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Processed Foods – Benefits and Misconceptions and Challenges

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Food

- Life is impossible without Food
- Food has an important social and emotional role

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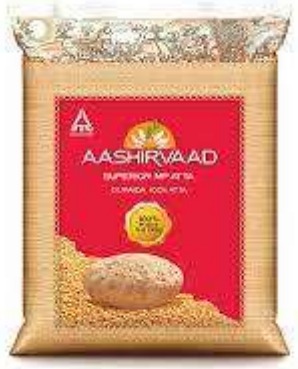

Food Processing

- Process is any step that converts input into an output

- Oxford dictionary defines Food Processing as

the action of performing a series of mechanical or chemical operations on food in order to change or preserve it.

- The resultant product is a “Processed Food”

Food Processing leads to

- Making a food edible
- Preserving Food
- Safe Food
- Extension of shelf life
- Removal of anti nutritional factors and toxins
- Creation of new Categories, Products and delivery platforms and formats
- Value addition
- Employment generation
- Food processing has played a major role in achieving Food self sufficiency and reducing hunger in population

Food Processing – At Home

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- Food processing is not an exclusive Industrial activity
- Traditionally, Food Processing was at the center of human activity for survival
  - Discovery of fire – Cooking – making food edible
  - Cleaning, Pounding, winnowing – making food for human consumption – Cereals
  - Preserving the surplus – Cheese, Ghee
  - Traditional sweets and snacks – Formulated products to make life interesting
  - Pickling for preservation
- Every food we eat – either packaged or made at home is processed.

Food Processing – Why Industrial ?

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- Social changes led to “Food Processing” move out of home kitchens
  - Increase in population
  - People moving out of traditional homes in search of new opportunities
  - Formation of nuclear families and Women joining the work force
  - Work pressure and Paucity of time
- Processed Foods is a result of the social changes and not the other way around.
- Food processing and Food Industry identifies the need gap in the consumer requirement and fills it.

Processed Foods – Challenges

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- Every new technology – challenges come to light late
- New science and understanding reveals the challenges
- In case of foods
  - Refinement – Increased the shelf life but removed a few nutrients
  - Heat treatment – Improved the shelf life but impacted the taste and nutrients
  - Combination of refined ingredients leading to interesting and tasty products but with higher levels of nutrients of concern – Fat, Sugar, Salt
  - Negative perception regarding perfectly legal and safe ingredients and additives
  - Every challenge throws a new opportunity

Addressing the challenges

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- Food refinement to the extent required to maintain the functionality – wheat flour – whole wheat based bread
- Food Fortification
- Non/Reduced thermal process – Preserving the taste and nutrients
  - HTST/UHT
  - HPP
  - Room temperature/Low RH drying of fruits and vegetables
  - Freeze drying
  - Extrusion – new shapes and formats

Addressing the challenges

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- Controlled Atmosphere and Modified atmosphere packaging.
- Negative perception about the use of additives and ingredients to be countered through education and clarification by FSSAI that they are perfectly safe and legal.
- Science based standards are dynamic and there is a continuous review and amendments including reducing the upper thresholds and banning of additives. Trans fat, Potassium Bromate, etc.

Classification of Processed Foods

- As per NOVA* classification (**Not endorsed or validated by FAO**), the processed groups are categorized as
  - Group 1 - Unprocessed or minimally processed food – Cereals, Fruits, Vegetables, Milk – processed enough to make it edible
  - Group 2 - Processed Culinary ingredients – Oil, Butter, Sugar, Salt –
  - Group 3 - Processed Foods – Prepared by adding Group 2 ingredients to Group 1. – Pickles, Jams, Fewer refined ingredients and additives
  - Group 4 – Ultra Processed Foods - formulations of ingredients, mostly of exclusive industrial use, typically created by series of industrial techniques and processes – More number of refined ingredients and additives – Cakes, Chocolates.
- Difficult to draw a clear boundary between Group 3 and 4.
- *Source Monteiro, C.A., Cannon, G., Lawrence, M., Costa Louzada, M.L. and Pereira Machado, P. 2019. Ultra-processed foods, diet quality, and health using the NOVA classification system. Rome, FAO.

Classification of Processed Foods

- Processing and where processed per se are not the issues. What it leads to should be the point of discussion.
- Group 4 Foods, in general, tend to be
  - "High" in calorie
  - "High" in Salt, Sugar and Fat (Nutrients of concern)
  - "High" in GI
  - Unfortunately, Tasty
- A few health concerns are associated with Sugar, Fat and Salt when consumed beyond the threshold levels
- The problem is compounded by
  - Affordability
  - Availability
  - Inactivity on the part of the consumer

The Way Forward

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- Processed Food is here to stay.
- Need to minimize the negative effects arising out of processed foods. All stakeholders have a role to play
  - Industry innovates in processing and formulations. Sets itself definite goals with timelines
  - Consumers – To Understand and study labels. Not give into sensationalism. Own responsibility for their good health and not completely place it on the food industry.
  - Regulators – Equitable science based regulations which would take into account the requirements of the consumer and the Industry.

Way Forward

- FSSAI's concept of "Thoda Kum" could be expanded to counter certain negative effects of processed foods.
- Many FOPNL focusses exclusively on nutrients of concern.
- A recent report submitted to FSSAI has recommended a star rating (FOP) system of assessing nutritional status of the food. It takes into account
  - Nutrients of concern like Sugar, Salt, Fat and its derivatives
  - Positive nutrients like Protein and Dietary Fiber
  - Positive ingredients like Pulses, Fruits and Vegetables, Nuts, etc

Conclusion

- A few issues associated with processed foods have to be addressed.

- How do we address it – Equitably . A million dollar question

- Thank You