

# Food Processing Occupations

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## Significant Points

- Workers in meatpacking plants have among the highest incidences of injury and illness of all workers.
- Most employees in manual food-processing jobs require little or no training prior to being hired.
- Job growth will be concentrated among lower skilled workers, who are found mostly in manufacturing plants.

## Nature of the Work

Food-processing occupations include many different types of workers who process raw food products into the finished goods sold by grocers or wholesalers, restaurants, or institutional food services. These workers perform a variety of tasks and are responsible for producing many of the food products found in every household.

Butchers and meat, poultry, and fish cutters and trimmers are employed at different stages in the process by which animal carcasses are converted into manageable pieces of meat, known as boxed meat, that are suitable for sale to wholesalers and retailers. Meat, poultry, and fish cutters and trimmers commonly work in animal slaughtering and processing plants, while butchers and meatcutters usually are employed at the retail level. As a result, the nature of these jobs varies significantly.

In animal slaughtering and processing plants, *slaughterers and meatpackers* slaughter cattle, hogs, goats, and sheep and cut the carcasses into large wholesale cuts, such as rounds, loins, ribs, and chucks, to facilitate the handling, distribution, and marketing of meat. In some of these plants, slaughterers and meatpackers also further process the large parts into cuts that are ready for retail use. These workers also produce hamburger meat and meat trimmings, which are used to prepare sausages, luncheon meats, and other fabricated meat products. Slaughterers and meatpackers usually work on assembly lines, with each individual responsible for only a few of the many cuts needed to process a carcass. Depending on the type of cut, they use knives, cleavers, meat saws, bandsaws, or other, often dangerous, equipment.

In grocery stores, wholesale establishments that supply meat to restaurants, and institutional food service facilities, *butchers and meatcutters* separate wholesale cuts of meat into retail cuts or individually sized servings. They cut meat into steaks and chops, shape and tie roasts, and grind beef for sale as chopped meat. Boneless cuts are prepared with the use of knives, slicers, or power cutters, while bandsaws are required to carve bone-in pieces. Butchers and meatcutters in retail food stores also may weigh, wrap, and label the cuts of meat, arrange them in refrigerated cases for display, and prepare special cuts to fill unique orders.

*Poultry cutters and trimmers* slaughter and cut up chickens, turkeys, and other types of poultry. Although the poultry-processing industry is becoming increasingly automated, many jobs, such as trimming, packing, and deboning, are still done manually. As in the animal slaughtering and processing industry, most poultry cutters and trimmers perform routine cuts on poultry as it moves along production lines.

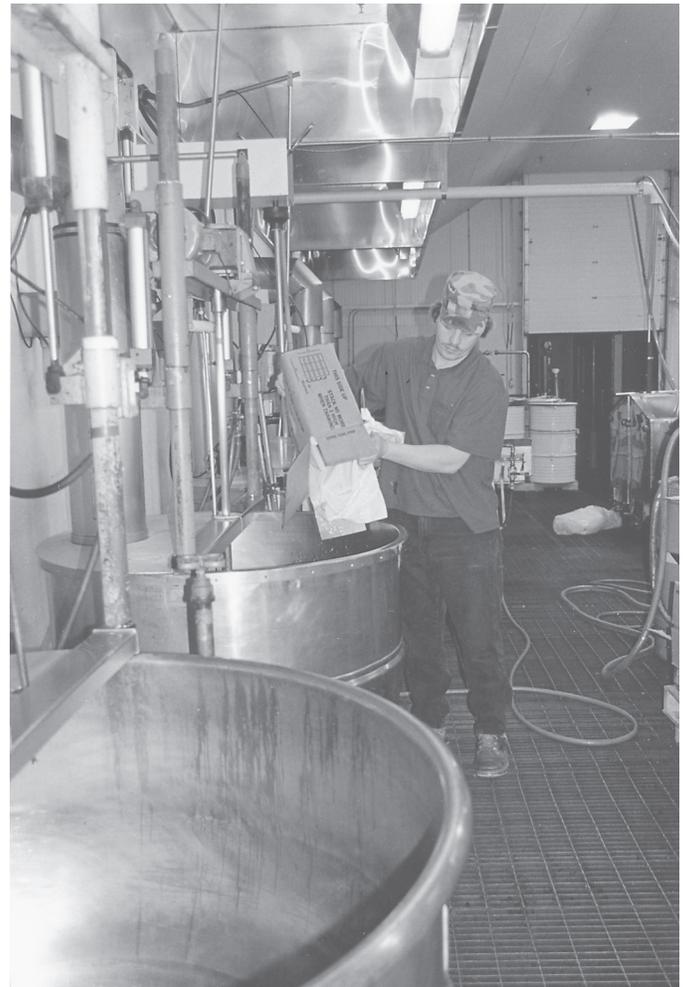
Unlike some of the other occupations just listed, *fish cutters and trimmers*, also called *fish cleaners*, are likely to be employed in both manufacturing and retail establishments. These workers primarily scale, cut, and dress fish by removing the head, scales,

and other inedible portions and cutting the fish into steaks or fillets. In retail markets, they may also wait on customers and clean fish to order.

Meat, poultry, and fish cutters and trimmers also prepare ready-to-heat foods. This often entails filleting meat or fish or cutting it into bite-sized pieces, preparing and adding vegetables, or applying sauces, marinades, or breading.

*Bakers* mix and bake ingredients in accordance with recipes to produce varying quantities of breads, pastries, and other baked goods. Bakers commonly are employed in grocery stores and specialty shops and produce small quantities of breads, pastries, and other baked goods for consumption on premises or for sale as specialty baked goods. In manufacturing, bakers produce goods in large quantities, using high-volume mixing machines, ovens, and other equipment. Goods produced in large quantities usually are available for sale through distributors, grocery stores, or manufacturer's outlets.

Others in food-processing occupations include *food batchmakers*, who set up and operate equipment that mixes, blends, or cooks ingredients used in the manufacture of food products, according to formulas or recipes; *food cooking machine operators and tenders*, who operate or tend cooking equipment such as steam cooking vats, deep-fry cookers, pressure cookers, kettles, and boilers to prepare food products such as meat, sugar, cheese, and grain; and *food and tobacco roasting, baking, and drying machine operators and tenders*, who use equipment to reduce the moisture content of food or tobacco products or to process food in preparation for canning. Some



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of the machines that are used include hearth ovens, kiln driers, roasters, char kilns, steam ovens, and vacuum drying equipment.

### Working Conditions

Working conditions vary by type and size of establishment. In animal slaughtering and processing plants and large retail food establishments, butchers and meatcutters work in large meatcutting rooms equipped with power machines and conveyors. In small retail markets, the butcher or fish cleaner may work in a cramped space behind the meat or fish counter. To prevent viral and bacterial infections, work areas must be kept clean and sanitary.

Butchers and meatcutters, poultry and fish cutters and trimmers, and slaughterer and meatpackers often work in cold, damp rooms, which are refrigerated to prevent meat from spoiling and are damp because meat cutting generates large amounts of blood, condensation, and fat. Cool, damp floors increase the likelihood of slips and falls. In addition, cool temperatures, long periods of standing, and repetitious physical tasks make the work tiring. As a result, butchers and meat, poultry, and fish cutters are more susceptible to injury than are most other workers. In fact, meatpacking plants had one of the highest incidences of work-related injury and illness of any industry in 2002. Nearly 1 in 7 employees in such plants experienced a work-related injury or illness that year.

Injuries include cuts and occasional amputations, which occur when knives, cleavers, or power tools are used improperly. Also, repetitive slicing and lifting often lead to cumulative trauma injuries, such as carpal tunnel syndrome. To reduce the incidence of cumulative trauma injuries, some employers have reduced employee workloads, added prescribed rest periods, redesigned jobs and tools, and promoted increased awareness of early warning signs so that steps can be taken to prevent further injury. Nevertheless, workers in the occupation still face the serious threat of disabling injuries.

Most traditional bakers work in bakeries, cake shops, hot-bread shops, hotels, restaurants, and cafeterias. They also may work in the bakery departments of supermarkets and cruise ships. Bakers may work under hot and noisy conditions. Also, bakers typically work under strict order deadlines and critical time-sensitive baking requirements, both of which can induce stress. Bakers usually work in shifts and may work early mornings, evenings, weekends, and holidays. While many bakers often work as part of a team, they also may work alone when baking particular items. They may supervise assistants and teach apprentices and trainees. Bakers in retail establishments may be required to serve customers.

Other food-processing workers, such as food batchmakers, food and tobacco roasting, baking, and drying machine operators, and food cooking machine operators and tenders, typically work in production areas that are specially designed for food preservation or processing. Food batchmakers, in particular, work in kitchen-type, assembly-line production facilities. Because this work involves food, work areas must meet governmental sanitary regulations. The ovens, as well as the motors of blenders, mixers, and other equipment, often make work areas very warm and noisy. There are some hazards, such as burns, created by the equipment that these workers use. Food batchmakers; food and tobacco roasting, baking, and drying machine operators; and food cooking machine operators and tenders spend a great deal of time on their feet and generally work a regular 40-hour week that may include evening and night shifts.

### Employment

Food-processing workers held 757,000 jobs in 2002. Employment among the various types of food-processing occupations was distributed as follows:

Bakers .....	173,000
Meat, poultry, and fish cutters and trimmers .....	154,000
Butchers and meat cutters .....	132,000
Slaughterers and meat packers .....	128,000
Food batchmakers .....	74,000
All other food processing workers .....	42,000
Food cooking machine operators and tenders .....	34,000
Food and tobacco roasting, baking, and drying machine operators and tenders .....	19,000

About 36 percent of all food-processing workers were employed in animal slaughtering and processing plants. Another 21 percent were employed at grocery stores. Most of the remainder worked in food manufacturing. Butchers, meatcutters, and bakers are employed in almost every city and town in the Nation, while most other food-processing jobs are concentrated in communities with food-processing plants.

### Training, Other Qualifications, and Advancement

Training varies widely among food-processing occupations. However, most manual food-processing workers require little or no training prior to being hired.

Most butchers and poultry and fish cutters and trimmers acquire their skills on the job through formal and informal training programs. The length of training varies significantly. Simple cutting operations require a few days to learn, while more complicated tasks, such as eviscerating slaughtered animals, generally require several months to learn. The training period for highly skilled butchers at the retail level may be 1 or 2 years.

Generally, on-the-job trainees begin by doing less difficult jobs, such as making simple cuts or removing bones. Under the guidance of experienced workers, trainees learn the proper use and care of tools and equipment and how to prepare various cuts of meat. After demonstrating skill with various meatcutting tools, trainees learn to divide carcasses into wholesale cuts and wholesale cuts into retail and individual portions. Trainees also may learn to roll and tie roasts, prepare sausage, and cure meat. Those employed in retail food establishments often are taught operations such as inventory control, meat buying, and recordkeeping. In addition, growing concern about the safety of meats has led employers to offer numerous safety seminars and extensive training in food safety to employees.

Skills that are important to meat, poultry, and fish cutters and trimmers include manual dexterity, good depth perception, color discrimination, and good hand-eye coordination. Physical strength often is needed to lift and move heavy pieces of meat. Butchers and fish cleaners who wait on customers should have a pleasant personality, a neat appearance, and the ability to communicate clearly. In some States, a health certificate is required for employment.

Bakers often start as apprentices or trainees. Apprentice bakers usually start in craft bakeries, while in-store bakeries, such as those in supermarkets, often employ trainees. Bakers need to be skilled in baking, icing, and decorating. They also need to be able to follow instructions, have an eye for detail, and communicate well with others. Knowledge of bakery products and ingredients, as well as mechanical mixing and baking equipment, is important. Many apprentice bakers participate in correspondence study and may work towards a certificate in baking. Working as a baker's assistant or at other activities that involve handling food also is a useful tool for training. The complexity of the skills required for certification as a baker often is underestimated. Bakers need to know about applied chemistry, ingredients and nutrition, government health and sanita-

tion regulations, business concepts, and production processes, including how to operate and maintain machinery. Modern food plants typically use high-speed, automated equipment that often is operated by computers.

Food-machine operators and tenders usually are trained on the job. They learn to run the different types of equipment by watching and helping other workers. Training can last anywhere from a month to a year, depending on the complexity of the tasks and the number of products involved. A degree in the appropriate area—dairy processing for those working in dairy product operations, for example—is helpful for advancement to a lead worker or a supervisory role. Most food batchmakers participate in on-the-job training, usually from about a month to a year. Some food batchmakers learn their trade through an approved apprenticeship program.

Food-processing workers in retail or wholesale establishments may progress to supervisory jobs, such as department managers or team leaders in supermarkets. A few of these workers may become buyers for wholesalers or supermarket chains. Some open their own markets or bakeries. In processing plants, workers may advance to supervisory positions or become team leaders.

### Job Outlook

Overall employment in the food-processing occupations is expected to grow as fast as average for all occupations through 2012. Increasingly, cheaper meat imports from abroad will have a negative effect on domestic employment in many food-processing occupations. Job growth will be concentrated at the manufacturing level, as more cutting and processing of meat shifts from retail stores to food-processing plants. Nevertheless, job opportunities should be available at all levels of the occupation due to the need to replace experienced workers who transfer to other occupations or leave the labor force.

As the Nation's population grows, the demand for meat, poultry, and seafood should continue to increase. Successful marketing by the poultry industry is likely to increase demand for chicken and ready-to-heat products. Similarly, the development of prepared food products that are lower in fat and more nutritious promises to stimulate the consumption of red meat. The trend toward preparing case-ready meat at the processing level also should contribute to demand for animal slaughterers and meatpackers.

Employment growth of lesser skilled meat, poultry, and fish cutters and trimmers—who work primarily in animal slaughtering and processing plants—is expected to increase about as fast as the average for all occupations in coming years. With the growing popularity of labor-intensive, ready-to-heat poultry products, demand for poultry workers should remain firm. Fish cutters also will be in demand, as the task of preparing ready-to-heat fish goods gradually shifts from retail stores to processing plants. Also, advances in fish farming, or “aquaculture,” should help meet the growing demand for fish and produce opportunities for fish cutters.

Employment of more highly skilled butchers and meatcutters, who work primarily in retail stores, is expected to continue to decline. Automation and the consolidation of the animal slaughtering and processing industries are enabling employers to transfer employment from higher paid butchers to lower wage slaughterers and meatpackers in meatpacking plants. At present, most red meat arrives at grocery stores partially cut up, but a growing share of meat is being delivered prepackaged, with additional fat removed, to wholesalers and retailers. This trend is resulting in less work and, thus, fewer jobs for retail butchers.

While high-volume production equipment limits the demand for bakers in manufacturing, overall employment of bakers is expected to increase about as fast as average due to growing numbers of large wholesale bakers, in-store and specialty shops, and traditional bakeries. In addition to the growing numbers of cookie, muffin, and cinnamon roll bakeries, the numbers of specialty bread and bagel shops have been growing, spurring demand for bread and pastry bakers.

Employment of food batchmakers, food and tobacco cooking and roasting machine operators and tenders, is expected to grow more slowly than average. As more of this work is being done at the manufacturing level rather than at the retail level, potential employment gains will be offset by productivity gains from automated cooking and roasting equipment. All other food processing workers should experience about as fast as average growth.

### Earnings

Earnings vary by industry, skill, geographic region, and educational level. Median annual earnings of butchers and meatcutters were \$25,500 in 2002. The middle 50 percent earned between \$19,440 and \$34,140. The highest-paid 10 percent earned more than \$42,330 annually, while the lowest 10 percent earned less than \$15,490. Butchers and meatcutters employed at the retail level typically earn more than those in manufacturing. Median annual earnings in the industries employing the largest numbers of butchers and meatcutters in 2002 were as follows:

Other general merchandise stores .....	\$30,670
Grocery stores .....	27,230
Specialty food stores .....	22,280
Animal slaughtering and processing .....	20,630

Meat, poultry, and fish cutters and trimmers typically earn less than butchers and meatcutters. In 2002, median annual earnings for these lower skilled workers were \$17,820. The middle 50 percent earned between \$15,800 and \$21,170. The highest 10 percent earned more than \$24,840, while the lowest 10 percent earned less than \$14,270. Median annual earnings in the industries employing the largest numbers of meat, poultry, and fish cutters and trimmers in 2002 are shown in the following tabulation:

Grocery stores .....	\$20,900
Grocery and related product wholesalers .....	18,440
Animal slaughtering and processing .....	17,710
Seafood product preparation and packaging .....	15,660

Median annual earnings of bakers were \$20,580 in 2002. The middle 50 percent earned between \$16,420 and \$26,610. The highest 10 percent earned more than \$33,470, and the lowest 10 percent earned less than \$14,100. Median annual earnings in the industries employing the largest numbers of bakers in 2002 are given in the following tabulation:

Bakeries and tortilla manufacturing .....	\$22,030
Other general merchandise stores .....	21,650
Grocery stores .....	20,470
Full-service restaurants .....	19,650
Limited-service eating places .....	17,830

Median annual earnings of food batchmakers were \$21,920 in 2002. The middle 50 percent earned between \$16,720 and \$28,740. The highest 10 percent earned more than \$35,110, and the lowest

10 percent earned less than \$13,930. Median annual earnings in the industries employing the largest numbers of food batchmakers in 2002 are presented in the following tabulation:

Dairy product manufacturing .....	\$26,330
Fruit and vegetable preserving and specialty food manufacturing .....	22,980
Other food manufacturing .....	22,850
Bakeries and tortilla manufacturing .....	22,530
Sugar and confectionary product manufacturing .....	21,390

In 2002, median annual earnings for slaughterers and meatpackers were \$20,370. The middle 50 percent earned between \$17,650 and \$22,900. The highest 10 percent earned more than \$26,270, and the lowest 10 percent earned less than \$15,350. Median annual earnings in animal slaughtering and processing, the industry employing the largest number of food processing workers, were \$20,410 in 2002.

Median annual earnings for food cooking machine operators and tenders were \$21,860 in 2002. The middle 50 percent earned between \$16,900 and \$28,160. The highest 10 percent earned more than \$34,890, and the lowest 10 percent earned less than \$14,380. Median annual earnings in fruit and vegetable preserving and specialty food manufacturing, the industry employing the largest number of food cooking machine operators and tenders, were \$25,320 in 2002.

In 2002, median annual earnings for food and tobacco roasting, baking, and drying machine operators and tenders were \$23,260 and for all other food processing workers, \$19,410.

Food-processing workers generally received typical benefits, including pension plans for union members or those employed by grocery stores. However, poultry workers rarely earned substantial benefits. In 2002, 25 percent of all butchers and other meat, poultry, and fish processing workers were union members or were covered by a union contract. Sixteen percent of all bakers and 18 percent of all food batchmakers also were union members or were covered by a union contract. Many food-processing workers are members of the United Food and Commercial Workers International Union.

### **Related Occupations**

Food-processing workers must be skilled at both hand and machine work and must have some knowledge of processes and techniques that are involved in handling and preparing food. Other occupations that require similar skills and knowledge include chefs, cooks, and food preparation workers.

### **Sources of Additional Information**

State employment service offices can provide information about job openings for food-processing occupations.