Plant	Onion	79(08018)	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Plant type	30 plants	Observation	3:Erect 4:Semi-erect 5:Intermediate 6:Semi-spreading 7:Spreading	
2	Leaf length	10 plants	Measurement	cm (integer)	Measure the length of leaves at bulbing stage
3	Sheath thickness	10 plants	Measurement	mm (integer)	At bulbing stage
4	Date of lodging	30 plants	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	Note the time when 50% of the plants have lodged
5	Bulb shape	10 bulbs	Observation	1:Flat 2:Slightly flat 3:Chestnut shape 4:Diamond shape 5:Round 6:Top shape 7:Oval 8:Narrow oval	
6	Bulb skin color	10 bulbs	Observation	1:White 2:Yellow 3:Brown 4:Red 5:Purple	
7	Number of scales	10 bulbs	Measurement	(integer)	Count the number of leaves at bulbing stage
8	Bulb firmness	10 bulbs	Observation	1:Extremely soft 2:Very soft 3:Soft 4:Slightly soft 5:Intermediate 6:Slightly hard 7:Hard 8:Very hard 9:Extremely hard	

Plant	Onion	79(08018)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Seed size	500 seeds	Measurement	mg (integer)	
2	Germination	200 seeds	Measurement	% (integer)	Germinate for 12 days at 20 centi degree
3	Leaf sheath length	10 plants	Measurement	cm (integer)	At bulbing stage
4	Leaf thickness	10 plants	Measurement	mm (integer)	At bulbing stage
5	Number of leaves	10 plants	Measurement	(integer)	At bulbing stage
6	Bent leaves	10 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	At bulbing stage
7	Leaf color	10 plants	Observation	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark 8:Very dark 9:Extremely dark	At bulbing stage
8	Leaf bloom	10 plants	Observation	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark 8:Very dark 9:Extremely dark	At bulbing stage
9	Bulbing time	50 plants	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	Time when 50% of the plants show develop bulbs
10	Leaf senescence	50 plants	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	Time when 50% of the plants show dried leaves
11	Bolting rate	100 plants	Measurement	% (integer)	Count the number of bolting plants among 100 plants and change into percentage
12	Maturity index	50 plants	Measurement	% (integer)	Calculate proportion of plants with dried leaves and/or tops down
13	Polar diameter	10 bulbs	Measurement	mm (integer)	
14	Equatorial diameter	10 bulbs	Measurement	mm (integer)	

Plant	Onion	79(08018)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
15	Bulb skin color	10 bulbs	Observation	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark 8:Very dark 9:Extremely dark	
16	Bulb skin thickness	10 bulbs	Observation	1:Extremely thin 2:Very thin 3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick 8:Very thick 9:Extremely thick	
17	Number of bulb skins	10 bulbs	Measurement	(integer)	
18	Neck diameter	10 bulbs	Observation	1:Extremely thin 2:Very thin 3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick 8:Very thick 9:Extremely thick	
19	Neck firmness	10 bulbs	Observation	1:Extremely soft 2:Very soft 3:Soft 4:Slightly soft 5:Intermediate 6:Slightly hard 7:Hard 8:Very hard 9:Extremely hard	Obtain data 1 to 2 month after harvest
20	Scale thickness	10 bulbs	Observation	1:Extremely thin 2:Very thin 3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick 8:Very thick 9:Extremely thick	
21	Scale color	10 bulbs	Observation	1:White 2:Pale yellow 3:Pale yellow-Purple red 4:Purple red	
22	Basal plate size	10 bulbs	Observation	1:Extremely small 2:Very small 3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large 8:Very large 9:Extremely large	
23	Core number	10 bulbs	Measurement	(round to the 1st decimal place)	
24	Bolting date	50 plants	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	Time when 50% of plants have bolted
25	Start of flowering time	50 plants	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	Time when 50% of plants start flowering

Plant	Onion	79(08018)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
26	Full bloom	50 plants	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	
27	Total number of scapes	10 plants	Measurement	(round to the 1st decimal place)	
28	Number of secondary scapes	10 plants	Measurement	(round to the 1st decimal place)	
29	Scape habit	Block	Observation	3:Erect 4:Semi-erect 5:Intermediate 6:Semi-spreading 7:Spreading	
30	Scape length	10 plants	Measurement	cm (integer)	
31	Scape diameter	10 scapes	Measurement	mm (integer)	Measure at the thickest portion
32	Umbel size	Block	Observation	1:Extremely small 2:Very small 3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large 8:Very large 9:Extremely large	Measure at full bloom

Plant	Onion	79(08018)	Secondary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Downy mildew resistance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
2	Bacterial rot resistance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
3	Leaf rot resistance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
4	Purple blotch resistance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
5	Onion fly resistance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	

Plant	Onion	79(08018)	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Occurrence of sprouting during storage	10 plants	Observation	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	Observe degree of sprouting during storage
2	Basal rot resistance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
3	Cold tolerance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
4	Drought tolerance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
5	Water tolerance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	
6	Heat tolerance	100 plants	Observation	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	

Plant	Onion	79(08018)	Tertiary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Bulb weight	10 bulbs	Measurement	g (integer)	Average bulb weight

Plant	Onion	79(08018)	Tertiary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Texture	10 plants	Observation	1:Extremely soft 2:Very soft 3:Soft 4:Slightly soft 5:Intermediate 6:Slightly firm 7:Firm 8:Very firm 9:Extremely firm	
2	Dry matter ratio	10 plants	Measurement	% (integer)	
3	Pungency	10 plants	Sensory	1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong	Sensory test