

STUDY GUIDELINES FOR LICENSE AND PERMIT EXAMS ORP (ORCHARD PEST CONTROL)

SOME INFORMATION YOU SHOULD HAVE KNOWLEDGE OF BEFORE TAKING LICENSE AND/OR PERMIT EXAMINATION FOR ORCHARD PEST CONTROL.

This outline may be used as a study guide for the license and/or permit examination (Category ORP), Orchard Pest Control. The Mississippi Bureau of Plant Industry is providing a list of suggested references and this outline as aids in studying for the License and/or Permit examinations. The only reference materials for the exams are Mississippi Cooperative Extension Service publications. Other entomological and plant pathological references, specifically dealing with orchards, diseases, or insects affecting orchards may also prove helpful. The use of the World Wide Web can provide a wealth of information and may be helpful in increasing your knowledge of the listed topics. Web sites from universities, extension, pest management societies and sites devoted to specific insects, pests and diseases may provide detailed information. A copy of the Regulations Governing Commercial Insect, Rodent, Plant Disease and Weed Control Work can be found at The Mississippi Department of Agriculture and Commerce, Bureau of Plant Industry website, <http://www.mdac.ms.gov/wp-content/uploads/11-Regulation-of-Professional-Services.pdf>. **Please note that you should be familiar with the topics and ID in this outline, but there is no guarantee that all of the topics and ID listed, or only the topics and ID listed will be included on any Licensing and/or Permit examinations.**

1. You should be thoroughly familiar with Bureau of Plant Industry Regulations Governing Commercial Insect, Rodent, Plant Disease and Weed Control Work. Topics include, but are not limited to:
 - Licensing/Permit requirements
 - Licensing/Permit renewal requirements
 - Registered technician standards
 - Violations
 - Record keeping requirements
 - Bond and insurance requirements
2. Be able to ID insects (adult and larval stages) and related pests and the damage they cause and be familiar with their life cycle. Be able to ID diseases and the symptoms they cause. Be able to ID symptoms caused by nutritional deficiencies, weather

related and mechanical damage and pesticide misapplication. BPI suggests referencing a good entomological and plant pathological textbook or use computer search engine to locate photos of insects and related pests and diseases and their symptoms.

- Aphididae**
 - Black pecan aphid; Yellow pecan aphid
 - Buprestidae**
 - Flat-headed appletree borer
 - Cercopidae**
 - Spittlebug
 - Cicadidae**
 - Cicada
 - Curculionidae**
 - Pecan weevil; Plum curculio
 - Gelechiidae**
 - Peach twig borer
 - Phylloxeridae**
 - Pecan phylloxera
 - Pyralidae**
 - Leaf casebearer; Nut casebearer
 - Sesiidae**
 - Peachtree borer
 - Tenthredinidae**
 - Pecan sawfly
 - Tephritidae**
 - Blueberry maggot
 - Tortricidae**
 - Codling moth; Hickory shuckworm; Oriental fruit moth
- Diseases, nutrient deficiencies and the damage they cause**
- Black knot; Black rot; Brown leaf spot; Brown rot; Cedar-apple rust; Crown gall; Fire blight; Leaf blotch; Powdery mildew; Scab

3. Insects. Structure, function and development
 - External morphology. head, thorax and abdomen.
 - Internal morphology including respiratory, circulatory, nervous, excretory, digestive, muscular and reproductive systems
 - Metamorphosis
4. Insecticides. Know some common products for each class that is used in pest control
 - Botanicals; Insect growth regulators; Nicotinoids; Carbamates; Inorganics; Spinosyns; Pyrethroids; Organophosphates; Fiproles (Phenylpyrazoles)
5. Pesticides (Insecticides, Fungicides, etc.)
 - Know how to interpret the label

- LD₅₀ interpretation
- Signal word interpretation
- Formulations effectiveness on specific pests
- Common volume conversions
- Modes of action
 - Insecticides
 - Larvicides
 - Ovicides
 - Nematicides
 - Acaricides
 - Fungicides

6. Know best time to apply pesticides to control the pests listed in Section (2) such as dormant stage; blossom stage petal fall; 1st cover/shuck fall; 3rd to 6th cover or after harvest.