Sveučilište Josipa Jurja Strossmayera u Osijeku
Medicinski fakultet Osijek

2nd European GREEN Conference
11-14 June 2024
Vodice, Croatia

Underutilized and alternative food sources

Nika PAVLOVIĆ [1]*, Ivan MIŠKULIN[1], Lea DUMIĆ[1] and Maja MIŠKULIN[1]

[1] Josip Juraj Strossmayer University of Osijek, Faculty of Medicine Osijek, Josipa Huttlera 4, 31000 Osijek, Croatia; nika.pavlovic@mefos.hr

Strengthening and transforming food systems through interdisciplinary design solutions at local, regional, national and international levels has become extremely necessary in the near future. Food insecurity will force people to accept different alternative food sources.

Food 2030's Agenda and innovation policy emphasizes the importance of sustainable, affordable diets for all, climate-resilient and circular food systems, and community empowerment. To eliminate hunger, people should change the way they produce and consume food. Low nutritional quality of food leads to malnutrition and obesity. The increase in non-communicable diseases in today's obesity pandemic is linked to premature deaths.

Priorities such as the development of alternative proteins, microbiome-based foods, climate-adapted food systems, rethinking food packaging, short food supply chains and replacement with sustainable alternatives collectively contribute to reducing the environmental footprint of the current food system.

To maintain overall health, people should focus more on environmental farming, personalized nutrition and change in eating habits. Non-conventional foods and grains, edible wild plants grown alternatively in urban areas that can be easily adapted to the environment, free of pesticides and fertilizers could strengthen food systems.

Meliponiculture products, edible insects, ancient grains and unconventional food crops could also contribute to better food security, better access to food, better local economies and higher incomes, while edible flowers also support biodiversity conservation.

Alternative protein sources lead to a decrease in livestock farming and thus reduce the impact on global warming.

Useful strategies such as open-air rooftop gardens and farms or urban farming are a form of building-integrated agriculture, and this type of green economy could help reduce economic and environmental crises in the near future.

Innovative production technology such as indoor vertical farming, urban farming and sustainable farming, revalorization of by-products and using regional and sesonal food as well as some emerging novel foods could drastically help in food resilience, nutrition sequrity and sustainability.

For some countries, climate change will create satisfactory conditions for the agri-food sector, but globally, the impact will certainly be negative.

There are many challenges that the world population must find an answer to in order to reduce and prevent its negative development.

Alternative food sources could improve the nutritional status of the population in a more sustainable way, reduce the risk of various diseases through a healthier diet and improve the quality of life.

Keywords: food sources; food insecurity; alternative food; sustainable food; environment