



Pasta Manufacturing – An insight

Agenda

1. Introduction

2. Manufacturing of Pasta

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4. Types of pasta and their differences

5. Shelf life of pasta

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1. Introduction

- Pasta is a type of food made up of durum wheat by the process of extrusion.
- Pasta produced primarily by mixing flour, water, sometimes eggs and salt
- As per pasta international organization, pasta has been molded into more than 600 shapes.

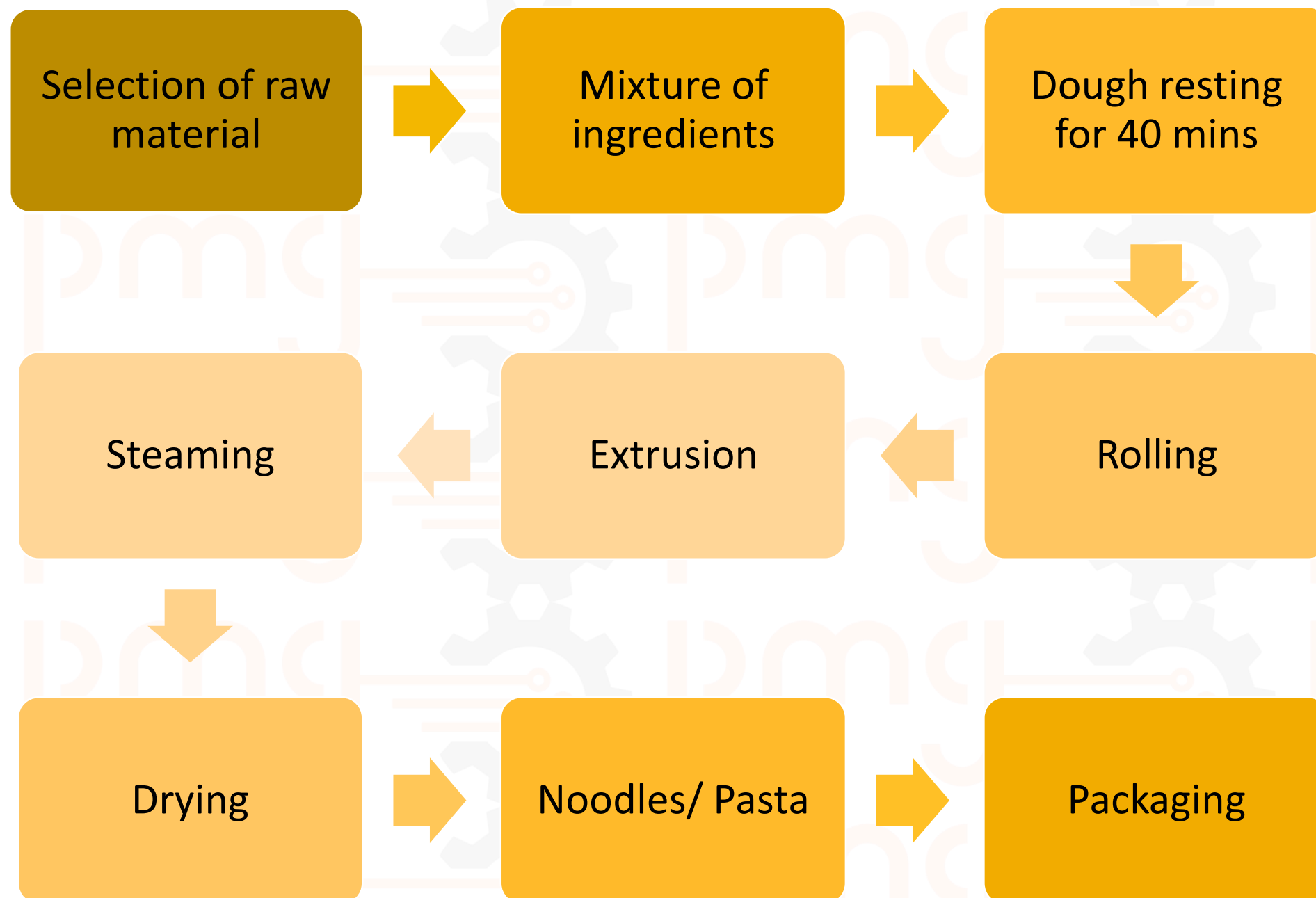


2. Manufacturing of Pasta

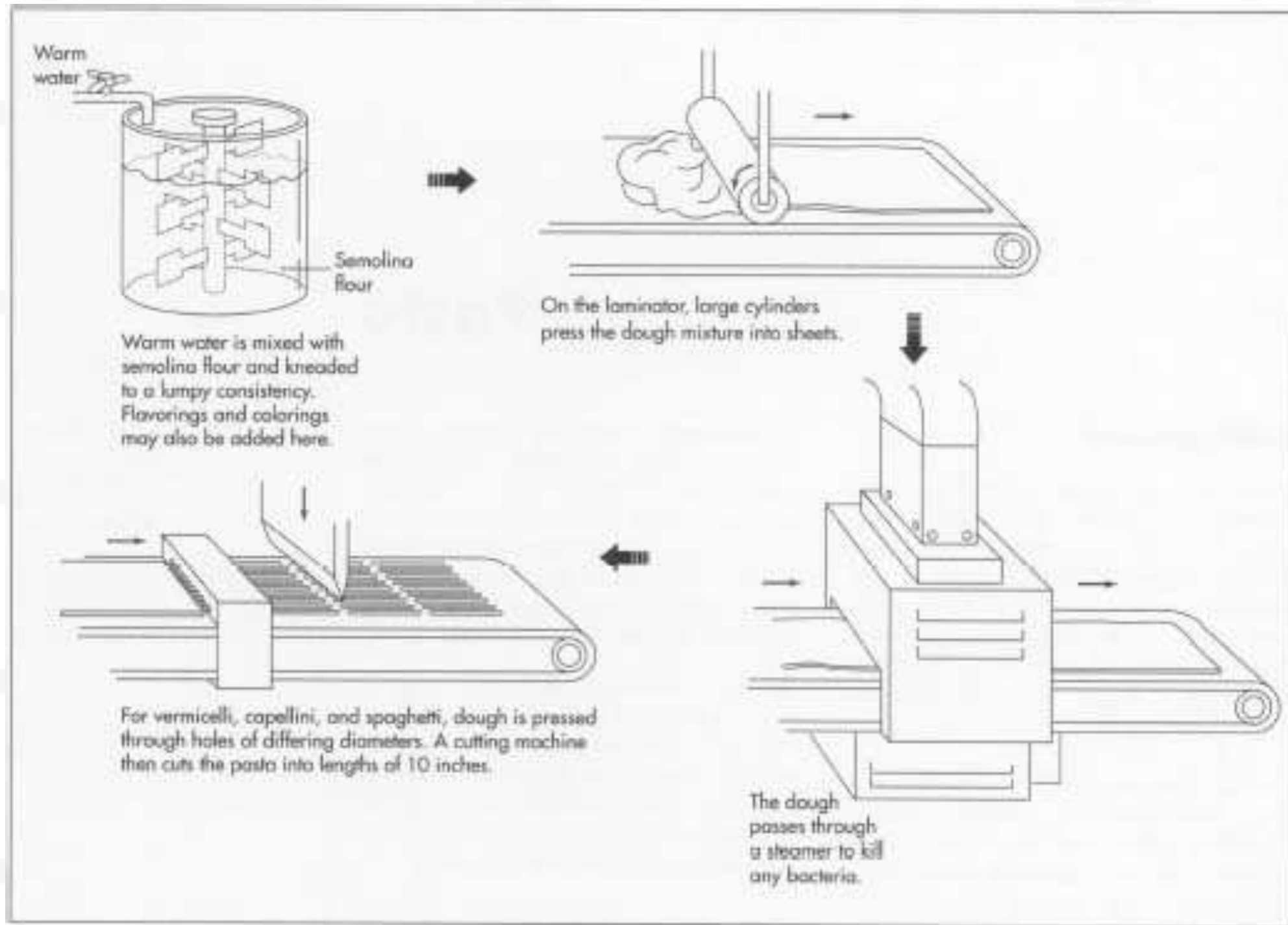
- For the manufacturing of Pasta, durum wheat milled into semolina to reduce its size.
- After milling, flour is mixed with water, eggs and other optional ingredients.
- After mixing, dough transferred to the extruder machine, in which extruder forces the dough through the die to form different shapes.
- Extrusion barrel are equipped with water jacket, to dissipate the heat generated during pasta processing. So, after this process, drying is needed to remove moisture.
- Then after drying the final product is packed in plastic bags so that it can be stored for a longer period.



2.1 Flowchart of pasta processing



2.2 Steps of Pasta Processing



3. Equipment used for manufacturing of Pasta

3.1 Mixing Machine

- For mixing of all the ingredient, Water should be pure, with no-off flavour suitable for drinking.
- Ingredients measured and added to the pre- mixer, then they are transferred to a mixing chamber which finalizes the mixing process



3.2 Rolling Machine

- Rolling machine is used to roll the dough into thin sheets. Rolling machine helps to provide pasta of good texture.



- **3.3 Extrusion machine**:- Extrusion is the process used for kneading and shaping the dough.
- Extrusion machine helps to presses the dough forward through the dies so that the desired shape of pasta can be formed.
- Temperature of dough should be between 40 and 45 °C. if it exceeds beyond 50 °C the gluten network would be damaged



- **3.4 Drying machine** helps to remove moisture content of the sliced plantain to 10 percent. Temperature should be maintained between 60 – 70 degree centigrade to prevent loss of nutrients
- Drying is most difficult and critical method used during pasta making



- **3.5 Packaging machine**- Packaging material should have a high barrier properly to properly to prevent aroma/ flavour losses and in gross the external odour.
- Packaging material used for packaging of pasta should be Plastic bags, Biodegradable pouches etc.



4. Types of Pasta

4.1 Penne

4.2 Farfalle

4.3 Spaghetti

4.4 Macaroni

4.5 Fettucine

4.6 Fusilli



4.1 Penne pasta

- Penne pasta is a type of pasta usually 4-5 cm long.
- Shape: Cylindrical tubes with slanting edges, comes with a ridged texture



4.1 Penne Pasta

4.2 Farfalle Pasta

- Also known as Bowtie pasta
- Shaped like a twisted hollow tube curled up in the shape of the letter C. Short and has a narrow tube. Smaller version of Farfalle called Farfallene
- Shape: Butterfly shape



4.2 Farfalle pasta

4.3 Spaghetti pasta

- Spaghetti pasta is a traditional staple food of traditional Italian cuisine
- One of the easiest shape of pasta
- Shape: long, thin, cylindrical pasta about 50 cm long



4.3 Spaghetti pasta 10

4.4 Macaroni pasta

- Macaroni pasta is also called as “Elbow macaroni”
- Macaroni is usually made up of durum wheat.
- Shape: Shaped like curved narrow tubes



4.4 Macaroni pasta

4.5 Fettuccine pasta

- It is mostly prepared from durum wheat and has a chewy texture.
- Shape: Shaped like long flattered and wider, entwined ribbons like structure



4.5 Fettuccini pasta

4.7 Fusilli pasta

- Made by wrapping pasta strips around a thin rod
- Hollow fusilli is also called as fusilli Bucati
- Fusilli is also used to describe a short, twisted pasta, known as rotini in United states
- Fusilli are long, thick, corkscrew shaped pasta.



4.6 Fusilli pasta

5. Shelf life of Pasta

- Shelf life of pasta is the length of time a commodity can store the product without becoming unfit for use
- Shelf life depends on a variety of factor like best- by-date, preparation method and how it was stored
- Shelf life of dry pasta is roughly 1 to 2 years.
- Shelf life of cooked or processed pasta is about 4-5 days in freezer and 1 week in refrigerator.



6. Conclusion

- Pasta is very convenient, cheap, easy to cook food. It is found in different varieties and types.
- Pasta is easily available in market.
- Common form of pasta include long and short pasta, tubes and flat shape pasta, sheet like pasta, butterfly shape pasta.
- Pasta is favourite food for kids as well as for all age adults.

7. References

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