

# AG RESEARCH

AgCareers.com developed career profiles for high demand jobs in the agricultural industry. These career profiles are a helpful resource for students and job seekers to explore new roles in the industry, as well as for career educators.

## Laboratory Technician

### JOB OVERVIEW

Prepare samples, carry out experiments, make measurements, record results & present for critical analysis

Collect, classify & preserve specimens & samples

Perform routine mathematical calculations & prepare graphs; assist in the writing of lab reports

Clean, maintain & set up experimental equipment; perform quality assurance checks

### JOB OUTLOOK



### EDUCATION NEEDED

Bachelor's degree in laboratory science, biology, chemistry, or other relevant field

### RECOMMENDED H.S. COURSES

Ag education, anatomy, biology, mathematics, English, chemistry, physics

### TYPICAL EMPLOYERS

Variety of labs - seed, chemical, animal health, biotech - in academic, government, or company settings

## Research & Development Manager

### JOB OVERVIEW

Oversee research activities & develop knowledge-based products for a company

Develop research programs incorporating current developments to improve existing products & study potential of new products

Managerial & testing programs for products/services through management of staff

Present at industry conferences on research topics of interest

### JOB OUTLOOK



### EDUCATION NEEDED

Master's degree in field you will be applying knowledge

### RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, business & computer courses, mathematics

### TYPICAL EMPLOYERS

Any company developing & testing new products to sell (plant, biotech, alternative energy, food, animal health)

## Research Station Manager

### JOB OVERVIEW

Manage research station operations for a university or organization with offsite research

Provide procedures for the collection, classification & preservation of specimens & samples

Supervise research trials & projects in an effort to achieve validated research data

Ensure compliance to safety & environmental regulations

### JOB OUTLOOK



### EDUCATION NEEDED

Bachelor's degree in desired work area (i.e. agriculture, crop science, soil science, animal science)

### RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, horticulture, Spanish, physics, business and computer courses, mathematics

### TYPICAL EMPLOYERS

Land Grant universities, companies with research farms &

## Research Technician

### JOB OVERVIEW

Assist scientists conducting research in lab or outdoor setting

Operate & maintain lab equipment, ensure lab is properly stocked, and clean and sanitize lab or research area

Record data from experiments & input data into software programs & draft progress reports

Assist in research activity & participate in research planning sessions

### JOB OUTLOOK



### EDUCATION NEEDED

Bachelor's degree in focus area of research (i.e. agronomy, horticulture, animal science)

### RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, physics, mathematics

### TYPICAL EMPLOYERS

Universities; general research facilities; seed, animal health, or pharmaceutical companies

## Product Development Manager / Demand Planner

### JOB OVERVIEW

Oversee product control, strategy & distribution throughout sales networks

Develop new products & technology that will potentially add value to the company

Assess the product's profitability through market research & competitive analysis

Assist in positioning product performance & manage global development programs

### JOB OUTLOOK



### EDUCATION NEEDED

Master's or Doctorate in desired field of work (i.e. plant pathology, ruminant nutrition)

### RECOMMENDED H.S. COURSES

Ag education, a focus on the sciences, business & computer courses, mathematics

### TYPICAL EMPLOYERS

Medium to large-scale agricultural organizations & companies, some government agencies

## Analytical Chemist

### JOB OVERVIEW

Study chemical compounds to determine what they are composed of & how they interact with other substances

Provide solutions to support formulation, active ingredient & packaging development

Conduct product chemistry studies that meet worldwide regulatory requirements which help bring new product to market

Provide analytical support

### JOB OUTLOOK



### EDUCATION NEEDED

Bachelor's or Master's in chemistry or laboratory science

### RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, anatomy, physics, writing, computer science, advanced mathematics

### TYPICAL EMPLOYERS

Agriculture companies that develop chemical & pharmaceutical solutions for farmers

## Formulation Chemist

### JOB OVERVIEW

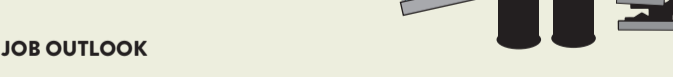
Design & develop new crop protection products

Plan, organize & conduct experiments to optimize the biological, marketing, regulatory & production performance of products

Plan and control/carry out lab work to develop, understand & test new & improved manufacturing processes

Record & deliver critical data

### JOB OUTLOOK



### EDUCATION NEEDED

Master's or PhD in chemistry

### RECOMMENDED H.S. COURSES

Ag education, statistics, algebra, genetics, biology, chemistry, physics

### TYPICAL EMPLOYERS

Academia; animal pharmaceutical, crop protection & alternative energy companies; biotechnology firms

## Biostatistician

### JOB OVERVIEW

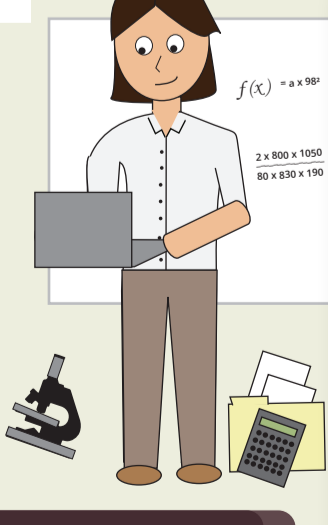
Use math & statistics to find ways to solve scientific problems

Assist in developing statistical techniques, design studies & analyze data

Review case reports & forms to ensure protocol objectives are met & that project standards are maintained

Conduct retrospective database analysis in order to determine effectiveness of past treatments

### JOB OUTLOOK



### EDUCATION NEEDED

Master's or PhD in statistics, biostatistics, mathematics, or statistical genetics

### RECOMMENDED H.S. COURSES

Ag education, biology, chemistry, statistics, anatomy, advanced mathematics

### TYPICAL EMPLOYERS

Animal pharmaceutical & biotechnology companies, academia, research groups & companies

PROFESSIONALS IN AG RESEARCH CAN EXPECT TO EARN AN AVERAGE OF \$80,500 PER YEAR