

# EESB16: Feeding Humans - The Cost to the Planet

## Course Outline

**Prof. R. Fulthorpe:**

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**TA : Ola Visha**

**Lecture: Tuesdays 1-3 pm HW214.**

This course outlines the development of modern industrialized agriculture, including the tools of genetic engineering and its application to the species we rely on for food. Environmental impacts of these developments will be highlighted, including over-harvesting, genetic erosion, soil erosion, pesticide and fertilizer use, and the issues surrounding the use of genetically modified organisms. The course has been enjoyed by students of biology, environmental science and social sciences.

Prerequisite: [BGYA01H](#) & BGYA02H.

Course Text: None. Readings provided.

<b>Date</b>	<b>Lecture</b>
<b>Jan 6</b>	<b>Introduction</b>
<b>Jan 13</b>	<b>Traditional agriculture</b>
<b>Jan 20</b>	<b>Industrialized crop production</b>
<b>Jan 27</b>	<b>Pesticides</b>
<b>Feb 3</b>	<b>Fertilizers</b>
<b>Feb 10</b>	<b>Confined Animal Feeding Operations</b>
<b>Feb 17</b>	<b>READING WEEK</b>
<b>Feb 24</b>	<b>MIDTERM</b>
<b>March 3</b>	<b>Fisheries and aquaculture and GM Fish</b>
<b>March 10</b>	<b>Basics of genetic engineering</b>
<b>March 17</b>	<b>GM crops and their special issues</b>
<b>March 24</b>	<b>GM mammals and birds</b>
<b>March 31</b>	<b>Packaging and distribution</b>

### Evaluation

<b>Assignment</b>	<b>10%</b>
<b>Tutorial participation</b>	<b>5%</b>
<b>Midterm Exam</b>	<b>30%</b>
<b>Final Exam</b>	<b>30%</b>
<b>Poster Presentation</b>	<b>25%</b>

**Exam Format:**

Midterm: Multiple choice

Final: Multiple choice, definitions, and short answers.

**Tutorials**

Students will give poster presentations in groups of up to 4 students during a poster session scheduled at the end of term in a public part of the campus.

Tutorials will be used to perform calculations for Assignment 1, view video material, assign poster groups, poster outline presentations to tutorial groups and for reading material discussion.

**Suggested Poster Topics**

See material in lecture 1 – Feeding Humans.ppt

**Resource Books - Optional Reading**

Armesto, Felipe Fernandez. 2002. Near a Thousand Tables: A History of Food

Cook, Christopher D. 2005. Diet for a Dead Planet: How the Food Industry Is Killing Us.

Dalby, Andrew. 2000. Dangerous Tastes: The Story of Spices

Goodall, Jane. 2005. Harvest for Hope: A Guide for Mindful Eating

Prance, Sir Ghillean and Mark Nesbitt. 2005. The Cultural History of Plants. Routledge,

Schlosser, Eric. 2005. Fast Food Nation: The Dark Side of the All-American Meal.

Pollan, Michael. 2007. The Omnivores Dilemma.

Roberts, Wayne. 2008. No-Nonsense Guide to World Food

Shiva, Vandana. 2009. Soil, Not Oil.