

Book of Abstracts of the Symposium
held in Turin, Italy, 23-25 September 2022

GASTRONOMY AT THE CROSSROAD OF ECOLOGICAL TRANSITION AND SOCIAL JUSTICE

Toward the
International
Society for
Gastronomic
Sciences and
Studies

GASTRONOMICSOCIETY.ORG



Università di Scienze
Gastronomiche di Pollenzo
University of Gastronomic Sciences of Pollenzo



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Introduction about the congress

On September 23rd to the 25th of 2022, The University of Gastronomic Sciences of Pollenzo, together with the University of Turin, organised the Symposium "Gastronomy at the crossroad of ecological transition and social justice: Toward the International Society for Gastronomic Sciences and Studies."

The Symposium was devoted to scholarly exchange of knowledge and reflections on the links between gastronomy, ecological transition, and food justice. The main aim of the Symposium was to provide a shared overview of the recent research regarding sustainable gastronomic sciences and studies and to explore the possibility of establishing an International Society of Gastronomic Sciences and Studies. This was considered crucial in the present scenario, as studies concerning the complexity of gastronomy are highly fragmented in different disciplinary fields while the holistic view of "gastronomic systems" is considered crucial for challenging the ongoing conundrums - most notably the ecological transition and unequal distributions of food access and resources.

The Symposium was held in both Pollenzo and Turin over three days. During this

time, Terra Madre (the Slow Food event hosted biennially in Turin, which gathers Food Communities from all over the world and offers them a shared space for meeting and networking) was ongoing nearby, and the Symposium itself hosted inspirational lectures, invited lectures, talks, poster sessions, and roundtables.

On September 23rd, the Symposium began with the opening ceremony at the University of Gastronomic Sciences venues. After the welcome from UNISG and UNITO Rectors Prof. Bartolomeo Biolatti and Prof. Stefano Geuna, the event entailed a plenary session moderated by Prof. Rick J. Stepp, with inspirational speeches from Prof. Nicola Perullo, Prof. Andrea Pieroni and Prof. Dessislava Dimitrova, who outlined the crucial role that gastronomic sciences and studies could have in tackling key issues related to the sustainability, sovereignty and justice of food systems, as well as the future trajectories of this emerging discipline.

On September 24th, the entire day was dedicated to the presentation and discussion of the overarching topics and themes of sustainable and sovereign food systems, for which the Symposium was designed. Specifically, seven scientific

1. INTRODUCTION

parallel sessions involving keynote speeches, oral contributions, panels, and posters were scheduled around the following crucial macro-themes: Food & One Health; Food Perception and Education; Traditional Ecological Knowledge and Food Heritage; Food History, Mobilities, and Sovereignty; Sustainable Food for People: Acceptability, Inclusivity and Co-creation; Climate Change, Agroecology, and Ecological Transition; Food Justice, Policies and Regulations. The seven sessions ended with roundtables involving scholars, practitioners, professionals, students, and activists. In this way, new pathways for cross-disciplinary research bringing together academia, the food sector and civil society were discussed and explored, drawing from the outcomes of the sessions held earlier in the day.

On September 25th, the closing ceremony was held in the Aula Magna of the Cavallerizza Reale building in Turin, in which a final discussion of topics at the core of the two previous days was conducted by representatives/rapporteurs of the seven thematic area sessions. Prof. Andrea Pieroni and Dr. Gabriele Proglia outlined the future trajectories and roadmap towards the establishment of the first International Society for Gastronomic Sciences and Studies, highlighting the importance of interdisciplinarity and the need of going beyond the boundaries of academia, abandoning academic and Western Eurocentrism to embrace a vision of a broader community open to listening to other voices. Additional inspirational speeches by Dr. Shujaul Mulk Khan, Dr. Harald Lemke and Fritjof Capra outlined from different disciplinary and geographical perspectives the potentially crucial role that a transdisciplinary gastronomic sciences approach could have in facing the future challenges linked to the food systems.

Overall, in its first edition, the Symposium counted more than 200 participants registered for the proceedings, 75 universities represented, 87 members of the scientific committee, 124 speakers who submitted papers, 107 oral presentations in attendance, and 27 scientific posters.

These proceedings aim to serve as a first important step towards a new scholarly society, which ideally could biannually meet and establish a truly open platform for research and studies in gastronomy.

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Manifesto

The aim of the International Society for Gastronomic Sciences and Studies is to exchange knowledge, to better understand the human dimension of food and to improve food sustainability, sovereignty and justice.

Our common interests are food and food systems and their sustainability, considered from the perspective of diverse cultures and backgrounds. We need a new language to facilitate dialogue between many different disciplines, interpretations and world views, so our plan is to create an open platform and share our critical approaches to complex food-related sustainability issues.

The ISGSS will build robust multidisciplinary bridges, in part by promoting a constant dialogue between local and academic knowledge (including scholarly knowledge originating in both the natural and social sciences). The society will enrich our current understanding of food systems by connecting and interweaving local and academic bodies of food knowledge. Most importantly, the society wants to be inclusive towards scholars and members of local and indigenous communities, as well as environmental and food activists who are committed to studying and

implementing sustainability-driven food sciences, cultures and policies and to using local resources. The ISGSS will also adopt a global vision, looking beyond Europe and tackling similar issues with diverse perspectives coming from the global north and south, from the east and the west and from urban and rural areas.

Particular attention will be dedicated to exploring food-centred social sciences, including agri-food and sensory sciences, food-related cultural studies, philosophy and history of food, ecology of food, psychology of food, innovative technologies and policies. We consider it a privilege to be able to study community-centred approaches accompanied by a rigorous analysis of food and cultural heritage, supported by bioscientific aspects.

We will foster a concrete platform focused on projects that aspire to change the current food systems. These initiatives will enhance new approaches and meta-languages that will also be easily accessible to society at large. This platform will share knowledge and create new pathways for cross-disciplinary research, supporting both established and emerging scholars.

3

Inspirational committee

Fritjof Capra

Author of “The Web of Life” (“La rete della vita”), coauthor of “The Systems View of Life” (“Vita e natura”)

Gary P. Nahban

Agroecologist, Franciscan Brother and Lyrical Celebrator of Food Biodiversity

Nancy Turner

Ethnobotanist, Retired Professor University of Victoria (Canada), and a long time Slow Food member

Chido Govera

Founder and Director, The Future of Hope Foundation

Satish Kumar

Peace-pilgrim, life-long activist and former monk

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Scientific committee

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Inspirational Speeches

Socioecological reset Biodiversity at the gastronomy crossroads

Dessislava Dimitrova

(Bulgarian Academy of Sciences, Bulgaria)

ABSTRACT

Humankind today exists amid a storm of climate change, biodiversity loss, and multiple forms of malnutrition that coexist in the same country, community, household, and even individual. However, modern policy and development agendas still overlook the role of the food system and the responsibility of its participants. The European Green Deal and the Farm to Fork Strategy call for a reassessment of agrobiodiversity and related traditional knowledge as a resource to mitigate climate change and provide incentives for local economies and social prosperity. Balkans are the memory of European agriculture and the rural communities in the region shelter gastronomic knowledge that reflects their skills to transform the available resources into food in specific socio-ecological environments. In 2010 Terra Madre Balkans network was launched to unite the efforts of stakeholders concerned about the future of gastronomy in the region. A pool of experts to provide solid arguments in support of local food culture is being organised.

How to become a Terran? Gastro-geo-politics of the return to earth

Harald Lemke

(International Forum Gastrosophy, Germany)

ABSTRACT

It might be just there, beneath the «dirt» we walk on, it supplies almost all food we eat, but we pay it little attention: «earth» (fertile soil, humus, Muttererde, terriccio, terra madre). When we sit down to dine, who thinks of earth where most of our food comes from? A few wine lovers say that each soil has its own terroir but how many of us can actually taste it or know its deeper, philosophical meaning? «Food nourishes us» — everybody is familiar with this gastronomic narrative. «Food connects us with the Earth» — this is the sound of a much bigger, gastrosophical story. What, then, needs to be done to become a Terran? — a compost human being who participates day by day in cultivating sustainable development and its organic agriculture? Answering this existential question, I will introduce to you some key concepts and algorithms of gastrophilosophy, especially earthing or terra-madre-forming as a grounding category of gastro-geo-politics and its complex interactions with climate change, biodiversity, utopian convivialism and the possible futurist lifestyle of humans as earthlings that enables those of us, who are willing, to stay on the planet as a beautiful place to live.

Problems identification and solutions related to food systems in the scenario of climate change

Shujaul Mulk Khan

(Quaid-i-Azam University, Islamabad, Pakistan)

ABSTRACT

Climate change is affecting every sector of life including our Food System. It's changing the weather pattern, increasing drought, creating floods and bringing wildfires. Acceleration in the soil erosion, depletion and deterioration of aquifers are the indirect impacts of these changes that in turn threaten the food security as well as safety. Mechanised agricultural practices, genetic engineering, and massive bee die-offs are now some of the main reasons for biodiversity loss. The situations are further worsened by rapid urbanisation, increasing poverty, over-hunting, overfishing and inadequate water resources. There is always a solution for a problem. Apart from long-term solutions some short-term remedies include, support small-scale food production, minimising the agro-fuels expansion, enhancing food sovereignty - that is recognizing the right of all people to healthy and culturally appropriate food produced through ecologically sound methods within the umbrella of their own food systems. There is also a dire need of combating the climate crises via achieving sustainable development goals.

Food and Life

Fritjof Capra

ABSTRACT

In the new systemic understanding of life that has recently been developed at the forefront of science, metabolism is seen as life's central characteristic. Metabolism is the continuous flow of energy and matter through networks of chemical processes, which allows a living organism to continually regenerate itself. In other words, metabolism is the intake, digestion, and transformation of food. This means that understanding the ecological, social, and cultural aspects of food connects us with the very essence of life.

7

Abstracts

7. ABSTRACTS

7.1 Food and One Health

AREA COORDINATORS

Bartolomeo Biolatti (University of Gastronomic Sciences of Pollenzo, Italy)

Ezio Ghigo (University of Turin, Italy)

INVITED SPEAKERS

Food and One Health

Francesco Branca

(Department of Nutrition for Health and Development at the World Health Organization, Switzerland)

ABSTRACT

Food systems impact health through multiple pathways. (1) Unhealthy diets and food insecurity: unhealthy diets and malnutrition rank among the top ten risk factors for the global disease burden. Multiple forms of malnutrition affect populations from early childhood on throughout the life course, and in all regions of the world. Food insecurity, exacerbated by the Covid-19 pandemic, resulted in up to 828 M people facing hunger in 2021. (2) Zoonotic pathogens and antimicrobial resistance: we see increased unlikely interactions at the human-animal-environment interface, due to unplanned urbanization, migrations, pollution, deforestation, and as a result of intensive agriculture and animal production, leading to disease spillover risks from animals to humans. In addition, the substantive use of antimicrobials in intensive animal farming leads to dangerous forms of resistance. (3) Unsafe and adulterated food: globally, almost 1 in 10 people fall ill from foodborne diseases due to contaminated food, some with a deadly outcome. (4) Environmental contamination and degradation: there is a clear bidirectional relation between food systems and climate change: 25-30% of total GHG emissions are attributable to the food system, i.e. agriculture and land use, storage, transport, packaging, processing, retail, and consumption. With the ongoing population growth, food systems linked to agriculture and food processing namely take a heavy toll on the biodiversity, the soils and the water. The current western diet model in particular cannot be sustained by the planet any longer. (5) Occupational health: food workers are exposed to chemicals, pathogens, injuries at

work, as well as mental health issues due to stressful working conditions. The One Health approach is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development. Food system transformation needs to support the consumption of Sustainable Healthy Diets, i.e. dietary patterns that promote all dimensions of individuals' health and wellbeing; have low environmental pressure and impact; are accessible, affordable, safe and equitable; and are culturally acceptable. WHO is taking active steps to support the global transformation of food systems and the shift to sustainable, healthy diets through a menu of recommended policy actions for countries, targeting (1) the reduction of salt, sugars, saturated and trans fats in processed food; (2) fiscal policies to subsidize healthy food choices while taxing unhealthy ones; (3) healthy food environments in schools, hospitals and public spaces; (4) easy to understand food labelling; (5) fortification of food with vitamins and minerals; (6) regulation of marketing of unhealthy food choices to children, while ensuring food safety is warranted from farm to fork.

Ms Liane Gross is gratefully acknowledged for the preparation of the abstract.

ORAL CONTRIBUTIONS

New Nutraceuticals derived from natural sources for improving gastrointestinal health in Animal Nutrition

David Atuahene (University of Turin, Italy)

ABSTRACT

Gastrointestinal (GI) disorders are the term used to refer to any condition or abnormality that occurs within the gastrointestinal tract in humans and animals such as dysbiosis, chronic diarrhoea, leaky gut syndrome and many others. Different therapeutic approaches to these disorders are used in both humans and pets. Treatment of GI disorders such as dysbiosis involves the use of anti-inflammatory drugs or enzyme-inhibiting drugs and antibiotics (Rosenfeld, 2017). However, antibiotics can induce antibiotic resistance. Therefore, scientists are in search of natural alternatives in the treatment and management of GI disorders. Nutraceuticals, on the other hand, have shown to be useful in regulating normal metabolic and immunological processes with fewer side effects than drugs (Fino, 2020). There is strong evidence of the antioxidant and immunostimulating properties of the nutraceuticals included in this paper, but few studies report their use for treating GI disorders in humans and there are limited reports in animals. Our study will be focused on the use of nutraceuticals derived from natural sources such as Bromelain, derived from pineapple and contains proteolytic enzymes with anti-inflammatory and immunomodulatory effects (Chakraborty et al., 2021), *Lentinula endodes*, mushrooms that improve the intestinal barrier function (Dufossé et al., 2021), Quercetin, a polyphenolic antioxidant substance found mostly in onions, grapes, berries, cherries, broccoli and citrus fruits and aids in stimulating the immune response (Reinboth et al., 2010), Superoxide Dismutase, an enzyme with antioxidant properties derived from melons (Romao, 2015) and Lactoferrin, a multifunctional protein found in many biological secretions including milk, it has iron transferrin, anti-inflammatory and immunomodulating properties (Pope et al., 2006) and their efficacy in Veterinary medicine specifically in breeding dogs to improve gut health parameters.

KEYWORDS

Nutrition, Gut-health, Nutraceuticals, Antioxidants, Canine

ORAL CONTRIBUTIONS

Improve adherence to the Mediterranean diet through an innovative app

Andrea Devecchi (University of Gastronomic Sciences of Pollenzo, Italy)
Francesco Novarese (Private Equity Professional)

ABSTRACT

Purpose – The Mediterranean diet (MD) is a sustainable and healthy diet. However, compliance to the MD is still poor. Given this, we created a Web App to promote the MD. The purpose of this study was to evaluate the efficacy of the Web app in terms of adherence to the MD.

Design/methodology/approach – We developed a Web app, with the aim of encouraging virtuous dietary habits. The application is based on a reward mechanism: the more virtuous and healthy foods are purchased, the higher the score. The points accumulated yield a reward in the form of health and wellness goods. After that, a randomised controlled study was conducted. All participants were given written advice on correct nutrition. Moreover, the case group was trained on the use of the app. The MD adherence was evaluated by a validated questionnaire (Medi-Lite).

Findings – Cases found an average increase in the Medi-Lite scores of + 7.1%, whereas controls showed an increase of + 0.7% ($p = 0.06$; effect size 0.60). For most of the users, the Web app helped them to think about what they were buying and to promote the MD.

Conclusions – Obesity and related diseases are a topical problem. New strategies are needed to counter it. The MD is one of the best tools to prevent obesity and noncommunicable chronic diseases and, at the same time, safeguard environmental and economic sustainability. Therefore, it is necessary to identify new methods to encourage adherence to the MD. This study showed interesting and encouraging results, which need further research and insight to be validated and supported.

KEYWORDS

Mediterranean Diet, Health, Technology, Innovation

ORAL CONTRIBUTIONS

Animal welfare, One Health and development of fragile areas. Reflections starting from the comparison between two different Apennine areas

Enrico Ercole (University of Eastern Piedmont, Italy)

Giacomo Balduzzi (University of Salerno, Italy)

ABSTRACT

The contribution focuses on two case studies in progress in the Alexandrian Apennines (on the border between Piedmont, Liguria and Emilia) and in Garfagnana (on the border between Tuscany and Emilia), as part of a project that sees the collaboration of researchers (veterinary epidemiologists, sociologists and anthropologists), local administrators and actors in the zootechnical sector (breeders, professionals, health and animal welfare specialists from the public and private sectors). In this first analysis, attention was focused on cattle farms, paying particular attention to the dairy supply chain. The two areas have both similarities and differences. In particular, both are suffering phenomena of abandonment of the territory and a strong downsizing of farming activities. The first results of the comparison between the two case studies show the opportunity to integrate into the territories the actions and interventions aimed at promoting innovations related to animal welfare and health promotion with a local development strategy, which aims to enhance local quality production. One Health has the aim of developing the priorities for “an international and interdisciplinary approach” aimed at countering “the threats to the health of life on Earth” (WCS 2004). The welfare of animals in dairy cattle farms, in fact, is linked to a number of other dimensions such as, for example, prevention of infections and protection of animal safety, food safety, biosecurity, and reduction of environmental impact. It is therefore a very suitable field of application for experimenting and operating, according to the logic of the One Health approach, in an integrated framework that holds together human, animal and ecosystem health. It is a fundamental perspective for global health, but also an opportunity for local development and to combat the abandonment and depopulation of fragile territories and areas. Some breeders are already moving in this direction and consider it important to collect information in order to adapt to indications that perhaps anticipate the regulatory change or consumer requests, as demonstrated, for example, by the movement, born among breeders, which some years ago promoted the manifesto for an “Ethical Breeding” (Ethical Breeding Association).

KEYWORDS

One health, Animal welfare, Local development, Italy

ORAL CONTRIBUTIONS

The sheep's route: from grazing to fork

Raffaella Rossi (University of Milan, Italy)

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Sabrina Ratti (Freelance Food Technologist)

Federica Bellagamba (University of Milan, Italy)

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Ernesto Beretta University of Milan, Italy)

ABSTRACT

In recent years, consumers are paying more attention to identifying what happens between the birth of livestock and the time the meat arrives on the kitchen table. Animal welfare and sustainability are seeing increased focus. To achieve these goals, traceability is a key element to guarantee product quality and safety, through origin identification. The development of livestock farming in mountain pastures has important economic implications for the territories themselves and is essential for the preservation of sustainable eco-environments. Alpine grazing is the most widely practised farming method for the Giant Bergamasca sheep in northern Italy. Today flocks represent a way to improve mountain pastures, maintain biodiversity and support the local economy that would otherwise disappear. Sustainable livestock models such as grass-fed, involving the use of grass from pastures and hay, are extremely sustainable, due to the lower environmental impact and it also reduces stress on the animal itself. This type of livestock farming produces meat products, which can benefit from the “green, local limited production, pure air, bio pastures, low environmental impact” marketing labels. The present work aimed to enhance the Giant Bergamasca sheep value in the supply chain, using GPS systems capable of monitoring and guaranteeing where and how the animals grazed. This livestock traceability by simple QR code accessibility to the grazing location data improves the appeal of the meat purchased by chefs and restaurateurs as they can easily show the quality of the meat to the final customer. Meat and derived products from Giant Bergamasca sheep nutritional and sensory parameters will be determined to characterise and valorize them. Some preliminary data of sensory attributes such as aroma, taste, flavour and texture of “Violino” and “Bresaola” will be presented to describe these healthy and green products.

KEYWORDS

Traceability, Animal welfare, Sustainability, GPS, Sheep products

ORAL CONTRIBUTIONS

The Mediterranean Diet: from the pyramid to the circular model

Michela Zanardi (Department of Clinical Nutrition, ASL Città di Torino, Italy)

Martina Tolomeo (Department of Clinical Nutrition, ASL Città di Torino, Italy)

ABSTRACT

The Mediterranean Diet (MD), declared an Intangible Cultural Heritage of Humanity, is a transnational cultural and dietary model that has been proven to provide multiple benefits: it prevents many chronic non-communicable diseases, it bases its principles on the limited and responsible use of natural resources and it encourages the varied and seasonal consumption of fresh and local products, preserving biodiversity; it positively influences society as it gives importance to traditional gastronomic activities, conviviality and social inclusion. It also respects the specificities of the territory by enhancing local products, which benefits local economies. Because of its multiple benefits, MD can be regarded as one of the healthiest and most sustainable diets in the world. In order to disseminate the principles of MD, it was decided to propose a new graphic model, an alternative to the pyramid model, that referred to the concept of global health as the result of human and ecosystem health balance.

It consists of six concentric circles which replace the 'floors' of the food pyramid, maintaining its quantitative and qualitative characteristics, but enriching it with symbolic, cultural and anthropological values. The circle has been used as a universally recognised symbol in various contexts throughout human history, from religion to astronomy, from art to architecture, and its use continues until now. The circle conveys an idea of harmony, inclusion, unity, democracy, equality and fairness, which are fundamental principles of MD, and highlights the cyclical nature that distinguishes human life, the seasonality and the food lifecycle. Circularity also refers to the concept of recycling and waste reduction. The proposed circular graphic model aims to enhance the concept of how healthy food choices for humans are also healthy choices for the planet. If the proposed graphic model is adopted, it could become an instrument to disseminate the principles of the MD over multiple levels using the One Health approach.

KEYWORDS

Mediterranean diet, One health, Sustainable diet, Biodiversity, Circular diet

ORAL CONTRIBUTIONS

Piemont Cheina: blockchain for traceability

Boella Guido (University of Turin, Italy)

ABSTRACT

The project Piemont chèINA (PININ) aims to increase the quality and perception of the Piedmontese high-end agro-food products, introducing technologies for the traceability and authentication of agri-food products, for innovation in the marketing of products of the food chain and for the protection of the intellectual property rights of quality Piedmontese agro-food brands by identifying fakes and scams.

The innovative technologies supporting the project, Blockchain, Artificial Intelligence and Big Data, IoT, Augmented Reality, but also the Geoweb and Business Processes, simultaneously allowed the creation of an innovative system for tracking food products along the entire supply chain, from raw materials to consumer, and to introduce innovative services for the consumer. The goal is also to avoid waste from a circular economy perspective, facilitating the management of expiring products, promoting KM0 products and introducing controls in the food chain to certify sustainability through technological platforms. The project is part of the “Made in Piedmont” of the S3 strategy of the Piedmont Region, in the agri-food sector, with particular attention to the rational and integral use of biological resources (Bioeconomy) as regards the waste of food products, with an interdisciplinary approach that brings together ICT companies with production and distribution companies, and aimed at the development of technologies not only in their respective sectors but as a result of their symbiosis, aimed at creating “circular” productive ecosystems on the regional territory. The PININ built a distributed and decentralised infrastructure based on Blockchain that allows traceability at the lot level and that is scalable throughout the supply chain. The same Blockchain technology will also allow the traceability of the use of European funds for breeding with regard to cattle in alpine pastures.

KEYWORDS

Blockchain, Traceability, Food quality

PANELS

Chemosensation and Health

PANEL LEADER

Gabriella Morini (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

All living organisms are equipped with chemical recognition systems, which play a pivotal role in food selection and the perception of semiochemicals. In humans (and in all vertebrates) chemoreception is managed by the chemical senses: taste and smell, together with chemesthesis. The identification of specific macromolecules (receptors) capable to interact with compounds associated with olfaction (olfactory receptors, ORs), taste (taste receptors, TASRs) and its chemesthetic components [temperature (thermo-TRPs) and texture (Piezos)] was soon followed by the surprising and puzzling observation that these receptors are not only expressed in sensory organs (olfactory epithelium and oral cavity) but also ectopically along the intestine as well as other internal organs. The first presentation (Morini) will show how these extra-oral receptors serve as sensors for both exogenous and endogenous agonists, mediating systemic responses ranging from endocrinological ones to innate immunity. The case of T2Rs bitter receptors bill is deepened, showing how their function has allowed explaining at least in part the “pharmacological” effects of some food compounds and their role in shaping the microbiota, making T2Rs interesting pharmacological targets, as well as opening new perspectives on the function and evolutionary role of these receptors. In the second presentation (Di Pizio) the pharmacological effect of food taste- and odour-active compounds will be discussed and visualised making use of computational investigations. Using chemoinformatics analyses, the chemical space of taste- and odour-active compounds will be compared, and the drug-like region will be highlighted 6,7. The presentation will then zoom in on 3D models of the interaction between food-derived compounds with bitter taste receptors, presenting the case of humulone compounds, key compounds for the bitter taste of beer, but also anti-diabetic drug candidates. The third presentation (Appendino) will focus on the discovery of the trigeminal chemosensory system, inspired and aided by a diverse set of compounds isolated from spices,4 and will discuss how the interaction of spice-derived compounds with intestinal macromolecules as well as with the microbiota has been an area of intense research activity, that will be summarised in terms of nutrition and health.

KEYWORDS

Taste, Olfaction, Chemesthesis, Extra-oral, Health

CONTRIBUTORS

Extraoral chemosensory: state of the art and future perspectives

Gabriella Morini (University of Gastronomic Sciences of Pollenzo, Italy)

Computational chemosensation: exploring the therapeutic potential of taste and odour-active molecules by navigating their chemical space

Antonella Di Pizio (Technical University of Munich, Germany)

Gut feeling: intestinal sensing beyond taste receptors and its modulation by food

Giovanni Appendino (University of Eastern Piedmont, Italy)

PANELS

Food, animals and humans

PANEL LEADER

Francesco Chiesa (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

The connection and interdependence of animal, human and environmental health have long been demonstrated under the paradigm of “One-Health”. Zoonotic diseases account for 60% of the global burden of human infectious diseases and 75% of human emerging infectious diseases have originated from animals. The spill-over of a pathogen from its animal host to humans is determined by interactions among several factors, including disease dynamics in the reservoir host, pathogen exposure and the within-human factors that affect susceptibility to infections. Socioeconomic, environmental and ecological drivers play a major role in shaping the contact between human, wildlife and the environment. Especially for vector-borne emerging diseases, this “ecotonal edge effect” is particularly evident when related to climate change. The concurrent temperature increase, wildlife density and distribution changes together with the change in land use, are regarded as the major drivers of tick-borne diseases in alpine regions and continental Europe. Wildlife as a sensitive source of zoonotic pathogens is also a sentinel for human encroachment with antibiotic resistance genes which are growing as major human health problems. The contribution of wildlife in the spread of antibiotic resistance among different hosts and ecosystems occurs at both a local level, when non-migrating species are involved and across different geographic areas, as in the case of Influenza A virus where the horizontal transmission of antibiotic resistance genes, is sustained by migrating species across different continents. Food supply chains are equally affected by these events, with food safety and security put in danger. However, if they may negatively impact the environmental burden caused by human activities, they may also be positive drivers for the mitigation of the impact of such activities.

KEYWORDS

Animals, Food safety, AMR, Climate change

CONTRIBUTORS

Foodborne diseases in a changing environment

Francesco Chiesa (University of Turin, Italy)

Climate change and foodborne parasites

Stefania Zanet (University of Turin, Italy)

Antimicrobial resistance, Food Safety and One Health

Guerrino Macori (University College Dublin, Ireland)

PANEL: Human nutrition and health

PANEL LEADER

Simona Bo (University of Turin, Italy)

Can a Hemp seed make a difference?

Chiara Cattaneo (University of Turin, Italy)

Annalisa Givonetti (University of Eastern Piedmont, Italy)

Maria Cavaletto (University of Eastern Piedmont, Italy)

ABSTRACT

The history of hemp (*Cannabis sativa*) is closely related to the agricultural and food tradition. Traces of its use are lost in the mists of time, both as a source of fibre used for fabrics and ropes, and as a source of nourishment. In the Piedmont area, particularly in the mountain areas, hemp culture was widespread until the early twentieth century. After a period of oblivion, linked to the trade in more profitable textile fibres and also to the illegal spread of varieties containing psychotropic substances, industrial hemp (with a low THC content) has been reintroduced in recent years thanks to advantageous traits such as adaptability to hostile environmental conditions and the high nutritional profile of its seeds. As a by-product of fibre processing, the seeds have been re-evaluated as a food with a high biological value as they contain oils and proteins rich, respectively, in unsaturated fatty acids and essential amino acids. Furthermore, the cultivation of hemp is sustainable: it does not require extensive irrigation or the use of pesticides, and the biomass amount allows for good absorption of carbon dioxide. For all these reasons, hemp is considered a high potential and healthy food resource. In this intervention, the bioactive characteristics of hemp seeds and the flours derived from them are examined, extending the analysis to protein hydrolysis products, in an attempt to deepen their nutraceutical aspects and their potential from a perspective of sustainable nutrition.

KEYWORDS

Hemp, Seed, Food sustainability, Bioactive compounds

Exploring wild edible flowers for a healthy diet

Valentina Scariot (University of Turin, Italy)

Sonia Demasi (University of Turin, Italy)

ABSTRACT

The number of plant species considered edible in the world is about 30,000; however, very few of them are used to fulfil human food requirements. The rich biodiversity and abundance of wild edible plants represent a precious source of food still underutilised. Besides, the increasing interest in healthy and natural foods has raised the attention towards uncommon or unexplored ingredients, such as edible flowers. Eating flowers is a legacy of many cultures, but nowadays they can also represent a source of nutrients and phytochemicals with health benefits. Investigating 30 wild species of North-West Italy, we found phenolic compounds, vitamin C and antioxidant activities comparable to fruits and vegetables, outperforming cultivated plants. Phenolic compounds are a wide group of non-nutritional plant secondary metabolites that exert a strong antioxidant activity, scavenging reactive oxygen species. Vitamin C is a strong antioxidant that scavenges radicals, thus neutralising oxidative stress and plays an important role in human metabolism, representing a fundamental supplement in the diet. Studies are ongoing to explore the potential of edible flowers in the human diet to be used as food, supplement, additive or more generally, as a nutraceutical product. However, studies

on their effects in humans after consumption are lacking. We therefore performed an explorative study to evaluate the changes in urinary phenolic excretion in healthy volunteers, after adding edible roses to a meal. We found direct associations between urinary phenolics and edible flowers' phenolic content and antioxidant activity, suggesting the positive impact of flowers on the human oxidative status. Further human trials are needed to characterise the absorption of phenolics contained in the flowers to provide new information on the potential benefits of adding specific edible flowers in daily diet, exploiting the plant biodiversity of the territory.

KEYWORDS

Antioxidant activity, Plant biodiversity, Nutraceuticals, Phenolic compounds, Vitamin C

Sustainability as managed by responsible chefs: the study case of Slow Food Chef's Alliance

Nicole Giuggioli (University of Turin, Italy)

Francesco Sottile (University of Palermo)

Chiara Caltagirone (University of Turin, Italy)

Cristiana Peano (University of Turin, Italy)

ABSTRACT

The approach to the sustainable development issue has changed over time, now generally expressed by the 17 United Nations Agenda 2030 goals. It is widely acknowledged that the agribusiness sector has a strong footprint; when considering the entire supply chain, that is, from raw material production to consumption, it appears responsible for just under 30 percent of the world's energy consumption. Thus, there are many aspects through which the sustainability of the supply chain can be improved. Eating habits have changed over time and today, increasingly, some of the day's meals are eaten not at home. Chefs, therefore, have the power to shape the production, processing and consumption of food, influencing the nutrition of thousands of people but also politically affecting the world of raw material production. This study aims to assess how collaboration and network support can also push the foodservice sector toward more sustainable goals and toward achieving responsible improvements, specifically regarding the SDG's 2 and 12. For this purpose, it was found interesting to use as a focus area the Slow Food Cook's Alliance. This structured project provides common guidelines for all chefs involved with a solid commitment to sustainability. Through the study of the differences between the guidelines drafted by the project in 2015 and those updated in 2020, it was possible to analyse the results achieved and the critical issues for the further development of the project. Through the administration of questionnaires with semi-structured interviews, the main critical issues encountered by the interviewed sample of chefs were highlighted. In a second series of interviews, sustainable advancement proposals were put forward which found an improvement over the then-current guidelines on no less than 7 different targets. The hypotheses put forward aimed at the consolidation of significant elements that would contribute to strengthening the role of a network of chefs by making them aware of their contribution to the achievement of targets included in Agenda 2030. The methodology used for this research and the results obtained offer food for thought that can be further analysed and applied in future investigations.

KEYWORDS

Sustainability, SDG's, Foodservice, Semi-structured interviews

7. ABSTRACTS

7.2 Food Perception and Education

AREA COORDINATORS

Nicola Perullo (University of Gastronomic Sciences of Pollenzo, Italy)

INVITED SPEAKERS

Collectives at the Table. The Strategic Use of Pleasure

Gianfranco Marrone (University of Palermo, Italy)

Francesco Mangiapane (University of Palermo, Italy)

ABSTRACT

The recent pandemic has revealed some structural transformations which had been silently ongoing for the last few decades in the organisation of both work and daily life.

Back in the 1960s, Marshall McLuhan (1964) envisioned a world in which everyone's main work duties would have been carried out from home thanks to some form of teleworking, with the consequence of changing the shape of the social setting. In this scenario, moving through the city, by car or public transport, would no longer be an obligation dictated by the need to carry out activities physically located in separate and distant spaces, but a pleasure – by definition unnecessary – linked to some form of symbolic recognition of leisure and conviviality. This is becoming a reality today.

Contemporary cities must evolve to free themselves from a hyper-competitive model of sociality based primarily on the values of economic rationality, and strive for overall hospitality. They need to assign a greater role to the values of good living, by promoting a strategic use of pleasure, to be achieved by enhancing the material and perceptive aspects of collective spaces. A transformation in their plan and design is, therefore, demanded at various levels, to free them from their own past of grey horizons, symbolised by smoking chimney stacks.

Pedestrianization, public parks, foodscapes, urban gardens and restaurants with vegetable gardens, places of entertainment and consumption are spreading more and more, promoting an idea of overall rearticulation of the urban scenario.

In particular, the world of canteens and collective catering - meaning by these terms the service carried out daily by company canteens, charitable bodies, public organisations such as hospitals, schools and universities - has recently become the focus of intense political debate. Canteens, places once poorly considered and marginalised, currently emerge as targets of redesign projects, thanks to their suitability for the promotion of such values as perceptive immersion, good living, and conviviality.

These projects call into question areas of multidisciplinary intervention. They range, just to give a few examples, from industrial production times, to problems related to economic sustainability, social inclusion, acceptance, and symbolic recognition of religious and political identities. This requires expertise in the fields of architectural planning and design, culinary art and gastronomy, among others, as well as philosophical, anthropological and semiotic reflection on nutrition. All are called upon to describe and assess the very complex cultural dynamics posed by the world of collective catering.

ORAL CONTRIBUTIONS

From food to taste, from taste to food. Building a parable in young people's taste perception to "relish" the future

Antonina Plutino (University of Salerno, Italy)

Paola Zoccoli (University of Salerno, Italy)

ABSTRACT

Food enfaces multiple facets (culture, identity, relations, nourishment and so on) embedding those ones of perception and savouring flavours. These latter ones are already objects in several analyses, but the urgency for a deeper knowledge of the relationship with the origin territories and consumption places constitutes the focus for additional fields of analysis. The origin territories of food and their preparation as the places and situations of consumption belong with constitutional characteristics in value, relationships and links to food. These are components of the unicity for these values, relationships and connections with food also. Early gastrophysics research has its interest area in factors that are able to have a certain multisensorial impact on savouring food and beverage. Multifactor analysis arouses analogy with spatial dialectics (the environment "into" consuming) as in the nourishment dialectics (mainly close to food) as a trigger for the dialogue among landscape, agriculture, food, education and any other element that involves the phenomenology of the taste. Current trends indicate actions to raise awareness and relevance from the nutritional point of view and impact in the individual dimension, but also in the relational dimension starting from the culture of the territory and being together. Data about young people's nourishment habits show the main character of a low variety in kinds of food that are also made up of non-seasonal ingredients, with highly processed foods and low nutritional values.

The paper, through a survey of a sample of students from all levels of education up to university, at the beginning investigates their food preferences, tastes, and related habits, up to real experiences of traditional local foods, in order to trace a path of the components in their taste experience and overturn eating habits.

KEYWORDS

Local food, Perception, Taste, Territory

ORAL CONTRIBUTIONS

The making of ‘a taste for sustainability’: the role of ecological thought, hospitality, and enjoyment

Isaac Enrique Perez Borda (University of Gastronomic Sciences
of Pollenzo, Italy)

ABSTRACT

Food Sustainability is an increasingly mainstream concept, subject to the same political, economic, and ideological forces that shape our current food system. Within it, a sizable part of the messaging and responsibility is placed on the person(s) ingesting the foodstuff -the consumer- with appeals to their morality or as a way to relate to higher concepts. In this paper, I explore the dynamics for this widespread co-option, and the base assumptions of a consumer culture-centred food sustainability discourse, as well as its shortcomings. Furthermore, I propose a framework based on the concepts of ecological thinking and hospitality, in order to resist and complement the main current of food sustainability discourse, by suggesting some of the necessary tools include mindful, aesthetic, and enjoyment as integral, and more ‘palatable’ part of food sustainability than purely moralistic or transcendental approaches.

KEYWORDS

Food sustainability, Ecological thinking, Hospitality, Food enjoyment

ORAL CONTRIBUTIONS

Food awareness

Martina Fagotti (Mercatorum Telematic University, Italy)

ABSTRACT

In a world where everything seems to be defined, where everything seems to be within everyone's reach, ideally, you would think that each of us could choose and decide following our own ethics. The knowledge from which we start, however, is most often related to a superficial and partial study. Try for a moment to analyse the parties involved. Let's start with the meaning of the words. The word CONSAPEVOLEZZA (AWARENESS) is derived from the Latin, Cum + Sapere, and it means 'knowing together'. It subtends the moment when something becomes inwardly perceived. It's the knowledge that leads to ethics, to discipline. It is knowledge that makes you want to know more and more. Not surprisingly, the word CONOSCENZA (KNOWLEDGE), Cum + Gnosis, i.e. 'by way of knowledge', is a synonym for it. Therefore, to have awareness requires knowledge, and this necessitates experience and study. The food world also needs this step, now more than ever. The pursuit of quality inevitably involves knowledge. This requires us to pass on experience and knowledge to future generations. Therefore, the definition of sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' helps us understand this handover. The study of raw materials, their origin and consequently their research and use, the resource management, the amount of food to be consumed in a day, the circular economy, the definitions of km 0 and work ethic - this is necessary knowledge to arrive at a true awareness of what any of us decides to eat each day. Who better than children to learn how the concepts needed for sustainable development - concepts we know because of experience - to raise them into conscious adults?

KEYWORDS

Food awareness, Childhood, Knowledge, Sustainable development, Food quality

ORAL CONTRIBUTIONS

Consipience: knowing together by tasting together, within and across species

Joshua Evans (Technical University of Denmark, Denmark)

ABSTRACT

Food perception is relational not only between a subject and food but also between subjects, within and across species. While the social dimension of relational food perception is known, our concepts for understanding its multispecies dimension remain paltry—and in our current age of ecological crisis, this understanding has never been more needed. In this paper, drawing on a multispecies ethnography among culinary fermenters at Restaurant Noma and Empirical Spirits in Copenhagen, I develop the concept of ‘consipience’ to account for how human and microbial fermenters come to know each other through tasting together, within and across species. The specific sense of taste these fermenters enact is multisensory and multivalent: involving both perception and preference, gustation and degustation, physiology and phenomenology, and human and multispecies intersubjectivity. Consipience thus builds on shifts in philosophy and social theory away from Cartesian notions of interiority, intentionality, and autonomy and toward immanent, relational, but not symmetrical modes of engagement. It brings together Science and Technology Studies and Multispecies Anthropology, connecting how humans come to make shared, intersubjective understandings of the world (e.g. Shapin) with how humans and nonhumans become with each other through mutual attunement and ‘arts of attentiveness’ (e.g. Despret, Latour, Haraway, Tsing). Such a multispecies approach to relational food perception can help us move beyond narrow, outdated understandings of taste as a merely social distinction within bourgeois human society, and towards a broader understanding that situates taste ecologically, contributing to ‘a different possibility for educating food perception and rising consciousness through eating’. It also better equips us to attend to how taste shapes and is shaped by nonhuman others in unstable times of anthropogenic climate change, late capitalism, and the reverberations of biological imperialism, and in this way also offers a contribution to the symposium’s larger themes of gastronomy, sustainability, and justice.

KEYWORDS

Multispecies, Relationality, Taste, Fermentation, Microbes

ORAL CONTRIBUTIONS

Diffused University and post-Covid

Ishida Masayoshi (Ritsumeikan University, Japan)

ABSTRACT

Ritsumeikan University established for the first time in Japan a faculty dedicated to gastronomy, following the idea of gastronomic sciences. In addition to various academic teachings related to food, it arranges various real gastronomic experiences that complement the whole panorama of gastronomy: Le Cordon Bleu has been running a culinary course for 4 years. The True Neapolitan Pizza Association has introduced a traditional oven to train professional pizza cooks. Students travel around the world to discover regional culinary cultures (Italy, South Korea, Bulgaria, Australia, Portland, etc.). A 2-week internship is carried out in Italy that includes the intensive course at UNISG and various visits to the production reality (DOMORI chocolate, Castelmagno d'Alpeggio, Genoese pesto, coffee, Piedmontese breed, refettorio di Massimo Bottura, etc). With the propaganda "Farmer goes to the Academy," we invited an elderly fisherman from Venice to tell us about Molleche fishing. During Covid, we continued to invite virtually food workers into the classroom. In the last 2 years, these educational broadcasts have accumulated to about sixty. We managed to form a real network of food storytelling. In 2021, we organised the "Italian Internship without going to Italy " with UNISG's online lectures and various broadcasts and Academic Tables with distinguished chefs. From this academic year, the university is funding the satellite network project. We are placing Starlink's satellite systems first in Italy and then around the world. At last, we can bring also inaccessible things with actual wifi or 4G into the classroom: hundreds of sheep in the region of Abruzzo from the high mountains, traditional tuna fishing directly from the boat, the Piedmont vineyard, vast Tuscan plains with red poppy blooms. With the difficulty of going around the world, we got another way of perceiving the world. Traditional knowledge of producers and academic knowledge can be easily exchanged, connecting the whole world. In a sense, it anticipates our future "Diffuse University".

KEYWORDS

Network, University, Traditional and academic knowledge, Know-how

ORAL CONTRIBUTIONS

Lockdown in Italy and consumption: the rise of flour during domestic forced isolation from a digital perspective

Massimiliano Moschin (University of Udine, Italy)

ABSTRACT

The lockdown experienced by Italian citizens during 2020, dictated by the Covid-19 pandemic, has highlighted unprecedented scenarios regarding the consumption activities carried out by the population. Of particular interest is the increase in flour consumption in the first phase of this unprecedented context of forced domestic confinement. The research began through social network analysis and content analysis, and applied to Facebook and Instagram, to find emerging trends, mapping the main #hashtags and opinion leaders/influencers that have most embraced and pushed the phenomenon. The analysis will pay particular attention to the national spread of the trend observed, the keywords selected by users, and the possible creation of internal trends within the phenomenon such as the birth or strengthening of online communities. Particular attention will then be paid to the promoters and facilitators of these diffusion phenomena, both in terms of nature and physiognomy, as well as understanding the degree and form of cultural production by users, whether through textual interactions or user-generated content type media products. The study could lead to a starting point for further understanding and definition of some of the deeper motivations, both value and symbolic, of the behaviour that prompted the apparently senseless consumption and purchase of flour, as well as an in-depth study of the choices related to the processing practices, of breadmaking by the Italian population during March, April and May 2020, to try to explain what type of processing was predominantly chosen, trying to identify its motivations and cultural values.

KEYWORDS

Consumer behaviour, Lockdown, Flour, Social media, Digital practices

ORAL CONTRIBUTIONS

Gastronomic studies in higher education – The Irish state-of-the-art

Anke Klitzing (Technological University Dublin, Ireland)

Máirtín Mac Con Iomaire (Technological University Dublin, Ireland)

ABSTRACT

Food, says Appadurai, is a “highly condensed social fact”. It comprises and refracts complex social, interpersonal and ecological relationships, while reaching us on a direct sensory and visceral level, and not least, satisfying a basic daily need. In Ireland, the study of food in this complexity has been advanced since 2017 by a Masters-level course that rests on three pillars: History, Society and Practice. Seemingly distinct, these pillars are in fact principles that imbue all aspects of the programme, as it is understood that a full appreciation of the complexity of food can only be gained by plumbing the depth of its history, surveying the horizon of social consequences of food production and consumption, as well as personally experiencing and performing acts of taste, hospitality and creative expression. In this paper, we will showcase two core pedagogical elements of the programme that apply these tripartite principles holistically: the “Global in the Local” assignment, and the Gastrocritical reading and writing activities. The “Global in the Local” assignment challenges the students to organise a global food experience in a local manifestation. On the surface, it is a communal lunch, but the assignment prompts deep reflection about food’s global networks, as well as multilayered learning and creative bonding. The Gastrocritical reading and writing activities cultivate the students’ perception on an aesthetic level. Gastrocriticism is a form of literary criticism that approaches literary texts with a culinary lens, honed by scholarship in Gastronomy and Food Studies. But students not only explore food writing and literature with this gastronomic perspective, but they also develop their own creative writing, investigating their thoughts and experiences with and through food. Through these and other educational activities, the programme promotes gastronomic literacy of great nuance, marking it as state-of-the-art in higher food education in Ireland, and possibly beyond.

KEYWORDS

Food Education, Gastronomic Studies in Higher Education, Gastrocriticism, Food Studies, Experiential Learning

ORAL CONTRIBUTIONS

Mind the (Knowledge) Gap. How cities can help solve the household food waste problem: practical suggestions

Amit Mestechkin (Independent researcher)

ABSTRACT

Who is responsible for teaching us the vital connection between us and Our food? How to know what a healthy and balanced diet is? How to shop and cook? Moreover, how to reduce our food waste as much as possible? Is it our mother's responsibility? or the father's? Grandmother? The education system? our spouse? I believe a knowledge gap causes different economic, environmental, and health problems. These days when over half of the world's population lives in urban areas, and according to forecasts, the number is expected to reach 70% by 2050, cities significantly impact most of the planet's inhabitants. The municipal system of government has a tremendous impact on daily life. What is the role of the municipality or state we live in? They are responsible for issues such as education, health, cleaning, and garbage disposal, so shouldn't they be responsible for dealing with one of the root causes that affect all these issues, such as our food system. When a third of the food produced in the world is thrown away, and the local authority is responsible for the treatment, collection, landfill costs, and waste treatment - it can be a new player that can make an impact.

Here are important points:

- Most people live in cities.
- The municipality bin is full of food scraps.
- The private consumer (in Western countries) is the biggest waster
- The food loss & waste chain.
- Our food system needs to be changed.

Connecting these points leads to the conclusion that there is a strong connection between a city and our food system and the potential to solve the global food waste problem.

I want to offer a panel discussing how a city can encourage residents to reduce food waste at home and promote a sustainable food system.

KEYWORDS

City, Food Waste, Education, Systemic thinking, Sustainability

ORAL CONTRIBUTIONS

Fill your belly not your bin: An action research project to reduce food waste at Kunskapsskolan in Trelleborg, Sweden

Silvia Mugnaini (University of Florence, Italy)

Gyeong Jeong Min (Global Product Compliance, Sweden)

ABSTRACT

School canteens have been identified as a unique case to address food waste due to their dual role: on one hand as big generators of food waste and on the other as settings to deliver education to reduce it. This paper applies action research methodology to a collaborative project with a school called Kunskapsskolan in Trelleborg, Sweden, attempting to reduce food waste. The aim is to identify drivers of food waste according to stakeholders' perceptions, and, by applying the Three Spheres of Transformation framework, explore possibilities and constraints to reduce plate food waste in the school, using the school lunch as an educational tool. Results show that food waste drivers can be categorised as behavioural, operational and situational which are interconnected with possibilities in the personal and practical spheres and with constraints mainly in the political. This paper shows implications regarding the role of food education and food waste education in helping students to transform their mindsets and behaviours towards the problem of food waste, therefore supporting transitions toward sustainability. This paper concludes that all three spheres, the personal, political and practical spheres, should be considered in order to significantly reduce food waste in the school canteen.

KEYWORDS

Food waste, School canteens, Food education, Three Spheres of Transformation framework, Action research

ORAL CONTRIBUTIONS

Solution is served! Good food and strong words in the defence of flavour: MocaMad in Aarhus, Denmark

Zsofia Anna Toth (Independent researcher)

ABSTRACT

We are not well. We are not well physically, mentally, environmentally, collectively, or individually. Nothing is going to happen suddenly. Everything is happening slowly, also at this very moment. We are in it and we are in it together. We need action, and we need it now. We named the solution collectively: sustainability, but what is the problem? The problem we are facing as humanity is partly caused by our complex food-producing system. The relation to food is something that has to be changed on a collective and on an individual level. Taste, deliciousness; and a consequent and conscious food education can be part of the solution. Our sustainable solution started two years ago, just before the first lockdown, in Denmark. An experimental kitchen run by entrepreneurs, food lovers and optimist academics where without compromises we serve food, made only with the products and help of local farmers, based on slow food principles. Our concept is a solution for many of the existing problems- including environmental, social, economic and cultural. So far the conclusion is positive, people can be convinced by good taste, which is universal. If it was that simple, there would be no problem, but good food requires time, and no one has that anymore. MocaMad is a modern eatery/kitchen trying to find solutions to our general problems, involving all aspects of sustainability – cultural, environmental, philosophical and social; ingredients of a plate of good food. Can taste teach us something... and can we taste it yet?

KEYWORDS

Flavour, Tasting, Teach, Education, Eating

ORAL CONTRIBUTIONS

Consumers' perception of edible flowers as fascinating food in future

Mohammad Sadegh Allahyari (Islamic Azad University, Iran)

ABSTRACT

Since ancient times flowers have been used mostly for medicinal purposes. However, the nutritional value of edible flowers has been discovered and consumers have expressed a willingness to test new tastes and textures. Consumers have found so much special importance and popularity that they regard edible flowers as a new food source. Despite the high agronomic potential of edible flowers, the idea of eating them is unfortunately still treated with mistrust. The present study investigated the factors influencing the attractiveness, acceptance, and purchase of edible flowers such as white gladiolus (*Gladiolus grandiflora*), purple spray chrysanthemum (*Chrysanthemum morifolium*), orange marigold (*Tagetes erecta L.*), white yucca (*Yucca gloriosa*), and purple hibiscus (*Hibiscus syriacus*) using a field survey. Data were collected using a questionnaire composed of questions for four steps viewing, smelling, consuming, and tasting. The questionnaires were completed by residents of Rasht with no initial training. They participated as a test panel simultaneously. The test panel comprised 82 people. The results showed that among the three steps of viewing, smelling, and tasting, the most important step influencing the purchase and, finally, the consumption of edible flowers was the flower viewing step from the respondents' perspective. According to the participants, the purple chrysanthemum was the most appealing followed by orange marigold, white gladiolus, purple hibiscus, and yucca. The visual attractiveness of edible flowers was found to be the most important factor contributing to the acceptance and willingness to consume these new food resources.

KEYWORDS

Acceptance of new food, Edible flowers, Food habits, Sensory analysis

ORAL CONTRIBUTIONS

Olfactory foodification: and aesthetic inquiry on smell, food and spaces

Elena Mancioppi (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

Understanding the tight connections between the human experience of space, the sense of smell and food seems nowadays urgent. In fact, we are persistently subjected to the conditioning of “scent marketing”, namely the staging of olfactory atmospheres as auratic and emotional adherences to places and commodities. Interestingly, this massive aromatization is taking the shape of what can be called olfactory foodification. If it is a fact that our identity is shaped by the food we eat, nonetheless we are first of all “being-in-the-air”, as some scholars have suggested. Thus, comprehending the influence of ‘air design’ becomes a philosophical and, in particular, aesthetic necessity. The aim of my talk is to sketch an exploratory investigation on the aesthetic relationships between smell and atmospheres through the case of food, specifically through its flavour as its affective aura – its osmosphere, as I suggest naming it – since it appears irreducibly linked not only to the phenomenological experience of being ‘placed’, but also to our idea of ‘home’.

KEYWORDS

Smell, Food, Olfactory Foodification, Air Design, Atmosphere

7. ABSTRACTS

7.3 Traditional Ecological Knowledge and Food Heritage

AREA COORDINATORS

Andrea Pieroni (University of Gastronomic Sciences of Pollenzo, Italy)

INVITED SPEAKERS

The conundrum concerning the changing TEK (changing because of climate change and social changes) and its possible applications for valorising local food heritage

Rick J. Stepp (University of Florida, United States)

ABSTRACT

The factors involving change, loss and persistence of traditional ecological knowledge are complex but what is clear is that climate change and external social factors are presenting novel challenges. A major subset of TEK for many indigenous and small-scale communities is knowledge regarding subsistence practices, food and foodways. Comparative case studies are presented based on long term research from two areas of the world with some of the highest biocultural diversity related to food: the Highland Maya Region of Southern Mexico and the Greater Mekong Region of Southeast Asia. Despite significant ongoing changes in both regions, many communities are maintaining TEK. Their connection to local food heritage plays a major role in its persistence. Possible drivers of biocultural diversity are examined along with their application to other regions of the world. The significance of this work to gastronomic sciences is explored.

ORAL CONTRIBUTIONS

Pelin layered wine – a case study from Bulgaria

Vanya Boneva (Trakia University, Bulgaria)

Dessislava Dimitrova (Bulgarian Academy of Sciences/Slow Food Bulgaria, Bulgaria)

Neli Grozeva (Trakia University, Bulgaria)

ABSTRACT

The village of Zmeyovo is famous not only for its sleeping volcano and legends that have saved its residents during hard times. There are food memories and traditions. The one that has made the village famous is how to make Pelin wine - a tasty drink that harbours the aroma and taste of a variety of aromatic herbs that are soaked in it for 40 days. The case study presents the traditional layered Pelin wine from Zmeyovo, Stara Zagora, Bulgaria. The name comes from the Bulgarian word for wormwood – Pelin. A rapid ethnobotanical appraisal was conducted among the people who make this wine annually. Although the precise recipe is usually kept in secret, the basic compounds of this aromatized wine are fresh fruits - 3 species (local aromatic varieties of apples, quince and grapes), at least 9 species of aromatic plants (among which *Artemisia annua* prevails and together with *A. absinthium* is responsible for the peculiar bitter taste of the drink), coriander seeds and mature wine, traditionally from the Bulgarian Pamid variety which is typical for the area. The herbs and fruits are soaked in the wine for about 40 days. Foraging is a common practice, as most species are collected from wild populations by gatherers who have traditional knowledge about herbs and their usage. The heirloom is in danger now, as many of our respondents are the last from their families who sustain the tradition, but there are other various challenges which threaten its future. On the one hand, there is a reduction in the natural resources of herbs, on the other - is the lack of collective approach to the product in the village and there are hints of “modernization” of the recipe to suit consumers’ taste rather than to keep the traditional knowledge. The Pelin Festival in Zmeyovo has increased the consumers’ interest in the product and tradition, but this could also be a factor for producers to deteriorate the quality in favour of bigger quantities.

KEYWORDS

Layered Pelin, Aromatized wine, Wine tradition, Medicinal plants

ORAL CONTRIBUTIONS

Re-situating local foodways

Roberta Cevasco (University of Gastronomic Sciences of Pollenzo, Italy)

Rebeccak Dossche (University of Genoa, Italy)

Robert Hearn (University of Nottingham, United Kingdom)

Valentina Pescini (Catalan Institute of Classical Archaeology, Spain)

ABSTRACT

This presentation explores the central arguments made in a forthcoming volume on local traditional foodways co-edited by the contributors (Genoa University Press, 2023). The book presents a range of case studies conducted by an interdisciplinary group of geographers, historians and archaeologists into extant relationships between diverse foodscapes and foodways. It emphasises the importance of acknowledging and re-embedding spatially and temporally specific environmental, social and cultural factors and values in the study of local food heritage.

Drawing on a selection of specific faunal and floral examples, this volume draws on a range of different methodologies and a range of distinct sources – dal documento al terreno –.

The microanalytical approach adopted in this work facilitates the exploration and recognition of the (im-)material relationships that have over time become deconstructed or rendered invisible, such as the relationships between situated production practices, contextual knowledge and historical ecologies of sites. The geographical stories that emerge from such an approach reconnect and resituate foodways in individual and idiosyncratic foodscapes and their ecologies. In doing so they can foster new projects to increase a sustainability-driven ecological transition that can be effectively applied at multiple scales of production and consumption, re-acknowledging the embedded, more-than-food geographies and the ecological and social roles of specific, situated production practices and knowledge.

KEYWORDS

Individual foodscapes, Local foodways, Microanalytical approach, Site ecology, Situated practices

ORAL CONTRIBUTIONS

Bulgarian home food heritage – sharing values and the route to the market

Dessislava Dimitrova (Bulgarian Academy of Sciences/Slow Food Bulgaria)

Yulia Bosseva (Bulgarian Academy of Sciences/Slow Food Bulgaria)

Mihail Chervenkov (University of Forestry/Slow Food Bulgaria)

Teodora Ivanova (Bulgarian Academy of Sciences/Slow Food Bulgaria)

ABSTRACT

The rapid decline in the rural population and the reduction of the number of farms growing heritage plant varieties and landraces and autochthonous animal breeds in Bulgaria in the last 30 years have become a serious threat to the authenticity of the local food. On the other hand, the maintenance of culinary traditions is a part of the cultural agenda of traditional chitalishte centres – local institutions first started in the late 1850s, allied in a state-supported network. They stage traditions from the local livelihood, organise festivals and events related to agricultural customs, etc. Through the years local food traditions have become a special celebrative topic which is a new phenomenon different from the past. We present the case of several food festivals related to Slow Food Presidia in Bulgaria and discuss the factors that influence the safeguarding of gastronomic biocultural heritage and related traditional (ecological) knowledge. Attracting younger and especially urban audiences requires innovative approaches to the traditions and reevaluation of their potential (promoting plant and animal resources, wild food/medicinal plants collection, preparation practices, etc.). Challenges for in situ and ex situ preservation of the resources are discussed.

Acknowledgements: The study is funded by the Bulgarian Ministry of Education and Science under the National Research Programme “Healthy Foods for a Strong Bio-Economy and Quality of Life” approved by DCM # 577/17.08.2018. Part of the field studies was supported under the project DN10/1/2016 “The Garden: Site of Biocultural Diversity and Interdisciplinary Junction” funded by the National Science Fund.

KEYWORDS

Bioculture, Food heritage, Food biodiversity, Bulgaria, Balkan perspective

ORAL CONTRIBUTIONS

Fragile gastronomic heritage: local value chains and the perspective of rural development in Italy

Michele Fontefrancesco (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

The peculiarity of Italian gastronomic heritage lies in the bio-cultural diversity that characterised the country. Specifically, this diversity is linked with local productions that continue the production of local animal and vegetable eco-types. These productions are generally of small scale, continued by SMEs in marginal rural areas. They are profitable and a key resource in terms of rural development, intercepting the growing urban demand for “typical”, and “traditional” products. However, the future of the local value chain is uncertain. Based on empirical research conducted since 2020, the paper assesses the state of the art of these value chains and points out the main opportunities and challenges they face. Moreover, it questions the future of these products and the underpinning traditional knowledge in face of the continuous socio-economic marginalisation Italian rural areas experience. In so doing, it offers a contribution to outlining the value, use, and perspective of gastronomic traditional knowledge in the near future.

KEYWORDS

Italy, Local Value Chain, Rural Development, Value

ORAL CONTRIBUTIONS

Beyond locality: towards a social sustainability for culinary heritagization

Jenny Herman (KU Leuven / The Research Foundation - Flanders (FWO), Belgium)

ABSTRACT

Considering that we attribute profound values to foodways, the products and practices connected to what we eat, which can connote social belonging or origin, class, etc., and also considering that these foodways are socio-historical constructions which carry deep cultural significations, we must be aware of potential impacts of heritage initiatives which prioritise certain (often national or local) narratives as references for 'authenticity'. Labels of origin (AOP for example) are linked with the notion of terroir, combining geographical aspects with culinary traditions rooted in a delimited territorial space. When we emphasise nostalgia for the folkloric and the rural, based on a shared common past, we risk excluding those who are not reflected in these heritage narratives. Similarly, by solely promoting 'local', 'authentic', or organic products, we risk socially and economically alienating, for example, migrants or citizens without the means to purchase such products, which are often more costly. Through its semiotic capacity, food facilitates both belonging and the potential of being seen as 'other'. Faced with the growing commodification of food heritage and the rise of tourism initiatives focused on terroir, regional specificity and generational savoir-faire, it is necessary to postulate the secondary effects of these heritagization processes and to examine the intersecting motivations of their various actors such as farmers, consumers, cooks, tourists, and policy-makers. For instance, national and regional policies seeking to valorise culinary products also have a direct impact on the diverse populations they serve, giving them the opportunity to highlight diversity through fluid heritage narratives, rather than reinforcing a homogenous sort of belonging through the instrumentalization of locality alone. Given this, I problematize over-emphasizing locality when considering culinary sustainability. While acknowledging the need for ecological transformations and local valorization, I explore the importance of building socially sustainable culinary heritage from a Cultural Studies perspective, with a focus on the context in contemporary France.

KEYWORDS

Commensality, Social sustainability, Heritagization, Hybrid heritage, Culinary policy

ORAL CONTRIBUTIONS

The importance of ethnobiological studies in open-air markets: from the 1920s pioneers to DNA barcoding

Łukasz Łuczaj (University of Rzeszów, Poland)

ABSTRACT

Open air markets hold an important position for ethnobiologists. They are places where one can usually find the plants, animals, and fungi which are most important to a given culture, e.g., commonly eaten fruits, vegetables, or medicinal plants. Ethnobotanical studies of open-air markets are a frequent topic of scientific enquiry and have been performed in most major geographical regions however they are missing from many countries. The oldest known ethnobiological market surveys were carried out by Hungarian and Polish researchers in the early twentieth century, in Budapest, Wilno (now Vilnius in Lithuania), and Poznań. Recently, return studies in the markets of Budapest and Poznań showed large changes in the list of sold plants and fungi compared to what was recorded a century ago. In my presentation, I will discuss the challenges and discoveries from my studies of open-air markets in Poland, Croatia, Georgia, Armenia and Laos. Based on this fieldwork and on other studies of similar markets in various countries, we may conclude that they differ very much in the categories of organisms sold. For example, Polish markets are dominated by ornamental plants and edible fungi. In Croatia, wild greens play a major role. Wild greens, edible fungi, and bushmeat dominate in Laos. There are however many examples from all over the world where it is medicinal plants that are most represented in open-air markets.

KEYWORDS

Ethnobotany, Ethnomycology, Edible plants

ORAL CONTRIBUTIONS

Foraging as a childhood activity can foster local plant knowledge: insights from Finnish Karelia

Giulia Mattalia (Ca' Foscari University of Venice, Italy)

ABSTRACT

Wild food plants, particularly berries, are relevant nutritional elements in Nordic countries. In contrast with the global decreasing trends, approximately 60% of the Finnish population is actively involved in foraging. According to literature, this datum is not comparable with neighbouring Nordic countries, which raises the question: why is foraging so popular in Finland? Is there any historical/political reason behind such a trend? To answer this, in the summer of 2018, we conducted 72 interviews in Finnish Karelia to detect possible patterns of change, and their drivers, of the use of wild food plants. We documented several sources of local plant knowledge in Finland, such as written sources such as books and magazines, the Internet, and elders. In addition, elder interviewees recalled two school activities involving wild plants; the mandatory herbarium activity (with up to 120 specimens to be collected) and the school trips for berry picking (especially *Vaccinium vitis-idaea*, a minimum amount from each child was required to contribute to food supplies).

These activities, in addition to a reiterated attendance of the forest with the family, may have deeply influenced the knowledge and the connectedness with the surrounding environment. This phenomenon occurred even if the collected berries (such as *Vaccinium myrtillus*, *Rubus idaeus*, *Rubus chamaemorus*) did not represent staple food or primary economic resource, but mainly a recreational activity. Some interviewees reported that this practice is decreasing among younger generations due to changes in school activities as currently, children do not perform herbaria or berry picking. Moreover, there is no such need as berries are available all year round in the grocery stores. We conclude that the political decisions and social and cultural features regarding childhood activities may affect the relationship between people and their surrounding environment. Future research should address the role of childhood activities in shaping the relationship with “nature” in Finland and neighbouring countries with different historical and political backgrounds.

This research received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No 714874).

KEYWORDS

Wild food plants, Knowledge transmission, Local ecological knowledge, Political context

ORAL CONTRIBUTIONS

Protection and valorization of traditional products in Ukraine: challenges of the war and prospects of the recovery period

Olena Motuzenko (National University of Kyiv “Taras Shevchenko”, Ukraine)
Dauro Mattia Zocchi (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

Traditional products are considered as the basis of the gastronomic heritage of Ukraine, with a focus on multiethnic and multinational composition of territories. Local communities in different regions of Ukraine have a high level of preservation of traditions of production and consumption (ritual and everyday) of products and beverages. At the same time, there is no awareness of the value of a traditional product as a component of intangible cultural heritage. There is also no state program for the protection of traditional products and a regulated base for their accounting. Based on the identified risks and needs in the protection and valorization of traditional products at the national, regional and local levels, a model of protection, valorization and commercialization on a sustainable basis has been developed. A set of specific tools for valorization of local products is proposed: a traditional product, a geographically protected indication, an element of intangible cultural heritage, an element of the Ark of Taste of Ukraine, an element of tourist attraction. Pilot projects based on the created model have been implemented in different regions of Ukraine: in Zakarpattia, Odesa, Kyiv, Dnipropetrovsk regions. Based on the principles of Slow Food and Slow Wine, regional routes of wine and gastronomic tourism were created as a tool for valorization of traditional products and beverages and support for local producers. Based on research and practical projects, the concept of digitalization of gastronomic heritage and recommendations for the formation of regional registers of traditional products have been formed.

The study was supported by the European Research Council (ERC) under the European Union’s Horizon 2020 research and innovation programme (DiGe, grant agreement No 714874).

KEYWORDS

Traditional products, Valorization, Gastronomic heritage, Ukraine

ORAL CONTRIBUTIONS

Connected food: preserving traditional food practices via portable foods

Sevgi Mutlu Sirakova (Ludwig-Maximilians University–Rachel Carson Center, Germany)

ABSTRACT

In the global context of increasing internal and international migration, people keep going to and coming back from their “homeland” while carrying their food, cultures, and dreams along with them. This paper focuses on the informal food transfers of the Turkish-speaking community in Germany that occur while visiting their “homes” and relatives in Bulgaria and Turkey. These foodways are widely practised and essential for the well-being of many migrant families, yet they remain neglected in political and scholarly debates. The food carried by migrant families keeps them socially, emotionally and microbially connected to their homeland. Furthermore, they represent alternative food networks against commodification and standardisation of food production and consumption by supporting bio-cultural diversity. This paper aims to bring insights from these informal food flows to sustainability discussions by connecting environmental humanities with recent microbiome discussions through ethnographic research.

KEYWORDS

Multispecies studies, Microbiome discussions, Anthropology of food, Social sustainability, Sustainable food practices

ORAL CONTRIBUTIONS

When the garden serves the kitchen, from monastic to Royal to urban gardens reaching the restaurant table

Alice Petrini (University of Turin, Italy)

Marco Devecchi (University of Turin, Italy)

Silvana Nicola (University of Turin, Italy)

ABSTRACT

Relying on fresh produce has always been present and the possibility of growing our food ensures a precious contribution. Kitchen gardens, or potagers, can be found in several forms throughout human history. During the Medieval age, monastic gardens had a pivotal role in both ensuring food supply and providing medicaments, since not only vegetables and fruits were cultivated but also aromatic and medicinal plants. The same tradition continues with the royal kitchen garden, where ad-hoc spaces for cultivation were arranged in castles. Today, the boundless possibilities of global trade should have reduced the necessity to harvest its products. Nevertheless, the kitchen garden culture is still present: urban gardens are common in the city but, moreover, potagers can be found in new places, like restaurants, schools, and hospitals. The cultivated species can be different from the past but having self-produced food is still an aspiration. Moreover, interesting new aspects of this type of horticulture gain more and more interest. For instance, in the case of a community garden, the advantages for people's health are not only due to the consumption of fresh produce but also to the positive effects on stress relief and socialisation. Restaurants with kitchen gardens can ensure "from field to table" and "zero-time postharvest" approaches: these types of solutions are not only found in countryside restaurants but also in the cities, thanks to rooftop potagers or greenhouses. The garden becomes an important element that contributes to the ambience of the place, ensuring the customers an emotional experience. Also, chefs can catch inspiration from what surrounds them and can adapt the menu according to what the plants offer. Fresh and high-quality vegetables, herbs, fruits, and flowers can be chosen and grown depending on needs and season and can contribute to differentiating their restaurants from other competitors.

KEYWORDS

Fresh produce, Food heritage, Garden heritage, From field to table, Zero-time postharvest

ORAL CONTRIBUTIONS

Local knowledge and genetically modified bananas: prospects of coexistence and conflicts in Buganda, Central Uganda

Yasuaki Sato (Nagasaki University, Japan)

ABSTRACT

Banana (*Musa* spp.) is the principal crop of livelihood systems in parts of the Great Lakes region of East Africa. Since the 2000s, the production of bananas has declined sharply due to *Xanthomonas* wilt of bananas in particular. To counter this, the government of Uganda is proceeding with the development of genetically modified (GM) bananas with disease resistance from local cultivars, and legislation for their cultivation. This study presents the framework of the local knowledge of bananas in Buganda, Central Uganda, and foresees how the introduction of GM bananas will affect their knowledge.

The local knowledge of bananas can be roughly divided into two categories. One is traditional knowledge which is shared widely in the communities. The preferences for bananas, and the customs of cooking methods and dining manners are strong and resilient while banana production is reduced. Such knowledge includes selection criteria of popular landraces. If the number of introduced GM banana plants is limited, both cultivars are expected to co-exist in their culture, but if the GM bananas are similar to existing cultivars in appearance, there is a risk of confusion. Another category of local knowledge is highly dependent on the socio-cultural context. It includes fine sensibility with banana plants and fruit, preferences of minor landraces, the ways of the spatial arrangement of plants, and the exchanging pattern of seedlings. They are elusive and specific to individual experiences. Though it enables the diversity and dynamic nature of their culture, it will be possibly influenced by the logic and intervention of GM banana providers. While existing studies on GM bananas criticise a gap or disconnection in attitude between donors, the government, and farmers, this study insists on the importance of an independent-minded stance for the farmers who continue to update local knowledge.

KEYWORDS

Bananas, Uganda, Local knowledge, Genetically modified organism, Independent-minded

ORAL CONTRIBUTIONS

Spatial and non-human dimension of intangible heritage of food: the case of poultry biodiversity preservation

Achille Schiavone (University of Turin, Italy)

Domenico Bergero (University of Turin, Italy)

Rosa Maria Tamborrino (Polytechnic University of Turin, Italy)

Mesut Dinler (Polytechnic University of Turin, Italy)

ABSTRACT

In recent years, the notion of heritage has come to be conceived not only as some tangible remains of history, but rather as a way of engaging with the past. Therefore, 'heritage' is not limited to the materials, but it is rather a dynamic and ever-changing relationship of humans with their environments. This relationship has a very strong intangible dimension recognized also by UNESCO since the 2000s through the formulation of UNESCO Intangible Cultural Heritage List in which many member states have nominated and got inscribed their food traditions. Although a holistic approach is promoted and encouraged for the preservation and sustainability of tangible and intangible dimensions of heritage, their integral relation between tangible and intangible properties is yet to be discovered. The proposed paper frames intangible heritage (especially as it relates to food) as an outcome of humans' interaction both with animals (specifically poultry) and with their physical environment. Its main aim is to underline that for the preservation of poultry biodiversity, it is essential to comprehend the temporal interaction between humans, animals, and physical space (landscape) with a historical perspective. Thus, departing from the suggestion that food heritage is a historical legacy of interacting with other beings in the spatial context of our everyday lives, the paper aims at exploring how we engage with animals and with our environment shape how we heritagize food traditions. To do that, the paper will focus on the case study of poultry biodiversity preservation investigating with a historical perspective how the food heritage is not a static legacy, but rather it is in continuous change depending on the spatial and non-human dimension of how humans interact with landscape both in rural and urban contexts.

KEYWORDS

Food heritage, Human and non-human interaction, Intangible cultural heritage, Heritagization of food, Poultry biodiversity

ORAL CONTRIBUTIONS

Field to fork: an overview of ethnobotanical research and outreach on wild food plants in the Catalan-language territories (Europe)

Airy Gras (Universitat de Barcelona/Institut Botànic de Barcelona (IBB), Spain)

Teresa Garnatje (Institut Botànic de Barcelona (IBB), Spain)

Montse Parada (Universitat de Barcelona, Spain)

Joan Vallès (Universitat de Barcelona/Institut d'Estudis Catalans, Spain)

ABSTRACT

Wild food plants (WFP) have always been present in our kitchens, basically at home and local levels, but also in restaurants, including high gastronomy. In the Catalan linguistic area (CLA), recently, they were fundamental during the Spanish civil war (1936-1939) and World War II (1939-1945), as well as long before and thereafter, and a large memory and some uses persists nowadays. We will present a meta-analysis of the WFP dataset of the CLA (regarding edible uses, drinks excluded), with data from around 1,700 informants, having produced more than 10,000 use reports of almost 300 taxa. The very high informant consensus factor, 0.97, accounts for the robustness of the information. This pool of plants and knowledge is often and mainly underestimated and underutilised, although it has a big potential for food security and sovereignty, and for gastronomy too. Its consideration is an opportunity to promote closer and more sustainable agriculture and to propose old, in some cases forgotten foods that could be newly introduced onto the market, first, but not only, at a local level, which could be also interesting for new crop development in the frame of a valorisation of territorial identity. Additionally, we will describe some formative and informative activities aiming at (re)introducing wild plants in both occasional and everyday's elaboration of food and drinks.

KEYWORDS

Catalan linguistic area, Ethnobotany, Food discovery and development, Food security and sovereignty, Gastronomic botany, Local traditional knowledge, Wild food plants

PANELS

Eating “Traditional Food Knowledge” in urban food markets: consumers’ perceptions and the sustainability question

PANEL LEADER

Alessandra Narciso (University of Roma Tre, Italy)

ABSTRACT

Food provides the fabric of sustainability by defining neighbourhoods, shaping communities, and making places. The foods we eat are reflections of history, culture, terroir, and know-how. In a globalised world, food has helped bring vibrancy and a sense of belonging, by also serving as a means of integration of diverse communities, including migrants and other vulnerable categories. This panel aims to capture traditional food knowledge as shaped within urban food markets that provide consumers with a hybrid choice of local and trans-local agrifood products. The focus will be on urban food markets’ offer of quality and traditional foods (i.e., GIs as sui generis IPRs) as perceived and negotiated between the seller and the consumer/buyer. While tastes increasingly change and are ‘hybridised’, some questions arise: How are quality products defined, and by whom? How are quality products from other parts of the world possibly integrated into local markets? How do quality products meet sustainability and safety standards? Overall, do quality labels aggregate product value that goes beyond mere economic concerns? The methodology will be multidisciplinary, interlinking concepts of eco-cultural and socio-economic sustainability, health, and food justice from a national and supranational perspective. It welcomes research across scales; from case studies based on qualitative (e.g., storytelling and oral histories) or quantitative approaches, to the analysis of policies and regulations adopted at city/national/international levels. Contributions are encouraged from researchers, practitioners, and administrators that explore crucial dimensions of sustainability and affordability of traditional quality food with the goal of ensuring food justice and healthy and sustainable diets for all, across age, class, gender, and other relevant axes of differentiation. The role played by local food networks, e.g. markets, in the ongoing debate will be investigated vis-à-vis culturally appropriate, fair, and eco-conscious acquisitions in urban processes of recognition and valorization.

KEYWORDS

Traditional food knowledge, Food heritage, IPRs, Urban markets, Sustainable food networks

CONTRIBUTORS

Alessandra Narciso (University of Roma Tre, Italy)

Valentina Peveri (The American University of Rome, Italy)

Cinzia Scaffidi (University of Gastronomic Sciences of Pollenzo, Italy)

PANELS

The role of policy in the current status and evolution of Local Gastronomic Knowledge

PANEL LEADER

Renata Söukand (Ca' Foscari University of Venice, Italy)

ABSTRACT

Local Gastronomic Knowledge (LGK) comprises the entire assemblage of knowledge and practices, including the identification of food resources, their procurement, processing, preservation, consumption, and contextualization within the foodscape. LGK is the result of the long coevolution between the local environment and the culture of the people inhabiting that environment. It is widely accepted that the evolution of such assemblages depends on a variety of factors: locally available ecological resources and the changes in their availability, including the influx of foods grown or produced outside the region; cultural predispositions and the influences of globalisation; social changes and their speed and consequences leading to changes in gender roles, educational and living standards, and healthcare possibilities. Additionally, one important, yet highly under-researched, factor is the influence of policy on both the local and national level.

Therefore, in this panel, we invite contributions addressing the issue of how various political decisions have influenced the current state and evolution of LGK.

We welcome presentations and reflections on (but not limited to) the following areas:

- Political drivers affecting LGK (both positively and negatively)
- Effects of borders
- Centralised policies on books and other media
- Education policies affecting food choices and LGK
- Conceptualizations of food as a mere resource in totalitarianism and dictatorship
- Influence of political choices on foodscapes
- Ecological and food policies: interactions on the rural and/or urban level
- Influence of EU or national policies on LGK
- Regional policies affecting LGK
- Role of regulatory frameworks on LGK
- Effect of autarchy vs. globalisation on foodscapes
- Food sovereignty

KEYWORDS

Local Gastronomic Knowledge, Local Ecological Knowledge, Policy examples, Regional and national food-related policy, State influence

CONTRIBUTIONS

Rigid agricultural and environmental regulations as causes of the loss of local traditional food production: examples from Estonia

Raivo Kalle (University of Gastronomic Sciences of Pollenzo, Italy)

Renata Sõukand (Ca' Foscari University of Venice, Italy)

Ritual food as hidden resistance to homogenization: cases from Bukovina, Ukraine

Nataliya Stryamets (Nature Reserve "Roztochya", Ivano-Frankove, Ukraine)

Giulia Mattalia (Ca' Foscari University of Venice, Italy)

Julia Prakofjewa (Ca' Foscari University of Venice, Italy)

Baiba Prüse (Ca' Foscari University of Venice, Italy)

Renata Sõukand (Ca' Foscari University of Venice, Italy)

Centralization as a mechanism for homogenization of Local Gastronomic Knowledge: insights from Eastern Europe

Renata Sõukand (Ca' Foscari University of Venice, Italy)

Giulia Mattalia (Ca' Foscari University of Venice, Italy)

Julia Prakofjewa (Ca' Foscari University of Venice, Italy)

Raivo Kalle (University of Gastronomic Sciences of Pollenzo, Italy)

Baiba Prüse (Ca' Foscari University of Venice, Italy)

Marco Marozzi (Ca' Foscari University of Venice, Italy)

Nataliya Stryamets (Nature Reserve "Roztochya", Ivano-Frankove, Ukraine)

Natalia Kuznetsova (Catholic University of the Sacred Heart)

Valeria Kolosova (Ca' Foscari University of Venice)

Olga Belichenko (Ca' Foscari University of Venice)

Muhammad Abdul Aziz (Ca' Foscari University of Venice)

Andrea Pieroni (University of Gastronomic Sciences of Pollenzo, Italy)

(De) constructing state environmental narrative around wild food plant use in Soviet Lithuania and Belarus

Julia Prakofjewa (Ca' Foscari University of Venice, Italy)

Matteo Sartori (University of Concepción, Chile)

7. ABSTRACTS

7.4 Food History, Mobilities, Sovereignty, and Gender

AREA COORDINATORS

Simone Cinotto (University of Gastronomic Sciences of Pollenzo, Italy)

INVITED SPEAKERS

Decolonizing Food History

Amy Bentley

(New York University, United States)

ABSTRACT

The term “to decolonize” refers to a process that examines the effects of power inequities, decenters historically Eurocentric colonial powers and institutions, and incorporates a more inclusive past to strengthen and energise current practices and forms. The presentation examines how food historians today are rethinking approaches to and assumptions about scholarship, while also acknowledging that the term “to decolonize” can risk overuse, diluting its specific meanings and purpose.

ORAL CONTRIBUTIONS

Food mobilities—How Cuisines Are Made: The History of Taste and the Taste of History

Simone Cinotto (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

Historical research on food always needs to comprehend the dual, intertwined nature of food: its materiality (texture, flavour, colour, productivity, preservability, chemical components, effects on the human body) and its symbolic and cultural meanings rooted in human and physical landscapes, individual and collective memories, distinctive styles of consumption and conviviality, gender and social organisation, and so forth, which together create its value. The corresponding twofold meaning of “taste” reflects this duality. This paper therefore argues that the history of taste encompasses the histories of how all cuisines are made, and the dynamics of power, exchange, mobility, technological change, and pleasure that have shaped them and constantly redefined them.

KEYWORDS

Food; Taste; Mobility; Globalization; Gastronomism/Culinary Nativism; Decolonization

ORAL CONTRIBUTIONS

Food Globalization from the Bottom: Race, Migration, and Memory

Gabriele Proglia (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

This paper is dedicated to analysing food globalisation in relationship to race and migration. The aim is to offer a broad methodological overview on these topics, referring to different approaches in the field of social, cultural, and oral history. The goal is to question if it is possible to make a history of hidden and silenced stories in a food globalised world. In particular, memory will be understood as a source able to disclose many stories to counterpoise a single history, as suggested by Chimamanda Ngozi Adichie.

KEYWORDS

Globalisation, Decolonial approach, Race, Food, Colonial legacies, Subjectivity, Memory, Taste

ORAL CONTRIBUTIONS

Food Globalization from the Top: The Industrialization of Food and the Making of the Corporate World Food System

Giulia Crisanti (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

The paper addresses the issue of what do we mean by “food globalisation” and how major food corporations have driven and affected such process. As effectively illustrated by a series of key studies, in order to fully understand how the emergence of a global corporate food system has altered people’s lives, we must adopt a holistic point of view, considering multinational companies as both producers and consumers. On the one hand, food globalisation has indeed meant greater food choices and growing circulation of food products. On the other hand, however, it has also spread specific economic, cultural and social paradigms, undermining local food sovereignty. Multinational food companies have therefore a major part not only in determining our tastes or what food we eat, but also in influencing our landscapes, territories, and political and social structures. Through a selection of some significant scholarly contributions and themes, the paper will provide a broad analysis of some of the main aspects of this food globalisation from the top.

KEYWORDS

Food globalization / Gastro-globalization; Business history; Ecological history; McDonaldization; De-territorialization of food; Global food chains; Imperial Agriculture

ORAL CONTRIBUTIONS

Exotic Food Experiences in «the Long Eighties». Evidence from two Culinary Magazines

Francesco D'Ausilio (Vrije Universiteit Brussels, Belgium)

ABSTRACT

The paper explores how two culinary magazines, *Gourmet* and *PPC-Petits Propos Culinaires*, represented the increasing popularity of exotic food experiences in the US and the UK between the end of the 1970s and the first years of the 1990s (hereafter referred to as “the long eighties”). It investigates whether this interest could be related to the consumers’ growing curiosity in venture and discovery, where exotic experiences progressively expand as a form of entertainment and a means of displaying status and distinction. The survey is exploited through a quali-quantitative analysis of the recipes published in the magazines during this period, including interviews and of course literature references.

KEYWORDS

1980s, Exotic food experiences, Dining out, Culinary narratives, US, Britain

ORAL CONTRIBUTIONS

Out of the Ghetto. The Secularization of Kosher Food in Italy

Francesco Della Costa (Ludwig-Maximilians University, Germany)

ABSTRACT

During the last two decades, Kosher food has begun to move out of the Jewish religious and cultural boundaries to become popular among an increasingly large segment of non-Jewish society as well. Today, even entering a non-specialized store, it is rather common to spot a hechsher (kosher certification) on the package of various products. I will focus on the Italian historical and cultural context, which is particularly interesting because of the explicit policy pursued recently by the UCEI (Union of the Italian Jewish Communities) to “de-ghettoise kosher food”. In 2010, UCEI launched the “Kasherut Project” to promote kosher certification nationwide. “The kosher certification, which has been created to guide the Jewish faithful, became in time a way to ensuring quality, safety, and product excellence” (UCEI’s website). The protection and promotion of kashrut, the traditional Jewish system of religious rules for food consumption, has actually been redefined in secularised terms and reset within the current common dietary offer. In 2015 a book edited by the AME (Jewish Medical Association), and sponsored by UCEI, was published under the title of *La dieta kasher* (the kosher diet). Thus, kashrut started being presented as a diet that everyone could follow, and the benefits that such a diet would bring to the consumer were related to positive influences on health and ethical-ecological issues. Certificated kosher food would guarantee the consumer strict control over quality and hygiene standards, as well as more natural and respectful treatment of farm animals, and higher care for the environment and the production process. Shortly, kashrut in Italy today is not only an alimentary regimen complementing the spiritual commitment of faithful Jews or the culinary tradition of a relevant cultural minority, but is also conceived as a secular healthy, and sustainable diet for non-Jewish consumers attentive to food safety, sustainability, and fairness.

KEYWORDS

Secularization, Kosher food, Healthy food, Sustainability, Diet

ORAL CONTRIBUTIONS

Cebando Juntos: Cultural Transfer in Buenos Aires through Mate

Diego Vilela Kroeff (University of Gent, Belgium)

ABSTRACT

Largely attributed to the gaucho culture as well as its indigenous origins, Yerba Mate has since weaved itself into the fabric of Argentinian society today. How then, has this traditional tea, with its many cultural customs and norms, become a staple of Syrian and Lebanese households? In the late 19th century immigrants from the Middle East, most of them of Syrian and Lebanese origin ended up in South America. Throughout the following decades some returned, many visited their former homes, and others rooted themselves in their new country. During this time, the cultural transfers between the immigrants and locals opened up a new world of tea drinking for a people who already had an affinity for it, which slowly led to mate becoming an extremely popular drink in the region, with many not even realising that this indigenous herb is only grown in South America. What is fascinating about this exchange is how the customs and traditions translated into Syrian and Lebanese society and how it became such a hot commodity, so much so that Syria and Lebanon are the largest importers of mate outside of Latin America. In this paper, I hope to recount the story of mate's travels through a lens of cultural transfer – an approach that “focuses on the presence of elements from foreign cultures in one's own culture through empirically investigable selection and appropriation processes as well as their actors and media,” breaking from the dominant diffusionist approaches (Middell 2016, p. 1).

KEYWORDS

Food, History, Mate

ORAL CONTRIBUTIONS

The Political Economy of ‘Bad Coffee’: Specialty Coffee Consumption in Brazil

Sabine Parrish (City University of London, United Kingdom)

ABSTRACT

This paper considers styles of coffee drinking among the transnational specialty coffee consumer community and examines how full participation in such a community can be stymied when a coffee consumer is located in a ‘producing country’. I take as my case study the community of specialty coffee drinkers in São Paulo, Brazil—an urban group of ‘hip’ connoisseur consumers whose consumption landscape is shaped by being located in the largest coffee-producing nation in the world. Drawing on ethnographic work with these passionate consumers, I show how historical and contemporary international trade structures maintain Brazilian consumers on the periphery of the transnational, commodity-specific consumer culture of specialty coffee, and reinforce their unequal participation in the ‘orthodox’ origin discourses negotiated and defined by coffee-importing nations. In particular, the relative lack of distance (both social and geographic) between coffee producers and consumers in Brazil and the practical difficulties that prevent Brazilians from easily and directly accessing coffee from other producing nations (rather than via importing nations, where it is roasted and returned to Brazil) transforms the shape of moral geographic imaginations, how status is accrued, and how something as seemingly simple as drinking coffee is negotiated between local participants in the specialty coffee scene.

KEYWORDS

Coffee, Brazil, Trade

ORAL CONTRIBUTIONS

Reinterpreting Commoning and Locality: The Relighting of Community Ovens in the Western Italian Alps

Chiara Flora Bassignana (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

Commons and commoning have been historically instrumental in sustaining livelihoods in Alpine areas. After decades of abandonment and oblivion, a process of repopulation is instilling new life there, with community building and locality emerging from new and old highlanders' commoning. Through anthropological lens, this study investigates community ovens in the Western Italian Alps as commons, and their relighting as a process of commoning that engenders community building through bread, kneading, and baking. As such, commoning becomes one powerful tool to reverse the process of social dissolution and rebuild communities and spaces. We capture the ovens' relighting as a heterogeneous and experimental process that manifests in fluid ways in different hamlets based on the commoners' different backgrounds, ideologies, and visions. We further reflect on the capacity of the process to trigger ripple effects upstream and downstream local food chains, to shape ways of living the mountains and of relating with the world beyond the hamlet and the valley.

KEYWORDS

Commons, Alpine Valleys, New Highlanders, Community Building, Local Food Chains, Bread

ORAL CONTRIBUTIONS

Changing Local Foods and their Socio-ecological Implications: The Case of the Malo Farmers in Southwestern Ethiopia

Takeshi Fujimoto (University of Toyama, Japan)

ABSTRACT

The Malo live in the mountainous area in southwestern Ethiopia. They refer to 'crops' as 'kattsa' in their local language. However, kattsa more commonly designates 'cooked dishes' in general and 'steam-boiled dishes' in particular. Although steam-boiled dishes currently play a minor role, such dishes were everyday meals until several decades ago. When the author started fieldwork among them in the 1990s, it was said that steam-boiled dishes were their real food, although nobody says that now. Why have they declined? Steam-boiling is simple cooking done in a pot over high heat for about 1 hour. A pot can serve enough food to feed an entire family. It is used for root crops, such as taro, yams, as well as doughs of cereals (wheat, maize, sorghum, and tef). Throughout the area, different root crops are grown, the most important food for steam-boiling is enset (*Ensete ventricosum*). Enset is a perennial crop in the banana family cultivated as a food crop only in southwestern Ethiopia. The underground corm is huge, often weighing over 30 kilograms. It is cooked in two different ways: by steam-boiling or fermentation. For the former, the corm is cut into pieces, stuffed into a pot with vegetables and steam-boiled immediately on the day it is harvested. The second method involves a more complex, labour-intensive treatment for fermentation that uses both the underground corm and leaf sheath pulp. The mixed substance is left to ferment for at least 2 weeks. Once fermented, it provides the basis for a variety of dishes. The baking of unleavened flatbread of fermented substances mixed with cereal flours is becoming more common. Women who prepare the daily meals prefer steam-boiling because it needs less labour. However, it needs more firewood, which is becoming difficult to collect with an increasing population (the local population has tripled in the last 30 years). Steam-boiling may have been a suitable cooking method when much firewood was available; now, however, an intensive method that requires more labour may be optimal, which may be termed as 'cooking intensification.'

KEYWORDS

Enset, Steam-boiling, Fermentation, Unleavened flatbread, Cooking intensification

ORAL CONTRIBUTIONS

Slow Food, Fast Food and the many Faces of Aspirational Consumption: Findings from an Ethnographic Study of Family Food Practices in England during COVID-19 and Implications for Food Justice

Charlotte Gallagher Squires (City University of London, United Kingdom)

ABSTRACT

COVID-19 has radically changed daily life, altering the economy, work and social lives and engagement with the food environment. Investigating how families have engaged with food and food environments in this time provides an opportunity to understand the conditions which shape the consumption of nutritious and sustainable diets. We conducted a remote longitudinal ethnography, interviewing 62 parents across three case study sites in England about their food-related experiences. Participants took part in remote interviews and completed creative tasks including photography, map-drawing and oral diaries, three times between October 2020 and December 2021. The study found that the meaning of food as a source of pleasure became heightened in lockdowns for those across the socioeconomic spectrum as we collectively experienced restrictions on movement, leisure and social activities. However, personal histories and aspirations, combined with households' social, psychological and financial resources together shaped what exactly food as a source of pleasure looked like; from 'fast food' burgers, pizza and chips to homemade bread, homegrown veg and organic produce. In my presentation, I will expand on these findings by discussing how the wider systems around us (e.g. economic, sociocultural & food systems) shape these meanings, and how the resources available to us (e.g. financial, social, psychological) shape whether this translates to nutritious and sustainable food practices. The presentation will outline the implications of these findings for creating a socially just food policy agenda and inclusive slow food movement.

Keywords

Lived experience, Food environment, Consumption, Food meanings

ORAL CONTRIBUTIONS

Umami and Power

Yoshimi Osawa (Aoyama Gakuin University, Japan)

ABSTRACT

Monosodium Glutamate (MSG) is one of the most consumed food additives in the world. It is used to add an “umami” taste to foods, and since its invention in Japan in 1908, it has spread around the world. Although MSG brings umami, a taste that everyone enjoys, there are global and regional differences in the amount and way of consumption. In fact, most of the consumption is in East and Southeast Asia, where MSG is used intentionally and directly, i.e., as a seasoning. In other regions, on the other hand, MSG is consumed mainly as an invisible food additive. It has been examined that the regional differences in MSG consumption can be attributed to the affinity between taste preferences and food culture, as Asia regions have traditionally used fermented seasonings such as fish sauce and soy sauce with a high umami content and have been familiar with umami through its use. On the other hand, we cannot forget the background of umami as a product invented by a Japanese company and spread throughout Asia and other regions as a Japanese product. This presentation is mainly based on research conducted in Thailand, one of the countries where MSG is consumed in large quantities, to understand how MSG became essential in kitchens and dishes. Through a discussion of the history of MSG production, distribution, and consumption, the presentation will not only illustrate the social relationship between Japan and other Asian countries but also examine how food production and eating habits are influenced by economics and power.

Keywords

Umami, MSG, Food Additives, Thailand, Asia

ORAL CONTRIBUTIONS

Global Food Security in the Age of Sustainable Development: Trends, Threats and Challenges

Donatella Saccone (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

The fight against hunger has been recognized as a global goal by the UN Agenda 2030 (SDG 2 “Zero Hunger”) and is strictly interconnected with all the other Sustainable Development Goals. However, progress towards the ‘Zero Hunger’ Goal stagnated and the COVID-19 pandemic, with the subsequent economic downturn, significantly contributed to a further increase in the prevalence of undernourishment worldwide. More recently, the war between Russia and Ukraine has further undermined the achievement of the “Zero Hunger” Goal through its impact on international trade flows in cereals, which represent the staple food in most low- and middle-income countries and, especially, for the poor. In light of these considerations, the presentation aims at: 1) illustrating the main trends in global food security using country-level data, with particular reference to the prevalence of undernourishment; 2) quantifying the impact of the Covid-19 pandemic and the Russia-Ukraine war in terms of new undernourished in low- and middle-income countries, estimated using econometric techniques; 3) debating the new challenges which increasingly impact global food security in the next years, with particular reference to climate change and demographic dynamics. Policy implications will be drawn accordingly.

Keywords

Food security, Sustainable development

7. ABSTRACTS

7.5 Sustainable Food for People: Acceptability, Inclusivity and Co-creation

AREA COORDINATORS

Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

INVITED SPEAKERS

People and sustainable foods: acceptability, perceptions and attitudes as drivers of and barriers to consumption

Sara R. Jaeger

(Plant & Food Research, New Zealand)

ABSTRACT

A transition to a more sustainable and plant-based diet has begun. This talk covers key factors that drive and/or hinder dietary changes and uptake of sustainable foods and beverages. Focus is foremost directed to product acceptability, perceptions and attitudes, and findings from recent empirical studies illustrate these influences. The case studies span a broad range of food and technologies that enhance sustainability, as well as people from multiple (western and eastern) countries. Plant-based dairy alternatives and vertical farming will be considered in detail, as representatives

of two very different approaches to improving sustainability in global food supply and consumption. For plant-based dairy alternatives, key content covers: i) product acceptability and its sensory drivers, ii) perceptual and situational use barriers to consumption, and iii) consumer segmentation. For vertical farming, key content covers: i) attitudes and purchase motivations, and ii) cross-cultural differences. The selected case studies also showcase a variety of research methods that can be used in people- and product-focused food-related research.

ORAL CONTRIBUTIONS

Food neophobia limits acceptance of sustainable and healthy foods

John Prescott (TasteMatters Research & Consulting/University of Florence, Italy)

Sara R. Jaeger (Plant & Food Research, New Zealand)

ABSTRACT

Food neophobia (FN), typically defined in terms of rejection of unfamiliar foods, is also associated with low dietary variety generally and more disliked foods, even if they are familiar. In particular, FN appears to have a major impact on the acceptability of foods introduced on the basis of sustainability, including limiting acceptance of insect proteins in foods, plant-based meat alternatives, cultured meat and other new sustainably-oriented technologies. Increasingly, too, FN is recognised for its public health implications as a barrier to healthy eating. As FN increases, it is associated with a reluctance to consume functional foods or healthier alternatives to current dietary items, as well as with adverse health outcomes such as obesity. We have been exploring whether the elicitation of unpleasant levels of arousal underlies food rejection for those high in FN. While novelty is a source of high arousal, other arousal elicitors include complexity, 'foreignness', perceived dangerousness and high intensity. In one study of ~ 9000 adults in the USA, UK, Australia, Germany and Denmark, we found that foods with these different high arousal characteristics showed the strongest negative relationships between FN and liking. A subsequent study of ~ 3400 adults in the UK, Australia, Malaysia and Singapore examined relationships between measures of arousal, liking and familiarity for pairs of food names that varied in these elicitors of increased arousal. Liking, which decreased with increases in FN, was strongly negatively correlated with arousal for all samples and in all countries. While the low familiarity of samples was a large contributor to rated arousal, foods that reflected other causes of arousal also had reduced liking. Finally, we recently showed that those high in FN were more sensitive to food sensory qualities prior to, or during, eating which possibly explains the higher arousal evident in response to foods. All of these data are consistent with a view of FN in which food novelty is one source among several arousal-related causes for food rejection, all of which are linked to negative emotional states.

KEYWORDS

Food neophobia, Preferences, Arousal, Sustainability, Healthy diet

ORAL CONTRIBUTIONS

Sustainability and novel foods: consumers' attitude towards future foods

Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

There is a growing criticism of meat-based products over environment, animal welfare, and public health. Alternative proteins (e.g. algae, insects, plant-based meat alternatives, jellyfish and cultured meat) are generally considered to be healthier and more environmentally friendly than traditional animal-derived proteins. However, people remains often hesitant toward new or unfamiliar foods.

Research on alternative proteins is currently increasing to improve food security and sustainability but, to promote the success of future foods, it is essential to understand how people perception and expectations are influenced by several factors, such as socio-demographics, psychological factors, external attributes (social environment, culture appropriateness, etc.), product-related factors (healthiness, taste, environmental benefits, convenience, weight control, etc.).

In this context, the present work is aimed to present the results of different researches conducted by the University of Gastronomic Sciences to explore consumers' expectations and attitudes for the potential gastronomic uses of alternative protein sources and their relationship with the individual variables. In particular, an original methodological approach based on a gastronomic perspective is presented after its application to three alternative protein sources traditionally consumed in EU third countries and considered environmentally sustainable: insects, jellyfish and seaweed. Through online surveys and sensory tests information on the overall liking, perceived sensory attributes, and potential modalities of consumption of the three alternative protein sources was collected and analyzed.

The obtained results demonstrated that the proposed gastronomic approach can provide insights useful for the development of future sustainable products able to meet the expectations of people seeking alternative protein foods.

KEYWORDS

Alternative proteins, Gastronomic approach, Sensory perception, Acceptability, Individual variables

ORAL CONTRIBUTIONS

Healthy, tasty and sustainable tailor-made meal solutions for individuals suffering from taste and smell alterations: the role of sensory science

Sara Spinelli (University of Florence, Italy)

Caterina Dinnella (University of Florence, Italy)

Erminio Monteleone (University of Florence, Italy)

ABSTRACT

On the behalf of the Italian Taste Project - Food preference and choice are influenced by many interacting factors and the need for a multidimensional approach to investigate the complex nature of the dietary pattern is well recognized, particularly within sensory science. The large body of available findings depicts a complex interplay among several personal dimensions in shaping meat-eating behaviour. The present work reports findings from the Italian Taste project, a large-scale study launched by the Italian Sensory Science Society and aims at deepening the understanding of factors underlying individual variation in meat liking and consumption within a given food culture framework. Demographics, anthropometrics, oral responsiveness to sensory stimuli and psycho-attitudinal traits were collected from a representative Italian population sample (n=2384; 58% women, age 18-60 years) and considered as possible explanatory variables affecting meat liking. In line with the literature, women report a lower liking for meat than men, and a within-gender approach was adopted to investigate each gender separately. Liking meat is positively associated with the interest in food (including its rewarding function) and eating experience, lower food neophobia and relatively higher Body Mass Index irrespective of gender. Results depict a complex interplay between age, liking for and familiarity with meat mainly related to environmental factors (such as family care) in women and to differences in values attached to eating experience and in eating motives, mainly driven by health concerns, in the older male population. Variation in oral responsiveness was ineffective for describing variation in liking for meat. In conclusion, the present study allowed for identifying both common and gender-specific barriers and facilitators for meat appreciation that would represent valuable information for the development of a personalised strategy to help the transition toward a more sustainable diet style in meat eaters.

KEYWORDS

Sensory alterations, Taste, Preferences, Sustainability, Chemotherapy

ORAL CONTRIBUTIONS

Meat consumption and transition to more sustainable and healthy diet: factors affecting meat liking in a between and within gender study

Caterina Dinnella (University of Florence, Italy)

Ada Braghieri (University of Basilicata, Italy)

Sara Spinelli (University of Florence, Italy)

Erminio Monteleone (University of Florence, Italy)

ABSTRACT

An increasing number of people suffer from taste and smell alterations and loss due to different pathologies, treatments or conditions such as covid-19, chemotherapy, and old age. While the reason behind these alterations is not perfectly understood and the patterns of the effects are unclear with huge individual differences, there is consensus that these alterations put at risk of malnutrition (hypo- or over-) as food acceptability and pleasure change as a consequence. Sensory science may contribute widely to facing this problem not only by supporting a better understanding of the sensory alterations and their associations with food acceptability and thus behaviours but also by working for the development of new healthy and sustainable food solutions that are tailored to the needs and tastes of the individuals when experiencing these alterations. The new approaches recently developed in sensory science allow us to fully consider individual differences, for example when looking at segmentation based on both sensory perception and liking. Individual differences in taste acuity, personality traits and attitudes have all been found to affect food preferences and behaviours and should be considered. Innovative approaches that fully integrate the complexity of the factors affecting food preferences (considering individual differences) to investigate the changes in food acceptability and taste alterations are needed. The information collected with these approaches may facilitate the development of healthy and sustainable tailor-made foods and meal solutions suited to the needs of people with taste and smell alterations reducing in this way their risk of malnutrition.

KEYWORDS

Meat liking, Gender, Personality traits, Oral responsiveness

ORAL CONTRIBUTIONS

Preferences of microgreens in Italian ho.re.ca channel: explorative survey on perception and sensory attributes

Vittoria Pilone (University of Foggia, Italy)

ABSTRACT

Microgreens are a food product recently discovered by consumers, considered a superfood because they are rich in nutrients and have a higher level of vitamins and bioactive substances at the same weight as the same grown vegetable. The “miniature” growing system ensures the minimal consumption of natural resources and a sustainable production process. With the aim to identify the major drivers of the microgreen market in Italy, in this study a survey, carried out in the ho.re.ca channel and oriented to investigate about willingness to use microgreens in cuisine and preferred quality attributes, is proposed. Ho.re.ca channel was chosen, considering that microgreens represent a novelty in the Italian food market and they are still scarcely adopted in household cuisine. The survey was based on an online questionnaire involving several restaurants, hotels, and catering across Italy. It was articulated in different sections aimed to investigate the relevance and characteristics of restaurants and respondents, level of knowledge about microgreens, their frequency of consumption, preferred microgreens and their quality attributes. In particular, sensory characteristics (e.g. taste, colour, shape, etc.) shelf life, price, and convenience to use were identified by literature and prior exploratory investigations as main attributes orienting choices and, therefore, they were selected in this study. The willingness to use microgreens is evaluated with a non-linear regression model. The main results bring out the level of interest in this product, the most preferred species of microgreens, the most important product attributes, and the price impact on their use. Overall findings of this study intend to detect insights about real and potential microgreen markets in Italy and, consequently, orient the competitive strategies of interested producers. This paper represents a novelty in economic literature because it is a try exploring the market opportunities of this new product, considered far from traditional Italian cuisine, but increasingly interesting to new food consumption trends.

KEYWORDS

Food Quality, Novel Food, Microgreens, Ho.re.ca. channel, Preference attributes

ORAL CONTRIBUTIONS

Individual differences in processing visual food stimuli with diabetogenic and hypertensive characteristics

Riccardo Migliavada (University of Gastronomic Sciences of Pollenzo, Italy)

Tommaso Ciorli (University of Turin, Italy)

Andrea Devecchi (University of Gastronomic Sciences of Pollenzo, Italy)

Maria Piochi (University of Gastronomic Sciences of Pollenzo, Italy)

Marina Perino (University of Turin)

Lorenzo Pia (University of Turin, Italy)

Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

Noncommunicable (NCDs) diseases are the leading cause of death worldwide. Hypertension and type 2 diabetes are common comorbidities and among the most common NCDs, and can be largely conditioned by dietary habits. The general aim of this study is to explore individual differences in the conscious/unconscious visual processing of food stimuli with diabetogenic and hypertensive characteristics.

A total of 24 subjects (54% female and 46% male), aged 29-62 years (mean age = 48.5 years), who participated in a previous project (Italian Taste) were recruited to participate in the study. Previous data on the subjects included: socio-demographic, socio-economic, anthropometric and physical health information; food preferences and eating behaviours; measurements of psychological and personality traits; and indices of taste function (i.e. fungiform papillae number, PROP taster status).

For the present study, 20 images of highly processed, high-calorie foods were selected from the Food-Pics database, classified according to their glycemic index (GI < 55; GI > 55) and salt content (salt < 1 g/100 g; salt > 1.0 g/100 g) as diabetogenic or hypertensive stimuli, and validate through an online questionnaire.

During individual laboratory sessions, participants completed multiple trials (100) of binocular rivalry and breaking-continuous flash suppression (b-CFS; 260) test with the selected food images, equally divided in stimuli (high GI and salt content) and controls (low GI and salt content), along with a questionnaire investigating food items familiarity, waist circumference, and BMI. Participants also completed an online version of Multidimensional Assessment of Interoceptive Awareness (MAIA) and Eating Disorder Inventory (EDI-2).

To the author's knowledge, this is the first study attempting to assess possible individual differences in the perception of diabetogenic and hypertensive foods.

KEYWORDS

Food perception, Food preferences, Individual differences, Binocular rivalry, Breaking-continuous flash suppression

ORAL CONTRIBUTIONS

Cross-cultural differences in cross-modal interactions between sound and taste in recipes with different textures

Maria Piochi (University of Gastronomic Sciences of Pollenzo, Italy)

Daniele Codognato (University of Gastronomic Sciences of Pollenzo, Italy)

Arman Onurcan (National Research University, Russia)

Anna Shestakova (National Research University, Russia)

Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

Cultural, genetic, physiological and perceptual differences in humans across the world are important determinants for food preferences. Cross-modal interactions are the interactions between two or more different sensory modalities and influence the food perception. In fact, even if food flavours are composed of distinct sensory properties, there is ample evidence that these properties are not perceived independently. The degree to which cross-modal interactions occur may greatly vary in individuals with different cultures. The current study explored how sound modulates the perception of taste in recipes with different textures, comparing two cultures with different gastronomic backgrounds (Italian vs Turkish). The aims of this study were primarily to assess the effect of sound in the perception of taste and liking in recipes with different textures, and to explore how the modulating effect of sound varied across different cultures. Four sounds were used as auditory stimuli. Carrot was used to prepare three recipes, representing different textures (boiled = firm/hard, purée = creamy/soft, chips=crispy). Both types of stimuli (sounds and carrot recipes) were validated on a large scale with previous tests, to assess respectively that each sound was associated with a prevalence of taste (sweet, salty, sour, bitter) and each recipe (product) was associated with a prevalent texture. A total of 151 participants (78 Italians, 71 Turkish) were enrolled in the study that took place at the University of Gastronomic Sciences (Bra, Italy) and at Gaziantep University (Gaziantep, Turkey) using the same protocol. The two populations were homogenous in gender composition, age and favourite music mostly frequently listened. The experimental plan included the collection of liking data (9-point hedonic scale) and perceived intensity of taste (9-point scale) of the three recipes under five sound conditions: no sound (control), sample tasting combined to 'sweet sound' (Sws), 'salty sound' (Sas), 'sour sound' (Srs), 'bitter sound' (Bs) (3 recipes x 5 sound conditions = 15 samples). Effects of sound on taste perception and liking are discussed in the whole population and considering the effect of nationality in a cross-cultural perspective. Sound significantly affected the perceived intensity of taste. A clear influence of the nationality was found on the impact of sound (especially of Sws and Bs) on perception of taste intensity and liking of recipes with different texture. Complex sound-taste cross-interactions were found, some of which for specific textures. Sound-taste cross-interaction generally reflects binary taste-taste interactions. The study highlights that sound could be used to modulate the perception of recipes, and the culture should be considered as a strong influencing factor.

KEYWORDS

Sound, Texture, Taste, Multisensory perception, Cross-cultural

ORAL CONTRIBUTIONS

A sensory-based approach to valorize local foods with experts and communities: the case study of polyfloral honey

Danny Cliceri (University of Trento/Fondazione Edmund Mach, Italy)

Leonardo Menghi (University of Trento/Fondazione Edmund Mach, Italy/University of Southern Denmark, Denmark)

Isabella Endrizzi (Fondazione Edmund Mach, Italy)

Gian Luigi Marcazzan (CREA Research Centre for Viticulture and Enology, Italy)

Flavia Gasperi (University of Trento/Fondazione Edmund Mach, Italy)

ABSTRACT

Sustainable foods are often enclosed within the gastronomic traditions of local communities. These foods are characterised by ingredients and production methods suitable to the resources locally present, they are known by the communities for their ability to generate income and guarantee food security. Industrial production has often put these products out of the market for their more competitive price and high availability. Therefore, the enhancement of local foods is important to allow them to survive in the food market and promote food biodiversity. This contribution aims to provide a methodological approach based on sensory and consumer science to valorize local foods and support local communities in their production. The approach was applied to polyfloral honey from Trentino (Italy), an area particularly suited to its production. With the support of local organisations (e.g. beekeepers' associations), 30 samples were collected to guarantee territorial coverage and sensory variability. The samples were then described remotely (Check-all-that-apply method) by a panel of 43 subjects from the national register of experts in the sensory analysis of honey. Representative samples of the sensory variability (6 samples) were selected on the basis of sensory characterization. These samples were used in a consumption test with 131 local consumers to evaluate their hedonic response (liking test, emotions). A consumers' characterization questionnaire (honey consumption habits, gastronomic uses, places of purchase) completed the investigation. The sensory analysis highlighted the wide variability of the local polyfloral honey, finding significant variability in 49 sensory terms (89% of the sensory wheel terms). The consumer test allowed identifying sensory descriptors linked to the positive hedonic responses of specific consumer segments differing in the level of consumption. This information, along with the relative gastronomic use of honey and the main places of purchase, provided relevant information to reach these segments and valorize this local product most effectively.

KEYWORDS

Sustainable food, Local food, Honey, Sensory analysis, Consumer science

ORAL CONTRIBUTIONS

Sensomic approach for consumer preference and acceptance of food products

Fabrizio Cincotta (University of Messina, Italy)

Antonella Verzera (University of Messina, Italy)

Concetta Condurso (University of Messina, Italy)

Maria Merlino (University of Messina, Italy)

ABSTRACT

Acceptance and preference of foods are among the most important criteria for determining food choice. Sensory perception and our response to food products and finally food choice itself are affected by different factors. In the last decades, the “omic technologies” widely spread in different fields and metabolomics subgroups, such as foodomics, flavoromics, and sensomics, for food and beverages were developed. The main purpose of “omics” is a holistic view of molecules in the sample to gain as much possible information. Food sensomics, metabolomics used in combination with sensory perception, allow the study of the compounds related to sensory perceptions and to verify the influence of different raw materials and production technologies on sensory properties on a molecular basis. A Sensomic approach included instrumental analyses, Gas Chromatography-Mass Spectrometry of volatile aroma compounds, analytical and hedonic Sensory analyses, Qualitative Descriptive Analysis and Consumer acceptability test, and Multivariate data analysis has been applied to several food products for instance bakery products, cookies, and packaged bread, ready-to-eat vegetables, and dried spices. Moreover, the same approach was applied to food products, such as lactose-free dairy products, intended for people with specific nutritional requirements. The development and the use of a Preference Map that combines information from end-consumer preference and expert panel description allow to identify the key drivers of liking and to define how to orient the product development to meet consumers’ expectations. The Sensomic approach can provide food industries with the drivers of product acceptability also for groups of people with specific pathologies and/or nutritional requirements; moreover, it can lead to food products that meet consumers’ demand in the case of sustainable and healthy foods development.

KEYWORDS

Consumer’s preference, Acceptance, Sensomics, Aroma compounds, Preference maps

ORAL CONTRIBUTIONS

Enhance the use of sustainable food packaging: the role of socio-demographic characteristics on consumer awareness of sustainability

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Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

Packaging performs a fundamental role in protecting products, but it is also considered one of the main factors determining the total environmental effect of food products. This work investigated which factors mainly influence consumers' sustainable choices about food packaging and how food labels on packaging can be a driver of sustainability-related information. A total of 646 participants' responses were collected by an online survey. Consumers' awareness, behaviour, and expectations were mainly influenced by gender, age, and education level. Consumers were classified into four groups based on their behaviour in relation to food packaging: 1) most sustainable - packaging role-oriented; 2) most sustainable - packaging minimizers; 3) least sustainable; and 4) average sustainable. The results revealed that consumers' consideration and expectations of sustainable packaging appears to be strongly influenced by socio-demographic aspects (gender, age, education level). The classification of consumers into four profiles based on their more or less sustainable packaging behaviours demonstrated the existence of a relationship between consumer behaviour and the information on the packaging. The most sustainable consumers were found to be mainly women, while the least sustainable were mainly young people. Expectations about sustainability-related information that can be communicated through food labels turned out to be a discriminating factor for the four groups. Both of the more sustainable profiles felt that the presence of information on the eco-label regarding the benefits of eco-friendly packaging and ways to recycle different types of packaging was very important. The less sustainable consumers showed less interest in label information and its improvement. In contrast, the presence of sustainability-related symbols on the packaging and their description are the items that gained relatively more interest. In conclusion, this study identified which factors may influence consumer behaviour so as to better understand how to guide them toward sustainable packaging-related choices through food packaging.

KEYWORDS

Sustainable packaging development, Consumer segmentation, Eco-labels, Socio-demographic characteristics effect

ORAL CONTRIBUTIONS

Preliminary results of a consumer survey: are consumers ready for eggs and meat of Portuguese local poultry breeds?

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Achille Schiavone (University of Turin, Italy)

ABSTRACT

Consumers attitude towards local poultry breeds is of utmost importance for maintaining traditional production, and promoting environmental, social and economical sustainability of local farms. The objective of this preliminary study was to assess whether Portuguese consumers: 1) perceived local breed products as different from industrial hybrid production 2) would be willing to buy local products and 3) would be willing to sustain low-production associated costs. A questionnaire was applied to consumers using online survey tools. The survey was structured in 4 sections: consumer characterization, general knowledge on poultry production, preferences on egg consumption and meat consumption. Data was analyzed using descriptive frequency and Chi-square tests. Consumers (N=538) are aware of differences between local breed and industrial hybrids and would be willing to buy products of local Portuguese breeds ($p < 0.001$). Eggs of local breeds are perceived as having: higher nutritional values (58.0%), similar cholesterol level (40.9%), lower to similar size (63.3%), similar health risk hazards (33.6%), better organoleptic characteristics (79.2) and aspect (62.2%; $p < 0.001$). Meat from local breeds is perceived as having: higher nutritional values (66.0%), lower to similar cholesterol level (61.2%), lower to similar health risk hazards (65.6%), better organoleptic characteristics (82.2%) and texture (77.7%; $p < 0.001$) when compared to industrial products. Consumers would be willing to pay up to 25% more (50.7%) and from 25 up to 100% more (37.0%) for local than for industrial hybrid eggs ($p < 0.001$). They would be willing to pay up to twice (63.4%) and from 2 to 3 times (20.6%) the price of industrial hybrid meat ($p < 0.001$). Portuguese consumers perceive that poultry products from local breeds have several positive quality and safety attributes. This seems to be translated in the willingness to pay more for local breed products as compared to industrial ones.

KEYWORDS

Portuguese local breed, Poultry, Sustainability, Quality perception, Safety perception

ORAL CONTRIBUTIONS

Organic and biodynamic sustainable productions and effect on eligibility and peculiarity of a typical wine

Valentina Canuti (University of Florence, Italy)

ABSTRACT

The wine industry is currently shifting toward more sustainable production systems. There are many reasons for this, such as the interest of people over climate change and, consequently, the wine consumer's choice toward organic and biodynamic, reduced carbon-footprint, vegan and other environmentally friendly wines. While the viticultural effects of biodynamic and organic practices on wine grapes have been investigated, there is a lack in literature on the general effect on the final quality of wine. For this purpose, this study sought to evaluate the impact of the organic, biodynamic and conventional production processes on the eligibility and peculiarity of a typical wine, such as Chianti DOCG: commercial Chianti DOCG wines from 2016 and 2017 harvest were selected based on their production management including organic, biodynamic and, conventional. The global quality of a typical wine was defined by three different profiles: the eligibility profile (chemical characteristics such as alcohol concentration, total acidity, pH, and phenolic concentration), the peculiarity or typicality profile defined by the cultivar (aromatic characteristics that originate from the grapes), and the style profile (characteristics that result from winemaking methods). Chemical and sensory analyses were carried out to define the eligibility and typicality profiles of the wines and to evaluate their correlation with the different production techniques. The statistical elaboration of the chemical and sensory data underlined that generally the different wine production techniques did not yield any systematic differences on the eligibility and typicality profiles, except for the higher values of colour intensity and polyphenol contents of the organic wines.

KEYWORDS

Winemaking process, Typicality, Quality, Sustainable productions, Sensory perception

PANELS

Social aspects of sustainable food production and access

PANEL LEADER

Paolo Corvo (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

The world of food has undergone profound transformations in recent years, taking on an increasingly important role in socio-cultural dynamics as well as in people's daily lives (Murcott, Belasco, Jackson, 2013; Corvo 2015). In this panel we highlight some of the most relevant changes in the gastronomic field, related to consumption patterns, food practices, the organisation of food services and restaurant management. Food has become a determining factor in the definition of individual identity, and a prime focus of traditional media, social networks, consumer movements and consumer associations (Poulain, 2005). To fully grasp the new frontiers of gastronomy is to rethink consumption patterns, lifestyles and public policies. Today, the individual is confronted with a plurality of options and choices without any certain or absolute point of reference. This is more evident today than ever before, even if thirty years ago Fischler had already spoken of gastro-anomy, describing a relationship to food characterised by a general absence of rules (Fischler, 1990). To describe the current situation characterising the world of food, it seems appropriate to evoke Zygmunt Bauman's concept of liquid society, where the globalised individual lives without certainties in an aesthetic and fragmented space (2000, 2017). Drawing from this perspective, we can perhaps speak of liquid food or gastro-liquidity, where the consumer's experience is in a state of constant change: from the introduction of automation into the restaurant sector (will we ever have robot waiters or robot chefs?), to the rediscovery of a direct relationship with producers; from the growing consideration of local products, to the attraction of fusion and multi-ethnic foods; from the multi-sensory and gustatory experiences of food (Shepherd's theories about neuro-gastronomy (2012) come to mind here) to the online purchase of food, which is devoid of any visual or tactile contact.

KEYWORDS

Food consumption, Food production, Liquid food, Cooking, Restaurants

CONTRIBUTORS

Food, sustainability and social change. Dubai between policies and mythopoesis
Marxiano Melotti (Niccolò Cusano University, Italy)

Food consumption practices towards digital society
Piergiorgio Degli Esposti (University of Bologna, Italy)

The role of food in achieving the Sustainable Development Goals
Carolina Facioni (Italian National Institute of Statistics)

Agro-food production and new post-global scenarios
Gabriele Di Francesco (D'Annunzio University of Chieti-Pescara, Italy)

The food in the future
Paolo Corvo (University of Gastronomic Sciences of Pollenzo, Italy)

PANEL: Greening Food Consumption/ Production Paradigm: A Glaze on Practices and Values

PANEL LEADER

Maria Giovanna Onorati (University of Gastronomic Sciences of Pollenzo, Italy)

Sustainable eating in times of crisis: a longitudinal Study

Maria Giovanna Onorati (University of Gastronomic Sciences of Pollenzo, Italy)

Francesco Domenico d'Ovidio (University of Bari "Aldo Moro", Italy)

Helena Horská (Slovak University of Agriculture in Nitra, Slovakia)

ABSTRACT

The severe commodity crisis triggered first by the pandemic and then by the war in Ukraine has accelerated a process of deglobalization of food supply and consumption and created a growing interest in "eating local." However, the success of locavorism is twofold, as it brings "normalcy" to the delicate tension between a forward-looking ecological sensibility and a backward-looking revitalising nationalism (Onorati - d'Ovidio, 2022). On the one hand, locavorism overlaps with certain claims about sustainable food, such as short supply chains and the farm-to-table strategy as resilience levers for food systems (Horska et al. 2021). On the other hand, the emphasis on the local lends itself to ideological claims about identity and banal nationalism (Reich et al., 2018; DeSoucey, 2010; Billig, 1995). The issue of local food thus highlights potential shifts from sustainability politics to identity politics. To better understand the competing visions behind these trends, this keynote will present the results of a panel survey conducted among a global sample of consumers on the topic of sustainable food since the onset of COVID -19. The data show an increasing preference for local food, which is accompanied by growing gastronationalist sentiment as an expression of security concerns, particularly in troubled times. The research also presents the methodological challenge of examining consumption patterns (Warde-Welch, 2017) in a way that offers insights into cultural values and visions in a restructuring consumer agency, especially in times of transition (Spargaaren et al., 2006).

KEYWORDS

Sustainable food, Sustainable consumption, Locavorism, Gastronomicalism, From-farm-to-table

Convivial foodscapes: From sustainability to conviviality in edible, food-related environments

Raul Matta (University of Göttingen, Germany)

ABSTRACT

Most research and action oriented towards the future of food builds upon the concepts of food sustainability. This concept is most commonly understood in economic terms; as food production that respects ecological carrying capacities. However, in times when the rhetoric of crisis shapes public conversation over social, political, and environmental issues, we may ask whether the concept of sustainability is sufficient. Does it have the dramatic appeal of apocalyptic visions of a collapsing world? Does it account for the necessary drastic changes in how food resources are protected? A vision that

both acknowledges the contributions of sustainability to the food system and, most importantly, goes beyond them, is more than ever needed. In this presentation, I propose the concept of convivial foodscapes as a sensitive opening towards new scenarios. The concept of convivial foodscapes evolves at the intersection of social sciences, arts, cuisine and activism. It revisits and combines the notions of conviviality and foodscapes. Conviviality designates a category of action and debate towards more fair and enduring social orders. It means more-than-human interdependence, mutual respect for one another and the natural world, and joint responsibility for the ways in which we live and we engage. Foodscapes are the environments wherein food-related practices, values, and representations intersect with the material realities that sustain peoples' relationships with food. By linking the physical and the imagined, foodscapes contribute to situate the lives of groups and individuals. The combination of conviviality and foodscapes provides a twofold critique of sustainability. The first addresses what critics of sustainability call its cultural deficit; meaning that academic humanists, civil society, local communities, artists, and cultural workers have not been central to discussions on what sustainability is and might be. The second offers an invitation to rethink our relationship to food, the environment, and the living world in general.

KEYWORDS

Foodscapes, Conviviality, More-than-human, Sustainability, Interdependence

Participatory Guarantee Systems (PGS): a tool to improve smallholders livelihoods

Michele Maccari (University of Parma, Italy)

ABSTRACT

“Food supply chains (FSC) are organisational models capable of simultaneously addressing the needs of various stakeholders: i) consumers accessing high-quality local products; ii) local farmers gaining direct market access; iii) civil society, through sustainable rural development policies.

In FSC, product quality is strictly connected to the quality of the control system. When consumers play an active role in controlling the quality of products - alternatively or complementary to the formal guarantee systems - the elements characterising the quality as a “domestic convention”, further increase the reputation of the products. The purpose of this paper is to analyse the role of Participatory Guarantee systems (PGS) as an informal quality control system, alternative and/or complementary to “formal” guarantee methods, in FSC. The paper aims to investigate: i) if PGS certification enhances the value of quality perceived by consumers; ii) if PGS increases the product value thanks to the trust relations established between producers and consumers) if PGS can improve the governance of the Food System and iv) if PGS could promote synergies with other Food Quality Schemes (FQS) (multi-certification) and the hybridization with other sustainability food labels. The paper will make reference to two case studies: the first one is the PGS pilot project developed by Slow Food in collaboration with IFAD in Kenya and Mexico, and the second case study refers to the PGS system developed by consumer groups jointly with producers in the district of Parma (Italy). The case studies will be focused on the following aspects: motivations for joining a PGS; perceived values of PGS (social embeddedness, etc.); participation (consumers and producers); limits and risks; the added value of PGS (reputation, trust, reduced cost for small producers).”

The social production of green taste: introducing the concept of ex-bodiment and its potential in the design of sustainable food experiences

Claudia Squarzon (University of Copenhagen, Denmark)

ABSTRACT

A 'green taste' driving sustainable food practices can collectively be shaped at the local level through the involvement of individuals in experiences that expose them to sustainable food practices. Building on the socio-anthropological understanding of socialising as gradually learning through the sharing of practices, namely the process of acquiring culture through the lived experience of its meanings; and inspired by socio-anthropological theories on the social production of taste, namely how social interaction drives taste formation; this study looks at shared experiences of sustainable food practices as the fruitful ground where individual agency connects to the collective norms of conduct, giving space for the reconstruction of individual food attitudes, the transmission of collective-oriented values, and the acquisition of a preference for sustainable food consumption (green taste). From the design of labels and products to interventions around the situational and socio-cultural factors affecting individual food preferences at the local level, the aim of this study is to expand the focus from the 'privacy of the mouth' (Højlund, 2015) to the everyday environments of food and taste activities, arguing that in times of food sustainability pressure, individual taste becomes social taste. Understanding the potential of taste externalisation (ex-bodiment/ex-corporation), instead of individuality and taste internalisation (embodiment/in-corporation), will help design activities aiming to promote sustainable food consumption. In doing so, a participatory kind of research is considered the most effective way to validate this thesis.

KEYWORDS

Social relations, Social practices, Taste formation, Embodiment, Ex-bodiment

7. ABSTRACTS

7.6 Climate Change, Agroecology, and Ecological Transition

AREA COORDINATORS

Franco Fassio (University of Gastronomic Sciences of Pollenzo, Italy)

Paola Migliorini (University of Gastronomic Sciences of Pollenzo, Italy)

INVITED SPEAKERS

Food from a changing Ocean. A blue vision for the ecological transition

Roberto Danovaro (Marche Polytechnic University, Italy)

ABSTRACT

Oceans can support human life in different ways, by delivering essential ecosystem services, or providing renewable and non-renewable resources. The ocean provides resources that are either not exploited or only marginally exploited and which could improve the wellbeing of humanity and help satisfy the global demand for food either through the direct production of food or through the harvesting of biomass (wild or cultivated). At the same time, it is clear that 'business as usual' is not sustainable from social, economic and environmental viewpoints.

We need to find solutions to feed a fast-growing global population, and with increasing nutritional challenges (hunger, undernutrition and micronutrient deficiencies). In addition, global climate change and the current climate crisis are threatening the functioning of most marine ecosystems worldwide, likely reducing their overall productivity. Here I'll provide a description of the current situation and projected expectations along with some ideas to improve management of the biological marine resources, to reduce the human footprint on the ocean while facing the challenges imposed by climate change.

ORAL CONTRIBUTIONS

Insect and circular economy

Sara Bellezza Oddon (University of Turin, Italy)

Ilaria Biasato (University of Turin, Italy)

Laura Gasco (University of Turin, Italy)

Achille Schiavone (University of Turin, Italy)

ABSTRACT

The amount of food waste worldwide is approximately 1.3 billion tonnes per year. This condition determines a double cost, both from an environmental and economic point of view. Modelled on nature, the transformation of waste into a resource can be carried out by different organisms. Among the various possibility, insects are one of the most promising solutions. Given its adaptability, its efficiency in waste conversion and the simple management of its life cycle when compared to the other insect species, the black soldier fly is the most bred and studied one. Another global issue derives from the need to find alternative proteins in feed production (poultry, pig and aquaculture) with less environmental impact than the ones that are currently used (fish and soybean meals). As feed needs to sustain the high world food production (130 MT, 8.3 BT, 110 MT, 93 MT of poultry meat, egg, pig meat and fish, respectively), such issues also directly impact the final consumer. For the holometabolous insects, the larvae can be transformed in meal, which is composed by proteins with high biological value that make it an optimal, alternative feed ingredient. Moreover, insect-derived products contain particular compounds (chitin, antimicrobial peptides) that are able to influence animal microbiota and improve animal health. Finally, since in nature birds eat insects, live larvae can be used as environmental and nutritional enrichments in order to improve animal welfare in poultry sector. The circularity of the insect farm derived also from the possibility of use the larvae digested substrate, rich in NPK, as soil fertilizer. In conclusion, considering the waste-resource chain applicable to the insect breeding, the insect farm falls within the circular economy model and insect product can be an alternative and sustainable nutrient for feed.

KEYWORDS

Black soldier fly, Circular economy, Feed, Waste bioconversion

ORAL CONTRIBUTIONS

Determinants of food waste: a systematic review of the households behaviour

Naomi di Santo (University of Foggia, Italy)

Roberta Sisto (University of Foggia, Italy)

Vittoria Pilone (University of Foggia, Italy)

ABSTRACT

Food waste is one of the main obstacles to sustainable development (Tilman et al., 2001). Indeed, on the one hand, food waste creates problems of food security and malnourishment (Campoy-muñoz et al., 2021; Garcia-herrero et al., 2019; Munesue et al., 2015). On the other hand, it negatively impacts landscape and ecosystem services and affects climate change with significant greenhouse gas emissions (Schanes et al., 2018). For these reasons, the issue of food waste reduction represents a priority in global policy documents. Indeed, in 2015, the United Nations included “Zero Hunger” and “Responsible Consumption and Production” among the 17 Sustainable Development Goals (SDGs) (respectively Goal 2 and Goal 12) (United Nations 2015, 2020; Roversi et al. 2020). Whereas one-third of food produced for human consumption is wasted and households contribute to the largest share of food waste (42%) (Monier et al., 2010), there is limited literature that analyses which factors influence the incorrect behaviour of families. Moreover, to define targeted and efficient future strategies focused on food production efficiency, a fundamental starting step is represented by taking an exact overview of the existing state of the art. In this scenario, the aim of the study is to frame the determinants of and the attitudes of households towards food waste. Therefore, a bibliometric analysis will be developed by employing the VosViewer software. Principal keywords (e.g., “food waste”, “households”) will be used to limit the search to those papers clearly focused on the topic analysed, while a set of ancillary keywords (e.g., “attitudes”, “determinants”, “behaviour”) will be directed at identifying studies deepening the households behaviour analysis. The expected result is the definition of the main drivers of food waste at the household level and then the areas of possible interventions to face this issue.

KEYWORDS

Food waste, Household behaviour, Food policy, Sustainable consumption, Bibliometric review

ORAL CONTRIBUTIONS

Environmental impact of diet among nursing home residents: an experience from Northern Italy

Francesco Barone-Adesi (University of Eastern Piedmont, Italy)

Massimiliano Panella (University of Eastern Piedmont, Italy)

ABSTRACT

Climate change is one of the main challenges our planet is currently facing, and the food production sector is considered an important driver of greenhouse gas (GHG) emissions. Therefore, interventions in the food system are necessary to support the ecological transition and increase environmental sustainability. We evaluated the environmental impact of the menus proposed to residents of the Nursing Home “Belletti Bona” (Biella). We also assessed whether the adopted dietary pattern was in line with the EAT-Lancet Commission reference diet. GHG emissions for the different types of food were obtained from the scientific literature and analysed using the Life Cycle Assessment methodology. For each meal, the Carbon Footprint (CF) of the single ingredients of each meal were summed up. To evaluate adherence to the planetary diet, we assigned each ingredient of the weekly menu to the 12 corresponding macronutrient categories considered in the planetary diet and then assessed whether the recommended limits were exceeded. In all the analyses we considered only menus for patients who do not have special dietary restrictions. The average daily CF of a menu was 2.47 KgCO₂eq during spring/summer and 2.26 KgCO₂eq during fall/winter, respectively. There was substantial variability in CF among the different available menus (Max/Min ratio equal to 3.13 and 3.39 during spring/summer and fall/winter). Regarding adherence to the EAT-Lancet Commission’s planetary diet, the recommended limits for the “red meat” and “added sugars” categories were regularly exceeded during the whole year. These preliminary results suggest that there is room to improve the environmental sustainability of food provided to nursing home residents. The next steps of the project will involve the extension of the study to a larger number of nursing homes and the development of a tool to evaluate whether a diet is both environmentally sustainable and compliant with recommendations from medical guidelines.

KEYWORDS

Ecological Transition, Climate Change, Environmental Impact

ORAL CONTRIBUTIONS

Living the circularity: the case study of the FUSILLI and FISH researches

Alessandra Savina (University of Gastronomic Sciences of Pollenzo, Italy)

Fabiana Rovera (University of Gastronomic Sciences of Pollenzo, Italy)

Franco Fassio (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

In the contemporary global scenario, high-impact food production and consumption models are progressively leading to increasingly complex environmental and social repercussions, involving urban, peri-urban and rural areas, compromising human and planetary health. However, there are operational tools and approaches capable of responding effectively and in a transdisciplinary manner to the complex challenges that the agri-food system is facing. Among these, Systemic Design and Circular Economy for Food are proposed as design methods capable of studying and applying systemic and circular solutions able to reduce the impact of linear agri-food supply chains, prevent the generation of waste, create local co-evolution processes and preserve the natural and cultural capital typical of a territory.

Within this contribution, the application of these tools and methodologies to two specific and different case studies will be described: the European Project FUSILLI (Fostering the Urban food System Transformation through Innovative Living Labs Implementation), which focused on the urban context of the city of Turin, in connection with 12 other European cities, and the Italian Project FISH (Hydrolyzed Fertilizer Soil and Habitat), framed, instead, within the Ligurian regional context. In the first case, the systemic design of circular solutions applied to the urban food catering and agricultural sector is underway, while, in the second case, the design of a circular business model for the development of a sustainable and scalable fish and horticultural value chain, starting from the reuse of fish industry byproducts for the production of an innovative biostimulant.

KEYWORDS

Systemic Design, Circular Economy for Food, European and Local Sustainable Project

ORAL CONTRIBUTIONS

Sustainability practices in chain food-beverage businesses

Ilkay Yilmaz (Başkent University, Turkey)

Ecem Akay (Dogus University, Turkey)

ABSTRACT

Increasing population, global warming and climate change, disturbance in ecological balance and various other parameters have revealed the effects of the food and beverage industry on the environment in the studies of scientists. In the studies on the subject, it has been observed that there is a lack of perceptions, attitudes and practices of the managers of chain food and beverage businesses within the scope of sustainability. Since chain food businesses are managed through a single-centre, implementation, inspection and improvement of the aforementioned procedures require relatively more intensive work. Parameters such as locational differences, and the adequacy of kitchen and restaurant projects against the relevant procedures should be questioned, and as a result, reports should be prepared and potential threats and advantages should be archived. When necessary, the business should add it to the corporate culture book and train its personnel with up-to-date information through in-house training. They should transfer this training to the guests who prefer the business and convey the steps and importance to the guests at the right time and in the right way. This study aims to reveal sustainability practices in chain food and beverage businesses. The sample of the study consists of senior managers working in chain food and beverage businesses affiliated with the Istanbul Center. In this context, semi-structured interviews were conducted with a management team of 10 people in total, both at home and abroad. As a result of the qualitative study, an 8-question interview was held with the kitchen management team and the overseas growth operation. With the analysis of the data obtained in the study, it is understood that the managers have positive attitudes toward sustainability.

KEYWORDS

Sustainable restaurant, Sustainability practices, Chain Food and Beverage Businesses

ORAL CONTRIBUTIONS

The first elementary aliment: the relevance of “blue gold”

Massimo Mamoli (University of Milan, Italy)

ABSTRACT

A debate has been recently developed by scholars and economists on the relevance of food.

This topic traces its origin to the Modern Malthusian theory concerning the scarcity of resources, caused by an ever-growing population. In particular, the attention of Literature has turned toward the fight against waste (Segrè et al., 2020). More than one billion tons of food, corresponding to about one-third of all food produced for human consumption, is lost or wasted every year along the value chain (FAO, 2011). Despite the importance of this topic, the aim of this paper is to point out the relevance of an element so fundamental as water and then expose the water footprint. Given that water is essential for human life, nature and the economy now I would like to explain why water it's very important, starting from three data: a) the consumption; b) the availability on the Earth; c) the value.

A] The main factors that push a country to consume water are: firstly, climatic fluctuations, which make irrigation necessary for agriculture, and secondly the level of industrial development, given that some factories and power plants use a lot of water resources. More specifically, the use of water is to be considered as such: 70% taken from agriculture, 22% from industry and only 8% for human consumption and in the service sector. In the last seventy years, consumption has increased remarkably and Italy is one of the European nations with the highest per capita consumption: about 900 mc per year (Source: TrueNumb3rs).

B] At the moment, water covers more than 70% of the Earth's surface (10 trillion cubic metres), of which only around 3% is freshwater, and consequently potentially drinkable. Ensuring universal availability and sustainable management and sanitation of water is the 6th objective of the 2030 Agenda for Sustainable Development. Access to this essential good must be considered an inalienable right: the World Health Organization (WHO) has estimated that our daily personal needs take up at least 50 litres of water. Therefore, all the Nations are committed to containing water consumption to ensure this minimum goal, despite the fact that we have to deal with the dispersion of water due to inefficiencies in water networks, estimated at about 30% of the amount consumed.

C] Over time, several international organisations have deployed in support of the right to water as a common good, considered fundamental for the survival of the entire Planet, the General Assembly of the United Nations, on 28 July 2010, included access to potable water and sanitation among “universal and fundamental human rights”. Regarding Italy, we recall the abrogative outcome of the Referendum held in 2011 in favour of public water. However, a genuine right to water has never been formulated legally, either as an individual right which can be claimed by every citizen against the authorities or as a collective right which can be invoked in the international sphere.

KEYWORDS

Water, Water footprint, Sustainability

ORAL CONTRIBUTIONS

Value addition to the table grapes: raisins production in the climate change scenario for its off season use and high price

Shujaul Mulk Khan (Quaid-i-Azam University, Pakistan)

ABSTRACT

Table Grapes *Vitis vinifera* L. are eaten in both fresh as well as dried form. Raisins are the dried form of grapes and are produced on a commercial scale for different purposes. The current study was executed to prepare raisins using different techniques to reduce the drying time for raisins production for its off-season uses. Eight varieties i.e., Sundar-Khani, Gola, Taffi, Black Taffi, Be Dana, Thompson Seedless, Haita and Corinth Black were used. Each variety was dried through two methods that are sunlight and using a microwave oven. A large number of raisins are lost during the sun drying process due to attacks of insects, fungus, and prolongation in time to prepare raisins. On the other hand, the microwave oven method was much more efficient and suitable where two different temperatures (60°C and 50°C) treatments were given to prepare quality raisins. The results showed that the microwave oven method was best for raisin preparation as it not only reduces the drying time but also dries the samples in a controlled environment in a neat and clean way. Among the two temperatures, the 60°C temperature was suitable for drying grapes in the oven. Nutritional analysis of raisin varieties obtained at 2 contrasting temperatures was performed. Nutrient concentration analyses showed Mg> Ni> Co> K> Ca> Mn> Cd> Na> Cr> Fe> Cu> at 50°C and was Ca> Ni> Co> K> Mn> Cd> Mg> Cr> Na> Zn> Fe> Cu at 60°C. Industries must come forward with modern technologies to develop drier to improve the raisins production and trend in the monsoon belt of the country to reduce the loss of grapefruit during production and add value for off-season uses. In the upcoming warmer climate of south Asia, grape cultivation and raisin production are climate-friendly plants and products for the farmer community.

KEYWORDS

Raisins, Value addition, Off season uses, Climate change scenario

ORAL CONTRIBUTIONS

Development of the European Agroecology Exchange Hub

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Alice Fassò (University of Gastronomic Sciences of Pollenzo, Italy)

Paola Migliorini (University of Gastronomic Sciences of Pollenzo, Italy)

ABSTRACT

The European Agroecology Exchange Hub is aiming to be a tool that provides a strong contribution to social development through its attempt to link people with different backgrounds, knowledge and skills with the same interest in agroecology, thereby also contributing to filling the famous gap between farmers and academia. Furthermore, the Hub is planned as an open space for sharing agroecology knowledge, practice and experiences by its future users. The paper describes different stages of the methodology used for the creation of the Hub.

KEYWORDS

Knowledge exchange, Knowledge co-creation, Networking, Sharing, Connect

ORAL CONTRIBUTIONS

Creation of the agroecological living lab in Valle Varaita

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Natalia Rastrogueva (University of Gastronomic Sciences of Pollenzo, Italy)

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ABSTRACT

Living labs are identified as both practice-driven organisations that facilitate and foster open collaborative innovation, and as real-life environments or arenas where both open innovation and user innovation processes can be studied and subject to experiments and where new solutions are developed. The agroecological living lab was created in Valle Varaita (CN), and embraced different types of stakeholders such as farmers, food producers, researchers, citizens, agricultural extensionists etc. The paper describes the process of creating the living lab and supporting its development.

KEYWORDS

Living lab, Action Agenda, Networking, Multi Stakeholder approach, Maieutic

PANELS

Chefs, restaurants, and culinary sustainability

PANEL LEADER

Sarra Talib (University of Vermont, United States)
Susanne Højlund Pedersen (Aarhus University, Denmark)

ABSTRACT

This is an edited book project that focuses on the role of chefs and restaurants in fostering food sustainability, an increasingly urgent societal and environmental concern. Built on empirical data from diverse cultural settings, it analyses the strategies and visions chefs enact in order to contribute to a more sustainable future. Food is a central pillar in the contemporary focus on sustainability. Prior to the global pandemic, the restaurant business grew all over the world and today professional food makers are facing staggering challenges to maintain social, environmental, and economic sustainability. They must adjust to new customer demands and new political imperatives for sustainable diets as well as simply surviving. Many chefs, restaurants, and public kitchens have responded creatively to these challenges, but there is a lack of empirical studies that analyse and evaluate their strategies for change. This book aims to redress that lacuna. It presents diverse chapters written by interdisciplinary food-culture researchers analysing how chefs in different parts of the world, working in different restaurant domains, approach sustainability. Together the chapters offer a range of strategies to promote the economic, social, and environmental revitalisation of restaurants and the food system in these highly unstable times. Several of the authors contributing to this project would love to present their work on a panel together, including Susanne Højlund Pedersen (Editor and Author), Elizabeth Hoover (Author), Liora Gvion (Author), Zsófia Anna Tóth (Author), Rachel Black (Author), Claudia Squarzon (Author), Michele Filippo Fontefrancesco (Author), and Sarra Talib (Author).

KEYWORDS

Chefs, Culinary Sustainability and Innovation, Cultural Sustainability, Social Embeddedness, Sustainability as a Social Practice

CONTRIBUTORS

Brigaid: chefs and sustainable school food in the United States
Rachel Black (Connecticut College, United States)

«To sustain the people»: native chefs and the food sovereignty movement
Elizabeth Hoover (University of California Berkeley, United States)

Re-framing food as sustainable. Introducing the green transition in Danish culinary schools
Susanne Højlund Pedersen (Aarhus University, Denmark)

Sustainability through social commitments: farm-to-chef in the era of COVID-19
Sarra Talib (University of Vermont, United States)

Solution is served! Good food and strong words in the defence of flavour
Anna Zsófia Tóth (Independent researcher)

PANELS

Water in Circular Economy of the food supply chain, sustainability patterns and future trends of diets

PANEL LEADER

Francesca Greco (University of Gastronomic Sciences of Pollenzo, Italy)
Elena Vallino (University of Turin, Italy)

ABSTRACT

Virtual Water “trade” and water footprint concepts expose the reality of water use and consumption of societies through international food trade, across countries and along personal choices of dietary patterns. The majority of virtual water “trade” is practised from physically and economically water scarce countries toward the most affluent and less water-scarce societies (Vallino et al., 2021), giving birth to what Greco calls “bad virtual water”. Bad virtual water has negative repercussions not only in terms of negative environmental impacts but also in terms of socio-economic implications. Cases such as the exploitation of a vulnerable aquifer in Pachino (Sicily) expose the reality of underpaid farmers and overexploited migrant workers in an export-led production of tomatoes which represents the perfect case of how virtual water can be bad (Greco, 2012). The Fair Water Footprint Initiative , represented by Nick Hepworth, is an example of how global alliances between governments, producers and NGOs could be a game-changer in the need to trace the fairness and the environmental protection of water in food production and industrial supply chains in general. At the same time, personal choices do have an environmental impact on water resources as demonstrated by the use of the SIMAPRO software and the Lancet guidelines in the elaboration of different dietary choices vis a vis their water footprint implications (Sarni et al., 2022, in peer review). If personal choices are important, the reality check on how food choices in the world are implemented is elaborated by Sarah Lupu, who describes how poor countries and specific sectors of populations in affluent countries do not have any food choices. At the same time, while rich and educated consumers can choose to improve their water footprint and environmental footprint through their food selections, BRICS economies and middle-income countries are expanding their meat consumption, thus increasing their environmental impact. TRUSTY, as illustrated by the CEO of APIO Alessandro Chelli, offers a low-cost solution to poor farmers for the tracing of food supply chains through block-chains techniques, as demonstrated with their project on Ivorian coffee for the Fair Trade market in Italy. Scaffidi, elaborating on the effectiveness of food labelling and food choices, foresees a pessimistic outlook in terms of the effectiveness of personal action over the improvement of environmental impact of food worldwide and re assesses the need to act for a more sustainable food at the political level through a governmental and global governance, with the support of grassroots movements and active citizenship, toward a more sustainable food for all.

KEYWORDS

Water, Water footprint, Diet patterns, Sustainability, Agri-food supply chains

CONTRIBUTORS

Physical and economic water scarcity in virtual water trade of global food networks

Elena Vallino (University of Turin, Italy)

Bad virtual water, a case study from Italy. Fair water Footprint: a bottom up approach to water footprint accountability

Francesca Greco (University of Gastronomic Sciences of Pollenzo, Italy)

How sustainable diets do also have a positive impact on water footprint (comparing North-American diets, Mediterranean diets, vegetarian and plant-based diets) - a software-based analysis

Anna R. Sarni (University of Pisa, Italy)

How blockchains can be applied to the food industry regarding tracing and labelling; how blockchains information could be integrated with the "Etichetta Narrante" of Slow Food method

Alessandro Chelli (CEO of APIO & TRUSTY, Italy)

Nutrition trends and dietary patterns of the BRICS and the Global South: do they really have a choice? And what is the choice of the poors?

Sarah Lupu (London School of Hygiene and Tropical Medicine, United Kingdom)

How can sustainability be traced and understood in labelling, marketing and communication of food products

Cinzia Scaffidi (University of Gastronomic Sciences of Pollenzo, Italy)

7. ABSTRACTS

7.7 Food Justice, Policies and Regulations

AREA COORDINATORS

Michele Antonio Fino (University of Gastronomic Sciences of Pollenzo, Italy)

ORAL CONTRIBUTIONS

Immigrant labour exploitation: producing the World's Bounty while perpetuating poverty

Matthew Giguere (Vermont Law School, United States)

ABSTRACT

Across the globe, immigrant agricultural worker labour is exploited to serve modern capitalistic food systems which demand cheap commodities. Countries seeking to capitalise on their agricultural abundance have utilised temporary immigrant work visa programs to address labour market shortages. These programs often distinguish low-skilled workers from their high-skilled immigrant peers. Low-skilled immigrant workers, such as those in the agricultural industry, often face greater barriers to attaining labour rights, have a longer pathway to citizenship, and have greater difficulty in attaining higher socio-economic status. Federal laws and regulations have failed to address these inequities, perpetuating poverty. This paper will compare temporary work visa programs in three countries. Section I of this paper will review the general elements of the three temporary work visa programs. Section II of this paper will determine whether, and to what extent, immigrant labourers are provided labour rights within their employing country. Section III of this paper will review the potential pathways to citizenship provided for temporary visa workers. Section IV will contextualise the result of these programs on the socio-economic status of immigrant farm workers. Finally, this paper will conclude that access to labour rights and an equitable pathway to citizenship promote long-term economic mobility for immigrant farm workers as well as overall economic growth for immigrant-receiving countries.

KEYWORDS

Labor, Law, Agriculture, Immigration, Equity

ORAL CONTRIBUTIONS

Food governance in Rome: the power of participation

Elisabetta Luzzi

(Rome Food Council, Roma Capitale, Resources for Rome SpA, Italy)

ABSTRACT

Rome has a peculiar widespread and organised presence of civil society movements and local committees, active since the 1970s on social, economic, and environmental issues. In the last 20 years, many of those dedicated themselves to the recovery of disused and degraded public areas, creating urban community gardens, managed by the same associations. Subsequently, the Administration was asked to recognize these activities on public land. A broad participation process promoted the network Orti in Comune, which plays the role of dialogue with the Administration, and led in 2015 to the approval of the Regulation for the UCGs. So far 150 in total, 10% on public land, the UCGs cultivate self-consumption, organise educational and social activities and promote social inclusion and awareness of sustainability and healthy food. They have assumed the role of safeguards and oases of resilience and adaptation to climate change. In 2019, a group of more than 50 farms, ONG, research centres, universities, organisations, associations, and experts created the Promoting Committee for the Food Policy of Rome. Playing a strong role of advocacy, they presented to the City Assembly a draft and achieved the official approval of a Resolution in April 2021. Once again, it was a bottom-up process. The new City Government, established after the elections in November 2021, together with the Horizon Fusilli project team (Rome European Projects' Office + Risorse per Roma spa), started a discussion with the Promoting Committee. An Assembly for the Food Council took place in February 2022, giving birth to 7 working tables. Presently, these involve over 250 stakeholders, representing the entire food supply chain: more than 5,000 individuals. They meet at least once a week, producing concrete proposals and regulations for the Council which was handed over to the Administration for review in July 2022. Active citizenship has a key role in the confrontation with the Administration and the proposals coming from below achieve the best governance results.

KEYWORDS

Co-creation, Food Governance, Food Systems, Food Education, Food Sustainability

ORAL CONTRIBUTIONS

Access to genetic resources between biodiversity protection and intra-generational solidarity

Rossana Pennazio

(University of Eastern Piedmont, Italy)

ABSTRACT

In Italy, even before the recent Constitution amendment of article 9, biodiversity protection was at the centre of the national strategy adopted with the ratification law of the Convention on Biological Diversity (CBD). The CBD establishes the sovereign rights of nations to control access to their biological diversity to safeguard, inter alia, an equitable sharing of the benefits arising out of the utilisation of genetic resources. The Nagoya Protocol, a supplementary agreement to the CBD implemented in Europe with two Regulations, sets out the general framework for access and benefit-sharing established in Articles 8(j) and 15 of the CBD. Having pointed out that the EU States, such as Italy, have recently implemented these regulations, the proponent suggests endorsing access and benefit-sharing (ABS legal instruments) in order to make the system for exchanging genetic resources more effectively in the interests of the community. Sustainable use of biological diversity is fundamental to coping with climate change and achieving food security. Therefore, this key objective requires solidarity between private and public actors, present and future generations.

KEYWORDS

Biodiversity Protection, Access and Benefit Sharing, Nagoya Protocol, Genetic Resources, ABS Regulation

ORAL CONTRIBUTIONS

Mapping policy reforms for a diverse grain system – from breeding to baking

Stephanie Walton

(City University of London, United Kingdom)

ABSTRACT

Agrobiodiversity is in decline. A handful of monoculture varieties of staple crops make up a large portion of the world's agriculture. This lack of diversity exposes food systems to the growing and unpredictable impacts of environmental change. In response, low-input, organic and agroecological (LIOA) farmers in industrial food contexts are starting to re-introduce locally-adapted crop varieties and build new markets into which they can sell what they grow. However, given the historic inertia towards homogeneity, increasing the production of diverse varieties will require coordinated and strategic policy action that works alongside market-led initiatives. This study explores how existing policies either help or hinder producers along the value chain in developing, growing, processing and selling varietal diversity. It analyses a single case study – the introduction of diverse grain varieties in England and their transformation into food in the form of flour and bread – to map where policies intersect with key processes, inputs and outputs along the value chain. A novel method was developed, combining multi-round interviews with interactive policy mapping to identify how policies impact producers' ability to run a viable business while introducing varietal diversity onto farms and to consumers. Rather than focusing exclusively on agricultural or environmental policies, this research takes a food systems approach to policy mapping. Open, unstructured discussions with actors allowed for seemingly-unrelated policies to surface that have direct or indirect effects on the ability of actors in the system to deliver certain outcomes – in this case, varietal diversification. Multiple points of intervention were identified across the value chain where policy reform is needed to create an enabling and supportive environment for agrobio-diversification. These findings have applications for similarly industrialised food systems in other countries and lay the methodological groundwork for undertaking similar policy mapping processes in other contexts.

KEYWORDS

Agrobiodiversity, Food policy, Heritage grains, Population grains, Neglected and underutilised varieties

ORAL CONTRIBUTIONS

Solidarity support of Slow Food for biodiversity conservation in Ukraine during war period

Yulia Pitenko (Slow Food Ukraine, Ukraine)

ABSTRACT

In pre-war Ukraine, an export-oriented agricultural state, where every third incoming dollar was due to agro-industrial complexes, biodiversity has always been fragile. Now a quarter of the land is occupied or is situated near the front line. It means that intensive agriculture will become even more quantitatively oriented. In addition, for the sake of safety, the main buyers of slow food products (mothers with children, women leading a healthy lifestyle) went abroad, which leaves small producers without the possibility of marketing. The impossibility of domestic tourism (including gastro tourism) deprives regional small producers of income - all this jeopardises the future of varieties and breeds of folk selection, and products of traditional processing because there is simply no one to either buy or produce them. That is why the solidarity support of the slow food chain internally (through purchases in Ukraine) and externally through the Together for Slow Food communities in Ukraine fund is of such high importance.

The forms of such support are at the level of processed products:

1) group purchases of the producers from different regions from each other (they become consumers)

2) the creation of boxes with sets of products (dairy, cheese, vegetables, honey) that are delivered to targeted groups (in our case, these are grandmothers who raise children whose parents have died or died). In a situation of war, they are given some humanitarian aid, but these are usually long-life commercially produced kits, such as cereals or breakfast cereals. The solidarity assistance of the fund allows the manufacturer to survive, preserve its production, to feed children and elderly women not only with healthy products but also with products that fill the senses.

3) At the level of scientific stations of plant growing and animal husbandry. We were able to support scientists who, in the absence of workers (mobilisation, departure), often despite the shelling (in the Kharkiv region), grow and preserve unique breeds of Ukrainian poultry, cows, as well as grain, oilseeds and vegetables. We purchased the necessary bags, systems watering, and equipment for them because the state financing is almost cut.

4) The most difficult form of support is facilitating the relocation of farms with animals from the frontline zone of heavy shelling to the central and western regions. And here again, solidarity comes to the fore: when some farmers (from safer places) invite "colleagues" from areas under missile attacks to live and work

5) Regional gastro tours of solidarity - trips to local producers are already being revived

Thus, the solidarity support of the international slow food community, members of the movement in Ukraine and conscious consumers is the main thing for the conservation of biodiversity during the period of hostilities, and possibly the post-war period in Ukraine. The toolkit that is being developed will also help in other places where similar problems arise.

7. ABSTRACTS

7.8 *Poster Session*

Food education, sensory analysis, odors, taste

Federica Bonello (CREA Research Centre for Viticulture and Enology, Italy)
Maria Carla Cravero (CREA Research Centre for Viticulture and Enology, Italy),
Christos Tsolakis (CREA Research Centre for Viticulture and Enology, Italy)

Aroma maps for applications in enogastronomy and wine quality control

Emanuele Boselli (Free University of Bozen-Bolzano, Italy)
Edoardo Longo (Free University of Bozen-Bolzano, Italy)
Simone Poggesi (Free University of Bozen-Bolzano, Italy)
Aakriti Darnal (Free University of Bozen-Bolzano, Italy)
Adriana Teresa Ceci (Free University of Bozen-Bolzano, Italy)

Stress-resilient tomato landraces as a tool to increase farming sustainability in challenging conditions: the EU projects VEG-ADAPT and RADIANT

Francesca Cardinale (University of Turin, Italy)

Local circular economy: a way to reduce agricultural wastes

Gian Luca Cerutti (University of Turin, Italy)
Laura Gasco (University of Turin, Italy)
Manuela Renna (University of Turin, Italy)
Danilo Perano (University of Turin, Italy)
Gabriele Beccaro (University of Turin, Italy)
Gabriella Mellano (University of Turin, Italy)
Mauro Mellano (University of Turin, Italy)
Ilaria Biasato (University of Turin, Italy)

Agroecological management: the influence of different mulching methods on weed growth and crop development

Chiara Chirilli (University of Gastronomic Sciences of Pollenzo, Italy)
Asia Biafora (University of Gastronomic Sciences of Pollenzo, Italy)
Alieksei Taran (University of Gastronomic Sciences of Pollenzo, Italy)
Stefano Benedettelli (University of Gastronomic Sciences of Pollenzo, Italy)
Paola Migliorini (University of Gastronomic Sciences of Pollenzo, Italy)

Soil and legumes of the Sibillini for high quality pasta

Martina Coletta (University of Camerino, Italy),
Aldo D'Alessandro (University of Camerino, Italy)
Matteo Fabbri (University of Camerino, Italy)
Elena Vittadini (University of Camerino, Italy)
Antonietta La Terza (University of Camerino, Italy)

Indigenous *Saccharomyces cerevisiae* and *Saccharomyces paradoxus* strains isolated in a requalified Piedmont Vineyard

Maria Carla Cravero (Council for Agricultural Research and Analysis of Agricultural Economics- Viticulture and Enology Research Center, Italy)
Antonella Costantini (Council for Agricultural Research and Analysis of Agricultural Economics- Viticulture and Enology Research Center, Italy)
Loretta Panero (Council for Agricultural Research and Analysis of Agricultural Economics- Viticulture and Enology Research Center, Italy)
Federica Bonello (Council for Agricultural Research and Analysis of Agricultural Economics- Viticulture and Enology Research Center, Italy)
Enrico Vaudano (Council for Agricultural Research and Analysis of Agricultural Economics- Viticulture and Enology Research Center, Italy)
Laura Pulcini (Council for Agricultural Research and Analysis of Agricultural Economics- Viticulture and Enology Research Center, Italy)
Emilia Garcia-Moruno (Council for Agricultural Research and Analysis of Agricultural Economics- Viticulture and Enology Research Center, Italy)

The SISTERS project: Systemic Innovations for a Sustainable reduction of the European food waste

Danny Clicerì (University of Trento/ Fondazione Edmund Mach, Italy)
Michele Pedrotti (Fondazione Edmund Mach, Italy)
Isabella Endrizzi (Fondazione Edmund Mach, Italy)
Iuliia Khomenko (Fondazione Edmund Mach, Italy)
Flavia Gasperi, F. (University of Trento/ Fondazione Edmund Mach, Italy)
Franco Biasioli (Fondazione Edmund Mach, Italy)

“Mujeres del Fuego” los colectivos

Gladys Espinoza (“Mujeres del Fuego”, Colima, Mexico)
María Martínez (Collective “Mujeres del Fuego”, Colima, Mexico/Mexican Cultural Association of Italy)
Lina Jiménez, Rocío Madrigal (Collective “Mujeres del Fuego”, Colima, Mexico)

The Ark of Taste in Afghanistan: documenting endangered food heritage

Abdullah Faiz (University of Gastronomic Sciences of Pollenzo, Italy)
Dauro Mattia Zocchi (University of Gastronomic Sciences of Pollenzo, Italy)

Alternative animal feeds in Mediterranean poultry breeds to obtain sustainable products “SUSTAvianFEED”

Edoardo Fiorilla (University of Turin, Italy)
Valentina Bongiorno (University of Turin, Italy)

Application of nutriScore and nutrInform battery to Spanish table olives

Antonio Garrido-Fernández (Instituto de la Grasa, Spanish National Research Council, Spain)
Antonio López-López (Instituto de la Grasa, Spanish National Research Council, Spain)

Effect of salt mixtures on the sensory attributes of green Spanish-style Manzanilla table olives

Antonio López-López (Instituto de la Grasa, Spanish National Research Council, Spain)
José María Moreno-Baquero (Instituto de la Grasa, Spanish National Research Council, Spain)
Antonio Garrido-Fernández (Instituto de la Grasa, Spanish National Research Council, Spain)

Wild plants used to flavour olives in brine: cases studies from Liguria and Campania

Paola Malaspina (University of Genova, Italy)
Laura Cornara (University of Genova, Italy)
Vincenzo De Feo (University of Salerno, Italy)

Wild and cultivated plants used as food in Liguria: a review of 125 years of ethnobotanical studies

Chiara Marescalchi (University of Genova, Italy)
Maria Guerrina (University of Genova, Italy)
Paola Malaspina (University of Genova, Italy)
Laura Cornara (University of Genova, Italy)
Luigi Minuto (University of Genova, Italy)

The role of individual characteristics in sustainable food choices: A cross-cultural study between Italy and Turkey

Riccardo Migliavada (University of Gastronomic Sciences of Pollenzo, Italy)
Carol Coricelli (Western University, Canada)
Esra Emine Bolat (University of Gastronomic Sciences of Pollenzo, Italy)
Ceyhun Uçuk (Gaziantep University, Turkey)
Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

The DIGI-GASE project: Development of Digital Education Competencies of Gastronomy and Culinary Arts in departments in higher education institutions

Maria Piochi (University of Gastronomic Sciences of Pollenzo, Italy)
Maria Giovanna Onorati (University of Gastronomic Sciences of Pollenzo, Italy)
Gabriella Morini (University of Gastronomic Sciences of Pollenzo, Italy)
Carol Povigna (University of Gastronomic Sciences of Pollenzo, Italy)
Nahuel Buracco (University of Gastronomic Sciences of Pollenzo, Italy)
Ramazan Eren (Akdeniz University, Turkey)
Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

Effect of group housing system on welfare of Grey Piedmontese Rabbit: preliminary results

Cecilia Mugnai (University of Turin, Italy)
Achille Schiavone (University of Turin, Italy)
Stefano Sartore (University of Turin, Italy)

The flat breads of the Mediterranean Area: a large and diverse family. A database of the tradition

Antonella Pasqualone (University of Bari Aldo Moro, Italy)
Francesca Vurro (University of Bari Aldo Moro, Italy)
Carmine Summo (University of Bari Aldo Moro, Italy)
Mokhtar H. Abd-El-Khalek (Agricultural Research Center, Egypt)
Haneen H. Al-Dmoor (University of Zagreb, Croatia)
Maria Ruiz (Institute of Agrochemistry and Food Technology, Spain)
Christopher Magro (University of Malta)
Christodoulos Deligeorgakis (International Hellenic University, Greece)
Cynthia Helou (Saint Joseph University of Beirut, Lebanon)
Patricia Le-Bail (INRAe, France)

Erasmus student's relation with Gastronomy before, during, and after their stay

Melpomeni Rampidou (Aristotle University of Thessaloniki, Greece)

Discovering Cinisara meat and milk traits

Paola Sacchi (University of Turin, Italy)
Santo Caracappa (University of Palermo, Italy)
Giulia Caracappa (Azienda Sanitaria Provinciale di Ragusa, Italy)
Bartolomeo Biolatti (University of Gastronomic Sciences of Pollenzo, Italy)
Francesca Tiziana Cannizzo (University of Turin, Italy)

Recovery of Vitamin D from mushrooms and fish waste destined to nutraceutical and food industries

Gianni Sagratini (University of Camerino, Italy)
Elisabetta Torregiani (University of Camerino, Italy)
Franks Kamgang (University of Camerino, Italy)
Sun Yue (University of Camerino, Italy)

How much does the colour affect the liking and the chemosensory perception of virgin olive oil and cold pressed hemp seed oil?

Enrico Valli (Alma Mater Studiorum, University of Bologna, Italy)

Maria Piochi (University of Gastronomic Sciences of Pollenzo, Italy)

Matilde Tura (Alma Mater Studiorum, University of Bologna, Italy)

Chiara Nervo (University of Gastronomic Sciences of Pollenzo, Italy)

Luisa Torri (University of Gastronomic Sciences of Pollenzo, Italy)

Tullia Gallina Toschi (Alma Mater Studiorum, University of Bologna, Italy)

TIME FOR APPLE – A Multidisciplinary Research Project

Giannina Vizzotto (University of Udine, Italy)

Maria Cristina Nicoli (University of Udine, Italy)

Silvia Bolognini (University of Udine, Italy)

Nicola Gasbarro (University of Udine, Italy)

Lara Manzocco (University of Udine, Italy)

Marilena Marino (University of Udine, Italy)

Carlo Pucillo (University of Udine, Italy)

Food Tours: entrepreneur's viewpoint on the main factors in designing a gastronomic experience

Charisia Vlachou (Aristotle University of Thessaloniki, Greece)

Melpomeni Rampidou (Aristotle University of Thessaloniki, Greece)

Cover crop management in fruit orchards

Francesco Volpe (University of Turin, Italy)

Searching for germane questions in the ethnobiology of foodscouting

Dauro M. Zocchi (University of Gastronomic Sciences of Pollenzo, Italy)

Giulia Mattalia (Ca' Foscari University of Venice, Italy)

Muhammad Abdul Aziz (Ca' Foscari University of Venice, Italy)

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