







7 June 2025



World Food Safety Day Food safety: science in action





World Food Safety Day



We all need safe food

But food can become contaminated with an array of hazards: bacteria, chemicals, fungi or parasites, which can cause at least 200 different diseases. These illnesses impact health, livelihoods, education and economies. However, they can be prevented - when we are **informed** and **take action**.

Each year on 7 June, the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) work together to facilitate the observance of this Day all around the world. On World Food Safety Day, we remember that food safety is a collective right and responsibility – everyone needs to play their part.

Join us this year to celebrate World Food Safety Day – whether as a policymaker, a food business owner or employee, as an educator or as a consumer!

Because food safety is everyone's business.

Theme Food safety: science in action

Everyone involved in the food supply chain - from producers, to processors, transporters, retailers, cooks and consumers - relies on the universal application of good practices, agreed processes and standards to keep food safe.

These all draw on the careful, clear and thoughtful application of the best available scientific evidencethat explores how and why food can become contaminated and make us sick. Scientists assess and analyse risks to human health associated with known, established, emerging and anticipated food safety hazards, and they provide advice to assist policymakers, food businesses and consumers make safe choices.

Without science, it would not be possible to maintain food safety along supply chains, which often span the globe and cross multiple borders.

This World Food Safety Day, we are celebrating the important role that science plays in making informed decisions about food.

Science provides the fundamental basis for food safety.



The Joint FAO/WHO Food Safety Scientific Advice Programme

FAO and WHO bring together the world's most eminent independent scientists to carefully evaluate possible food safety hazards. They provide unbiased, evidence-based advice to policymakers, food businesses and consumers, most notably to the Codex Alimentarius Commission (Codex). Codex elaborates international standards, guidelines and codes of practice on food safety and quality based on the scientific advice provided by this joint FAO/WHO programme. The joint FAO/WHO Scientific Advice Programme consists of several established and ad hoc bodies, which include:



The Joint FAO/WHO Expert Committee on Food Additives was established in 1956 and will hold its 100th meeting this year.

The Committee evaluates the risks associated with food additives and residues of veterinary drugs, contaminants and natural toxins in food and feed.

See more on JECFA here: JECFA at <u>FAO</u> | JECFA at <u>WHO</u>



The Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment was established in the year 2000.

JEMRA assesses risks associated with bacterial pathogens, viruses and parasites in food, ranks those risks and evaluates risk management options. Amongst other work, JEMRA has provided the scientific advice necessary for the development of key guidance on hygiene practices.

See more on JEMRA here: JEMRA at <u>FAO</u> | JEMRA at <u>WHO</u>



The Joint FAO/WHO Meeting on Pesticides Residues was established in 1963 and is charged with assessing the risk to human health of pesticide use.

Experts review data and studies on residues of pesticides in food and animal feed, which are used to determine what levels can be found in foods and what levels are safe for consumption.

See more on JMPR here: JMPR at <u>FAO</u> | JMPR at <u>WHO</u>

Key messages

Science is fundamental to food safety

International expert bodies like those in the Joint FAO/WHO Food Safety Scientific Advice Programme play a crucial role in shaping international standards and guidance, which inform national legislations and contribute to the harmonized trade in safe food. This protects consumers everywhere.

If it is not safe, it is not food

We all have a right to food. That means we should have access to food that is safe, nutritious, affordable and reliable.

Food safety is everyone's business

The safety of our food depends upon the application of good practices and good communication along the food chain, from production to consumption. Everyone has a role to play in keeping food safe.

There is no science without data

All governments and the food industry play a vital role in the collection and sharing of data: this is the evidence scientists use to determine how to keep food safe.

There are many scientific disciplines behind food safety

Microbiological and toxicological sciences play a crucial role in food safety. In our changing world, climate sciences, social sciences and other disciplines also have a role to play in helping to develop more reliable and integrated policies and guidelines.

Education is key

Teaching young people, advancing research and educating consumers about how to keep food safe will contribute to a robust food safety culture.

Everyone is a risk manager

We all make daily choices about what we eat and how to handle food. These decisions are made by individuals, families, communities, businesses and governments. When we understand food safety risks, we make more informed decisions.



Facts and stats

- **600 million people fall ill each year** from foodborne disease. The annual cost of treating foodborne illnesses is estimated at USD 15 billion.
- Certain hazards are not static and can multiply in food: they are living microorganisms. We cannot see them, but they can move, they multiply; animals can carry them and so can humans, they can be found everywhere, at any time. Science helps us understand the conditions that manage and mitigate the risks these microorganisms may pose to humans.
- The economic burden of foodborne diseases exceeds USD 110 billion annually in low- and middle-income countries due to lost productivity and healthcare expenses.
- Some chemical compounds may pose specific risks when humans are exposed to them at low levels over a long time. Scientists have developed risk assessment methods to estimate how to keep us safe even when we are exposed to these chemicals during our lives.
- Bacteria that are resistant to antimicrobials can be found in

food. Agriculture and livestock communities need to be vigilant about prudent antimicrobial use, so that resistant pathogens cannot be passed on to humans through food.

enerally grow rapidly between temperatures of 5°C (41°F) and 60°C (140°F), a range commonly known as the 'danger zone.' To reduce the risk of contamination, perishable foods should be kept either refrigerated (below 5°C) or cooked to temperatures above 70°C.



What can you do?

Science provides the basis for food safety guidance, but preventing foodborne illness depends on all of us taking the right actions.

Governments can:

- Invest in research and support scientists. When governments invest in sound science to guide policies, they create a solid foundation for good governance.
- Invest in data collection.

 This can support regular review of scientific advice and promote data sharing both within and beyond their borders.
- Develop science-based policies to ensure food safety along the food supply chain, reassure consumers about the safety of their food, and address emerging risks.
- **Promote science education** to empower young people with the knowledge to stay safe and secure the future of food safety.





Food businesses can:

- Implement evidence-based programmes to identify potential contamination risks and ensure safe handling, processing, distribution and storage of food.
- Reinforce food safety practices by continuously educating and retraining employees on the latest food safety practices and emerging
- risks. This ensures consistent high standards throughout the supply chain.
- Support data collection efforts to facilitate regular review of the scientific basis on which practices and risk management measures are established and monitor and oversee their implementation.

Consumers can:

• Practice safe handling using evidence-based practices at home. Following the five keys to safe food reduces the risk of foodborne illnesses.



• **Stay informed** by keeping up to date on food safety advice from national authorities. Staying informed about ongoing outbreaks and emerging risks can make us all safe.

Academics can:

- Conduct and share research on food safety including known and emerging risks, and disseminate findings to inform policy and the public.
- Provide education and training to governments and the food industry on the latest food safety practices, emerging risks and the importance of sound scientific research and data to prevent foodborne illnesses.



Schools can:

- Teach food safety basics and incorporate food safety education into school curricula, teaching students about safe food handling and hygiene.
- Make food safety fun!
 Encourage students to learn through creative activities and involve them in developing good practices in their school.
- Encourage an interest in science. The next generation of scientists is at school! Children should develop an understanding of science and develop the skills to critically assess information and support evidence-based decision making.





Staying informed about ongoing outbreaks and emerging risks can make us all safe.

Get involved



Hold a sports activity:

a run, walk or dance to promote food safety is a great way for people to get involved in their communities and raise awareness about food safety.



Organize an exhibition:

create an informative display on food safety for colleagues, fellow students or a general public.



Engage people on social media:

launch a campaign to spread awareness. Prepare your own videos, brochures or posters emphasizing the role of science in food safety with our ready-to-use communication materials. Don't forget to tag #WorldFoodSafetyDay to join the global conversation!



Get creative:

compose a song, create a dance, write a poem, or draw a picture that celebrates the science behind food safety! Show how science and innovation help protect the food we eat.



Organize a food safety quiz:

host a quiz and engage your community on food safety and the science behind it. A quiz can help raise awareness and promote safe food handling practices in your community, business or organization.



Host a webinar:

bring together colleagues and counterparts to talk about food safety preparedness and response. Host a question-and-answer session to provide tips and information.

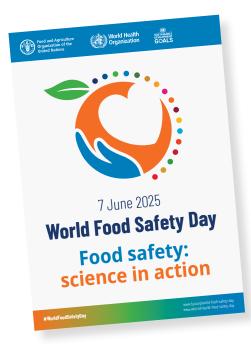
Communications tools

FAO and WHO have developed some communications materials to help you organize an event and raise awareness about food safety. These can be found in three key places:

• **Digital media hub**. Posters, promotional materials and other assets useful for events are available in all six UN languages (Arabic, Chinese, English, French, Russian and Spanish).

Download here

- **Trello board**. Social media cards, "mythbuster" messages, videos and infographics are available in all 6 UN languages on the **World Food Safety Day Trello board**. This will be regularly updated as 7 June nears, so keep checking in.
- The World Food Safety Day website.
 Find links here to food safety leaflets and this year's World Food Safety Day news and events, as well as all other information relating to World Food Safety Day.









Visual identity

The World Food Safety Day visual identity is available for use, without modification, in all World Food Safety Day campaigns. Please feel free to **download it here**.

However, please note that requests for **use of the FAO and WHO logos** for any reason whatsoever, whether or not in association with other logos, must be addressed to both organizations in advance. For more information please refer to the **FAO** and **WHO** websites.





This Toolkit was developed by FAO and WHO to help food safety advocates around the world prepare their World Food Safety Day events.

Please get in touch and let us know what you plan for the Day, and how you are putting science into action this year!

Events and news can be posted on the World Food Safety Day website.

Share details of your events, photos and video links

Email: world-food-safety-day@fao.org world-food-safety-day@who.int

Social media: tag @FAOWHOCodex on X

Join: WHO's Food Systems Community

of Practice food safety group

https://www.whofoodsystems.org/

Hashtag: #WorldFoodSafetyDay



