

I. STATE APPROVAL

Section 281.100 of the Missouri Pesticide Use Act and Section 2 CSR 70-25.050 (2) of the corresponding regulations authorize the Missouri Department of Agriculture's Bureau of Pesticide Control to establish minimum criteria for recertifying Missouri certified Commercial and Noncommercial Pesticide Applicators and Public Operators.

Each recertification training course must be approved in advance by the Bureau of Pesticide Control. No course will be given post approval. Individuals attending courses prior to approval will **NOT** be recertified.

The Bureau cannot approve a course for a period of time when staff are not available to monitor the program. Please submit programs as early as possible. Programs will be reviewed in the order received. For a course to be considered for recertification credit in Missouri, the program must comply with the following:

1. The course must meet Core requirements, category requirements, or both.
2. The course sponsor must be present, whether in-person or virtual, during the course.
3. The course must be open to the public without discrimination.
4. A final course agenda must be received by the Bureau of Pesticide Control at least 45 days (90 preferred) in advance of the proposed program. The agenda must include:
 - A. Program curriculum with a detailed description of each topic.
 - B. Times allotted for each section.
 - C. List of proposed speakers and qualifications.
 - D. Location, date, and time of the program.
 - E. Applicator participation method.
 - F. Estimated number of Missouri applicators expected to attend the program.
 - G. Attendance verification procedure.

Failure to supply the required information will be grounds for rejection. Copies of the training materials (audio, visual, and printed) should be available for Bureau review upon request. The Bureau will attempt to work with any group to improve courses which do not qualify for recertification credit. It is the program sponsor's responsibility to acquire the needed materials and/or speakers for the program.

Bureau of Pesticide Control personnel will monitor all in-state recertification programs. Time and space must be provided for Bureau personnel to distribute and collect recertification forms at the end of the program. All fees charged for the recertification program shall be waived for Bureau of Pesticide Control personnel monitoring the program. Bureau personnel shall be provided copies of all materials distributed to the program attendees.

The program sponsor shall provide a sign-in sheet for attendees desiring Missouri recertification credit. This is in addition to the program registration procedure. The sign-in sheet must contain: the applicator's name, business name, business address, and Missouri pesticide license number. The sign-in sheets will be presented to the Bureau personnel at the close of registration or when requested by the Bureau personnel.

Final approval of a recertification program depends upon actual program content. If, in the opinion of the personnel monitoring the program, the approved curriculum was not followed, the course content was altered so that it no longer met the minimum standards, or the coverage of the topics

was inadequate, Bureau personnel may leave the program and recertification will not be granted to those attending the program.

These guidelines may change without notice. However, once a program is approved using a particular set of guidelines, the sponsor will not be required to change the content of the program.

II. CURRICULUM

The following topics are considered to be a **MINIMUM** needed for approval of a program for recertification credit in Missouri. These topics must be discussed in all training programs regardless of seeming applicability, to receive approval for Missouri recertification credit.

These topics are based on requirements found in 40 CFR 171.103. This material must be easily recognizable in both the written agenda and the actual program.

The suggested times set for each topic are designed for Core and category recertification to be covered in a single day and allow for adequate breaks. For ease of monitoring and verifying attendance, it is recommended the entire recertification program be offered in a single day.

III. REQUIRED CORE TOPICS

The information provided should be directed toward reviewing basic information in each topic area and updating each area by including new information that has been developed in the last three to five years.

1. APPLICABLE STATE & FEDERAL PESTICIDE LAWS & REGULATIONS - (Suggested time - 30 minutes)

This topic discussion should review current laws and regulations pertaining to pesticides. The program should:

- A. Discuss any changes or additions in the current laws and regulations.
- B. Discuss any information concerning recently suspended or canceled pesticides.

2. PESTICIDES (CORE) - (Suggested time - 20 minutes)

This topic should discuss pesticide selection, proper use, and characteristics of pesticides in general terms.

- A. Restricted Use Pesticides (RUP) - The discussion should review the term "restricted use", including labeling and record keeping requirements.
- B. Storage and Transportation - The discussion of proper methods of storage and transportation.
- C. The discussion should include formulations, compatibility, persistence, hazards, and dilution procedures.

3. LABELS - (Suggested time - 30 minutes)

This discussion should include a review of pesticide labels and their content and any changes or additions to the pesticide labels.

4. PESTICIDE WASTE - (Suggested time - 30 minutes)

Participants should be aware that improper disposal of pesticide waste is a violation of state and federal laws.

- A. Pesticide Waste Disposal - The discussion should cover the proper procedures for disposal of pesticide waste regardless of the source. Instructors should make participants aware that they should contact the Missouri Department of Natural Resources at (573) 751-3176 for information concerning waste disposal in Missouri.
- B. Container Cleaning and Disposal - Information on proper pesticide container cleaning and disposal methods.
- C. Spill Reporting - Procedures and methods for reporting spills. Contact the Missouri Department of Natural Resources at (573) 751-3176 for information concerning spill reporting.

5. APPLICATOR SAFETY & WORKER PROTECTION - (Suggested time - 30 minutes)

This topic must discuss the effects of pesticides as they relate to the health and safety of pesticide applicators. Specific topics to be covered include:

- A. General discussion of safe and conscientious pesticide applications.
- B. General discussion of the Worker Protection Standard.
- C. Discussion of category-specific provisions of the Worker Protection Standard.
- D. Discussion/demonstration of the proper use and maintenance of personal protective equipment (PPE) including respirators, eye protection, gloves, boots, and protective outerwear. Discussion of what applicators will see on pesticide labels related to PPE.
- E. Information concerning prevention, recognition, and first-aid treatment of pesticide poisoning. Discuss long-term health effects related to pesticide use.
- F. Discussion of decontamination of individuals, clothing, PPE, and application equipment.
- G. Discussion of information related to pesticide toxicity, including information sources such as the MSDS and pesticide label.

6. WATER PROTECTION - (Suggested time - 20 minutes)

This topic must include discussion of the environmental effects of pesticides as they relate to groundwater, surface water, wells, and abandoned wells. Specific topics to be covered include:

- A. Physical characteristics of groundwater. What is groundwater. From where does it come. Movement in Missouri. Quality of Missouri groundwater.
- B. Water contamination sources. General information about contamination should be provided with an emphasis on pesticide contamination. Category specific information concerning contamination should be provided. Discuss the difference between point and non-point source contamination.
- C. Regulatory update. This should include any state or federal laws and regulations dealing with water protection.
- D. Contamination prevention. General information about the pesticide user's role in preventing contamination should be discussed along with category-specific best management practices to prevent contamination.

7. ENDANGERED SPECIES PROTECTION - (Suggested time - 15 minutes)

This topic must include discussion of the environmental effects of pesticides as they relate to protection of threatened and endangered species and non-target organisms. Specific topics to be covered include:

- A. General description of the Endangered Species Protection Program. A discussion of the importance of endangered species.
- B. Missouri specific endangered species information. Include a discussion of what users will see on pesticide labels and how to obtain further information.
- C. Label information. Include a discussion of what users will see on pesticide labels and how to obtain further information.
- D. Bulletin information. Discuss the contents and availability of endangered species bulletins.

8. SUPERVISION AND PROFESSIONALISM – (Suggested time – 10 minutes).

This topic must include discussion of the responsibilities of supervisors of noncertified applicators and the importance of product stewardship. Specific topics to be covered include:

- A. Understanding and complying with the requirements for supervising noncertified applicators.
- B. Understanding the importance of maintaining chemical security and communicating information regarding pesticide exposure and risks to supervised employees, customers, and the public.

IV. REQUIRED CATEGORY TOPICS

The information provided should be directed toward reviewing category specific information in each topic area and updating each area by including new information that has been developed in the last three to five years.

1. PESTS - (Suggested time - 1 hour)

This topic should include a review of the most common pests (insects, diseases, weeds, etc.) and a discussion of the less common and new pests for each specific category.

- A. Identification - The discussion should review pest identification.
- B. Biology - Discussion of life cycles should also be included.
- C. Habitat - A discussion of pest habitat and habits should be included.

2. PEST CONTROL - (Suggested time - 1 hour)

This topic must include discussion of application techniques and integrated pest management (IPM) methods as they relate to the control of pests.

- A. Application Techniques - Techniques and equipment for each pest control category covered by the program. Any new equipment or recently approved techniques should be discussed.
 - 1. Drift - Effects of drift to non-target areas including beneficial insects, livestock, pets, food, and humans should be discussed.
 - 2. Runoff - Effects of runoff to non-target areas should be included.
- B. Integrated Pest Management (IPM) - Discuss the meaning of IPM and those methods specific to the pesticide applicator category(ies).

3. PESTICIDES (CATEGORY) - (Suggested time - 10 minutes)

This topic should discuss pesticide selection, proper use, and characteristics of pesticides used in the specific category(ies).

- A. The discussion should include types of pesticide formulations.
- B. Discuss factors that influence effectiveness for specific pesticides.
- C. Category specific information on preventing water/environmental contamination.

4. NEW DEVELOPMENTS - (Suggested time - 30 minutes)

Material presented should review any significant additions and changes related to pesticides used in the approved category.

- A. Discussion of new application methods.
- B. Discussion of new hazards and precautions.
- C. Discussion of new legislation affecting the pest control industry.
- D. Discussion of new equipment.

V. APPLICATOR PARTICIPATION

A major consideration in any training program is the retention of the material presented. One method of increasing the learning potential of the trainee is the incorporation of some type of active participation by the trainee. The following are suggested methods of increasing retention:

1. A no fail test that would be discussed by the training staff.
2. Discussion of several review questions at the end of each training segment.
3. A workbook that is completed during training, then kept by the applicator at the end of the training.

Other participation methods will also be considered based on their ability to increase applicator retention.

VI. OUT-OF-STATE PROGRAMS

Out-of-state programs may be approved by the State of Missouri when the following conditions are met:

1. The program complies with the guidelines previously listed.
2. The program is approved by the host state's lead agency.
3. The host state's lead agency monitors the program and agrees to complete and forward Missouri's Notification of Recertification to the Bureau of Pesticide Control.
4. The sponsor agrees to comply with requirements and procedures designated by the State of Missouri for recertifying pesticide applicators.
5. The program sponsor agrees to announce that it is the responsibility of the applicator receiving recertification credit in Missouri to request copies of Missouri laws and regulations pertaining to the use of pesticides from the Bureau of Pesticide Control - Missouri Department of Agriculture.

For further information about the Pesticide Applicator Training Program at the University of Missouri go to: **pat.missouri.edu** or contact:

Sam Polly
University of Missouri
Phone: (573) 884-8596
Email: **sjpkkf@missouri.edu**

For further information contact the **Pesticide Program**.