



Again, you can see that Labelling and Packaging do not exist on their own.

It relies on information from Marketing – For the design, name and brand of the product. What is to be communicated to the consumer via the label and package?

From Product Development the technical information is provided such as the ingredients, nutritional facts panel, preparation instructions, storage information, bilingual requirements, etc.

Quality Assurance ensures regulatory compliance, such as claims and food safety information is evident, if necessary, i.e. Keep Refrigerated; shelf life information

Production & Logistics ensure the correct label and packaging are used for the appropriate product. The input as to if the equipment or personnel can apply the label to the container, if the shape and size of the containers are suitable for the manufacturing operations.

## SESSION OUTLINE

- Design Elements
- Hazards of Designs
- Regulatory Requirements
- Optional Label Information
- Product Protection
- Multi-layer Protection
- Information Summary
- Collaboration

In this session we will be discussing the functions of labelling and packaging for food protection, enticement of the product, and product information.

Through collaboration with other departments all of the pieces are in place for success.

Even though there is not enough time in this session to cover all or even a few facets within each section of Labelling and Packaging design, this session, will provide the basics of considering Labelling and Packaging as an integrated system that not only protects the product and communicates information to the consumer in an appealing way but can also do so in a cost effective and environmentally compliant manner.

The main elements include the aesthetics of design, considerations of function, regulatory requirements, label information, product protection, designing a multilayer system of protection.

## DESIGN ELEMENTS

- Who is going to buy and use the product?
- What container
  - provides the best access to the product?
  - provides the best protection of the product?



What design elements should you consider when choosing a container? Consider your own products and packaging as we go through this module and let me know at the end if you would change any aspect of your current packaging or labelling?

Who is the target market? Age? Gender? How often are they going to have to open the container? Single Serving? Where is it going to be stored?

At one time or other we have all had or will have challenge **opening** a pickle jar.

People try tapping the edges with a knife, running the jar lid under water, tip the jar and tap on a counter and in all circumstances hope that the jar won't break.

Then once we get the jar opened the next challenge becomes getting the pickles, particularly the first one if the product is whole pickles, **out of the jar!**

Is this the best design for a pickle jar?????

The original design engineers were concerned more for safety and the ability of the jar to withstand the thermal processing. Perhaps the size of hands was smaller years ago!

Do you think that if the pickle was a new product, the jar would be designed differently? Would it even be packed in a glass jar?

What container will provide the best protection of the product? Against pilferage, breakage, outside contaminants, light, oxygen, etc.

## DESIGN ELEMENTS

- What container has the most eye appeal?
- What is the best shape and size for the product?



Eye appeal is also contingent on the marketplace and where you want to position the product.

**Take Crown Royal** – a Premium product with an auburn coloured liquid – you know it is whisky, the texture and the shape of the bottle impresses you as to the quality of the product. The bottle is easy to grasp with either one or two hands depending upon the size of the bottle. The cap resembles a crown and the colours and text on the label are synonymous with kings and queens! There is consistency of brand of a premium product throughout the package and label. Generally there is a velvet royal blue/purple bag that the product is placed within the product box that continues the value of the product from the box to the last sip!

**Breaker High Protein Yogurt** in a Pouch pack is directed to an entirely different audience. This is a healthy product where the shape of the container denotes ease of use, ease of consumption directly from the pouch, directed to a younger audience, on the go.

# HAZARDS OF DESIGNS

## Customer needs

- Legibility
- Clarity
- Utilitarian
- Instructions
- Attractiveness
- Emotional attachment
- Cultural faux pas
- Environmental

This slide illustrates the elements of the design that can become hazards to the marketability of the product and ultimate sale or subsequent purchases.

- Legibility – readability
- Clarity – what is in the package
- Utilitarian – ability to hold or grasp
- Instructions – how to use it

- Attractiveness – pleasing to eye; does the colour match the expectation or association of the product
- Emotional attachment – is there familiarity or history of the product with the customer; good times, childhood memories
- Cultural faux pas – naming a product or associating with specific colours, animals, etc. that have negative associations based on the culture of the prospective customers
- Environmental – Sustainability, reduce, recycle, reuse (not too applicable for food industry) e-

footprint, over-packaging  
(educational component)



# HAZARDS OF DESIGNS

## Product needs

- Risk assessment - hazards
- Planned protection
- Materials research
- Efficacy testing

This slide illustrates the elements of the design that can become hazards to the product protection and integrity and must be considered at the initial stage of package design.

## Product Needs – 4 stages:

- Risk assessment – hazards – chemical, biological, physical, sensory
- Planned protection – barriers to counteract the hazards –

some are part of the package/labelling and within the product

➤ Materials research – what materials will provide the protection? New materials, multilayers?

➤ Efficacy testing – testing each level of the package for confirmation of efficacy at the beginning of the shelf life and at prescribed intervals throughout.

# REGULATORY REQUIREMENTS

- Products requiring pre-approval from CFIA
- Mandatory information in Canada
  - Front panel (Bilingual)
  - Product identity – single language only if  
TM or R
  - Common name (Bilingual)
  - Net Quantity Declaration (Bilingual)

Are you familiar with the acronym CFIA for the Canadian Food Inspection Agency? They are the watchdogs and enforcers of the Canadian Food and Drugs Act and Regulations governing all food products sold and distributed in Canada.

The company technical team of Product Development and Quality Assurance will ensure that the appropriate data is contained on the label and package through their understanding of the Food and Drugs Regulations

Some higher food safety risk products require additional inspection and review of information being presented to the public on their labels.

Include: Meat  
Fish and shellfish  
Honey  
Maple Syrup  
Eggs  
Dairy  
Fruit and Vegetables, Processed products

Do any of your products fit within these product types? Do you sell your products outside of B.C.? If yes, then you are likely familiar

with your local CFIA representative and understand the degree of inspection that is required within these products.

Product identity is either the brand and/or the name of the product.

Common name is what people will understand to be the nature of the product, i.e. spaghetti sauce or fruit spread, whereas the product identity may also include a more specific identity such as Mama Mia's Fabulous Sauce which could be used for either product.

The Net Quantity Declaration denotes the container volume or weight of the product that is contained within the package.

# REGULATORY REQUIREMENTS

## ➤ **Front or Back Panel (Bilingual)**

- Ingredients & Allergen statements
- Nutrition Facts Panel
- Preparation Instructions, if pertinent
- Company Name and Address (Domicile)
- Made in Canada (country of origin)
- Specific storage or food safety information (i.e. keep frozen, refrigerate after opening)
- Lot tracking / traceability of product

The information on this slide may be situated on either the front or back panel of the product depending upon the amount of room and the requirement of information for the consumer.

Ingredients and Allergen statements: All ingredients to be declared in order of weight in the product from greatest to least. If present in the product, the top ten allergens must be listed in the ingredient statement, either directly after the ingredient that contains the allergen, i.e. .... Kamut (Wheat)..... Or at the end of the ingredient statement with at least 2 spaces where the statement "Contains: wheat" will be added

Nutrition Facts Panel information must be in the prescribed format per CFIA and the correct size based on the package size. There are a number of versions or the format that can accommodate packages of varying sizes and shapes of package and types of products.

If the product must be prepared further by the consumer prior to the consumption of the product these instructions must be included on the label.

The company (seller) name and address must be present on the package to ensure the consumer or regulator has access to contact the seller in the event of recall or complaint.

Made in Canada or statements to the effect of the origin of the product must be compliant based on the regulations to be truthful and to not misrepresent the origin of the product.

Specific storage or food safety information must be compliant with specific wording and must be present in an obvious location so the consumer can act on the advice.

Lot tracking / traceability of product allows the manufacturer to identify the source of ingredients and materials that may have caused a customer complaint or illness.

## OPTIONAL LABEL INFORMATION

- **Certifications:** Organic, Halal, Kosher, Canada Brand, Non-GMO, Gluten Free, Free Range, etc.
- **Claims:** Nutritional – low sodium, low sugar  
Functional – health claims
- Must be **truthful** and **compliant** with the agency that is monitoring or granting the accreditation

Optional information often includes marketing information such as the story behind the product or recipe ideas or suggested servings.

Other information may require conformance to accreditation requirements and may also include registration with the granting agency.

Nutritional and Health Claims in Canada have very specific requirements of use and statement. Need to confirm with Food and Drugs Regulations.

Further details and information can be found in the workbook.

# PRODUCT PROTECTION



To retain and maintain:

- product integrity
- food safety / prevent contamination
- quality attributes
- product information – how to prepare

Here is the example (Eggsample) of the Egg and the package design to protect its integrity and safety.

Product integrity – if you purchase a carton of eggs you want them to be whole by the time they arrive home. Note that the shape, materials and size of the carton is specific to the size of the eggs.

Food safety / prevent contamination – If an egg is broken there is potential that salmonella can get into the egg thereby contaminating the egg and providing an opportunity for food illness.

Quality attributes - Size consistency, number, colour, shape, odour, taste

Product information – outside of carton – identity, Grade, quantity, name of farmer (source of eggs)  
- inside of carton – nutrition information, recipes, easter egg colouring instructions, etc.



# MULTI-LAYER PROTECTION

## Protection through Distribution

- **Primary Package** – closest to product
- **Secondary Package** – may be outer shipper or an intermediary package that allows for distribution at a counter i.e. multi-packs
- **Outer Shipper** (Secondary or Tertiary Package) – is the transporting container



## Protection through Distribution

Starting from the inside out:

Primary Package – Example Chocolate Bar – wrapper protects the bar from light, oxygen (rancidity), pests

Secondary Package – counter box also known as a display pack (allows retention of the integrity when carrying or holding up to 12-15 bars at a time). The counter box or a multipack box allows for purchase of multiples or of a variety of flavours within a single purchase item.

Secondary Package can also be considered a shipper if the container is durable and strong enough to stack product on top.

When a counter or inner box is supplied then the Shipper is considered the tertiary package.

When designing a package system the engineer will identify where the structure and support is provided at each stage of pack. The primary package role is product quality and safety protection.

Subsequent levels of packaging will be used to protect the integrity of the product; i.e. a counter box of 12 bars will ensure the bars do not crush each other, are not bent or broken. The counter box also has to have some rigidity and support to ensure the weight of boxes layered on top do not crush the lower cartons and product. Additional Sealing of the boxes such as via shrink wrap will contain the product and support the carton to retain its shape.

The outer shipper will be designed to hold the requisite number of cartons and provide protection from impact, weather, weight, and pilferage. The structure of the shippers will also take into account the arrangement of the cases on a pallet, the pattern per layer and the number of layers engineered to withstand crushing and add support at critical junctures; while adding support to the entire pallet.

# INFORMATION SUMMARY

- **Primary selling package** - product information (most detail)
- **Secondary/counter box** - product identification, number of units, net quantity, seller and marketing information
- **Shipper** - little printed information; barcode formats preferred

This slide summarizes the information that is placed at each stage/level of the packaging from the product to the shipper.

Primary selling package – most detailed information as that will be the first and closest package that the consumer will see and hold related to the product.

Secondary or counter box – product identification, number of units, net quantity and seller and marketing information

Shipper – least amount of printed information, converting more use barcode formats that include the expiry dates, product identity, the production code, etc. Now often just product name, quantity, and seller information.

# COLLABORATION



Critical to ensuring the protection of product while attracting customers and purchases the Labelling and Packaging designers must carefully understand the product qualities and the demographics of the target audience.

Input from all departments is valuable to prevent damage during transport, ability to package using equipment in manufacturing efficiently, minimize losses during filling, labeling, and packing, ensure employees and consumers can handle the products easily, and to meet the costing criteria.

## **NEXT STAGE OF LEARNING**

1. Define and design your package
2. Create a compliant label
3. Research claims for your product
4. Test your package design for protection efficacy

This level you have learned the basics of food labelling and packaging requirements and design.

To effectively create the design that will attract the consumer while protecting the product safety and quality input from all department is required.

In a small operation many of these activities are conducted by a single person but it is critical to understand the roles and responsibilities of each set of activities.

The next stage of learning will require further knowledge of designing a package for your product, where you create a compliant label for Canada, research the claims for your product, and test your package design for protection efficacy.

# **FEEDBACK, PLEASE**

Please take a few minutes to assist us by providing feedback as to the content and delivery of this module.

We would appreciate if you would provide your name and contact details to follow up for more details as we want these modules to constantly be relevant to food business owners. We appreciate all input, positive and less than positive!