

Stratification involves keeping the harvested nuts in a breathable bag or container, storing them in a cool, moist place, like the bottom drawer of your refrigerator. This process helps break the seed's dormancy. After a period of cold stratification for about 90-120 days, the seeds should be ready for planting. If the nut shell cracks easily, it's usually a good indication that the seed is ready to sprout.

From Suckers: American Hazelnut sends up suckers from its roots, forming clonal colonies. These can be divided in late winter or early spring. Dig up a sucker with some root attached, ensuring not to damage the mother plant's roots too much, and replant it immediately.

From Hardwood Cuttings: Hardwood cuttings can be taken in late winter. Choose a straight, healthy branch from the previous year's growth, and cut it into sections of about 20-30 cm, each with several buds. Plant these directly in potting soil, with one or two buds above the soil surface.

7 Recipes and Usage Ideas

American Hazelnut nuts have numerous culinary uses, from sweet to savory dishes. They're high in healthy fats, protein, and

vitamins, making them a nutritious addition to your diet.

Fresh Eating: American Hazelnuts can be eaten fresh after harvest and drying. They have a sweet, slightly buttery flavor that can be enjoyed as is.

Roasted Hazelnuts: Roasting enhances the flavor of the nuts. Preheat your oven to 180°C, spread the hazelnuts on a baking sheet in a single layer, and roast for 10-15 minutes or until they're golden and fragrant. After roasting, you can remove the skins by rubbing the nuts in a kitchen towel.

Hazelnut Butter: Blend roasted hazelnuts in a food processor until they form a smooth, creamy butter. This can be spread on toast or used in cooking and baking.

Baking and Desserts: Hazelnuts can be ground into a flour and used in baking. They're a classic ingredient in baked goods like cookies, cakes, and pastries. They also pair well with chocolate, such as in the classic spread, Nutella.

Savory Dishes: Chopped hazelnuts add a pleasing crunch and flavor to salads, pastas, or as a crust for fish or poultry.

In terms of medicinal uses, while more research is needed, some studies suggest that eating hazelnuts may support heart health, aid in blood sugar control, and provide anti-inflammatory and antioxidant benefits.

Lyis: American Hazelnut (Corylus Americana)

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1 Introduction to Corylus Americana

Contents

1 Introduction to Corylus Americana	1
1.1 Description of the Plant . . .	1
1.2 Historical and Cultural Context	1
1.3 Edible, Medicinal, and Useful Properties	1
2 Planting Outdoors	2
3 Ongoing Plant Care	2
4 Winterizing	3
5 Harvesting and Storage	3
5.1 Signs of Maturity for Harvest	3
5.2 How to Harvest (Method and Tools)	3
5.3 Post-Harvest Storage and Usage Guidelines	3
6 Propagation	3
7 Recipes and Usage Ideas	4

autumn, the shrub yields edible nuts encased in a leafy husk, which turn from green to brown as they mature.

1.2 Historical and Cultural Context

The American Hazelnut has been part of North American ecosystems and cultures for centuries. Native American tribes, including the Iroquois, Ojibwa, and Potawatomi, valued the plant not only for its edible nuts but also for its medicinal properties. The nuts were a crucial source of food, especially during the winter months. They were often ground into a meal or paste, which could be used to make cakes or added to soups and stews. The wood of *Corylus americana* was used in crafting various tools and baskets due to its flexibility and strength.

1.3 Edible, Medicinal, and Useful Properties

The most notable feature of the American Hazelnut is its nuts. These are high in nutritional value, rich in healthy fats, vitamins, and minerals, particularly Vitamin E and manganese. They have a sweet, mild flavor and can be eaten raw or used in a variety of culinary applications, from baking to making oil.

Medicinally, different parts of the plant have been used by Native American tribes for various purposes. A decoction of the bark was used to treat hives and fever, while an infusion of the root or leaf was applied to help heal wounds.

1.1 Description of the Plant

Corylus americana, commonly known as the American Hazelnut, is a deciduous shrub native to North America. It typically grows to a height of 2.5-4.5 meters and has a similar spread. This multi-stemmed shrub is recognized by its rounded shape, with leaves that are bright green, rounded to oval, and have doubly serrated edges. During the spring, the American Hazelnut is adorned with yellow male catkins that provide an early source of pollen for bees. By late summer to early

In addition to its food and medicinal uses, the American Hazelnut is an excellent plant for wildlife and conservation purposes. It provides food for various animals, including squirrels, deer, and birds. As a native plant, it can be used in restorations and to increase biodiversity in managed landscapes. The strong wood can also be used for crafting tools and furniture.

In conclusion, *Corylus americana* is a valuable plant not only for its edible nuts but also for its rich historical, medicinal, and ecological significance.

2 Planting Outdoors

When it comes to planting hazelnut trees outdoors, proper site selection and preparation are essential for their long-term success. Follow these guidelines to ensure optimal growth and productivity:

1. **Site Selection:** Choose a location that receives full sun exposure, as hazelnut trees thrive in bright sunlight. Select a site with well-drained soil to prevent waterlogging, as excessive moisture can be detrimental to the roots. Hazelnuts can tolerate a wide range of soil types, including sandy loam, clay loam, and loamy soils.

2. **Soil Preparation:** Before planting, prepare the soil by removing any weeds, rocks, or debris. Hazelnuts prefer slightly acidic to neutral soil with a pH range of 5.5 to 7.0, though they can manage even in highly alkaline soils. Test the soil pH and amend it if necessary to create optimal growing conditions. Incorporate up to 5% organic matter, such as compost or well-rotted manure, to improve soil fertility and structure, or sprinkle the soil around with an organic slow release fertilizer.

3. **Planting Technique:** Dig a hole that is wide and deep enough to accommodate the hazelnut seedling's root system. Gently get the hazelnut seedling, ensuring the roots remain intact. Place the seedling in the hole, ensuring that the bud union (the swollen area where the stem meets the roots) is level with or slightly above the soil surface. Backfill the hole with soil, firming it gently around the roots.

4. **Spacing and Layout:** Provide sufficient spacing between hazelnut trees to allow for optimal growth and airflow. Depend-

ing on the specific variety and growth habit, hazelnut trees generally require a spacing of 3 to 5 meters (10 to 16 feet) between trees. This spacing allows ample room for the trees to mature, preventing overcrowding and facilitating efficient pollination.

5. **Mulching and Weed Control:** Apply a layer of organic woody mulch around the base of the hazelnut trees to suppress weeds, retain moisture, and regulate soil temperature. Leave a small gap around the trunk to prevent moisture buildup and potential trunk rot. Regularly monitor the area for weeds and remove them promptly to reduce competition for nutrients and water.

6. If you have herbivores such as rabbits or deer in the area. Then you will need to put up some fencing around your plant, secured by a pole to make sure the animals do not destroy the stem of the plant. When the plant is big enough, it will be able to fend for itself, but in the meantime it needs the protection. You can use a plastic mesh or whatever you have on hand. 1/4 inch mesh will keep out most critters.

3 Ongoing Plant Care

To ensure the healthy growth and productivity of hazelnut trees, ongoing care and maintenance are crucial. Follow these practices to provide optimal care throughout the year:

1. **Watering:** Hazelnut trees require regular watering, especially during dry periods. Aim for deep, thorough watering, ensuring the root zone receives sufficient moisture. Monitor soil moisture levels and adjust watering frequency based on weather conditions and soil moisture content. Avoid overwatering, as excessive moisture can lead to root rot and other diseases.

2. **Fertilization:** Hazelnut trees benefit from regular fertilization to support their growth and fruit production. Conduct a soil test to determine nutrient deficiencies and apply a balanced fertilizer based on the test results. Apply fertilizer in early spring before the growing season begins, following the manufacturer's instructions for application rates and timing.

3. **Pruning:** Regular pruning helps maintain the shape, health, and productivity of hazelnut trees. Prune during the dormant season, typically in late winter or early

spring. Remove dead, damaged, or crossing branches, and thin out crowded areas to improve airflow and light penetration. Pruning also encourages the development of strong branches and promotes optimal fruit production.

4. **Pest and Disease Management:** Monitor hazelnut trees regularly for signs of pests and diseases, such as aphids, mites, caterpillars, or fungal infections. Implement integrated pest management practices, including the use of organic insecticides or horticultural oils when necessary. Proper sanitation, such as removing fallen leaves or diseased branches, can help prevent the spread of diseases.

4 Winterizing

Young Hazelnut trees require proper winterization to protect them from harsh winter conditions. Consider the following practices:

Mulching: Apply a layer of organic mulch around the base of the tree to insulate the roots and conserve soil moisture. Use materials such as straw, wood chips, or shredded leaves. Avoid piling mulch against the trunk to prevent moisture buildup and potential disease.

Wrapping: In regions with severe winters, wrap the lower trunk of young hazelnut trees with burlap or tree wraps to protect against frost cracks and sunscald. This is particularly important during the first few winters. 1/4inch hardware cloth in metal or plastic can protect from voles and other predators.

Watering: Adequate soil moisture is crucial before the ground freezes. Water the trees deeply in late fall to ensure they enter winter with sufficient hydration.

Pruning: Winter is an ideal time for light pruning to remove dead, damaged, or crossing branches. However, avoid heavy pruning during the dormant season, as it can stimulate new growth that may be vulnerable to cold temperatures.

Pest and Disease Prevention: Remove fallen leaves, fruit, and other debris from around the trees to reduce the risk of pests and diseases overwintering. Proper sanitation can help minimize potential issues in the following growing season.

5 Harvesting and Storage

5.1 Signs of Maturity for Harvest

American Hazelnuts typically start bearing fruit in their 3rd year, with female flowers forming that will produce nuts if successfully pollinated. Male catkins, which provide the pollen, appear around the 5th year, meaning successful pollination and nut production typically begin in the 6th year. Nuts are ready for harvest when the husks turn brown and start to crack open, generally in late summer to early fall.

5.2 How to Harvest (Method and Tools)

To harvest, simply pluck the ripe nuts from the branches. Alternatively, you can place a tarp or cloth beneath the shrub and shake the branches to dislodge the nuts.

5.3 Post-Harvest Storage and Usage Guidelines

After harvesting, remove the husks from the nuts.

For food storage: Allow the nuts to air-dry for 2-4 weeks in a cool, dry place. Once dried, the nuts can be stored in an airtight container in a cool, dark location for several months. American Hazelnuts are excellent for fresh eating, in baked goods, or for making hazelnut butter or oil.

For seed sprouting: Keep the harvested nuts in a breathable bag or container, and store them in a cool, moist place. The bottom drawer of your refrigerator, for example, is ideal for this. This process is called stratification, and it helps break the seed's dormancy. After a period of cold stratification for about 90-120 days, the seeds should be ready for planting. If the nut shell cracks easily, it's usually a good indication that the seed is ready to sprout.

6 Propagation

American Hazelnuts can be propagated from seeds, suckers, or hardwood cuttings.

From Seeds: If you want to grow from seeds, you first need to stratify the nuts.