

# Career Opportunities for Majors in **Plant Sciences**

The Cornell Plant Sciences program prepares students for careers or further study in areas related to research or teaching about plants, or the growing of plants as food or fiber (field crops, vegetables, fruit or vineyards), turfgrass, ornamental plant production, pest management, plant breeding, plant pathology and plant protection.

## **Job requirements**

A bachelor's degree is often beneficial, or required, for employment in the horticultural or farm industries, as well as for those interested in laboratory research-assistant positions, technical assistants in government, museums, and horticultural or educational staff at botanical gardens. A master's degree is often required for many advanced positions in the scientific field, as well as for extension (agricultural or horticultural advising) or coordinators of educational programs in public garden settings. A Ph.D. is required of most research and teaching at the college/university level, and often for research-leadership or management positions in industry, government, or the public garden arena.

## **Opportunities & Employers**

- Private Industry: Farms, nurseries, fruit growers, garden centers, landscape contractors, wineries, golf courses, chemical and pesticide companies, lumber and paper industries, seed and nursery companies, fermentation industries, biotechnology firms and biological supply houses.
- Education: teaching in schools, colleges, universities, museums and botanical gardens. Colleges and universities employ the majority of basic plant scientists as teachers and/or researchers.
- Government: Federal Agencies: plant scientists are employed in federal agencies such as the U.S. Department of Agriculture and its branches, including the Poisonous Plant Research Laboratory, Medical Plant Resources Laboratory, Germplasm Resources Laboratory, Animal and Plant Health Inspection Service, National Arboretum and the U.S. Forest Service, the U.S. Department of the Interior (including the National Park Service and the U.S. Geological Survey), Public Health Service, N.A.S.A., Smithsonian and the Environmental Protection Agency.
- Government: State Agencies: all 50 states employ plant scientists in agencies with similar functions to those at the federal level, including Cooperative Extension in crops, orchards and vineyards, horticulture, and human well-being.

## **Specializations**

Plant Sciences is an appropriate base for working in:

- agronomy (increasing crop yields)
- botanical gardens
- plant biotechnology (a growing field where researchers insert protective or nutritional genes into plants),
- plant breeding (developing disease resistant and high yield plant varieties)
- ecology
- food science
- forestry and natural resource management,
- horticulture (includes all work, commercially or scientifically, with flowers, vegetables, fruits, turf, and forestry)
- floriculture (growing, marketing and designing with flowers) and gardening
- wine production
- landscape architecture
- plant pathology (controlling diseases)
- cooperative extension
- garden writers and photographers, or science journalism
- ethnobotany and medicinal plants

## A Sample of Related Occupations Occupied by Plant Sciences Majors

Agronomist	Horticulturist	Pharmaceutical Sales Rep.
Arborist	Irrigation Engineer	Physician
Botanist	Journalist	Plant Geneticist
Cooperative Extension Agent	Lab Technician	Plant Quarantine Specialist
Crop Physiologist	Landscape Architect	Public Health Administrator
Ecologist	Landscape Contractor	Research Leader/Assistant
Environmental Health Educator	Municipal Forester,	Sales Representative
Field Contractor	Natural Resources Manager	Scientific Librarian
Food & Drug Inspector	Naturalist	Seed Technician
Food Buyer	Nursery Operator	Taxonomist
Food Technologist	Patent Specialist	Technical Writer
Forester	Pest Control Inspector	Wine Maker (Enologist)

## Types of Employers

Private & Non-Profit Organizations	
Biological supply houses	Garden centers
Botanical gardens	Golf Courses
Biotechnology firms	Laboratories
Chemical manufacturers	Landscape architects and contractors
Colleges/Universities	Lumber/Paper companies
Conservation organizations	Museums
Consulting firms	Nature Conservancy
Crop/Soil management firms	Nurseries
Farms (field crops, vegetables, vineyards & fruit)	Petrochemical firms
Fermentation organizations	Pharmaceutical firms
Fertilizer suppliers	Public/Private schools
Floral organizations	Research facilities
Food manufacturers	Weed control industry
Forest management agencies	Wholesale distributors

Government Agencies	
Agricultural Research Station	Shade Tree Commission
Consumer Affairs Department	School districts
County Extension Service	Smithsonian Institution
Dept. of Environmental Protection	State Department
Department of Interior	State Universities
Municipal Government	US Dept. of Agriculture (USDA)
NASA	US Food & Drug Admin.
Peace Corps	US Forest Service
Public Health Service	US National Park Service
Teach for America	US Public Health Service