

## Agriculture and Forestry Careers

Careers in Agriculture and Forestry make up one of the largest industries and sources of long-term employment in the country, providing jobs for millions of Americans. These careers supply us with a **multitude** of food products and **alternative** energies, among many other important resources for sustaining our country and contribution to the world economy. In addition, these careers - particularly those associated with Forestry - **conserve** our natural resources and assure we have bountiful supplies of land to utilize in the future. Many of the careers in the Agriculture and Forestry industry are considered “Green Careers,” meaning that the careers are involved in preserving or protecting our environmental resources.

### Employment Conditions

Many careers in Agriculture and Forestry will place workers in food production environments, including farms, **hatcheries**, and nurseries. In addition, some careers may place employees in wild environments that are involved in commodity production, including forests, rivers, mountains, and natural other areas.

It is recommended that those seeking a career in Agriculture and Forestry enjoy working outdoors and/or working with animals. The ability to work independently in **potentially isolating** environments is also a good trait to possess, as certain careers requiring fieldwork may place employees away from their homes and families for extended periods of time. It's also important to know that some of these jobs are physically demanding and can be dangerous, depending on what kind of heavy equipment you're required to use and what weather conditions you're required to work in. Aversion to hard labor is not recommended for those wishing to break into the Agriculture and Forestry industry.

In recent history, agriculture has been the main source of the food we consume on a daily basis. In this lesson, we will explore the difference between industrialized and subsistence agriculture. We will also investigate the different kinds of subsistence agriculture that are practiced.

### Types of Agriculture

Imagine a family farm on a small plot of land and a huge commercial farm that spans acres and acres of land. What do you think makes these two types of farms different? Although both of these farms are designed to produce food, they vary in the methods of production, the amount of food they produce and who consumes the food produced.

Although for most of human history our species has survived by hunting and gathering food, around 10,000 years ago, our ancestors started producing their own food. **Agriculture** is the term used to describe the act of growing crops and raising livestock for human consumption and use.

Since the development of agriculture, many different types of production have been implemented. Currently, agriculture is divided into two different types, including industrialized agriculture and subsistence agriculture. Let's explore and learn more about these two types of agriculture.

## Industrialized Agriculture

**Industrialized agriculture** is the type of agriculture where large quantities of crops and livestock are produced through industrialized techniques for the **purpose** of sale. The goal of industrialized agriculture is to increase **crop yield**, which is the amount of food that is produced for each unit of land. Crops and livestock made through this type of agriculture are produced to feed the masses and the products are sold worldwide.

Industrialized agriculture is able to produce large quantities of food due to the farming methods used. Instead of using animal and manpower to work the fields, industrialized agriculture utilizes large machines, which are more powerful and can work faster and harder. The shift towards machines has increased the use of fossil fuels on industrial farms, and, therefore, the price of food can **fluctuate** as the price of oil changes. Industrialized agriculture also increases crop yield by investing in large irrigation systems and by using chemical fertilizers and pesticides.

The **chemical fertilizers** that are used in industrialized agriculture often add inorganic nutrients to the soil to increase yield and plant size. The use of **pesticides** is also common in industrialized agriculture, and most pesticides help increase yield by killing pests that are harming or consuming the crops. Another farming technique that is used in industrialized agriculture is the method of growing **monocultures**, which is when a single crop is planted on a large scale. Although planting monocultures can increase overall yield, this method of farming is also more **susceptible** to disease and causes a reduction in the dietary variation of consumers.

## Subsistence Agriculture

Although industrialized agriculture is necessary to feed the growing human population, there is another type of agriculture that is regularly practiced today. **Subsistence agriculture** is when a farmer lives on a small amount of land and produces enough food to feed his or her household and have a small cash crop. The goal of subsistence agriculture is to produce enough food to ensure the survival of the individual family. If there is excess food produced, it is sold locally to other families or individuals.

Subsistence agriculture varies a great deal from industrialized agriculture in terms of the farming methods used. This type of agriculture is very labor-intensive because all of the work is done by humans and animals and only hand tools and simple machines are used to work the land.

Subsistence agriculture does not rely on chemical fertilizers or pesticides and instead utilizes more natural techniques. Most farmers have animals, including chickens, goats and cows, and the manure from these animals is used to fertilize the plants. The crops produced are then consumed or sold, and the inedible parts of the plants are used to feed the livestock. This creates a closed circuit within the farm where nothing goes to waste.

Instead of using chemical pesticides, subsistence farmers rely on natural predators of pests to control the pest population. Another major difference between industrialized and subsistence agriculture is what is being planted. Unlike industrialized agriculture that utilizes monocultures, subsistence agriculture relies on **polycultures**, which is when different types of crops are planted in one are