

PACKAGING OF WHEAT FLOUR PACKAGING



AATMANIRBHAR BHARAT

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

Shelf Life of Product:



- Flour infestation is a common problem that both traders and flour millers face.
- Maintaining the consistency of the grain and its flour is a difficult task.
- With due treatment & managed conditioned climate, flour can be stored without any signs of damage for up to 6 months.
- In the open condition, it gets infested within 2 months, affecting flour's shelf life.

Milled Flour is infested for a variety of reasons-

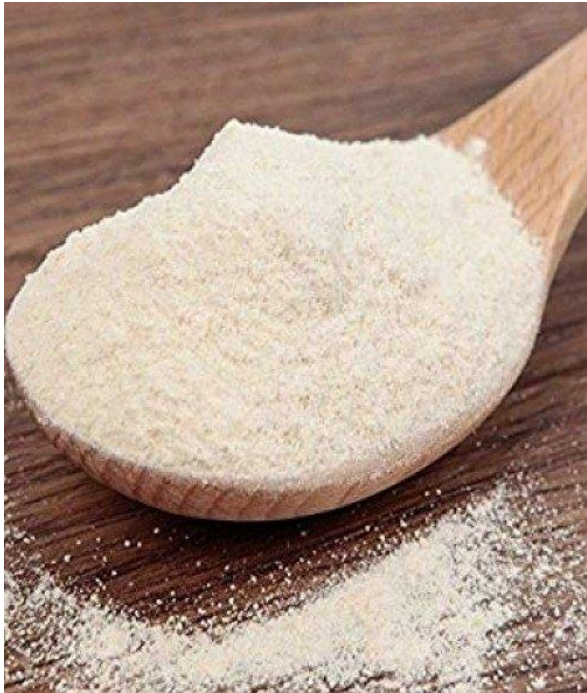
- The moisture content of the Wheat flour
- Storage Conditions
- Storage –Temperature & Humidity
- Cross Contamination
- Unhygienic Conditions
- Cracks on the floors & walls
- Standing water near the stores
- Spillage & bird faeces in the stores/stairs & floors
- Presence of grains germs in the flour.



In order to improve the shelf life of the flour, the following additional precautions should be taken by millers

- Use clean & fumigated grains for milling.
- Use scouring machines in the cleaning line.
- Set cleaning machines with optimum efficiency to separate out all the impurities from the millets grains.
- Clean the dead pockets of the cleaning line frequently, to get rid of non-moving grains at the elevator bottom & outlets, grains conveyor troughs, and tempered grain conveyors.
- Fumigate empty Grains bag.

In order to improve the shelf life of the flour, the following additional precautions should be taken by millers



- Before milling, use scourers to remove dirt in tempered grains.
- Regularly clean the milling Equipment's and machinery.
- Fumigate packing materials before every use.
- Frequently fumigate bins & conveyors.
- Always keep the parking area & the flour storage area clean.
- Type of packaging materials used.

Need for Packaging:



It's not possible to imagine food without a packet!



Food packaging is everywhere. Being such a large industry, packaging has its own principles, technology, advantages and disadvantages, processes, toxic effects and cost.



Packaging which used to be a mere necessity few decades back has now turned into an art and a science.

Need for Packaging:

- ❑ It also refers to the process of design, evaluation, and production of packages.
- ❑ While appropriate packaging is important to maintain the basic attributes of food (temperature, color, taste, texture, etc.), maintaining food safety is an important function of packaging.



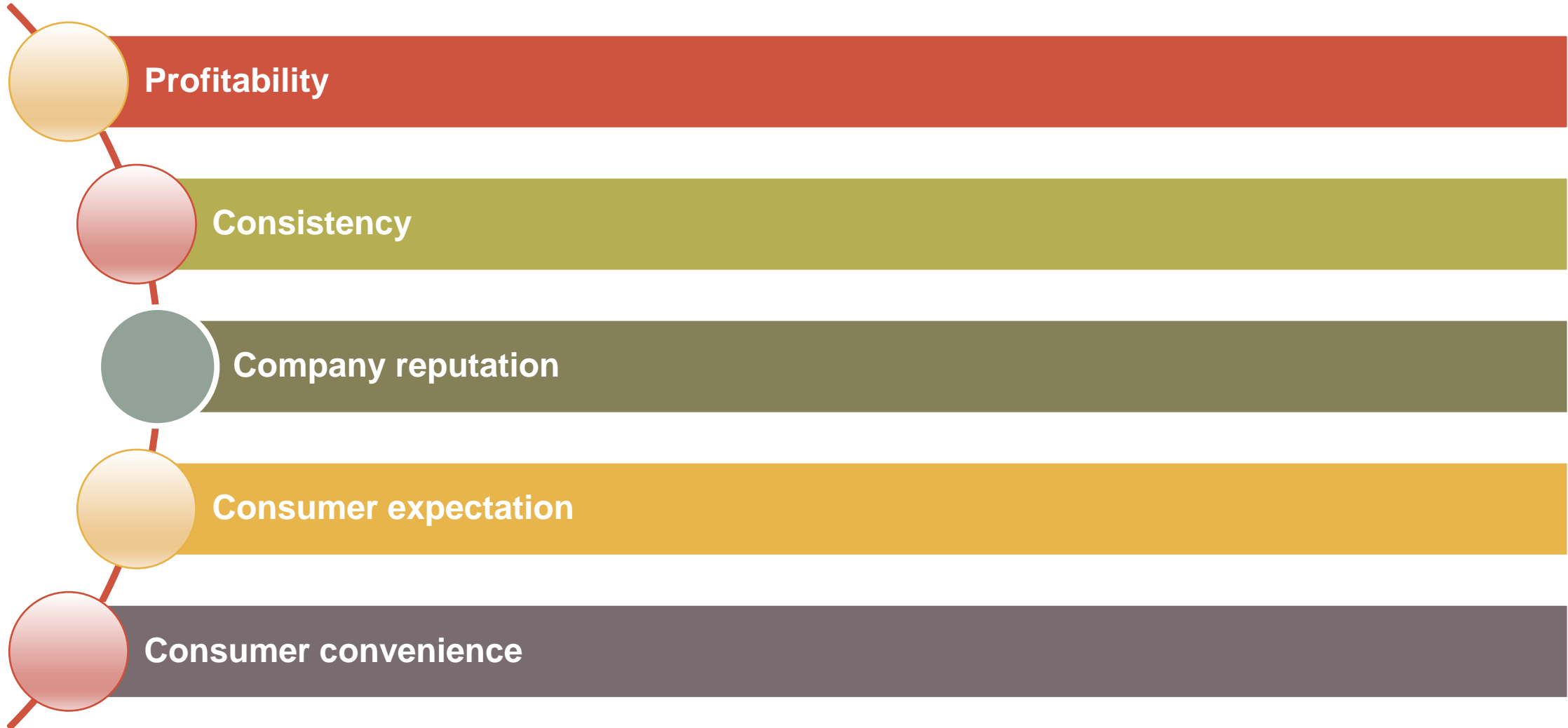
Characteristics of packaging material

The material selected must have the following characteristics:

- Must meet tamper-resistance requirements
- Must not reactive with the product
- They must protect the preparation from environmental conditions
- Must be non-toxic
- Must not impart odor/taste to the product



FEATURES OF PACKAGING



FEATURES OF PACKAGING

Protect contamination

Maintain quality

Legislation (codex, local legislation)

Product consistency

Company reputation



FEATURES OF PACKAGING

Inform (labeling)

Nature of the contents

Legislation, codex, and other codes

Nutrition

Instructions for use

Elimination of fraud

Storage requirement

TYPE OF PACKAGING

Primary packaging

- It refers to the product's immediate container.
- It is the packaging that most closely protects the product.
- It can also be referred to as retail or consumer packaging.
- E.g. tin cans, glass jar, plastics sacks etc.



Types of Primary packaging used in Wheat flour

Hanging Bags-

- Hanging bags in grocery stores and other shopping outlets are commonly used.
- They are a type of plastic bag that is also sealed with a back-middle seam on both ends as well.
- Hanging bags have a pre-cut hole that makes it easier for them to hang from hooks so that they can be seen in an attractive way.



Types of Primary packaging used in Wheat flour

2. Pillow bags

- A pillow bag is another typical type of package.
- The bags are named for their shape, which is like a cushion.
- They are found lying flat on grocery store shelves in the grocery store and were known to carry the items.



Types of Primary packaging used in Wheat flour

3. Gusseted Poly Bags

- Gusseted bags are often called flat-bottom bags because they feature a tucked in pleat that's been pressed flat.
- It allows the bag to expand for greater carrying capacity and to keep the shape of a box if necessary.
- These types of poly bags can be heat sealed, tied, stapled, or taped shut. They're the perfect poly bag for anyone looking to get more flour in a single bag.



Types of Primary packaging used in Wheat flour

4. Flexible Pouches-

- Flexible pouches are a perfect way to carry most packaged items.
- They can be made with zipper-seal closures, which tend to keep the inside contents fresh for use.
- Flexible pouches offer amazing printing capabilities, so you can add your attractive product branding to the pouch itself.
- Many pouches stand up on their own, which helps you improve your shelf appearance.



TYPE OF PACKAGING

Secondary Packaging



- Secondary packaging is the packaging that holds the individual units of package.
- Secondary packaging makes it easier for retailers to display and handle products.
- Secondary packaging may be removed from the item without changing the qualities or attributes of the good.
- Common examples include cardboard cartons, cardboard boxes, paperboard cartons, shrink-wrapped bundles Etc.

TYPES OF PACKAGING

Tertiary packaging

- It refers to the further packaging necessary for storage or transportation.
- It may contain a number of products within a cardboard box for easy transportation.
- Mostly curtain box are used for final packaging



Plastic material for packaging of flour

The printed flexible packets are generally laminates of various compositions. Some of the commonly used laminates are:

- Polyester/metallised polyester/LDPE
- BOPP/LDPE
- BOPP/metallised polyester/LDPE
- Polyester/Al foil/LDPE



Quality considerations during packing

Quality control of packed products is the last time the product is checked before reaching the customer.

Documented checking of the packages entails:

- Weight of the package
- Weight of the spices
- Arrangement of the packages
- Uniformity
- Damage to the product
- Defects; and Moisture content.



Filling and Packaging machine

it's a simple packaging machine, designed to fill the given food grade plastic material's continuous pouch with required product after sealing one end & after filling sealing the other end also to generate packet of product.



FSSAI LABELLING REQUIREMENTS

1. Name of the Food
2. List of Ingredients
3. Nutritional information
4. Declaration Non-Vegetarian or Vegetarian
5. Information regarding food additives
6. Addition of colors and flavors
7. Net quantity
8. Name and complete address of the manufacturer
9. A lot no., Code no., and Batch number details
10. Date of manufacture or packing
11. Best before
12. Country of origin for imported food
13. Instructions for use shall be included in the label if necessary.



FOOD SAFETY AND STANDARDS (PACKAGING AND LABELLING) REGULATIONS, 2011

- Every container in which any fruit product is packed shall be so sealed that it cannot be opened without destroying the licensing number and the special identification mark of the manufacture to be displayed on the top or neck of the bottle.
- For Canned fruits, juices and vegetables, sanitary top cans made up of suitable kind of tin plates shall be used.

FOOD SAFETY AND STANDARDS (PACKAGING AND LABELLING) REGULATIONS, 2011

- For Bottled fruits, juices and vegetables, only bottles/ jars capable of giving hermetic seal shall be used.
- Juices, squashes, crush, cordials, syrups, barley waters and other beverages shall be packed in clean bottles securely sealed.
- These products when frozen and sold in the form of ice shall be packed in suitable cartons. Juices and Pulps may be packed in wooden barrels when sulphated.



FOOD SAFETY AND STANDARDS (PACKAGING AND LABELLING) REGULATIONS, 2011

- For packing Preserves, Jams, Jellies, and Marmalades, new cans, clean jars, new canisters, bottles, chinaware jars, and Aluminium containers may be used and it shall be securely sealed.
- For Pickles, clean bottles, jars, wooden casks, tin containers covered from inside with polythene lining of 250 gauge or suitable lacquered cans shall be used.



FOOD SAFETY AND STANDARDS (PACKAGING AND LABELLING) REGULATIONS, 2011

- For Tomato Ketchups and Sauces, clean bottles shall be used. If acidity does not exceed 0.5% as acetic acid, open top sanitary cans may also be used.
- Candied fruits and peels and dried fruits and vegetables can be packed in paper bags, cardboard or wooden boxes, new tins, bottles, jars, aluminium and other suitable approved containers.
- Fruits and Vegetable products can also be packed in aseptic and flexible packaging material having good grade quality conforming to the standards laid down by BIS.



PM-FME SCHEME

The objectives of the scheme are:

- Support for capital investment for up-gradation and formalization with registration for GST, FSSAI hygiene standards and Udyog Aadhar;
- Capacity building through skill training, imparting technical knowledge on food safety, standards & hygiene and quality improvement;
- Hand holding support for preparation of DPR, availing bank loan and up-gradation;
- Support to Farmer Producer Organizations (FPOs), Self Help Groups (SHGs), producers cooperatives for capital investment, common infrastructure and support branding and marketing.
- <https://mofpi.nic.in/pmfme/docs/SchemeBrochure1.pdf>



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