



FOOD SAFETY CAREERS: What is it in Food Safety R&D?

GOVERNMENT PERSPECTIVE

KRISTINE B. NACIONALES

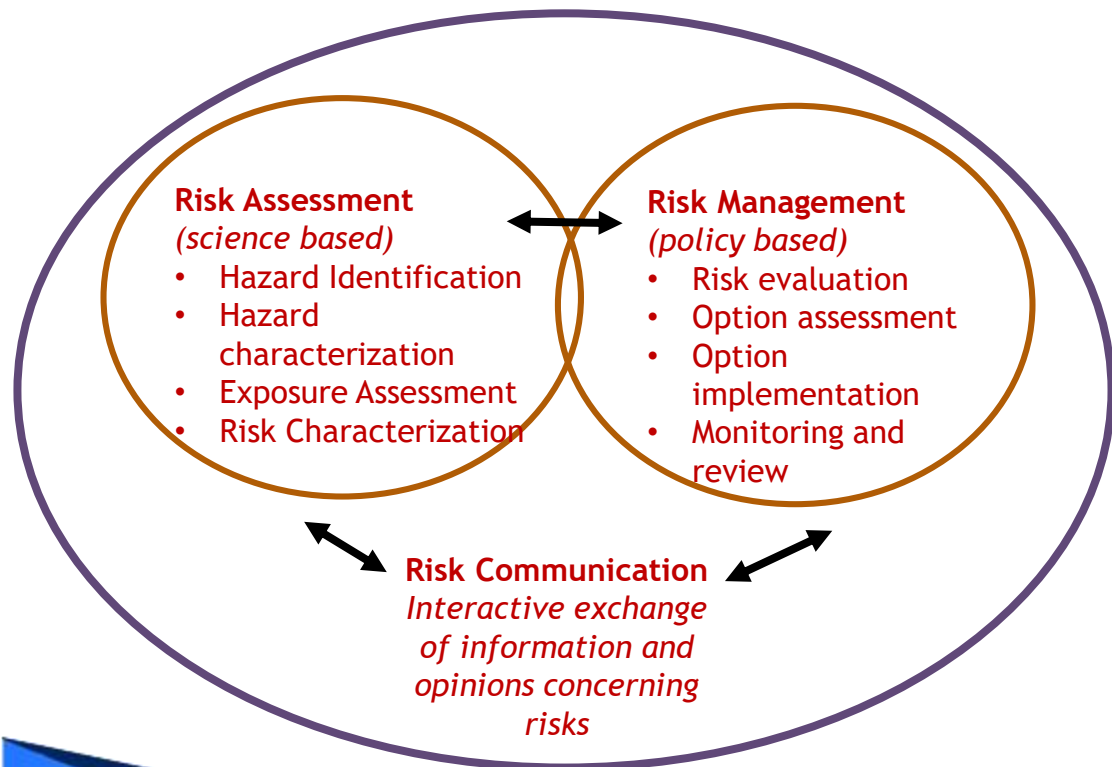
SUPERVISING SRS, DOST-FNRI

November 27, 2020

PRESENTATION OUTLINE

1	INTRODUCTION	<ul style="list-style-type: none">• 2013 FOOD SAFETY ACT OF THE PHILIPPINES
2	FOOD SAFETY R&D PROGRAMS	<ul style="list-style-type: none">• DOST SUPPORT FOR THE FOOD SAFETY ACT• DOST INTEGRATED FOOD SAFETY PROGRAM
3	FOOD SAFETY R&D WORKERS FRONTLINER	<ul style="list-style-type: none">• INNOVATION• POLICY ADVOCACIES• INFORMATION
4	R&D WORKER'S JOURNEY	<ul style="list-style-type: none">• PURSUING THIS CAREER





Risk Analysis

A management tool for government bodies to define an appropriate level of public health protection and establish guidelines to ensure the supply of safe food (CODEX, 1997)

Risk Assessors

RDIs

Academe

Scientists



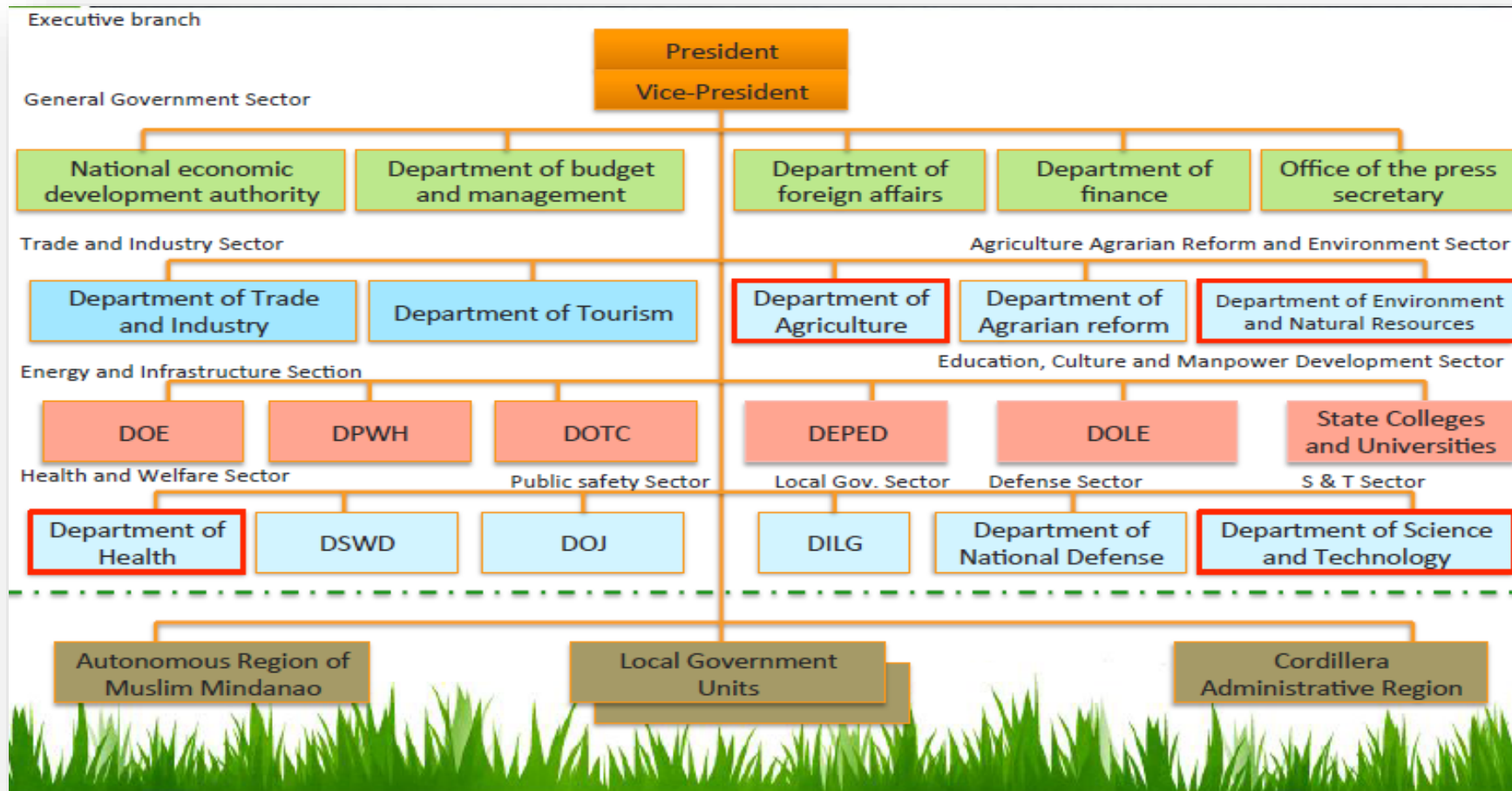
Risk Managers

DA

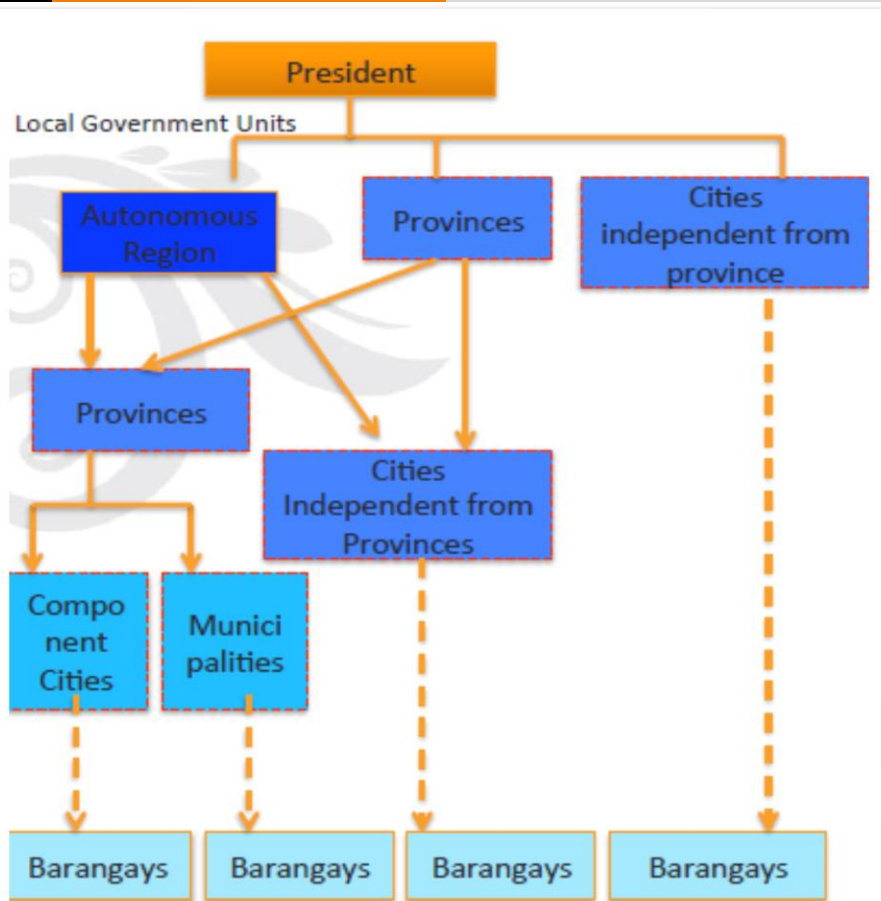
DOH

LGUs

• 2013 FOOD SAFETY ACT OF THE PHILIPPINES



2013 FOOD SAFETY ACT OF THE PHILIPPINES



REGIONAL SUMMARY
NUMBER OF PROVINCES, CITIES, MUNICIPALITIES AND BARANGAYS, BY REGION
AS OF JUNE 30, 2020

RegProvMunBgy	REGION	PROV.	CITIES	MUN.	BRGYS
130000000	NCR	-	16	1	1,710
140000000	CAR	6	2	75	1,178
010000000	I (ILOCOS REGION)	4	9	116	3,267
020000000	II (CAGAYAN VALLEY)	5	4	89	2,311
030000000	III (CENTRAL LUZON)	7	14	116	3,102
040000000	IV-A (CALABARZON)	5	20	122	4,019
170000000	MIMAROPA	5	2	71	1,460
050000000	V (BICOL REGION)	6	7	107	3,471
060000000	VI (WESTERN VISAYAS)	6	16	117	4,051
070000000	VII (CENTRAL VISAYAS)	4	16	116	3,003
080000000	VIII (EASTERN VISAYAS)	6	7	136	4,390
090000000	IX (ZAMBOANGA PENINSULA)	3	5	67	1,904
100000000	X (NORTHERN MINDANAO)	5	9	84	2,022
110000000	XI (DAVAO REGION)	5	6	43	1,162
120000000	XII (SOCCSKSARGEN)	4	5	45	1,195
160000000	XIII (CARAGA)	5	6	67	1,311
150000000	ARMM	5	2	116	2,490
	TOTAL	81	146	1,488	42,046

<https://dilg.gov.ph/facts-and-figures/Regional-and-Provincial-Summary-Number-of-Provinces-Cities-Municipalities-and-Barangays/32>

• 2013 FOOD SAFETY ACT OF THE PHILIPPINES

2013 FOOD SAFETY ACT OF THE PHILIPPINES

- To strengthen the **food safety** regulatory system in the country
- To protect consumer health
- To facilitate market access of local foods and **food** products, and for other purposes

Food Safety Regulation Coordinating Board (FSRCB) from DA, DOH, FDA, DILG, DTI, DOST and LGUs

Monitor and coordinate the performance and implementation of the mandates of the FSRAs in food safety regulation

- Coordinate crisis management and planning during food safety emergencies
- Continuously evaluate the effectiveness of enforcement of food safety regulations and research and training programs



- 2013 FOOD SAFETY ACT OF THE PHILIPPINES

Food Safety: From Farm to Fork



Production



Processing



Transport & Distribution



Retail



Preparation and Consumption

FOOD BUSINESS OPERATORS



• 2013 FOOD SAFETY ACT OF THE PHILIPPINES



FOOD SCIENCE & TECHNOLOGY



CHEMISTRY & BIOCHEMISTRY



MICROBIOLOGY



VETERINARY SCIENCE



MEDICINE



EPIDEMIOLOGY



AGRICULTURAL SCIENCES



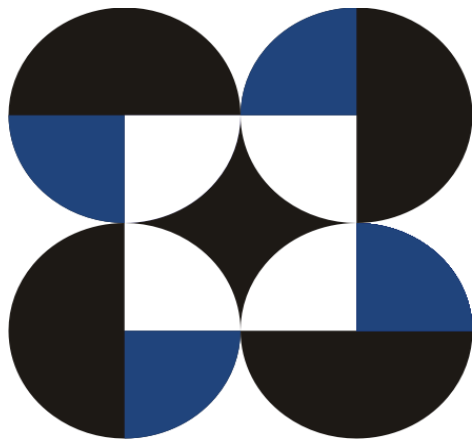
QUALITY ASSURANCE AUDITING



FOOD LAW



- **DOST SUPPORT FOR THE FOOD SAFETY ACT**
- **DOST Integrated Food Safety Program**



Conduct researches especially on food safety-related problems and concerns in the Philippines.



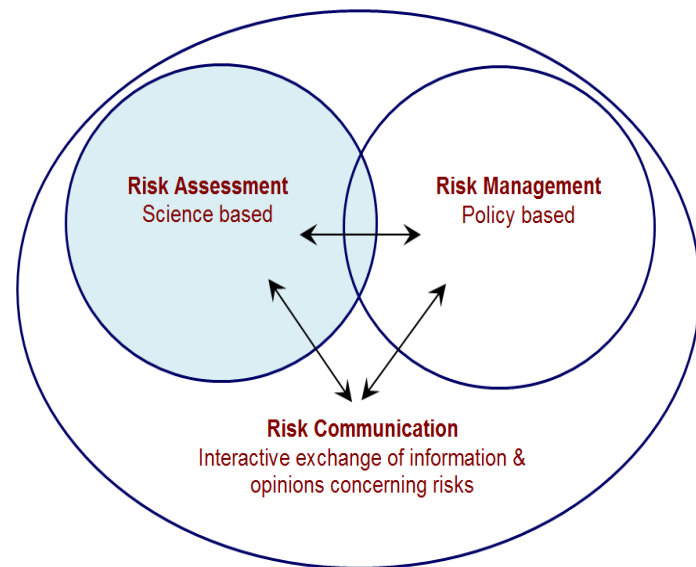
Develop/recommend tools, guidelines, policy option, and the like to address food safety issues



Share R&D results, knowledge and technologies and provide relevant S&T services

ARTICLE IV

Strengthening the
scientific basis of the
regulatory system



Article IV, Section 7:

Use of science-based risk analysis as
the basic principle for food safety

Article IV, Section 9:

Standards shall be established on the
basis of science, risk analysis, scientific
advice from expert bodies, standards of
other countries, existing PNS, and Codex,
where these exist and are applicable

ARTICLE IX

Upgrading the capability of farmers, fisher folk, industries, consumers and government personnel in ensuring food safety

Article IX, Section 31:

Skills training and other instructional/educational activities shall be regularly provided to food business operators, food handlers, and government personnel.

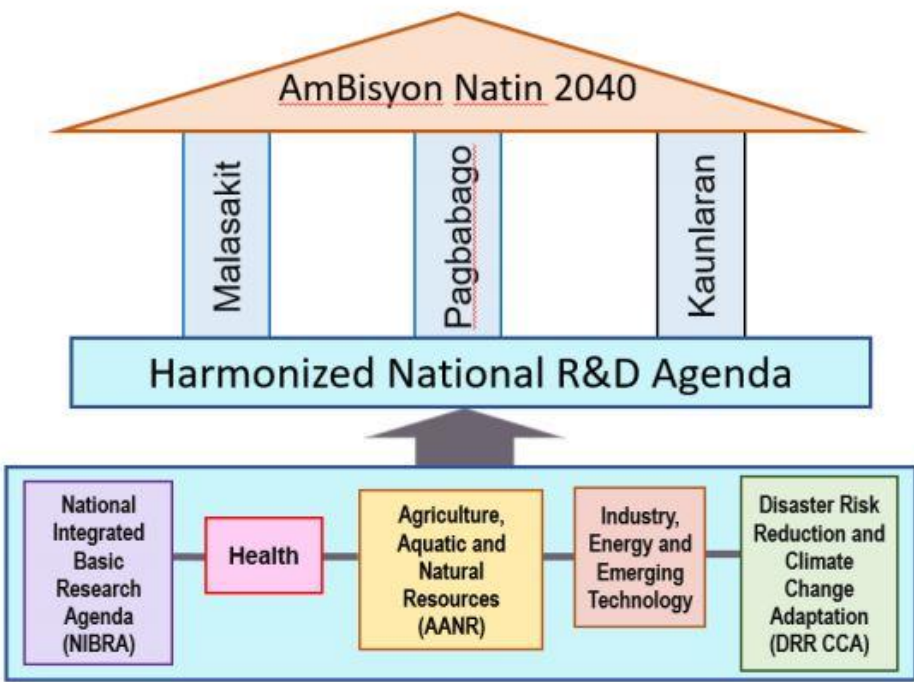
ARTICLE X

Research on cost effective technologies and codes of practice for assisting farmers, fisher folk, MSMEs and other stakeholders to enable them to comply with food safety regulations

Article X, Section 35:

Results of research shall be used in the development of policies and improvement of food safety regulations.

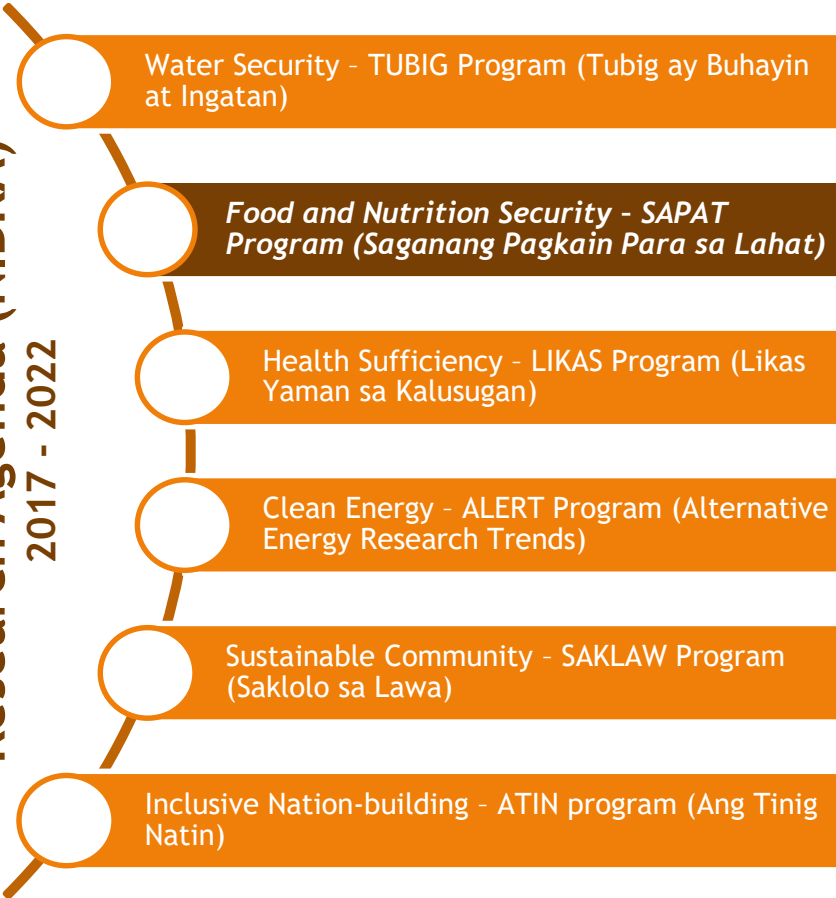
Harmonized National R&D Agenda (HNRDA) Framework



The Harmonized National Research and Development Agenda (HNRDA) is divided into five (5) sectors. It is aligned with *AmBisyon Natin 2040*, and is founded on the three pillars of *Malasakit, Pagbabago* and *Kaunlaran*.

National Integrated Basic Research Agenda (NIBRA)

2017 - 2022



- **DOST SUPPORT FOR THE FOOD SAFETY ACT**
- **DOST Integrated Food Safety Program**

- Diagnostics
- Drug discovery and development
- Functional foods
- Hospital equipment and biomedical devices
- Information and communication technology for health
- Dengue
- **Nutrition and Food Quality and Safety**
- Disaster risk reduction
- Climate Change Adaptation
- Omic technologies for health (Platform technology across research priorities)

**RESEARCH PRIORITIES
for HEALTH RESEARCH
and DEVELOPMENT**



- **Food and Nutrition Security**
 - Nutritious, safe and affordable food for all, at all times
- **Countryside Development**
- **Competitive Industry**
- **Delivery of Social Services**
- **Intelligent Transportation Solutions**
- **Renewable Energy and Energy Storage Solutions**
- **Human Security**

**RESEARCH PRIORITIES
for INDUSTRY, ENERGY
AND EMERGING
TECHNOLOGY**



- DOST SUPPORT FOR THE FOOD SAFETY ACT
- DOST Integrated Food Safety Program

DOST Integrated Food Safety Program

O B J E C T I V E S



To provide science/evidence-based approach in enhancing and strengthening the Philippine Food Safety system;



To provide food safety related services to meet customer satisfaction;



To develop and implement effective systems, processes and protocols on food safety;



To develop and enhance human resource on food safety;



To develop and institute strategies and mechanisms to sustain the food safety program.

VISION 2022

Safe food for everyone, by everyone, through science, technology, and innovation

MISSION:

To harness science, technology, and innovation in ensuring safe food for everyone

Customer Perspective

Effective delivery of food safety related services to meet stakeholders' requirements

Increase awareness and compliance on food safety

Enhance or develop capability to conduct R&D to generate technologies, risk assessment, and other food safety related areas

Internal Process Perspective

Effective systems, processes, and protocols

Enhance collaboration (local and international inter-agency) and linkages to include LGUs in policy advocacy and development, IECs, capability building

Harmonize and intensify all DOST techno-transfer and IEC activities

Develop and implement a DOST-wide R&D and techno transfer agenda and action plans

Learning & Growth Perspective

Competent service providers (trainers, consultants, R&D, and techno-transfer personnel)

Develop and implement Human resource development program (scholarships, skills, etc)

Sustain accreditation and membership of DOST laboratories under OneLab

Financial Perspective

Secure funds for Food Safety Program from funding institutions

Financial sustainability of the Food Safety program by 2022

Ensure sound and cost-efficient financial management

Access funds from other agencies to support food safety program

Sharing of cost for Food Safety program
Use of income from laboratory services

FOOD SAFETY STRATEGY MAP

DOST
Integrated
Food Safety
Program

- DOST SUPPORT FOR THE FOOD SAFETY ACT
- DOST Integrated Food Safety Program

PROGRAM COMPONENTS

DOST
Integrated
Food Safety
Program

INTEGRATED FOOD
SAFETY RESEARCH
AND DEVELOPMENT
PROGRAM

ENHANCEMENT OF
TESTING CAPABILITIES
ON FOOD SAFETY

HUMAN RESOURCE
DEVELOPMENT
PROGRAM ON FOOD
SAFETY

KNOWLEDGE/TECHNOLOGY
TRANSFER AND POLICY
ADVOCACY PROGRAM ON
FOOD SAFETY



- INNOVATION
- POLICY ADVOCACIES
- INFORMATION



DOST-FNRI

Optimum nutrition to everybody through scientific, environmental friendly and global competitive technologies.

- INNOVATION
- POLICY ADVOCACIES
- INFORMATION

Research and Development on Food Safety & Quality

BACKGROUND



Food safety, nutrition and food security are inextricably linked. Unsafe food creates a vicious cycle of disease and malnutrition, particularly affecting infants, young children, elderly and the sick.



Access to sufficient amounts of **safe and nutritious food** is key to sustaining life and promoting good health.

- INNOVATION
- POLICY ADVOCACIES
- INFORMATION

Research and Development on Food Safety & Quality

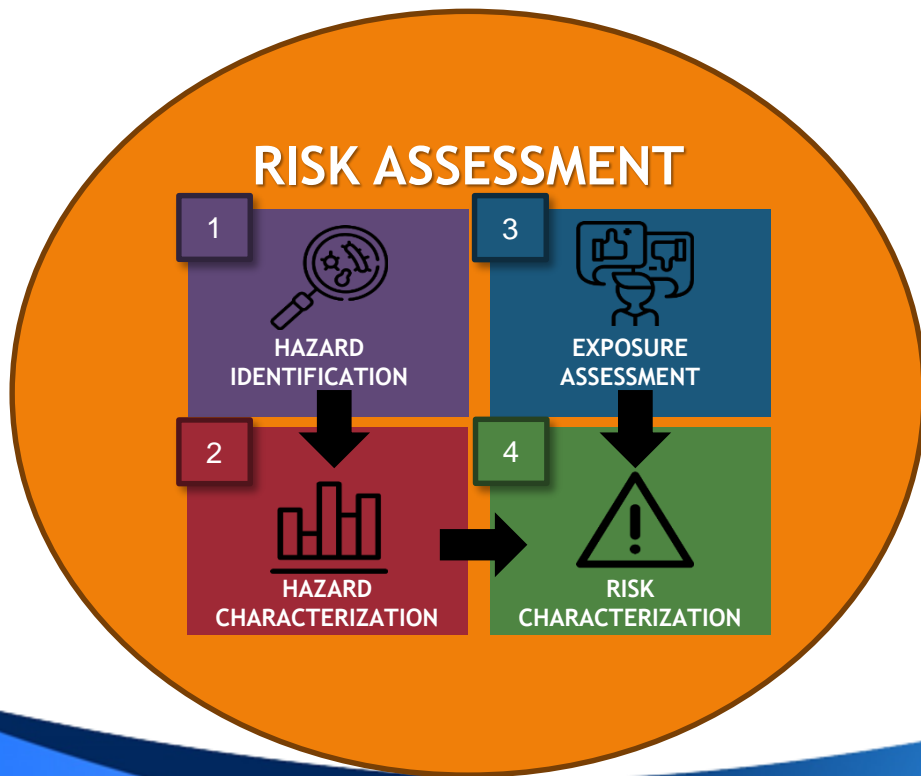
BACKGROUND



Consumer confidence in food relies on the effectiveness of checks and available assessment tools and researches to ensure the quality, safety, consistency, and authenticity of food in the Philippine food supply chain.



The focus on the integrity of food has increased globally in recent years, which consequently seeks planning and implementation of new regulations and higher standards on quality control and assurance.



RISK ASSESSMENT

(WHO/FAO, 2006)

3



EXPOSURE ASSESSMENT

Estimation of the likelihood that the consumer will be exposed to a substance or hazard.

Major considerations in dietary exposure:

1. Hazard concentration/occurrence data
2. Food consumption data

FOOD SAFETY R&D WORKERS AS FRONTLINERS

- INNOVATION
- POLICY ADVOCACIES
- INFORMATION



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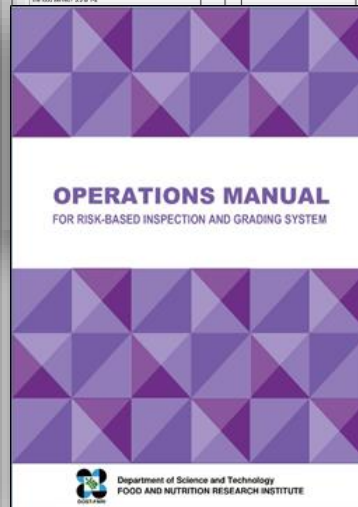
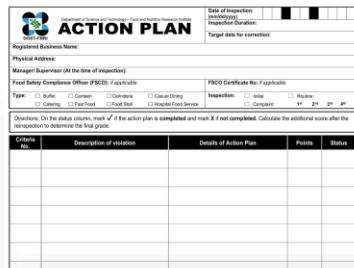
PNS/BAFS 10:2017
ICS 67.180.10

Grains – Grading and Classification - Corn



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

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Website: www.hafpda.gov.ph



**FOOD SAFETY
GUIDELINES
FOR THE
FOOD SERVICE
SECTORS**

DEPARTMENT OF SCIENCE AND TECHNOLOGY
FOOD AND NUTRITION RESEARCH INSTITUTE

- INNOVATION
- POLICY ADVOCACIES
- INFORMATION



- INNOVATION
- POLICY ADVOCACIES
- INFORMATION



FOOD SAFETY R&D WORKERS AS FRONTLINERS

- INNOVATION
- POLICY ADVOCACIES
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IN PHOTO: Representatives of various health and food safety agencies share insights on FWBD.



<http://ritm.gov.ph/health-food-safety-agencies-launch-talks-on-food-and-waterborne-disease-monitoring/>

FOOD SAFETY R&D WORKERS AS FRONTLINERS

- INNOVATION
- POLICY
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FOOD SAFETY R&D WORKERS AS FRONTLINERS

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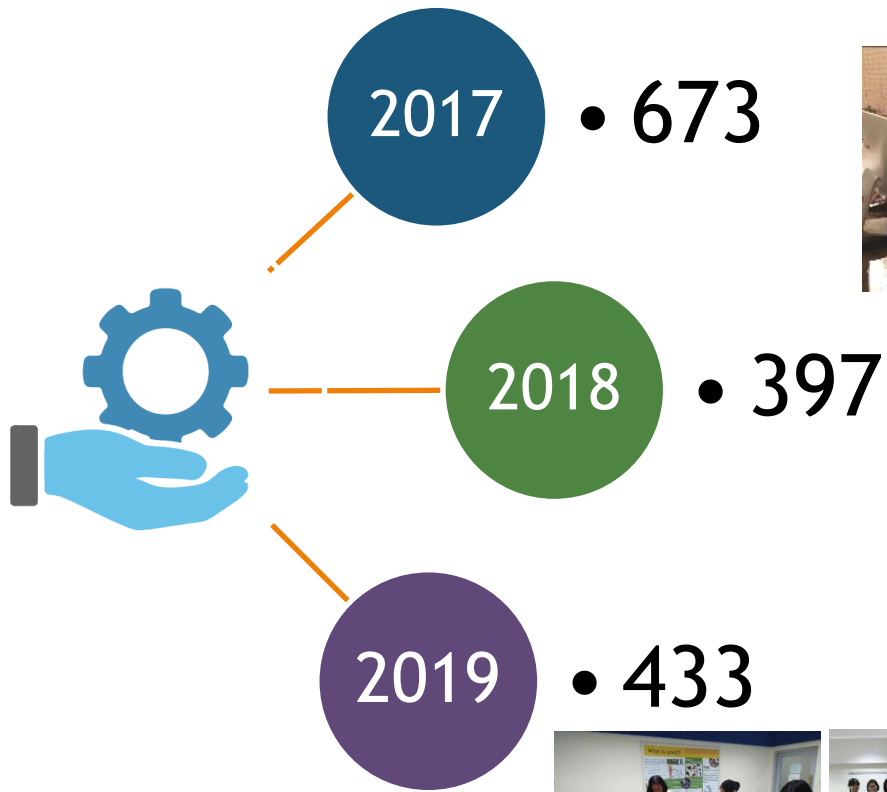




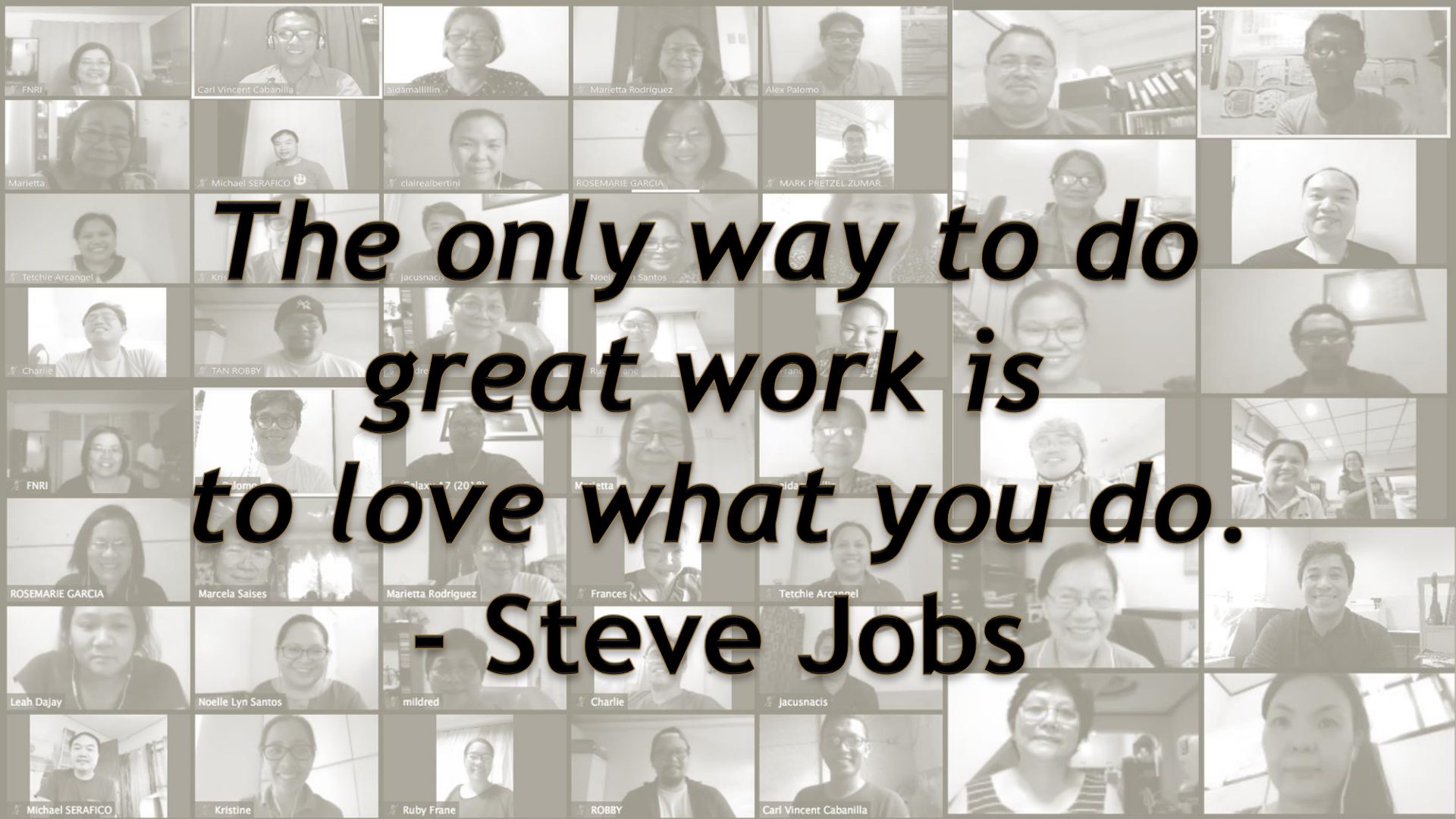












***The only way to do
great work is
to love what you do.
- Steve Jobs***



*Thank you for
your attention.*