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SOIL CONSERVATION SERVICE
LEXINGTON, KENTUCKY
AND
UNIVERSITY OF KENTUCKY AGRICULTURAL EXPERIMENT STATION
LEXINGTON, KENTUCKY
AND
KENTUCKY DEPARTMENT OF FISH AND WILDLIFE
FRANKFORT, KENTUCKY

Notice of Release of 'Golden' Chinquapin

The United States Department of Agriculture, Soil Conservation Service; University of Kentucky Agricultural Experiment Station; and the Kentucky Department of Fish and Wildlife announce naming and release of 'Golden' chinquapin Castanea pumila (L.) Mill. PI 421739.

Original seed of 'Golden' chinquapin was collected in Towns County, Georgia. Seedlings from this source were received at the Plant Materials Center, Quicksand, Kentucky, in 1974, and accessioned KY. 1812.

'Golden' chinquapin is a large shrub native to the Eastern United States. It produces a smaller nut than the American chestnut of approximately half-inch in diameter. The nuts are an excellent source of wildlife food during fall and winter. They are also enjoyed by humans as well. Maximum height of the plant is 15-20 feet.

Foundation quality plant materials will be maintained by the Soil Conservation Service Plant Materials Center, Quicksand, Kentucky.


Director, Ecological Sciences Division
U.S. Department of Agriculture
Soil Conservation Service
Washington, DC 20013

5/3/83
Date


State Conservationist
U.S. Department of Agriculture
Soil Conservation Service
Lexington, Kentucky

4/19/83
Date

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**Director, Kentucky Agricultural Experiment
Station
University of Kentucky
Lexington, Kentucky**

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Date

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**Commissioner, Kentucky Fish and
Wildlife Resources
Frankfort, Kentucky**

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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
LEXINGTON, KENTUCKY

Development of 'Golden' Chinquapin

'Golden' chinquapin was first evaluated by the SCS Plant Materials Center at Americus, Georgia, in 1960 and designed as AM-120 chinquapin. Original seed was collected at Towns County, Georgia. Seedlings of AM-120 were shipped to the Plant Materials Center at Quicksand, Kentucky, in the winter of 1974 and designated as KY 1812 (See Table-1 attached). Due to KY 1812 chinquapin's superior qualities of vigor and sustained yield led to the decision to release it for commercial nursery production in 1983.

Description

'Golden' chinquapin, Castanea pumila (L.) Mill., PI 421739 is a large shrub native to the eastern United States and more especially the Appalachian region. Bark is light brown. Leaves are elliptic-oblong, sharply serrated, green and smooth above, densely white, soft and hairy beneath, 2-5 inches long. Each vein terminates in a bristle-like point. The leaves look a great deal like the native American chestnut or Chinese chestnut. Burs are 1 to 1-1/2 inches in diameter, spiny, enclosing a single brown nut. Seed is about 1/2 inch in diameter or about half as long as American chestnut. Maximum height of the plant is 15-18 feet.

Procedures Used in Development

Original seed of 'Golden' chinquapin was collected at Towns County, Georgia, in the fall of 1959. These seed were planted in 1960 and seedlings were transplanted at the Americus, Georgia Plant Materials Center in 1961. Seedlings from this stock were shipped to the Quicksand Plant Materials Center in the winter of 1974. These plants have been evaluated at the Quicksand PMC since 1975 (Table-1). Field evaluation plantings were also made with these Georgia seedlings in 1975 and 1976 (Table-2). Since 1979 seedlings have been produced at the Quicksand Plant Materials, with field plantings being made, beginning in 1981, also (Table-2). Seedlings may produce nuts as early as the end of the second or third growing season. However, nut production is not significant until the fourth or fifth year. Six year old plants in 1981 produced 1500 nuts per plant. The same plants in 1982 produced 5 lbs. of nuts per plant.

Uses and Adaptation

The principal use of 'Golden' chinquapin is for wildlife food and cover. It can be used as a component of mitigation plantings for wildlife on a variety of disturbed sites. The nuts are eaten by squirrel, deer, grouse, bobwhite quail, wild turkey as well as humans. It is adapted to a wide range of site conditions. These include dry, well-drained, moist, sunny, or shady conditions. It can be grown on sandy loam soils, or clay soils. Ideally, it should be planted where competition from other plants is slight. Known geographic range is southern Georgia to Texas and north to New Jersey, southern Pennsylvania, Ohio, Indiana, Illinois, Missouri and most of Arkansas.

Establishment and Maintenance

One-year old seedlings should be planted in early spring. For maximum fruit production, space plants at eight feet apart, where they get at least 50% sunlight. When multiple rows are used, fifteen to eighteen feet between rows is advisable. When planting in sod, scalp an area at least three feet in diameter for each plant. Spread a closed handful of 10-10-10 fertilizer in the bottom of each hole and cover with two to three inches of soil before putting in the plant. Keep fertilizer from touching roots. Mulch each plant with wood chips, rotten sawdust or straw regardless of where the planting is made. Keep the vegetation away from each plant until it becomes well established, possibly for two years or until plant can compete for space. If growth is not satisfactory after second year, sprinkle a small amount of complete fertilizer around each plant and work into the soil.

TABLE-1 QUICKSAND PMC - 8 YR. EVALUATION OF CHINQUAPIN

<u>Name/Number</u>	<u>Origin</u>	<u>Blk</u>	<u>Row</u>	<u>Years Old</u>	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)
					<u>Surv.</u>	<u>Vig.</u>	<u>Ht.</u>	<u>Wd</u>	<u>Fruit Amt.</u>	<u>Ret.</u>	<u>WI</u>	<u>DI</u>	<u>Year Eval.</u>
Castanea pumila	GA	G	10	1975	100	1	3.4	2.4	-	-	1	1	1975
KY 1812 - PT 421739	(PMC)				100	3	3.6	2.6	-	-	1	1	1976
chinquapin					100	3	5.9	3.3	1	-5	1	1	1977
					100	3	6.2	4.5	1	5	1	1	1978
					100	1	7.5	6.1	1	3	1	1	1979
					100	1	8.6	7.5	1	3	1	1	1980
					100	3	9.1	8.2	1	5	1	1	1981
					100	1	11.6	9.2	1	3	1	1	1982

Legend For Chinquapin Evaluation

<u>Column</u>			
1	Stand expressed in percentage survival	(S)	Percentage
2	Vigor	(V)	1-Excellent, 3-Good, 5-Fair, 7-Poor, 9-Very Weak
3	Height in feet	(HT)	Number
4	Crown width in feet	(WD)	
5	Fructing Habits	(FRT HABS)	1-Excellent, 3-Good, 5-Fair, 7-Poor, 9-Very Little, 10-None
	Amount of fruit produced	(AMT)	
	Retention of fruit after maturity	(RET)	1-Excellent, 3-Good, 5-Fair, 7-Poor, 9-Verv Poor
6	Winter Injury	(WI)	1-(0-20%), 3-(20-40%), 5-(40-60%), 7-(60-80%), 9-(80-100%)
7	Disease Injury	(DI)	

TABLE-2 FIELD PLANTINGS - 'GOLDEN' CHINQUAPIN

<u>Year Planted</u>	<u>Location</u>	<u>Remarks</u>
1975	Pike County (KY) (Mine Spoil)	Survival 75% - Nuts produced in 1980.
1975	Laurel County (KY) (Mine Spoil)	Survival 80% - Some nuts produced in 1979.
1976	Lawrence County (TN)	Survival 50% - Nuts produced in 1981
1981	Franklin County (KY)	Survival 65%
1981	Bullitt County (KY)	Survival 60%
1981	Grant County (KY)	Survival 60%
1982	Hardin County (KY)	Survival 65%
1982	Pulaski County (KY)	Survival 50%
1982	Letcher County (KY)	Survival 90%
1982	McCreary County (KY)	Survival 100%
1982	Lawrence County (KY)	Survival 90%
1982	Granger County (TN)	Survival 40%
1982	Waverly County (TN)	Survival 50%
1982	Pickett County (TN)	Survival 98%
1982	Henderson County (TN)	Survival 60%
1982	Lawrence County (OH)	Survival 85%
1982	VanWert County (OH)	Survival 40%
1982	Calhoun County (W. VA)	Survival 30%
1982	Hardy County (W.VA)	Survival 30%
1982	Mercer County (W.VA)	Survival 88%
1982	Mason County (W.VA)	Survival 34%
1982	Pendleton County (W.VA)	Survival 65%