Overview of Animal Husbandry Practices

Gilberto F. Layese
Project Consultant

Presented during the Seminar-Workshop on the Assessment of Good Animal Husbandry Practices in APEC Member Economies
October 25, 2011
Tagaytay City, Philippines

Outline of Presentation

- Food Safety
- Challenges of Food Safety
- Farm Level Initiative: Animal Husbandry

Food Safety

- Unsafe food causes several acute and life-long diseases, ranging from diarrhea to various forms of cancer.

Foodborne diseases remain responsible for high levels of morbidity and mortality in the general population, but particularly for at-risk groups, such as infants and young, children, the elderly and the immunocompromised.

Challenges in Food Safety

Food safety challenges differ by region, due to difference in income level, diets, local conditions and government infrastructures.

In developing countries the following are observed as food safety concerns:

- Inappropriate use of agrochemicals
- Use of untreated or partially treated waste water
- The use of sewage or animal manure on crops
- The insufficient food inspection
- Lack of infrastructure, such as adequate refrigeration
- Poor hygiene, including a lack of clean water supplies

(Center for Science in the Public Interest, 2005)

Challenges in Food Safety

Trends observed both in developing and developed countries that can increase food safety challenges *(WHO)*:

a. Changes in agronomic process
b. Increase in international trade
c. Changes in food and agricultural technology
d. Increase in susceptible populations
e. Increase in travel
f. Changes in lifestyle and consumer demand
g. Bioterrorisms
h. Changes in animal husbandry

(Center for Science in the Public Interest, 2005)

Challenges in Food Safety

Trends observed both in developing and developed countries that can increase food safety challenges *(WHO)*:

a. *Changes in agronomic process*

- Increased risks associated with fresh fruits and vegetables such as the use of manure, chemical fertilizers, untreated sewage or irrigation water containing pathogens

e.g *Escherichia coli O104:H4 tainted Romaine Lettuce that had sickened 19 people in OHIO, New York and Michigan*

(Center for Science in the Public Interest, 2005)

Challenges in Food Safety

Trends observed both in developing and developed countries that can increase food safety challenges *(WHO)*:

b. Increase in international trade

- International trade allows for the rapid transfer of microorganisms from one economy to another. Increase time between processing and consumption of food leads to additional opportunities for contamination and time/temperature abuse, increasing the risk of food borne illnesses.

- e.g *Escherichia coli O104:H4 Outbreak in Germany due to cucumbers from Spain (cross contamination along the transportation)*

(Center for Science in the Public Interest, 2005)

Challenges in Food Safety

Trends observed both in developing and developed countries that can increase food safety challenges *(WHO)*:

c. Changes in food or agricultural technology

- Advances in processing, preservation, packaging, shipping and storage technologies bring new forms and sometimes new hazards of foods to the market

- e.g Increased use of refrigeration to prolong shelf life of ready to eat foods has contributed to the emergence of *Listeria monocytogenes*

(Center for Science in the Public Interest, 2005)

Challenges in Food Safety

Trends observed both in developing and developed countries that can increase food safety challenges *(WHO)*:

d. *Increased in susceptible populations*
e. *Increased in travel*

- Exposure of one person to a foodborne illness in one economy can expose others to the infection which could be a thousand miles from the original source.

(Center for Science in the Public Interest, 2005)

Challenges in Food Safety

Trends observed both in developing and developed countries that can increase food safety challenges *(WHO)*:

f. Changes in lifestyle and consumer demand

- increasing proportion of working women, more single person household, shorter food preparation time; more convenience increasing interest in more diverse diet & exotic foods, increasing interests on organically grown foods

g. Bioterrorism

- Rising incidents of terrorist attacks in many countries , concerns about the intentional adulteration of food by terrorists, criminals or other antisocial groups

(Center for Science in the Public Interest, 2005)

Challenges in Food Safety

Trends observed both in developing and developed countries that can increase food safety challenges *(WHO)*:

h. Changes in animal husbandry

- Modern intensive animal husbandry practices have been used to maximize production that has resulted to emergence and increased prevalence of several human pathogens.

(Center for Science in the Public Interest, 2005)

Food safety being universally recognized as a public health priority holistic approach is deemed necessary to be considered

"Farm-to-Table Continuum"

Farm Level Initiative: Animal Production

There are several possible hazards in animal production that may enter the food producing animals or animal products through entry point in the food chain giving potential risks for consumers which are categorized as **biohazards, chemical and physical hazards**

- Biohazards – human pathogens such as *Salmonella* and *Campylobacter*
- Chemical Hazards – increased use of antibiotics that has been linked to the emergence of new strains of antibiotic resistant bacteria
- Physical Hazards – needles, nails, syringes

Farm Level Initiative: Animal Production

Animal Husbandry Practices that entails minimizing the possible risk of previously mentioned hazards be in the end product of the animals that considers several aspect of the production system including the following but not limited to:

1. Farm workers
2. Farm location
3. Animal Housing and Facilities
4. Farm Management
5. Animal Feeding
6. Environmental Management
7. Animal Product and handling

Farm Level Initiative: Animal Production

-Several countries has formulated their own animal husbandry practices with the intention of providing guide or minimum requirements to the competent authorities, farmers and other stakeholders that farming practices applied in the production of food animals provide confidence that the end products are safe and of good quality.

-Certification systems are also implemented to ensure that these farming systems are adhered to

-These certification gives opportunity for the farm to enter the market locally or could be internationally.