

Food Scientists

WHAT THEY DO

Uses chemistry, microbiology, engineering, and other sciences to study the principles underlying the processing and deterioration of foods; analyzes food content to determine levels of vitamins, fat, sugar, and protein; discovers new food sources; researches ways to make processed foods safe, palatable, and healthful; and applies food science knowledge to determine best ways to process, package, preserve, store and distribute food. Belongs to the Agriculture, Food and Natural Resources cluster and Food Products and Processing Systems pathway.

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
- **Conventional** – You are an "organizer". Keeping things neat and organized is important to you. You like working with charts and reports, and work well with power and authority.

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.

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**
- **Clerical Perception**

Additional skills for this occupation may be found at <http://www.iowaworkforce.org/pubs/careers/cps> .



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
- Operating computers to record and analyze life science data

Medium level

- Explaining life science concepts
- Researching life sciences

Workplace Skills:

High level

- Quality Control Analysis

Medium level

- Complex Problem Solving
- Coordination
- Instructing
- Judgment and Decision Making
- Negotiation
- Operation Monitoring
- Persuasion
- Social Perceptiveness
- Time Management
- Troubleshooting

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

ESTIMATED & PROJECTED EMPLOYMENT

Occupational Title	2010 Estimated Employment	2020 Projected Employment	2010-20 Employment Change	Annual Growth Rate (%)	Total Annual Openings
Total All Occupations	1,717,020	1,948,700	231,680	1.3	64,525
Life, Physical, & Social Science Occupations	11,655	13,080	1,420	1.2	510
Food Scientists & Technologists	390	430	40	1.0	20

Source: <http://iwin.iwd.state.ia.us/pubs/statewide/stateoccproj.pdf>

2012 WAGE & SALARY (\$)

Occupational Title	Average Wage	Average Salary	Entry Wage	Entry Salary	Experienced Wage	Experienced Salary
Total All Occupations	18.90	39,295	9.30	19,341	23.69	49,272
Life, Physical, & Social Science Occupations	26.24	54,567	15.74	32,739	31.48	65,482
Food Scientists & Technologists	27.79	57,805	16.07	33,412	33.65	70,002

Source: <http://iwin.iwd.state.ia.us/pubs/statewide/stateoccproj.pdf>

EDUCATION & TRAINING

Education	Work Experience	Job Training
Bachelor's Degree	None	None

Training requirements for agricultural scientists depend on their specialty and on the type of work they perform. A bachelor's degree in agricultural science is sufficient for some jobs in applied research or for assisting in basic research, but a master's or doctoral degree is required for basic research. A PhD in agricultural science usually is needed for college teaching and for advancement to administrative research positions. Degrees in related sciences such as biology, chemistry, or physics or in related engineering specialties also may qualify persons for some agricultural science jobs.

Source: <http://iwin.iwd.state.ia.us/pubs/statewide/stateoccproj.pdf> 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>

PRIMARY INDUSTRY SECTORS

(Where are Food Scientists Employed?)

- Food Mfg
- Crop Production
- Management of Companies
- Animal Production

Source: <http://iwin.iwd.state.ia.us/pubs/statewide/stateoccproj.pdf>

ADDITIONAL SOURCES:

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 <http://iwin.iowaworkforce.org/> to obtain the latest workforce data and trends including this document under the **Publications** tab. Published 10/2013.