Plant	Yacon	120(04004)	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Plant type	Block	Observation	2:Erect type 1 3:Erect type 2 4:Erect type 3 5:Intermediate 6:Spreading type 1 7:Spreading type 2 8:Spreading type 3	Plant type 4 months after transplanting
2	Flowering ability in open field	Block	Observation	1:None 2:Flower bud formation 3:Flower bud 4:Beginning of flowering 5:Flowering time 6:Few flowering 7:Moderate flowering 8:Many flowering	Flowering habit at harvest time
3	Leaf shape	10 leaves	Measurement	1:Very narrow 3:Narrow 5:Intermediate 7:Wide 9:Very wide	Width/length ratio of the uppermost leaf (10 cm length) 3 months after transplanting
4	Anthocyanin pigmentation on leaf	Block	Observation	1:None 3:Pale 5:Intermediate 7:Slightly dark 9:Dark	Anthocyanin pigmentation of the uppermost leaf 3 months after transplanting
5	Storage root shape	Block	Observation	1:Round 3:Round elliptic 5:Elliptic 7:Long elliptic 9:Very long elliptic	Storage root outline
6	Storage root flesh color	Block	Observation	1:White 3:Yellowish white 5:Pale yellow orange 7:Yellowish orange	Predominant color of cross section of storage roots
7	Storage root cracking	Block	Observation	2:Almost none 3:Very little 4:Little 5:Intermediate 6:Some 7:Much 8:Very much	Cracking on storage root surface

Plant	Yacon	120(04004)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Stem length	10 plants	Measurement	cm (round to the 1st decimal place)	Length from the grond to the tip of the longest stem of moderate growing plant
2	Leaf size	10 leaves	Measurement	1:Very small 3:Small 5:Intermediate 7:Large 9:Very large	Size of the largest leaf of moderate growing plant 2 to 3 months after transplanting
3	Leaf smoothness	Block	Observation	1:Very smooth 3:Smooth 5:Intermediate 7:Rough 9:Very rough	Smoothness of leaf surface
4	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 transplanting
5	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
6	Stem diameter	10 plants	Measurement	mm (round to the 1st decimal place)	Stem diameter of moderate growing plants at 10 cm from the ground
7	Storage root size	Block	Measurement	1:Very small 3:Small 5:Intermediate 7:Large 9:Very large	Average weight of storage roots over 100 g
8	Number of tubers	Block	Observation	1:Very few 3:Few 5:Intermediate 7:Many 9:Very many	Tuber formation at harvesting time
9	Leaffall before frost	Block	Observation	1:Very few 3:Few 5:Intermediate 7:Many 9:Very many	Degree of leaffall before frost
10	Anthocyanin pigmentation in leaves	Block	Observation	1:Very little 3:Little 5:Intermediate 7:Much 9:Very much	Degree of anthocyanin pigmentation on leaves before frost
11	Petiole length ratio	10 petioles	Measurement	1:Very short 3:Short 5:Intermediate 7:Long 9:Very long	(Petiole length)/(leaf length) ratio of the uppermost leaf 3 months after transplanting

Plant	Yacon	120(04004)	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:Very early 3:Early 5:Intermediate 7:Late 9:Very late	Eariness of sprouting

Plant	Yacon	120(04004)	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Cross-incompatibility group	10 flowers	Others	1:A group 2:B group 3:C group	Identify cross-incompatibility group by reciprocal crosses with tester varieties
2	Self-compatibility	10 flowers	Others	1:- 3:-+ 5:+/- 7:+ 9:++	Judge from seed-set ratio after self-pollination.
3	Seed-set	10 flowers	Others	1:Very low 3:Low 5:Intermediate 7:High 9:Very high	Judge from seed-set ratio of compatible crosses.

Plant	Yacon	120(04004)	Tertiary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Total root weight per 100 square meters	Block	Measurement	1:Very low 3:Low 5:Intermediate 7:High 9:Very high	Weight of roots over 2 cm diameter per 100 square meters
2	Storage root weight per 100 square meters	Block	Measurement	1:Very low 3:Low 5:Intermediate 7:High 9:Very high	Storage root weight over 100 g per 100 square meters
3	Number of storage roots	Block	Measurement	1:Very few 3:Few 5:Intermediate 7:Many 9:Very many	Number of storage roots over 100 g per 100 square meters
4	Water content in roots	Block	Measurement	1:Very low 3:Low 5:Intermediate 7:High 9:Very high	Dry roots at 80 degrees centigrade at least for 3 days and measure the change of weight
5	Sweetness of roots	10 storage roots	Measurement	% (round to the 1st decimal place)	Mash roots and measure brix by refractometer

Plant	Yacon	120(04004)	Tertiary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Top weight	10 plants	Measurement	1:Very low 3:Low 5:Intermediate 7:High 9:Very high	Cut and dry stems and leaves of moderate growing plants
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 transplanting and compare root weight with that of the standard harvest or control variety
3	Degree of root rot		Observation	1:None 3:Little 5:Intermediate 7:Much 9:Very much	
4	Fructo-oligosaccharide content	10 storage roots	Measurement	Fw.mg/g (round to the 1st decimal place)	Content of GF2 to GF10
5	Total saccharide content	10 storage roots	Measurement	Fw.mg/g (round to the 1st decimal place)	Total content of monosaccharides, disaccharides and oligosaccharides
6	Fructo-oligosaccharide ratio	10 storage roots	Measurement	% (round to the 1st decimal place)	Ratio of fructo-oligosaccharide to total saccharoids