

Analysis of Pesticide Risk Communication Strategies in Asia-Pacific Economic Cooperation (APEC) Member Economies.

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AGENDA

Pesticide Risk Communication

- DEFINITION
- IMPORTANCE
- HOW THE RESEARCH WAS DONE
- INEFFECTIVE EXAMPLES
- EFFECTIVE TOOLS AND EXAMPLES
- CLOSING THOUGHTS



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RISK COMMUNICATION AS DEFINED BY CODEX ALIMENTARIUS COMMISSION

“Risk communication is the interactive exchange of information and opinions throughout the risk analysis process concerning risk, risk-related factors and risk perceptions, among risk assessors, risk managers, consumers, industry, the academic community and other interested parties.”



<https://www.fao.org/3/i8608en/i8608en.pdf>

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Why is Effective Risk
Communication Important?



- Maintain Public Trust
- Increase Safety
- Encourage Communication
- Expand Economic Opportunities
- Decrease Barriers to Trade
- Cooperatively Strive for a Sustainable Future

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EIGHT CHARACTERISTICS OF EFFECTIVE RISK COMMUNICATION

- 1) Protects Consumers/Stakeholders
- 2) Operates in a Transparent and Timely Manner
- 3) Consists of Two-Way Communication
- 4) Relies on Credible Information
- 5) Shares Responsibility
- 6) Caters to Multiple Audiences
- 7) Consultative, Consistent, Systematic and Preventative
- 8) Requires Continuous Improvement



https://www.apec.org/docs/default-source/publications/2022/2/apec-food-safety-risk-communication-framework-and-associated-guidelines/222_scsc_apec-food-safety-risk-communication-framework-and-associated-guidelines.pdf?sfvrsn=420db0bf_2

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EXPANDING ON THE EIGHT CHARACTERISTICS OF RISK COMMUNICATION



- Simplify Scientific/Technical Language
- Explain Risk vs Hazard
- Meet people on their level
- “Advertise” Risk Communication
- Create easily accessible platforms for discussion

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RESEARCH PARAMETERS



SEARCH SETTINGS

- Changed Region Settings for each Member Economy
- Utilized Google Translate



FAS POST EMAILS

- Contacted FAS Posts within APEC
- Ascertained which Agencies Communicate Risk



KEY POINTS OF INTEREST

- Priority of Audiences
- Style of Communication
- Platforms for Discussion
- Accessibility to Information



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Characteristics of Ineffective Risk Communication



The Disconnect

- No Connection to Audiences
- Insufficient Information/Transparency
- Non-credible Information
- Technical Research/Documents lack Simplified Summaries



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“Technical information alone will not address public concerns effectively, nor will it necessarily reduce regulatory restrictions. The key is interaction and dialogue.”

<https://www.extension.purdue.edu/extmedia/PPP/PPP-52.pdf>

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EFFECTIVE RISK COMMUNICATION TOOLS

SOCIAL MEDIA	AGENCY WEBSITES	ADVERTISEMENTS	APPS
<ul style="list-style-type: none"> • Reaches multiple audiences • Allows for concise simplified information 	<ul style="list-style-type: none"> • Increases transparency • Provides Regulatory Information • Provides education 	<ul style="list-style-type: none"> • Promotes interest in credible sources • Directs audiences to credible authorities on risk communication 	<ul style="list-style-type: none"> • Creates convenience • Utilizes technological advancements

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Effective Risk Communication caters to multiple audiences

Canada divides information according to relevant audiences

Most requested	<ul style="list-style-type: none"> • Reports and publications • Public registry 	<ul style="list-style-type: none"> • Search pesticide labels • Pesticides and food safety
For the public	<ul style="list-style-type: none"> • Pesticides in Canada • Consultations • Public Engagement Portal • Report a pesticide incident 	<ul style="list-style-type: none"> • Pesticide compliance and enforcement • PMRA Program Renewal
For growers & commercial users	<ul style="list-style-type: none"> • General information • Importing pesticides • Sustainable pest management 	<ul style="list-style-type: none"> • User requested minor use • Pollinator protection
For registrants & applicants	<ul style="list-style-type: none"> • General information • Electronic Pesticide Regulatory System (e-PRS) 	<ul style="list-style-type: none"> • Renewals
Resources	<ul style="list-style-type: none"> • Acts and regulations • Subscribe for updates 	<ul style="list-style-type: none"> • Frequently asked questions • Contact us

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SOCIAL MEDIA IS AN INTERACTIVE PLATFORM THAT REACHES A VARIETY OF AUDIENCES

- Facebook
- Twitter
- Instagram
- TikTok
- LinkedIn
- Etc.



AGENCY WEBSITES ARE AN IMPORTANT RESOURCE FOR INFORMATION IN EFFECTIVE RISK COMMUNICATION

DIARY/
CALENDAR

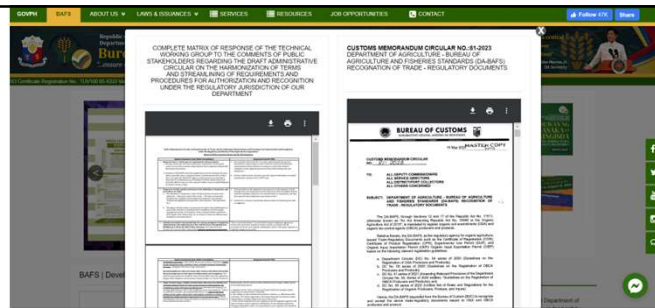
Informs stakeholders of important dates

INFOBITES/
UPDATES

Provides FAQ answers and keeps viewers up to date on project progress

ORGANIZATION
INFORMATION

Displays which Divisions of the agency are responsible for various topics



event listing

- Jun 06 - Aug 31
Public Consultation: Modifies Exempt Resolution No. 6,612/2018, which Establishes a List of Authorized Ingredients for the Production of Food or Supplements for Animals
[More information](#)
- May 23 - June 23
Public Consultation: Participatory Public Account 2023, 2022 management
[More information](#)
- May 15 - Jul 13
Public Consultation: Modifies Resolution No. 1,187 of 2022, which approves the coordinated and systematized text of the resolution that establishes phytosanitary entry requirements for cereal seeds.
[More information](#)
- May 02 - June 30
Public Consultation: Draft resolution that "sets sanitary requirements for the entry into Chile of land urchins (subfamily: erinaceinae)"
[More information](#)
- Apr 28 - Jun 12
Public Consultation: Draft resolution that "modifies Exempt Resolution No. 7,773/2021 that defines products of animal origin that only require submitting sanitary certification to the Agricultural and Livestock Service"
[More information](#)



APPS CAN PROVIDE PERTINENT INFORMATION TO USERS IN A CONVENIENT FASHION

Phytosanitary Complaints APP by the Chilean Agricultural and Livestock Service



Thuốc BVTV by the Vietnamese Ministry of Agriculture and Rural Development



PAMPHLETS CAN HELP BREAKDOWN TECHNICAL INFORMATION INTO SHORT MEANINGFUL POINTS

Pesticides and the Environment
Pesticides help manage native and invasive pests that threaten Canada's natural resources, crops and gardens.

Health Canada scientists evaluate hundreds of lab and field studies as part of a thorough science-based risk assessment. They look at the potential effects pesticides can have on a wide variety of animals, plants and insects.

Health Canada scientists also look at pesticide exposure in the environment, including when, where and how much pesticides are in contact with people.

They then determine the potential level of risk to the environment and the best way to manage these risks by restricting how, where, when and if a pesticide can be used.

Before using a pesticide, always read the label and check for the registration number to make sure the product is authorized for use by Health Canada.

REG. NO. 00000 P.C.P. ACT

For more information, go to canada.ca/pesticides

PNS/BAFS 161:2021

Product Standard BANANA
Maximum Residue Limits (MRLs) of Pesticides

Pesticide residue
It is any specified substance in food, agricultural commodities, or animal feed resulting from the use of a pesticide. The term includes any derivative of a pesticide, such as conversion products, metabolites, reaction products, and impurities considered to be of toxicological significance.

Maximum Residue Limits (MRLs)
It is the maximum concentration of a pesticide residue (expressed as mg/kg) to be legally permitted in or on food commodities and animal feeds.

Active ingredient
It is part of the product that provides the pesticidal action.¹

Examples of MRL per active ingredient in Banana

- iprodione (10.00 mg/kg)
Fungicide used to control pests on a variety of field, fruit, and vegetable crops, including almonds, grapes, peaches, potatoes, rice, berries, onions, peanuts, lettuce, lawns, and ornamentals.²
- oxamide (0.20 mg/kg)
Fungicide used for the control of various fungal infections including blight in potatoes and tomatoes.³
- tebuconazole (0.05 mg/kg)
Fungicide effective against foliar diseases in cereals and other field crops.³
- sulfufenacil (0.01 mg/kg)
Herbicide used alone or mixed with glyphosate for rapid control of many dicotyledonous weeds by pre-plant and pre-emergence applications in a wide range of food crops.³
- prochloraz (5.00 mg/kg)
Fungicide active against a wide range of diseases affecting cereals, field crops, fruit and many other crops.³
- methomyl (5.00 mg/kg)
Fungicide used to control a wide range of foliar and soil-borne insects.³
- lambda-cyhalothrin (0.50 mg/kg)
Insecticide used to control a wide range of foliar and soil-borne insects.³

To see full list check: https://www2.gov.bc.ca/gov/content/food_agriculture/pesticides/Pesticides%20Standard%20161.pdf

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RISK COMMUNICATION IS COMPLEX

Every topic of risk communication must take into consideration input from multiple areas of research.



WHAT IS SAFETY IN THE FIELD?

The SENASICA invites primary producers to implement the safety measures established in the 15 modules to implement the Contamination Risk Reduction Systems (SRRC) throughout their productive processes:

- 1 Productive unit registration**
Notify the SENASICA a production or packaging unit is active for vegetable production.
- 2 Productive infrastructure**
Making sure the limit counts on basic facilities for the proper production of vegetables.
- 3 Hygiene**
Implementing actions to ensure hygiene in the facilities, material, and staff involved in the production process.
- 4 Domestic and wild fauna handling**
Identifying, preventing, and avoiding vegetable contamination due to the presence of domestic and wild animals.
- 5 Training all the actors involved in production**
Ensuring ongoing training for the staff involved in the vegetable production process, for a better performance of their activities.
- 6 Internal audit**
Assessing if the productive unit complies with the technical specifications in terms of safety, according to its identification.
- 7 Procedure validation**
Proving the efficacy of control measures implemented to reduce physical, chemical or microbiological contamination risks.
- 8 Traceability**
Identifying the conditions in which vegetables are produced in the productive process, through documentary evidence of the process.
- 9 Production Unit History**
Establishing preventive measures to prevent contamination derived from the improper use of soil in the previous productive cycles.
- 10 Water use and management**
Establishing storage and use measures (human consumption, hand washing, equipment washing, irrigation, etc.) in order to prevent carrying direct or indirect contamination over the vegetables.
- 11 Fertilization**
Making sure the application of organic and chemical fertilizers is performed properly to prevent chemical and biological contamination.
- 12 Proper use and management of pesticides in the primary production of vegetables**
Maintaining the proper handling, storage, preparation, and application of pesticides used in the primary production of vegetables, preventing environmental pollution risks.
- 13 Best harvesting practices**
Implementing best practices during the vegetable harvesting process, to reduce contamination risks.
- 14 Packaging**
Preventing the product from interacting with surfaces and substances that can achieve a biological, chemical, or physical pollutant to it, which may represent a risk.
- 15 Transportation**
Preventing contamination during vegetable transportation, ensuring the staff involved in this stage ensures the transfer to the following step in the process.

Logo: GOBIERNO DE MÉXICO, AGRICULTURA, SENASICA

FIELD SCHOOLS CAN BE USED TO REACH RURAL AUDIENCES.



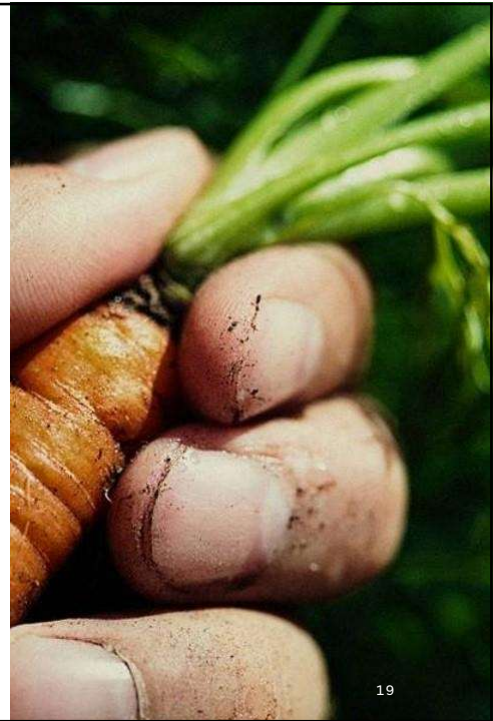
GAP training in Filipino field schools.

One of 16 banana/plantain field schools created by the Peruvian National Agricultural Health Agency to increase GAP knowledge.



EFFECTIVE RISK COMMUNICATION TAKES MANY FORMS

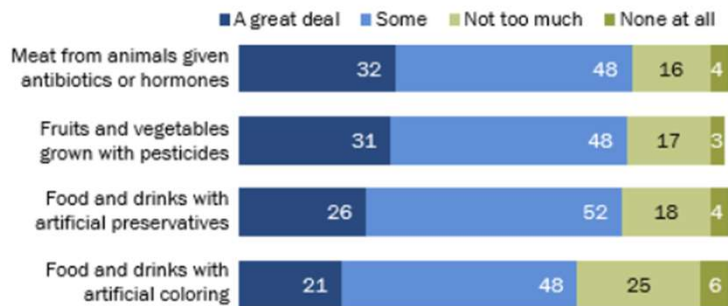
- BLOGS
- YOUTUBE CHANNELS
- PODCASTS
- COMIC STRIPS
- YOUTH/ ADULT EDUCATION PROGRAMS
- ADVERTISEMENTS



LACK OF EFFECTIVE RISK COMMUNICATION PREVENTS PUBLIC ACCEPTANCE OF NECESSARY PESTICIDES

About one-third of Americans believe antibiotics in meat, pesticides in produce pose a great health risk

% of U.S. adults who say ____ has the following health risk for the average person over the course of their lifetime



Note: Respondents who did not give an answer are not shown.

Source: Survey conducted April 23-May 6, 2018.

"Public Perspectives on Food Risks"

PEW RESEARCH CENTER





SUMMARY

- Responsibility for risk communication must be shared amongst all stakeholders
- There are many different paths to building effective risk communication
- Risk communication is an ever-changing field and there are always areas to improve upon

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Risk communication is an integral part of harmonizing regulations and creating a cohesive effort toward building a sustainable future.

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THANK YOU

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