

Cropping Systems of the Tropics

Agronomy 377 - Spring 2016

3 Credits - University of Wisconsin – Madison.

Tuesdays and Thursdays, 9:30-10:45 am, Room Engineering Hall 2535

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Catalog summary:

3 cr (B-I). Crops and cropping systems of the tropics. The environmental requirements of the major crops, their botany, and how they fit into local farming systems will be emphasized. For students with broad interests in tropical agriculture and food production. P: Intro crse in botany or cons inst.

Course objectives:

After completing the course, students will be able to:

1. describe, analyze, and understand cropping systems of different regions of the world (including the tropics),
2. explain and meaningfully engage in discussions about global issues, food production of major crops, and environmental and socioeconomic impacts of farming systems;
3. analyze these issues critically and comparatively using an agroecology framework;
4. consider thoughtfully engaging in international sustainable agriculture issues.

Course topics:

1. Agriculture and Sustainability. World food production, hunger and malnutrition. Global land use and climate change.
2. International Agriculture literacy: international units, countries and capitals.
3. Ecosystems where cropping systems are developed. Climate. Soils. Vegetation.
4. Characteristic cropping and farming systems. Agroecosystem processes and agronomic analysis.
5. Major staple cropping systems around the world. Rice. Wheat. Corn. Cassava. Coffee. Pastures and Livestock.
6. Alternative cropping system models: traditional, industrial, agroecological
7. Case studies on major cropping systems in Latin America, Africa and Asia.

Skills to develop:

1. Proper use of analytical tools to solve problems and evaluate evidence.
2. Use of models and maps to understand cropping systems.
3. Synthesis and systems thinking.
4. Ability to communicate in writing, public speaking and other media.
5. Successfully working in teams of peers
6. In-depth study of an agroecosystem of interest and creatively proposing alternatives for improvement.

Assessment:

- Bi-weekly written responses to course readings (5 x 5% = 25%)
- Passport quizzes (5 x 5% = 25%)
- Participation/preparation grade in class debate (10%)
- Team project on case study (10% Oral presentation, 10% Written report, 10% Food, 10% Individual reflection)
- No final exam