



United States Department of Agriculture

'Copper' chinquapin

Castanea pumila (L.) P. Mill.

A Conservation Plant Release by USDA NRCS Big Flats Plant Materials Center, Corning, New York



'Copper' chinquapin tree at the USDA NRCS Big Flats Plant Materials Center, in Big Flats, New York.

'Copper' chinquapin was released in 2005 by USDA NRCS Big Flats Plant Materials Center. It was selected for its winter hardiness, superior plant vigor, and abundant fruit production.

Description

Copper is a native, deciduous, upland shrub belonging to the Beech family (Fagaceae), which grows to a mature height of 12 feet in its northern range and up to 20 feet, in the southern part. The oblong, alternate leaves are 6 inches long, simple, prominently veined with fine pointed teeth.

Male flowers arise in the leaf axils, are yellow to white, and have a strong odor. Female flowers are rounder with a 1-inch diameter. Male flowers appear in May and June, female flowers later in the season.

Source

Copper (PI-594371) is an open pollinated composite of four accessions of seed originally collected at high elevation sites in Floyd County, Virginia (9002902), Mercer County, West Virginia (9002905 and 9002906), and Bland County, Virginia (9002068). A total of 19 accessions of chinquapins were collected and evaluated from the north Appalachian region of West Virginia, Pennsylvania and New York, for 10 years.

Conservation Uses

Copper is mainly used for food and cover in wildlife plantings. With its large seed production, the nuts are eaten by squirrels, deer, grouse, chipmunks, blue jays, woodpeckers and many other bird species. White tailed deer will browse on its foliage.

Restoration: Copper can be used to rehabilitate disturbed sites because of its ability to adapt to harsh conditions.

Food source: Copper nuts are palatable to humans as well as wildlife. They have a sweet flavor and are often preferred over the fruit of the American chestnut.

Landscaping: Copper is sometimes used for landscaping as a small ornamental tree or shrub. It has long, dark green leaves and attractive flowers.

Area of Adaptation and Use

Copper chinquapin is adapted to the southern tier of New York to Florida. It can be grown on sandy loams to light clay soils. It is suitable to well-drained sites that receive full sun to partial shade. Typically found on dry uplands in deciduous or mixed woodlands.



Copper chinquapin area of adaptation and use.

Establishment and Management for Conservation Plantings

Copper plants can be established from bareroot or seed-grown containerized plants. The best survival and growth are achieved by planting dormant chinquapins between the date of first frost in the fall and the date of last frost in the spring. Containerized plants established after the last frost in the spring will survive if there is sufficient soil moisture.

Management: Copper chinquapin orchards should be fenced or tree shelters installed, to minimize browsing by livestock and deer. Root collars may be necessary if girdling of woody plants by rabbits is a problem. Seed

orchards should be mowed to minimize competition from other plants.

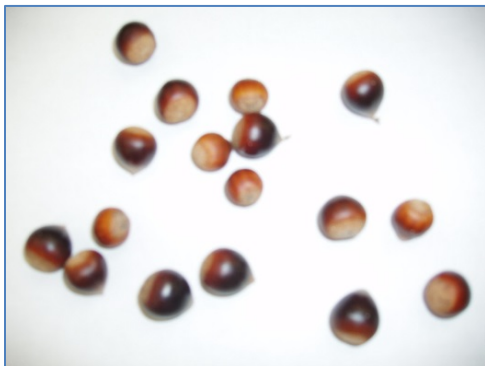
Plantings for wildlife habitat improvement should be established at a 10-foot spacing between plants while planting for seed orchards should be spaced 15-20 feet apart. Watering at planting time is essential for good seedling survival. Keep vegetation away from each plant until it becomes well established.

Ecological Considerations

Copper chinquapin has no adverse effects on the environment. It is susceptible to the chestnut blight infection.

Seed and Plant Production

Copper chinquapin nuts are about ½ inch in diameter and are enclosed in spiny burs and its fruit matures in mid-September. Collect seeds immediately after the spiny husks have split open. Plants can produce over 1000 nuts per plant. Seed has no physiological dormancy. It is recommended to sow freshly harvested seeds immediately after harvest in the fall. Planting at this time shows good germination while seeds stored over winter, tend to dry out and germinate at reduced rates.



Copper chinquapin seed.



Copper chinquapin seed encased in spiny bur.

To obtain the best germination and growth of seedlings, Copper chinquapin should be planted in raised beds or

sandy soils with adequate moisture. To prepare the area, deep rototill to loosen and mix the soil. Plant seed ¾" to 1" deep and 3 inches apart in furrows that are 4" apart. Bed should be covered with 2"-3" of straw, to prevent frost heaving. When seedlings emerge ½ of the straw should be removed.

Nuts planted in the spring should be kept in a moist medium at 30-36° F and planted as soon as the soil can be worked.

After one year in the seedbeds, seedlings are harvested in late fall or winter while dormant. The best harvesting methods is using a nursery bed digger which undercuts the seedlings and gently loosens the soil around the roots. Bare root seedlings are then stored in coolers to maintain seedling dormancy, until shipped. Depending on site conditions, plants will produce nuts in the third growing season, with large nut crops occurring during the fifth and sixth season.

Availability

For conservation use: Copper chinquapin is available at limited nurseries in the East, South, and mid-West.

For seed or plant increase: Copper chinquapin breeder seed and un-rooted and rooted plants will be maintained by the USDA NRCS Big Flats Plant Materials Center, near Corning New York.

For more information, contact:
USDA NRCS Big Flats Plant Materials
Center

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<http://plant-materials.nrcs.usda.gov/nypmc/>

Citation

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For additional information about other plants, please contact your local field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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