



Pesticide Section

LICENSING

and

EXAMINATION GUIDE

for

Commercial Applicators

Limited Commercial/Public Applicator

Qualified Supervisors

Certified Operators

Private Applicators

COLORADO DEPARTMENT OF AGRICULTURE

Division of Plant Industry

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INTRODUCTION

The Colorado Department of Agriculture, Division of Plant Industry (the "department") is charged with the responsibility of administering the Pesticide Applicators' Act under Title 35, Article 10, C.R.S. (the "Act") and associated rules and regulations which include the licensing and regulation of any individual or business who applies pesticides or use certain pest control devices for compensation or production agriculture in Colorado.

Limited commercial and public applicators must be registered with the department, rather than licensed, if they apply restricted use pesticides. They may also choose to place themselves under the Department's jurisdiction, even if they do not apply restricted use pesticides.

The following is intended to provide a general understanding of the licensing and registration requirements under the Act and associated rules and regulations. Contact the Department for a printed copy of the Act and associated rules. The information in this guide are subject to change.

Who Must be Licensed or Registered?

Commercial Applicator: A business or person engaged in the business of applying pesticides or operating certain pest control devices for hire must license as a commercial applicator.

Commercial applicator examples: lawn care services that apply herbicides or weed and feed products, tree sprayers, structural pest control operators and aerial applicators.

Limited Commercial or Public Applicator: A business or person who applies restricted use pesticides in the course of their business, on property they own or lease must be registered as a limited commercial applicator. Examples: private golf courses and ditch irrigation companies.

A state or local agency which applies restricted use pesticides must be registered as a public applicator. Examples: weed control districts, highway departments, and parks.

Limited commercial and public applicators not applying restricted use pesticides may voluntarily register and be regulated by the department.

Qualified Supervisor: An individual employed by or acting on behalf of a commercial, limited commercial, or public applicator who without supervision evaluates pest problems, recommends pest controls using pesticides or devices, mixes, loads, or applies any pesticide, sells any application services, operates devices, or supervises others in any of these functions must be licensed as a qualified supervisor.

Certified Operator: An individual employed by or acting on behalf of a commercial, limited commercial, or public applicator, who uses restricted use pesticides without the on-site supervision of a qualified supervisor must be licensed as a certified operator.

Private Applicator: A person who uses or supervises the use of a restricted use pesticide for the purpose of producing an agricultural commodity on property owned or leased by the applicator or the applicator's employer or, if the pesticide is applied without compensation other than trading of personal services between producers of agricultural commodities, on the property of another person must be a licensed private applicator.

Reciprocity: An individual certified or licensed by another jurisdiction as a private or commercial pesticide applicator may become a licensed private or certified operator in Colorado without passing examinations, but only for the unexpired term of that certification or license.

A reciprocal application must include proof of current certification or licensure, a letter of good standing, a citizenship verification form and the appropriate fee.

The reciprocal application may be denied if incomplete or incorrect. A reciprocal license expires on the expiration date of the certification or license issued by the other jurisdiction.

What are the Requirements for Licensing or Registration?

Commercial Applicator: An applicant for a commercial applicator's license must: 1) employ or secure the services by documented agreement of at least one qualified supervisor licensed in the application category or subcategory performed, 2) provide proof of required insurance, 3) submit a Certificate of Good Standing from the Secretary of State (303-894-2200) if

the applicant is a corporation, a limited liability partnership, or a limited liability company, 3) a citizenship/immigration status form (sole proprietors), 4) copy of FAA certification under 14 CFR Part 137 (aerial applicators), 5) submit a properly completed application and the \$350 fee.

Limited Commercial and Public Applicator: An applicant for registration as a limited commercial or public applicator must: 1) employ or have available by agreement a qualified supervisor licensed in the category or subcategory of application being performed, 2) submit a Certificate of Good Standing from the Secretary of State (303-894-2200) if applicant is a corporation, limited liability partnership, or a limited liability company, 3) provide a copy of certification issued by the FAA under 14 CFR, Part 137 (aerial applicators), and 4) submit a properly completed application and the \$50 fee.

Qualified Supervisor: An applicant for a qualified supervisor license must: 1) successfully complete the general exam plus exams in all categories applicable to the pesticide applications which they will be performing, 2) have the required experience and qualifications specified in rule, 3) submit a citizenship/immigration status form, and 4) submit a properly completed application and the \$100 license fee.

Certified Operator: An applicant for a certified operator license must: 1) successfully complete the general exam plus exams in all categories applicable to the pesticide applications which they will be performing, 2) submit a citizenship/immigration status form, and 3) submit a properly completed application and the \$100 fee, or apply for a reciprocal license.

Private Applicator: An applicant for a private applicator license must: 1) successfully complete the private applicator exam, and 2) submit a properly completed application and the \$75 license fee with the application and acceptable ID, such as a driver's license copy.

What are the Licensing or Registration Categories?

Agricultural

101 Agricultural Insect Control
102 Agricultural Plant Disease Control
103 Agricultural Weed Control
104 Seed Treatment

105 Livestock Pest Control
106 Forest Pest Control
107 Rangeland Pest Control
108 Aquatic Pest Control
109 Industrial and Right of Way Weed Control
110 Public Health Control
111 Research and Demonstration
113 Metam Sodium for Root Control in Sewers
401 Private Applicator

Ornamental

206 Turf Pest Control
207 Ornamental Pest Control

Structural

301 Wood Destroying Organism Pest Control
302 Outdoor Vertebrate Pest Control
303 Fumigation
304 Residential/Commercial Pest Control
305 Stored Commodities Treatment
306 Wood Preservation & Wood Products Treatment
307 Interior Plant Pest Control

What are the Experience Requirements for Qualified Supervisor Licensing?

Agricultural Pest Control:

1. An applicant for licensure as a qualified supervisor in **Agricultural Insect Control, Agricultural Plant Disease Control, Agricultural Weed Control, Seed Treatment, Livestock Pest Control, Forest Pest Control, Rangeland Pest Control, Aquatic Pest Control, Industrial and Right of Way Weed Control, Public Health Control, or Research and Demonstration** must have the following field experience or equivalents (see rules for exceptions), obtained within the last five years.

- a. An applicant shall have obtained a minimum of eight months field experience in agricultural pest control.
- b. If an applicant has earned college or university credit in agricultural pest control or related fields, such credit may be combined with field experience in agricultural pest control in order to qualify for licensing, as follows:

- (1) two years college credit and two months field experience in agricultural pest control; or
- (2) one year college credit and five months field experience.

2. An applicant for licensing as a qualified supervisor in **Metam Sodium for Root Control in Sewers** must have the following field experience or equivalents. Such field experience must have been obtained within the five years immediately preceding the date of application for licensure.

- a. An applicant shall have obtained at least 40 hours of field experience in applying pesticides in sewers, including, but not limited to metam sodium; or
- b. A level 2 or 3 wastewater collection certification issued by the Colorado Water Distribution and Wastewater Collections Systems Council and 20 hours of field experience; or
- c. A Class A, B, or C wastewater treatment plant operator certification issued by the Colorado Department of Public Health and Environment and 20 hours of field experience.

3. There is no experience requirement for those licensing in the private applicator licensure category. However a private applicator license is intended to be used in the production of an agricultural commodity which is defined as "any plant, or part thereof, or animal, or animal product, produced by a person (including farmers, ranchers, vineyardists, plant propagators, Christmas tree growers, aquaculturalists, floriculturalists, orchardists, foresters, or other comparable persons) primarily for sale, consumption, propagation, or other use by man or animals.

Ornamental Pest Control

1. An applicant for licensing as a qualified supervisor in **Turf Pest Control** must have the following field experience or equivalents. Such field experience must have been obtained within the two years immediately preceding the date of the application for licensure. Experience in the application of pesticides gained by the applicant in the maintenance of his/her own home will not constitute experience that will satisfy the experience requirements.

- a. An applicant shall have obtained at least four months of field experience in turf pest control.
- b. If an applicant has earned college or university credit in turf pest control or related fields, such credit may be combined with field experience in order to qualify for licensure as follows. Such field experience shall have been obtained within the two years immediately preceding the application for licensure.

- (1) two years college credit and one month field experience;
- (2) one year college credit and ten weeks field experience.

2. An applicant for licensing as a qualified supervisor in Ornamental Pest Control must have the following field experience or equivalents. Such field experience must have been obtained within the two years immediately preceding the date of the application for licensure. Experience in the application of pesticides gained by the applicant in the maintenance of his/her own home will not constitute experience that will satisfy the experience requirements.

- a. An applicant shall have obtained at least eight months field experience in ornamental pest control.
- b. If an applicant has earned college or university credit in ornamental pest control or related fields, such credit may be combined with field experience in order to qualify for licensure as follows:
 - (1) two years college credit and four months field experience;
 - (2) one year college credit and six months field experience in ornamental pest control.

Structural Pest Control

1. An applicant for licensing as a qualified supervisor in Wood Destroying Organism Pest Control, Residential/Commercial Pest Control and Fumigation must have the following field experience or equivalents.

Such field experience must have been obtained during the five years immediately preceding the date of the application for licensure. Experience using pesticides or devices, gained while the applicant was maintaining his/her own home, or performing janitorial or maintenance duties for another in a residential, industrial or commercial location will not satisfy the experience requirements.

- a. An applicant for licensure must have obtained at least 24 months field experience in structural pest control.

In addition, an applicant for licensing as a qualified supervisor in the structural pest control category of wood destroying organisms must have obtained, within the two years immediately preceding the date of the applicant's application for licensing, at least 100 hours of verifiable field experience in termite control.

A minimum of 30 of the 100 hours must consist of verifiable "hands-on" field experience covering drill and inject and other post-treat methods and applications. Any or all of the 100 hours may be obtained in courses approved by the Commissioner.

- b. If an applicant has earned college or university credit in structural pest control or related fields, such credit may be combined with field experience in related categories of structural pest control in order to qualify for licensure as follows:
 - (1) four years college credit and four months field experience; or
 - (2) three years college credit and nine months field experience; or
 - (3) two years college credit and 14 months field experience; or
 - (4) one year college credit and 19 months field experience.

2. An applicant for licensing as a qualified supervisor in the categories of **Outdoor Vertebrate Pest Control, Wood Preservation and Wood Products Treatment,**

Stored Commodities Treatment, or Interior Plant Pest Control, must have the following field experience or equivalents. Such field experience must have been obtained within the five years immediately preceding the date of the application for licensure.

- a. An applicant must have obtained at least eight months field experience in the related categories of structural pest control.
- b. If an applicant has earned college or university credit in structural pest control, such credit may be combined with field experience in related categories of structural pest control in order to qualify for licensure, as follows:
 - (1) two years college credit and two months field experience; or
 - (2) one year college credit and five months field experience.

How do I Schedule My Exam?

For Qualified Supervisor and Certified Operators

CDA in partnership with Colorado State University Extension and Metro Institute, a computer based testing company, are providing examinations at locations throughout Colorado. The locations are listed on the next page.

As a result of CDA's partnership with CSU Extension and Metro Institute, CDA has changed way applicators schedule and pay for the examinations.

Individuals wishing to take a qualified supervisor or certified operator exam must complete an online examination application. CDA must validate the application, after which the individual will then continue to use the Metro Institute website to schedule and pay for the exams you wish to take. Please be aware that a small "convenience fee" for using your credit card will be added to your exam payment.

Do not contact the testing centers to schedule exams, testing centers cannot schedule exams for you!

To start the examination process please visit the CDA website at www.colorado.gov/ag/dpi.

ALL Exams Must be scheduled online, unscheduled individuals will not be allowed to take an exam.

In order to implement the new testing system, CDA has changed the cost to take the exams. The exam fee is now \$31.50 per exam per applicator. For example: an applicator that wishes to take three exams the total cost is \$94.50.

The Metro Institute testing program requires that the testing center take your picture as security measure. In the future, CDA will use this photograph to issue plastic wallet applicator licenses.

CDA Office
305 Interlocken Pkwy
Broomfield, Colorado

CSU— Logan County Extension Office
508 South 10th Avenue
Sterling, Colorado

CSU Extension Office
Prowers County / Southeast Area
1001 South Main Street
Lamar, Colorado

SLV Research Center
0249 East Rd 9 North
Center, Colorado

CSU Extension Office
Montezuma County
109 Main Street, Room 102
Cortez, Colorado

CSU Tri-River Area Extension Office
Mesa County Fairgrounds
2775 Hwy 50
Grand Junction, Colorado

Colorado State University Campus
University Testing Center
203 General Services Building
Colorado State University
Fort Collins, Co. 80523

Testing days and times vary depending on the testing center. Additional information about the testing days and time is available at the time you schedule the exam.

You must present a government issued form of identification, which includes your photograph, your complete physical description, and your signature (for example - a valid Colorado driver's license) at the time you take the exam.

Each testing center will provide exam results (pass / fail and percentage) at the conclusion of each exam. In addition, the testing center will also provide a report detailing your exam results.

Individuals wishing to license as a qualified supervisor or certified operator must complete a license application and pay the \$100.00 license fee.

Individuals that are currently licensed and are adding a category must also complete a license application but are not required to pay additional license fees.

All pesticide applicator licenses (after you pass the exam) will be issued from the CDA Broomfield office.

For Private Applicators

Examinations are an open book taken at your location. To order the Private Applicator Training Manual contact the Colorado Department of Agriculture at (303) 869-9064 or order online at www.colorado.gov/ag/dpi.

License fees should be submitted with the completed exam, the license application and a photocopy of the applicant's identification (a government issued picture ID). If the license fee is not submitted, the test will be graded and an invoice will be sent requesting payment before the license is issued.

If the examination is not passed, the tester will receive a test results letter, a new examination answer sheet, application form and a return envelope. The exam may be resubmitted up to three times. If the exam is not passed by the third attempt, there will be an additional \$20.00 examination processing fee for an additional three attempts.

How do I Prepare for the QS or CO Exam?

1. **Review Study Materials.** Obtain copies of all laws, rules and regulations and other suggested study materials and carefully review them prior to taking any examinations.

2. **Examination Content.** The general and category examinations consist of true-false and multiple-choice. Questions for the category examinations will be specific to that category and will cover subject areas such as **basic biology, pesticides and formulations, pesticide application, applicator safety, pest identification, environmental protection, integrated pest management, equipment knowledge, calibration, and host/site identification.** The general examination questions will be drawn from the following subject areas.

I. Laws and Regulations

- A. Applicable federal laws and regulations such as the Federal Insecticide, Fungicide & Rodenticide Act (FIFRA), the Comprehensive Environmental Response, Compensation & Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act of 1986, Title III (SARA, Title III), etc.
- B. Applicable state laws and regulations such as the Pesticide Applicators' Act, the Water Quality Control Act, etc.
- C. Applicable local regulations and ordinances such as those relating to zoning, fire protection districts, etc.

II. Pesticide Labels and Labeling

- A. Understand that the label is considered a legal document.
- B. Be able to read and understand requirements (brand/trade name, type of pesticide, restricted entry, formulation, ingredients statement, etc.).
- C. Understand label terminology such as for-

mulations and signal words (for example, wettable powder, DANGER, etc.).

D. Be able to read and understand a Safety Data Sheet (SDS)/Material Safety Data Sheet (MSDS).

III. Pesticides

- A. Be able to identify families and types of pesticides.
- B. Be able to identify types of formulations (EC, WP, SP, etc.).
- C. Be able to identify types of adjuvants and other types of additives (surfactants, dyes, fertilizers, etc.).
- D. Understand pesticide characteristics and concepts (compatibility, synergism, persistence and environmental fate, resistance, mode of action, volatility, solubility, phytotoxicity, etc.).
- E. Be able to recognize alternative control methods and practices (mechanical, biological, etc.).

IV. Host and Pest Identification and Biology

- A. Be able to recognize principles of host identification and biology.
- B. Be able to recognize principles of site/habitat identification.
- C. Be able to recognize principles of pest identification and biology.
- D. Be able to recognize damage to host or other factors caused by pests.
- E. Be able to recognize beneficial organisms.
- F. Understand life cycles, susceptible stages.
- G. Be able to evaluate environmental conditions and effects on host and pest biology.

V. Safety and Protection

- A. Personal and Public
 - 1. Understand exposure and toxicity (acute and chronic toxicity, routes of exposure, symptoms, practical first aid).

2. Understand precautions to take to prevent injury to applicators, individuals, property, and the environment.
3. Be able to recognize safe methods of handling pesticides during transportation, storage, mixing and loading, application, and equipment cleanup.
4. Be able to maintain and understand a current reference file (MSDS, telephone hotlines, emergency procedures, etc.)

B. Environmental

1. Be able to identify meteorological and climatic factors affecting application (drift, runoff, etc.).
2. Be able to identify the influence of terrain, soil, and substrata on possible ground water contamination.
3. Be able to recognize sensitive areas and organisms that could be affected by application, drift, and runoff.
4. Understand precautions for protection of endangered and threatened species.
5. Understand methods of spill prevention, control, and cleanup.

VI. Pesticide Application

- A. Be able to identify target pests, ascertain the economic threshold level, consider environmental impacts, select methods of control for a site and pest.
- B. Be able to select material, formulation, equipment, determine dosage, calibrate equipment, load material, apply the pesticide or control measures, and conduct post-treatment evaluation.

3. Sample Questions. The following questions are intended to help you become familiar with some of the types of questions you may encounter on the examinations. These questions do not represent the full range of content or difficulty levels contained in the actual examinations.

1. Which federal agency is responsible for classifying pesticides as restricted or general use?

- A. Department of Interior
- B. Agricultural Chemical Agency
- C. Department of Agriculture
- *D. Environmental Protection Agency

2. Reentry intervals prevent

- A. excessive pesticide residues on crops.
- B. damage from drift.
- *C. unprotected workers from having hazardous pesticide exposure.
- D. contamination of the environment.

3. Pesticides used in the state of Colorado must be approved and registered by the Colorado Department of Agriculture.

- *True
False

4. Matching questions may also be given. These questions generally have four or more statements and an equal number of answers to these statements. Each answer has to be matched to the corresponding statement to which it applies.

*Correct Answer

What Happens At the QS or CO Examination?

1. What to bring to the examination:

- A. Identification** - must bear your picture, a complete physical description and your signature. A driver's license is preferred.
- B. Calculator** - Provided by testing site.
- C. Reference material** - Examinees may not bring reference material into the testing room or share equipment during the examination.

2. Conduct during the examination. You are expected to conduct yourself in a professional manner during the examination. Any candidate engaging in conduct which subverts or attempts to subvert the examination process may be dismissed from the examination.

A. Do not bring cellular phones, beepers, cameras, tape recorders or electronic recording or transmitting devices to the examination.

B. Do not take notes from the examination room. Scratch paper will be provided and collected at the end of the examination.

C. Do not remove examination materials from the examination site.

D. The examination proctors cannot answer any questions about the subject matter of any examination questions.

E. Do not leave the examination room except with the examination proctor's permission.

F. Smoking is not allowed in the building or examination room.

G. Do not bring reference materials, bags, purses, briefcases, backpacks, or similar items into the examination room. Please leave these items at home or locked in your vehicle.

H. No food or beverages allowed in the testing room.

THE DEPARTMENT WILL NOT BE RESPONSIBLE FOR THE LOSS OR THEFT OF ANY PROPERTY BROUGHT INTO THE EXAMINATION ROOM.

3. Time limits for the examination. You will have two hours to complete the general examination and one hour to complete each category examination.

4. While taking the examination:

A. Read all instructions carefully, and be sure you understand them. Ask questions about any instructions which are unclear.

B. Be sure to select an answer for all questions, even the ones about which you may be unsure. There is no penalty for guessing, and your score is based upon the total number of questions you answer correctly.

C. For each question, select the BEST answer of the options listed. More than one choice may be partially correct, but for each question there will be only one best answer.

D. Scratch paper will be provided. You may wish to make a note, on the scratch paper, of the questions you wish to review before turning in your examination, or of questions that you wish to bring to the attention of the proctor. All scratch paper will be collected at the end of the exam.

5. Evaluation and question comments. Please note, on the scratch paper provided, any comments you may have about the examination process or any of the examination questions and bring them to the attention of the proctor when you turn in your examination(s). Your comments may help us to improve the examinations and the examination process.

Friendly Suggestions

1. Plan for your arrival. Allow time to get to the examination site, find parking, and get to the examination room.

2. **Dressing for the examination.** Dress comfortably. Individuals have different temperature preferences. It is recommended that you bring a sweater so that you can be comfortable in any event.
3. **Visitors in the examination room.** Visitors will not be permitted in the examination room. If you need to meet family members or other persons after the examination, you should arrange to meet in the lobby of the building. Examinees will not be allowed to visit with, or exchange messages with others during the examination.

What Happens After the QS, CO or Private Applicator (PA) Examination?

1. Passing Percentage

A score of 70% or more is passing for all exams.

2. Examination Score Process and Report

QS/CO: scores will be available immediately upon completion of the exam, including a compilation of the subject areas of questions missed on the examination. See page 4, item 2, examination content. PA: online exam scores will be available immediately; hard copy exam scores will be mailed back within 7-10 days of receipt.

3. Re-examination Procedure

QS/CO: applicants failing any exam must retest and pass to license. **The Metro Institute online system must be used to retest.** Schedule at least two days prior. Applicants may retest as many times as they wish, but must pay the fees each time. PA, online: 30 days access to exam is allowed; you may exit and reenter the exam at any time during your 30 day period. PA, hard copy: you may test up to three times for one \$20 fee. If you do not pass after the first three attempts, another \$20 fee must be paid for three more attempts.

4. Licenses

A person cannot act as a qualified supervisor, certified operator or private applicator until the required test(s) are passed **and the licensing procedure is completed.** For initial licensing, a license application, fee (QS/CO: \$100; PA: \$75) must be submitted to CDA. An application must also be submitted if the applicant is already licensed and is seeking to add a category or upgrade from a CO to a QS.

5. Expiration and renewals

Commercial applicator business

Commercial applicator business licenses expire on December 31st of each year. Renewals should be submitted on or before this date. Renewals post-marked after December 31st and before February 1 will be charged an additional late fee. After that, an applicator must apply for a new license. **The annual license fee is \$350.00.**

Limited Commercial and Public Applicator

Limited commercial and public applicator registrations expire on December 31st of each year. Re-application for those applying restricted use pesticides and those who choose to be registered must be made prior to that date. **The registration fee is \$50.00.**

Qualified Supervisor and Certified Operator

Qualified Supervisor and Certified Operator licenses expire three (3) years from the licensee's birth date. **The renewal fee is \$100.00.**

A qualified supervisor or certified operator applying for license renewal must meet the continuing education requirements or re-examine. If all continuing education credit requirements are not met prior to license expiration, an applicator must re-examine and apply for a new license.

Renewals postmarked up to 30 days after the expiration date will be charged an additional late fee. Any license that is not renewed on or before the expiration date may be reinstated within 180 days after the expiration date only if all renewal requirements have been satisfied prior to the expiration date.

Private Applicator

Licenses expire three years from the licensee's birth date. Continuing education requirements must be met prior to the license expiration date, or the applicant must retest. To renew a license, the applicant must provide 1) a correctly completed application + \$75 fee, 2) a driver's license copy, or other acceptable ID, and should provide a photograph to be printed on the license card.

Renewals postmarked up to 30 days after the expiration date, will be charged an additional late fee. Any license that is not renewed on or before the expiration date may be reinstated within a 180 days after the expiration date only if **all** renewal requirements must have been satisfied as of the expiration date.

Reciprocal Licenses

If all requirements are met, the Department will reciprocate with another jurisdiction and issue a reciprocal license. **A reciprocal license is issued at the certified operator level only.**

A reciprocal license expires on the date the license issued by the other jurisdiction expires. Continuing education credits do not apply to renewal of a reciprocal license. Upon expiration a reciprocal licensee may apply to renew based on reciprocity or may take Colorado examinations and satisfy all other requirements for non-reciprocal licensure in Colorado.

Study Materials and References

The following references are for your information. This is not a complete list. Some of the test questions will be based on field experience and knowledge of common practices; therefore, questions will not be limited to the reference materials listed below.

A. Colorado Department of Agriculture/Colorado State University Study Guides may be purchased from the CSU CEPEP Internet site at www.cepep.colostate.edu/Publications/ (click on "Study Guides"), or by calling (970) 491-6198 or (877) 692-9358. Prices are listed on this site and are subject to change. Not all material on the exams is found in the study guides, and not all material in the study guides is found on the exams.

CDA and CSU cooperate to revise and update study guides on a rotating basis for all categories.

B. Colorado State University Cooperative Extension Factsheets and guides are excellent study materials and reference sources. Factsheets can be downloaded from the internet for free at <http://www.ext.colostate.edu>. A full list of publications is also available on this website.

Further information may be obtained by calling (970) 491-6198 or (877) 692-9358, or by sending an e-mail to ccs_resourcecenter@mail.colostate.edu.

C. General Reference

The Standard Pesticide User's Guide, 7th Ed. Dr. Bert L. Bohmont, Colorado State University Professor Emeritus. Prentice-Hall, Upper Saddle River, NJ.

Destructive and Useful Insects: Their Habits and Control, 5th Ed.. Robert L. Metcalf and Robert A. Metcalf. McGraw-Hill, NY.

Borror and DeLong's Introduction to the Study of Insects, 7th Ed. D. J. Borror, C. A. Triplehorn and N. F. Johnson. Cengage Learning, Independence, KY.

Plant Pathology, 5rd Ed. George N. Agrios. Academic Press, New York.

Applied Weed Science: Including the Ecology and Management of Invasive Plants, 3rd Ed. Merrill A. Ross and Carole A. Lembi. Prentice-Hall, Upper Saddle River, NJ.

The Pesticide Book, 4th ed. George Ware. Meister Media Worldwide, Willoughby, OH.

Handbook of Pest Control, 10th ed. Arnold Mallis. GIE Media Inc, Vally View, OH.

Pests of the West, Revised: Prevention and Control for Today's Garden and Small Farm, 2nd ed. Whitney Cranshaw. Fulcrum Publishing, Golden, CO.

Weeds of the West, 10th ed. Thomas D. Whitson, ed. The Western Society of Weed Science, Las Cruces, NM.

Weeds and Poisonous Plants of Wyoming and Utah. Wyoming Cooperative Extension and Utah State University. Research Report 116. University of Wyoming.

Aspen: A Guide to Common Problems in Colorado. David Leatherman. CSU Extension and Colorado State Forest Service.

Diseases of Trees in the Great Plains.

Riffle and Peterson. USDA General Technical Report RM-129.

Westcott's Plant Disease Handbook. R. Kenneth Horst. Springer, New York, NY.

Truman's Scientific Guide to Pest Control

Operations, 7th Ed. G.W. Bennett. Questex Media Group, Newton, MA.

American Phytopathological Society Disease Compendium Series.

Many titles, listed on the APS website at www.apsnet.org. Select publications, then APS Press, then Compendium Series.

Handbook of Turfgrass Insect Pests 2nd Ed.

Brandenburg and Freeman, editors. Entomological Society of America, Lanham, MD.

Controlling Turfgrass Pests, 3rd Ed. Malcolm C. Shurtleff, Fermanian, and Randell. Prentice-Hall, Upper Saddle River, NJ.

Service Technician's Manual. National Pest Control Association, Dunn Loring, VA.

Turf Pest Control (206) \$25

Buffington & McDonald eds, CSU, 2006, 148 pp

Ornamental Pest Control (207)

Buffington & McDonald eds, CSU, 2006, 224 pp

Wood Destroying Organism (301) \$6**Outdoor Vertebrate Pest Guide (302)** \$25

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