



MAIZE PACKAGING



AATMANIRBHAR BHARAT

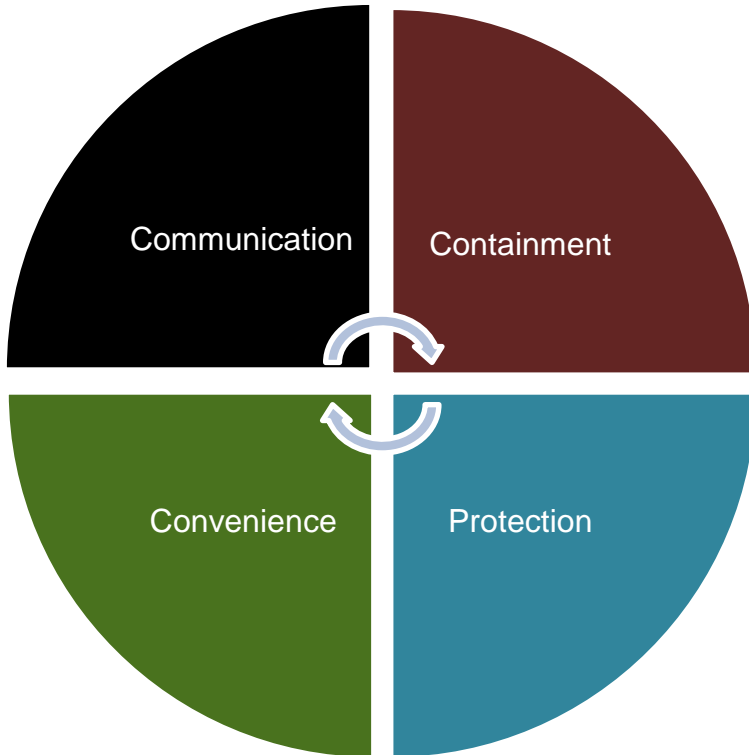
**PM Formalisation of Micro Food Processing
Enterprises Scheme (PM FME Scheme)**



- Maize is the most important cereal in the world. It is a source of more than 3,500 products including specialized Maize like QPM “Quality Protein Maize”.
- Production scenario of three major crops shows that the growth in maize production in last 20 years is impressive.
- During 2000, the maize, wheat and paddy were produced in same quantity globally. During 2019, maize was produced 382 m t more than second most producing cereal wheat in the world.
- At present maize is being cultivated on 197 m ha acreage with a production of 1148 mt and productivity of 5.82 t/ha during 2019



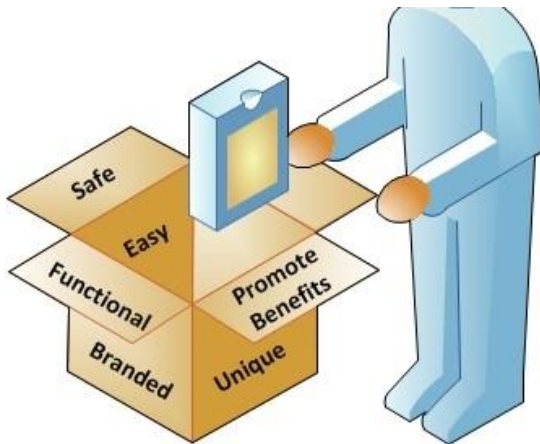
FUNCTIONS OF PACKAGING



- Ability to protect content from spoilage and Spillage
- Prevent insect infestation and insect damage
- Economical, easily available and easy disposal
- Confirm with food laws



FUNCTIONS OF PACKAGING



- Offer Protection against environmental conditions- moisture barrier
- Offer protection against microorganisms- oxygen barrier
- Strength properties to withstand mechanical hazard during transportation and storage
- Have a good printability

PRIMARY PACKAGING

- Primary packaging is the packaging in direct contact with the product itself and is sometimes referred to as a consumer unit.
- The main purpose of primary packaging is to contain, protect and/or preserve the finished product, particularly against contamination.



PRIMARY PACKAGING

- This is the first layer containing the finished product, such as a plastic pouch holding whole-grain cereal or the cardboard box containing the pouch of cereal.
- This type of packaging is often intended for the end user or consumer. In addition to making it easier for consumers to handle products, it makes the products look more appealing and can be used for communication purposes to convey printed information about the products to consumers.





SECONDARY PACKAGING

- This type of packaging is used outside of primary packaging to group a certain number of products to create a stock-keeping unit, commonly referred to as a SKU.
- It facilitates the handling of smaller products by collating them into a single pack.



SECONDARY PACKAGING

- This type of packaging also provides supplementary protection to help maintain the integrity of the primary packaging. In addition, it can serve as a shipping container for small shipments, making it highly useful in e-commerce.
- Secondary packaging is frequently made up of multiple components (box, padding, separators, reinforcements, bags, paper, etc.).

SECONDARY PACKAGING

- It may also be customized to make a product easily identifiable in the warehouse setting. In the case of cereal, for example, the secondary packaging would be the corrugated cardboard box containing multiple individual boxes of cereal.

TERTIARY PACKAGING

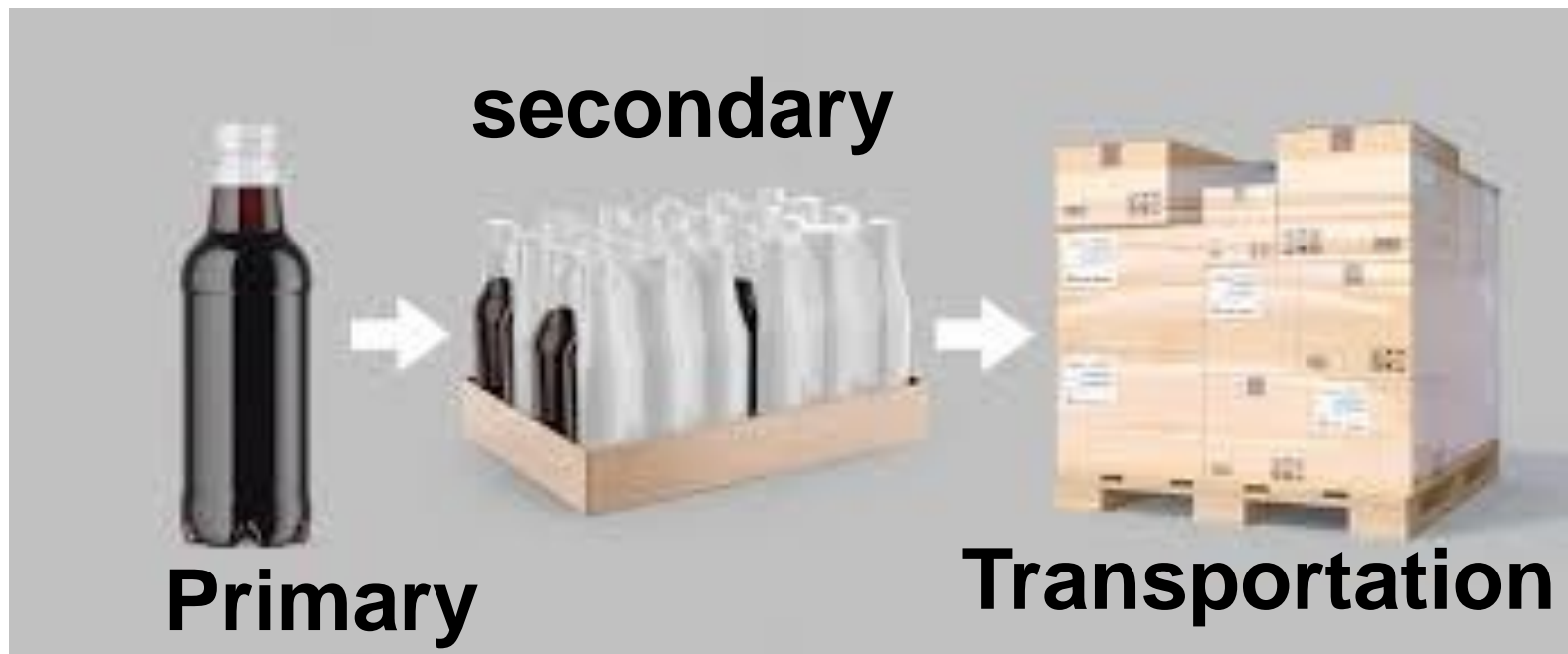
- Often referred to as bulk or transit packaging, this type of packaging is used to group larger quantities of SKUs to transport them from point A to point B
- (e.g. from production facility to point of sale). During this stage, products are handled as distribution units.



TERTIARY PACKAGING

- This type of packaging makes it easier to transport large and/or heavy loads safely and securely. In addition to helping prevent damage, it consequently facilitates the handling, storage and transport of goods.
- An example of tertiary packaging is a stretch-wrapped pallet containing a quantity of cardboard boxes (secondary packaging) to enable efficient product shipping.







BULK PACKAGING

- Women plastic bags which may be laminated or provided with a loose liner bag and multiwall paper sacks with a plastic liner bag.
- The plastic based or carton alternate packaging materials are used to overcome the contamination problems associated with jute.
- Moreover, plastic bags/liners also help in retaining the quality of the rose packed inside for a longer time.



U-PANEL



4-PANEL



CIRCULAR
(TUBULAR)



BAFFLED

ADVANTAGES OF BULK PACKAGING

- Bags are flexible, collapsible and durable
- Can be used for packaging of, powder and any free-flowing material.
- Product wastage/spillage and tampering can be avoided.
- Since the handling is mechanized, less labour is required.
- Saving in time for loading and unloading.
- Bags are light in weight and, therefore, freight costs are reduced.
- Creates eco-friendly, pollution free working atmosphere.





CONSUMER PACKAGES

- The options available to the traders/exporters in the selection of a consumer pack for domestic and export market are quite wide.
- The selection/choice of the packaging material/system depends upon a number of factors.
- Shelf-life period(the degree of protection required by the product against moisture pick-up, aroma retention and discolouration).
- Climatic conditions during storage, transportation and distribution.
- Type/sector of market.
- Consumer preferences.
- Printability and aesthetic appeal.

FOOD GRADE HDPE FILM (POUCH)

- One of the cost effective means of Packaging
- HDPE stands for High Density Polyethylene
- These films may be printed with details & logos
- It's more suited for liquid food though



FOOD GRADE PP FILM (POUCH)

- One of the cost effective means of Packaging
- PP stands for Polypropylene
- These films may be printed with details & logos
- It's used for wide variety of food products



LAMINATED RETORT FILM ROLLS

- Used by more reputed brand, for bulk packaging
- Material usually includes a laminate of metal & plastic
- One of the modern materials used for packaging
- Can be printed with required details



FOOD GRADE PP CONTAINER

- These are one of the means for packaging that provide more aesthetic appeal without heavy secondary packaging.
- Require their own specialized packaging machine, if containers are to be heat sealed.

FLEXIBLE PACKAGING

The printed flexible pouches are generally laminates of various compositions.

1. Polyester/metallised polyester/ LDPE
2. BOPP/LDPE
3. BOPP/metallised polyester/LDPE.
4. Polyester/AL foil LDPE





FLEXIBLE PACKAGING

- Polyester and BOPP materials used for lamination is generally 10 or 12 μ thick.
- PVDC, EVOH and EVAL based material have high barrier properties.



TYPES OF POUCHES

- Centre seal formation
- Three sides seal formation
- Four sides seal formation



Centre seal formation



Three sides seal formation



Four sides seal formation



- Composite containers are also used for packaging of corn flour.
- The containers are round and the body (side wall) is made of PE coated foil laminated spirally wound paper.
- The top and bottom ends of the container may be made from metal or plastic.
- The inner face is coated with plastic film or a combination of film and aluminum foil- This ensures optimum barrier properties against moisture and oxygen.



KRAFT PACKAGING

- Has good strength, printability and appearance.
- Other advantages are its low cost, wide availability and low weight.



- Currently very popular material in food packaging.
- Made by sulphate pulping process.
- Poly amide or polyamine resin is used to coat or laminate to improve barrier properties.



OTHER PACKAGING MATERIAL

PET bottles

- Clear, Shiny and transparent.
- Unbreakable.
- Good barrier properties.
- 100 % recyclable.
- Low permeability of moisture and air.



OTHER PACKAGING MATERIAL

- Liner carton filling and packing machine also known as duplex box packing machine
- Provides good protection and barrier properties.



PACKAGING MACHINERY



Bag filling machine



Automatic FFS
machine



Automatic double head
power filling machine

PACKAGING MACHINERY



Maize Flour filling machine

PACKAGING MACHINERY

- Dehydrated Products Packing

Automatic Filling Machine.

Fully Automatic Filling Machine.



PACKAGING MACHINERY

- Filling machine

Semi Automatic Bottle Filling Machine

Fully Automatic Bottle Machine





FSSAI LABELLING REQUIREMENTS

- Name, trade name or description
- Name of ingredients used in the product in descending order of their composition by weight or volume
- Name and complete address of manufacturer/packer, importer, country of origin of the imported food (if the food article is manufactured outside India, but packed in India)
- Nutritional Information
- Information Relating to Food Additives, Colors and Flavors
- Instructions for Use



FSSAI LABELLING REQUIREMENTS

- Veg or Non-Veg Symbol
- Net weight, number or volume of contents
- Distinctive batch, lot or code number
- Month and year of manufacture and packaging
- Month and year by which the product is best consumed
- Maximum retail price



LABELLING OF MAIZE

Vegetarian Sign



Ingredients

Price

FSSAI License number

Best Before

Customer care information

Information of the product

Name and complete address of the manufacturer



For More details Contact:

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