

# Farming, Fishing, and Forestry Occupations

## Agricultural Workers

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### Significant Points

- Farmworkers comprise 9 out of 10 agricultural workers.
- Duties and working conditions vary widely, from working in nurseries, to producing crops and raising livestock outdoors, to inspecting agricultural products in plants.
- Most workers learn through short-term on-the-job training; agricultural inspectors need work experience or a college degree in a related field.
- Employment is projected to grow more slowly than average.

### Nature of the Work

Agricultural workers have a range of responsibilities, from planting, cultivating, grading, and sorting agricultural products to inspecting agricultural commodities and facilities. They may work with food crops, animals, or trees, shrubs, and plants. Depending on their jobs, they may work outdoors or indoors.

Agricultural inspectors are employed by Federal and State governments to inspect agricultural commodities, processing equipment and facilities, and fish and logging operations for compliance with laws and regulations governing health, quality, and safety. They inspect horticultural products or livestock to detect harmful disease or infestations. To assist in eradicating disease, they also inspect livestock to help determine the effectiveness of medication and feeding programs. They may collect samples of pests, or of suspected diseased animals or materials, and send such samples to a laboratory for identification and analysis.

Graders and sorters, agricultural products work to ensure the quality of the agricultural commodities that reach the market. They grade, sort, or classify unprocessed food and other agricultural products by size, weight, color, or condition.

*Farmworkers and laborers, crop, nursery, and greenhouse* manually plant, maintain, and harvest food crops; apply pesticides, herbicides, and fertilizers to crops; and cultivate the plants used to beautify landscapes. They prepare nursery acreage or greenhouse beds for planting; water, weed, and spray trees, shrubs, and plants; cut, roll, and stack sod; stake trees; tie, wrap, and pack flowers, plants, shrubs, and trees to fill orders; and dig up or move field-grown and containerized shrubs and trees. Additional duties include planting seedlings, transplanting saplings, and watering and trimming plants.

Farmworkers, farm and ranch animals care for live farm, ranch, or aquacultural animals that may include cattle, sheep, swine, goats, horses and other equines, poultry, finfish, shellfish, and bees. They also tend to animals raised for animal products, such as meat, fur, skins, feathers, eggs, milk, and honey. Duties may include feeding, watering, herding, grazing, castrating, branding, de-beaking, weighing, catching, and loading animals. They also may maintain records on animals, examine animals to detect diseases and injuries, and assist in birth deliveries and administer medications, vaccinations,



*On dairy farms, agricultural workers milk cows two or three times a day.*

or insecticides as appropriate. Daily duties include cleaning and maintaining animal housing areas.

Farmworkers, agricultural production may have a wide range of duties, some of which overlap duties of other farmworkers described above. They tend to livestock and poultry; plant and harvest crops; and apply pesticides, herbicides, and fertilizers to crops. These farmworkers also repair farm buildings and fences. Other duties may include operating milking machines and other dairy processing equipment, supervising seasonal help, irrigating crops, and hauling livestock products to market. Some farmworkers operate tractors, fertilizer spreaders, haybines, raking equipment, balers, combines, threshers, and other equipment used for plowing, sowing, and harvesting. They also may help with the sorting, storage, and working in post-harvest treatment of crops.

### Working Conditions

Working conditions vary widely. For example, some inspectors do field work, and may travel frequently. Federal food inspectors may work in highly mechanized plants or with poultry or livestock in confined areas with extremely cold temperatures and slippery floors. The duties often require working with sharp knives, moderate lifting, and walking or standing for long periods. Many inspectors

work long and often irregular hours. Inspectors may find themselves in adversarial roles when the organization or individual being inspected objects to the inspection process or its potential consequences.

Graders and sorters may work with similar products for an entire shift, or may be assigned a variety of items. They may be on their feet all day and may have to lift heavy objects, whereas others may sit during most of their shift and do little strenuous work. Some graders work in clean, air-conditioned environments, suitable for carrying out controlled tests. Some may work evenings or weekends because of the perishable nature of the products. Overtime may be required to meet production goals.

For farmworkers in nurseries, work is seasonal; spring and summer are the busier times of the year and hours in the cold weather tend to be fewer. These workers enjoy relatively comfortable working conditions while tending to plants indoors. However, during the busy seasons when landscape contractors need plants, work schedules may be more demanding, requiring weekend work. Moreover, the transition from warm weather to cold weather means that nursery workers might have to work overtime with little notice in order to move plants indoors in case of a frost.

Farmworkers enjoy a somewhat independent lifestyle working with animals or on the land. Benefits include the wide-open physical expanse, the variability of day-to-day work, and the rural setting. However, hours are generally uneven and often long; work cannot be delayed when crops must be planted and harvested, or when animals must be sheltered and fed. Weekend work is common, and farmworkers may work a 6- or 7-day week during planting and harvesting seasons. About 1 out of 5 agricultural workers had variable schedules, compared with fewer than 1 in 10 workers in all occupations combined. As much of the work is seasonal in nature, many workers also obtain other employment. Migrant farmworkers, who move from location to location as crops ripen, live an unsettled lifestyle, which can be stressful.

Much farm and ranch work takes place outdoors in all kinds of weather and is physical in nature. Harvesting fruits and vegetables, for example, may require much bending, stooping, and lifting. Some field workers may lack adequate sanitation facilities, and their drinking water may be limited. The year-round nature of much livestock production work means that ranch workers must be out in the heat of summer, as well as the cold of winter. Those who work directly with animals risk being bitten or kicked.

Farmworkers in crop production risk exposure to pesticides and other potentially hazardous chemicals that are sprayed on crops or plants. However, exposure is relatively minimal if safety procedures are followed. Those who work on mechanized farms must take precautions when working with tools and heavy equipment to avoid injury.

### Employment

Agricultural workers held 987,000 jobs in 2000. Farmworkers held 909,000 jobs, graders and sorters 63,000 jobs, and agricultural inspectors 15,000 jobs. More than 60 percent of all agricultural workers held jobs in crop and livestock production and almost 21 percent held jobs in agricultural services, mostly for farm labor contractors. About 15 percent of farmworkers were part-time employees, about the same proportion as for workers overall.

### Training, Other Qualifications, and Advancement

Becoming an agricultural inspector requires relevant work experience, or a college degree in a field such as biology or agricultural science. Inspectors are trained in the applicable laws or inspection procedures through some combination of classroom and on-the-job training. In general, people who want to enter this occupation should

be responsible, like detailed work, and be able to communicate well. Federal Government inspectors whose job performance is satisfactory advance through a career ladder to a specified full-performance level. For positions above this level, usually supervisory positions, advancement is competitive and based on agency needs and individual merit. Advancement opportunities in State and local governments and in the private sector are often similar to those in the Federal Government.

For graders and sorters, training requirements vary on the basis of their responsibilities. For those who perform tests on various agricultural products, a high school diploma is preferred and may be required. Simple jobs may be filled by beginners provided with short-term on-the-job training.

Farmworkers learn through short-term on-the-job training. Fifty-six percent of these workers do not have a high school diploma, compared with only about 13 percent of all workers in the economy. The proportion of workers without a high school diploma is particularly high in the crop production sector, where there are more labor-intensive establishments employing migrant farmworkers.

In nurseries, entry-level workers must be able to follow directions and learn proper planting procedures. If driving is an essential part of a job, employers look for applicants with a good driving record and some experience driving a truck. Workers who deal directly with customers must get along well with people. Employers also look for responsible, self-motivated individuals, because nursery workers sometimes work with little supervision.

Advancement depends on motivation and experience. Farmworkers who work hard and quickly, have good communication skills, and take an interest in the business may advance to crew leader or other supervisory positions. Some agricultural workers may aspire to become farm, ranch, and other agricultural managers, or farmers or ranchers themselves. (Farmers, ranchers, and agricultural managers are discussed in a separate *Handbook* statement.) In addition, their knowledge of raising and harvesting produce may provide an excellent background for becoming purchasing agents and buyers of farm products. Knowledge of working a farm as a business can help agricultural workers become farm and home management advisors. Those who earn a college degree in agricultural science could become agricultural and food scientists.

### Job Outlook

Overall employment of agricultural workers is projected to grow more slowly than the average for all occupations over the 2000-10 period—primarily reflecting the outlook for farmworkers, who constitute 9 out of 10 agricultural workers. Low wages, the physical demands of the work, and high job turnover should result in abundant job opportunities.

Continued consolidation of farms and technological advancements in farm equipment will dampen employment growth. Nevertheless, farms remaining in operation will still need workers to help with farms' operations, and farm labor contractors' employment of farmworkers is expected to increase rapidly. Farmworkers in landscape and horticultural services should have among the most rapid job growth, reflecting the demand for agricultural services such as landscaping.

Slower-than-average employment growth also is expected for agricultural inspectors, as governments at all levels are not expected to hire significant numbers of new inspectors and regulators. Similarly, slow growth is expected for graders and sorters, reflecting projections for the industries in which they work.

### Earnings

Median weekly earnings of farmworkers were \$309 in 2000. The middle 50 percent earned between \$250 and \$404. The lowest 10

percent earned less than \$205, and the highest 10 percent earned more than \$526.

Median hourly earnings of graders and sorters, agricultural products were \$7.11 in 2000. The middle 50 percent earned between \$6.34 and \$8.78. The lowest 10 percent earned less than \$5.87, and the highest 10 percent earned more than \$11.18.

Median hourly earnings of agricultural inspectors were \$13.75 in 2000. The middle 50 percent earned between \$10.61 and \$17.85. The lowest 10 percent earned less than \$8.79, and the highest 10 percent earned more than \$21.91.

Few agricultural workers are members of unions.

### Related Occupations

The duties of farmworkers who perform outdoor labor are related to the work of fishers and fishing vessel operators; forest, conservation, and logging workers; and grounds maintenance workers. Farmworkers who work with farm and ranch animals perform work related to that of animal care and service workers. The work of agricultural inspectors and graders and sorters is related to work performed by inspectors, testers, sorters, samplers, and weighers in manufacturing industries.

### Sources of Additional Information

Information on jobs as agricultural workers is available from:

► National FFA Organization, The National FFA Center, Career Information Requests, P.O. Box 68690, Indianapolis, IN, 46268-0960. Internet: <http://www.ffa.org>

Information on farmworker jobs is available from:

► The New England Small Farm Institute, 275 Jackson St., Belchertown, MA 01007. Internet: <http://www.smallfarm.org/newoof/companions.html>

Information on obtaining a position as an agricultural inspector with the Federal Government is available from the Office of Personnel Management (OPM) through a telephone-based system. Consult your telephone directory under U.S. Government for a local number or call (912) 757-3000; Federal Relay Service: (800) 877-8339. The first number is not tollfree, and charges may result. Information also is available from the OPM Internet site: <http://www.usajobs.opm.gov>

## Fishers and Fishing Vessel Operators

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### Significant Points

- Over 60 percent of the workers are self-employed, among the highest proportion in the workforce.
- Many jobs require strenuous work and long hours, and provide only seasonal employment.
- Employment is projected to decline, due to depletion of fish stocks and new Federal and State laws restricting both commercial and recreational fishing.

### Nature of the Work

Fishers and fishing vessel operators catch and trap various types of marine life for human consumption, animal feed, bait, and other uses. (Aquaculture—the raising and harvesting for commercial purposes of fish and other aquatic life in ponds or confined bodies of water—is covered in the *Handbook* statement on farmers, ranchers, and agricultural managers.)

Fishing hundreds of miles from shore with commercial fishing vessels—large boats capable of hauling a catch of tens of thousands

of pounds of fish—requires a crew including a captain, or skipper, a first mate and sometimes a second mate, boatswain (called a deckboss on some smaller boats), and deckhands with specialized skills.

The *fishing boat captain* plans and oversees the fishing operation—the fish to be sought, the location of the best fishing grounds, the method of capture, the duration of the trip, and the sale of the catch.

The captain ensures the fishing vessel is seaworthy; oversees the purchase of supplies, gear, and equipment such as fuel, netting, and cables; obtains the required fishing permits and licenses; and hires qualified crew members and assigns their duties. The captain plots the vessel's course, using navigation instruments and aids such as compasses, sextants, and charts, in addition to electronic navigational equipment such as autopilots, loran systems, and satellite navigation systems. Ships also use radar to avoid obstacles and depth sounders to indicate the water depth and the existence of marine life between the vessel and sea bottom. Sophisticated tracking technology allows captains to better locate and analyze schools of fish. The captain directs the fishing operation through the officers, and records daily activities in the ship's log. Upon returning to port, the captain arranges for the sale of the catch—directly to buyers or through a fish auction—and ensures that each crew member receives the prearranged portion of adjusted net proceeds from the sale of the catch. Some captains have begun buying and selling fish via the Internet; and as electronic commerce grows as a method to find buyers for fresh catch, more captains may use computers.

The *first mate*—the captain's assistant, who must be familiar with navigation requirements and the operation of all electronic equipment—assumes control of the vessel when the captain is off duty. Duty shifts, called watches, usually last 6 hours. The mate's regular duty, with the help of the boatswain and under the captain's oversight, is to direct the fishing operations and sailing responsibilities of the deckhands. These include the operation, maintenance, and repair of the vessel, and the gathering, preservation, stowing, and unloading of the catch.

The *boatswain*, a highly experienced deckhand with supervisory responsibilities, directs the *deckhands* as they carry out the sailing and fishing operations. Before departure, the boatswain directs the deckhands to load equipment and supplies, either by hand or with hoisting equipment, and to untie lines from other boats and the dock. When necessary, boatswains repair fishing gear, equipment, nets, and accessories. They operate the fishing gear, letting out and pulling in nets and lines. They extract the catch such as pollock, flounder, menhaden, and tuna, from the nets or lines' hooks. Deckhands use dip nets to prevent the escape of small fish and gaffs to facilitate the landing of large fish. They then wash, salt, ice, and stow away the catch. Deckhands also must ensure that decks are clear and clean at all times and the vessel's engines and equipment are kept in good working order. Upon return to port, they secure the vessel's lines to and from the docks and other vessels. Unless "lumpers" (laborers or longshore workers) are hired, the deckhands unload the catch.

Large fishing vessels that operate in deep water generally have technologically advanced equipment, and some may have facilities on board where the fish are processed and prepared for sale. Such vessels are equipped for long stays at sea and can perform the work of several smaller boats.

Some full-time and many part-time fishers work on small boats in relatively shallow waters, often in sight of land. Navigation and communication needs are vital and constant for almost all types of boats. Crews are small—usually only one or two people collaborate on all aspects of the fishing operation. This may include placing gill nets across the mouths of rivers or inlets, entrapment nets in bays and lakes, or pots and traps for fish or shellfish such as