	Plant	Clant Onion			79(080	018)	Primary essential character	
No	Cha	uracters	No. of samples	Methods			Rank or measurement unit	Remarks
1	Plant type	е	30 plants			3:Erect 4:Semi-erect 5:Intermediate 6:Semi- spreading 7:Spreading		
2	Leaf length 10 plants		10 plants	Measuremer	easurement cm (integer)		er)	Measure the length of leaves at bulbing stage
3	Sheath th	ickness	10 plants	Measuremer	surement mm (integer)		er)	At bulbing stage
4	Date of lo	odging	30 plants	Observation	4	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	e	10 bulbs	Observatio	4	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	on 1	1:White 2:Yellow 3:Brown 4:Red 5:Purple		
7	Number of	scales	10 bulbs	Measuremer	nt	(integer)		Count the number of leaves at bulbing stage
8	Bulb firm	ness	10 bulbs	Observation	4	4:Slightl	ly soft 2:Very soft 3:Soft y soft 5:Intermediate 6:Slightly ard 8:Very hard 9:Extremely hard	

	Plant	Onion		7:	9(08018)	Primary optional character	
No	Cha	aracters	No. of samples	Methods		Rank or measurement unit	Remarks
1	Seed size		500 seeds	Measurement	mg (integ	ger)	
2	Germinati	on	200 seeds	Measurement	% (intege	er)	Germinate for 12 days at 20 centi degree
3	Leaf shea	th length	10 plants	Measurement	cm (integ	ger)	At bulbing stage
4	Leaf thic	kness	10 plants	Measurement	mm (integ	ger)	At bulbing stage
5	Number of	leaves	10 plants	Measurement	(integer	•)	At bulbing stage
6	Bent leaves 10 plants		Observation	low 5:In	ely low 2:Very low 3:Low 4:Slightly stermediate 6:Slightly high 7:High gh 9:Extremely high	At bulbing stage	
7	Leaf color 10 plants		10 plants	Observation	4:Slightl	ely light 2:Very light 3:Light y light 5:Intermediate 6:Slightly Oark 8:Very dark 9:Extremely dark	At bulbing stage
8	Leaf bloom 10 plants		10 plants	Observation	4:Slightl	ely light 2:Very light 3:Light y light 5:Intermediate 6:Slightly Oark 8:Very dark 9:Extremely dark	At bulbing stage
9	Bulbing t	Bulbing time 50 plants Observation 1:Extremely early 2:Very early 3:Ea 4:Slightly early 5:Intermediate 6:S			Time when 50% of the plants show develop bulbs		
10	Leaf sene	scence	50 plants	Observation			Time when 50% of the plants show dried leaves
11	Bolting r	Bolting rate 100 plants Measurement % (integer)		er)	Count the number of bolting plants among 100 plants and change into percentage		
12	2 Maturity index 50 plants		50 plants	Measurement	% (intege	er)	Calculate proportion of plants with dried leaves and/or tops down
13	3 Polar diameter 10 bulbs		Measurement	mm (integ	ger)		
14	14 Equatorial diameter 10		10 bulbs	Measurement	mm (integ	ger)	

	Plant Onion				79(08	3018)	Primary optional character	
No	Cha	racters	No. of samples	Method	.s		Rank or measurement unit	Remarks
15	Bulb skin	color	10 bulbs	Observation		4:Slightl	ly light 2:Very light 3:Light y light 5:Intermediate 6:Slightly ark 8:Very dark 9:Extremely dark	
16	16 Bulb skin thickness 10 bulbs		Observatio		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	Measuremer	nt	(integer)		
18	Neck diam	eter	10 bulbs	Observatio		4:Slightl	ly thin 2:Very thin 3:Thin y thin 5:Intermediate 6:Slightly Thick 8:Very thick 9:Extremely thick	
19	Neck firm	ness	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		Observatio		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 col	or	10 bulbs	Observation	1	1:White	2:Pale yellow 3:Pale yellow-Purple rple red	
22	Basal pla	te size	10 bulbs	Observatio		4:Slightl	ly small 2:Very small 3:Small y small 5:Intermediate 6:Slightly Large 8:Very large 9:Extremely large	
23	Core number	er	10 bulbs	Measuremer	nt	(round to the 1st decimal place)		
24	Bolting da	ate	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			4:Slightl	ly early 2:Very early 3:Early y early 5:Intermediate 6:Slightly ate 8:Very late 9:Extremely late	Time when 50% of plants start flowering		

	Plant Onion			79(080	018)	Primary optional character		
No	No Characters		No. of samples	Methods		Rank or measurement unit		Remarks
26	Full bloom 50 plants		Observatio	4:Slightly		ly early 2:Very early 3:Early y early 5:Intermediate 6:Slightly ate 8:Very late 9:Extremely late		
27	27 Total number of scapes 10 plants		10 plants	Measurement (round		(round	to the 1st decimal place)	
28	Number of scapes	secondary	10 plants	Measuremen	nt	(round	to the 1st decimal place)	
29	9 Scape habit Block		Block	Observation			4:Semi-erect 5:Intermediate 6:Semi-7:Spreading	
30	Scape leng	gth	10 plants	Measuremen	nt c	cm (integ	er)	
31	Scape diameter 10 scapes Measureme		Measuremen	nt m	mm (integer)		Measure at the thickest portion	
32	Umbel size	e	Block	Observatio	4	:Slightl	ly small 2:Very small 3:Small y small 5:Intermediate 6:Slightly Large 8:Very large 9:Extremely large	Measure at full bloom

	Plant Onion				79(08018)		Secondary essential character	
No	Cha	racters	No. of samples	Method	ls		Rank or measurement unit	Remarks
1	1 Downy mildew resistance 100 plant		100 plants	Observation	low	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	2 Bacterial rot 100 plants resistance		Observation	low	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	Observatio	low	5:Ir	ely low 2:Very low 3:Low 4:Slightly ntermediate 6:Slightly high 7:High high 9:Extremely high	
4	Purple blo		100 plants	Observation	low	5:Ir	ely low 2:Very low 3:Low 4:Slightly ntermediate 6:Slightly high 7:High high 9:Extremely high	
5	Onion fly	resistance	100 plants	Observation	low	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	No Characters No. of samples		Method	s	Rank or measurement unit	Remarks	
1	1 Occurrence of sprouting 10 plants during storage		Observation	4:Slig	emely early 2:Very early 3:Early ntly early 5:Intermediate 6:Slightly 7:Late 8:Very late 9:Extremely late	Observe degree of sprouting during storage	
2	Basal rot	resistance	100 plants	Observatio	low 5	emely low 2:Very low 3:Low 4:Slightly :Intermediate 6:Slightly high 7:High high 9:Extremely high	
3	Cold tole:	rance	100 plants	Observatio	low 5	emely low 2:Very low 3:Low 4:Slightly :Intermediate 6:Slightly high 7:High high 9:Extremely high	
4	Drought to	olerance	100 plants	Observatio	low 5	emely low 2:Very low 3:Low 4:Slightly :Intermediate 6:Slightly high 7:High high 9:Extremely high	
5	Water tol	erance	100 plants	Observatio	low 5	emely low 2:Very low 3:Low 4:Slightly:Intermediate 6:Slightly high 7:High high 9:Extremely high	
6	Heat tole:	rance	100 plants	Observatio	low 5	emely low 2:Very low 3:Low 4:Slightly :Intermediate 6:Slightly high 7:High high 9:Extremely high	

	Plant Onion				79(08018)	Tertiary essential character	
No	o Characters		No. of samples	Methods		Rank or measurement unit	Remarks
1	Bulb weight 10		10 bulbs	Measureme:	nt g (intege	er)	Average bulb weight

	Plant Onion		79(08018)		Tertiary optional character	
No	Characte:	rs No. of samples	Methods	Rank or measurement unit		Remarks
1	Texture 10 plants		Observation	4:Slightl	ely soft 2:Very soft 3:Soft y soft 5:Intermediate 6:Slightly 'irm 8:Very firm 9:Extremely firm	
2	Dry matter ratio 10 plants Me		Measurement	% (intege	er)	
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