Plant	Turnip	72(08009)	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Plant habit	10 plants	Observation	3:Erect 4:Semi-erect 5:Intermediate 6:Semi-prostrate 7:Prostrate	At harvesting stage
2	Leaf shape	10 plants	Observation	3:Spatulate 4:Spatuate-Ovate 5:Ovate 6:Ovate-Reverse ovate 7:Reverse ovate	The outline of entire leaf margin
3	Leaf color	10 plants	Observation	2:Yellowish green 3:Light green 4:Slightly light green 5:Green 6:Slightly dark green 7:Dark green	
4	Root shape	10 plants	Observation	1:Flat 2:Flat-Ovate 3:Ovate 4:Circular 5:Round 6:Short conical 7:Long conical 8:Long 9:Very long	
5	Root length	10 plants	Measurement	cm (integer)	
6	Root diameter	10 plants	Measurement	cm (round to the 1st decimal place)	At the widest part of root
7	Root color	10 plants	Observation	1:White 2:Milky white 3:Yellow 4:Light red 5:Red 6:Reddish purple 7:Purple 8:Grayish brown 9:Black	Basic color of root epidermis
8	Harvesting time	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	When 50% of plants have reached at harvesting stage

Plant	Turnip	72(08009)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Plant height	10 plants	Measurement	cm (integer)	
2	Leaf number	10 plants	Measurement	(round to the 1st decimal place)	At harvesting stage
3	Leaf weight	10 plants	Measurement	g (integer)	For fodder turnip. Grams per plant
4	Leaf pigmentation	10 plants	Observation	0:None 1:Extremely little 2:Very little 3:Little 4:Slightly little 5:Intermediate 6:Some 7:Much	Anthocyanin pigmentation
5	Distribution of pigmentation on leaf	10 plants	Observation	3:Base only 4:Base-Center 5:Center 6:Center-whole leaf 7:Whole leaf	Observe adaxial surface, around midrib or vein
6	Leaf size	10 plants	Observation	3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large	Observe the largest leaf
7	Leaf incision	10 plants	Observation	1:Entire 2:Entire-Lobate 3:Lobate 4:Lobate-Cleft 5:Cleft 6:Cleft-Parted 7:Parted 8:Parted-Desect 9:Desect	
8	Leaf wrinkle	10 plants	Observation	0:Absent 1:Extremely little 2:Very little 3:Little 4:Slightly little 5:Intermediate 6:Some 7:Much	As the degree of wrinkle or savoy
9	Leaf thickness	10 plants	Observation	3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick	
10	Leaf glossyness	10 plants	Observation	3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong	
11	Leaf hardness	10 plants	Observation	3:Soft 4:Slightly soft 5:Intermediate 6:Slightly hard 7:Hard	
12	Leaf pubescence	10 plants	Observation	0:Absent 1:Extremely few 2:Very few 3:Few 4:Slightly few 5:Intermediate 6:Some 7:Many	Degree of pubescence on adaxial surface of expanded leaf
13	Petiole/midrib pigmentation	10 plants	Observation	0:None 1:Extremely little 2:Very little 3:Little 4:Slightly little 5:Intermediate 6:Some 7:Much	Anthocyanin pigmentation
14	Petiole/midrib width	10 plants	Measurement	mm (round to the 1st decimal place)	At 1/4 length from the base of the largest leaf

Plant	Turnip	72(08009)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
15	Petiole/midrib strength	10 plants	Observation	3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong	Evaluated as a marketable bundle of plants
16	Petiole/midrib shape	10 plants	Observation	3:Flat 4:Flat-Elliptic 5:Elliptic 6:Elliptic-Round 7:Round	Of the transverse section at the upper position from leaf base
17	Lateral buds	10 plants	Observation	0:Absent 9:Present	
18	T/R ratio	10 plants	Measurement	% (round to the 1st decimal place)	
19	Root projection	10 plants	Observation	0:No projection 1:Extremely little 2:Very little 3:Little 4:Slightly little 5:Intermediate 6:Some 7:Much 8:Very much 9:Extremely much	
20	Neck shape of root	10 plants	Observation	3:Hollow 4:Slightly hollow 5:Flat 6:Slightly swollen 7:Swollen	
21	Shape of root shoulder	10 plants	Observation	1:Square 2:Square-Round sloping 3:Round sloping 4:Round sloping-sloping 5:Sloping 6:Sloping-Thick bottle 7:Thick bottle 8:Thick bottle-Thin bottle neck 9:Thin bottle neck	
22	Shape of root bottom	10 plants	Observation	1:Hollow 2:Hollow-Flat 3:Flat 4:Flat-Round 5:Round 6:Round-sloping 7:Sloping 8:Sloping-Conic 9:Conic	
23	Root pigmentation	10 plants	Observation	0:None 1:Extremely pale green 2:Pale green 3:Green 4:Green-Red 5:Red 6:Slightly reddish purple 7:Reddish purple 8:Slightly purple 9:Purple	Pigmentation of projected part
24	Distribution of pigment in root	10 plants	Observation	3:<1/4 4:1/2-4/1 5:2/1 6:2/1-4/3 7:<3/4	Pigmented length/whole length
25	Color of flesh in root	10 plants	Observation	1:White 2:Creamy white 3:Pale yellow 4:Yellow 5:Pale green 6:Pale green-Pale red 7:Pale red	
26	Distribution of pigment of root flesh	10 plants	Observation	3:Little 4:Slightly little 5:Intermediate 6:Some 7:Much	Observe vertical section

Plant	Turnip	72(08009)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
27	Smoothness of root skin	10 plants	Observation	3:Smooth 4:Slightly smooth 5:Intermediate 6:Slightly rough 7:Rough	
28	Presence of horizontal furrows in root	10 plants	Observation	0:None 3:Few 4:Slightly few 5:Intermediate 6:Some 7:Many	
29	Thickness of root cortex	10 plants	Observation	3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick	Observe transverse section at the maximum diameter of root
30	Thickness of tap root	10 plants	Observation	3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick	
31	Root pithyness	10 plants	Observation	3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late	Earliness of pithyness after harvesting stage
32	Bolting habit	10 plants	Observation	3:Late 4:Slightly late 5:Intermediate 6:Slightly early 7:Early	

Plant	Turnip	72(08009)	Secondary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Clubroot resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	By natural occurrence or artificial inoculation
2	Virus resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	By natural occurrence or artificial inoculation
3	Soft rot resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	By natural occurrence or artificial inoculation

Plant	Turnip	72(08009)	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Adaptability to dence planting	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	For fodder turnips only. Compare root weight of dense planting (1200 plants/a) to standard planting (600 plants/a)
2	Adaptability to late sowing	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	For fodder turnips only. Compare root weight of late sowing to standard sowing.
3	Storage ability	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	For fodder turnips only. Observe field durability in warm area or post-harvest storage ability in cool area.
4	Diamondback resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluated by natural occurrence
5	White rust resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluated by natural occurrence
6	Diamondback moth resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluated by natural occurrence
7	Striped flea beetle resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluated by natural occurrence
8	Green catapillar resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluated by natural occurrence
9	Aphid resistance	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluated by natural occurrence
10	Root growth under low temperature	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluated by plastic-tunnel cultivation in cold winter
11	Adaptability to hot season cropping	30 plants	Observation	3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High	Evaluate by mid July sowing

Plant	Turnip	72(08009)	Tertiary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Root weight	10 plants	Measurement	g (integer)	Per plant
2	Dry matter ratio	10 plants	Measurement	% (round to the 1st decimal place)	For fodder turnip only. 2cm thick section are dried at 50 centi degrees first then 80 centi degrees finally.
3	Brix	10 plants	Measurement	% (round to the 1st decimal place)	For fodder turinp only. Brix is measured for juice squeezed from 2cm thick section.
4	Hardness of texture	10 plants	Sensory	3:Soft 4:Slightly soft 5:Intermediate 6:Slightly hard 7:Hard	Evaluated by biting 5 mm-thick slice
5	Fineness of texture	10 plants	Sensory	3:Rough 4:Slightly rough 5:Intermediate 6:Slightly fine 7:Fine	Evaluated by biting 5 mm-thick slice

Plant	Turnip	72(08009)	Tertiary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Suitability for thin-salted pickle	10 plants	Sensory	0:Unsuitable 9:Suitable	
2	Taste	10 plants	Sensory	3:Bad 4:Slightly bad 5:Intermediate 6:Slightly good 7:Good	