

Because wages for beginners are low and the work is physically demanding, many employers have difficulty attracting enough workers to fill all openings.

Employment of grounds maintenance workers is expected to grow faster than the average for all occupations through the year 2010, in response to increasing demand for groundskeeping and related services. Expected growth in the construction of commercial and industrial buildings, shopping malls, homes, highways, and recreational facilities should contribute to demand for these workers.

The upkeep and renovation of existing landscaping and grounds are continuing sources of demand for grounds maintenance workers. Owners of many existing buildings and facilities, including colleges and universities, recognize the importance of “curb appeal” and are expected to use grounds maintenance services more extensively to maintain and upgrade their properties. Homeowners also are expected to continue using landscaping services to maintain the beauty and value of their property. As the “echo” boom generation (children of baby boomers) comes of age, the demand for parks, athletic fields, and recreational facilities also can be expected to sustain the demand for grounds maintenance workers.

Job opportunities for nonseasonal work are more numerous in regions with temperate climates, where landscaping and lawn services are required all year. However, opportunities may vary depending on local economic conditions.

Earnings

Median hourly earnings in 2000 of grounds maintenance workers were as follows:

First-line supervisors/managers of landscaping, lawn service, and groundskeeping workers	\$14.70
Tree trimmers and pruners	11.41
Pesticide handlers, sprayers, and applicators, vegetation	11.11
Landscaping and groundskeeping workers	8.80

Median hourly earnings in the industries employing the largest numbers of landscaping and groundskeeping workers in 2000 were as follows:

Local government	\$11.41
Real estate agents and managers	9.05
Subdividers and developers	8.71
Landscape and horticultural services	8.63
Miscellaneous amusement and recreation services	8.34
Real estate operators and lessors	8.18

Related Occupations

Grounds maintenance workers perform most of their work outdoors and have some knowledge of plants and soils. Others whose jobs may require that they work outdoors and are otherwise related are agricultural workers; farmers, ranchers, and agricultural managers; forest, conservation, and logging workers; landscape architects; and biological scientists.

Sources of Additional Information

For career and certification information on tree trimmers and pruners, contact:

► National Arborist Association, 3 Perimeter Rd., Unit I, Manchester, NH 03103. Internet: <http://www.natlarb.com>

For information on work as a landscaping and groundskeeping worker, contact:

► Professional Lawn Care Association of America, 1000 Johnson Ferry Rd. NE., Suite C-135, Marietta, GA, 30068-2112. Internet: <http://www.plcaa.org>

► Associated Landscape Contractors of America, 150 Elden St., Suite 270, Herndon, VA, 20170.

For information on becoming a licensed pesticide sprayer, contact your State’s Department of Agriculture.

Pest Control Workers

(O*NET 37-2021.00)

Significant Points

- Pesticides used by pest control workers can pose health risks.
- Federal and State laws require licensure through training and examination.
- Job prospects should be favorable for qualified applicants because many people do not find pest control work appealing.

Nature of the Work

Roaches, rats, mice, spiders, termites, fleas, ants, and bees—few people welcome them into their homes or offices. Unwanted creatures that infest households, buildings, or surrounding areas are pests that can pose serious risks to human health and safety. It is a pest control worker’s job to eliminate them.

Pest control workers locate, identify, destroy, and repel pests. They use their knowledge of pests’ lifestyles and habits, along with an arsenal of pest management techniques—applying chemicals, setting traps, operating equipment, and even modifying structures—to alleviate pest problems.

The best known method of pest control is pesticide application. Pest control workers use two different types of pesticides—general use and restricted use. General use pesticides are the most widely used and are readily available; in diluted concentrations, they are available to the public. Restricted use pesticides are available only to certified professionals for controlling the most severe infestations. Their registration, labeling, and application are regulated by Federal law, interpreted by the U.S. Environmental Protection Agency (EPA), because of their potential harm to pest control workers, customers, and the environment.

Pesticides are not pest control workers’ only tool, however. Pest control workers increasingly use a combination of pest management techniques, known as integrated pest management. One method involves using proper sanitation and creating physical barriers, for pests cannot survive without food and will not infest a building if they cannot enter it. Another method involves using baits, some of which destroy the pests, and others that prevent them from reproducing. Yet another method involves using mechanical devices, such as traps, that do not allow pests to reenter the environment.

Integrated pest management is becoming popular for several reasons. First, pesticides can pose environmental and health risks. Second, some pests are becoming more resistant to pesticides in certain situations. Finally, an integrated pest management plan is more effective in the long term than use of a pesticide alone.

Most pest control workers work in one of three positions—pest control technician, applicator, or supervisor. Position titles vary by State, but the hierarchy—based on training and responsibility required—remains consistent.

Pest control technicians identify problem areas and operate and maintain traps. They assist applicators by carrying supplies, organizing materials, and preparing equipment. In addition, they may make sales presentations on pest control products or services. Technicians are licensed to apply pesticides only under an applicator’s supervision.

Certified pest control applicators, sometimes called exterminators, perform the same tasks technicians do. But they also are certified to apply all pesticides, both general use and restricted use, without supervision and are licensed to supervise and train technicians in pesticide use. Within this group of workers are several subspecialties, including termite exterminators and fumigators.

Termite exterminators are applicators who specialize in controlling termites. They use chemicals and modify structures to eliminate termites and prevent reinfestation. To treat infested areas, termite exterminators drill holes and cut openings into buildings to access infestations. To prevent further infestation, they modify foundations and dig holes and trenches around buildings. Some termite exterminators even repair structural damage caused by termites.

Fumigators are applicators who control pests using poisonous gases called fumigants. Fumigators pretreat infested buildings by examining, measuring, and sealing the buildings. Then, using cylinders, hoses, and valves, they fill structures with the proper amount and concentration of fumigant. They also monitor the premises during treatment for leaking gas. To prevent accidental fumigant exposure, fumigators padlock doors and post warning signs.

Pest control supervisors, also known as operators, direct service technicians and certified applicators. Supervisors are licensed to apply pesticides, but they usually are more involved in running the business. Supervisors are responsible for ensuring employee adherence to rules and must resolve problems with regulatory officials.



Pest control workers may come into contact with dangerous chemicals while treating buildings for pest problems.

Most States require each pest control establishment to have a supervisor; self-employed business owners usually are supervisors.

Working Conditions

Pest control workers must kneel, bend, reach, and crawl to inspect, modify, and treat structures. They work both indoors and out, in all weather conditions. During warm weather, applicators may be uncomfortable wearing the heavy protective gear—such as respirators, gloves, and goggles—required for working with pesticides.

Almost half of all pest control workers work a 40-hour week, but about a quarter work more hours. Pest control workers often work evenings and weekends, but many work consistent shifts.

There are health risks associated with pesticide use. Various pest control chemicals are toxic and could pose health risks if not used properly. Extensive training required for certification and the use of recommended protective equipment minimizes these health risks, resulting in fewer reported cases of lost work. Because pest control workers travel to visit clients, the potential risk of motor vehicle accidents is another occupational hazard.

Employment

Pest control workers held about 58,000 jobs in 2000; 79 percent of workers were employed in the services to buildings industry. They are concentrated in States with warmer climates. About 14 percent were self-employed.

Training, Other Qualifications, and Advancement

A high school diploma or equivalent is the minimum qualification for most pest control jobs. Although a college degree is not required, almost half of all pest control workers have either attended college or earned a degree.

Pest control workers must have basic skills in math, chemistry, and writing. Because of the extensive interaction that pest control workers have with their customers, employers prefer to hire people who have good communication and interpersonal skills. In addition, most pest control companies require their employees to have a good driving record. Pest control workers must be in good health because of the physical demands of the job, and they also must be able to withstand extreme conditions—such as the heat of climbing into an attic in the summertime or the chill of sliding into a crawlspace during winter.

Both Federal and State laws regulate pest control workers. These laws require them to be certified through training and examination, for which most pest control firms help their employees prepare. Workers may receive both formal classroom and on-the-job training, but they also must study on their own. Because the pest control industry is constantly changing, workers must attend continuing education classes to maintain their certification.

Requirements for pest control workers vary by State. Pest control workers usually begin their careers as apprentice technicians. Before performing any pest control services, apprentices must attend general training in pesticide safety and use. In addition, they must train in each pest control category in which they wish to practice. Categories may include general pest control, rodent control, termite control, fumigation, and ornamental and turf control.

Training usually involves spending 10 hours in the classroom and 60 hours on the job for each category. After completing the required training, apprentices can provide supervised pest control services. Apprentices have up to 1 year to prepare for and pass the written examinations. Upon successful completion of the exams, the apprentice becomes licensed as a technician.

To be eligible to become applicators, technicians need 1 year of experience, 6 months of which must be as a licensed technician. This requirement is sometimes waived for individuals who have

either a college degree in biological sciences or extensive related work experience. To become certified as applicators, technicians must pass an additional set of category exams. Depending on the State, applicators must attend additional classes every 1 to 6 years to be recertified.

Applicators with several years of experience often become supervisors. To qualify as a pest control supervisor, applicators must pass State-administered exams and have experience in the industry, usually a minimum of 2 years. Many supervisors are self-employed, reflecting the relative ease of entry into the field and the growing need for pest control. Therefore, the pest control industry provides a good opportunity for people interested in operating their own business.

Job Outlook

Job prospects should be favorable for qualified applicants because many people do not find pest control work appealing. Employment of pest control workers is expected to grow faster than the average for all occupations through 2010. In addition to job openings arising from employment growth, opportunities will result from workers transferring to other occupations or leaving the labor force.

Demand for pest control workers is projected to increase for a number of reasons. An expanding client base will develop as environmental and health concerns, greater numbers of dual-income households, and improvements in the standard of living convince more people to hire professionals rather than attempt pest control work themselves. In addition, tougher regulations limiting pesticide use will demand more complex integrated pest management strategies. Greater concerns about the effects of pesticide use in schools has increasingly prompted more school districts to investigate alternative means of pest control, such as integrated pest management. Furthermore, use of some newer materials for insulation

around foundations has made many homes more susceptible to pest infestation. Finally, continuing population shifts to the more pest-prone sunbelt States should increase the number of households in need of pest control.

Earnings

The hierarchy of pest control positions also applies to earnings. Pest control supervisors usually earn the most and technicians the least, with earnings of certified applicators falling somewhere in between. Earnings data do not distinguish among job titles, however.

Median hourly earnings of full-time wage and salary pest control workers were \$10.65 in 2000. The middle 50 percent earned between \$8.73 and \$13.58. The lowest 10 percent earned less than \$7.09, and the top 10 percent earned over \$16.95.

Many pest control workers are employed under a wage plus commission system, which rewards workers who do their job well. Some firms offer bonuses to workers who exceed their performance goals.

Related Occupations

Pest control workers visit homes and places of business to provide building services. Other workers who provide services to buildings include building cleaning workers; various construction trades workers, including carpenters and electricians; and heating, air-conditioning, and refrigeration mechanics and installers.

Sources of Additional Information

Private employment agencies and State employment services offices have information about available job opportunities for pest control workers.

For information about the training and certification required in your State, contact your local office of the U.S. Department of Agriculture or your State's Environmental Protection Agency.

Food Preparation and Serving Related Occupations

Chefs, Cooks, and Food Preparation Workers

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Significant Points

- Many young people work as chefs, cooks, and food preparation workers—almost 20 percent are between 16 and 19 years old.
- Almost 1 out of 2 food preparation workers are employed part time.
- Job openings are expected to be plentiful through 2010, primarily reflecting substantial turnover in this large occupation.

Nature of the Work

A reputation for serving good food is essential to the success of any restaurant or hotel, whether it offers exotic cuisine or hamburgers. Chefs, cooks, and food preparation workers are largely responsible for establishing and maintaining this reputation. Chefs and cooks do this by preparing meals, while other food preparation workers

assist them by cleaning surfaces, peeling vegetables, and performing other duties.

In general, *chefs* and *cooks* measure, mix, and cook ingredients according to recipes. In the course of their work they use a variety of pots, pans, cutlery, and other equipment, including ovens, broilers, grills, slicers, grinders, and blenders. Chefs and head cooks often are responsible for directing the work of other kitchen workers, estimating food requirements, and ordering food supplies. Some chefs and head cooks also help plan meals and develop menus.

Large eating places tend to have varied menus and kitchen staffs often include several chefs and cooks, sometimes called assistant or apprentice chefs and cooks, along with other less skilled kitchen workers. Each chef or cook usually has a special assignment and often a special job title—*vegetable, fry, or sauce cook*, for example. Executive chefs and head cooks coordinate the work of the kitchen staff and often direct the preparation of certain foods. They decide the size of servings, plan menus, and buy food supplies. Although the terms chef and cook still are used interchangeably, chefs tend to be more highly skilled and better trained than most cooks. Due to their skillful preparation of traditional dishes and refreshing twists in creating new ones, many chefs have earned fame for both themselves and for the establishments where they work.

The specific responsibilities of most cooks are determined by a number of factors, including the type of restaurant in which they work. *Institution and cafeteria cooks*, for example, work in the