



**21 MARCH
2022**

INTERNATIONAL HEADS OF FOOD AGENCIES FORUM

**Third annual meeting
under the theme**

“New food sources and production systems”

Meeting report

 21 March , 2021

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Introduction:

Innovative new food sources and production systems are emerging in response to feeding the growing global population. The Codex Alimentarius Commission, at their forty-fourth session in 2021, signalled the need for further consideration and guidance on new food sources and production systems.

The International Heads of Food Agencies Forum (IHFAF), as a gathering of like-minded heads of international food safety agencies, is well-placed to discuss this topic, and to consider the implications for food safety regulatory frameworks.

The purpose of the third annual meeting of the IHFAF was to share information, raise awareness and to develop a strategic approach to addressing potential regulatory challenges that may emerge

from new food sources and production systems.

The third meeting of the IHFAF was hosted virtually by Food Standards Australia New Zealand (FSANZ) on 21 March 2022. At the opening of the third annual meeting, Dr Sandra Cuthbert, Chief Executive Officer (CEO) of FSANZ welcomed members and guests to the virtual meeting.

About this meeting report

This meeting report provides an overview of the presentations, discussions and recommendations of the third meeting of the IHFAF. The meeting agenda and a list of participants are available at Appendices I and II, respectively.

Session 1

New food sources

Chaired by Mrs Emily Miles, CEO, Food Standards Agency (FSA) (United Kingdom)



New foods are entering the food supply through technological innovations, or through consumption of foods outside of their traditional contexts. Session 1's presentations introduced new food sources and production systems, and discussed some examples of new foods.



Dr Vittorio Fattori – Food
Safety Officer, Food and
Agriculture Organization
(FAO)

Presentation 1

New food sources and
production systems:
FAO's perspective on
implications for food
safety

The global food system is complex and evolving, with a range of drivers for new and emerging trends. Food safety is key to the system. The FAO identified new food sources and food production systems as an emerging trend.

Dr Fattori provided an overview of food safety implication and regulatory challenges for a selection of new food sources and food production systems: insects, jellyfish, seaweed, plant-based alternatives, cell-based food production, and 3D printing of food. New foods can help to address some of the challenges ahead of us.

Filling knowledge gaps, developing appropriate regulatory frameworks and encouraging close collaboration among stakeholders is required to ensure food safety.



Professor Michelle Colgrave –
Future Protein Lead,
Commonwealth Scientific and
Industrial Research Organisation
(CSIRO), Australia

Presentation 2

Plant-based meat analogues and cell-based proteins

Global demand for protein is growing. In Australia, 1 in 3 people are limiting their meat consumption, with reasons including for overall health and to reduce impact of their diet on the planet. Alternative proteins including plants, insects and cellular agriculture represent a growing market.

Professor Colgrave provided an overview of novel proteins and production systems used in Australia. Innovation in the plant-based meat analogue and cell-based protein space creates choice for consumers in their protein consumption, from animal-based proteins to fully cultivated products.



Mr Per Preisler Christiansen –
Deputy Director General,
Danish Veterinary and Food
Administration

Presentation 3

**Ingredients and
future perspectives
including insects**

In Denmark, there is a focus on promoting greener and more sustainable solutions for food and feed production. Stronger stakeholder collaboration is being promoted to help achieve this, particularly between industry and authorities. Mr Christiansen provided examples of insects as feed and food, such as yellow mealworms and highlighted the importance of EU Regulations. Continuing research and evidence development for insect safety as food or feed will help inform any regulatory changes needed to support a 'circular economy'.



Discussion: Food systems both locally and globally are growing in complexity, and regulators need to reflect on their current risk frameworks to consider where there may be gaps and where to develop science to underpin future decisions. This along with sharing experiences and challenges will allow regulators to be responsive in their food safety considerations. In considering the safety of such 'new' foods, participants recognised traditional knowledge can be utilised alongside modern scientific knowledge to form a robust assessment of safety.

Food safety is fundamental to the role of regulators and policy makers, and should be a key consideration when assessing the risks and benefits of new foods.

Session 2

New production systems – the food safety challenges

Chaired by Dr Pamela Byrne, CEO, Food Safety
Authority of Ireland



New production systems may present innovative and sustainable solutions to feeding the growing global population. Session 2 explored examples of new food production systems and considered the food safety implications.



Professor Laurence Shalloo – Head of Animal and Grassland Research and Innovation Programme, Teagasc – Agriculture and Food Development Authority, Republic of Ireland

Presentation 1

Precision farming

Emerging farming technologies can provide real-time information that can be used to influence short, medium and long term farming decisions. Examples of emerging technologies discussed included integrated systems incorporating cloud-based data, image capture, and using machine learning. Application of such technology can influence interventions and decision making in farming, for example for grass growth.



Dr Wu Yuansheng –
Director, National
Centre for Food
Science, Singapore
Food Agency

Presentation 2

Urban farming techniques
and food safety risk
assessment: A case study
on mercury contamination
on a vertical production
system

The drivers for vertical farming in an urban setting include global population growth; food supply and price shocks due to weather patterns and geopolitical tensions; extreme weather due to global warming and climate change; and food supply chain complexities. Vertical farming serves as a meaningful complement to traditional food supply sources.

It is imperative to establish a framework of comprehensive risk assessment and risk management guided by HACCP principles. When considering food safety risk assessment, it is important to understand which risks are 'known knowns' and which are 'unknown knowns', and not to forget that there could be 'unknown unknowns' in the early stage of technological development and adoption. Dr Wu presented a case study on a vertical production system and discussed the importance of recognising that new technologies may present unanticipated risks. Such risks are best addressed through thorough identification of potential risks, robust inspection and monitoring, comprehensive scientific investigation capabilities as well as close collaboration and information sharing among stakeholders.



Discussion: The opportunities for new foods and production systems in feeding a growing population and improved nutrition are substantial. New technologies can also have the ability to enhance food safety by providing traceability functions. Such functions may also assist with consumer values such as authenticity of food. Food safety should be a core consideration for assessing new food and production systems, alongside sustainability and nutrition. There may be a need to further promote and advocate for the value of a safe food system.

Session 3

The associated Regulatory Challenges

Chaired by Dr Lee Kim Tan, Director-General and Deputy CEO, Singapore Food Agency



While new food sources and production systems has potential benefits, the potential implications for public health and safety need to be considered. Session 3 considered the associated regulatory challenges and considered high-level strategic recommendations.



Dr Michelle Patel –
Acting Deputy Director
of Analysis and Insight,
FSA

Presentation 1

Horizon scanning and
foreseeing new risks

Dr Patel provided an overview of FSA's horizon scanning processes and current emerging priorities. Horizon scanning can identify and classify emerging risks, for example by considering the timeframe in which a new idea/risk may emerge, opportunities and challenges, existing knowledge and intelligence gaps. It is important that science and gathered intelligence informs decision making, including for emerging risks.



Dr Tan Yong Quan –
Scientist, National
Centre for Food Science,
Singapore Food Agency

Presentation 2

Regulatory updates
on alternative proteins
and novel foods

Dr Tan provided an overview of new alternative proteins including cell-based meat, algae, insect proteins, and noted that some alternative proteins, but not all, may be considered novel foods. Dr Tan also outlined Singapore's regulatory framework for novel foods that ensures potential risks are identified and managed, using scientifically validated safety assessment procedures. Capability building is promoted through partnerships among authorities, academia, and food industry, and through collaboration with counterpart international agencies.



Dr Hamoud A. Alnughaymishi
– Head of Risk Communication
Section, Saudi Food and Drug
Authority

Presentation 3

Communicating with consumers

Consumers may not perceive new technologies in positive ways despite their potential to enhance safety, nutrition and sustainability of food.

Consumers have a fundamental influence on what technologies are implemented and successful on the market. Consumer acceptance of new technologies is often low due to a perception that the food or process may seem 'unnatural', unhealthy or a public health risk even where experts have confirmed safety.

To increase consumer acceptance, there needs to be more trust for the regulator making the decisions. Regulators should provide relevant information to consumers, including information on the risks and benefits; and be not overloaded with unnecessary information or information that consumers are unwilling to consider. People are influenced by social norms and culture, therefore increasing visibility of new technologies can influence consumer acceptance. It is important to engage directly with the public through panels and media, including social media channels.



Discussion: Food safety is the primary consideration for food regulators, and core to maintaining consumer trust. Where ancillary considerations are present they should be robustly evidenced and advocacy for such considerations should fall to the responsibility of industry and other parties. Nevertheless where possible, there is value in collaborating on consistent messaging to consumers. While food safety decisions should be science and evidence-based, focusing on scientific reasoning in consumer communications is not always effective, as food is deeply intimate. Regulators need to communicate with consumers effectively. It is important that regulators invest in strong risk communication efforts alongside existing robust risk assessment activities.

The Codex circular letter 'CL2022/06/OCS-CCExec' requesting information on new food sources and production systems provides an opportunity to inform Codex's consideration and guidance on this issue.

The IHFAF serves as a forum for regulators to share ideas and experiences, and seek advice on challenges that other agencies may also be experiencing.

Meeting recommendations

Participants discussed and agreed to the following high-level recommendations. That IHFAF:

recognise that in relation to sustainable food systems, a system that does not produce safe food fails to meet its objective.

note that new food sources and production systems will increasingly contribute to feeding a growing global population.

agree that effective communication is an important element in ensuring the critical role of food safety in the context of sustainable food systems is understood.

recognise the importance of pro-active food safety risk communication activities in facilitating community understanding of new foods sources, technologies and production systems.

consider the opportunities and regulatory challenges that may result from new foods and production systems, including food safety, labelling, nutritional aspects and various potential benefits.

recognise that new foods and production systems may present new food safety hazards or nutritional changes. Risk assessments, guided by HACCP principles, should be done with risk management measures implemented where appropriate.

agree the sharing of information, including that relating to traditional use or history of safe use, will be important for regulators when considering and assessing food safety risks associated with new food sources and production systems.

provide country input in response to the circular letter 'CL2022/06/OCS-CCExec' circulated by the Codex Secretariat. The circular letter requests information on new food sources and production systems (deadline: 30 April 2022). This information will assist the Codex Executive Committee to investigate potential mechanisms to address crosscutting, overarching and emerging issues in Codex.

Session 4

Terms of Reference (members only session)

Chaired by Dr Sandra Cuthbert, CEO,
FSANZ



The IHFAF is an important mechanism of information sharing and strategic collaboration on food safety issues. As the IHFAF grows, the Executive Committee continues to consider how best to support the IHFAF in achieving its objectives.

Session 4 was attended by members only and considered the IHFAF terms of reference including criteria for joining the IHFAF. Updated terms of reference will be published on the IHFAF website when finalised.

Acknowledgements and next meeting

FSANZ staff would like to express their sincere gratitude to all session chairs, presenters, members and guests for their invaluable contributions to an informative and enjoyable meeting.

The next IHFAF annual meeting will be hosted by the Food Safety Authority of Ireland in 2023, and held in-person, subject to COVID-19 travel restrictions.



Picture: Australia hosting the IHFAF meeting from the FSANZ offices in Canberra. From left to right: Mr Steve Crossley (Director, International and Dietary Exposure Assessment), Ms Christel Leemhuis (Acting General Manager, Science and Risk Assessment), Dr Sandra Cuthbert (CEO), Ms Emily Dawson (International Liaison Officer)

Appendix I





Meeting agenda



21 March 2022



09:00 to 12:00 (GMT)

International Heads of Food Agencies Forum (IHFAF)

Third Meeting under the theme

“New food sources and productions systems”

Agenda

Innovative new food sources and production systems are emerging in response to feeding the growing global population. The Codex Alimentarius Commission, at their forty-fourth session in 2021, signalled the need for further consideration and guidance on new food sources and production systems.

The IHFAF, as a gathering of like-minded heads of international food safety agencies, is well-placed to discuss this topic, and to consider the implications for food safety regulatory frameworks.

The purpose of the third meeting of the IHFAF is to share information, raise awareness and to develop a strategic approach to addressing potential regulatory challenges that may emerge from new food sources and production systems.

TIME	TOPIC	Speaker
09:00 – 09:10 AM GMT	Welcome and Opening Remarks	Dr Sandra Cuthbert CEO, Food Standards Australia New Zealand (FSANZ)

Session 1 Chaired by: **Mrs Emily Miles, CEO, UK Food Standards Agency**

New food sources

New foods are entering the food supply through technological innovations, or through consumption of foods outside of their traditional contexts. Session 1 will introduce new food sources and production systems, and discuss some examples of new foods.

09:10 – 09:22 AM GMT	New food sources and production systems: FAO's perspective on implications for food safety	Dr Sandra Cuthbert CEO, Food Standards Australia New Zealand (FSANZ)
09:22 – 09:34 AM GMT	Plant-based meat analogues and cell based proteins	Professor Michelle Colgrave Future Protein Lead, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
09:34 – 09:46 AM GMT	Ingredients and future perspectives including insects	Mr Per Preisler Christiansen Deputy Director General, Danish Veterinary and Food Administration
09:46 – 09:55 AM GMT	Short discussion	Mrs Emily Miles CEO, UK Food Standards Agency

09:55 – 10:00 AM GMT	Break
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Session 2 Chaired by: **Dr Pamela Byrne, CEO, Food Safety Authority of Ireland**

New production systems – the food safety challenges

New production systems may present innovative and sustainable solutions to feeding the growing global population. Session 2 will explore examples of new food production systems and consider the food safety implications.

10:00 – 10:12 AM GMT	Precision Farming	Professor Laurence Shaloo Head of Animal and Grassland Research and Innovation Programme, Teagasc – Agriculture and Food Development Authority, Republic of Ireland
10:12 – 10:24 AM GMT	Urban farming techniques and food safety risk assessment: A case study on mercury contamination on a vertical production system	Dr WU Yuansheng Director, National Centre for Food Science, Singapore Food Agency
10:24 – 10:35 AM GMT	Short discussion	Dr Pamela Byrne CEO, Food Safety Authority of Ireland

10:35 – 10:40 AM GMT	Break
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Session 3 Chaired by: Dr Lee Kim Tan, Director-General and Deputy CEO, Singapore Food Agency

The associated Regulatory Challenges

While new food sources and production systems has potential benefits, the potential implications for public health and safety need to be considered. Session 3 will consider the associated regulatory challenges and consider high-level strategic recommendations, as appropriate.

10:40 – 10:52 AM GMT	Horizon scanning and foreseeing new risks	Michelle Patel Deputy Director of Science, Evidence and Research, UK Food Standards Agency
10:52 – 11:04 AM GMT	Regulatory updates on alternative proteins and novel foods	Dr Tan Yong Quan Scientist, National Centre for Food Science, Singapore Food Agency
11:04 – 11:16 AM GMT	Communicating with consumers	Dr Hamoud A. Alnughaymishi Head of Risk Communication Section, Saudi Food & Drug Authority
11:16 – 11:25 AM GMT	Short discussion	Dr Lee Kim Tan Director-General and Deputy CEO, Singapore Food Agency

<p>11:25 – 11:40 AM GMT</p>	<p>Further discussion and consideration of high-level recommendations relating to new food sources and production systems</p>	<p>Dr Sandra Cuthbert CEO, FSANZ</p>
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Closing Remarks for Sessions 1-3

Session 4 Closed session for IHFAF members only Chaired by: **Dr Sandra Cuthbert, CEO, FSANZ**

Terms of reference

The IHFAF is an important mechanism of information sharing and strategic collaboration on food safety issues. As the IHFAF grows, the Executive Committee continues to consider how best to support the IHFAF in achieving its objectives. Session 4 will provide an update on IHFAF governance and planning for the fourth meeting.

<p>11:40 – 11:55 AM GMT</p>	<p>Updates relating to the Terms of Reference, including criteria for new members, and the Executive Committee meetings.</p>	<p>Dr Sandra Cuthbert CEO, FSANZ</p>
<p>11:55^{AM} – 12:00^{PM} GMT</p>	<p>Closing Remarks for Session 4</p>	<p>Dr Sandra Cuthbert CEO, FSANZ</p>

12:00
PM GMT **Meeting Adjourns**

Note: Further information on the International Heads of Food Agency Forum can be found at www.ihfaf.com

Appendix II





List of participants

Country	Participants (member in bold)
Australia Food Standards Australia New Zealand (FSANZ)	<ul style="list-style-type: none">› Sandra Cuthbert, Interim CEO, FSANZ (Meeting Chair)› Christel Leemhuis, General Manager, Science and Risk Assessment› Steve Crossley, Director, International and Dietary Exposure Assessment› Louise Cook, International Strategy Officer› Emily Dawson, International Liaison Officer <p>Presenter:</p> <ul style="list-style-type: none">› Professor Michelle Colgrave, Future Protein Lead, Commonwealth Scientific and Industrial Research Organisation (CSIRO)
Saudi Arabia Saudi Food and Drug Authority	<ul style="list-style-type: none">› Professor Hisham Al-jadhey, CEO› Dr. Mohammed Al Nasser, Vice President for Food sector› Dr Hamoud A Alnughaymishi, Head of Risk Communication Section› Ms Roaa Almarwani, Senior Risk Communication Specialist <p>Presenter:</p> <ul style="list-style-type: none">› Dr Hamoud A. Alnughaymishi, Head of Risk Communication Section
Ireland Food Safety Authority of Ireland	<ul style="list-style-type: none">› Dr Pamela Byrne, CEO (Session 2 Chair) <p>Presenter:</p> <ul style="list-style-type: none">› Professor Laurence Shalloo, Head of Animal and Grassland Research & Innovation Programme
Denmark Danish Veterinary and Food Adminis- tration (DVFA)	<ul style="list-style-type: none">› Dr Pamela Byrne, CEO (Session 2 Chair) <p>Presenter:</p> <ul style="list-style-type: none">› Professor Laurence Shalloo, Head of Animal and Grassland Research & Innovation Programme

Country	Participants (member in bold)
<p>France The French agency for Food, Environmental and Occupational Health Safety (ANSES)</p>	<ul style="list-style-type: none"> › Mr Matthieu Schuler, Managing Director General, Science for Expertise Division › (proxy for Dr Roger Genet, Director General) › Mr Christophe Cordevant, Scientific Advisor, Food Microbiology, Strategy and Programmes Department › Ms Irene Margaritis, Assistant Director for Food Safety and Nutrition, Animal and Plant Health, Risk Assessment Department
<p>Japan Food Safety Commission of Japan (FSCJ)</p>	<ul style="list-style-type: none"> › Dr Shigeki YAMAMOTO, Commissioner and Chairperson, Food Safety Commission › Dr Masako WAKI, Commissioner › Mr Yoshiyuki MATSUBARA, Assistant Director
<p>Kuwait Public Authority for Food and Nutrition (PAFN)</p>	<ul style="list-style-type: none"> › Dr Reem AlFulaij, Deputy Director General for Technical Affairs › Dr Amal AlRashdan, Deputy Director for Inspection and Control › Mrs Abeer Alrammah, Director of International Relations
<p>Morocco National Office of Food Safety (ONSSA)</p>	<ul style="list-style-type: none"> › Dr Abdelghni AZZI, Director of Food Control (proxy for Dr Hamid Lachhab, Director of Risk Assessment and Legal Affairs)
<p>Singapore Singapore Food Agency (SFA)</p>	<ul style="list-style-type: none"> › Dr Lee Kim TAN, Director-General and Deputy Chief Executive Officer (Session 3 Chair) Presenter: › Dr Yuansheng WU, Director, National Centre for Food Science › Dr Tan Yong Quan, Scientist, National Centre for Food Science
<p>United Kingdom UK Food Standards Agency (FSA)</p>	<ul style="list-style-type: none"> › Mrs Emily Miles, CEO (Session 1 Chair) Presenter: › Michelle Patel, Deputy Director of Science, Evidence and Research

International Organisations	Participants
Codex Alimentarius	› Tom Heilandt , Secretary of the Codex Alimentarius Commission
Food and Agriculture Organization (FAO)	› Dr Markus Lipp , Head, Food Safety and Quality Unit Presenter: › Dr Vittorio Fattori, Food Safety Officer
World Health Organization (WHO)	› Luz Maria De-Regil , Unit Head, Multisectoral Action in Food Systems; International Food Safety Authorities Network (INFOSAN) › Peter Ben Embarek, Head, WHO One Health Initiative
Guests	Attendees
New Zealand New Zealand Food Safety, Ministry for Primary Industries	› Mr Vincent Arbuckle, Deputy Director General
Republic of Korea Ministry of Food and Drug Safety (MFDS)	› Mrs Yujeong CHOI, Deputy Director, Food Safety Policy Bureau

