

Plant		Chestnut		52(07010)	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Color of shoot	10 shoots	Observation	1:Grayish yellow 2:Yellow 3:Yellow brown 4:Light brown 5:Brown 7:Reddish brown		Average color on sunny side of shoot after leaf fall
2	Apical shape of leaf blade	15 leaves	Observation	3:Aristate 4:Slightly acuminate 5:Acuminate 7:Acute		Average shape of tip of leaf blade in August
3	Bottom shape of leaf blade	15 leaves	Observation	3:Cuneate 4:Slightly cuneate 5:Acute 7:Obtuse		Average shape of bottom of leaf blade in August
4	Size of leaf blade	15 leaves	Observation	3:Small 5:Intermediate 7:Large		Size of mature leaf blade. Observe in August
5	Length of male catkin	15 catkins	Observation	3:Short 5:Intermediate 7:Long		Length of male catkin at full bloom
6	Attitude of male catkin	15 shoots	Observation	3:Erect 5:Intermediate 7:Spread		Average habit of male catkins at full flowering
7	Shape of bur	15 burs	Observation	3:Globular 5:Flat globular 7:Squarely globular		Shape of burs which contain three nuts just before opening
8	Length of spine	15 burs	Observation	3:Short 5:Intermediate 7:Long		Average length of spines
9	Size of hilum	15 nuts	Observation	3:Small 5:Intermediate 7:Large		Size of hilum on the outer side of intact outer nuts
10	Shape of separation line	15 nuts	Observation	3:Straight 5:Carved 7:Wavy		Shape of separation line on the outer side of intact outer nuts
11	Color of pericarp	15 nuts	Observation	3:Light brown 5:Brown 6:Reddish brown 7:Dark brown 8:Dark-purplish brown		Color of intact nuts. Observe just after harvest

Plant		Chestnut		52(07010)	Primary optional character
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Length of shoot	10 shoots	Observation	3:Short 5:Intermediate 7:Long	Average length of well-developed shoots without bearing nuts. Observe after leaf fall
2	Thickness of shoot	10 shoots	Observation	3:Thin 5:Intermediate 7:Thick	Average diameter of well-developed shoots without nut bearing. Observe after leaf fall
3	Length of petiol	15 leaves	Observation	3:Short 5:Intermediate 7:Long	Average length of petiole of fifteen leaves. Three leaves collected from the middle part of each of five shoots in August

Plant		Chestnut		52(07010)	Secondary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Tree attitude	2 trees	Observation	3:Erect 5:Intermediate 7:Spread		Tree shape after leaf fall referring to ratio of tree height to width
2	Tree size	2 trees	Observation	3:Small 5:Intermediate 7:Large		Tree size after leaf fall referring to width of tree crown
3	Density of shoots	2 trees	Observation	3:Low 5:Intermediate 7:High		Density of current season's shoots after leaf fall
4	Time of bud burst	2 trees	Observation	3:Early 5:Intermediate 7:Late 9:Very late		Time when 20% of terminal buds developed greenish color at bud apex
5	Time of leaf fall	2 trees	Observation	3:Early 5:Intermediate 7:Late		Time of natural leaf fall of more than 80% of total leaves
6	Resistance to chestnut gall wasp	2 trees	Observation	3:Low 5:Intermediate 7:High 9:Very high		The ratio of gall formation, size of gall, position of gall formation on shoot or tree crown are referred.
7	Flowering time	2 trees	Observation	1:Very early 3:Early 5:Intermediate 7:Late 9:Very late		Time of full flowering of male catkin
8	Ripening time	2 trees	Observation	1:Very early 3:Early 5:Intermediate 7:Late 9:Very late		Intermediate date between the first harvest and last harvest
9	Size of bur	10 burs	Observation	3:Small 5:Intermediate 7:Large		Size of ten burs which contain three nuts just before opening
10	Density of spines	10 burs	Observation	0:None 3:Low 5:Intermediate 7:High		Average density of spines

Plant		Chestnut		52(07010)	Secondary optional character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Tree vigor	2 trees	Observation	3:Weak 5:Intermediate 7:Strong		Dimension of tree trunk, length and thickness of shoots, angle of branching are referred.
2	Amount of female inflorescence	2 trees	Observation	3:Little 5:Intermediate 7:Much		The number of female flowers per shoot at full bloom
3	Length of peduncle	10 burs	Observation	3:Short 5:Intermediate 7:Long		Average length of ten peduncles at full flowering
4	Thickness of peduncle	10 burs	Observation	3:Thin 5:Intermediate 7:Thick		Average thickness of ten peduncles at full flowering

Plant		Chestnut		52(07010)	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Size of fruit	30 nuts	Observation	1:Very small 3:Small 5:Intermediate 7:Large		Based on average fruit weight, shape and actual size of fruits
2	Density of tomenta on fruit tip	30 nuts	Observation	3:Low 5:Intermediate 7:High		Density and area of tomenta observed for outer fruits from above
3	Shape of outer fruit	30 nuts	Observation	2:Tall triangular 3:Triangular 4:Rounded triangular 5:Round-flat triangular 6:Round 7:Concave round 8:Flat round		Shape on lateral side of 30 outer fruits collected from 15 burs containing 3 nuts
4	Splitting of pericarp	30 nuts	Observation	3:Minimal 5:Intermediate 7:Large		Splitting of pericarp at apex, body, hilum at full flowering
5	Polyembryony	30 nuts	Observation	3:Minimal 5:Intermediate 7:Large		Ratio of fruits containing at least two embryos in a fruit
6	Color of steamed kernel	10 nuts	Observation	3:Milky white 5:Pale yellow 7:Yellow		Flesh color on the cut surface of kernels steamed over 40 minutes
7	Quality of pulp	10 nuts	Sensory	3:Gummy 5:Intermediate 7:Grainy		Quality of pulp of kernels steamed over 40 minutes
8	Sweetness	10 nuts	Sensory	3:Low 5:Intermediate 7:High		Organoleptic evaluation of kernels steamed over 40 minutes
9	Flavor	10 nuts	Sensory	3:Weak 5:Intermediate 7:Strong		Organoleptic evaluation of kernels steamed over 40 minutes
10	Kernel quality	10 nuts	Sensory	3:Low 5:Intermediate 7:High		General evaluation on kernels steamed over 40 minutes

Plant		Chestnut		52(07010)	Tertiary optional character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Subsidence of pellicle to kernel	30 nuts	Observation	3:Shallow 5:Intermediate 7:Deep		Subsidence of pellicle on horizontally cut surface at the maximum fruit width
2	Specific gravity of fruit	30 nuts	Measurement	3:Low 5:Intermediate 7:High		Specific gravity of fruits just after harvest