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TRENDS IN THE FOOD INDUSTRY

Workshop on Innovative Food Product Development

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Objectives

By the end of this module, students will be able to:

- ✓Understand where food trends originate
- ✓Realize major concerns and find solutions concerning food production
- ✓Discuss trends in the food industry in 2025
- ✓Distinguish innovation and sustainability in food products

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Which factors affect trends in the food industry?

Consumer-related factors

- Health consciousness
- Lifestyle
- Demographics (age, income, culture, and location)
- Ethical and environmental concerns (sustainability and animal welfare etc.)
- Food Allergies and intolerances (gluten and lactose intolerance)

Non consumer-related factors

- Food industry innovation and advances in food technology
- Agricultural and supply chain factors (farming practices and seasonal products)
- Economic conditions (inflation, raw material prices)
- Environmental factors and climate change

(Saygı & Shipman, 2021)

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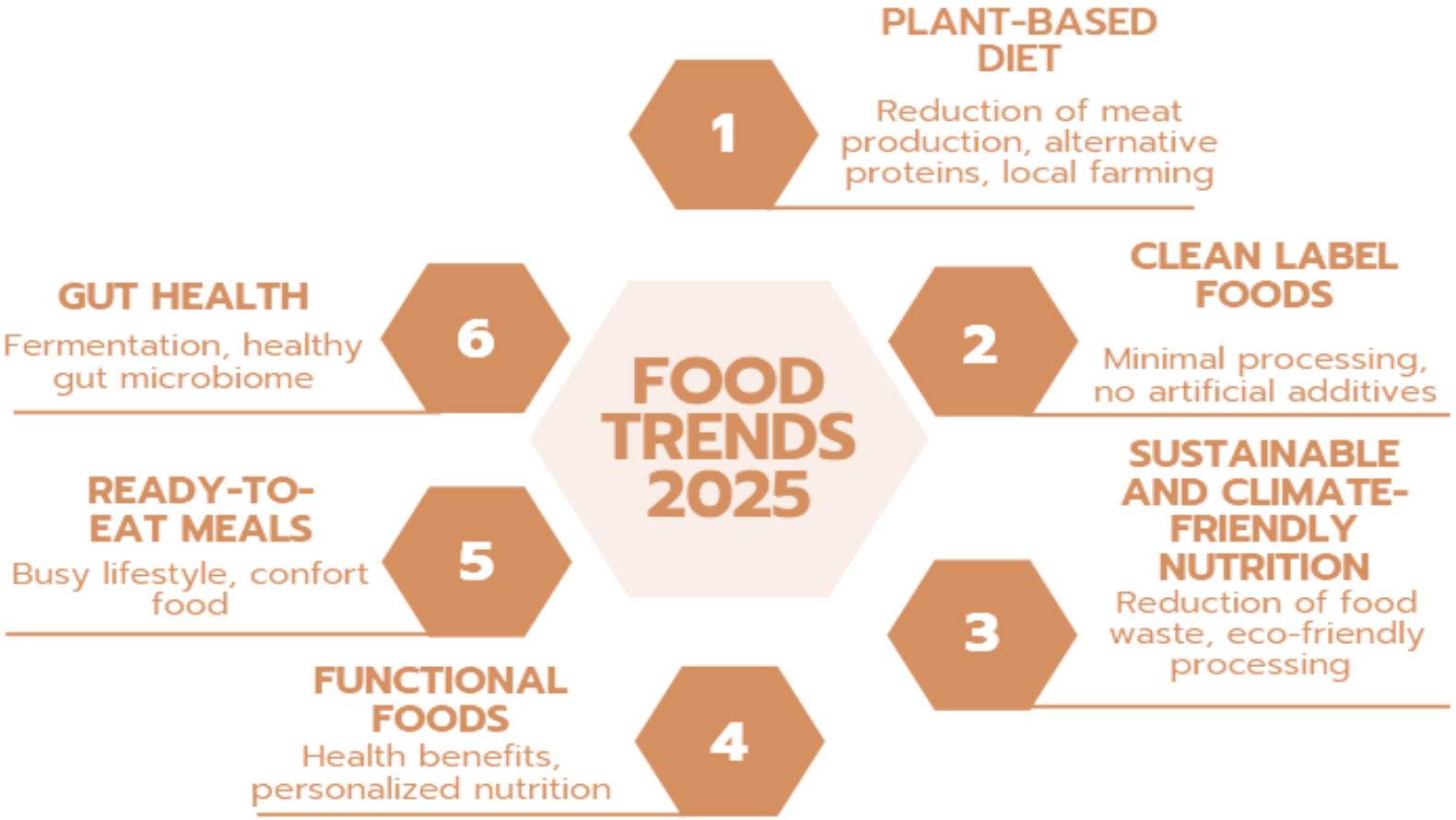
So, which are some of the food trends for 2025?



Nutrition Trend Report 2025 by EIT Food

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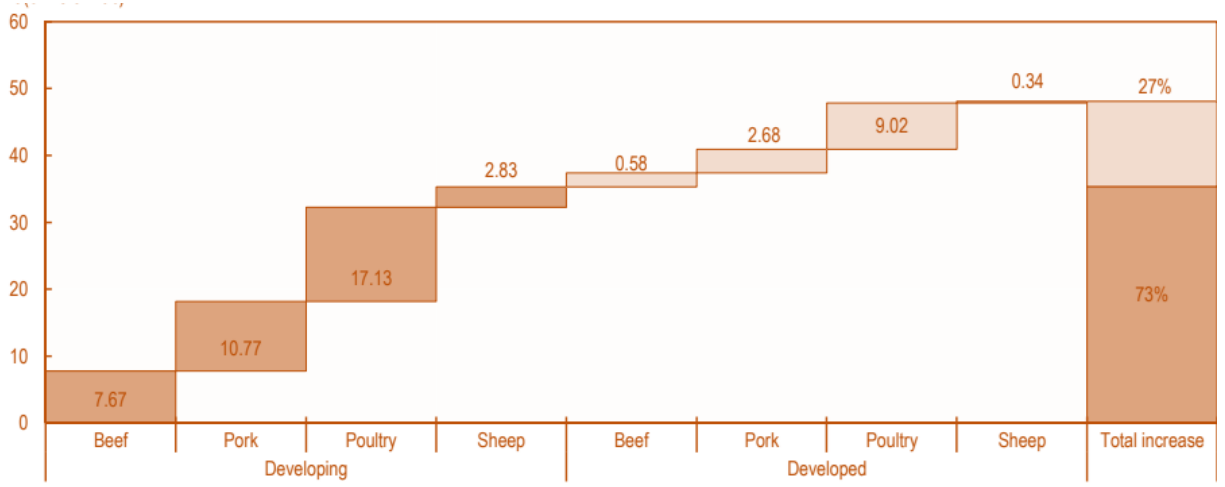
1

Plant-based diet

According to FAO, over the last 10 years, global meat production has increased by up to **27%** in developed countries and **73%** in developing countries, causing increased greenhouse gas emissions (methane, CO2).



Growth of meat production by region and meat type
2025 vs 2015, FAO

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1

Plant-based diet

Meat food products

- High greenhouse gas emissions
- Large water and land use
- Animal welfare concerns
- High resource requirements (energy and animal feed)
- Disruption of local food systems
- Excessive consumption of processed meat is linked to heart disease, cancer, and obesity

Plant-based food products

- Lower carbon footprint
- Reduced water need and soil degradation
- Ethical and animal welfare
- Promotion of diverse, seasonal, and local food production
- Rich in fiber, vitamins, and antioxidants

(Fehér et al., 2020)

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1

Plant-based diet

A plant-based diet is rich in **fiber**, **vitamins**, and **antioxidants** from fruits, vegetables, whole grains, nuts, and seeds.

But, where does **protein** in plant-based nutrition come from?

Alternative protein in plant-based diets comes from a variety of sources, such as:

- legumes (beans, chickpeas),

- soy products (tofu, edamame),

- whole grains (quinoa, brown rice, oats),

- Nuts (almonds, cashews, hazelnuts)

- seeds (chia, flaxseeds)

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2 Clean label foods

The term ‘clean label’ has been connected with **natural ingredients** (usually non-GMO and organic sourced), **no artificial additives** (colors, flavors, or preservatives), **minimal processing**, and **transparency** (easily recognizable ingredients for the consumers).

There is a legal definition for “clean label.” The term is characterized both by the consumer’s perception of what “natural” suggests and by the food industry.

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2 Clean label foods

CLEAN LABEL

- Natural and easily recognizable ingredients
- No additives and preservatives

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2 Clean label foods

CLEAN LABEL

- Emulsifiers (mono- and diglycerides of fatty acids)
- Acidity regulator (sodium acetate)
- Soy (a potential allergen)
- Sugar and invert syrup
- Flour improvers

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3

Sustainable and climate-friendly nutrition

According to the European Commission, over **59 million tonnes of food waste** (132 kg/inhabitant) are generated annually in Europe *(Eurostat, 2024),* with an associated market value estimated at 132 billion euros.

Households generate more than half of the total food waste (54%). The remaining 46% was waste generated upwards in the food supply chain: 19% by the **manufacture of food products and beverages**, 11% by **restaurants** and **food services**, 8% in the **retail** and other distribution of food, and 8% in the **primary production**.

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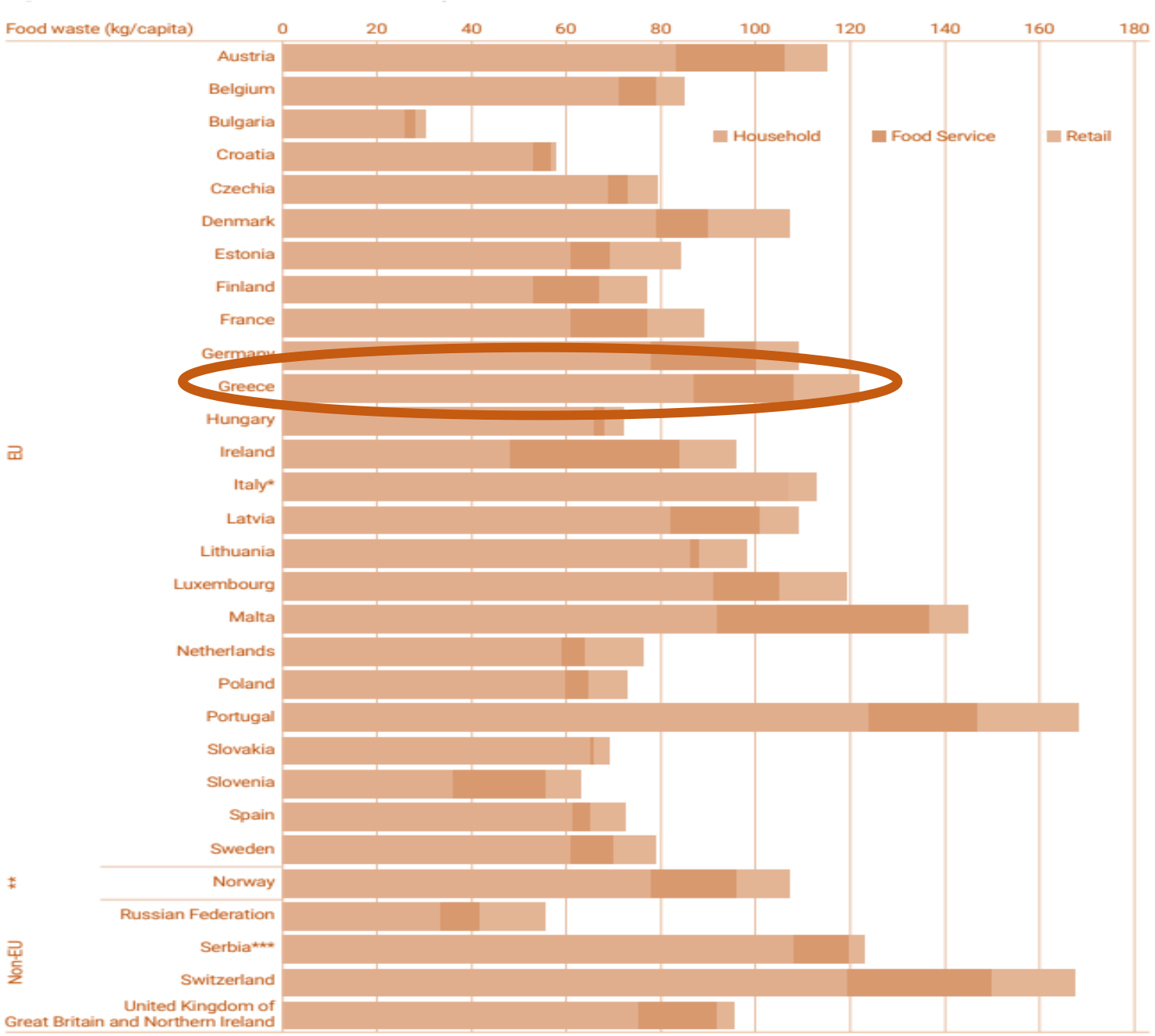
3

Food waste across Europe, according to EUROSTAT



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3

Sustainable and climate-friendly nutrition

Key solutions:

- Farm level: improving harvesting techniques and market access to “imperfect” produce to reduce food loss
- Production level: packaging innovation to extend shelf life, upcycled food products using byproducts, anaerobic digestion to produce bio-gas
- Household level: meal prep and portion control, composting the organic waste

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4

Functional foods

"natural or processed foods that contain known or unknown biologically active compounds, which in defined, effective, non-toxic amounts, provide a clinically proven and documented health benefit for the prevention, management, or treatment of chronic disease."

Functional Food Center, 2019

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4 Functional foods

Functional bioactive ingredients

- polyunsaturated fatty acids (PUFAs)

- Probiotics, prebiotics, and synbiotics

- Antioxidants

Techniques used for functional food production

- Encapsulation (microencapsulation, nanoencapsulation, liposomes)
- Fortification and enrichment
- Enzymatic Treatments (hydrolyzing proteins)
- New trends (ionic gelation, emulsification followed by freeze-drying, electrospray, coaservation)

(Gómez-Gaete et al., 2024)

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4

Functional foods

Food component[1]	Function	Conditions of use	Reference
Fat	Normal absorption of fat-soluble vitamins	no conditions of use can be defined	(EFSA 2011n)
Saturated fatty acids	Management of cholesterol	reduced amounts of saturated fatty acids by at least 30% compared to a similar product	(EFSA 2011{) (EFSA 2011o)
Linoleic acid	Management of cholesterol	15% of the proposed labelling reference intake values of 10g linoleic acid per day	(EFSA 2009p)
ALA	Management of cholesterol	15% of the proposed labelling reference intake value of 2g ALA per day	(EFSA 2009b)
Plant sterols	Management of cholesterol	0.8g per day	(EFSA 2010z)
DHA/EPA	Management of blood triglycerides	2-4g per day	(EFSA 2009i)
	Management of blood pressure	3g per day	(EFSA 2009i)
	Heart health	250mg per day	(EFSA 2010i)
DHA	Vision	250mg per day	(EFSA 2010g)
	Brain function	250mg per day	(EFSA 2010g)

Notes: [1]ALA - α-linolenic acid; DHA - docosahexaenoic acid; EPA - eicosapentaenoic acid.

Most commonly used PUFAs by EFSA

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5

Ready-to-eat meals

Busy lifestyle, lack of time, many responsibilities, and activities

Convenience, no preparation, tasty meals

Ready-to-eat meals

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6

Gut health

The bacteria and other microorganisms in the human gut are known as the gut microbiome. And, **why is it important to maintain balance in the gut microbiome**?

Gut health and balance affect:

- immune system
- mental health
- autoimmune diseases
- endocrine disorders, such as type 2 diabetes
- gastrointestinal disorders, such as irritable bowel syndrome and inflammatory bowel disease
- cardiovascular disease
- cancer
- sleep
- digestion
- ...

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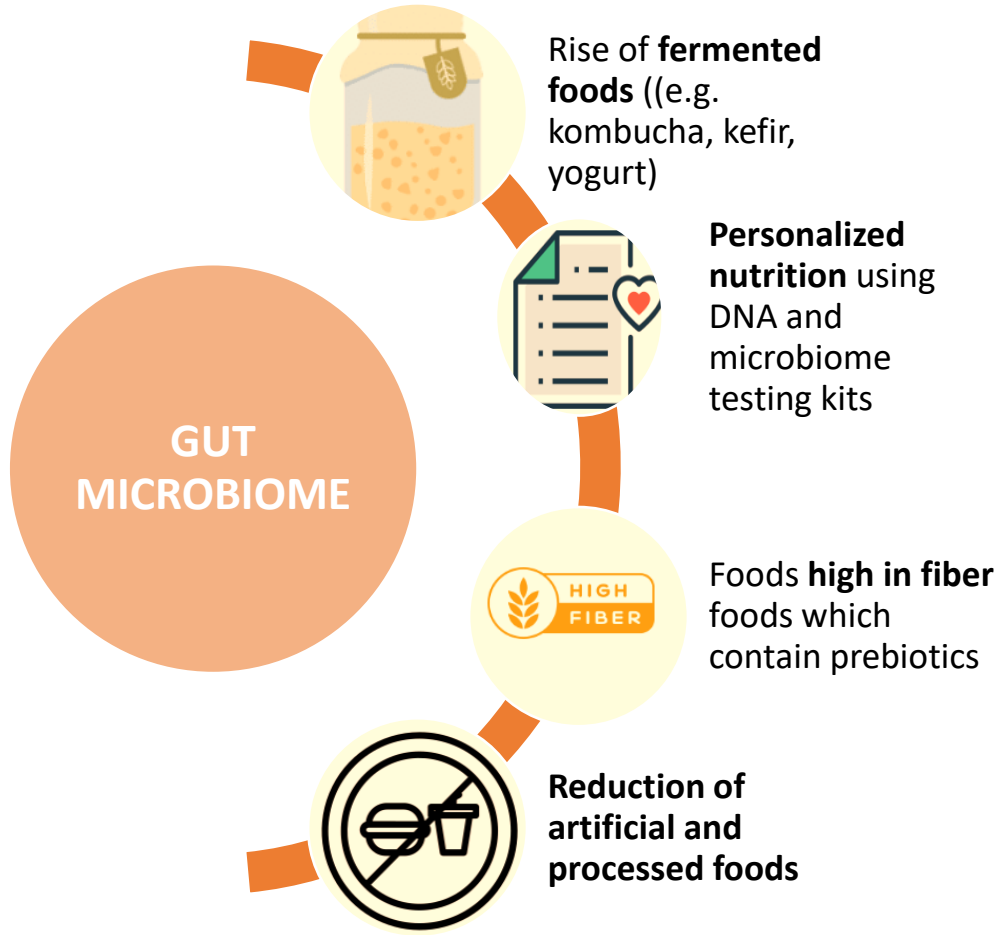
6

Gut health

Gut health has become a major driver of modern food trends, influencing both product innovation and consumer behavior.



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"The future of food is driven by health, sustainability, and smarter choices that reflect both personal and global values"