Plant	Cucumber	455	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Bitterness of cotyledon	5 plants	Sensory	0:Absent or Extremely weak 9:Present	Observe at the time the first true leaf is fully expanded
2	Plant growth type	5 plants	Observation	1:Determinate 2:Indeterminate	Growth habit of determinate or indeterminate type
3	Internode length	5 plants	Measurement	cm (round to the 1st decimal place)	Average length of internode at the 10th-15th nodes at the time of the 20th leaf expanding or just before the main stem is pinched
4	Leaf blade length	5 plants	Measurement	cm (round to the 1st decimal place)	Length of the 8th-10th fully unfolded leaf
5	First pistillate flower bearing node	5 plants	Observation	0:Not bearing 1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	Order of node which bears the 1st female or bisexual flower
6	Sex expression	5 plants	Observation	1:Monoecious 2:Subgynoecious 3:Gynoecious 4:Andromonoecious	Monoecious has both male and female flower; Subgynoecious has mostly female flowers with a few male flowers; Gynoecious has female flowers only; Hermaphrodytic has both hermaphroditic and male flowers.
7	Vestiture color of ovary	5 plants	Observation	1:White 2:Black	Observe before flower drop
8	Fruit shape	5 fruits	Observation	1:Globular 2:Ovoid 3:Obovoid 4:Spindle-shaped 5:Elliptical 6:Cylindrical 7:Sickle-shaped 8:Snake-shaped	Fruit shape at 14 days after flowering
9	Fruit length	10 fruits	Measurement	cm (round to the 1st decimal place)	Fruit length at 14 days after flowering
10	Fruit diameter	10 fruits	Measurement	cm (round to the 1st decimal place)	Fruit diameter at 14 days after flowering
11	Ground color of fruit skin	5 fruits	Observation	1:White 2:Yellow 3:Green 4:Orange 5:Brown	Ground color of fruit skin at 14 days after flowering

Plant	Cucumber	455	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
12	Intensity of ground color of fruit skin	5 fruits	Observation	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Medium 6:Slightly dark 7:Dark 8:Very dark 9:Extremely dark	Intensity of ground color of fruit skin at 14 days after flowering
13	Fruit ribs	5 fruits	Observation	0:Absent 1:Weak 2:Medium 3:Strong	Fruit ribs at 14 days after flowering
14	Creasing of fruit	5 fruits	Observation	0:Absent 9:Present	Creasing of fruit at 14 days after flowering
15	Wart size of fruit	5 fruits	Observation	0:Absent 1:Extremely small 2:Very small 3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large 8:Very large 9:Extremely large	Wart size of fruit at 14 days of flowering
16	Dots of fruit	5 fruits	Observation	0:Absent 9:Present	Dots of fruit at 14 days after flowering
17	Fruit color at maturity for seed harvest	5 fruits	Observation	1:White 2:Yellow 3:Green 4:Orange 5:Brown	Ground color of fruit skin at mature stage
18	Net formation at maturity for seed harvest	5 fruits	Observation	0:Absent 1:Extremely sparse 2:Very sparse 3:Sparse 4:Slightly sparse 5:Intermediate 6:Slightly dense 7:Dense 8:Very dense 9:Extremely dense	Net formation of mature fruit
19	Seed shape	20 seeds	Measurement	* (round to the 2nd decimal place)	The ratio of width to length of seeds

Plant	Cucumber	455	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Cotyledon length	5 plants	Measurement	cm (round to the 1st decimal place)	Length of cotyledons at the 3rd true leaf expanding stage
2	Cotyledon width	5 plants	Measurement	cm (round to the 1st decimal place)	Width of cotyledons at the 3rd true leaf expanding stage
3	Shape of cotyledon	5 plants	Measurement	* (round to the 2nd decimal place)	The ratio of width to length of cotyledons at the 3rd true leaf expanding stage
4	Color of cotyledon	5 plants	Observation	3:Light green 4:Slightly light green 5:Green 6:Slightly dark green 7:Dark green	Color of cotyledon at the first true leaf expanding stage
5	Hypocotyl length	5 plants	Measurement	cm (round to the 1st decimal place)	Distance from the soil surface to the base of cotyledon at the first true leaf expanding stage
6	Thickness of hypocotyl	5 plants	Measurement	mm (round to the 1st decimal place)	Diameter of hypocotyls at the first true leaf expanding stage
7	Density of pubescence on main vine	5 plants	Observation	0:Absent 1:Extremely thin 2:Very thin 3:Thin 4:Slightly thin 5:Intermediate 6:Slightly dense 7:Dense 8:Very dense 9:Extremely dense	Degree of pubescence of main stem at the time of the 20th leaf expanding or just before the main stem is pinched
8	Total length of first 15 internodes	5 plants	Measurement	cm (round to the 1st decimal place)	Distance from the cotyledon to the 15th node of main stem at the time of the 20th leaf expanding or just before the main stem is pinched
9	Thickness of stem	5 plants	Measurement	mm (round to the 1st decimal place)	Diameter of the center of 10th-15th nodes at the time of the 20th leaf expanding or just before the main stem is pinched
10	Time of development of primary lateral branch	5 plants	Obs.&Measr.	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Intermediate 6:Slightly late 7:Late 8:Very late 9:Extremely late	Date of the first flowering on primary lateral branch

Plant	Cucumber	455	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
11	Length of internode of primary lateral branch	5 plants	Measurement	cm (round to the 1st decimal place)	Length between the 1st and 2nd leaves of primary lateral branch developed on the 6th-15th node of main stem at the end of harvesting time
12	Number of primary lateral branches	5 plants	Obs.&Measr.	1:Extremely small 2:Very small 3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large 8:Very large 9:Extremely large	Number of primary lateral branches developed on the 6th-15th nodes of main stem at the end of harvesting time
13	Attitude of leaf blade	5 plants	Observation	1:Erect 2:Horizontal 3:Drooping	Fully expanding leaf blade on main stem
14	Leaf width	5 plants	Measurement	cm (round to the 1st decimal place)	Fully expanding leaf blade on the 8th-10th nodes of main stem
15	Leaf shape	5 plants	Observation	3:Round 5:Roundish pentagonal 7:Sharp pentagonal	Fully expanding leaf blade on main stem
16	Length of terminal lobe / length of leaf blade	5 plants	Obs.&Measr.	1:Extremely small 2:Very small 3:Small 4:Slightly small 5:Intermediate 6:Slightly large 7:Large 8:Very large 9:Extremely large	Ratio of terminal lobe length to leaf blade length. Fully expanding leaf blade on main stem
17	Shape of apex of terminal lobe	5 plants	Observation	1:Acute 2:Right-angled 3:Obtuse 4:Rounded	Fully expanding leaf blade
18	Intensity of green color of leaf blade	5 plants	Observation	1:Extremely light 2:Very light 3:Light 4:Slightly light 5:Medium 6:Slightly dark 7:Dark 8:Very dark 9:Extremely dark	Fully expanding leaf blade
19	Undulation of margin of leaf blade	5 plants	Observation	0:Absent 1:Weak 2:Moderate 3:Strong	Fully expanding leaf blade
20	Dentation of margin of leaf blade	5 plants	Observation	1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Medium 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong	Fully expanding leaf blade
21	Petiole length	5 plants	Measurement	cm (round to the 1st decimal place)	Petiole length of the largest leaf on the 7th node and above of main stem

Plant	Cucumber	455	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
22	Attitude of petiole	5 plants	Observation	1:Elect 3:Semi-elect 5:Horizontal	Fully expanding leaf blade on main stem
23	Time of development of female flowers	5 plants	Obs.&Measr.	1:Extremely early 2:Very early 3:Early 4:Slightly early 5:Medium 6:Slightly late 7:Late 8:Very late 9:Extremely late	Days from seeding to the time when 80% of plants develop at least one female flower
24	Number of female flowers per node	5 plants	Observation	1:Predominantly one 2:Predominantly one or two 3:Predominantly two 4:Predominantly two or three 5:Predominantly three or four 6:Predominantly four or five 7:Predominantly more than five	Number of female flowers per node (on the 8th-10th nodes of main stem)
25	Fruit length at market stage	10 fruits	Measurement	cm (round to the 1st decimal place)	Observe at 7-8 days after flowering (Time when weight of cv. Tokiwa reaches about 100g)
26	Fruit width at market stage	10 fruits	Measurement	cm (round to the 1st decimal place)	Observe at 7-8 days after flowering (Time when weight of cv. Tokiwa reaches about 100g)
27	Fruit length / diameter	10 fruits	Measurement	* (round to the 2nd decimal place)	Ratio of fruit length to diameter at 14 days after flowering
28	Fruit length / diameter at market stage	10 fruits	Measurement	* (round to the 2nd decimal place)	Ratio of fruit length to diameter at 7-8 days after flowering (Time when weight of cv. Tokiwa reaches about 100g)
29	Ratio of flesh to fruit diameter	10 fruits	Measurement	* (round to the 2nd decimal place)	Ratio of fruit fresh to diameter ((2×flesh thickness) / diameter) at 14 days after flowering
30	Core diameter in relation to diameter of fruit at market stage	10 fruits	Obs.&Measr.	* (round to the 2nd decimal place)	Ratio of core to fruit diameter at market stage, i.e., 7-8 days after flowering (Time when weight of cv. Tokiwa reaches about 100g)
31	Flesh thickness	10 fruits	Measurement	mm (round to the 1st decimal place)	Average thickness of flesh at 1/3 and 2/3 place of fruit length at 14 days after flowering

Plant	Cucumber	455	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
32	Flesh thickness at market stage	10 fruits	Obs.&Measr.	mm (round to the 1st decimal place)	Average thickness of flesh at 1/3 and 2/3 place of fruit length. Measure at market stage, i.e., 7-8 days after flowering (Time when weight of cv. Tokiwa reaches about 100g)
33	Shape in transverse section of fruit	5 fruits	Observation	1:Rounded 2:Round to angular 3:Angular	Shape in transverse section of fruit at 14 days after flowering
34	Shape of stem-end of fruit	5 fruits	Observation	1:Necked 2:Acute 3:Obtuse	Shape of stem-end of fruit at 14 days after flowering
35	Length of necked part of fruit	5 fruits	Observation	1:Extremely short 2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long 9:Extremely long	Length of necked part of fruit at 14 days after flowering
36	Shape of lower half of fruit	5 fruits	Observation	1:Thin 2:Equal 3:Thick	Shape of lower half of fruit at 14 days after flowering
37	Shape of blossom-end of fruit	5 fruits	Observation	1:Acute 2:Obtuse 3:Rounded 4:Truncate	Shape of blossom-end of fruit at 14 days after flowering
38	Glossiness of fruit skin	5 fruits	Observation	1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly prominent 7:Prominent 8:Very prominent 9:Extremely prominent	Glossiness of fruit skin at 14 days after flowering
39	Fruit sutures	5 fruits	Observation	0:Absent 9:Present	Fruit sutures at 14 days after flowering
40	Degree of creasing of fruit	5 fruits	Observation	1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Medium 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong	Degree of creasing of fruit at 14 days after flowering
41	Type of vestiture of fruit	5 fruits	Observation	1:Hairs only 2:Hairs and prickles 3:Prickles only	Type of vestiture of fruit at 14 days after flowering
42	Density of vestiture of fruit	5 fruits	Observation	1:Extremely sparse 2:Very sparse 3:Sparse 4:Slightly sparse 5:Intermediate 6:Slightly dense 7:Dense 8:Very dense 9:Extremely dense	Density of vestiture of fruit at 14 days after flowering

Plant	Cucumber	455	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
43	Color of vestiture of fruit	5 fruits	Observation	1:White 2:Light brown 3:Dark brown	Color of vestiture of fruit at 14 days after flowering
44	Size of vestiture of fruit	5 fruits	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	Size of vestiture of fruit at 14 days after flowering
45	Length of stripes of fruit	5 fruits	Observation	0:Absent 1:Extremely short 2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long 9:Extremely long	Length of stripes of fruit at 14 days after flowering
46	Length of fruit containing dots	5 fruits	Observation	1:Distal 1/3 2:Distal 1/2 3:Distal 2/3 4:Excluding area around peduncle 5:Whole length	Length of fruit containing dots at 14 days after flowering
47	Distribution of dots of fruit	5 fruits	Observation	1:In bands only 2:Predominantly in bands 3:Evenly distributed	Distribution of dots of fruit at 14 days after flowering
48	Density of dots of fruit	5 fruits	Observation	1:Extremely sparse 2:Very sparse 3:Sparse 4:Slightly sparse 5:Intermediate 6:Slightly dense 7:Dense 8:Very dense 9:Extremely dense	Density of dots of fruit at 14 days after flowering
49	Fruit glaucosity	5 fruits	Observation	0:Absent 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Medium 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong	Fruit glaucosity at 14 days after flowering
50	Length of peduncle	5 fruits	Measurement	cm (round to the 1st decimal place)	Length of peduncle at 14 days after flowering
51	Seed length	20 seeds	Measurement	mm (round to the 1st decimal place)	Length of seeds
52	Seed width	20 seeds	Measurement	mm (round to the 1st decimal place)	Width of seeds

Plant	Cucumber	455	Secondary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Time of harvesting	5 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	Date of harvesting of half of the plants investigated

Plant	Cucumber	455	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Resistance to scab	10 plants	Observation	0:Absent 9:Present	Artificial inoculation for young seedling or natural infection in field
2	Resistance to Cucumber Mosaic Virus	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
3	Resistance to powdery mildew	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
4	Resistance to downy mildew	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
5	Resistance to Corynespora blight and target leaf spot	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
6	Resistance to Cucumber Vein Yellowing Virus	10 plants	Observation	0:Absent 9:Present	Artificial inoculation for young seedling or natural infection in field
7	Resistance to Zucchini Yellow Mosaic Virus	10 plants	Observation	0:Absent 9:Present	Artificial inoculation for young seedling or natural infection in field
8	Resistance to bacterial spot	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
9	Resistance to Melon Yellow Spot Virus	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
10	Resistance to Cucurbit Chlorotic Yellows Virus	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
11	Resistance to Kyuri Green Mottle Mosaic Virus	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field

Plant	Cucumber	455	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
12	Resistance to Fusarium wilt	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
13	Resistance to gummy stem blight	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
14	Resistance to Phytophthora rot	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
15	Resistance to thrips	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
16	Resistance to whitefly	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
17	Resistance to nematodes	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
18	Resistance to aphid	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
*19	Resistance to Anthracnose	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field
*20	Resistance to Papaya ringspot virus	10 plants	Observation	1:Susceptible 2:Moderately resistant 3:Highly resistant	Artificial inoculation for young seedling or natural infection in field

* Unlisted item in Genebank Descriptor

Plant	Cucumber	455	Tertiary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Parthenocarpy	5 plants	Observation	0:Absent 9:Present	Ability to produce parthenocarpic fruits
2	Fruit bearing position	5 plants	Observation	1:On the main stem only 2:On the main stem and lateral 3:On lateral shoots only	Fruit bearing position: 1 main stem only, 2 both, 3 lateral branches only
3	Fruit weight	10 fruits	Measurement	g (integer)	Fruit weight at 14 days after flowering
4	Bitterness of fruit	10 fruits	Sensory	0:Absent 1:Extremely low 2:Extremely low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	Fruit bitterness at 14 days after flowering

Plant	Cucumber	455	Tertiary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Fruit skin firmness	10 fruits	Sensory	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	Fruit skin firmness at 14 days after flowering
2	Flesh firmness	10 fruits	Sensory	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	Flesh firmness at 14 days after flowering