| Plant | Bell pepper |  |  | Primary essential character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Earliness of flowering | 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``` | Date of the first flowering of second nodes |
| 2 | Flower color | 10 plants | Observation | 1:Greenish white $3:$ White $5:$ White with spots 7:Purple 9:Purple with spots |  |
| 3 | Leaf length | 10 plants | Measurement | cm (round to the 1st decimal place) | Length from leaf base to leaf apex in the <br> largest leaf on upper sites of first branching <br> at immature fruit time |
| 4 | Fruit attitude | 10 plants | Observation | 1:Erect 2:Semi-drooping 3:Drooping |  |
| 5 | Immature fruit color | 10 fruits | Observation | 1:Greenish white 2:Yellow 3:Green 4:Purple |  |
| 6 | Mature fruit color | 10 fruits | Observation | 1:Yellow 2:Orange 3:Red 4:Brown 5:Green |  |
| 7 | Mature fruit length | 10 fruits | Measurement | cm (round to the 1st decimal place) |  |
| 8 | Index of fruit shape | 10 fruits | Measurement | \% (round to the 1st decimal place) | Ratio of length/the longest diameter of typical mature fruit |
| 9 | Shape in longitudinal <br> section of fruit | 10 fruits | Observation | 1:Oblate 2:Circular 3:Cordate 4:Square 5:Rectangular 6:Trapezoidal 7:Moderately triangular 8:Narrowly triangular 9:Horn shaped | Mature fruit |
| 10 | Fruit pungency | 10 fruits | Observation | 0:Absent 9:Present | Presence of pungency in typical fruit |


| Plant | Bell pepper |  |  | Primary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Anthocyanin coloration of hypocotyl | 10 plants | Observation | 0:Absent 9:Present |  |
| 2 | Cotyledon size | 10 plants | Measurement | cm (round to the 1st decimal place) | Length from base to apex of cotyledon |
| 3 | First branching height | 10 plants | Measurement | cm (round to the 1st decimal place) | Length from cotyledon to a node of first flowering |
| 4 | Stem thickness | 10 plants | Measurement | cm (round to the 1st decimal place) | Diameters of branch between the second and third nodes under branching |
| 5 | Shortened internode | 10 plants | Observation | 0:Absent 9:Present | Presence of shortened internode |
| 6 | Internode number between the first flower and shortened internodes | 10 plants | Observation | 1:None 2:One to three 3:More than three |  |
| 7 | Internode length | 10 plants | Measurement | cm (round to the 1st decimal place) | Average length of internodes between the second and forth branchings on primary side shoots |
| 8 | Anthocyanin coloration of nodes | 10 plants | Observation | ```0:None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` |  |
| 9 | Hairiness of nodes | 10 plants | Observation | ```0:None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` |  |
| 10 | Plant height | 10 plants | Measurement | cm (integer) | At immature fruit time |
| 11 | Leaf width | 10 plants | Measurement | cm (round to the 1st decimal place) | Width of the largest leaf on upper sites at immature fruit time |
| 12 | Intensity of leaf green | 10 plants | Observation | 3:Light 4:Slightly light 5:Medium 6:Slightly dark 7:Dark | Leaves on upper site of first branching |


| Plant | Bell pepper |  |  | Primary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 13 | Leaf shape | 10 plants | Observation | 1:Lanceolate 2:Ovate 3:Broad elliptic | Leaves on upper site of first branching |
| 14 | Undulation of leaf margin | 10 plants | Observation | $0:$ None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong | Leaves on upper site of first branching |
| 15 | Leaf blistering | 10 plants | Observation | ```1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` | Leaves on upper site of first branching |
| 16 | Leaf profile in cross section | 10 plants | Observation | 1:Strongly concave $2:$ Very concave <br> 3:Moderately concave 4:Slightly concave <br> 5:Flat 6:Slightly convex 7:Moderately convex <br> 8:Very convex 9:Strongly convex | Leaves on upper site of first branching |
| 17 | Leaf glossiness | 10 plants | Observation | ```1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` | Leaves on upper site of first branching |
| 18 | Peduncle attitude | 10 plants | Observation | 1:Erect 2:Semi-drooping 3:Drooping |  |
| 19 | Anther anthocyanin coloration | 10 flowers | Observation | 0:Absent 9:Present |  |
| 20 | Intensity of fruit color | 10 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``` |  |
| 21 | Anthocyanin coloration of immature fruits | 10 fruits | Observation | 0:Absent 9:Present |  |
| 22 | Fruit diameter | 10 fruits | Measurement | cm (round to the 1st decimal place) |  |
| 23 | Fruit weight | 10 fruits | Measurement | $g$ (round to the 1st decimal place) |  |
| 24 | Shape in cross section of fruit | 10 fruits | Measurement | 1:Elliptic 2:Angular 3:Circular | Mature fruits |


| Plant $\quad$ B | Bell pepper |  |  | Primary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 25 | Sinuation of pericarp at fruit basal | 10 fruits | Observation | 0:None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong | Mature fruits |
| 26 | Sinuation of pericarp excluding fruit basal part | 10 fruits | Observation | 0 :None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong | Mature fruits |
| 27 | Fruit surface texture | 10 fruits | Observation | 1:Smooth or very slightly wrinkled 2:Slightly wrinkled 3:Strongly wrinkled | Mature fruits |
| 28 | Intensity of mature fruits | 10 fruits | Observation |  | Mature fruits |
| 29 | Fruit glossiness | 10 fruits | Observation | ```1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` | Mature fruits |
| 30 | Depth of stalk cavity | 10 fruits | Observation | ```0:None 1:Extremely shallow 2:Very shallow 3:Shallow 4:Slightly shallow 5:Intermediate 6:Slightly deep 7:Deep 8:Very deep 9:Extremely deep``` | Mature fruits |
| 31 | Shape of fruit apex | 10 fruits | Observation | 1:Very acute 2:Moderately acute 3:Rounded 4:Moderately depressed 5:Very depressed | Mature fruits |
| 32 | Depth of wrinkle on fruit surface | 10 fruits | Observation | ```0:None 1:Extremely shallow 2:Very shallow 3:Shallow 4:Slightly shallow 5:Intermediate 6:Slightly deep 7:Deep 8:Very deep 9:Extremely deep``` | Mature fruits |
| 33 | Number of locules | 10 fruits | Observation | ```1:Predominantly two 2:Equally two and three 3:Predominantly three 4:Equally three and four 5:Predominantly four and more``` | Mature fruits |
| 34 | Thickness of fruit flesh | 10 fruits | Measurement | mm (round to the 1st decimal place) | Thickness of fruit flesh at the center of typical mature fruit |
| 35 | Stalk length | 10 fruits | Measurement | mm (round to the 1st decimal place) | Mature fruits |


| Plant | Bell pepper |  |  | Primary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 36 | Stalk thickness | 10 fruits | Measurement | mm (round to the 1st decimal place) | Mature fruits |
| 37 | Shape of calyx | 10 fruits | Observation | 1:Non enveloping $2:$ Enveloping | Mature fruits |
| 38 | Number of seeds per fruit | 10 fruits | Measurement | Seed number (round to the 1st decimal place) |  |
| 39 | Time of maturity | 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``` | Date of the first maturing fruit |


| Plant | Bell pepper |  | 446 | Secondary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Resistance to tobamovirus | 10 plants | Observation | 0:None 1:L1 2:L2 3:L3 4:L4 | Resistant genes to tobamovirus |
| 2 | Resistance to Potato <br> Virus Y | 10 plants | Observation | ```0:None 1:Resistance to pathotype 0 2:Resistance to pathotype 1 3:Resistance to pathotype 1-2``` |  |
| 3 | Resistance to Tomato <br> Spotted Wilt Virus | 10 plants | Observation | 0:Absent 9:Present | Resistance to R0 race |
| 4 | Resistance to Cucumber <br> Mosaic Virus | 10 plants | Observation | 0 :None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong | Artificial inoculation or natural infection |
| 5 | Resistance to <br> Phytophthora blight | 10 plants | Observation | ```0:None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` | Medium: Bell-masari, Strong: LS279 |
| 6 | Resistance to Bacterial spot | 10 plants | Observation | ```0:None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` |  |
| 7 | Resistance to Bacterial <br> wilt | 10 plants | Observation | ```0:None 1:Extremely weak 2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong 9:Extremely strong``` | Weak: Kyo-Midori, Medium: Mie-Midori, Strong: LS2341 |


| Plant |  | Bell pepper |  |  | Tertiary optional character |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No | Characters |  | No. of samples | Methods | Rank or measurement unit | Remarks |
| 1 | Degree of pungency |  | 10 plants | observation | 0 :None 1:Extremely low 2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high 9:Extremely high | Very weak: NuMex Sunrise, Weak: Yatsufusa, Medium: Takanotume, Strong: Habanero |

