

Plant		Radish		78(08017)	Primary essential character
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Plant posture	10 plants	Observation	1: Drooping 2: Nearly drooping 3: Prostrate 4: Semi-prostrate 5: Intermediate 6: Semi-erect 7: Erect	At 30 days (20 days for extra early variety) after sowing
2	Leaf desection	10 plants	Observation	3: Completely deselected 4: Nearly completely deselected 5: Average 6: Deselect with some lobes cleft 7: Deselect with all lobes cleft	
3	Leaf color	10 plants	Observation	3: Yellowish green 4: Slightly yellowish gree 5: Green 6: Slightly dark green 7: Dark green	
4	Root shape	10 plants	Observation	0: Round or reverse triangle 1: Short cylinder 2: Cylinder 3: Cylinder with flat bottom 4: Cylinder with slant bottom 5: Long corn 6: Long spindle 7: Club with slanted bottom 8: Club 9: Other	
5	Root length	10 plants	Measurement	1: Extremely short 2: Very short 3: Short 4: Slightly short 5: Intermediate 6: Slightly long 7: Long 8: Very long 9: Extremely long	Extremely short: <3 cm, short: 15-24 cm, intermediate: 30-39 cm, long: 45-54 cm, extremely long: >70 cm
6	Root thickness	10 plants	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	Maximum diameter. Extremely thin: ≤1.5 cm, thin: 3.6-5.5 cm, intermediate: 7.6-10.5 cm, thick: 13.6-16.5 cm, extremely thick: ≥20 cm
7	Root color	10 plants	Observation	1: White 2: White-Creamy white 3: Creamy white 4: Creamy white-yellowish white 5: Yellowish white	Basic color of root surface (excluding color by pigmentation)
8	Maturity	10 plants	Measurement	1: Extremely early 2: Very early 3: Early 4: Slightly early 5: Intermediate 6: Slightly late 7: Late 8: Very late 9: Extremely late	At 50% harvestable stage. Extremely early: ≤24 days, early: 30-39 days, intermediate: 55-69 days, late: 85-99 days, extremely late: 120 days

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1	Leaf number	10 plants	Observation	3:Very few 4:Few 5:Intermediate 6:Many 7:Very many		At the harvesting stage. Very few<=1.5, intermediate:25, many:40
2	Hue of leaf pigmentation	10 plants	Observation	0:Absent 3:Pink 4:Pink-Red 5:Red 6:Red-Purple 7:Purple 8:Purple-Blush purple 9:Bluish purple		By anthocyanin pigmentation
3	Degree of leaf pigmentation	10 plants	Observation	3:Little 4:Slightly little 5:Intermediate 6:Slightly much 7:Much		By anthocyanin pigmentation
4	Leaf length	10 plants	Measurement	cm (integer)		Of the largest leaf
5	Leaf width	10 plants	Measurement	cm (round to the 1st decimal place)		Of the largest leaf
6	Number of lobes	10 plants	Observation	0:Absent 1:Almost none 2:Very few 3:Few 4:Several 5:Intermediate 6:Many 7:Very many		Few:<=5, intermediate:10, many:15
7	Density of leaf lobes	10 plants	Observation	3:Sparce 4:Slightly sparce 5:Intermediate 6:Slightly dense 7:Dense		Sparce:lobes completely apart, intermediate:slightly touching, dense:overlapping
8	Root projection	10 plants	Observation	0:Absent 1:Almost none 2:Extremely little 3:Very little 4:Little 5:Intermediate 6:Much 7:Very much		As the ratio of projected length/whole length. Absent:0%, Very little:20%, intermediate:40%, Very much:>=60%
9	Plant weight	10 plants	Measurement	g (integer)		
10	Root consistency	10 plants	Observation	3:Inconsistent 4:Slightly inconsistent 5:Intermediate 6:Slightly consistent 7:Consistent		As for root length, deviation more than 15% of the average is regarded as irregular. As irregular root percentage, inconsistent:>=30%, intermediate:20%, consistent:10%
11	Shape of root shoulder	10 plants	Observation	1:Square 2:Round sloping 3:No shoulder 4:Thick bottle neck 5:Thin bottle neck		
12	Shape of root bottom	10 plants	Observation	1:Conic 2:Sloping 3:Flat 4:Round		

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13	Thickness of root neck	10 plants	Observation	3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick		At just under the base of foliage. Intermediate:1-5 cm
14	Position of the maximum diameter of root	10 plants	Observation	1:Highest 2:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 8:Very low 9:Lowest		As the percentage of distance of the position from the neck/whole length. Highest:<=5%, high:35%, intermediate:55%, low:75%, lowest:95%
15	T/R ratio	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		Extremely low:<=0.3, low:0.5, intermediate:0.9, high:1.3, extremely high:>=1.5
16	Flower bud	10 plants	Observation	0:Absent 9:Present		Observe (representing relative earliness of flower bud initiation)
17	Hue of pigmentation in root	10 plants	Observation	0:Absent 1:Pale green 2:Green 3:Yellow 4:Gray 5:Pink 6:Red 7:Violet 8:Black		
18	Distribution of pigmentation in root	10 plants	Observation	1:<=1/5 2:2/5 3:3/5 4:4/5 5:4/5 6:5/5 7:<=1/2 8:>1/2 9:2/2		As the ratio of colored surface to the whole area, 1 to 6 are for continuous pigmentation. 7 to 9 are for scattered pigmentation.
19	Color of root flesh	10 plants	Observation	1:Transparent 2:Pure white 3:Creamy white 4:Ashy white 5:Pale green 6:Green 7:Red		1-4:basic color without pigment, 5-7:pigmented color
20	Distribution of flesh color in root (1)	10 plants	Observation	1:<=1/2 2:2/5 3:3/5 4:4/5 5:4/5 6:5/5		Vertical proportion of pigmented part to whole length
21	Distribution of flesh color in root (2)	10 plants	Observation	1:<=1/2 2:>1/2 3:2/2		Horizontal proportion of pigmented part to whole width
22	Development of root pithiness	10 plants	Observation	3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late		At 50% harvestable stage
23	Unseasonal bolting	10 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Bolting rate by natural occurrence

Plant		Radish		78(08017)	Secondary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Resistance to Fusarium yellows	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		By natural occurrence or artificial inoculation
2	Resistance to Soft rot	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		By natural occurrence or artificial inoculation
3	Virus resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		By natural occurrence or artificial inoculation

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1	Resistance to Downey mildew	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		By natural occurrence
2	Resistance to Diamondback moth	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		By natural occurrence
3	Aphids resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		By natural occurrence
4	Green catapillar resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		By natural occurrence
5	Cold tolerance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Evaluated by the degree of cold injury
6	Heat tolerance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Evaluted by the degree of growth disorder by high temperature
7	Adaptability to hot season cropping	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		Evaluated by the difficulty of high quality production in hot season
8	Storability	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High		As the durability in post-harvest storage

Plant		Radish		78(08017)	Tertiary essential character
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Root weight	10 plants	Measurement	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Intermediate 6:Slightly heavy 7:Heavy 8:Very heavy 9:Extremely heavy	Extremely light:<=9 g, intermediate:0.6-0.9 kg, heavy:2.0-2.9 kg, extremely heavy:>=6.0 kg
2	Content of pungent element	10 plants	Sensory	0:Absent 1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	
3	Sweetness	10 plants	Sensory	0:Absent 1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	

Plant		Radish		78(08017)	Tertiary optional character
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Pickling suitability	10 plants	Sensory	0:Not suitable 9:Suitable	
2	Taste	10 plants	Sensory	3:Bad 4:Slightly bad 5:Intermediate 6:Slightly good 7:Good	
3	Texture	10 plants	Sensory	3:Tough 4:Slightly tough 5:Intermediate 6:Slightly tender 7:Tender	
4	Water content	10 plants	Sensory	3:Very little 4:Little 5:Intermediate 6:Much 7:Very much	