What is FAO's role in supporting innovation to deliver more sustainable crop and food production in the future?
Crop production is the foundation of world food security, and it is at risk.

If we continue operating the way we do today, we will continue facing hunger and malnutrition over the next decade, and we will not achieve the SDGs.

Dr QU, Dongyu, FAO Director-General, 8 July 2021
We need transformative change.

To achieve the ambitious transformation required by today’s challenges, we need to change:

- policies;
- mindsets;
- approaches; and
- business models.

Dr QU, Dongyu, FAO Director-General, 23 March 2021 and 8 July 2021
Enabling more efficient, inclusive, resilient and sustainable agrifood systems

FAO Strategic Framework 2022-2031
• Innovation as a key accelerator

FAO Science & Innovation Strategy
1. Strengthening science and evidence-based decision making
2. Supporting innovation & technology at regional & country level
3. Serving Members better by reinforcing FAO's capacities

Enablers:
i) Partnerships and ii) innovative funding & financing
FAO Innovation

We create an enabling environment for co-innovation to support member countries towards agrifood system transformation by focusing on four areas:
More than a biennial publication: **Data, information and analysis of science, technology and innovation** (STI), for descriptive and impact assess

**Global coverage** (focusing on LMICs)

**Beyond non-tech STI** to cover institutions, processes and policies.
Digital agriculture

- **Blockchain technology** can connect all the stakeholders in the supply chain from the farmer to the end consumer

- **Artificial intelligence** to increase farming efficiency (e.g. through agricultural robotics, soil and crop monitoring, predictive analysis and agricultural advisories with automated chats)

[! Ethical issues requiring global standards and guidelines]

- **Precision agriculture** technology for optimised management of inputs

Our Office, for instance, leads

- **Global Network of Digital Agriculture and Innovation Hubs** launched by FAO
- Support to countries with **Digital strategies**
Agricultural innovation systems approach

- **Co-development of innovative solutions** to address specific problems

- **Strengthening capacity** of national agricultural research systems, extension and advisory services, business enterprises and market intermediaries

- **Integration of innovation priorities** into the national policies and strategies

Examples: MAIPs; Tropical Agriculture Platform (TAP) and TAP-AIS project; innovation policies
New genomic techniques

- New tool for plant and animal breeding in low- and middle-income countries.
- Potential hazards, benefits and impacts on the environment and society, plus regulatory aspects
  - Issue Papers on Gene editing and agrifood systems (2022) and Gene editing and food safety (2023)
Behavioural science for innovation and sustainability

- AMR in Mozambique
- Climate Smart Crop choices in Kenya
- Improve recycling habits to reduce FAO’s carbon footprint
- Support Healthy diets and sustainable food choices
Innovation and traditional knowledge

- **Indigenous Peoples' innovation** is place-based, context-specific, and holistic.

- Traditional knowledge and co-creation of innovation can result in rich cross-fertilization of knowledge and cultures, and **contribute to biodiversity preservation and climate resilience**.

- FAO report on *Labelling and certification schemes for Indigenous Peoples' foods*.

FAO-WIPO synergies around traditional knowledge protection and intellectual property frameworks?
More examples from FAO's portfolio:

- **Sustainable crop production intensification** farming practices and technologies that support the development of resilient crop production systems.
- **Promotion of stress tolerant crop varieties and crop species** using emerging crop improvement technologies (including through the ITPGRFA)
- **Preserving crop diversity and genetic resources** for sustainable agriculture
- **Hydroponic solutions** to grow food while strengthening the livelihoods of communities
- **Adopting nuclear science**, such as with the sterile insect technique (SIT), for pest management
Innovation is the future of sustainability
THANK YOU

www.fao.org/office-of-innovation