Plant	Squash	104(08003)	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Seed length	10 seeds	Measurement	mm (round to the 1st decimal place)	Length of dried ripe seeds
2	Color of seed coat	10 seeds	Observation	0:No seed coat 1:White 2:Milky white or gray white 3:Light yellow 4:Light yellowish brown 5:Yellowish brown 9:Black	Color of seed coat of dried ripe seeds
3	Size of cotyledon	5 plants	Measurement	cm (round to the 1st decimal place)	Width of fully expanded cotyledons
4	Plant type	5 plants	Observation	1:Dwarf 2:Intermediate 3:Climbing	At the time of the first fruit setting or 3 months after sowing
5	Shape of stem	5 plants	Observation	3:Round 5:Intermediate 7:Pentagonal	Shape of cross section at the 5th-10th nodes on stem which sets the first fruit or on the strongest stem at 3 months after sowing
6	Leaf size	5 plants	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 the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
7	Depth of sinus of leaves	5 plants	Observation	0:Absent 1:Extremely shallow 2:Very shallow 3:Shallow 4:Slightly shallow 5:Intermediate 6:Slightly deep 7:Deep 8:Very deep 9:Extremely deep	Depth of sinus of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
8	Leaf spots	5 plants	Observation	0:Absent 1:Almost none 2:Extremely few 3:Very few 4:Few 5:Intermediate 6:Some 7:Many 8:Very many 9:Extremely numerous	Quantity of spots or checks of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
9	Length of petiole	5 plants	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 petiole of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
10	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	Average order of node which bears the first female or bisexual flower

Plant	Squash	104(08003)	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
11	Sex type	5 plants	Observation	1:Androecious 2:Monoecious 3:Hermaphroditic and monoecious 4:Andromonoecious 5:Gynomonoecious 6:Gynoecious 7:Hermaphroditic 8:Male sterile 9:Female sterile	
12	Fruit shape (1)	5 plants, 5 fruits	Observation	1:Globular 2:Flattened 3:Disk 4:Cylindrical 5:Oval 6:Heart shaped 7:Pyriform 8:Dumbbell 9:Other	Shape of fully ripe fruit. If none of these ranks apply, choose '9' and select from 'No.13'.
13	Fruit shape (2)	5 plants, 5 fruits	Observation	1:Elongate 2:Elongate and curved 3:Crooked neck 4:Turbinate superior 5:Turbinate inferior 6:Crowned 7:Other	Shape of fully ripe fruit
14	Fruit pleat	5 plants, 5 fruits	Observation	0:Absent 1:Extremely shallow 2:Very shallow 3:Shallow 4:Slightly shallow 5:Intermediate 6:Slightly deep 7:Deep 8:Very deep 9:Extremely deep	Fruit pleat of fully ripe fruit
15	Predominant fruit skin color	5 plants, 5 fruits	Observation	1:White 2:Gray 3:Yellow 4:Gray green 5:Green 6:Orange 7:Red 8:Brown 9:Black	Predominant color is the color covering the largest surface area of the fully ripe fruit. In case two colors have the same area, the lighter color is considered to be the predominant one.
16	Secondary fruit skin color	5 plants, 5 fruits	Observation	0:Absent 1:White 2:Gray 3:Yellow 4:Gray green 5:Green 6:Orange 7:Red 8:Brown 9:Black	Secondary color is the color covering the second largest area of the fully ripe fruit. In case two colors have the same area, the darker is considered to be the secondary one.
17	Fruit weight	5 plants, 5 fruits	Measurement	kg (round to the 1st decimal place)	Weight of fully ripe fruit
18	Flesh color	5 plants, 5 fruits	Observation	1:White 2:White green 3:Light yellow 4:Yellow 5:Deep yellow 6:Orange yellow 7:Orange 8:Peach 9:Other	Flesh color of fully ripe fruit
19	Shape of peduncle	5 plants, 5 fruits	Observation	3:Round 5:Medium 7:Pentagonal-octagonal	Shape of peduncle of fully ripe fruit

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No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
20	Character of base of peduncle	5 plants, 5 fruits	Observation	1:Soft cylindric 2:Soft coned 3:Soft fanned out 4:Slightly hard cylindric 5:Slightly hard coned 6:Slightly hard fanned out 7:Hard cylindric 8:Hard coned 9:Hard fanned out	Hardness and shape of the part where the peduncle attached to fruit

Plant	Squash	104(08003)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Condition of seed coat	10 seeds	Observation	1:Extremely smooth 2:Very smooth 3:Smooth 4:Slightly smooth 5:Intermediate 6:Slightly rough 7:Rough 8:Very rough 9:Extremely rough	Condition of seed coat of dried mature seed
2	Shape of funiclus trace of seed	10 seeds	Observation	1:Rounded 2:Polygonal 3:Slant 4:Level 5:Pointed	Shape of funiculus trace of dried ripe seed
3	Thickness of seed margin	10 seeds	Observation	0:Not thickened 1:Extremely thin 2:Very thin 3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick 8:Very thick 9:Extremely thick	Thickness of margin of dried ripe seed
4	Condition of seed margin	10 seeds	Observation	3:Smooth 4:Slightly smooth 5:Intermediate 6:Slightly serrated 7:Serrated	Condition of margin of dried mature seed
5	Color of seed margin	10 seeds	Observation	1:Gray white 2:Gray yellow 3:Gray yellowish brown 4:Yellowish brown 5:Light brown 6:Silver green 7:Silver blue 8:Black 9:Other	Color of margin of dried ripe seed
6	Shape of cotyledon	5 plants	Observation	1:Rounded 3:Short oval 5:Oval 7:Long oval	Observe at the time when cotyledon fully expanded
7	Color of cotyledon	5 plants	Observation	3:Light green 4:Slightly light green 5:Green 6:Slightly dark green 7:Dark green	Observe at the time when cotyledon fully expanded
8	Length of hypocotyl	5 plants	Measurement	cm (round to the 1st decimal place)	Measure at the time when cotyledon fully expanded
9	Diameter of hypocotyl	5 plants	Measurement	mm (round to the 1st decimal place)	Measure at the time when cotyledon fully expanded
10	Plant vigor	5 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	Evaluate at the time of the first set or 3 months after sowing

Plant	Squash	104(08003)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
11	Softness of stem	5 plants	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	Softness of stem at 5th-10th nodes which sets the first fruit or on the strongest stem at 3 months after sowing
12	Thickness of stem	5 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	Diameter of stem at 5th-10th nodes which sets the first fruit or on the strongest stem at 3 months after sowing
13	Internode length	5 plants	Measurement	cm (round to the 1st decimal place)	Average length of internode at 5th-10th node on stem which sets the first fruit or on the strongest stem at 3 months after sowing
14	Branching habit	5 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	Evaluate based on the number of branches at the time of the first fruit set or 3 months after sowing
15	Number of tendrils	5 plants	Observation	0:Absent 1:Almost none 2:Extremely few 3:Very few 4:Few 5:Intermediate 6:Some 7:Many 8:Very many 9:Extremely numerous	Observe at the time of first fruit setting
16	Leaf shape	5 plants	Observation	1:Ovoid 2:Slightly ovoid 3:Round 4:Slightly round 5:Intermediate 6:Slightly angular 7:Angular	Shape of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
17	Condition of leaf margin	5 plants	Observation	3:Smooth 4:Slightly smooth 5:Intermediate 6:Slightly serrated 7:Serrated	Condition of margin of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
18	Spot color of leaf	5 plants	Observation	0:Absent 1:Light green 2:Silver 3:Light green and silver 4:Other	Spot color of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
19	Texture of pubescence on leaf	5 plants	Observation	0:Absent 1:Soft hairy 2:Hard hairy 3:Hard spiny	Texture of pubescence of the 6th-10th leaves on stem which sets the first fruit or on the strongest stem at 3 months sowing

Plant	Squash	104(08003)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
20	Density of pubescence on leaf	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	Density of pubescence of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
21	Leaf color	5 plants	Observation	3:Light green 4:Slightly light green 5:Green 6:Slightly dark green 7:Dark green	Color of the 6th-10th leaf on stem which sets the first fruit or on the strongest stem at 3 months after sowing
22	Color of flower	5 plants	Observation	1:White 2:Yellow 3:Orange 4:Other	Flower color at the time of the first fruit set or 3 months after sowing
23	Time to first female flowering	5 plants	Observation	0:No female flower 1:Extremely short 2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long 9:Extremely long	Average days to the first female or bisexual flowering
24	Time to first male flowering	5 plants	Observation	0:No male flower 1:Extremely short 2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long 9:Extremely long	Average days to the first male flowering
25	Fruit rib shape	5 plants, 5 fruits	Observation	0:Absent 1:Round 2:Intermediate 3:V-shaped	Fully ripe fruits
26	Shape of stem-end of fruit	5 plants, 5 fruits	Observation	1:Depressed 2:Slightly depressed 3:Flattened 4:Slightly rounded 5:Rounded 6:Slightly pointed 7:Pointed	Fully ripe fruits
27	Shape of blossom-end of fruit	5 plants, 5 fruits	Observation	1:Depressed 2:Slightly depressed 3:Flattened 4:Slightly rounded 5:Rounded 6:Slightly pointed 7:Pointed	Fully ripe fruits
28	Shade of predominant fruit skin color	5 plants, 5 fruits	Observation	3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark	Fully ripe fruits
29	Design produced by secondary fruit skin color	5 plants, 5 fruits	Observation	0:No secondary color 1:Speckled 2:Spotted 3:Striped 4:Streaked 5:Bisectional 6:Other	Fully ripe fruits

Plant	Squash	104(08003)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
30	Fruit skin texture	5 plants, 5 fruits	Observation	1:Smooth 2:Grainy 3:Finely wrinkled 4:Shallowly wavy 5:Netted 6:With warts 7:With spines 8:Knoted 9:Other	Fully ripe fruits
31	Glossiness of fruit skin	5 plants, 5 fruits	Observation	0:Absent 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly prominent 7:Prominent	Fully ripe fruits
32	Bloom on fruit skin	5 plants, 5 fruits	Observation	0:Absent 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly prominent 7:Prominent 8:Very prominent 9:Extremely prominent	
33	Size of blossom end	5 plants, 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	Fully ripe fruits
34	Height of fruit	5 plants, 5 fruits	Measurement	cm (round to the 1st decimal place)	Fully ripe fruits
35	Width of fruit	5 plants, 5 fruits	Measurement	cm (round to the 1st decimal place)	Fully ripe fruits
36	Hardness of fruit skin	5 plants, 5 fruits	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	Fully ripe fruits. Soft:easily marked by fingernail, intermediate:difficult to mark with fingernail, hard:impossible to mark with fingernail
37	Flesh thickness	5 plants, 5 fruits	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	Evaluate based on the flesh thickness index (flesh thickness/radius of fruit x 100), 1:< 15, 2:16-22, 3:23-29, 4:30-36, 5:37-43, 6:44-50, 7:51-57, 8:58-64, 9:> 65
38	Brightness of flesh color	5 plants, 5 fruits	Observation	3:Bright 4:Slightly bright 5:Intermediate 6:Slightly dark 7:Dark	Fully ripe fruit
39	Length of peduncle	5 plants, 5 fruits	Measurement	cm (round to the 1st decimal place)	Fully ripe fruit

Plant	Squash	104(08003)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
40	Thickness of peduncle	5 plants, 5 fruits	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	Fully ripe fruit. The part of the center of peduncle

Plant	Squash	104(08003)	Secondary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Resistance to fusarium wilt	5 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	Artificial inoculation for young seedling or natural infection in field
2	Resistance to powdery mildew	5 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	Artificial inoculation for young seedling or natural infection in field
3	Resistance to virus diseases	5 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	Artificial inoculation for young seedling or natural infection in field
4	Resistance to Phytophthora rot	5 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	Artificial inoculation for young seedling or natural infection in field
5	Earliness	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 half the plants investivated

Plant	Squash	104(08003)	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Resistance to bacterial spot	5 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	Artificial inoculation for young seedling or natural infection in field
2	Resistance to insects	5 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	Artificial inoculation for young seedling or natural infection in field
3	Resistance to nematodes	5 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	Artificial inoculation for young seedling or natural infection in field
4	Tolerance to low temperature	5 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	Seedling or field test
5	Tolerance to high temperature	5 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	Seedling or field test
6	Excess water tolerance	5 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	Seedling or field test

Plant	Squash	104(08003)	Tertiary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Degree of continuous female flowering	5 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	Observe at the end of harvesting time, exclude dwarf species
2	Days to harvesting	5 plants, 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	Average number of days from flowering to harvest
3	Predominant fruit skin color at maturity for table use	5 plants, 5 fruits	Observation	1:White 2:Gray 3:Yellow 4:Gray green 5:Green 6:Orange 7:Red 8:Brown 9:Black	Fruit at maturity for table use
4	Shade of predominant fruit skin color at maturity for table use	5 plants, 5 fruits	Observation	3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark	Fruit at maturity for table use
5	Bitterness of flesh	5 plants, 5 fruits	Sensory	0:Absent 1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	Bitterness of flesh at full or table use maturity

Plant	Squash	104(08003)	Tertiary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Flesh texture	5 plants, 5 fruits	Sensory	1:Fibrous 2:Spongy 3:Mealy 4:Intermediate 5:Sticky 9:Other	Flesh texture at full or table use maturity
2	Firmness of flesh	5 plants, 5 fruits	Sensory	1:Extremely soft 2:Very soft 3:Soft 4:Slightly soft 5:Intermediate 6:Slightly hard 7:Hard 8:Very hard 9:Extremely hard	Hardness of flesh at full or table use maturity
3	Eating quality	5 plants, 5 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	Eating quality at full or table use maturity
4	Dry matter percentage of flesh	5 plants, 5 fruits	Obs.&Measr.	1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high	Dry matter percentage of flesh at full or table use maturity. Low:approximately 10-15%, intermediate:20-25%, high:30-35%
5	Keeping quality	5 plants, 5 fruits	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	Keeping quality of fruit at table use maturity. Low: approximately 1 week. Intermediate:1 month, high:3 months
6	Soluble solid content	5 plants, 5 fruits	Measurement	% (round to the 1st decimal place)	Brix value of flesh