

Plant		Thunberg lily, Showy lily		497	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Stem length	5 plants	Measurement	1:<=29 cm 2:30-59 cm 3:60-89 cm 4:90-119 cm 5:120-149 cm 6:150-179 cm 7:180-209 cm 8:>=210 cm		Length from ground to boot leaf
2	First peduncle	5 plants	Measurement	1:<=29 mm 2:30-59 mm 3:60-89 mm 4:90-119 mm 5:120-149 mm 6:150-179 mm 7:180-209 mm 8:>=210 mm		The first flower
3	Flower cluster type	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V		At the full flowering time of the first flower
4	Leaf type	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII 8:Type VIII 9:Type IX		Leaf at the middle part of stem
5	Leaf angle	5 plants	Measurement	1:<=29 2:30-59 3:60-89 4:90-119 5:120-149 6:>=150		Angle made by a line from leaf base to leaf tip, and a vertical line
6	Flower angle	5 plants	Measurement	1:<=29 2:30-59 3:60-89 4:90-119 5:120-149 6:>=150		Angle made by the central line of the first flower, and a vertical flower
7	Basal color of petal	5 plants	Observation			At the full flowering time of the first flower, central part of petal. Refer to RHS color chart
8	Flower diameter	5 plants	Measurement	1:<=29 mm 2:30-59 mm 3:60-89 mm 4:90-119 mm 5:120-149 mm 6:150-179 mm 7:180-209 mm 8:210-239 mm 9:>=240 mm		At the full flowering time of the first flower
9	Number of flowers	5 plants	Measurement	1:<=2 2:3-5 3:6-8 4:9-11 5:12-14 6:15-17 7:18-20 8:>=20		Normal flower number per plant
10	Flowering time	Block	Observation	date		Date when 50% of flowers have bloomed
11	Leaf length	5 plants	Measurement	1:<=19 mm 2:20-29 mm 3:30-49 mm 4:50-79 mm 5:80-119 mm 6:120-169 mm 7:170-229 mm 8:230-299 mm 9:>=300 mm		Of the middle part of stem
12	Number of blotches of one inner perianth	5 plants	Measurement	0:0 1:1-9 2:10-19 3:20-29 4:30-39 5:40-49 6:50-59 7:60-69 8:>=70		At the full flowering time of the first flower

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1	Seed weight	1000 grains	Measurement	1:<=1.9 g 2:2.0-3.9 g 3:4.0-5.9 g 4:6.0-7.9 g 5:>=8.0 g		For seed propagation varieties
2	Bulb color	5 plants	Observation	1:White 2:Pale yellow 3:Yellow 4:Pale red purple 5:Red purple 6:Deep red purple 7:Red brown 8:Brown		Color at the harvesting time
3	Bulb type	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII 8:Type VIII 9:Type IX		
4	Scale width	5 plants	Measurement	1:<=4 mm 2:5-9 mm 3:10-14 mm 4:15-19 mm 5:20-24 mm 6:25-29 mm 7:30-34 mm 8:35-39 mm 9:>=40 mm		Central part of the outermost substantial scale
5	Scale length	5 plants	Measurement	1:<=9 mm 2:10-19 mm 3:20-29 mm 4:30-39 mm 5:40-49 mm 6:50-59 mm 7:60-69 mm 8:70-79 mm 9:>=80 mm		Central part of the outermost substantial scale
6	Scale thickness	5 plants	Measurement	1:<=1.9 mm 2:2.0-3.9 mm 3:4.0-5.9 mm 4:6.0-7.9 mm 5:8.0-9.9 mm 6:10.0-11.9 mm 7:>=12.0 mm		Central part of the outermost substantial scale
7	Plant height	5 plants	Measurement	1:<=29 cm 2:30-59 cm 3:60-89 cm 4:90-119 cm 5:120-149 cm 6:150-179 cm 7:180-209 cm 8:>=210 cm		Length of whole plant
8	Next stem length in culture by bulb on seed propagation variety	5 plants	Measurement	1:<=29 cm 2:30-59 cm 3:60-89 cm 4:90-119 cm 5:120-149 cm 6:150-179 cm 7:180-209 cm 8:>=210 cm		Length from ground to the boot leaf
9	Stem diameter	5 plants	Measurement	1:<=2.4 mm 2:2.5-4 mm 3:5-9 mm 4:10-14 mm 5:15-19 mm 6:20-24 mm 7:25-29 mm 8:>=30 mm		Diameter at 1/3 length from the boot leaf of stem
10	Upper part stem color	5 plants	Observation	1:Yellow green 2:Pale green 3:Green 4:Deep green 5:Pale brown 6:Brown 7:Deep brown		Upper 1/3 length of stem
11	Middle part stem color	5 plants	Observation	1:Yellow green 2:Pale green 3:Green 4:Deep green 5:Pale brown 6:Brown 7:Deep brown		Middle 1/3 length of stem
12	Lower part stem color	5 plants	Observation	1:Yellow green 2:Pale green 3:Green 4:Deep green 5:Pale brown 6:Brown 7:Deep brown		Lower 1/3 part of stem

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13	Stem hair	5 plants	Observation	0:Absent 9:Present		
14	Internode length	5 plants	Measurement	1:<=4 mm 2:5-9 mm 3:10-19 mm 4:20-39 mm 5:40-59 mm 6:60-79 mm 7:80-99 mm 8:100-119 mm 9:>=120 mm		Middle part of stem
15	Internode length under a boot leaf	5 plants	Measurement	1:<=4 mm 2:5-9 mm 3:10-19 mm 4:20-39 mm 5:40-59 mm 6:60-79 mm 7:80-99 mm 8:100-119 mm 9:>=120 mm		
16	2nd. peduncle length	5 plants	Measurement	1:<=29 mm 2:30-59 mm 3:60-89 mm 4:90-119 mm 5:120-149 mm 6:150-179 mm 7:180-209 mm 8:>=210 mm		The second flower
17	Peduncle leaf presence	5 plants	Observation	0:Absent 9:Present		
18	First peduncle angle	5 plants	Measurement	1:<=14 2:15-29 3:30-59 4:60-89 5:90-119 6:120-149 7:>=150		Angle made by peduncle of the first flower and a vertical line
19	Number of leaves	5 plants	Measurement	1:<=19 2:20-39 3:40-59 4:60-79 5:80-99 6:100-119 7:120-139 8:140-159 9:>=160		Number of leaves from ground to boot leaf
20	Leaf width	5 plants	Measurement	1:<=4 mm 2:5-9 mm 3:10-19 mm 4:20-29 mm 5:30-39 mm 6:40-49 mm 7:50-59 mm 8:60-69 mm 9:>=70 mm		Maximum leaf width of middle part of stem
21	Leaf color	5 plants	Observation	1:Yellow green 2:Pale green 3:Green 4:Deep green 5:Purple green		Leaf at the middle part of stem
22	Leaf picotee	5 plants	Observation	0:Absent 9:Present		
23	Curvature of middle part of leaf	5 plants	Observation	1:Incurved 2:Absent 3:Outcurved		Adaxial side of leaves on the middle part of stem
24	Curvature of apex of leaf	5 plants	Observation	1:Incurved 2:Absent 3:Outcurved		Adaxial side of leaves on the middle part of stem
25	Undulation of leaf edge	5 plants	Observation	0:Absent 9:Present		Leaf at the middle part of stem
26	Leaf twisting	5 plants	Observation	0:Absent 9:Present		Leaf at the middle part of stem

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27	Leaf hair	5 plants	Observation	0:Absent 9:Present		Leaf at the middle part of stem
28	Basal part color of petal	5 plants	Observation			At the full flowering time of the first flower. Refer to RHS color chart
29	Middle part color of petal	5 plants	Observation			At the full flowering time of the first flower. Refer to RHS color chart
30	Apex part color of petal	5 plants	Observation			At the full flowering time of the first flower. Refer to RHS color chart
31	Back side color of petal	5 plants	Observation			At the full flowering time of the first flower. Refer to RHS color chart
32	Blotch of one outer perianth	5 plants	Measurement	0:0 1:1-9 2:10-19 3:20-29 4:30-39 5:40-49 6:50-59 7:60-69 8:>=70		At the full flowering time of the first flower
33	Color of petal blotches	5 plants	Observation			At the flowering time of the first flower. Refer to RHS color chart
34	Blotch size of petal	5 plants	Measurement	1:<=0.9 mm 2:1.0-1.9 mm 3:2.0-2.9 mm 4:3.0-3.9 mm 5:4.0-4.9 mm 6:5.0-5.9 mm 7:6.0-6.9 mm 8:7.0-7.9 mm 9:>=8.0 mm		At the full flowering time of the first flower. Diameter of middle class size of blotch
35	Bud type	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V		Just before flowering
36	Flower typeing	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV		At the full flowering time of the first flower
37	Double flowered	5 plants	Observation	3:Single 7:Double		
38	Inner perianth width	5 plants	Measurement	1:<=9 mm 2:10-9 mm 3:20-19 mm 4:30-39 mm 5:40-49 mm 6:50-59 mm 7:60-69 mm 8:70-79 mm 9:>=80 mm		At the full flowering time of the first flower
39	Inner perianth length	5 plants	Measurement	1:<=19 mm 2:20-29 mm 3:30-49 mm 4:50-79 mm 5:80-119 mm 6:120-169 mm 7:170-229 mm 8:230-299 mm 9:>=300 mm		At the full flowering time of the first flower

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40	Inner perianth type	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII 8:Type VIII 9:Type IX		At the full flowering time of the first flower
41	Shape of apex of inner perianth	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII		At the full flowering time of the first flower
42	Curvature of inner perianth	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V		At the full flowering time of the first flower
43	Curvature of side part of inner perianth	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII 8:Type VIII 9:Type IX		At the full flowering time of the first flower
44	Outer perianth width	5 plants	Measurement	1:<=9 mm 2:10-19 mm 3:20-29 mm 4:30-39 mm 5:40-49 mm 6:50-59 mm 7:60-69 mm 8:70-79 mm 9:>=80 mm		At the full flowering time of the first flower
45	Outer perianth length	5 plants	Measurement	1:<=19 mm 2:20-29 mm 3:30-49 mm 4:50-79 mm 5:80-119 mm 6:120-169 mm 7:170-229 mm 8:230- 229 mm 9:>=300 mm		At the full flowering time of the first flower
46	Outer perianth type	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII 8:Type VIII 9:Type IX		At the full flowering time of the first flower
47	Shape of apex of outer perianth	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII		At the full flowering time of the first flower
48	Curvature of outer perianth	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V		At the full flowering time of the first flower
49	Curvature of side part of outer perianth	5 plants	Observation	1:Type I 2:Type II 3:Type III 4:Type IV 5:Type V 6:Type VI 7:Type VII 8:Type VIII 9:Type IX		At the full flowering time of the first flower
50	Protrusion on perianth	5 plants	Observation	0:Absent 9:Present		At the full flowering time of the first flower
51	Anther length	5 plants	Measurement	1:<=4 mm 2:5-9 mm 3:10-14 mm 4:15-19 mm 5:20-24 mm 6:25-29 mm 7:30-34 mm 8:35-39 mm 9:>=40 mm		Just before anthesis

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52	Pollen color	5 plants	Observation			Anthesis time, refer to RHS color chart
53	Capsule length	5 plants	Measurement	1:<=19 mm 2:15-39 mm 3:40-59 mm 4:60-79 mm 5:80-99 mm 6:100-119 mm 7:120-139 mm 8:140-159 mm 9:>=160 mm		
54	Capsule width	5 plants	Measurement	1:<=4 mm 2:5-9 mm 3:10-14 mm 4:15-19 mm 5:20-24 mm 6:25-29 mm 7:30-34 mm 8:35-39 mm 9:>=40 mm		
55	Polyploidy	5 plants	Observation	1:Haploid 2:Diploid 3:Triploid 4:Tetraploid 5:Pentaploid 6:Hexaploid 7:Heptaploid 8:Octaploid 9:Other		

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Stem length in forcing culture	5 plants	Measurement	1:<=29 cm 2:30-59 cm 3:60-89 cm 4:90-119 cm 5:120-149 cm 6:150-179 cm 7:180-209 cm 8:>=210 cm		Stem length in forcing culture
2	Abnormal flower ratio in forcing culture	5 blocks	Observation	0:0% 1:1-19% 3:20-39% 5:40-59% 7:60-79% 9:80-100%		Abnormal flower (calyx splitting, blind etc.) rate
3	Botrytis blight resistance	5 blocks	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Degree of symptom occurrence

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1	Fusarium oxysporum resistance	5 blocks	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Degree of symptom occurrence
2	Virus resistance	5 blocks	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Degree of symptom occurrence

Plant		Thunberg lily, Showy lily		497	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Number of bulblets	100 scales	Measurement	1:<=0.4 2:0.5-0.9 3:1.0-1.4 4:1.5-1.9 5:2.0-2.4 6:2.5-2.9 7:3.0-3.4 8:3.5-3.9 9:>=4.0		Average number of bulblets per scale
2	Bulblet weight	100 scales	Measurement	1:<=1.9 g 2:2.0-2.9 g 3:3.0-4.9 g 4:5.0-7.9 g 5:8.0-11.9 g 6:12.0-16.9 g 7:17.0-22.9 g 8:23.0-29.9 g 9:>=30.0 g		Average bulblet weight per scale

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Storability	5 plants	Measurement	1:<=2 days 2:3-5 days 3:6-8 days 4:9-11 days 5:12-14 days 6:15-17 days 7:18-20 days 8:>=21 days		Days from the full flowering time to the wilting time of the first flower
2	Scale bitterness	5 plants	Sensory	0:Absent 2:Weak 5:Intermediate 7:Strong		
3	Fragrance	5 plants	Sensory	0:Absent 2:Weak 5:Intermediate 7:Strong		