The Future of Food Safety

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Conagra Brands

30 Years of Advancements

- WGS/bioinformatics/source tracking
- Modeling
- Mapping
- Data analytics
- Improved Detection Capabilities
- Development of advanced knowledge of food safety issues
- Mitigation Technologies
- Food processing-HPP, Sous Vide, alternative proteins, plant-based

Gaps/Bottlenecks/Hurdles

Lack of investments in manufacturing and aging infrastructure

Advancements in training and delivery

GAPs

Complicated supply chains, Globalization & Ecommerce make traceability challenging

Lack of research in new technologies

Regulatory oversight inconsistences (FDA, USDA, States, CFIA, other global)

Lack of consumer education/understanding on proper handling of raw/NRTE products

Forward thinking

Technology moves fast

- Apps, AI, Automation, Big Data, Blockchain, Cloud, Data Mining, Robotics, Whole Genome Sequencing, Machine Learning, Metaverse, Quantum Computing, Virtual & Augmented Reality, etc.

Food Technology is also fast

- Alternative proteins- cell culture, lab grown, plant-based, edible insects, mycoprotein
- 3D printing
- Vertical, urban, greenhouse farming
- Aquaponics
- GMOs

Industry 4.0

Smart Factories

The integration of intelligent digital technologies into manufacturing and industrial processes. It encompasses a set of technologies that include industrial IoT networks, AI, Big Data, robotics, and automation.
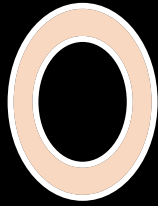
What Else

- Globalization
- Resource depletion
- Sustainability
- Packaging
- Recycling
- Water reuse
- Climate Change
- Carbon offsetting
- Healthier diets

Where are we headed?

- **GMPs-** The basics must continue to be a focus
- **Infrastructure -**Investment in manufacturing facilities
- Digital tools and training
- Continued improvements in detection, mitigation, processing
- Improved mapping technology
- Consumer education

Food safety is everyone's business

FAO