

IPM For Pennsylvania Schools and Childcares

A HOW-TO MANUAL



PennState Extension



Introduction to the 2019 Edition

The first edition of this manual was published in 2002. Shortly thereafter legislation was enacted requiring each Pennsylvania school district, intermediate unit, and area vocational-technical school to develop an integrated pest management (IPM) plan (Act 35 of 2002), notify parents and guardians 72 hours prior to any pesticide applications, and post warning signs 72 hours prior to and 48 hours after any pesticide applications in school buildings or on school grounds (Act 36 of 2002).

In 2012, the Pennsylvania Department of Agriculture (PDA) Health and Safety Division determined that these regulations apply to childcares as well as K–12 schools since childcare facilities are explicitly covered by the Pennsylvania Pesticide Control Act of 1973. Note that this includes the provision that **only** a licensed pest control operator can apply a pesticide in a facility or a home-based childcare center.

In addition, the Pennsylvania Department of Health recommends that IPM be a part of indoor air quality guidelines for Pennsylvania schools. The U.S. Environmental Protection Agency (EPA) studies of human exposure to air pollutants indicate that indoor levels of pollutants may be two to five times higher than outdoor levels. Children may be especially susceptible to air pollution since they breathe a greater volume of air relative to their body weight than adults. One specific contaminant addressed by the EPA's report *Indoor Air Quality Tools for Schools* are pesticides. Chronic exposure to some pesticides can result in damage to the liver, kidneys, and nervous system.

The following are some of the important changes to this edition:

- Childcare providers have been included due to changes in state regulations.
- A new section addressing the role of pests as asthma triggers can be found in "Asthma, Pests, and Pesticides."
- A new section on "IPM for Bed Bugs" addresses a critical need for evidence-based information about the control of bed bugs in schools and childcares.
- A new section on "Who Does What?" explains what the legislation requires of the school/childcare and others.
- A new section on "Beneficial Insects and Pollinators" has been added that explains the importance of "good bugs" and the need for conservation and provides tips for attracting beneficial organisms to school and childcare gardens and grounds.
- The addition of "How to Develop an IPM Policy and Plan for Your School District or Childcare Facility/Provider" on page 15 shows the parts of an acceptable plan with an outline to adapt it for your school/childcare.
- The Pennsylvania School Boards Association policy has been replaced with an updated version reflecting the effects of the school IPM legislation.
- A sample notification letter for parents and guardians has been added, as well as a sample pest control information sheet used to inform staff and parents and guardians about pesticide applications.
- The "Intent to Apply Pesticides" page has been replaced with a "Notice of Pesticide Application" sign that is 8½ inches by 11 inches as required by the legislation.
- The "Contract Guide Specifications" on page 19 have been somewhat simplified.
- A "Frequently Asked Questions" section has been added on page 163 that answers many of the questions PA IPM has received about proper application of IPM procedures and interpretations of state pesticide laws.
- A description of the Worker Protection Standard is now included in Appendix B on page 182.
- There is now a universal poison control number used nationwide: 1-800-222-1222.
- Copies of the acts are included on pages 178–181.
- Additional resources have been listed and website addresses have been updated.
- At the time of print, several new pests were emerging in Pennsylvania (e.g., spotted lanternfly, emerald ash borer, tick species/diseases vectored, mosquito species/diseases vectored, nonnative and invasive plants and fish) as a result of human behaviors and climate change. Best management practices for these pests is ongoing and evolving as

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Table 4.1. Characteristics of Common Cockroach Species

SPECIES	COLOR AND DISTINCTIVE MARKINGS	LENGTH OF ADULT	AVERAGE NUMBER OF EGGS PER EGG CASE*	LIFE CYCLE FROM EGG TO ADULT
American Cockroach (<i>Periplaneta americana</i>), FIGURE 4.1A	Reddish brown throughout with a pale band on the edge of the pronotum (platelike structure behind the head on the back)	1½–1¾ inches	14	320–1,071 days
Brown-Banded Cockroach (<i>Supella longipalpa</i>), FIGURE 4.1B	Tan with faint, V-shaped, lighter bands on wings; nymph has two distinct brown bands running crosswise on body	¾–½ inch	16	143–379 days
Cuban Cockroach (<i>Panchlora nivea</i>), FIGURE 4.1C	Uniformly pale green; both sexes fully winged; good fliers	7⁄8–1 inch	56	144–181 days
German Cockroach (<i>Blattella germanica</i>), FIGURE 4.1D	Light brown with two black bars on the pronotum	½–5⁄8 inch	37	64–251 days
Oriental Cockroach (<i>Blatta orientalis</i>), FIGURE 4.1E	Dark brown-black throughout; adult male wings do not cover abdomen; adult females are wingless	1¼ inches	18	316–533 days
Pennsylvania Wood Cockroach (<i>Parcoblatta pennsylvanica</i>), FIGURE 4.1F	Males are chestnut brown, females are black; adult male wings cover the abdomen; adult females have short, nonfunctional wings	5⁄8–1 inch	26	324–700 days
Surinam Cockroach (<i>Pycnoscelus surinamensis</i>), FIGURE 4.1G	Pronotum uniformly dark; dark olive-green wings that extend beyond abdomen; no known males exist (parthenogenetic species)	¾ to 1 inch	26	162–219 days

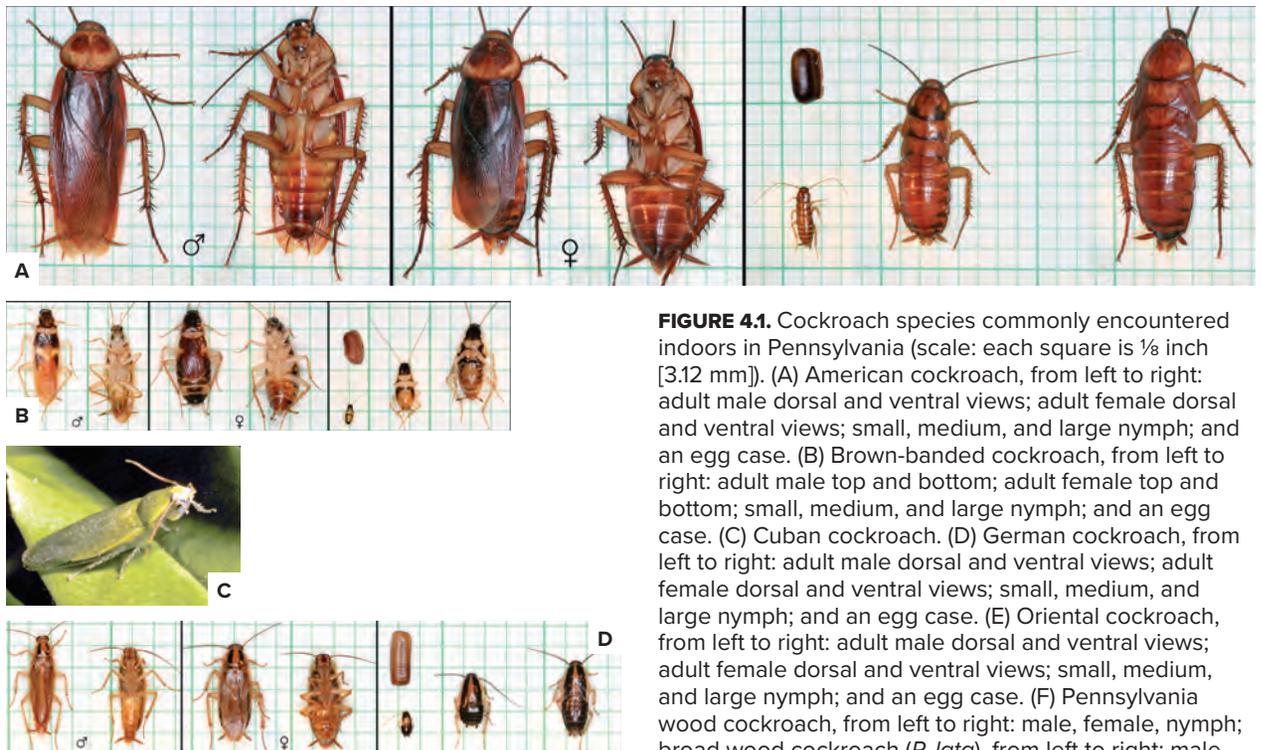


FIGURE 4.1. Cockroach species commonly encountered indoors in Pennsylvania (scale: each square is 1⁄8 inch [3.12 mm]). (A) American cockroach, from left to right: adult male dorsal and ventral views; adult female dorsal and ventral views; small, medium, and large nymph; and an egg case. (B) Brown-banded cockroach, from left to right: adult male top and bottom; adult female top and bottom; small, medium, and large nymph; and an egg case. (C) Cuban cockroach. (D) German cockroach, from left to right: adult male dorsal and ventral views; adult female dorsal and ventral views; small, medium, and large nymph; and an egg case. (E) Oriental cockroach, from left to right: adult male dorsal and ventral views; adult female dorsal and ventral views; small, medium, and large nymph; and an egg case. (F) Pennsylvania wood cockroach, from left to right: male, female, nymph; broad wood cockroach (*P. lata*), from left to right: male, female, nymph. (G) Surinam cockroach, from left to right: adult female top and bottom; small, medium, and large nymph; and an egg case, which is incubated within the female.

Frequently Asked Questions: IPM Plans and Pesticide Notification Legislation, Acts 2002-35 and 2002-36 of Pennsylvania

Since the publication of this manual, the Pennsylvania IPM Program has received many questions about the proper application of IPM procedures and interpretation of state pesticide laws. Since many school officials often have the same questions, the answers to these questions have been compiled here.

Specifically, the “Frequently Asked Questions” section addresses Acts 2002-35 (Integrated Pest Management Plan Act) and 2002-36 (Pesticide Notification Act) as well as IPM implementation. The legislation requires schools to adopt an IPM plan and provide notification to parents, students, and teachers in advance of pesticide applications.

Disclaimer: The answers to these questions are for guidance and information. If you need further clarification, contact your school solicitor or the Pennsylvania Department of Agriculture at 717-772-5212 for pesticide information and 717-772-5204 for IPM plan information.

The following is a catalog of questions and answers to date grouped together by subject. See extension.psu.edu/ipm for additional questions.

Administration Buildings

- Q.** *Do the regulations apply to public school administration buildings?*
- A.** Yes, the workers in the building must be notified 72 hours prior to any pesticide applications, and posting must be done 72 hours prior to and 48 hours after applications. Parents and guardians only need to be notified of applications in buildings in which their students attend.

Athletic Fields

- Q.** *Our athletic fields are not fenced in. Where do the pest control signs need to be posted?*

- A.** PDA recommends posting the signs at common entry points as determined by the school IPM coordinator. A notice of placement of signs could be posted on the staff bulletin board and sent to parents and guardians so they know where to look for the pest control signs.
- Q.** *One of our athletic fields is several miles away from any of our school buildings. Does a notice need to be placed in each school building prior to pesticide applications on that field?*
- A.** No, only workers in buildings at that location need notification. Whatever method your district uses for notification (postings in the buildings, emails, announcements) needs to be followed. The legislation also requires that a pest control sign be placed at the common entry point to that field. The seven-hour reentry time applies.
- Q.** *We only treat the athletic fields in the summer. Is it necessary to notify the parents and guardians at that time?*
- A.** No, unless students are using the fields for normal academic instruction or organized extracurricular activities. However, workers in the schools at the locations need to be notified and the fields must have the treatment signs posted at common entry points. The seven-hour reentry time also applies.

Background Checks for Pest Management Professionals

- Q.** *What are the requirements for background checks on pest management professionals servicing a public school in Pennsylvania?*
- A.** The IPM legislation does not address this, but the district may require a criminal background check (Act 34 clearance), a child abuse

Penn State Extension County Offices: extension.psu.edu/county-offices

Pennsylvania Department of Agriculture Regional Offices: www.agriculture.pa.gov/regional-offices

Universal Poison Control Number: **1-800-222-1222**

extension.psu.edu/ipm

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