

# Geography of Crop Plants

Fall 2005

**COURSE:** Geo 3315

**SECTION:** 9637

**INSTRUCTOR:** Nigel Smith, Professor

**LOCATION:** CSE E121

**LECTURES:** MWF 3rd Period (9:35-10:25 AM)

**OFFICE:** 3141 Turlington

**OFFICE HOURS:** MWF 10:30 AM-2 PM, or by appointment.

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This course explores the origins of agriculture and the historical geography of a small selection of the over 2,000 plants domesticated by farmers over the millennia. Major emphasis will be on the tropics where most of our crops originated. Crops covered include bananas & plantains, breadfruit & jackfruit, coffee, cacao, cupuaçu, vanilla, annatto, avocado, mango, the annanoceous fruits, Brazil nut, sapucaia, and cashew. For each crop, the area of origin, diffusion, diverse uses, and current areas of production are profiled. Themes to be explored include traits that have been selected for by traditional farmers, the natural history of crops and their wild progenitors, how crop varieties have been developed, the impact of changes in the technological and socioeconomic environment on crop production, and the contribution of modern plant breeding. Both major and minor crops that produce fruits, nuts, beverages, candy, and spices.

## **COURSE OUTLINE**

### **Plant Domestication and Crop Improvement:**

Agricultural origins, weeds and cultural biases, plant breeding objectives and genetic resources, intellectual property rights.

PowerPoint #1: *Traditional Varieties of Crops*

### **A Threatened Resource:**

Loss of biodiversity and indigenous knowledge and implications for agriculture, particularly with respect to tropical forests.

PowerPoint #2: *Tropical Forests, forces of destruction, and indigenous knowledge*

## **Conserving Plants in Their Natural and Cultural Environments:**

Parks, reserves, genebanks, rural agroforestry systems, and the importance of traditional societies in preserving plant genetic resources.

### **Basic Staples:**

#### **Bananas and Plantains**

PowerPoint #3: *Bananas & Plantains*

PowerPoint #4: *Fe'i bananas*

#### **Breadfruit**

PowerPoint #5: *Breadfruit*

Film #1: *Mutiny on the Bounty* (1962) with Marlon Brando, Trevor Howard, and Richard Harris

#### **Jackfruit**

PowerPoint #6: *Jackfruit*

### **Beverages and Candy:**

#### **Coffee**

PowerPoint #7: *Coffee*

Film #2: *Out of Africa* (1985) with Meryl Streep and Robert Redford

## **FIRST TEST**

For the 1<sup>st</sup> test read:

*The Botany of Desire* (all chapters)

*Tropical Forests and Their Crops* (chapter 1, chapter 6 pp. 264-303, chapter 2 pp. 19-37)

#### **Cacao**

PowerPoint #8: *Cacao*

PowerPoint #9: *Chocolate*

## **Cupuaçu**

PowerPoint #10: *Cupuaçu*

## **Spices and World History:**

### **Vanilla**

PowerPoint #11: *Vanilla*

### **Annatto**

PowerPoint# 12: *Annatto*

## SECOND TEST

For the 2<sup>nd</sup> test read:

*Tropical Forests and Their Crops* (chapters 2 pp. 38-75,  
chapter 8 pp. 333-338, 357-370)

## **Fruits of the Forest:**

### **Avocado**

PowerPoint #13: *Avocado*

### **Mango**

PowerPoint #14: *Mango*

### **The Annonaceae fruits** (Soursop, Custard Apple, Sweetsop, Biribá)

PowerPoint #15: *Annonaceae fruits*

## **Nuts for All Seasons:**

### **Brazil nut**

PowerPoint #16: *Brazil nut*

### **Sapucaia**

PowerPoint #17: *Sapucaia*

### **Cashew and its near relatives**

PowerPoint #18: *Cashew, Cajuí*

## THIRD TEST

For the 3<sup>rd</sup> test read:

*Tropical Forests and Their Crops* (chapter 3 pp. 76-94, 112-150, chapter 4 pp. 196-202, chapter 9 pp. 372-402)

### **TEXTBOOKS**

Pollan, Michael, 2002. *The Botany of Desire: A Plant's Eye View of the World*. Random House, New York (ISBN 0375760393).

Smith, Nigel et al. 1992. *Tropical Forests and Their Crops*. Cornell University Press, Ithaca (ISBN 0-8014-2771-1).

### **LECTURE NOTES**

My copyrighted lecture notes are available in three parts, one part for each of the three tests, online without charge via a link for the course website ([www.geog.ufl.edu](http://www.geog.ufl.edu)). At the geography website click on "current course syllabi", then click on "Fall Semester", then go to Geo 3315. You will see the link to the notes there.

### **TESTS**

Three tests will be administered throughout the semester. Each test contains 45 multiple-choice questions plus a blank map of the world on which you will be asked to locate 5 items (such as a river, country, mountain range, island) that relate to the course. Each test is worth a total of 50 points.

Each test covers one third of the course, and is not cumulative. There is no final, comprehensive exam. The last test is given on the last day of class (Wednesday 29th November).

The multiple choice tests contain questions pertaining to material covered in lectures, the two textbooks, class discussion, spontaneous student presentations, PowerPoint presentations, and films. It is important, therefore, that you not miss class.

No make-up tests will be administered. Credit is given for a missed exam if there is a valid, documented reason.

### **TERM PAPER**

A concise term paper of about 8-12 pages is an option (not required). The term paper is worth 25% of the grade (the three tests are worth 25% each of the grade for those opting to do a term paper). The term paper is not extra credit, but may be undertaken by those who wish to explore a topic related to the course or who do

not want to have their grade based solely on their performance on multiple choice tests.

The term paper is due on the last day of class (Wednesday 29<sup>th</sup> November). The topic of the term paper is up to the student as long as it falls within the scope of the course. Students are encouraged to show early drafts of their papers to improve the final product.

No late term papers will be accepted and no incomplete grades will be offered. If the term paper is not handed in on time, the course grade will depend on scores obtained on the three multiple choice exams.

### **GRADUATE STUDENTS**

Graduate students may take the course as Geo 6938 *Special Topics* (which can be changed later to *Geography of Crop Plants*). In addition to taking the three tests, a term paper is required. The topic of the term paper, which should be in the 12-20 page range), is up to the student as long as it falls within the scope of the course.

### **GRADING POLICY**

The final grade is based on the average of the three test scores. Grades are not curved. No incomplete grades are given. Grades are assigned as follows:

Grade	%
A	90
B+	85-89
B	80-84
C+	70-79
C	60-69
D+	55-59
D	50-54
F	<50

### **PROVISIONS FOR STUDENTS WITH DISABILITIES**

I will be happy to accommodate students that need special assistance in taking notes or exams. However, students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to me when requesting accommodation.

## **ACADEMIC HONESTY**

Students are reminded that the University of Florida Honor Code states: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."