Objective

To become familiar with the U.S. agriculture systems and the major agricultural arthropod pests in the United States.

Assignment 1

Describe the following agricultural organizations including their structures and main functions: FAO, USDA, USDA-ARS, CSREES, FDA, EPA, APHIS, State Agricultural Experimental Stations, Cooperative Extension Services, Land-Grant Universities, and Sea-Grant Universities. In your report, you need to have a cover page and a list of the references.

In your report, you need to have a cover page and a list of the references.

Assignment due: (TBA)
Ten min presentation (TBA)

Assignment 2

List the acreages or productions (use of tables or figures) of corn (including Bt and non-Bt corn), wheat, cotton (including Bt and non-Bt cotton), soybean, sorghum, citrus, rice, and sugarcane in the last ten years in total and in each state of the U.S.A.

Provide a short statement for each crop about its overall production, and changes in production and distribution in the United States. Also provide some reasons (not just to say its price or demand is low or high) that caused the changes in a crop production during the last 10 years. For example, a major reason for the significant increase in corn production in the United States during 2007 might be due to the urgent need for alternative energy sources…

Provide maps to show the distributions of acreage or production (by state) for each crop listed above in the United States in year 2013 (or 2012 if 2013 is not available). Write a short statement to show the major states (or regions) that planted the most for each crop during 2013 or 2012 if 2012 is not available.

In your report, you need to have a cover page and a list of the references.
Assignment 3

List the species names including the common and scientific names, their orders and families of the major arthropod pests and their distributions (by state or region) of corn, cotton, wheat, sorghum, soybean, sugarcane, rice, citrus, and stored-products in the United States. You may list at least 15 major species for each crop. An example for the distribution of sugarcane borer on field corn would include LA, TX, AR, and MS or the mid-southern region of the United States.

In your report, you need to have a cover page and a list of the references.

Assignment due: (TBA)
Fifteen min presentation: (TBA)

Assignment 4

Describe the life cycle, damage, and management of 10 major corn and 10 major cotton arthropod pests (or other crop pests based on student’s interests). Provide pictures to show the insect life stages that causes plant injury and the symptom of a plant injury.

Write your report (like a pest management newsletter), one page per insect. You also need to have a cover page and a list of the references in your report. Also for the pictures that are used in your report, you need to give the credit to the person(s) who took the pictures.

In your report, you need to have a cover page and a list of the references.

Assignment due: (TBA)
Fifteen min presentation: (TBA)

Assignment 5

Select a research project based on student’s interests. To complete a research project, students will discuss with the course instructor to select a suitable project first. And then, a research proposal should be submitted to the instructor for approval before experiments begin. After completing the experiments, students need to analyze the data using appropriate statistical analyses and present the results in a report using the format as required for submitting manuscripts for the
Journal of Economic Entomology. The instructor may schedule a time to ask the student some questions based on the data presented in his/her report. In your report, you need to have a cover page and a list of the references.

Assignment due: (TBA)
Fifteen min presentation: (TBA)

The class will meet once for each assignment in Room A561 for a total of five times. All students should attend the five class meetings. Students who have selected an assignment will give a 10-min presentation plus 5 min questions during the class meeting and the presentation should contain a portion of the information content of that assignment.

Note: 3 hr – all of the 5 assignments
2 hr – assignments 1-4 or 2, 4, 5
1 hr – assignments 2 and 4 or assignment 5 only