






# Nut Facts: A-L

Nut	Growth (Where)	Growth (How)	Harvest
<b>Almonds</b> 	Almonds grow best in climates with warm, dry summers and mild, wet winters. They are extremely sensitive to frost.	Almonds are grown on trees. Almond trees need consistent irrigation, especially during the growing season. Almonds require cross-pollination from bees. Beehives are often brought into almond orchards to facilitate pollination.	Almonds are typically harvested in the late summer or early fall. Mechanical shakers are used to shake the nuts from the trees. Sweepers collect the almonds into rows for collection.
<b>Brazil Nuts</b> 	Brazil nuts grow best in the Amazon rainforest in South America. The trees require the specific conditions of the rainforest, including a hot and humid climate, well-drained soil, and consistent rainfall.	Brazil nuts are grown on trees. The trees produce small, bell-shaped flowers that are pollinated by orchid bees, other insects, and wind. The flowers develop into large, spherical fruits that contain 12-24 nuts encased in hard, woody shells.	Brazil nuts grow in a pod weighing up to 5 pounds and drop from 160-foot (18-story) high trees at a rate of 50 miles per hour. This makes harvesting dangerous. Harvesters gather these fruits from the forest floor.
<b>Cashews</b> 	Cashews grow best in tropical climates with high temperatures, a distinct dry season, and sandy soil is best for growing cashews.	Cashew nuts are grown on trees. They form out of the swollen end of the tree's stem known as the cashew apple. The cashew apple contains a single cashew nut at its bottom.	Cashews are ready to harvest when the cashew apple takes on a pink or red cast and the nut turns gray. The nut is harvested by being twisted off the cashew apple by hand.
<b>Chestnuts</b> 	Chestnuts grow best in regions with a temperate climate with cool to cold winters, warm to hot summers, and well-drained soil.	Chestnuts are grown on trees. Chestnut trees are either male or female. The male trees produce pollen, which is carried by wind or insects to female flowers. The flowers develop into spiky burs or capsules that contain 2-3 chestnuts.	Chestnuts are ready to harvest after they drop to the ground and are released from their enclosed bur. Harvesting machines sweep and/or vacuum chestnuts from the ground.
<b>Hazelnuts</b> 	Hazelnuts grow best in regions with a temperate climate with cool winters, well-drained soil, and moderate rainfall.	Hazelnuts are grown on trees or bushy shrubs. Hazelnut trees typically require cross-pollination. Two different varieties are required for successful nut production. Bees play a crucial role in this process.	Hazelnuts are ripe when the nut inside the husk turns brown. After hazelnuts drop, they are mechanically harvested by blowing them into windrows and using vacuums or sweepers to pick them up. The nuts are shaken or slapped off the branches and collected into bins.

# From Farm to You

## Geography

## Transport & Processing

## Distributor

## Store

California is the only state that commercially produces almonds. The United States is the world's largest almond producer, producing 80% of the world's almonds.

Almonds have a protective outer hull, which is removed during processing. The almonds are then dried, sometimes pasteurized, and sorted for quality. Once processed, almonds are packaged and transported to markets worldwide.

Brazil nuts are not grown in the United States. Bolivia is the world's top producer. While there are some plantations, most Brazil nuts are harvested from the wild.

To access the edible Brazil nuts, the hard shells must be cracked open, usually with large hammers or mechanical devices. After extraction, the nuts are cleaned, sorted, and packaged for distribution.

Vietnam and India are the world's leading producers of cashews. There is no commercial production in the United States.

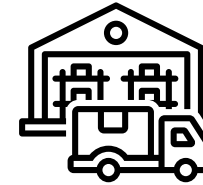
The cashew nuts are dried and processed to remove any remaining shell pieces, sorted by size and quality, and packaged for distribution.

Chestnuts are grown in Michigan, Florida, California, Oregon, and Virginia. The United States grows less than 1% of the world's chestnuts. South Korea and China are the world's leading producers of chestnuts.

Chestnuts are separated from the burs. Some may still have a thin inner skin, which can be removed through blanching or boiling. The chestnuts are dried in the sun or through artificial drying methods to reduce their moisture content. Chestnuts are stored in a cool, dry environment to maintain their freshness and prevent mold or spoilage before being packaged and distributed.

99% of U.S. hazelnuts are produced in Oregon, representing 3-5% of the world's crop. Turkey is the world's leading hazelnut producer.

Hazelnuts are removed from their husks either manually or with the help of machinery. Once husked, the nuts are dried to reduce moisture content. Dried hazelnuts are stored in a cool, dry environment to maintain their quality before being packaged for distribution.



Raw and processed products are sold in bulk quantities to a buyer who will distribute it to a retail store.



Retail product is sold to consumers.

# Products Made from Nuts

## Products

## Nutrition

Almonds are consumed as snacks and in goods such as cereal and granola bars. Almonds can be made into flour, milk, butter, paste, or oil.



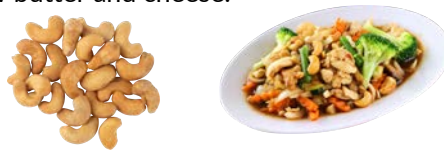
Almonds are cholesterol-free, sodium-free, and low in saturated fat. They are rich in unsaturated fats and phytonutrients and a good source of fiber.

Brazil nuts are typically eaten raw, blanched, or roasted and can be chopped over salads, cereal, porridge, or desserts. But don't eat too many! Brazil nuts contain selenium and eating too many (11-12 nuts) can lead to poisoning.



Brazil nuts are sodium-free, sugar-free, and cholesterol-free. They are an excellent source of heart-healthy fats and nutrients like selenium (beneficial in moderation).

Cashews are eaten raw or roasted and can be incorporated in stir-fries, soups, salads, and stews. Cashews are also used to make cashew butter and cheese.



Cashews are cholesterol-free and sodium-free. They are a good source of antioxidants, fiber, amino acids, monounsaturated fatty acids, and phenols.

Chestnuts are eaten roasted, boiled, or glazed and mixed in stuffing and other dishes. Some varieties of chestnuts should not be eaten raw because their tannic acid content could cause gastrointestinal distress.









Chestnuts are low in fat and high in vitamin C. They are a good source of antioxidants, fiber, amino acids, monounsaturated fatty acids, and phenols.

Hazelnuts are used in candies or ground into flour for cakes, cookies, and breads.



Hazelnuts are cholesterol-free, sodium-free, and low in carbohydrates. They contain monounsaturated fat, which may help to lower LDL cholesterol.

# Nut Facts: M-Z

Nut	Growth (Where)	Growth (How)	Harvest
<b>Macadamia Nuts</b> 	Macadamia nuts grow best in regions with a warm, subtropical climate with well-drained soil, ample sunlight, and consistent rainfall.	Macadamia nuts are grown on trees. When pollinated, small, fragrant flowers mature into nuts inside a hard shell. As the nuts ripen, the outer husk falls away, revealing the tough shell that protects the nut.	Macadamia nuts are ready to harvest when the nut shells split open and reveal the kernel inside. They are harvested manually or with mechanical sweepers and pickup devices.
<b>Peanuts</b> 	Peanuts grow best in warm climates with well-drained sandy soil. They require a frost-free growing season with temperatures between 70-90°F (21-32°C).	Peanut plants flower above ground and fruit below ground. The flowers are self-pollinating, meaning they can fertilize themselves without the need for external pollinators. Botanically, they are legumes.	Peanuts are harvested by diggers that pull up the plant, shake off the excess soil, rotate it so the peanuts are up, and lay it back down in a windrow to dry for 2-3 days. A combine separates the peanuts from the vines.
<b>Pecans</b> 	Pecans thrive in regions with a combination of warm temperatures and well-drained soil.	Pecans grow on trees. The trees produce catkins, which contain male flowers that release pollen. The wind or insects pollinate female flowers which develop into nut clusters. These clusters mature into pecans.	When pecans are ready to harvest, the outer husk splits open revealing the mature nut inside. Pecans are harvested by shaking the trees with mechanical shakers. A harvester collects the pecans from the ground.
<b>Pine Nuts</b> 	Pine nuts grow best in a climate with warm summers and mild winters with well-drained soil.	Pine nuts grow on specific varieties of pine trees inside a pinecone. Each cone contains numerous pine nuts. As the pinecones mature, they change from green to brown and open up, exposing the pine nuts.	Pine nuts are mostly harvested by hand. They can most easily be extracted from cones that have naturally opened. Pine nuts are extracted by shaking, tapping, or smashing the cone to and then separating the nuts from the cone.
<b>Pistachios</b> 	Pistachios grow best in arid climates with hot summers, cool, wet winters, and well-drained soil.	Pistachios grow on trees. The male trees produce pollen, which is carried by the wind to fertilize the flowers on female trees. Pistachio trees require consistent watering and regular pruning to optimize nut production.	Pistachios mature in late summer to early fall. They are ready to harvest when the shells split open. Pistachios are harvested by shaking the tree with a mechanical harvesting machine. The pistachios fall into a catching frame.
<b>Walnuts</b> 	Walnuts grow best in temperate climates with moderate to cool temperatures and a distinct winter chill for dormancy.	Walnuts are grown on trees. The female trees produce flowers that develop into walnut fruits after being pollinated by the pollen of a male tree. The green husk surrounding the fruit turns brown when ripe.	Walnuts are typically harvested in late summer to early fall, when the husks have turned brown, and the nuts inside have fully matured. They are harvested by mechanical shakers and harvesters that pick them up.

# From Farm to You

## Geography

## Transport & Processing

## Distributor

## Store

South Africa is the world's largest producer of macadamia nuts. Most U.S. commercially produced macadamia nuts are grown in Hawaii.

Macadamia nuts are husked and dried to reduce moisture content. They are mechanically cracked to extract the hard shell. The kernels are sorted and cleaned before being packaged for distribution.

The U.S. grows about 5% of the world's peanuts. Georgia produces the most followed by Florida, Alabama, Texas, and North Carolina. China is the world's largest peanut producer.

Peanuts are cleaned to remove any remaining plant debris. Processing involves shelling, blanching, roasting, and grinding to produce various products.

Pecans are grown in 15 states with Georgia, New Mexico, and Texas being the top-producing states. The United States is the world's largest pecan producer.

Pecans are removed from their outer husks. The nuts are dried to reduce moisture content and stored in a cool, dry environment to maintain their quality before being packaged and distributed.

China, Russia, Pakistan, and Afghanistan are the largest producers of pine nuts. In the United States, pine nut production has drastically decreased in part due to their difficulty to harvest.

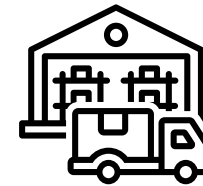
Pine nuts are removed from a second shell and then cleaned to remove any remaining debris or cone scales. They are typically dried to reduce their moisture content and prevent spoilage. Pine nuts are stored in a cool, dry environment to maintain their freshness and quality before they are packaged and distributed.

Iran and the United States are the world's leading pistachio producers. In the United States, California produces about 99% of the pistachios grown.

Pistachios are hulled to remove the outer shells and then dried through mechanical or natural air drying to reduce their moisture content and extend their shelf life. Some pistachios may be roasted or processed with seasonings before packing and distribution.

Almost all U.S. walnuts are grown in California. The United States ranks second in walnut production behind China.

The husks are removed from the walnuts mechanically or by hand. The walnuts are dried to reduce their moisture content and prevent mold and spoilage. They are stored in a cool, dry environment to maintain their freshness and prevent rancidity before they are packaged and distributed.



Raw and processed products are sold in bulk quantities to a buyer who will distribute it to a retail store.



Retail product is sold to consumers.

# Products Made from Nuts

## Products

## Nutrition

Macadamia nuts are used for candies, ground into flour for cakes, cookies, and bread, made into butter, and used in salads and stir-fries. Macadamia nut oil is used in cooking and as a salad dressing.



Macadamia nuts are cholesterol-free, sodium-free, and low in carbohydrates. They contain monounsaturated fat, which may help lower LDL cholesterol.

Peanuts can be eaten raw, roasted, or salted. They are also consumed as peanut butter, peanut oil, boiled peanuts, peanut sauce, candies peanuts, or peanut flour.



Peanuts are cholesterol-free and low in sodium. They are an excellent source of monounsaturated fatty acids, which may help to lower cholesterol levels. They are also an excellent source of manganese and niacin and a good source of folate, thiamin, and vitamin E.

Pecans are eaten as appetizers and as additions to salads, cakes, candies, pies, and cookies.



Pecans are cholesterol-free, sodium-free, and a good source of fiber. They are low in carbohydrates and a good source of monounsaturated fat and protein.

Pine nuts are eaten raw, roasted, used to make pesto, or as an ingredient in breads, cookies, cakes, sauces, and meat, fish, and vegetable dishes.



Pine nuts are cholesterol-free and sodium-free. They are a good source of heart-healthy fats, vitamins, and minerals.

Pistachios are sold shelled, unshelled, salted, or roasted. They are also used as ingredients in candies, baked goods, ice cream, and flavorings.



Pistachios are cholesterol-free, sodium-free, and a good source of fiber. They are an excellent source of vitamins, minerals, and phytonutrients. The green and yellow color of the nut comes from carotenoids (lutein and zeaxanthin) and the purple skin surrounding the nut contains antioxidants called anthocyanins.

Walnuts are sold as a snack item or for use in candies and ice cream. Products include walnut oil, walnut butter, and baked goods. Walnuts are a popular ingredient in salads, cereals, and granola.



Walnuts are cholesterol-free and sodium-free. They are a good source of healthy fats, protein, antioxidants, and fiber. Walnuts provide essential vitamins and minerals, including vitamin E, magnesium, and phosphorus.