

Plant		Jerusalem Artichoke ( <i>Helianthus tuberosus</i> L.)		503	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Plant height	Block	Observation	3:Low 5:Intermediate 7:High		Hight of netire plant at the maximum growing stage
2	Flowering ability in open field	Block	Observation	1:None 2:Very low 3:Low 4:Slightly low 5:Moderate 6:Slightly high 7:Profuse 8:Very profuse 9:Extremely profuse		Flowering habit under natural conditions
3	Vine pigmentation	Block	Observation	1:Absent 3:Pale 5:Intermediate 7:Dark 9:Extremely dark		Anthocyanin pigmentation 3 months after planting
4	Storage root shape	Block	Observation	1:Round 3:Round elliptic 5:Elliptic 7:Long elliptic 9:Very long elliptic		Storage root outline
5	Storage root skin color	Block	Observation	1:White 2:Yellow 3:Brown 4:Pale red 5:Red 6:Reddish purple 7:Dark reddish purple 8:Purple 9:Other		The skin color of storage root
6	Storage root flesh color	Block	Observation	1:White 2:Pale cream 3:Cream 4:Pale yellow 5:Yellow 6:Pale orange 7:Orange 9:Purple		The flesh color of storage root
7	Storage root projection	Block	Observation	2:Almost none 3:Very little 4:Little 5:Intermediate 6:Some 7:Much 8:Very much		Projection on storage root surface

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Stem length	5 plants	Measurement	cm (round to the 1st decimal place)		Length from the ground to the tip of the longest stem of moderate growing plant
2	Leaf size	10 leaves	Observation	1:Very small 3:Small 5:Intermediate 7:Large 9:Very large		Size of the largest leaf of moderate growing plant 3 months after planting
3	Leaf shape	10 leaves	Observation	1:Very narrow 3:Narrow 5:Intermediate 7:Wide 9:Very wide		Shape of the leaf of moderate growing plant 2-3 months after planting
4	Leaf smoothness	Block	Observation	1:Very smooth 3:Smooth 5:Intermediate 7:Rough 9:Very rough		Smoothness of leaf surface
5	Petiole length	10 petioles	Measurement	1:Very short 3:Short 5:Intermediate 7:Long 9:Very long		Petiole length of the largest leaf of moderate growing plants 3 months after planting
6	Number of stems	10 plants	Measurement	Shoots per plant (round to the 1st decimal place)		Number of shoots over 50 cm length of moderate growing plant at harvesting time
7	Stem diameter	10 plants	Measurement	mm (round to the 1st decimal place)		Stem diameter of moderate growing plant at 100 cm from the ground
8	Storage root size	Block	Observation	1:Very small 3:Small 5:Intermediate 7:Large 9:Very large		Average weight of storage roots
9	Variability of storage root size	Block	Observation	1:Extremely uniform 3:Uniform 5:Intermediate 7:Variable 9:Extremely variable		Variability of storage root size
10	Variability of storage root shape	Block	Observation	1:Extremely uniform 3:Uniform 5:Intermediate 7:Variable 9:Extremely variable		Variability of storage root shape
11	Number of tubers	Block	Observation	1:Very few 3:Few 5:Intermediate 7:Many 9:Very many		Tuber formation at harvesting time
12	Position of tubers	Block	Observation	1:Very near 3:Near 5:Intermediate 7:Far 9:Very far		The distance of the tubers from the plant
13	Leaf fall before frost	Block	Observation	1:Very few 3:Few 5:Intermediate 7:Many 9:Very many		Degree of leaf fall before frost

Plant		Jerusalem Artichoke ( <i>Helianthus tuberosus</i> L.)		503	Secondary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Storability of roots	Block	Observation	1:Very poor 3:Poor 5:Intermediate 7:Good 9:Very good		Weight loss and the degree of rot after natural storage condition
2	Time of sprouting	Block	Observation	1:Extremely early 3:Early 5:Intermediate 7:Late 9:Extremely late		Time of sprout emergence after root bedding
3	Number of sprouts	Block	Observation	1:Almost none 3:Very few 5:Intermediate 7:Many 9:Extremely many		Observation of number of sprouts from bedded storage roots

Plant		Jerusalem Artichoke ( <i>Helianthus tuberosus</i> L.)		503	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Storage root weight per 100 square meters	Block	Measurement	1:Very low 3:Low 5:Intermediate 7:High 9:Very high		Storage root weight per 100 square meters
2	Number of storage roots	Block	Measurement	1:Very few 3:Few 5:Intermediate 7:Many 9:Very many		Number of storage roots per 100 square meters
3	Dry matter content of storage root	1 kg of storage roots	Measurement	1:Extremely low 3:Low 5:Intermediate 7:High 9:Extremely high		Cut roots into small pieces, take two samples of 100g dry at 70-80 centi degree preliminary and dry again at 105 centi degree for 6 hours. Dry matter/fresh weight (g)
4	BRIX (%)	10 storage roots	Measurement	% (round to the 1st decimal place)		Mash roots and measure brix by refractometer

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Top weight per 100 square meters	Block	Measurement	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Top weight of investigated block, convert to the weight per 100 square meters
2	Adaptability for early harvest	Block	Measurement	3:Very low 4:Low 5:Intermediate 6:High 7:Very high		Harvest roots within 120 days after planting and compare root weight with that of the standard harvest
3	Fructo-oligosaccharide content	10 storage roots	Measurement	Fw.mg/g (round to the 1st decimal place)		Content of GF <sub>n</sub> (n>2)
4	Total saccharide content	10 storage roots	Measurement	Fw.mg/g (round to the 1st decimal place)		Total content of monosaccharides, disaccharides and oligosaccharides
5	Fructo-oligosaccharide ratio	10 storage roots	Measurement	% (round to the 1st decimal place)		Ratio of fructo-oligosaccharides to total saccharaids
6	Total polyphenol content	10 storage roots	Measurement	Fw.mg/g (round to the 1st decimal place)		Total content of polyphenol
7	Blackening of storage root flesh		Observation	1:None 3:Little 5:Intermediate 7:Abundant 9:Extremely abundant		Blackening of the cut surface of the fresh storage root flesh
8	Taste of fresh storage root		Sensory	1:Extremely bad 3:Bad 5:Intermediate 7:Good 9:Excellent		Taste of steamed root flesh