

Pesticides may be ingested by humans through residues in fruits and vegetables.

Pesticide residues refer to substances in food, agricultural commodities or animal feed resulting from the use of crop protection products. Due to the irresponsible use of pesticides, governments regulated the sale of pesticides with unacceptable properties to be introduced in the market. Maximum residue limits are pesticide levels permitted to be in the fresh crops.

An educative approach on the judicious use of pesticides in order to meet the MRL is a collaborative effort of the various agencies under the Department of Agriculture in order to provide safe foods to consumers. Farmers, producers and the public are informed on the Good Agricultural Practices (GAP) and those following it may apply for GAP certification.

The Fertilizer and Pesticide Authority of the Department of Agriculture in the Philippines also promote product stewardship to provide the responsible and ethical management of products. Pesticide companies are required to provide the necessary training on the safe handling and use of the chemicals.

His PowerPoint presentation is in **Appendix 29**.

Risk Communication Case Studies

Specific case studies were presented by Ms Christel Leemhuis. She discussed the consumer attitude survey conducted in Australia in 2007, describing that consumers are more concerned about food poisoning and safety of imported foods rather than the risk presented by obesity. Actual risk ranking show that diet related diseases poses the greatest risk in Australia, followed by food poisoning and allergens.

After presenting the results of the survey, Ms Leemhuis discussed the strategy implemented by FSANZ in dealing with the risk associated with *Listeria monocytogenes* in ready-to-eat foods. FSANZ undertook a qualitative risk analysis to determine the extent of risk posed by *Listeria* in food. The assessment concluded that only certain populations are at a higher risk of *Listeria* contamination. Similarly, it was found out that certain foods are more likely to be contaminated with *Listeria*. The risk management options considered were: *L. monocytogenes* cooked crustacean presents a low risk to public health, compliance with existing standards ensure that good hygienic practices are employed during production and handling, and a microbial limit for *L. monocytogenes* in cooked crustacean was not justified.

As part of the risk communication strategy of FSANZ for the risk of *L. monocytogenes* in food, information sharing among the food industry, States and Territories on minimizing *Listeria* contamination was undertaken. An educative approach was undertaken to manage the risk. Fact sheets, *Listeria* recall guidelines, question and answer sheets and website information were included in the risk communication activities for *Listeria*.

The Primary Production and Processing (PPP) standard was also introduced by Ms Leemhuis. A whole of chain approach was adopted by Australia in 2002 and covers standards for primary production, primary processing, manufacture of products, transport, wholesale and retail. Communicating the complexity of PPP standards entail thorough explanation of the risk assessment conducted through-out the chain. Pinpointing data gaps and uncertainties in the development of PPP standards is also imperative in order to properly allow the stakeholders to comprehend the complexity of the standards.

The case studies are found in **Appendix 30**.

Risk Communication from Theory to Application – Operationalizing the Theory

Dr Deborah Cai discussed in full detail the important role of messengers to risk communication. A copy of her presentation is shown in **Appendix 31 & 32**. She expressed that the credibility, trustworthiness and expertise of a communicator directly determines if a message will get through to the target audience. Dr Cai compared risk communication to teaching citing the results of studies showing that students' impression of a professor in the first 15 seconds of a class is directly proportional to their teachers evaluation at the end of each semester. She further stressed that in the field of risk communication, the same principle applies. The risk communicator has to capture the audience attention immediately or the message will be lost in the process.

She also enumerated how people perceive expertise of a messenger. These can be through stating the trainings undertaken or degrees received, demonstrating specialized skill, keeping up to date on advanced research and being well-informed on current information, speaking with authority that can be established through non-verbal behavior, ability to take action, and demonstrating general intelligence. Dr Cai stressed that in low trust and high concern situations, credibility is greatly affected by empathy and caring accounting for 50% of the audience perception. In situations of high concern, the appropriate person delivering the message is often times more important than the message itself.

On credibility, Dr Cai differentiated consumers evaluation on credibility of a communicator during a low versus high stress situation. In low stress situation and to 80-85% of audiences, competence and expertise are the most important factors. While in high stress situations, 50% of consumers perceive communicators that listen, care and empathize with them as credible.

Further to her presentation, Dr Cai discussed the importance of non-verbal communication during interaction with people. Body language makes an impression and can provide 50 – 70% of the message that people hear. Thus, she emphasized the impact of communicating nonverbally and provided

the participants several tips on the dos and don'ts of nonverbal communication.

Considering that her audience is a mixture of different cultures, Dr Cai then recommended methods of sending out messages for collective and individualistic cultures. Collective cultures tend to value harmony, have concern for others, and are more likely to put forward the goals of the group over that of an individual. Meanwhile, individualistic culture is included towards valuing independence and the goals of the individuals.

In order to assist Member economies in the development of messages fit for their respective countries and cultures, Dr Cai presented a message development chart which appears below.

Message Development Template

Scenario:
Communicator Role:
Communication Purpose:
Preparedness Strategies

Key Audience(s)	Medium/ Delivery Mode	Key Message and/or Questions	Metamessage Strategies
Message Text			

Table 1. Message development table (US National Center for Food Protection and Defense)

There are three message components that you need to consider in developing the message texts, ie, basic information, self-efficacy statements and the metamessages. The basic information contains what you know, what you don't know, what you're doing about it, or trying to do about it and when you'll provide the next update. Self efficacy contains what you must do, what you should do, what you could do. Metamessaging contains verbal and non verbal messages that deal with compassion, concern & empathy, honesty, candor & openness. Metamessages contain words that dare to apologize and admit mistakes in case of misinformation and accept uncertainty & ambiguity of the data,

Food Recall Experience of the United States of America (USA), Spinach Recall

The Spinach Recall situation that happened in the USA was presented by Dr Marjorie Davidson. She informed the Member economies that during the

outbreak situation, the USFDA was faced with a difficult task of communicating information about a possible life threatening issue. Dr Davidson expressed that if the communication was not done well, it can put the public at greater risk by creating misunderstanding.

During the *E. coli* O157:H7 outbreak in spinach, there were 204 cases throughout the USA and the health authorities considered this serious because more than 50% of the infected population was hospitalized. During that time, the USA had already developed an effective communication strategy based on the World Health Organization (WHO) guidelines for effective media communication during public health emergencies. The WHO guidelines are composed of seven steps to which the US used as a pattern. When the spinach outbreak occurred in 2006, the federal authority used the model and was faced with several realities.

She also enumerated the different messages the USFDA have issued at different times of the crisis. These were: trained communicators will not necessarily face the media and explain to the public about the situation and there is a necessity to establish at least two teams during an outbreak. Using the lessons learnt, she further explained that currently USFDA has done revisions of their model and created two teams responsible during a crisis situation. Dr Davidson also said that the authority took the situation as an opportunity to teach consumers and food industry on the importance of safe food handling of fresh produce.

The PowerPoint presentation is found in **Appendix 33.**

Food Recall Experiences in Australia

The Australian system of food recall was discussed by Ms Christel Leemhuis. The full presentation is in **Appendix 34.** She conveyed that in Australia, there are two levels of recall. The first of which is a trade recall where questionable products are recovered either from the manufacturer's warehouse or at supermarket shelves. While consumer recall is the most serious and involves recovery of the product from consumers.

Ms Leemhuis informed that FSANZ acts as central recall coordinator which relay information to enforcement agencies and other potentially affected parties. Ms Leemhuis further expressed that food recalls in Australia are voluntary; however, their Food Safety Standards mandate food businesses to have a system that will ensure recall of unsafe food.

She enumerated common origins of recalls in Australia. Most came from consumer complaints, followed by government routine testing, and company testing. Ms Leemhuis showed the participants a graph illustrating the increasing trend of food recall throughout Australia. For the regulatory authorities, this indicates rising capability of laboratories for testing and early detection of contaminants, and adoption and improvement of quality assurance system by food establishments.

Ms Leemhuis listed down the common causes of food recall in Australia. Recalls were conducted due to contamination from microorganisms, foreign matter, chemical, marine toxins, processing, mislabeling and tampering. For microbial contamination, 44% were due to *Listeria monocytogenes*, while for chemical contamination 49% of which was due to metal fragments found in the foodstuff. She also noted as opposed to common belief, majority of food recall cases in Australia were those products produced domestically.

Notifications of food recalls in Australia are also advertised in a pre-determined number of newspapers using a standard format. Ms Leemhuis also explained that when an Australian product has been found to be tainted with contaminants and has already been exported to other countries, the importing country is notified on this so that they can take appropriate actions.

Analysis, Strategies, Public Perception – Dioxin and Other Toxins

Ms Samara Kitchener discussed how NSWFA dealt with the dioxin contamination of seafood found in Sydney harbour. In November of 2005, the NSW Food Authority found elevated dioxin levels in prawns caught outside of the contaminated area and this sent an alarm to the regulatory agency. The NSWFA, to assess the extent of the hazard conducted sampling and testing of prawns and bream, while FSANZ undertook an exposure assessment using the test results. An expert panel was also established to determine the public health significance of the findings.

After several discussions with the expert panel, affected industries and other government authorities, the NSW Food Authority issued a consumption advice on seafood caught in the harbour. Ms Kitchener also expressed that her institution considered several risk management options. Each option was weighed for its possible repercussions on the consumers and industry. She further disclosed that NSW Food Authority chose to close all commercial fishing in Sydney harbour and the Parramatta river since consumer education on the safe consumption of seafood contaminated with even low level of dioxin is undesirable.

Her presentation is attached as **Appendix 35**.

Risk Communication Case Study: Methylmercury in Fish (United States of America)

Risk communication strategies of the USA on the case of methylmercury in fish were presented by Dr Marjorie Davidson. Similar to that presented by Australia, the USA found it difficult to deal with the situation considering that consumption of fish per se is good and that its nutritional benefits outweigh the negative effects. However, American consumers unlike any other consumers from the Asia Pacific region rarely consume large fish species. Thus, the USFDA focused their risk communication strategies on issuing

advisories on the fish species American consumers normally eat. The advisories issued by the USFDA also gave simple explanations on how seafoods are contaminated by mercury. The PowerPoint presentation is found in **Appendix 36**.

After the presentation of Dr Davidson, the delegates were given sufficient time to develop a case study presentation to be presented the following day.

MEMBER ECONOMY PRESENTATION – CASE STUDY

The Member economies were asked to present their respective case studies. The order of presentation was done alphabetically. The PowerPoint presentations are attached to this report as **Appendix 37** to **Appendix 49**.

Delegates from Brunei Darussalam shared the insights of Dr Cai on the importance of making risk communication strategies country-specific and takes into account cultural differences rather than socio-economic and demographic characteristics of the target audience. They also presented a model of policy-making as developed by Dr Ortwin Renn which incorporates the concept of deliberation and principles of deliberative processes. The figure below illustrates the inputs affecting policy- and risk-decision making

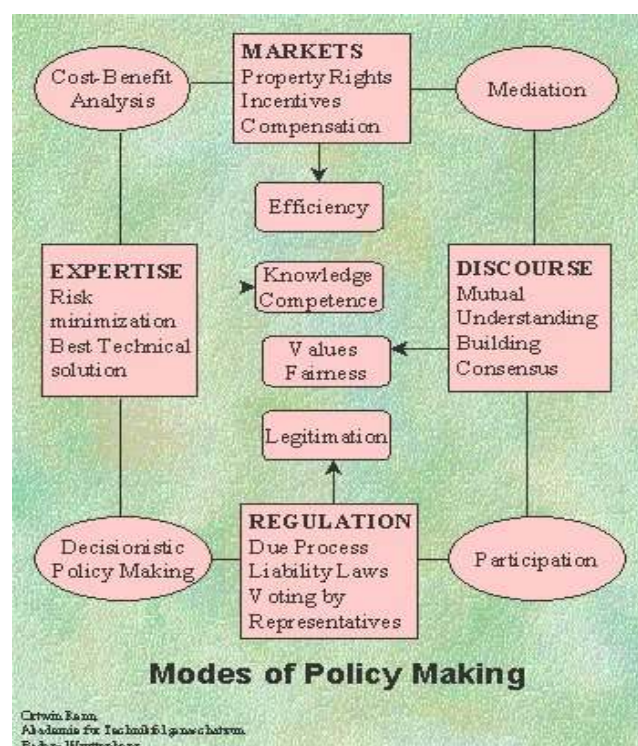


Figure 13. Dr Ortwin Renn's Model for policy-making⁵

⁵ Chartier, Jean and Sandra Gabler. 2001. Risk Communication and Government; **Theory and Application for the Canadian Food Inspection Agency (CFIA)** - Chapter 6: A Risk Communication Model. http://www.inspection.gc.ca/english/corpaffr/publications/riscomm/riscomm_ch6e.shtml , accessed 28 June 2008.