limiting their effectiveness.

Shape and Structure

As noted earlier, product categories often have a common packaging structure. These structures are often rooted in food protection and consumer use, as well as manufacturability and production cost. A different packaging shape or structure can be a great differentiator, but often carries tradeoffs. If considering a shape or structure different from category norms, ensure the product offers the necessary food protection throughout the distribution chain and that it delivers the product in a manner that consumers accept. Know also that deviation from the norm will likely increase manufacturing and packaging costs. Determine if the added cost is recoverable through increased sales.

Channel Considerations

The channel a product sells through can also have impact on the types of packaging used. For example, sales through a convenience store may require a small, fully-printed display case that allows consumers to easily grab products or allow for hanging on display clips. On the other hand, products sold in the club channel (e.g. Costco) often require some way to consolidate into larger product volume. This may simply be a larger primary package but is also achievable through binding multiple retail sizes together, such as two peanut butter jars bound by shrink-wrap, or combining multiple primary packages within a larger secondary package, such as multiple cereal packages sold in a larger box. Each of the latter two cases can present unique challenges and opportunities. When binding multiple products, it’s often important to obscure the individual unit Universal Product Code and display a UPC for the bound product offering; while multiple smaller sizes contained within a box may provide the opportunity to use unprinted, and therefore potentially less expensive, primary packaging. Additionally, within the club channel, products may require corrugated trays between pallet layers to secure product; this can become an additional space to communicate to consumers.

Basic Label Requirements

Despite the desire for a package to differentiate itself from others, there are a core set of items required on every package. Not only is this information required, there are specific directions for its location, proximity to other information and size.

Required information:

Date Code	Allergen Disclosure
UPC	Net Weight
Nutrition Facts Panel	Legal Standard of Identity or Product Description
Ingredient Declaration	Location of Manufacture or Company

The specific requirements of this information will differ depending on your product category. For example, the USDA controls and must approve meat product label and package graphics, while most other categories are regulated by the FDA and do not require a specific review and approval. The FDA does, however, have specific label requirements that must be considered, subject to audit at any time.

A Small Business Labeling Exemption exists, so businesses under a certain threshold avoid the requirement to have nutrition facts on their primary package. While the government provides this exemption, retailers may still require any product they sell to contain a nutrition facts panel. More information on the exemption can be found here: <https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm2006867.htm>

Note that this link is to the FDA ruling, but a similar ruling exists for products regulated by the USDA (i.e., meat, poultry, fish, eggs, dairy) and is found at: fsis.usda.gov/wps/wcm/connect/f4af7c74-2b9f-4484-bb16-fd8f9820012d/Labeling_Requirements_Guide.pdf?MOD=AJPERES

Getting a UPC

A common question entrepreneurs have when scaling their product is how to obtain a Universal Product Code, or UPC. A non-profit called GS1 manages UPCs and, for a nominal fee, a company can join GS1 and receive UPCs and barcodes for their products.

Additional UPC Information

For more information on UPCs, visit www.gs1us.org

Selecting a Designer

When looking for a resource to create package graphics, a graphic designer with experience creating food packaging can be an invaluable asset. Several requirements exist for package graphics such as font sizes for certain information, location of certain information on certain package faces or proximity to other information. While many graphic designers can create attractive brand marks and front panel artwork, they may lack the knowledge regarding required information as well as knowledge about limitations of certain substrates to successfully print complex graphics. A designer with experience in creating food packaging can simplify adhering to information requirements.

Package Type Considerations

Package Type	Common Uses	Category Examples	Advantages	Disadvantages
Folding Carton	Secondary package	Dry good, shelf stable	Cost, print quality, various strengths, recyclability and use of recycled material, cost to inventory	Shelf life (if used as a primary package), tamper evidence, moisture and grease resistance
Cans	Primary package	Soups, vegetables, drinks	Cost, shelf life, durability, tamper evidence, strength	Cost to inventory, limited product applications, weight
Bottle / Jar (Glass)	Primary package	Drinks, sauces	Shelf life, shapes/utility, product visibility, high moisture/oxygen barrier	Material cost, cost to inventory (if premade), weight, requires a lidding operation, shatter resistance
Tub (Plastic)	Primary package	Dips, cottage cheese	Utility, durability, high moisture/oxygen barrier	Print quality, cost to inventory, requires a lid as a separate piece
Flexible pouch	Primary package	Shredded cheese, cereal	Cost, product visibility, print quality, utility	Limited moisture/oxygen barrier properties
Film/wrapper	Primary package	Granola bar, candy bar, string cheese	Customizable moisture/oxygen barrier properties, printing limitations, graphics quality, automation	Bulk purchase, lowest cost requires a flow wrapper, requires equipment to seal
Corrugated (also referred to as cardboard)	Master case, shipper, tray	Shipping cases, club displays	Durability, cost, recyclability, use of recycled materials, strength	Shelf life (if used as primary package), print quality

Controlling Packaging Costs

Many entrepreneurs start their businesses with relatively simple packaging; often nothing more than a paper label on some sort of container. As the package evolves to a format that supports the business' growing scale, a number of factors can drive unexpected costs if not carefully considered.

Printing Format

Printing digitally may be more expensive on a per piece basis than a plate-based approach, however, it may save costs in the long-run. Traditional processes like offset lithography, flexography and rotogravure printing require production of plates and often longer print runs to drive efficiency. For a young business that may rapidly evolve assortment, recipes and branding, this can create a risk of obsolete packaging. Digital printing, while more expensive per piece, often removes many of those barriers. Digital uses media files, rather than plates, and does not require large minimum quantities.

Purchasing Requirements

Unique product shapes or sizes can also drive incremental cost. Selecting a

stock size offered by a packaging vendor will likely provide for lower production costs and packaging procurement costs than choosing a custom shape.





Packaging Creation

Some packaging brought into a manufacturing facility is ready to fill, seal and ship out for sale; while other manufacturers use on-site fabricated packages during the production process. For example, the manufacturer often receives packaging for shredded cheese pouches or bags of potato chips as roll-stock that is formed to its final shape immediately prior to filling with food. Packaging created on-site is often more cost effective for the co-packer and therefore the entrepreneur, though minimum order quantities and equipment requirements may make this a less attractive option for new entrepreneurs.

Labels Versus Pre-printed Packaging

The basic construct of most food startups – a label on a package – may still be a viable option for a scaling food business. In fact, large brands in many categories (beverages, dips in tubs) use labels rather than fully printed substrates. Labels generally provide greater flexibility for changes due to their lower cost per unit.

Key considerations by distribution stage

 Point of Product Manufacture	 Distribution	 Point of Purchase	 Consumer
Manufacturer's capabilities	Case strength	Product size	Product use
Stock vs custom	Case pack	Orientation	Use rate
Shelf life	Pallet fit	Number of facings	Product storage
Food safety and quality		Merchandising options	Branding
Printing format		Tamper evidency	Nutrition facts
Barrier properties		Case pack out	Code date
		Differentiation vs competition	
		Product claims	

Packaging Glossary

Case pack out – Ensuring that a retailer can fit at least a full case of an item on the shelf in its allocated facings.

Display-ready case – an easily opened case, which becomes a product display case.

Flex packed – a product with two primary display panels or faces with graphics oriented both vertically and horizontally to provide the retailer the option to display the product in two different orientations.

Headspace – the space in a food package between the package itself and the food product inside.

Master case – a logistics unit, most often made of corrugate, to aggregate a number of other packages.

Oxygen transmission rate (OTR)– the rate at which oxygen moves through the packaging substrate.

Primary package – the package directly in contact with the food product. It may or may not be the product the consumer sees at shelf.

Secondary package – a layer of packaging that aggregates one or more primary packages. Most often a package the consumer sees at shelf. For example, a carton of granola bars is the secondary package containing the primary packages (foil wrappers).

Shipper – a term that is sometimes synonymous with master case, or may refer to a display case that holds several consumer items.

Substrate – a generic term for the type of material used in manufacturing a package.

Supply chain – the series of companies involved in producing and distributing a food product.

Value chain – the process or activities by which a company adds value to a product, including production, marketing, and sales.

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