

## Sources

- 2011 California Foundation for Agriculture in the Classroom, Corn: Commodity Fact Sheet.
- Demand Media, Inc. 1999-2014. Prepared by eHOW Contributor: Corn Seed Spacing and Planting Depth.
- Demand Media, Inc. 1999-2014. Prepared by eHOW Contributor: When to Harvest Sweet Corn.
- Demand Media, Inc. 1999-2014. Prepared by eHOW Contributor: How to Store Fresh Ears of Corn.
- Growing Corn: All the advice you ever need to know about growing corn so you can make the best and most delicious corn you can.



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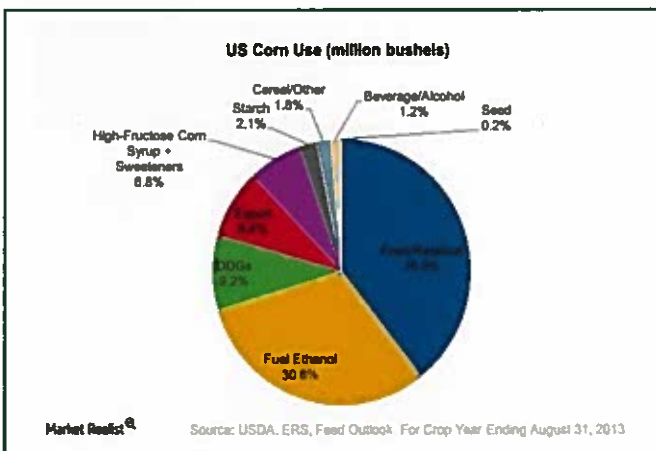
ALCORN STATE UNIVERSITY EXTENSION PROGRAM

# CORN

## PRODUCTION

A Quick Reference Source

**Corn**, also known as maize, is a cereal grain that was domesticated in Mesoamerica as many as 10,000-12,000 years ago. Corn is a member of the grass family and grew wild in what is now modern-day Mexico. Native Americans grew corn as a crop and fertilized the seed by planting it with decaying fish. The fish contained nitrogen, which corn needs for good growth. The earliest known ears of corn were tiny, but centuries of breeding—first by Native Americans, then by early settlers, and later by modern scientists—resulted in bigger, fuller ears of corn. Today, corn is cultivated on every continent except Antarctica. The three types of corn grown for human consumption are dent corn (grain), sweet corn (vegetable), and popcorn (food snack). Dent corn is primarily used as feed for animals, but is also processed into thousands of items: starch (baby food, salad dressing, glue); corn syrup (soda, fireworks, adhesives); dextrose (bakery goods, fruit juices, antibiotics); and oil (margarine, soap, paint). Today's scientists have even developed a new source of fuel from corn products called ethanol.



## Types of Corn Grown in the United States

Dent corn, getting its name from the dent in the crown of the seed, is grown more than any other type of corn. Millions of tons of grain are produced from dent corn and used for human and industrial use, and for livestock feed. Flint corn kernels are hard and smooth and have little soft starch. Columbus and his followers explored some countries that grew a lot of flint corn.

Flour corn contains a lot of soft starch, and has almost no dent. Though it is not used much anymore, it is grown in the drier sections of the US and in the Andean region of South America. Sweet Corn has an almost clear, horny kernel when it is still young. The kernels become wrinkled when dry.

## Spacing

Corn is planted in rows of three or more for optimum pollination efficiency. Because corn is pollinated by the wind, the rows of corn need to be close and in large quantities to get pollinated. In row planting, place corn seeds every 12 inches. In planting a hill, position the three or four seeds about 5 inches apart in the shallow, wide basin with 30 inches row to row. This makes it easy for the wind to pollinate the corn and provides the gardener easy access to the pick the fresh corn once it is ripe.

## Harvesting

When harvesting corn, monitor the corn ears for corn silk development. Ears reach maturity and are ready to harvest approximately 20 days after corn silk has emerged. When the corn silks ends have dried up and turned brown, check the firmness. Ears that are ready to harvest will feel firm when gently squeezed. Rounded rather than pointed ends are also indicative of maturity. Gently separate a portion of the husk in the middle of the ear. Mature kernels appear rounded and full. Puncture a kernel with a fingernail and observe the juice that comes out. If the fluid is clear, the corn is not mature; a milky fluid indicates mature corn; and a creamy fluid indicates the corn is over-mature.



## Storing

Fresh, sweet corn quickly loses its flavor after harvest. The sugar in the kernels that gives the corn its tenderness and flavor converts to starch the longer the corn is stored. Proper storage helps prolong the flavor for a few days by inhibiting the starch-conversion process. If you must store the corn, select firm ears with healthy green husks to ensure the best quality. The better the quality, the easier it is to maintain both flavor and texture.

## Nutritional Value

Corn has four major elements: starch, protein, oil, and fiber. One cup of white corn has 130 calories, two grams of fat, five grams of protein, 29 grams of carbohydrates, four grams of fiber and no cholesterol. Oil from the germ or embryo of the kernel is rich in antioxidants such as lutein and zeaxanthin, which are associated with a lower risk of chronic diseases. Fructose (from cornstarch) is a sweetener that helps the body to utilize protein.

