Title: Post-Harvest Management

Abbreviation and Number: AGRI230 AB Paper No.: 14-91

School: Chemistry, Environmental and Life Science

Department: Biology

Credits: 3

Course Sequence: (  ) Fall (  ) Spring ( X ) Fall and Spring

Hours Per Week: ( 2 ) Lecture (  ) Seminar ( 3 ) Laboratory (  ) Studio (  ) Kitchen

(  ) Other (Specify)

Pre-requisites: Second-year standing

Co-requisite(s): None

COURSE DESCRIPTION
Students cover the physical and biochemical changes in plant products such as seeds, leaves, stems, fruits, roots and tubers following harvest. They examine losses caused by pathological, physical and physiological damage, as well as physical and chemical methods used to reduce and control post-harvest losses. Students use low cost post-harvest technology suitable for The Bahamas.

SPECIFIC OBJECTIVES
Upon successful completion of this course, students will be able to
1. Diagnose latent infections;
2. Identify factors that contribute to spoilage;
3. Utilise differential diagnosis to determine spoilage;
4. Assess crop loss in storage; and
5. Apply quality assurance measures to crop storage and supply.

COURSE CONTENT
I. Identification of spoilage agents and symptoms
   A. Insects
   B. Fungi
   C. Bacteria
   D. Trauma
   E. Air pollution
   F. Environment cues

II. Quality assurance
   A. Hazard Analysis Critical Control Points (HACCP)
   B. International Organisation for Standardisation (ISO) 9000

III. Mycotoxicology

IV. Loss
   A. Assessment
   B. Prevention

V. Shelf life
   Extenders
   Field heat removal
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VI. Packing house management
   A. Produce safety
   B. Packaging

VII. Fruit maturity
   A. Ripening
   B. Maturity coefficient
   C. Crop maturity index

VIII. Produce safety

IX. Packaging

ASSESSMENT
Attendance ........................................ 5%
Assignments ..................................... 20%
Lab Reports ..................................... 50%
Project ........................................... 25%
Total ............................................. 100%

REQUIRED TEXT(S)

SUPPLEMENTARY READINGS/MATERIALS

WEBSITES
www.agf.gov.bc.ca/agric/hortweb/Florprod.htm
www.aggie-horticulture.tamu.edu/vegetable.html
www.ars.usda.gov
www.fao.org
www.helsinki.fi/kmus/botecon.html
www/luminet.net/
www.usda.mannlib.cornell.edu
www.plantfacts.osu.edu
www.csrees.usda.gov/glinks/partners/state_partners.html
www.hort.ufl.edu/nutdef