

# Agronomist

FACTORS SUCH AS CLIMATE, ROOTS, MOISTURE, WEEDS, PESTS, FUNGI, AND EROSION CAN ALL POSE SIGNIFICANT CHALLENGES TO FARMERS



Agtech Career Series in partnership with



## **Agronomy Focuses on Studying Soil Management and Crop Development**

*It looks at agriculture from an integrated, holistic lens as agronomists aim to understand the what, when, how and why of farming ecologies. It is an application of science and technology that blends several different fields (biology, ecology, economics, soil and water science, genetics and pest management, to name a few). While often working in many different environments, agronomists are considered scientists with various skills that can be used to improve farm and crop quality.*



Communication



Collaboration



Critical-Thinking

# Agronomy Integrates Disciplines

HELPING US TO UNDERSTAND AGRICULTURE,  
EVOLUTION, ECOLOGY AND BIODIVERSITY.

## WHAT DOES AN AGRONOMIST DO?

By definition, an agronomist is a go-between for farmers and researchers. They are sometimes called 'crop doctors' because they look after the health and well-being of crops used for fuel, food production, and land reclamation. They are well-trained in caring for, studying and researching crops. So, they work in the field of agriculture using their knowledge to make recommendations to farmers. Their experience is gathered by reviewing research, and they often make suggestions to farmers about new scientific developments that will help support their growing operation.

Agronomists also ensure that recent developments in crop varieties, crop rotation, tillage systems, and disease and pest control are adequately implemented on the farm.

There is a great demand for agronomists in the agriculture industry today as producing profitable crops is becoming more complex every year. There are so many things to consider - machinery, equipment, technology - that farmers require the extra support, and a good agronomist can be the one to provide that.

## THERE ARE A NUMBER OF PLACES AGRONOMISTS CAN FIND EMPLOYMENT. THEY INCLUDE:

- **Crop consulting and farm management firms**
- **Seed or horticulture companies**
- **Agricultural chemical or fertilizer companies**
- **Federal, provincial/territorial, or municipal government departments**
- **Colleges, universities and foreign aid agencies**

*What are some of the things farmers should consider when choosing an agronomist to work with?*



# Job Description

STUDYING SOIL, PLANTS, AND PRODUCTS TO BETTER UNDERSTAND CROP NEEDS AND DEVELOP MORE EFFECTIVE AND EFFICIENT FARMING PRACTICES

## DUTIES

- Conduct experiments with crops in a lab
- Engage with farmers to discuss potential farm improvements
- Work with researchers to come up with new ideas
- Solve problems related to farming practices
- Find ways to protect plants from harsh weather or climate
- Travel to visit farms and meet with operators
- Present research at conferences or publish it in journals
- Develop new, sustainable methods of farming
- Conserve and recycle water and other resources

## SKILLS

- Self-motivated
- Detail-oriented
- Analytical
- Excellent listening and communication skills
- Problem-solving skills

## TASKS

- Apply **knowledge** to make recommendations for more efficient crop production
- **Manage field trials**, irrigation practices and plant physiology
- Gather, compile, analyze and **interpret test results** and prepare progress reports
- Remain up to date with **crop nutrition** and protection technology
- Document field evaluation, provide **agronomic training** to staff and assist with budgeting/cost monitoring

## Requirement

To pursue a career in agronomy you will need the following high school courses (agricultural education, biology, mathematics, chemistry and computer science) and a bachelor's/master's degree in agronomy or a related field. You will also want to obtain your Certified Crop Advisor (CCA) certification.

## Tip

In addition, agronomists should be physically able to travel as they will need to examine farms in a variety of environments and climates. To be physically fit in the sense of bending, kneeling and carrying light loads. The top skills an agronomist should have are in communication, collaboration and critical thinking.

## Salary

\$40,750 - \$75,000 or \$31.41 per hour