

## Careers in Horticulture and Related Fields

Horticulture is an applied science dealing with fruits, vegetables, and ornamentals. It is an extremely diversified field with nearly unlimited career opportunities in a variety of job settings.

The majority of horticultural positions require a minimum of either a two- or four-year degree. In some careers, however, educational requirements can vary greatly, depending on the level of expertise required for the position. Some entry level positions provide on-the-job training and require only a high school diploma, while other positions within that same career may require specialized technical or professional training.

The following list is meant to provide basic information on some of the more common careers in horticulture and horticulture-related fields.

### Agricultural Business Consultant

Evaluates agricultural businesses with the goal of increasing productivity, efficiency, and profits. Assists in establishing budgets. Provides advice on taxes, estate planning, and other financial issues. May be self-employed or work for financial consulting firms and agribusinesses. Requires a four-year degree in agricultural business or agricultural education.

### Arboretum/Botanical Garden/ Horticultural Garden Worker

Involves planting and maintaining plant collections in naturalized, systematic, or aesthetic arrangements. May

**Crop Diversification  
& Biofuel Research  
Education Center**



also propagate plants, teach, and/or conduct research. Employed by arboreta, botanical gardens, city parks, colleges/universities, historical sites, nature preserves, public and private gardens, and recreational areas. Wide range of educational requirements.

### Arborist/Urban Forester/Tree Service Technician

Concerned with all aspects of the care, protection, and maintenance of woody plants, especially trees, in urban settings. Employed by arboreta, botanical gardens, colleges/universities, consulting firms, Cooperative Extension, government agencies, landscape maintenance firms, large private estates, parks departments, research institutions, resorts, theme parks, tree nurseries, tree service companies, and utility companies. Wide range of educational requirements. Voluntary certification available through International Society of Arboriculture.

## **Botanist/Plant Biologist**

Studies the form and function of plants. Most are employed by educational institutions and government agencies. Others may be employed by arboreta, biological supply companies, biotechnology firms, botanical gardens, chemical companies, food companies, fruit growers, research institutions, and seed companies. Requires a minimum of a four-year degree.

## **Business Sales Representative**

Promotes, markets, and distributes agriculturally related products to retail or wholesale businesses and growers. May work for companies that manufacture or sell chemicals, fertilizers, equipment, or horticultural supplies, as well as seed and plant suppliers. Wide range of educational requirements.

## **Communications**

Involves one or more forms of mass media. Types of positions include agriculture/farm news director, book/magazine author, editor, journalist, photographer, public relations, scientific writer, technical illustrator, videographer, and Web designer. Employment opportunities include agribusiness firms, newspapers, radio/TV stations, and trade/garden magazines. Wide range of educational requirements.

## **Consultant**

Provides expert horticultural advice to businesses and growers. May specialize in one area; e.g. nursery crops. Many are self-employed; others work for equipment companies, landscape firms, and pesticide companies. Requires a minimum of a four-year college degree.

## **Educator**

Teaches horticulture or related subjects at colleges, high schools, junior colleges, technical schools, universities, and vocational schools. Requires a minimum of a Bachelors Degree or Masters Degree. Ph.D. required for teaching at the college or university level.

## **Enologist/Oenologist**

Studies the science of wine and winemaking. Job types include operating machinery, picking grapes, teaching, and research, as well as winemaker. May be hired by colleges/universities, wineries, and grape producers. Wide range of educational requirements.

## **Extension Agent**

Develops and coordinates programs to promote agriculture in the county. Involves research (such as field trials and test demonstrations) and providing educational opportunities for growers. Employed by land grant universities. Requires a minimum of a four-year college degree.



## **Extension Specialist**

Develops and coordinates programs to promote horticulture in their state. Provides educational opportunities for Extension agents and conducts applied research. May also have teaching responsibilities at the university. Employed by land grant universities. Requires a Ph.D.

## **Floriculturist**

A general term for horticulturists who specialize in cut flowers, bedding plants, and potted plants. May be involved in marketing floral supplies and products, teaching, or conducting research. Employed by colleges/universities, florists, garden centers, producers, and technical schools. Wide range of educational requirements.

## **Florist/Floral Designer**

Floriculturists who design flower and foliage plant arrangements. May also care for and sell live or dried floral material. Positions in florist shops and floral retail businesses; also large grocery stores and retail chains with floral departments. Wide range of educational requirements.



## **Food Scientist/Technician**

Involved in every aspect of food production and processing from farm to table. Concerned with such issues as food safety, quality, and nutrition; developing new food products; and educating consumers. Employed by food processing companies, government agencies, and universities. Typical positions include food inspector, quality assurance specialist, marketing representative, researcher, and technician. Requires a college degree.

## **Garden Center Owner/Manager/Worker**

Sells landscape plants, tools, and supplies in a retail outlet. Provides plant information to customers. Positions include field worker, garden center owner, greenhouse worker, manager, and sales clerk. Wide range of educational requirements.

## **Greenhouse Manager/Worker**

Plants, cultivates, manages, and harvests greenhouse crops. May be hired by commercial greenhouses or landscape companies. Wide range of educational requirements.

## **Grower/Plant Producer/Farmer**

Produces horticultural crops for retail or wholesale markets. Works on and/or owns a greenhouse, nursery, orchard, sod farm, vegetable farm, vineyard, etc. May be an independent grower or be employed by other producers. Wide range of educational requirements.

## **Horticultural Therapist**

Uses plants and horticultural activities to improve emotional, mental, and/or physical well-being of patients. Works as part of a team consisting of other health-care professionals, rehabilitation specialists, and/or social workers. May work with mentally disabled, emotionally disabled, senior groups, inner city youth, and prisoners. Employed by hospitals, nursing homes, prisons, schools, and rehabilitation centers. Requires specialized training in a post-secondary program accredited by the American Horticultural Therapy Association.

## **Interior Landscaping**

Involves designing, installing, and maintaining interior plantings in private or public buildings. May be self-employed or work for landscape or interior design companies. Wide range of educational requirements.

## **Irrigation Specialist**

Sells, installs, operates, and repairs irrigation systems at various locations, such as athletic fields, farms, golf courses, greenhouses, and nurseries. Requires a two- or four-year college degree in grounds management, landscape design, or a closely related field.

## **Landscape Architect**

Plans and designs exterior landscapes for parks, recreational areas, campuses, industrial sites, institutional grounds, shopping malls, and other large projects. May be self-employed or work for developmental companies, government agencies, landscape architectural firms, or resorts. A four-year college degree is required for most

entry level positions; however, some positions require a graduate degree. State registration or certification required.

### **Landscape Construction**

Installs ornamental plant material, turfgrass, and structural landscape features according to plans from a landscape designer or landscape architect. Employed by a landscape contractor firm or landscape nursery. Wide range of educational requirements.

### **Landscape Designer**

Plans and designs exterior landscapes for homes, estates, and small commercial buildings. Generally involved in smaller projects, compared to a landscape architect. May be self-employed or work for landscape firms. Requires a minimum of a two-year college or technical degree.

### **Landscape Maintenance/Landscape Gardener/Groundskeeper/Grounds Manager**

Involves planting and maintaining private and public landscapes, gardens, and lawns. Employment opportunities exist at amusement parks, cemeteries, golf courses, parks, lawn and garden service companies, public grounds, racetracks, recreation and sports facilities, and university campuses. A two- or four-year college degree is recommended.

### **Lawn Care Specialist**

Home lawn maintenance, including mowing grass, seeding lawns, applying pesticides, and making fertilizer applications. Generally employed by lawn care companies, but may also work for landscape firms or government agencies. Some serve as independent contractors. Wide range of educational requirements.

### **Marketing**

Involves all aspects of marketing and promoting horticultural crops or products, including improving methods and equipment used in grading, packaging, storage, and shipping.

May be employed by processing companies, producers, and marketing organizations. Post-secondary training is required.

### **Nurseryman/Nursery Manager/ Nursery Worker**

Plants, transplants, maintains, and harvests nursery crops. May be involved in grafting and propagating plants. Job opportunities at greenhouses, landscaping companies, and wholesale or retail nurseries. Wide range of educational requirements.

### **Plant Breeder/Geneticist**

Produces new and improved plant varieties. Positions with arboreta, biotechnology firms, botanical gardens, colleges/universities, consulting firms, government agencies, and research and development departments in large corporations. Requires a four-year college degree for entry level positions and a graduate degree for advanced positions.

### **Plant Diagnostician**

Specialists who attempt to determine the cause of various plant problems, which can include plant diseases, insects, and cultural problems. Provides pest management solutions. May be employed by colleges/universities, the Cooperative Extension Service, greenhouses, and large nurseries. Requires post-secondary training.

### **Plant Inspector**

Inspects plants in commercial nurseries, garden centers, orchards, field plantings, as well as county, state, or national entry/exit points, to ensure material is free of specific insects or diseases. Generally federal or state employees. Requires a four-year degree or graduate degree.

### **Plant Pathologist**

Studies plant diseases, their cause, and their management. May be involved in teaching, research, diagnostic work, or agribusiness sales. Some serve as private consultants, while others may be employed by colleges/universities, the

Cooperative Extension Service, industrial firms, government agencies, pesticide companies, and regulatory services. A four-year college degree is required for technical positions, while a graduate degree is essential for more advanced positions.

### **Plant Propagator**

Propagates new plant material using various techniques (e.g. grafting, seed production, tissue culture, and vegetative propagation). Employed by arboreta, botanical gardens, greenhouses, propagation nurseries, and universities. Wide range of educational requirements.

### **Pomologist**

Specializes in the production and marketing of tree fruits, tree nuts, and small fruits. May be an independent grower or employed by colleges/universities, food processing companies, and research institutions. Wide range of educational requirements.

### **Researcher**

Conducts experiments, studying various aspects of plant cultivation, propagation, production, pest control, etc. Basic and/or applied research. Employed by arboreta, chemical companies, colleges/universities, experiment stations, government agencies, private industry, public gardens, research institutions, and seed companies. Requires a graduate degree.



### **Sales Clerk/Sales Manager**

Coordinates sales of horticultural crops and products. Provides information and advice to customers. Employed by floral shops, garden centers, nurseries, and other retail outlets. Wide range of educational requirements.

### **Technician**

Provides technical assistance to professionals, such as arborists, foresters, landscape architects,

and researchers. Employed by arboreta, botanical gardens, chemical companies, colleges/universities, government agencies, research and development departments in large corporations, research firms, and seed companies. Requires a minimum of a four-year college degree; however, some positions require a graduate degree.

### **Tree Assessors**

Arborists who estimate tree values and the cost of tree damage for insurance claims. Employed by insurance companies. Requires post-secondary training.

### **Turfgrass Management**

Develops and maintains turf areas, such as those at commercial sites, golf courses, sod farms, and sports fields. Types of positions include golf course superintendent, golf course manager, greenskeeper, and sod farmer. May work for athletic fields, golf courses, government agencies, landscaping companies, lawn care companies, and sod farms. Requires a two- or four-year college degree in turfgrass management.

### **Viticulturist**

Studies grape production for wine, juice, raisins, and other grape products. Employers include companies manufacturing grape products, colleges/universities, vineyards, and wineries. Requires a four-year college degree.

### **Related Careers**

Ag Economist	Forest Ranger
Ag Engineer	Habitat Restoration Specialist
Agronomist	Naturalist
Conservationist	Park Manager
Ecologist	Park Ranger
Entomologist	Plant Physiologist
Environmental Engineer/Scientist	Silviculturist
Farm Business Manager	Soil Scientist
Forester	Water Quality Specialist
	Weed Scientist

## Selected Resources

- Agripedia Careers in Agriculture (University of Kentucky)  
<http://www.ca.uky.edu/agripedia/AGMANIA/CAREER/>
- American Horticultural Therapy Association  
<http://www.ahta.org/>
- Career Search (Schools in the USA)  
[http://www.schoolsintheusa.com/career\\_search.cfm](http://www.schoolsintheusa.com/career_search.cfm)
- Careers in Agricultural Science (Florida Department of Agriculture)  
<http://www.florida-agriculture.com/consumers/careers.htm>

- Careers in Horticulture (American Society of Horticultural Science)  
[http://ashs.org/index.php?option=com\\_content&view=section&id=9&Itemid=66](http://ashs.org/index.php?option=com_content&view=section&id=9&Itemid=66)
- Careers in Plant Pathology (American Phytopathological Society)  
<http://www.apsnet.org/careers/careersinplantpathology/Pages/default.aspx>
- Horticulture and Landscape Design Career Guide (Vocational Information Center)  
<http://www.khake.com/page21.html>

---

*Reviewed by Jack Buxton, Professor (Issued 2004); Reviewed by Christy Cassady, Extension Specialist (Reviewed 2008; Revised 2011)*

---

*Photos by Christine MacAlpine, Texas A & M (pg. 1); Steve Patton, University of Kentucky Agricultural Communications (pg. 2); Public Domain, Wikimedia Commons (pg. 3); and Matt Barton, University of Kentucky Agricultural Communications (pg. 5)*

**November 2011**

---

For additional information, contact your local [County Extension](#) agent