

Adaptation of course focusing sustainability-BISWAS

Course Title: Zoonotic Infection and Control

Course No: ANSC688

Instructor: Debabrata Biswas

I have been teaching a course entitled “Zoonotic Infection and Control. This course focuses the animal-borne human diseases and how we can control it. This course takes a global perspective of foodborne diseases common to animals and man, specifically those caused by farm animal-originated human pathogens (zoonoses) and their control. A selection of important zoonoses and food safety issues will be specifically covered with an emphasis on the principles of zoonotic disease transmission and control, risk factors to humans, and surveillance methods.

Many diseases involve an intermediary pest or vector that plays an important role in the transmission of the pathogenic organism to humans. This course examines zoonotic diseases and their current importance in the United States and around the world. This course will also study the impact of rodent and arthropod vectors of disease — including those of historical importance as well as endemic and emerging diseases. Identification, surveillance and control methods will be examined, with attention paid to replacing pesticide use with natural organic antimicrobial components, regulations, and safety measures. In the control section, I mainly teach the antimicrobial products those are not chemicals or synthetic products. Instead of synthetic chemicals and antibiotics, I am focusing organic and natural component those are consumer friendly and no detrimental effect on human health. As well as it will solve the current antimicrobial resistant problem and antibiotic and growth supplement in animal feed. In addition, it will also contribute in environmental specifically water and soil components and microbes.

Course Outline (Old):

1. Public Health and Zoonotic Infections
2. Economic consequences of contaminated food products and outbreaks due to zoonotic pathogens
3. Identification of major risk factors and health related consequences for food zoonotic illness in the United States.
4. Zoonotic bacteria
5. Zoonotic viruses
6. Other zoonotic microbes and parasites
7. Sources of zoonotic illness in animals and pests, rodents, birds and vectors
8. Control of zoonotic illness at the pre-harvest level
9. Control of zoonotic illness at the post-harvest level
10. Identification of issues related to optimum food safety in the home

Course Outline (New For 2013-2014): Focusing on sustainability

1. Public Health and Zoonotic Infections
2. Economic consequences of contaminated food products and outbreaks due to zoonotic pathogens
3. Identification of major risk factors and health related consequences for food zoonotic illness in the United States.
4. Zoonotic bacteria

5. Zoonotic viruses
6. Other zoonotic microbes and parasites
7. Sources of zoonotic illness in animals and pests, rodents, birds and vectors
8. Control of zoonotic illness [with natural and organic components](#) at the pre-harvest level [and make a sustainable agricultural practice](#)
9. Control of zoonotic illness at the post-harvest level [and replacement of synthetic chemicals with natural and organic antimicrobial plant products](#)
10. Identification of issues related to optimum food safety in the home

[Students will be asked to prepare assignment on the sustainable antimicrobial products and at least one topic will be given a group of students for their group presentation. In addition, questions will be picked in this area for the final and/or mid-term exam.](#)