

STUDY GUIDELINES FOR PERMIT EXAM MBF (MOSQUITO AND BITING FLY CONTROL)

SOME INFORMATION YOU SHOULD HAVE
KNOWLEDGE OF BEFORE TAKING PERMIT
EXAMINATION FOR MOSQUITO AND BITING FLY
CONTROL.

This outline may be used as a study guide for the permit examination (Category MBF), Mosquito and Biting Fly Control. The Mississippi Bureau of Plant Industry is providing a list of suggested references and this outline as aids in studying for the Permit examination. Truman's Scientific Guide to Pest Control and the MSU Extension Service Publications are excellent references. Other entomological references specifically dealing with the pest control industry 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 and pests 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 Permit examination.**

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:

- Definitions
- Licensing/Permit requirements
- Licensing/Permit renewal requirements
- Issuance of a Permit
- Registered technician standards
- Violations
- Record keeping requirements
- Bond and insurance requirements
- Equipment

2. Insects. Structure, function and development

- External morphology. Head, thorax and abdomen.
- Internal morphology including respiratory, circulatory, nervous, excretory, digestive, muscular, and reproductive systems
- Metamorphosis: none, gradual, incomplete, or complete.

3. Mosquitoes

- Common species found in Mississippi
- Be familiar with common species such as but not limited to:
 - Culex quinquefasciatus* – southern house mosquito
 - Aedes albopictus* – Asian tiger mosquito
 - Anopheles* spp.
 - Toxorhynchites* spp.
 - Psorophora* spp.

- Life cycle
- Feeding habits of males and females
- Hosts (mammals, reptiles, amphibians, birds, etc.)
- Habitats
- Diseases transmitted by
 - West Nile virus (primary vector in MS; peak timing)
- Management strategies
 - Integrated Mosquito Management
 - Adulticiding
 - Larviciding
 - CDC gravid trap

4. Biting flies

- Life cycle
- Hosts
- Diseases transmitted by
 - Tularemia
- Match family names to common names
 - Ceratopogonidae
 - Muscidae
 - Psychodidae
 - Simuliidae
 - Tabanidae
- Control strategies