Horticulture programs teach the scientific principles related to the cultivation of ornamental plants, including turf grass, flowers, and landscape and greenhouse crops. This includes the application of genetics to the improvement of plant health and agricultural plants. You will learn about specific types of plants, such as willows, Kentucky bluegrass and poinsettias; breeding of horticultural varieties; physiology of horticultural species; and the scientific management of horticultural plant development and production through the life cycle. You will also study genetic engineering, agronomy and biotechnology with a focus on horticultural science.

Horticulturists with experience and ability may advance to supervisory or management positions in retail outlets, golf courses & botanic gardens. Horticulturists with advanced degrees often are involved in research or teach in colleges and universities. With experience and ability they may advance to positions such as head of research programs or director of horticultural organizations. Some horticulturists become self-employed as growers or as consultants in the use of plants. Those who specialize in the development and use of products to assist growers may be promoted to top marketing positions.

The program at Montana State University teaches the science and art of growing and maintaining ornamental plants for the enjoyment and improvement of the human environment. Its application through research has led to improved varieties of plants to benefit our daily lives. Students studying horticulture take fundamental courses in biology, chemistry, and mathematics prior to taking specialized courses such as plant materials, plant physiology, plant pathology, plant propagation, and turf grass. Graduates of this program are prepared for careers in such areas as floral and nursery crop production, grounds care, landscape nurseries, turf grass industry and greenhouse businesses; and in research with private companies, public agencies or institutions of higher learning.

Characteristics associated with success in this major include a desire to improve the environment and a strong interest in science and working with plants.

A student should:
- be interested in horticulture
- be analytical and creative
- be able to work with people
- have an analytical mind
- have laboratory skills

Occupations in this field require ability to: solve complex problems, work independently or as part of a team, and to communicate clearly in speech and in writing.

Related occupations include:
- Farm/Home Management Advisor
- Biologist
- Botanist
- Landscape Architect
- Horticulturist
- Plant Scientist
- Golf Course Superintendent
- Nursery/Greenhouse Manager
- Soil Conservationist
- Agronomist
- Animal Scientist
- Soil Scientist
- Food Technologist
MSU graduates (Bachelor’s degree) were hired in the following selected fields:

- Assistant Horticulturist—Chicago Botanic Gardens
- Assistant Superintendent—Idaho Falls Country Club; Oak Hill Country Club
- Cereal Quality Lab Manager
- Chemical Technician—The Yellowstone Club
- Greenhouse Worker—Montana Perennial Farms; Visser Greenhouses
- Greenhouse Manager—Research & Marketing at Ball Horticultural Company
- Greenskeeper Assistant—Austin Golf Course
- Lab Technician—Montana State University
- Landscape Manager—Blake Nursery
- Nurseryman—Oak Gardens
- Plant Health Care Technician—Collier Arbor Care
- Preschool Assistant—Playful Kitten
- Self-Employed Horticulturist
- Landscape Owner and Operator
- Private Gardening/Landscaper

Salary averages of survey respondents: (# of respondents in parentheses)

<table>
<thead>
<tr>
<th>Year</th>
<th>MT: Insufficient Data</th>
<th>Out of State: $32,600 (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td></td>
<td></td>
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<tr>
<td>2011</td>
<td></td>
<td>Out of State: Insufficient Data</td>
</tr>
<tr>
<td>2010</td>
<td>$32,616 (2)</td>
<td>Out of State: $35,496 (1)</td>
</tr>
<tr>
<td>2009</td>
<td>$30,000 (1)</td>
<td>Out of State: $30,000 (1)</td>
</tr>
</tbody>
</table>

In the field for “Nursery and Greenhouse Manager” the lowest 10% of salaries for 2012 (comparable to new college graduate starting salaries) was $31,700 annually. The median wages in the nation in 2012 was estimated at $69,300 annually. In 2012 there were 930,600 positions nationally with an expected growth forecast of −19% through 2022. In 2012 there was not enough data to report salaries for the State of Montana. In 2012 there were 2,340 positions in Montana with an expected growth forecast of −5% through 2022. Job openings in Montana and nationally are due to both growth and net replacement. Please remember when reviewing the salary information that it is the “median”, meaning 50% of reported wages fell below and 50% above the reported wage.

Licensure or Certification:

Horticulturists are required to obtain a pesticide license. They must be certified by the state in order to apply restricted-use pesticides.

Other Sources of Information:

- Horticultural Research Institute: www.anla.org/research/index.htm
- American Society for Horticultural Science: www.ashs.org
- American Public Gardens Association: www.publicgardens.org
- American Horticultural Society: www.ahs.org
- Department of Plant Pathology & Plant Sciences - Montana State University: http://plantsciences.montana.edu

2Montana State University College of Agriculture
3On*Net: online.onetcenter.org
Number of graduates/number of respondents: 2012: 7/5; 2011: 6/2; 2010: 10/5; 2009: 6/2