

Plant		Japanese bunching onion		200(08031)	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Plant type	30 plants	Observation	1:Extremely erect 3:Erect 5:Intermediate 7:Spreading 9:Extremely spreading		
2	Leaf blade color	10 plants	Observation	1:Extremely light 3:Light 5:Intermediate 7:Dark 9:Extremely dark		
3	Degree of leaf waxiness	10 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong		
4	Leaf blade length	10 plants	Measurement	cm (integer)		Leaf blade length of the longest leaf
5	Number of pseudostems	10 plants	Measurement	(round to the 1st decimal place)		Number of externally-observable pseudostems per plant
6	Red color of pseudostem	10 plants	Observation	0:Colorless 1:Extremely light 3:Light 5:Intermediate 7:Dark 9:Extremely dark		
7	Tightness of leaf sheath neck	10 plants	Observation	1:Extremely loose 3:Loose 5:Intermediate 7:Tight 9:Extremely tight		
8	Pseudostem length	10 plants	Measurement	cm (integer)		Leaf sheath length of the outermost leaf after preparation

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Degree of leaf bending	30 plants	Observation	1:Extremely low 3:Low 5:Intermediate 7:High 9:Extremely high		Observe stand plants after a strong wind blow
2	Number of leaves	10 plants	Measurement	(round to the 1st decimal place)		Number of externally-observable leaves of the thickest pseudostem
3	Width of flattened leaf blade	10 plants	Measurement	mm (integer)		Maximum width of the longest leaf blade. Flatten the cylindrical leaf blade to measure.
4	Interval between leaf blade bases	10 plants	Measurement	mm (integer)		Distance between the leaf blade base of outermost leaf after preparation and that of the next
5	Diameter of pseudostem at the middle	10 plants	Measurement	mm (integer)		
6	Diameter of pseudostem at the base	10 plants	Measurement	mm (integer)		Maximum diameter of pseudostem around its base
7	Internal tillering rate	50 plants	Measurement	% (integer)		Percentage of pseudostems with internal tillers. Observe the cross-cutting of pseudostem at the middle.
8	Number of leaves composing a pseudostem	10 plants	Measurement	(round to the 1st decimal place)		Observe the cross-cutting of pseudostem at the middle
9	Number of pseudostems(in blanching culture)	10 plants	Measurement	(round to the 1st decimal place)		Number of externally-observable pseudostems per plant
10	Pseudostem length(in blanching culture)	10 plants	Measurement	cm (integer)		Leaf sheath length of the outermost leaf after preparation
11	Diameter of pseudostem at the middle(in blanching culture)	10 plants	Measurement	mm (integer)		

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12	Internal tillering rate(in blanching culture)	50 plants	Measurement	% (integer)	Percentage of pseudostems with internal tillers. Observe the cross-cutting of pseudostem at the middle.
13	Number of leaves composing a pseudostem(in blanching culture)	10 plants	Measurement	(round to the 1st decimal place)	Observe the cross-cutting of pseudostem at the middle

Plant		Japanese bunching onion		200(08031)	Secondary essential character
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Rust resistance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	Natural infection(In artificial inoculation, use 20plants)
2	Purple blotch resistance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	Natural infection(In artificial inoculation, use 20plants)
3	Bolting 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	Base on the date when 50% of plants have bolted
4	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	Base on the date when 50% of plants have started flowering
5	End 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	Base on the date when 50% of plants have completed flowering

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1	Phytophthora blight resistance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	Natural infection(In artificial inoculation, use 20plants)
2	Downy mildew resistance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	Natural infection(In artificial inoculation, use 20plants)
3	Yellow dwarf resistance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	Natural infection(In artificial inoculation, use 20plants)
4	Basal rot resistance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	Natural infection(In artificial inoculation, use 20plants)
5	Botrytis leaf blight resistance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	Natural infection(In artificial inoculation, use 20plants)
6	Heat tolerance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	
7	Drought tolerance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	
8	Moisture tolerance	50 plants	Observation	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong	
9	Growth under low temperature	50 plants	Observation	0:Winter dormant 1:Extremely low 3:Low 5:Intermediate 7:High 9:Extremely high	
10	Wintering ability	50 plants	Observation	1:Extremely low 3:Low 5:Intermediate 7:High 9:Extremely high	
11	Seed weight	1000 seeds	Measurement	mg (round to the 1st decimal place)	Weight of one dried seed

Plant	Japanese bunching onion		200(08031)	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Foliage weight	10 plants	Measurement	g (integer)	Fresh foliage weight per plant
2	Pseudostem weight	10 plants	Measurement	g (integer)	Fresh weight of pseudostems per plant

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Leaf blade hardness	10 plants	Sensory	1:Extremely soft 3:Soft 5:Intermediate 7:Hard 9:Extremely hard		
2	Pseudostem firmness(in blanching culture)	10 plants	Sensory	1:Extremely soft 3:Soft 5:Intermediate 7:Hard 9:Extremely hard		
3	Foliage weight(in blanching culture)	10 plants	Measurement	g (integer)		Fresh foliage weight per plant
4	Pseudostem weight(in blanching culture)	10 plants	Measurement	g (integer)		Fresh weight of pseudostems per plant
5	Dry matter ratio of pseudostem(in blanching culture)	10 plants	Measurement	% (integer)		
6	Pseudostem pungency(in blanching culture)	5 plants	Sensory	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong		
7	Sugar content of pseudostem(in blanching culture)	5 plants	Measurement	% (round to the 1st decimal place)		Brix of the tissue sample sliced off at the middle of pseudostem
8	Dry matter ratio of foliage	10 plants	Measurement	% (integer)		
9	Pseudostem pungency	5 plants	Sensory	1:Extremely weak 3:Weak 5:Intermediate 7:Strong 9:Extremely strong		
10	Sugar content of pseudostem	5 plants	Measurement	% (round to the 1st decimal place)		Brix of the tissue sample sliced off at the middle of pseudostem