

Soil & Plant Scientists

WHAT THEY DO

Conducts research in breeding, physiology, production, yield, and management of crops and agricultural plants or trees, shrubs, and nursery stock, their growth in soils, and control of pests; or study the chemical, physical, biological, and mineralogical composition of soils as they relate to plant or crop growth. May classify and map soils and investigate effects of alternative practices on soil and crop productivity. Belongs to the Agriculture, Food, and Natural Resources cluster and the Plants Systems pathways.

IS THIS FOR YOU?

Work Interests are described in the following categories (compatible with Holland's Model) by people who tend to succeed in this career:

- **Investigative**—You are a “thinker”. When you have a problem, you like to analyze it and look at different ways to solve it. You like to work by yourself, and you don’t like explaining your ideas to other people.
- **Realistic** – You are a “doer”. You like physical activities and projects. You like to find the answers to problems by doing hands-on work instead of talking about solutions.

Work Values are aspects of work that are satisfying to you. The following work values are generally associated with this career.

- **Achievement** – It’s very important to you that your work allows you to use your best abilities. You want to see the results of your work and get a feeling of accomplishment.
- **Independence**—It’s very important to you that your work allows you to make decisions on your own. You want to try out your own ideas and work with little supervision.
- **Recognition**—It’s very important to you that your work satisfies your need for prestige and leadership opportunities, as well as opportunities for advancement.
- **Relationships**—It’s very important to you that you have friendly co-workers. You would like to be of service to others without compromising your sense of right and wrong.
- **Working Conditions**—It’s very important to you that your work satisfies your needs in areas like salary, job security and your working style preferences, such as working alone, staying busy all the time or having variety in your work tasks.

Aptitudes reflect a person’s ability to acquire skills and knowledge. The following aptitudes are important for success in the career:

- **General Learning Ability**
- **Verbal Aptitude**
- **Numerical Aptitude**



SKILLS YOU NEED

Basic Skills:

- Reading Comprehension
- Active Listening
- Writing
- Speaking
- Mathematics
- Science
- Critical Thinking
- Active Learning
- Learning Strategies
- Monitoring

Transferable Skills (applicable in other careers):

High level

- Analyzing and interpreting life science data
- Explaining life science concepts
- Operating computers to record and analyze life sciences
- Researching life sciences

Workplace Skills:

Medium level

- Complex Problem Solving
- Coordination
- Instructing
- Judgment and Decision Making
- Operations Analysis
- Systems Analysis
- Systems Evaluation

Additional skills for this occupation may be found at <http://www.iowaworkforcedevelopment.gov/career-exploration-resources>

Source: <https://secure.ihaveaplaniowa.gov/>

ESTIMATED & PROJECTED EMPLOYMENT

Occupational Title	2012 Estimated Employment	2022 Projected Employment	2012-22 Employment Change	Annual Growth Rate (%)	Total Annual Openings
Total, All Occupations	1,758,205	1,955,480	197,275	1.1	61,665
Life, Physical, & Social Science Occupations	12,490	13,850	1,360	1.1	525
Soil & Plant Scientists	1,495	1,745	250	1.7	75

Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0>

2015 WAGE & SALARY (\$)

Occupational Title	Average Wage	Average Salary	Entry Wage	Entry Salary	Experienced Wage	Experienced Salary
Total, All Occupations	19.77	41,122	9.55	19,858	24.88	51,755
Life, Physical, & Social Science Occupations	28.06	58,366	16.55	34,421	33.82	70,338
Soil & Plant Scientists	33.86	70,437	22.29	46,371	39.65	82,469

Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0>

EDUCATION & TRAINING

Education	Work Experience	Job Training
Bachelor's Degree	None	None

Education training and experience are required at different levels for success in different occupations. Soil and plant scientists typically earn bachelor's degrees.

Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0> and <https://secure.ihaveaplaniowa.gov/>

NATIONAL CAREER READINESS CERTIFICATE (NCRC)

Skill	Median Skill Level
Applied Mathematics	n.a.
Locating Information	n.a.
Reading for Information	n.a.

This ACT-developed credential demonstrates achievement and a certain level of workplace employability skills. The greater the score, the greater the skill level (Bronze = 3, Silver = 4, Gold = 5, Platinum = 6).

Source: <http://www.act.org/workkeys/analysis/occup.html>

ADDITIONAL SOURCES:

This workforce product was funded by a grant by the U.S. Department of Labor's Employment and Training Administration. The product was created by the recipient and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This product is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner. This publication was produced by the Labor Market and Workforce Information Division of Iowa Workforce Development. Revisions and/or corrections made when necessary. Inquiries may be directed to Brent Paulson at 515.281.3439 or Brent.Paulson@iwd.iowa.gov. Visit www.iowalmi.gov to obtain the latest workforce data and trends including this document. Published 12/2015.

PRIMARY INDUSTRY SECTORS

(Where are Soil & Plant Scientists Employed?)

Professional, Scientific, and Technical Services
Agriculture
Educational Services
Management of Companies

Source: <http://www.iowaworkforcedevelopment.gov/occupational-projections-0>