

ROLE OF
FOOD INDUSTRY
IN
FOOD AND NUTRITION SECURITY



SPEAKER

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AGENDA

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WHAT IS FOOD SECURITY ?



Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life

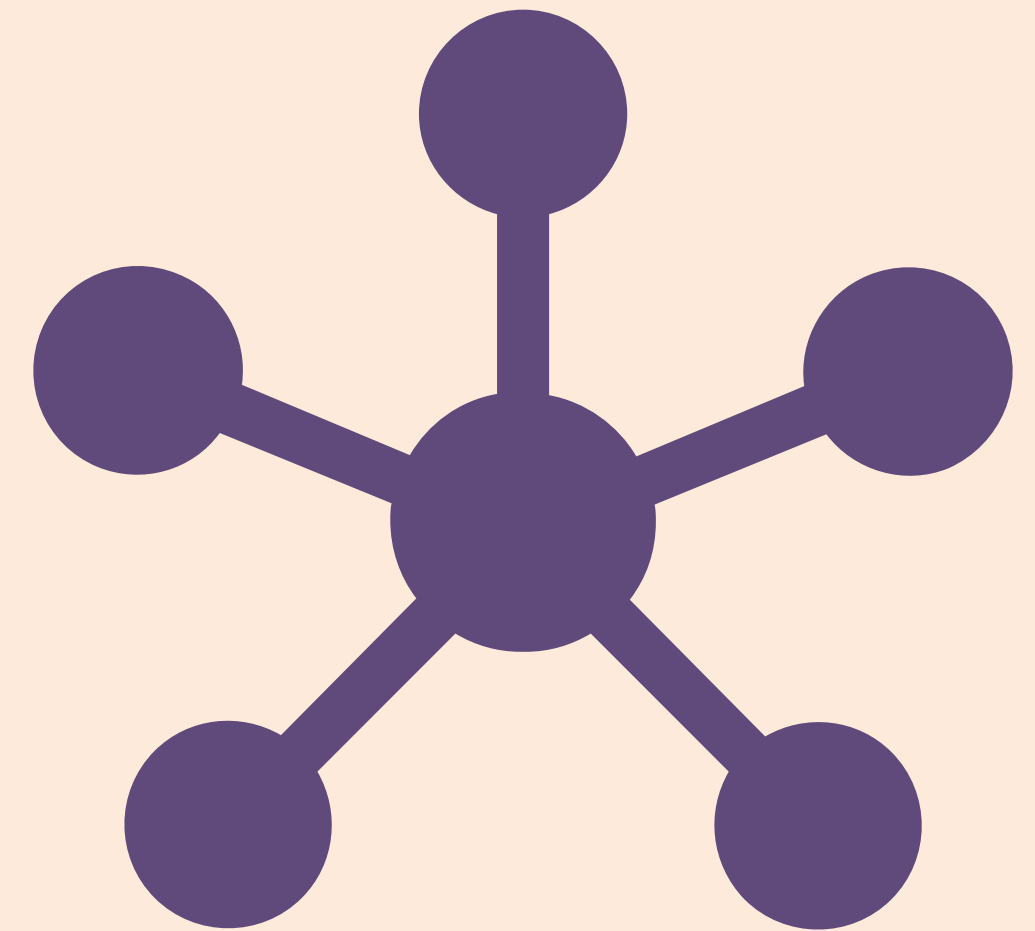
WHAT IS NUTRITION SECURITY ?



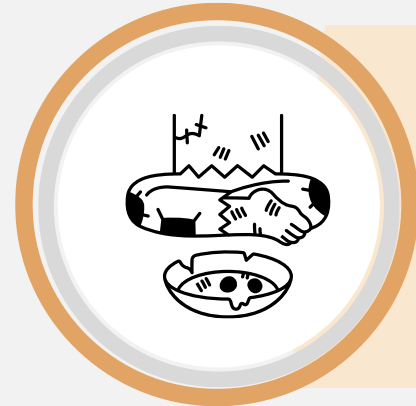
Nutrition security exists when secure access to an appropriately nutritious diet is coupled with a sanitary environment, adequate health services and care, in order to ensure a healthy and active life

FACTS & FIGURES

FOOD AND NUTRITION SECURITY



Global Food and Nutrition Security: Facts and Figures



Global Hunger

- In 2023, around **735 million people** faced hunger globally, according to the Food and Agriculture Organization (FAO).
- **29.6%** of the world's population (about 2.4 billion people) experienced moderate to severe food insecurity.



Micronutrient Deficiencies

- Over **2 billion people** suffer from deficiencies in essential vitamins and minerals, such as iron, vitamin A, and zinc



Malnutrition

- **149 million children** under 5 are stunted (short for their age).
- **45 million children** are wasted (too thin for their height).
- **2.3 billion adults** worldwide are overweight or obese, contributing to an increasing burden of non-communicable diseases



Food Waste

- Roughly **1/3 of the food produced globally is wasted** each year, amounting to 1.3 billion tonnes of food, while millions suffer from hunger

Food and Nutrition Security in India: Facts and Figures

Anemia

57% of women aged 15-49 and 67% of children under 5 suffer from anemia, a critical indicator of poor nutrition

1

Undernutrition

- 74 million Indians are considered undernourished.
- 35.5% of children under 5 in India are stunted

2

Food Waste

India wastes 67 million tonnes of food annually, valued at about ₹92,000 crores, despite widespread hunger and malnutrition

3

Obesity

In India, 23% of women and 22.7% of men are overweight or obese, marking an increasing trend in malnutrition through overnutrition

4

Accessibility

Around 25 per cent of country's total population is under poverty line and have very minimal per capita monthly income so their food and nutrition security should be the priority of every food security agenda

5

Global Hunger Index

India ranks low in the 2023 Global Hunger Index, with a score indicating a prevailing issue of hunger.

6

Per Capita Availability

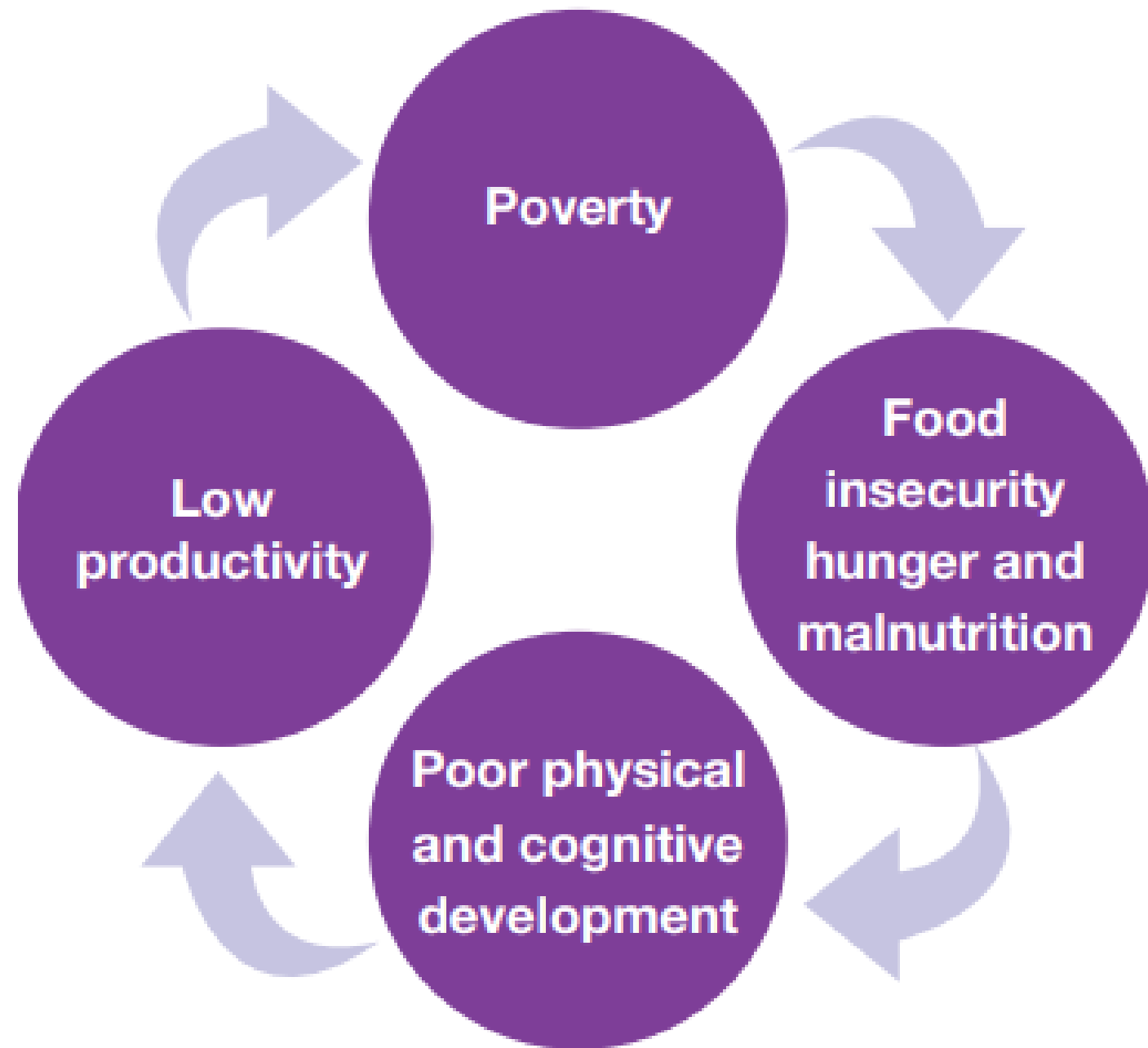
The per capita availability of food grains at 510.1 grams per day in 1991 was the highest achieved and 20 years later in 2021 we are at 507.9 grams per day

7



How Food Security Impacts Nutrition Security

Economic access plays a key role in food choices. People with lower incomes may only afford staple foods like grains, missing out on nutrient-rich foods like fruits, vegetables, and proteins



Diet Quality and Diversity

Variety of food items, other than staple

Undernourishment

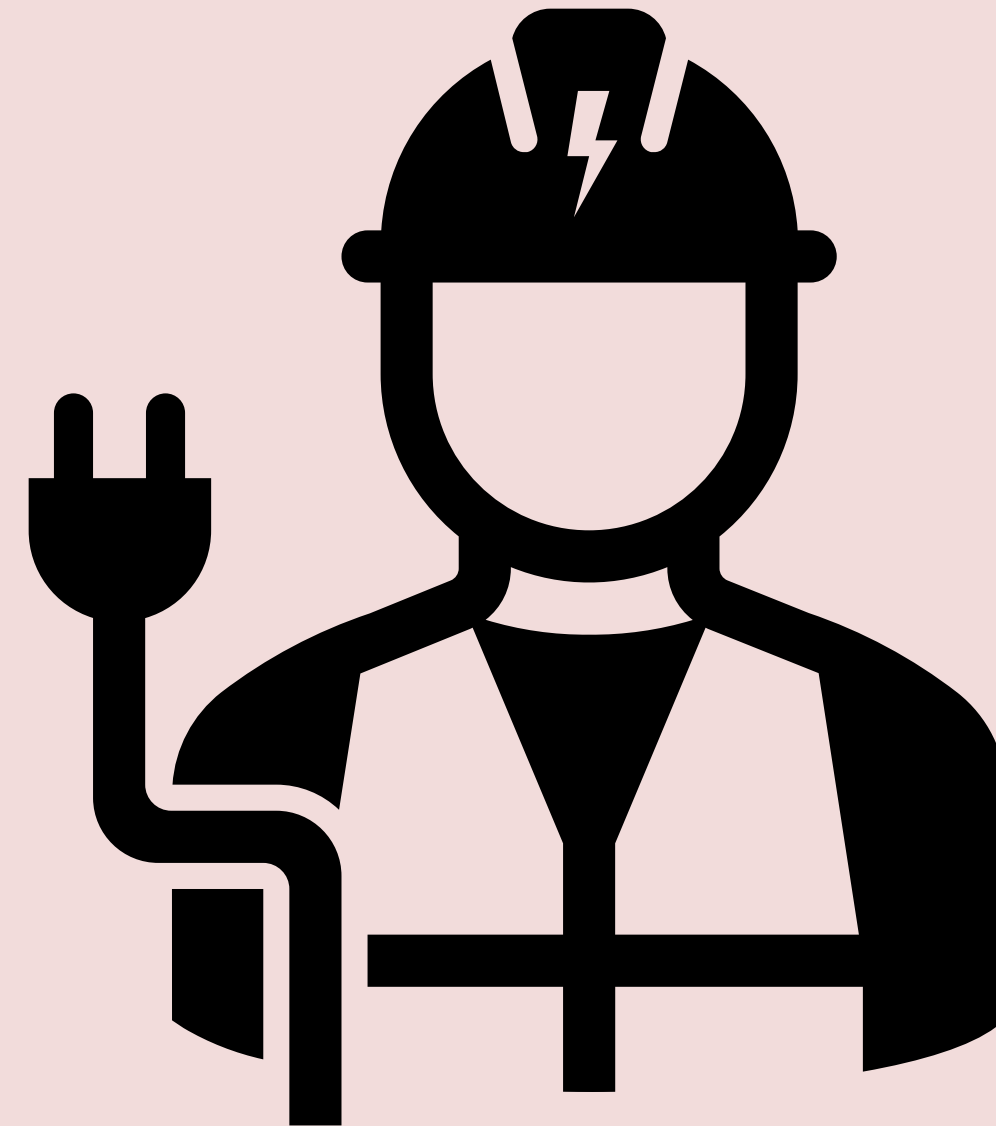
Lack of access to sufficient food can lead to calorie and protein deficiencies

Micronutrient Deficiencies

A shortage of diverse food options often results in a lack of essential vitamins and minerals (e.g., iron, vitamin A, iodine)

Food and nutrition security are foundational to a nation's overall development. Ensuring access to safe, sufficient, and nutritious food improves health, education, productivity, and economic growth. It also stabilizes societies, reduces poverty, and paves the way for sustainable development

Challenges for Food Industry

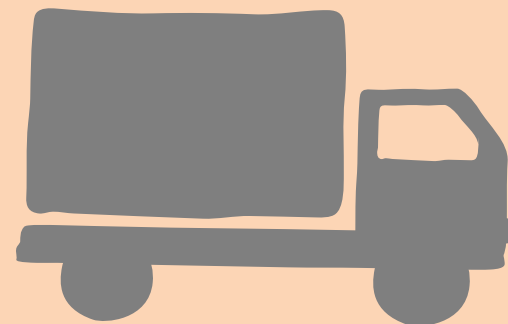


PROCESSING



- **1/3 of the food produced is wasted** annually due to Inadequate Processing
- economic losses—**estimated at around \$1 trillion globally**
- **up to 20% of food produced** is wasted during processing due to strict aesthetic standards and inefficiencies
- **up to 50% of vitamins** can be lost during certain processing methods, impacting the overall nutritional value of food products

SUPPLY CHAIN & DISTRIBUTION



- Approximately **30% of food produced** is lost before reaching consumers due to logistical issues and inadequate infrastructure
- Only **30% of farms in developing countries** have access to modern supply chain technologies, limiting efficiency and waste reduction
- Global shipping costs surged by over **300% in 2021**, raising food prices and affecting affordability, especially for vulnerable populations

CONSUMER EDUCATION



- **over 60% of people underestimate portion sizes**, contributing to overconsumption and food waste at the household level
- **40% of low-income households** lack access to reliable nutrition education resources, making it challenging for them to make informed decisions about food
- **Only 1 in 3 consumers** can accurately identify key nutrients in their diet, leading to poor food choices and inadequate nutrition

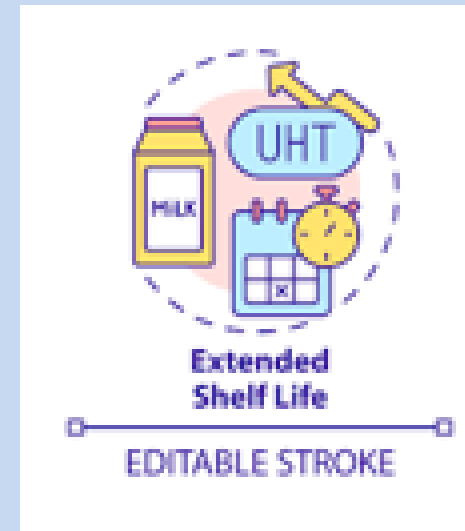
Industry Solutions



Tackling Global Food Security: Industry Solutions



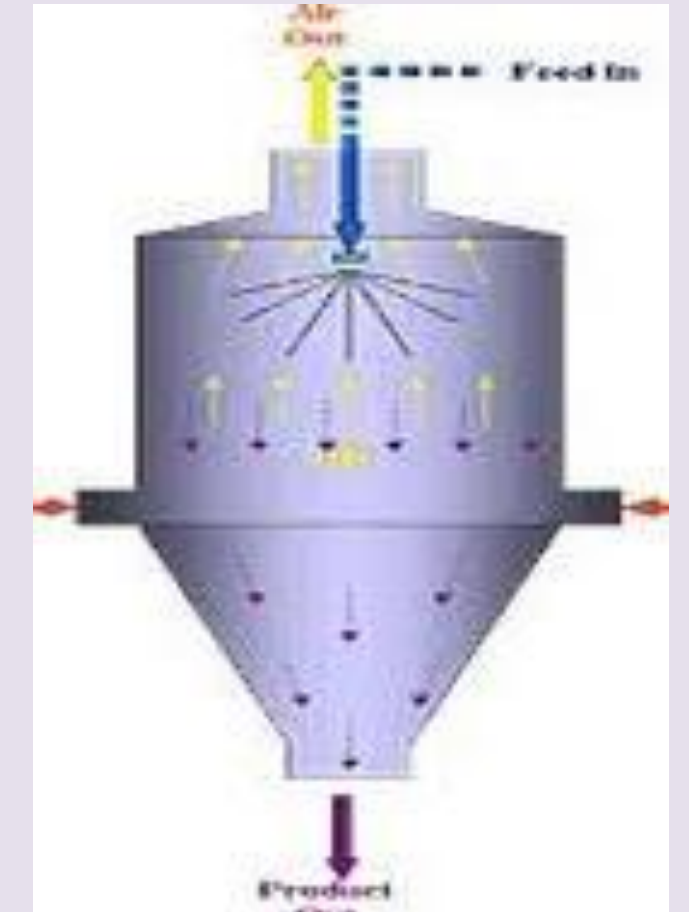
Pasteurization



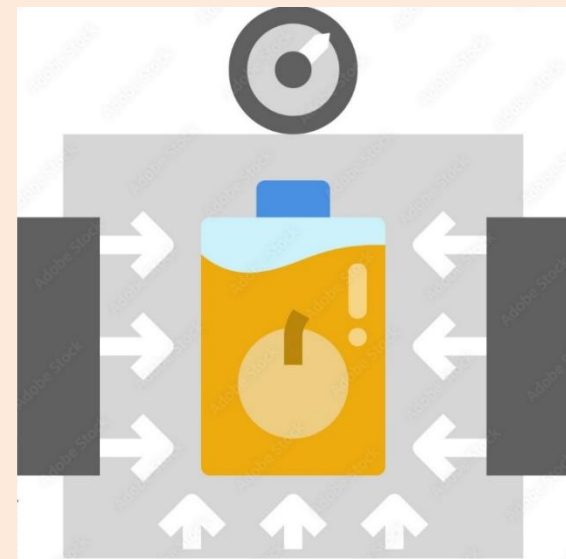
Sterilization



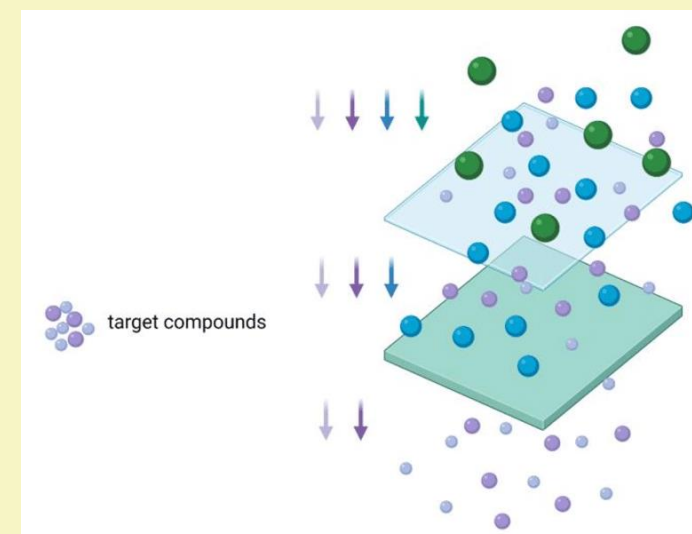
Irradiation



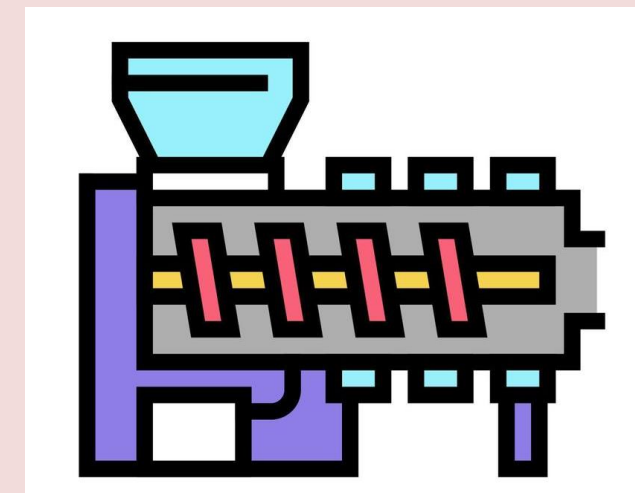
Dehydration/Drying



High Pressure Processing



Membrane separation



Extrusion

By leveraging these processing technologies, the food industry not only enhances food safety and quality but also plays a vital role in achieving global food security, ensuring that all populations have reliable access to nutritious food

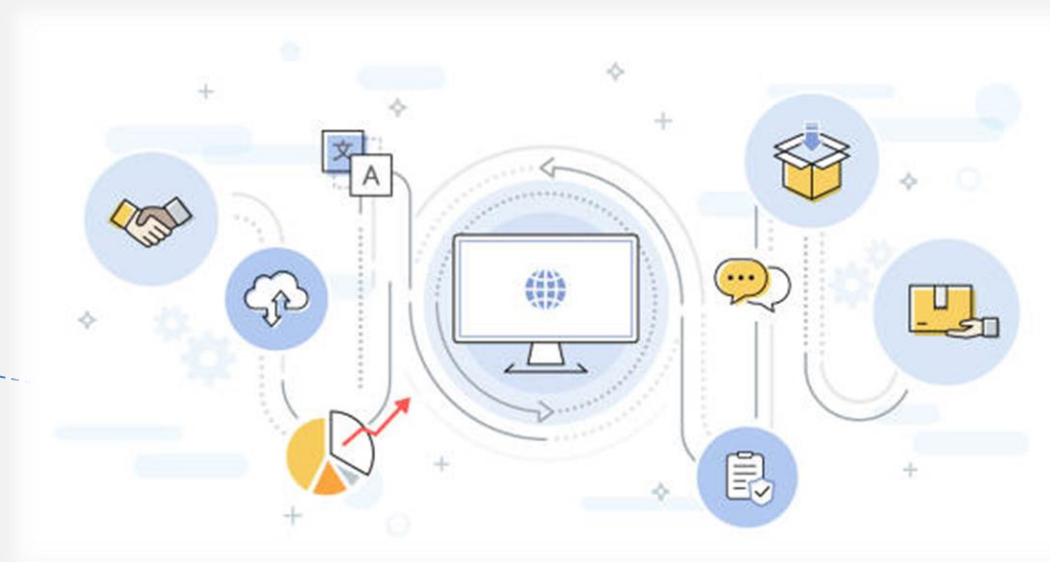
Tackling Global Food Security : Supply Chain & Distribution



Inventory Management

Advanced inventory management systems can minimize food waste by optimizing stock levels, resulting in a **10-20% reduction** in overall waste.

Source: McKinsey, 2021



Utilizing technologies like **blockchain for traceability** can improve supply chain transparency and reduce food fraud, potentially saving the industry **\$30 billion annually**



Cold Chain Logistics

Implementing cold chain systems can reduce spoilage of perishable goods by up to **30%**, ensuring fresher products reach consumers.

Source: World Bank, 2019

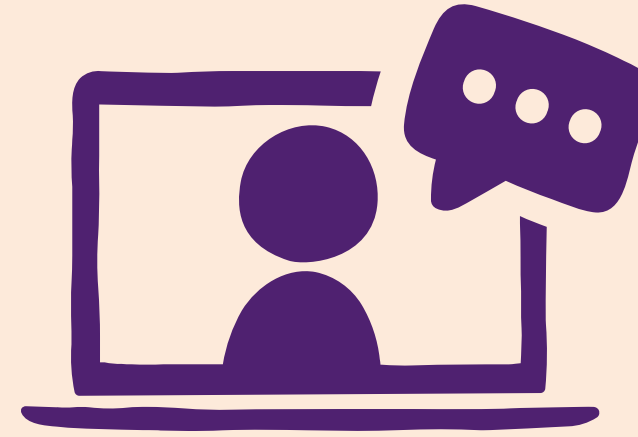
Tackling Nutrition Security: Industry Solutions

Fortification



Fortifying staple foods like **wheat flour and rice with essential vitamins and minerals** can significantly reduce deficiencies. For instance, iron-fortified wheat flour has been shown to reduce anemia prevalence by **40%** in some regions. ([WHO, 2021](#))

Consumer Education Campaigns



Learning

Effective nutrition education campaigns can improve dietary choices. A study found that well-structured campaigns can lead to a **20% increase** in the consumption of fruits and vegetables among targeted populations. ([CDC, 2020](#))

Food for Special Dietary Uses



The industry has developed specialized products for individuals with dietary restrictions, such as **gluten-free or low-sugar options**. The global market for gluten-free products is projected to reach **\$6.43 billion by 2025**, addressing specific nutritional needs. ([Market Research Future, 2020](#))

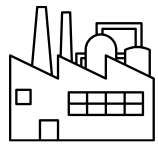
Collaboration with Health Organizations



Partnering with health organizations to create guidelines and promote nutritious foods can enhance public awareness. Programs that promote healthy eating have led to a **15% reduction** in diet-related diseases in communities engaged in such initiatives. ([WHO, 2021](#))

Food Industry's Contribution





The Food Industry's Contribution



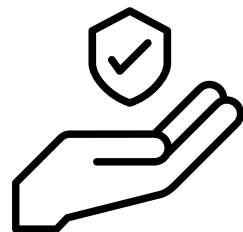
Global Food Security

- The food industry provides employment to over 1.5 billion people worldwide (FAO)
- Produces enough food to feed 10 billion people, yet 735 million people face hunger (FAO 2023)



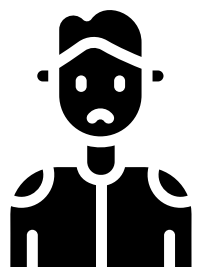
Waste Reduction & Supply Chain

- The food industry helps reduce food waste by 30-40% through improved supply chain logistics (FAO)
- 1/3 of global food production is wasted yearly, but targeted interventions by the industry aim to halve food waste by 2030 (FAO)



Nutrition Security

- Private sector partnerships provide over 150 million children globally with fortified foods in schools



Addressing Malnutrition

- Food fortification: Benefiting over 2 billion people through enriched staples like salt, rice, and flour (GAIN)
- Industry innovations (e.g., reduced-sodium foods) have helped reduce sodium intake in over 45% of products globally (WHO)



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THANK-YOU