

All About Crops



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Corn

Corn, a crop that is also known as maize, grows best when temperatures are warm and the days are long and full of sun. Once planted, corn takes 86-92 days before harvesting, growing in rich moist soil. Farmers wait until soil temperatures are between sixty and sixty-five degrees Fahrenheit before planting. A mixture of sand, silt, and clay, known as sandy loam, is the preferred soil used for growing corn. A better crop is produced with irrigation but is not the only way corn has to be watered. The crop does, however, need to be well drained during the growing season.

Corn is a tall, annual grass with a very stout, erect, solid stem that supports the weight of the corn cob as it grows. Two large, narrow leaves grow and spread alternately on opposite sides of the stem with a fibrous root system, with the majority of the roots growing two feet into the soil.

The majority of corn grown in the United States is also known as field corn. It is used to make cornmeal, and corn chips, but is primarily grown to feed livestock. Other corn is grown for human consumption and also used to produce biofuel.



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Sugarbeets

Sugarbeets grow in temperate to cool climates. They can grow in a wide variety of soils from sandy loam to clay as long as the soil is deep and loose. After planting in the spring, farmers care for the sugarbeets for 8-10 weeks until they are ready to harvest. Harvest usually happens in late September to October. Part of caring for sugarbeets is ensuring that they have water through irrigation.

Sugarbeets grow close to the ground, with the top of the beet being level with the ground or sitting slightly above the soil. They have large leaves that produce sugar through photosynthesis, which is then stored in the beet. The beet itself is the root of the plant and is a tap root. A tap root is a straight tapering root growing downward from the center of a plant. Sugarbeets also have a flowering stalk that aids in reproduction. Sugarbeets are used for sugar (sucrose), livestock food (silage), and sugarbeet syrup which is similar to molasses.



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Beans

Beans are planted in mid-June when the climate is arid, with warm days and cool nights. They have a growing period of 85-115 days depending on the type of bean being planted. Beans grow in many different soil types and do not need soil with a high content of nitrogen. Bean plants actually are nitrogen-depositing plants and are often grown in rotation with other crops that are high nitrogen using plants. This prevents disease, insects, and weed problems that could destroy the crop. Farmers practice pre-irrigation when growing beans. The soil is irrigated before the bean is planted and then not again until a month later.

Bean plants grow as a bushes or climbing plants. They have weak fibrous root systems, as they grow very shallow into the soil. Pinto bean plants produce better results because their pods are stronger and won't shatter before harvest. Some beans grown in Wyoming include dark and light kidney beans, black beans, navy beans, and pinto beans. Beans are used for consumption by both humans and livestock. In the past, beans were used as ways to vote and even as a type of currency, or money.



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Wheat

Wheat is a type of grass that grows and thrives in cooler climates. Winter wheat is usually planted in September and harvested at the beginning of winter after a 4-month growing season. Spring wheat is planted between March and May, depending on the weather, and is harvested between September and August. Wheat grows in a wide range of soils that are sufficiently fertile and well-aerated. Wheat will require more water through irrigation the more mature it becomes. Irrigation does not have to be used for wheat except in arid areas.

Wheat grows between two and four feet tall and is made up of a head, stem, leaves, and roots. It has long skinny leaves and parallel veins. Wheat has a fibrous root system made up of numerous, fine branches all being close in length and a shallow growth. Wheat will develop flowers when it reaches full height where reproduction will take place and produce seeds. Wheat is most commonly used to feed livestock and as a main ingredient in foods that humans consume, including, breads, cookies, cakes and cereals.



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Hay

Hey, what's hay? Hay is an important agricultural crop that is used for both animal feed and to control erosion. All hay is not the same. Many different grasses can be considered hay. The type of hay depends on the climate of the area it is grown in. Some types of hay varieties are: Timothy, Alfalfa, Garrison, Brome, and clover. Even though there are different types, they all have similar characteristics. The plants are tall, measuring from 2 to 4 feet, with flat leaves. Finally, they all have fibrous roots, though the roots can be deep or shallow depending on the type.

How do farmers take care of hay? Hay needs to be grown in sandy or clay-rich soil. The plants must be irrigated but not too much. They thrive when they are living in a slightly dry state. Farmers harvest hay depending on the part of the state that they live in. Farmers in eastern Wyoming cut their hay in late June, while those who live in the western and central part of the state usually harvest through July.



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Barley

Barley is a crop that is perfect for Wyoming. It grows in arid climates, and it can withstand high elevations. Farmers plant barley in March or April. It has a short growing season and only needs 60 to 70 days before it can be harvested.

Farmers can plant barley in a wide variety of soils. The fibrous roots of the plant grow out in all directions and closer to the surface of the ground. Barley can be planted as a companion plant for alfalfa. Alfalfa has a tap root, which is a straight tapering root that grows straight down in the soil. The fine mat of branching roots in the barley keeps the soil around the alfalfa from eroding away.

Barley grows up to 80 centimeters tall. The main stem produces smaller, secondary stems. All the stems are covered in long, skinny leaves. The reproductive parts of the plant are found on structures that grow above the rest of the plant, which become the seeds of the plant. The seeds are the part of the plant that is harvested. Wyoming harvests about 8,000 bushels of barley each season. Barley can be used as animal feed, but humans also use barley bread, flour, crackers, and vinegars.



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Crop Challenge Sheet

Your Challenge

Construct a model of your crop using only the provided materials.

Constraints:

Materials:

- Use only the materials provided by your teacher

Time:

- 15 minutes to build and plan

Success Criteria:

- Include all structures of your crop
- Explain the purpose of each structure
- Completed within the time constraints
- Must resemble your crop



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