ASIA BIONET

"Capacity Building in Biosafety of GM Crops in Asia"
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RISK COMUNICATION MANUAL

FOOD AND AGRICULTURAL ORGANIZATION OF THE UNITED NATIONS
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ASIAN BIONET
The FAO Bangkok Regional Project
"Capacity Building in Biosafety of GM crops in Asia"
GCP/RAS/185/JPN

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PREFACE

The science and use of biotechnology is fast gaining grounds. Countries who have adapted the technology had put in-place its own regulatory system to address the human and animal health, and environment safety issues of modern biotechnology, that is genetic engineering. In some other countries that do not have yet a regulatory framework, they are contemplating to incorporate some social issues outside the scientific issues of health and environment.

Among the subject of many debates in the culture of genetically modified crops, risks associated with such kind of crop is the focus. The pro and the anti biotechnology groups had both aired their statements, and expectedly, they differ in opinions. For countries that have already existing regulations in the field of biotechnology, the government is always on the defensive and the groups that are against biotechnology are on the offense. More often than not, the target user of the technology, the farmers are caught in between. The benefits of the technology may not have been accessed.

As it is, some of the major identified stakeholders of the genetically modified crops are the government as the regulator, technology developer, and farmer as user, scientists, and the general public as a consumer of products that have used GMOs as a raw material for their production. Each of these sectors needs factual information before they make a decision. Each of the stakeholders is also an owner of primary information. Therefore, exchange of information takes place.

When exchange of information occurs, communication becomes a vital instrument. Communication is another field of science that interplays with biotechnology. This manual focuses on communicating the risks associated with the use of genetically modified crops. The manual intended users are the government as the science regulator and the scientists.

The FAO Regional project on Capacity Building in Biosafety of GM Crops in Asia known as '*Asian BioNet*" put out this training manual to assist countries to develop the government people and scientists to become more effective agents and carriers of information on products of modern technology. Because at the end, the public needs the correct information to enable them to make an informed decision.

This manual was the main output of the Regional Training Workshop on Public Awareness and Participation conducted in Manila, Philippines in 2004 by the '*Asian BIoNet'* for the project participating countries. Tools and procedures included were jointly designed with the participants, who were mainly government officers and researchers, with the idea of putting the regulators and scientists in the forefront to make them reach out to the public.

MODULE I: PRINCIPLES OF RISK COMMUNICATION

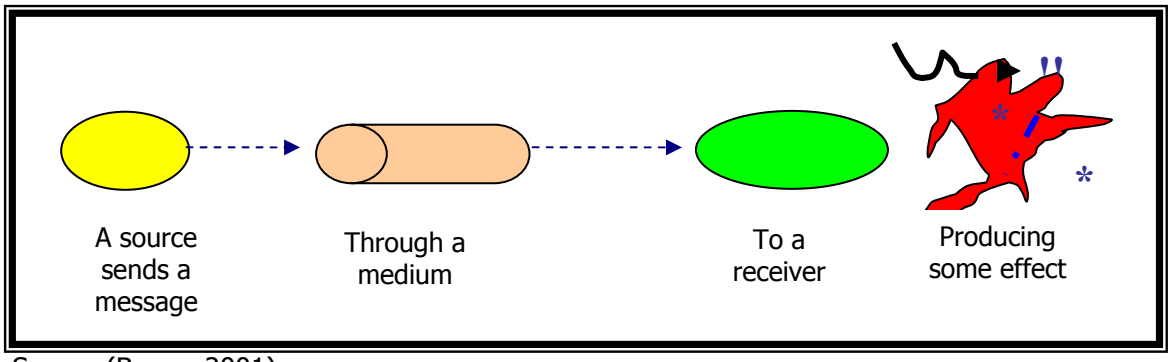
Terms and Basic Principles

Risk. A probability of loss, damage or injury. Or a threat – real or perceived --quantified or non-quantified – to that which we value. It is also the possibility of an adverse outcome, and uncertainty over the occurrence, timing or magnitude of that adverse outcome

Communication. The transmission of a message from a sourced to a receiver. Laswell (1948) said that a convenient way to describe communication is to answer these questions:

- *Who*?
- Says *what*?
- In *which* channel?
- To *whom*?
- With *what effect*?

Figure 1: Communication Process, Communication Occurss When…



Source (Baran, 2001)

Risk Communication. A science-based approach for communicating effectively about issues that are: Of high concern to the stakeholders, Emanating from sources with Low Trust, Sensitive, and Controversial (Covello, 2001).

The interactive exchange of information and opinions, throughout the risk analysis process concerning hazards and risks, risk-related factors and risk perceptions, among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions (FAO, 2001)

Dimensions of Risk

Probability - chance of occurring
Size – magnitude of the effect or impact

Other Dimensions of Risk

Less Risky: Voluntary, familiar, controllable, fair, detectable, known to science, and not in my backyard

More Risky: Involuntary, Unfamiliar, Uncontrollable, Unfair, Undetectable, Unknown to science, In my backyard

Public Behavior Toward Risk

- Perceive risk as bi-polar: *safe vs. not safe.*
- Any activity with a risk should not be undertaken unless its outcome can be predicted *fully* in advance.
- Give more importance to the *moral*, rather than the scientific issue of risk.
- See and hear what they believe, not the other way around.

Features of Risk Com

- Interactive
- Democratic
- Exchange of information among the affected publics or stakeholders in *assessing the risk* and *developing the risk guidelines*

Goals of Risk Communication

- Enable the affected publics to make informed decisions and actions
- Give the public a chance to think rather than reasons to panic
- Promote: Mutual understanding and Communal responsibility in assessing the risk and determining the corresponding policies and actions

Stakeholders and their Roles in the Risk Com Process

- *Risk bearers* - victims
- *Risk generators* - create opportunities for the risk to happen
- *Risk advocates* - amplify the issues and champion the cause of the victims
- *Risk mitigators* - experts who scrutinize the risk and propose how to lessen or avoid it
- *Risk arbiters* - bring actors in dispute for negotiation and consensus
- *Risk informers* - messengers of risk information

Roles of a Risk Communicator

- Process initiator
- Facilitator
- Listener
- Synthesizer or
- Integrator

Exercise No. 1

To Bt or not to Bt

The planting of a Bt corn, a genetically modified crop has received mixed reactions. There are those who want access to the technology and certain sectors that are wary and totally resist this kind of product. Those who are against contend that GMOs in general are not safe to human, animals, and the environment.

Scientists and government regulators assess the safety of such products of modern biotechnology based on available scientific information. However, despite the conclusions that these products are as safe as their traditional counterpart, many still do not like GM products for several reasons.

This activity will zero in on the commercialization of a Bt corn. Should this product, however is not yet approved to be commercialized, then it would be assumed on the contrary. The exercise shall provide insights on what to tell the public relative to the commercial planting of Bt corn.

Objectives

At the end of this exercise, the participants shall be able to:

1. Categorize the risks associated with the commercial planting of Bt corn as either sensitive, controversial, or least concern;

2. Identify who shall communicate the risks;

3. Know the messages – risks and its mitigating measures to be communicated;

4. Design how the messages are to be communicated; and

5. Be familiar with the perceived effects of the risks associated with Bt corn.

Expected Outputs

1. Classified risks associated with the commercialization of Bt corn;

2. Communication matrix on who say what, what to say, channel of communication, and perceived effects.

Materials

1. Risk assessment findings of Bt corn, preferable that that have been assessed using an appropriate risk assessment instrument
2. Manila papers
3. Permanent pens or markers

Activities

1. The participants shall be grouped into four or five.

2. Taking into account the food, feed, and animal health and environment safety, the group has to indicate the health and environment risks associated with Bt corn;

3. The group shall now prepare a risk and communication matrix using this frame as reference

Safety Elements	Identified Risks		
	Sensitive	Controversial	Least Sensitive
Food			
Feed			
Environment			

Safety Elements	Identified Risks	Perceived Effects	Mitigating Measures
Food			
Feed			
Environment			

The group shall fill-in this frame by categorizing the risks associated with Bt corn. For the second table, the identified risks to be indicated are those that are sensitive and controversial only. It is suggested that one sensitive and one controversial are only to be placed on the second table; and

4. After the risks had been categorized, a risk communication plan shall be made. The following frame shall be filled-in,

Perceived effects of the risks	Target audience	Message to be communicated	Who shall communicate?	Appropriate communication channel

Synthesis

- The facilitator shall be able to show to the participants that risks may be categorized differently depending on the group's assessment. What is important is that the participants become aware that risks have varying degrees of perceived effects;

- In the third frame, the participants should be made aware that there must be someone who must be tasked to communicate the public re- risks associated with Bt corn technology. It is during the group discussion that the participants shall be only be able to identify on who shall communicate and what communication channel may be used. The use of communication channel should be amply discussed by the facilitator focusing on the perceived merits and demerits of a given communication channel;

- The participants should realize that audience segmentation requires varying messages and an appropriate communication channel, too. It may also help if the participants shall play roles of being a "general consumer", a crop and livestock farmer. The message requirements of these groups may also be used as an input in this activity; and

- The facilitator should be able to show the participants the importance of audience segmentation for a particular message. At the end, a same message shall be shown that it can be packaged in several forms intended to different kinds of audiences.

MODULE II: MESSAGE MAP

Terms and Basic Principles

The following information were lifted from the paper of Vincent T. Covello, which is to be published in an upcoming book by the World Health Organization titled "Communicating During Disease Outbreaks" (2005)

Message map is a roadmap for displaying detailed, hierarchically organized responses to anticipated questions or concerns. It is a visual aid that provides at a glance the organization's messages for high concern or controversial issues.

Use of message maps achieves the following risk communication goals:

a. identifying stakeholders early in the communication process
b. anticipating stakeholder questions and concerns before they are raised;
c. organizing our thinking and developing prepared messages in response to anticipated stakeholder questions and concerns;
d. developing key messages and supporting information within a clear, concise, transparent, and accessible framework;
e. promoting open dialogue about messages both inside and outside the organization;
f. providing user friendly guidance and direction to spokespersons;
g. ensuring that the organization has a central repository of consistent messages;
h. encouraging the organization to speak with one voice.

Seven steps are involved in constructing a message map.

The **first** step is to identify stakeholders – interested, affected, or influential parties – for a selected issue or topic of high concern. Stakeholders can be distinguished further by prioritizing them according to their potential to affect outcomes and their credibility with other stakeholders.

For example, stakeholders in a crisis situation might include*: Directly affected individuals, Emergency response personnel, Public health personnel, Law enforcement personnel, Government agencies, Politicians/Legislators, The media (all types), Legal professionals, Ethic/minority groups, Non-government organizations, Educators, Scientific community, Religious community, Business community (e.g., tourism, food services, and recreation), and General public*

The **second** step in message mapping is to identify a complete list of specific concerns for each important stakeholder group.

Lists of specific concerns and questions are typically generated through empirical research, including:

- media content analysis (print, radio, television)
- analysis of web site material
- document review, including pubic meeting records, public hearing records, and legislative transcripts
- reviews of complaint logs, hot line logs, toll free number logs, and media logs
- focused interviews with subject matter experts
- facilitated discussion sessions with individuals that are intimately familiar with the issue
- focus groups
- surveys

The **third** step in message map construction is to analyze the lists of specific concerns to identify common sets of underlying general concerns. As part of this step, it is often useful to create a matrix or table that matches stakeholders with their concerns. The vertical axis of the table would list stakeholders (in priority order). The horizontal axis of the table would list concerns.

The **fourth** step in message map construction is to develop key messages in response to each stakeholder question, concern, or perception.

Key messages are typically developed through brainstorming sessions with a message mapping team. As noted above, the message mapping team typically consists of a subject matter expert, a communication specialist, a policy or legal management expert, and a facilitator.

The brainstorming session produces message narratives -- usually in the form of complete sentences -- which are entered as key messages onto the message map. Alternatively, the brainstorming session produces **keywords** for each message, which are entered onto the message map. Keywords serve as an aid to memory. Each separate message should have no more than 1-3 keywords. **Key messages should be based on what the target audience: most needs to know and most wants to know**

The **fifth** step in message map construction is to develop supporting facts and proofs for each key message. The same principles that guide key message construction should guide the development of supporting information. Proof points are not necessarily included in the message map. Some may be held in reserve to support a particular message is challenged.

The **sixth** step in message map construction is to conduct systematic message testing using standardized message testing procedures. Message testing should begin by asking subject matter experts not directly involved in the original message mapping process to validate the accuracy of technical information contained in the message map. Message testing should then be done with: (1) surrogates for key internal and external target audiences; (2) partner organizations.

Sharing and testing messages with partners ensures message consistency and coordination.

The **seventh**, and final step, is to plan for the delivery of the prepared message maps through: (1) a trained spokesperson; (2) appropriate communication channels; and (3) trusted individuals or organizations.

Once developed, message maps can be used in to structure press conferences, media interviews, information forums and exchanges, public meetings, web sites, telephone hot line scripts, and fact sheets or brochures focused on frequently asked questions.

Guidelines for Using Message Maps

- Use one or all of the three key messages on the message map as a media sound bite.
- Repeat and bridge to the **over-arching message map** – the map that contains the most important information to be conveyed -- frequently during interviews
- Present the sound bite in less than **9** seconds for television and less than **27** words for the print media.
- When responding to specific questions from a reporter or a stakeholder regarding a key message, present the supporting information from the message map in less than **9** seconds or **27** words.

- Stay on the prepared messages in the message map; avoid "winging it."
- Take advantage of opportunities to reemphasize or bridge to key messages.
- Keep messages short and focused.
- Be honest: tell the truth.

Figure 2: Message Map Template

Stakeholder: Question or Concern:		
Key Message 1	Key Message 2	Key Message 3
Supporting Fact 1-1	Supporting Fact 2-1	Supporting Fact 3-1
Supporting Fact 1-2	Supporting Fact 2-2	Supporting Fact 3-2
Supporting Fact 1-3	Supporting Fact 2-3	Supporting Fact 3-3

Figure 3: A Sample List of General Concerns in Biotechnology

1.	Health	11.	Options/Alternatives
2.	Safety	12.	Control
3.	Ecological/Environmental	13.	Irreversibility
4.	Economic	14.	Ethics/Morality
5.	Quality of Life	15.	Unfamiliarity
6.	Equity/Fairness	16.	Benefits
7.	Cultural/Symbolic	17.	Expertise
8.	Legal/Regulatory	18.	Honesty
9.	Openness/Transparency/Access to Information	19.	Listening/Caring/Empathy
10.	Accountability	20.	Trust

Figure 4: Sample Message Map, The Smallpox Case

Draft Message Map Stakeholder: General Public Question: How contagious is smallpox?		
Key Message 1	*Key Message 2*	*Key Message 3*
Smallpox spreads slowly compared to measles and flu.	This allows time to trace those who have come in contact.	Vaccination shortly after contact will generally prevent disease
Supporting Fact 1-1	*Supporting Fact 2-1*	*Supporting Fact 3-1*
People are only infectious when the rash appears.	The incubation period for the disease is 10-14 days	People who have never been vaccinated are the most important to vaccinate
Supporting Fact 1-2	*Supporting Fact 2-2*	*Supporting Fact 3-2*
Smallpox requires hours of face-to-face contact	Resources are available for tracing contacts.	Adults who were vaccinated as children may still have some immunity.
Supporting Fact 1-3	*Supporting Fact 2-3*	*Supporting Fact 3-3*
There are no carriers without symptoms	Finding people who have been exposed and vaccinating them has proved successful.	Adequate vaccine is on-hand.

Exercise No. 2

"My Soup Has a DNA"

Most consumers are not aware of the composition of the food they eat. Advocates of anti-biotechnology would say that genetically modified foods are not safe to eat. In most of their pronouncements, some even say that the food we eat has DNA (deoxyribonucleic acid) thus making our food not safe to eat.

The target participants of this exercise are researchers or scientists in the field of biotechnology. It would be of great help if the researchers would bring with themselves their scientific articles (pro and anti) on biotechnology.

Objective

At the end of this exercise, the participants shall be able to create message maps for the three most pressing safety questions about the products of biotechnology.

Expected Output

1. Three pressing questions on the products of biotechnology
2. Three message maps

Materials

1. 2 to 3 Manila papers per group
2. Colored permanent pens or markers
3. Tapes or adhesives
4. Colored metacards (optional) with the size of 10 cm x 20 cm.

Activities

1. The participants are to be grouped into four or to six members;

2. The group selects who shall be the output presenter;

3. Each group shall decide on only one question to prepare a message map;

4. Given the draft message map, each group has to prepare their own message maps;

5. In making the message map, and if possible, the key message should only have three words;

6. If so desired, colored metacards may be used for every key message and supporting fact; and

7. The groups are given 30-45 minutes to prepare the message map.

Synthesis

- After the message maps had been prepared, the groups shall post the output on the walls of the training room;

- Each of the assigned presenters shall present the group's message map;

- Other group members are encouraged to enhance the other groups' outputs;

- As soon as the presentations and discussions are made, the trainer or workshop facilitator would do the synthesis of the presentations. It is advised that the synthesis would focus on the basis of the selection of key message and the source(s) of supporting facts;

- If time permits, the final message maps would be presented to a selected group of audience who may be are other biotechnology experts, consumers in general, or the target audience of the message maps. The selected group of audience is encouraged to provide feedbacks so as to assess if the message sent was able to elicit its desired output.

MODULE III: DEVELOPING THE MESSAGE

Terms and Basic Principles

7 Cs to remember in developing messages

1. **Command attention**- *Scientific findings show…Genetically modified crops are safe to eat*

2. **Cater to the heart and head**-*To address public concern, government would label GM products*

3. **Clear and focused**- *Genetically modified crops feed our people*.

4. **Communicate a benefit**- *with no danger on health… Biotechnology boosts food security*

5. **Create trust**-*Genetically Modified Crops have been with us for the longest time since man began propagating food for sustenance*

6. **Consistency counts**
   - Biotechnology is our future
   - Repetition in: *Key message- Color, Logo, Theme*

7. **Call for action**- *To know more about biotechnology and GM Crops, just Dial-a-Friend! (02-982-3356)*

Other Things to Remember

1. Create **your positioning message**-*Brief, crisp message that will uniquely be associated with your communication campaign or efforts*

2. Interpersonal Communication
   - Anticipate the worst possible questions and prepare answers for them
   - Maintain your composure, watch your body language and don't take things personally
   - If you don't know the answer, say so
   - Do not bluff or lie
   - Don't answer "no comment"
   - Don't be defensive, it will just prolong arguments
   - Show concern and empathy
   - Avoid fixing blame
   - Avoid jargon, acronyms, technical terms
   - Be quotable
   - Don't argue
   - Be always prepared for your answers

3. Riding the Storm
    - Take a deep breath
    - Take an objective look at the reactions. Is it your fault, or their unique interpretation
    - Decide if another attempt is likely to change the situation for the better (or for the worse)
    - Decide if the additional effort is worth it
    - Do your own reality check

Exercise No. 3

"The Message is Right"

To date, supporters and developers of biotechnology products have yet to coin a word or words to best describe their products. Everyone claims safety, benefits, advantages, and the likes. However, the words "destructor technology", "Frankenstein food", "Gene contamination", and others are seem easy to recall, have more message impact, and readily come across to target audience.

This exercise aims to gather researchers and policy makers and regulators and come up with key messages they want to tell their publics. These key messages may be presented to several target groups of audiences, whose opinions bear importance in coming up with key messages that regulators and policy makers should use.

Objective

At the end of this exercise, the participants shall be able to create "**Key Biotechnology Messages**" that researchers and policy makers and regulators may use in their respective field of works.

Expected Output

"Key Biotechnology Messages" for researchers and policy makers and regulators

Materials

1. Colored metacards
2. Colored permanent pens or markers
3. Tapes or adhesives
4. Individual small placards with written words "OK", " NOT OKAY", and "QUITE OK"

Activities

1. The participants are to be grouped into four or five. The members, as much as possible should come from the same sector (academe, research, policy makers and regulators) they represent.

2. Each group shall discuss they key message they want to their target audience. It is advised that the target audience be specified so as a key message is developed for each target audience.

3. On a metacard (it is advised that a color be assigned to every target audience, example, green for farmers, blue for general consumers or public), the key message should be written following the basic principles of developing messages. At least three messages are crafted for each of the target audience specified.

4. As soon as the key messages are crafted, each group shall show their key messages. The order of showing is as per target audience.

5. The other groups shall judge the key message by showing the appropriate placard for their judgment, which may either be OK", "NOT OKAY", or "QUITE OK".

6. The workshop trainer or facilitator and other invited people may also give their judgment.

7. On the wall, the key messages shall be posted according to target audience and judgment.

8. The group who has the most number of "OK" votes wins the game.

Synthesis

- Looking at the walls, the workshop trainer together with the participants shall make comments why such messages belong to such judgment classification

- During the comment session, some metacards maybe moved to another judgment category

- As soon as the comment session is over, the trainer re-enforces the principles of developing message, its uses and may be to some extent, limitations.

MODULE IV COMMUNICATING RISK

Terms and Basic Principles

How do we communicate risk?

- Know your audience. The audience may have any of the following characteristics.
  - Upset
  - Distrustful
  - Difficulty hearing and processing information.
  - Limited attention and ability to process information

  It is therefore important for communicators to know in advance what type of audience he is communicating with. Given such possibilities of an audience, the communicator must:

- Develop messages that are:
  - Believable
  - Convincing
  - Clear and concise
  - Positive

- How do you make message believable?
  - Empathy and caring (50%)
  - Dedication and commitment (15-20%)
  - Honesty and openness (15-20%)
  - Competence (5-10%)

  The probability of a message being believable increases when the message sender shows empathy or care towards his or her audience. The message sender's personal and professional character may also affect the believability of the message, so dedication, track record of honesty, and competence.

Risk Communication Strategy

1. **A**nticipate- In the field of biotechnology, the communicator anticipates the questions or issues related to his field. Knowing in advance betters prepare a communicator to provide more accurate and acceptable messages.
2. **P**repare- If the questions and issues had been anticipated, the communicator shall be able to have time in preparing messages.
3. **P**ractice- A saying goes, practice makes perfect. Ensure that as a risk communicator, **APP** becomes a habit.

We should Anticipate
1. High Stress Issues and Topics
2. Stakeholders
3. Questions and Concerns

Prepare our
1. Messages
2. Messengers
3. Means

And Practice- Transform words, plans, and strategies into actions

Exercise No. 4

Danger Zone

This exercise shall employ role-playing activities. The activity is titled "Danger Zone" because the risks or dangers of the biotechnology are the focus of this exercise.

The absence of absolute risk is a reality. The use of a certain technology would always have a risk. However, a user makes a decision based on the risks and benefits. This activity aims to present the risks of the use of Bt corn coming from the regulators and scientists.

It is advisable to use a video recorder to record this activity because at the end of the exercise, the output shall be assessed. Also, this activity may invite other people to view the output and give comments.

Objectives

At the end of this exercise, the participants shall be able to use their communication plan and attain the following:

1. Present the risks of Bt corn technology as a government regulator and a biotechnology scientist;

2. Enact a risk communication based on a given role; and

3. Assess how the message was put across to a target audience.

Expected Output

It is envisioned that the activity would be documented through a video recorder. The video document shall be the output of this exercise.

Materials

1. Video recorder
2. Risk assessment results of a Bt corn or any GM crop

Activities

1. The participants shall be grouped into four as (a) government regulator, (b) scientist, (c) consumer groups – farmers and general public;

2. The scientist in collaboration with the government regulator shall prepare risk messages and their respective mitigating measures to the two consumer groups- farmer and general public;

3. The two consumer groups shall prepare difficult and pressing questions to the two set of communicators – regulator and scientist;

4. With the aid of a video recorder and extemporaneously, the communicators shall make an announcement that the Bt corn has been approved;

5. The consumer public shall now ask their questions. It would be nice if the communicators would not be aware of the questions that would be raised after the announcement. It is suggested that the consumer group would try to intimidate the communicators. The Q and A portion is suggested to be limited to 30 minutes only; and

6. The video recorder man should be able to capture how the communicators answer the questions.

Synthesis

- Right after the Q and A portion, the groups shall now view the recorded activity;

- The consumer group shall make a decision whether their questions were answered appropriately, if not, then the unanswered issues shall be raised. No debates or arguments should be undertaken on this regard; and

- The invited guests, preferable communication experts shall provide comments on HOW the communicators had put across their message. If possible, the message may also be assessed for its substance and adequacy given a limited time of announcement of the risks of the Bt technology.

MODULE V: USE OF TRI-MEDIA IN RISK COMMUNICATION

Terms and Basic Principles

Mass communication. The process by which a complex organization, with the aid of one or more machines, procedures, and transmits public messages that are directed at large, heterogeneous, and scattered audiences. (Dominick, 1999). The process of creating shared meaning between the mass media and their audiences. (Baran, 2001).

Mass media. The channels of mass communication. (Dominick, 1999)

The following articles are cited and the source is indicated. The cited articles were contracted.

Language and Persuasion In Biotechnology Communication with The Public:
How
To Not Say What You're Not Going
To Not Say And Not Say It

Source: Steven B. Katz, North Carolina State University; (Excerpts Below) *http://www.agbioforum.org/Default/vol4no2ar3katz.htm*

The purpose of this paper is to begin to explore the role of language in biotechnology communication with the public by briefly analyzing in a particular press release how organization, style, and diction convey values and emotions that can undermine intended meaning. These communication problems are the result of rhetorical choices of organization, style, and/or diction that are ultimately based on unconscious and often flawed assumptions about the role of language, values, and emotion in communication and decision-making.

While there are differences between other controversies and those surrounding the acceptance of agricultural biotechnology by consumers here and abroad, the general parameters of these controversies can reveal deep-seated assumptions, as well as the pitfalls of communication with the public. One almost universal feature is the public fear of possible long term and as yet unknown risks to health and the environment that no amount of scientific assurance seems able to assuage. Despite statements to the contrary by researchers and officials, the public by and large perceives decisions to be based as much on politics as science.

For their part, researchers attempt to provide the public with clear, up-to-date information, and to explain the scientific logic of their reasoning. Government agencies attempt to deal with the crisis in public confidence by developing expensive public information and education campaigns. But these usually are massive failures (Katz & Miller, 1996).

A press release delivered before the National Press Club by former Secretary of Agriculture Dan Glickman (1999) noted similar public reaction to the issue of genetically modified foods (GMFs): a fear of possible and as yet unknown long term risks to health and the environment; a distrust of the decision-making process that consumers see as much political and economic as scientific; and a distrust in the role of industry in

developing biotechnology and assessing its safety. The speech also noted "great consumer resistance and cynicism toward biotechnology," protests, and violence and damage to test plots overseas. To attempt to deal with these issues, the Secretary proposed the following principles, including

- *"complete and open public involvement;*
- *the establishment of 'regional centers' around the country;" and*
- *"a strong public education effort to show consumers the benefits of these products and why they are safe."*
- *Despite public resistance, the speech attempted to express great optimism not only in biotechnology, but also its acceptance.*
- *"We have to ensure public confidence in general, consumer confidence in particular. .I believe farmers and consumers will eventually come to see the economic, environmental, and health benefits of biotechnology products".*

Style and Substance: Communicating Agbiotech

Source: AgBiotech Bulletin & Infosource Vol 9, Issue 1 Feb. 2001

On one side, we have children in Monarch butterfly costumes accompanied by activists with a shaky premise; on the other, a scientist with charts, graphs and a compelling body of evidence. In the age of the 10-second sound bite, who wins?

According to rhetorician Dr. Jennifer McLennan, the contest isn't even close. "There was a time when people trusted science," she says. "Now there is suspicion, as ethical questions aren't being dealt with, or even taken seriously."

The Rhetoric of Fear Anti-biotech activists have tapped into a powerful rhetoric as old as Mary Shelley's Dr. Frankenstein - the scientist arrogantly pursuing forbidden knowledge, playing God, and paying the ultimate price for his hubris. The plot line is still popular in horror movies today.

"We don't trust the science because we can't trust what the marketers do with the science," McLennan says. According to McLennan, who holds the D.K. Seaman Chair in Technical and Professional Communications at the University of Saskatchewan's College of Engineering, facts by themselves don't persuade. This is because the average person doesn't have the skill or knowledge base to know if the facts are true

"It's a far more complicated question than 'what are the lab results'," McLennan says. "The very nature of science is that the last word is never in, but we must act as though it is." She warns that while the public may be unsophisticated in their knowledge, they are extremely sensitive to attempts to manipulate their opinion. "Attention has to be paid to reassuring people on the level where they're hurting. More spin doctoring won't work."

Understanding versus Persuasion This idea is consistent with public relations theory, in particular, a model described as "two way symmetrical communication" by James Grunig in the seminal public relations work, Excellence in Public Relations & Communication Management. In this model, the goal is not selling or persuading, but understanding - a dialogue.

"The public should be just as likely to persuade the organization's management to change attitudes or behavior as the organization is likely to change the publics' attitudes or behavior," Grunig writes. This model is held up as the most preferred way to do public relations. Research shows organizations that use this model enjoy success in the public arena as well as at the bottom line.

An Industry Response According to Ray Mowling, information, not advocacy, is the aim of the Council for Biotechnology Information (CBI). Its goal is to reach opinion leaders and food shoppers with the "other side of the story" about biotech.

The CBI is pro-biotech, stressing the benefits of the technology. This is done through advertising in print and on television, a Web site, information packages, and support for other similarly minded organizations. CBI advertisements started running in Canada last May, as part of a three to five year campaign. Similar efforts are underway in the U.S. and Mexico

"For the opinion leaders, people want and are looking for more detailed information," Mowling says. "The consumer profile is different. Some people don't want information; they just want to hear from a trusted authority that what they're eating is safe." The overall aim is to create a receptive environment for biotechnology.

"The language of biotech, the language of science, is not the Queen's English as most know it," he says. "Most scientists are not aware they are speaking in a language different than everyone else." Bechtel explains that before biotechnology came along, people didn't think too much about crop farming. If they thought about it at all, they trusted the plant breeders and regulators to do their jobs. A new variable is the anti-biotech movement - people that simply don't trust the technology for whatever reason. These groups don't necessarily know any more about biotech, but spread fear. This doesn't automatically reflect the general public view.

"The general public doesn't understand the technology," Bechtel says. "What we need is to give an honest translation of the information so everyone can understand what's going on." "It's not necessarily that they're afraid of it. They don't understand it."

The ultimate aim is not propaganda, or even persuasion. It's making sure the correct information is heard, so people can make informed decisions. "We have to be perceived as balanced and non-prejudicial, presenting the information in a fair and balanced manner," Bechtel says. "That's what we're trying to achieve."

(Resources: The Council for Biotechnology Information at http://whybiotech.com; The Agricultural Biotechnology Initiative at http://www.abi.usask.ca, Dr. Jennifer McLennan at maclenna@engr.usask.ca, The Centre for Safe Food at http://www.plant.uoguelph.ca/safefood and Excellence in Public Relations & Communication Management, James E. Grunig [contributor and editor].)

The Science of Working with the News Media

Source: ASPB News, Jan- Feb 2003; www.aspb.org

The prospect of talking with journalists can be somewhat daunting for scientists, just as it is for many people in all other walks of life.

As Terri Lomax, a botany and plant pathology professor at Oregon State University explained at an ASPB media workshop sponsored by the Committee on Public Affairs last summer in Denver, traits often found in both scientists and journalists include free and independent thinking, competitive natures, and curiosity as well as higher levels of education.

Lomax notes that working with the media is key to communicating with the public and believes that some advance preparation can help the media contact go more smoothly.

She said that in preparing for an interview, a scientist should

- *Learn more about the reporter, the publication, and the readership*
- *A scientist needs to have a goal in mind for the interview and deliver a focused message*
- *Advance practice in answering expected potential questions can contribute to more accurate and confident answers during the actual interview*
- *If the reporter attempts to divert a scientist from the point or poses a hypothetical question, it's important for the scientist to stay on message and politely transition back to the relevant points the scientist wants to make.*

Lemaux said. She noted that too often, the media use misleading terminology such as "Franken-food" and "killer corn." Scientists need to use more accurate terminology in discussing genetically modified foods and should not repeat misleading terms if they are used by a reporter in a question.

In talking to a journalist, scientists should speak as if they are speaking to a friend, Henderson advised. Alan McHughen, biotechnology specialist/geneticist, University of California, Riverside, related some of his experiences in working with the media. Author of Pandora's Picnic Basket: The Potential and Hazards of Genetically Modified Foods, McHughen interacts frequently with the media. McHughen said a survey seeking public views on the credibility of different sources found that Americans have considerable respect for scientists and family physicians.

Writing letters to the editor to cite a need for corrections in a science story is one of the ways that McHughen has found effective for getting to know journalists. He said that although his letter might not get published, it is likely the editor will have the reporter call him to clarify any facts in dispute noted in the letter. At that point, a contact is made and McHughen can be identified by the writer as a valuable source in a particular subject area, such as genetic modification of foods.

Accessing the Media and Congress - Newspaper Editor's Advice on Writing Letters to the Editor and Meeting with Newspaper Editorial Boards

Source: http://www.aspb.org/publicaffairs/editorial/editor.cfm
Writing Letters to the Editor

Lynnell Burkett, Editorial Page Editor of the San Antonio Express-News explains that the Express-News, one of the larger metropolitan daily newspapers in the prints only about one of every five letters to the editor it receives. However, writers can obtain a success rate much better than 20 percent in getting their letters from pen to newspaper page if they follow a few simple guidelines.

Maximum Number of Words

Newspapers impose a maximum number of words limit on the letters they publish on editorial pages. For the Express-News, the limit is 250 words per letter. A maximum of 250 words is in the range of what many other newspapers follow. Longer op-ed commentaries can range from 450 to 1,000 words for different newspapers.

To find out the limit for your newspaper, simply call the newspaper's phone number listed in the local public telephone directory and ask for the maximum number of words accepted for letters to the editor or for op-ed commentaries.

Include Your Address and Telephone Number

If you don't include your address and telephone number, don't expect to see your letter to the editor or longer, op-ed commentary printed. "So don't send a letter before heading off for a three-week vacation," Burkett advised at a past ASPB Public Affairs workshop. Writers generally don't hear whether their letters are selected until at least a few days after it is received by the newspaper.

Handwrite Your Name

Remember to include your signature in ink at the bottom of your letter. Letters that request use of initials only are not published. The theory is that individuals should take responsibility for their opinions.

Make it Readable

If editors can't decipher the handwriting in the body of the letter, they can't publish it. Typewritten or computer-generated letters avoid this problem.

Stick to One Major Point

If you are writing a letter about support for plant research, don't digress into other topics. Editors are looking for letters on one particular subject.

Members of Congress Read Local Editorial Pages

A letter to the editor of your local daily and weekly newspapers can be of more interest to your members of Congress than letters to national newspapers. Burkett pointed out that a U.S. Senator from Texas responded directly to the Express-News the same day a letter to the editor referring to the Senator was published in the newspaper. It is also generally more difficult to get a letter published in a national newspaper. Keep an emphasis on your local newspapers.

Exercise No. 5

Dear Farmer

This activity shall expose the participants in making letters to newspaper editors, writing news article, and facing interviews both for radio and television.

It is suggested that video and tape recorders be made available for this exercise. Also, people who are working in tri-media be invited as resource speakers or discussants.

Objectives

After finishing this exercise, the participants shall be able to:

1. Write letters to newspaper editors;
2. Write a short newspaper article; and
3. Experience interviews both for radio and television.

Activities

1. The participants are to grouped in to two or three as (a) newspaper article writer (b) regulatory body or scientists, (c) Radio broadcaster, and (d) TV new person;
2. The first group shall be tasked to write a newspaper article criticizing the way regulators had approved the commercialization of Bt corn technology and the technology itself;
3. The second group shall prepare responses to such newspaper articles;
4. Another third and fourth groups (preferable those who were invited representing the radio people) shall prepare interview questions intended for radio and television. The radio and TV interviews should be recorded with appropriate electronic equipment;
5. The regulators or scientist groups shall provide the answers.

Synthesis

- The invited guests are encouraged to give comments whether the news articles and response letters were substantive and adequate;

- The resource persons are also encouraged to give comments on the radio interview, focusing on the voice quality, sound of sincerity, sound of being not adept with the topic, and other voice elements; and

- The resource persons would also comment on the video recording of an interview. It is preferable that the interview is focused on the usage and fears about the technology.

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