

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

(O*NET 35-1011.00, 35-2011.00, 35-2012.00, 35-2013.00, 35-2014.00, 35-2015.00, 35-2021.00)

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

kitchens of schools, cafeterias, businesses, hospitals, and other institutions. For each meal, they prepare a large quantity of a limited number of entrees, vegetables, and desserts. *Restaurant cooks* usually prepare a wider selection of dishes, cooking most orders individually. *Short-order cooks* prepare foods in restaurants and coffee shops that emphasize fast service. They grill and garnish hamburgers, prepare sandwiches, fry eggs, and cook french fries, often working on several orders at the same time. *Fast food cooks* prepare a limited selection of menu items in fast-food restaurants. They cook and package batches of food, such as hamburgers and fried chicken, which are prepared to order or kept warm until sold. *Private household cooks* plan and prepare meals, clean the kitchen, order groceries and supplies, and also may serve meals.

Other food preparation workers, under the direction of chefs and cooks, perform tasks requiring less skill. They weigh and measure ingredients, go after pots and pans, and stir and strain soups and sauces. These workers also clean, peel, and slice vegetables and fruits and make salads. They may cut and grind meats, poultry, and seafood in preparation for cooking. Their responsibilities also include cleaning work areas, equipment, utensils, dishes, and silverware.

The number and types of workers employed in kitchens depends on the type of establishment. For example, fast-food establishments offer only a few items, which are prepared by fast-food cooks. Small, full-service restaurants offering casual dining often feature a limited number of easy-to-prepare items supplemented by short-order

specialties and ready-made desserts. Typically, one cook prepares all the food with the help of a short-order cook and one or two other kitchen workers.

Working Conditions

Many restaurant and institutional kitchens have modern equipment, convenient work areas, and air conditioning, but many kitchens in older and smaller eating places are not as well equipped. Working conditions depend on the type and quantity of food being prepared and the local laws governing food service operations. Workers usually must withstand the pressure and strain of working in close quarters, standing for hours at a time, lifting heavy pots and kettles, and working near hot ovens and grills. Job hazards include slips and falls, cuts, and burns, but injuries are seldom serious.

Work hours in restaurants may include early mornings, late evenings, holidays, and weekends. Work schedules of chefs, cooks and other kitchen workers in factory and school cafeterias may be more regular. Nearly 3 in 10 cooks and 1 out of 5 other kitchen and food preparation workers have part-time schedules, compared to 1 out of 7 workers throughout the economy.

The wide range in dining hours creates work opportunities attractive to homemakers, students, and other individuals seeking supplemental income. For example, about 27 percent of kitchen and food preparation workers are 16-19 years old. Kitchen workers employed by public and private schools may work during the school year only, usually for 9 or 10 months. Similarly, establishments at vacation resorts usually only offer seasonal employment.

Employment

Chefs, cooks and food preparation workers held more than 2.8 million jobs in 2000. The distribution of jobs among the various types of chefs, cooks, and food preparation workers was as follows:

Food preparation workers	844,000
Cooks, restaurant	668,000
Cooks, fast food	522,000
Cooks, institution and cafeteria	465,000
Cooks, short order	205,000
Chefs and head cooks	139,000
Cooks, private household	5,200

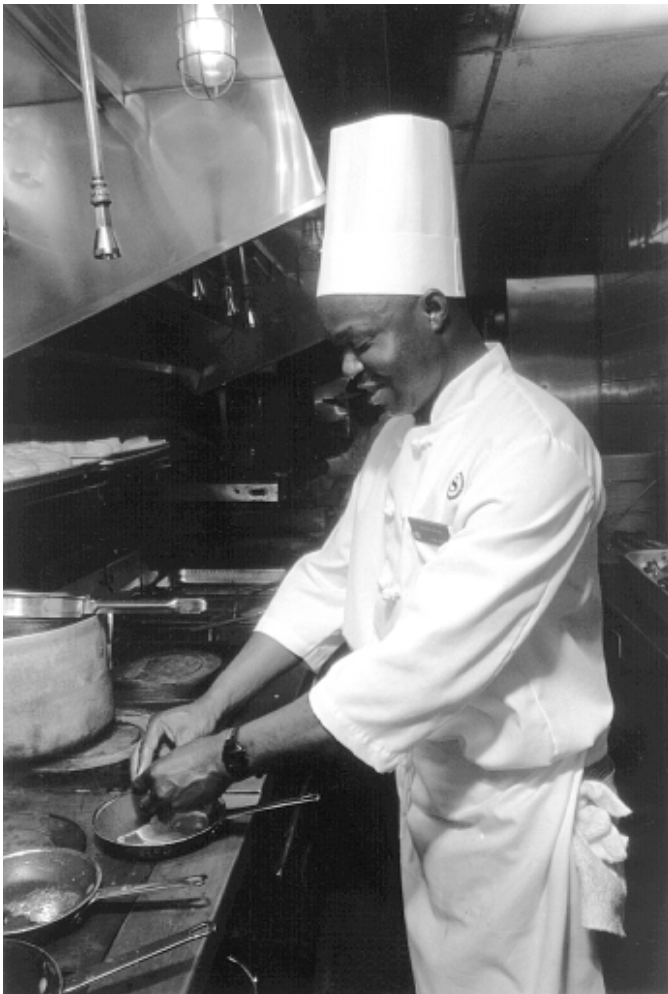
Almost 60 percent of all chefs, cooks, and food preparation workers were employed in restaurants and other retail eating and drinking places. About 20 percent worked in institutions such as schools, universities, hospitals, and nursing homes. Grocery stores, hotels, and other organizations employed the remainder.

Training, Other Qualifications, and Advancement

Most chefs, cooks, and food preparation workers start as fast-food or short-order cooks, or in other lower skilled kitchen positions. These positions require little education or training, and most skills are learned on the job. After acquiring some basic food handling, preparation, and cooking skills, these workers may be able to advance to an assistant cook position.

Although a high school diploma is not required for beginning jobs, it is recommended for those planning a career as a cook or chef. High school or vocational school courses in business arithmetic and business administration are particularly helpful. Many school districts, in cooperation with State departments of education, provide on-the-job training and summer workshops for cafeteria kitchen workers with aspirations of becoming cooks. Large corporations in the food service and hotel industries also offer paid internships and summer jobs, which can provide valuable experience.

To achieve the level of skill required of an executive chef or cook in a fine restaurant, many years of training and experience are



Chefs, cooks, and food preparation workers are essential to the success of any restaurant or full-service hotel.

necessary. An increasing number of chefs and cooks obtain their training through high school, post-high school vocational programs, or 2- or 4-year colleges. Chefs and cooks also may be trained in apprenticeship programs offered by professional culinary institutes, industry associations, and trade unions. An example is the 3-year apprenticeship program administered by local chapters of the American Culinary Federation in cooperation with local employers and junior colleges or vocational education institutions. In addition, some large hotels and restaurants operate their own training programs for cooks and chefs.

People who have had courses in commercial food preparation may be able to start in a cook or chef job without having to spend time in a lower skilled kitchen job. Their education may give them an advantage when looking for jobs in better restaurants and hotels, where hiring standards often are high. Although some vocational programs in high schools offer training, employers usually prefer training given by trade schools, vocational centers, colleges, professional associations, or trade unions. Postsecondary courses range from a few months to 2 years or more and are open, in some cases, only to high school graduates. About 8 to 15 years as a cook is required to become a fully qualified chef. Those who gain experience, including in a supervisory capacity, may become executive chefs with responsibility for more than one kitchen. The U.S. Armed Forces also are a good source of training and experience.

Although curricula may vary, students in these programs usually spend most of their time learning to prepare food through actual practice. They learn to bake, broil, and otherwise prepare food, and to use and care for kitchen equipment. Training programs often include courses in menu planning, determination of portion size, food cost control, purchasing food supplies in quantity, selection and storage of food, and use of leftover food to minimize waste. Students also learn hotel and restaurant sanitation and public health rules for handling food. Training in supervisory and management skills sometimes is emphasized in courses offered by private vocational schools, professional associations, and university programs.

Across the Nation, a number of schools offer culinary courses. The American Culinary Federation has accredited over 100 training programs and offers a number of apprenticeship programs around the country. Typical apprenticeships last three years and combine classroom and work experience. Accreditation is an indication that a culinary program meets recognized standards regarding course content, facilities, and quality of instruction. The American Culinary Federation also certifies pastry professionals, culinary educators, and chefs and cooks at the levels of cook, working chef, executive chef, and master chef. Certification standards are based primarily on experience and formal training.

Important characteristics for chefs, cooks, and food preparation workers include the ability to work as part of a team, a keen sense of taste and smell, and personal cleanliness. Most States require health certificates indicating that workers are free from communicable diseases.

Advancement opportunities for chefs and cooks are better than for most other food and beverage preparation and service occupations. Many chefs and cooks acquire high-paying positions and new cooking skills by moving from one job to another. Besides culinary skills, advancement also depends on ability to supervise less skilled workers and limit food costs by minimizing waste and accurately anticipating the amount of perishable supplies needed. Some chefs and cooks go into business as caterers or restaurant owners, while others become instructors in vocational programs in high schools, community colleges, or other academic institutions. A number of cooks and chefs advance to executive chef positions or supervisory or management positions, particularly in hotels, clubs,

and larger, more elegant restaurants. (See the separate *Handbook* statement on food service managers.)

Job Outlook

Job openings for chefs, cooks, and food preparation workers are expected to be plentiful through 2010. While job growth will create new positions, the overwhelming majority of job openings will stem from the need to replace workers who leave this large occupational group. Minimal educational and training requirements, combined with a large number of part-time positions, make employment as chefs, cooks, and food preparation workers attractive to people seeking a short-term source of income and a flexible schedule. In coming years, these workers will continue to transfer to other occupations or stop working to assume household responsibilities or to attend school full time, creating numerous openings for those entering the field.

Job openings stemming from replacement needs will be supplemented by new openings resulting from employment growth, as overall employment of chefs, cooks, and food preparation workers is expected to increase about as fast as the average for all occupations over the 2000-10 period. Employment growth will be spurred by increases in population, household income, and leisure time that will allow people to dine out and take vacations more often. In addition, growth in the number of two-income households will lead more families to opt for the convenience of dining out.

Projected employment growth, however, varies by specialty. Increases in the number of families and the more affluent, 55-and-older population will lead to more restaurants that offer table service and more varied menus—resulting in faster-than-average growth among higher-skilled restaurant cooks. As more Americans choose more full-service restaurants, employment of fast-food cooks is expected to decline and employment of short-order cooks, most of whom work in fast-food restaurants, is expected to grow more slowly than average. Duties of cooks in fast-food restaurants are limited; most workers are likely to be combined food preparation and serving workers, rather than fast-food cooks. In addition, fast-food restaurants increasingly offer healthier prepared foods, further reducing the need for cooks.

Employment of institution and cafeteria chefs and cooks also will grow more slowly than the average for all occupations. Their employment will not keep pace with the rapid growth in the educational and health services industries—where their employment is concentrated. In an effort to make “institutional food” more attractive to students, staff, visitors, and patients, high schools and hospitals increasingly contract out their food services. Many of the contracted food service companies emphasize simple menu items and employ short-order cooks, instead of institution and cafeteria cooks, reducing the demand for these workers.

Earnings

Wages of chefs, cooks, and food preparation workers depend greatly on the part of the country and the type of establishment in which they are employed. Wages usually are highest in elegant restaurants and hotels, where many executive chefs are employed.

Median hourly earnings of head cooks and chefs were \$12.07 in 2000. The middle 50 percent earned between \$8.98 and \$16.75. The lowest 10 percent earned less than \$7.39, and the highest 10 percent earned more than \$22.77 per hour. Median hourly earnings in the industries employing the largest number of head cooks and chefs in 2000 were:

Miscellaneous amusement and recreation services	\$16.50
Hotels and motels	15.78
Eating and drinking places	11.03

Median hourly earnings of restaurant cooks were \$8.72 in 2000. The middle 50 percent earned between \$7.35 and \$10.33. The lowest 10 percent earned less than \$6.30, and the highest 10 percent earned more than \$12.43 per hour. Median hourly earnings in the industries employing the largest number of restaurant cooks in 2000 were:

Hotels and motels	\$9.97
Miscellaneous amusement and recreation services	9.68
Eating and drinking places	8.57

Median hourly earnings of cooks in fast-food restaurants were \$6.53 in 2000. The middle 50 percent earned between \$5.90 and \$7.53. The lowest 10 percent earned less than \$5.49, and the highest 10 percent earned more than \$8.43 per hour. Median hourly earnings in eating and drinking places, the industry employing the largest number of fast-food cooks, were \$6.52 in 2000.

Median hourly earnings of short-order cooks were \$7.55 in 2000. The middle 50 percent earned between \$6.32 and \$9.20. The lowest 10 percent earned less than \$5.67, and the highest 10 percent earned more than \$10.83 per hour. Median hourly earnings in the industries employing the largest number of short-order cooks in 2000 were:

Hotels and motels	\$8.66
Miscellaneous amusement and recreation services	7.94
Eating and drinking places	7.57
Gasoline service stations	6.87
Grocery stores	6.60

Median hourly earnings of institution and cafeteria cooks were \$8.22 in 2000. The middle 50 percent earned between \$6.70 and \$10.24. The lowest 10 percent earned less than \$5.84, and the highest 10 percent earned more than \$12.53 per hour. Median hourly earnings in the industries employing the largest number of institution and cafeteria cooks in 2000 were:

Hospitals	\$9.37
Nursing and personal care facilities	8.50
Eating and drinking places	8.29
Elementary and secondary schools	7.65
Child day care services	7.52

Median hourly earnings of food preparation workers were \$7.38 in 2000. The middle 50 percent earned between \$6.28 and \$8.81. The lowest 10 percent earned less than \$5.67, and the highest 10 percent earned more than \$10.65 per hour. Median hourly earnings in the industries employing the largest number of food preparation workers in 2000 were:

Elementary and secondary schools	\$8.14
Hospitals	8.12
Grocery stores	7.90
Nursing and personal care facilities	7.56
Eating and drinking places	6.88

Some employers provide employees with uniforms and free meals, but Federal law permits employers to deduct from their employees' wages the cost or fair value of any meals or lodging provided, and some employers do so. Chefs, cooks, and food preparation workers who work full time often receive typical benefits, but part-time workers usually do not.

In some large hotels and restaurants, kitchen workers belong to unions. The principal unions are the Hotel Employees and Restaurant Employees International Union and the Service Employees International Union.

Related Occupations

Workers who perform tasks similar to those of chefs, cooks, and food preparation workers include food processing occupations such as butchers and meat cutters, and bakers.

Sources of Additional Information

Information about job opportunities may be obtained from local employers and local offices of the State employment service.

Career information about chefs, cooks, and other kitchen workers, as well as a directory of 2- and 4-year colleges that offer courses or programs that prepare persons for food service careers, is available from:

► National Restaurant Association, 1200 17th St. NW., Washington, DC 20036-3097. Internet: <http://www.restaurant.org>

For information on the American Culinary Federation's apprenticeship and certification programs for cooks, as well as a list of accredited culinary programs, send a self-addressed, stamped envelope to:

► American Culinary Federation, 10 San Bartola Dr., St. Augustine, FL 32085. Internet: <http://www.acfchefs.org>

For general information on hospitality careers, contact:

► International Council on Hotel, Restaurant, and Institutional Education, 3205 Skipwith Rd., Richmond, VA 23294-4442. Internet: <http://www.chrie.org>

Food and Beverage Serving and Related Workers

(O*NET 35-3011.00, 35-3021.00, 35-3022.00, 35-3031.00, 35-3041.00, 35-9011.00, 35-9021.00, 35-9031.00)

Significant Points

- Most jobs are part time and many opportunities exist for young people—nearly 2 out of 3 food counter and fountain workers are 16 to 19 years old.
- Job openings are expected to be abundant through 2010, reflecting substantial turnover.
- Tips comprise a major portion of earnings; consequently, keen competition is expected for bartender, waiter and waitress, and other jobs in popular restaurants and fine dining establishments where potential earnings from tips are greatest.

Nature of the Work

Whether they work in small, informal diners or large, elegant restaurants, all food and beverage serving and related workers aim to help customers have a positive dining experience in their establishments. These workers greet customers, take food and drink orders, serve food, clean up after patrons, and prepare tables and dining areas.

The largest group of these workers, *waiters and waitresses*, take customers' orders, serve food and beverages, prepare itemized checks, and sometimes accept payments. Their specific duties vary considerably, depending on the establishment where they work. In coffee shops, they are expected to provide fast and efficient, yet courteous service. In fine restaurants, where gourmet meals are accompanied by attentive formal service, waiters and waitresses serve meals at a more leisurely pace and offer more personal service to patrons. For example, servers may recommend a certain wine as a complement to a particular entree, explain how various items on the menu are prepared, or complete preparations on a salad or other special dishes at tableside. Additionally, waiters and waitresses may check the identification of patrons to ensure they meet the minimum age requirement for the purchase of alcohol and tobacco products.