

CHARACTERIZATION

7. Plant descriptors

7.1 Vegetative

7.1.1 Seedling

Recorded when the terminal bud is 1-2 mm in size

7.1.1.1 Hypocotyl colour

- 1 White
- 2 Green
- 3 Purple

7.1.1.2 Hypocotyl pubescence

- 3 Sparse
- 5 Intermediate
- 7 Dense

7.1.1.3 Cotyledonous leaf colour

- 1 Light green
- 2 Green
- 3 Dark green
- 4 Light purple
- 5 Purple
- 6 Dark purple
- 7 Variegated
- 8 Yellow
- 9 Other (specify in descriptor **7.4 Notes**)

7.1.1.4 Cotyledonous leaf shape

(See Fig. 3)

- 1 Deltoid
- 2 Ovate
- 3 Lanceolate
- 4 Elong-deltoid

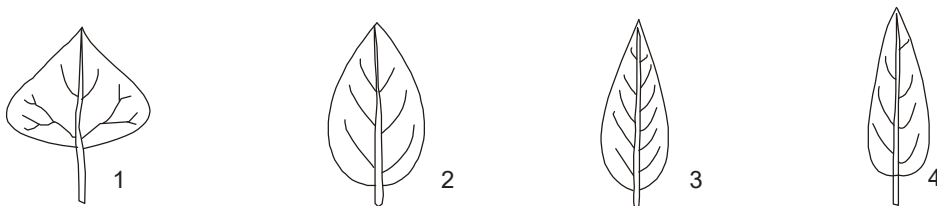


Fig. 3 Cotyledonous leaf shape

7.1.1.5 Cotyledonous leaf length [mm]

Recorded when they are fully developed. Average of 10 cotyledonous leaves

7.1.1.6 Cotyledonous leaf width [mm]

Recorded when they are fully developed. Average of 10 cotyledonous leaves

7.1.2 Plant descriptors

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7.1.2.1 Life cycle

- 1 Annual
- 2 Biennial
- 3 Perennial

★

7.1.2.2 Stem colour

(4.1.3)

Recorded on young plants before transplanting

- 1 Green
- 2 Green with purple stripes
- 3 Purple
- 4 Other (specify in descriptor **7.4 Notes**)

7.1.2.3 Nodal anthocyanin (whole plant)

(6.1.3)

Recorded at plant maturity

- 1 Green
- 3 Light purple
- 5 Purple
- 7 Dark purple

7.1.2.4 Stem shape

Observed at plant maturity

- 1 Cylindrical
- 2 Angled
- 3 Flattened

7.1.2.5 Stem pubescence

(4.1.2)

Recorded on mature plants, excluding the first two nodes below the shoot. (See Fig. 4)

- 3 Sparse
- 5 Intermediate
- 7 Dense

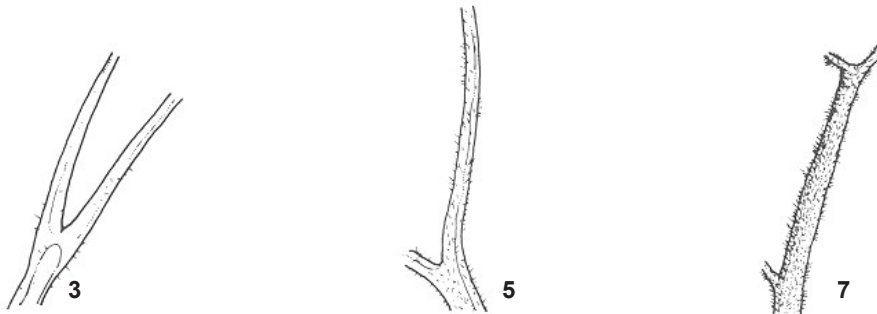


Fig. 4 Stem pubescence

- ★ **7.1.2.6 Plant height [cm]** (6.1.1)
Recorded when in 50% of the plants the first fruit has begun to ripen
 - 1 <25
 - 2 25-45
 - 3 46-65
 - 4 66-85
 - 5 >85

- ★ **7.1.2.7 Plant growth habit** (4.1.1)
Observed when 50% of the plants bear ripe fruits. (See Fig. 5)
 - 3 Prostrate
 - 5 Intermediate (compact)
 - 7 Erect
 - 9 Other (specify in the descriptor **7.4 Notes**)

- 7.1.2.8 Plant canopy width [cm]** (6.1.2)
Measured immediately after first harvest, at the widest point

- 7.1.2.9 Stem length [cm]**
Height to first bifurcation. Measured immediately after first harvest

- 7.1.2.10 Stem diameter [cm]**
Measured in the middle part to first bifurcation, immediately after first harvest

- 7.1.2.11 Branching habit**
 - 3 Sparse
 - 5 Intermediate
 - 7 Dense

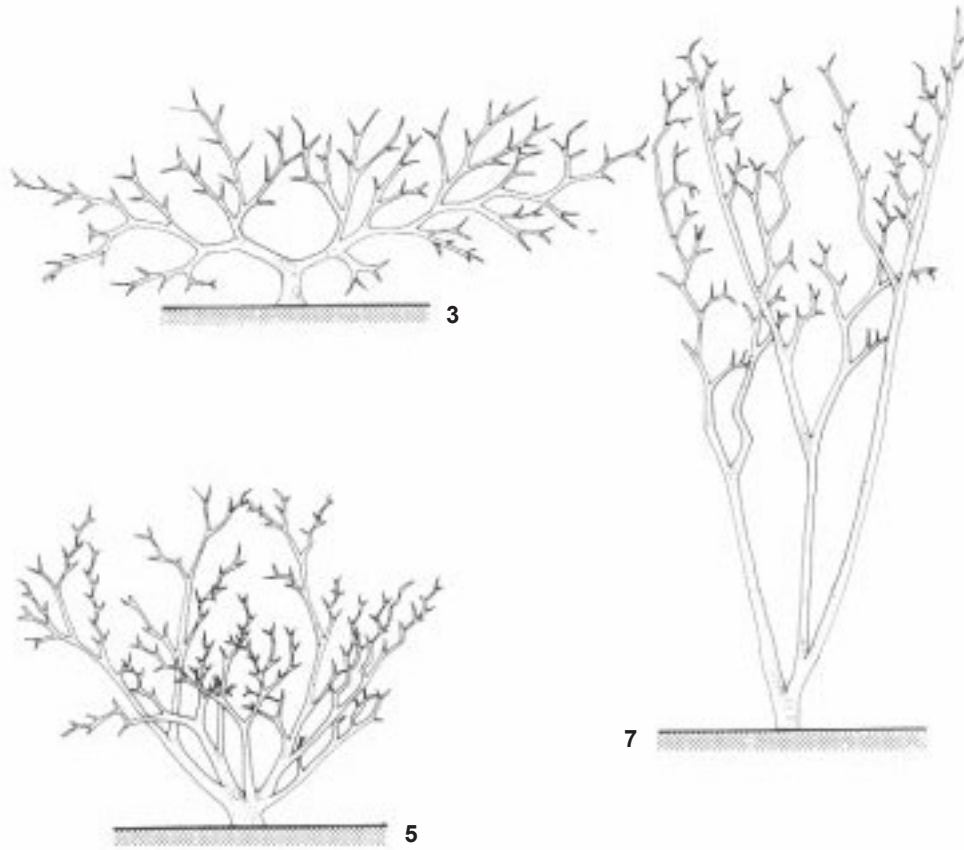


Fig. 5 Plant growth habit

7.1.2.12 Tillering

- 3 Sparse
- 5 Intermediate
- 7 Dense

7.1.2.13 Leaf density

Recorded in healthy, mature plants. Average of 10 plants

- 3 Sparse
- 5 Intermediate
- 7 Dense

For descriptors **7.1.2.14** to **7.1.2.19**: recorded when in 50% of the plants the first fruit has begun to ripen. Average of 10 mature leaves (from the main branches of the plant)

7.1.2.14 Leaf colour

- 1 Yellow
- 2 Light green
- 3 Green
- 4 Dark green
- 5 Light purple
- 6 Purple
- 7 Variegated
- 8 Other (specify in descriptor **7.4 Notes**)

7.1.2.15 Leaf shape

(See Fig. 6)

- 1 Deltoid
- 2 Ovate
- 3 Lanceolate

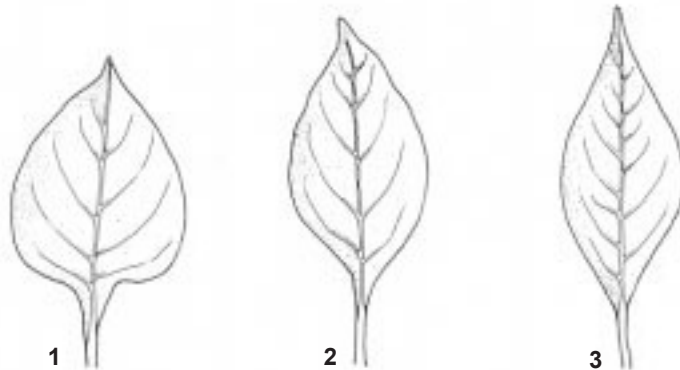


Fig. 6 Leaf shape

7.1.2.16 Lamina margin

- 1 Entire
- 2 Undulate
- 3 Ciliate

7.1.2.17 Leaf pubescence (4.1.4)

Observed on the youngest mature leaves. (See Fig. 7)

- 3 Sparse
- 5 Intermediate
- 7 Dense



Fig. 7 Leaf pubescence

7.1.2.18 Mature leaf length [cm] (6.1.4)

7.1.2.19 Mature leaf width [cm]
Measured on the widest part of the leaf

7.2 Inflorescence and fruit (4.2)

7.2.1 Inflorescence descriptors
Recorded on fully open flowers in the first fresh flowering

★ **7.2.1.1 Days to flowering** (6.2.1)
Number of days from sowing/transplanting until 50% of plants have at least one open flower

★ **7.2.1.2 Number of flowers per axil** (4.2.1)
1 One
2 Two
3 Three or more
4 Many flowers in bunches but each in individual axil (fasciculate growth)
5 Other (i.e. cultivars with two flowers in the first axil and with one only in the other)

7.2.1.3 Flower position

(4.2.2)

Recorded at anthesis. (See Fig. 8)

- 3 Pendant
- 5 Intermediate
- 7 Erect

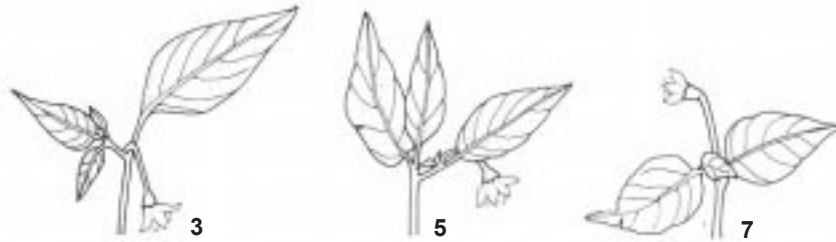


Fig. 8 Flower position

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7.2.1.4 Corolla colour (4.2.3)

- 1 White
- 2 Light yellow
- 3 Yellow
- 4 Yellow-green
- 5 Purple with white base
- 6 White with purple base
- 7 White with purple margin
- 8 Purple
- 9 Other (specify in descriptor **7.4 Notes**)

7.2.1.5 Corolla spot colour (6.2.2)

- 1 White
- 2 Yellow
- 3 Green-yellow
- 4 Green
- 5 Purple
- 6 Other (specify in descriptor **7.4 Notes**)

7.2.1.6 Corolla shape

- 1 Rotate
- 2 Campanulate
- 3 Other (specify in descriptor **7.4 Notes**)

7.2.1.7 Corolla length [cm]

Average of 10 petals of dissected corolla

- 1 <15
- 2 1.5-2.5
- 3 >25

★ **7.2.1.8 Anther colour** (6.2.3)

Observed immediately after blooming before anthesis

- 1 White
- 2 Yellow
- 3 Pale blue
- 4 Blue
- 5 Purple
- 6 Other (specify in descriptor **7.4 Notes**)

7.2.1.9 Anther length [mm] (6.2.5)

Average anther length of 10 representative flowers selected from different plants. Observed immediately at anthesis

7.2.1.10 Filament colour (6.2.4)

Observed immediately at anthesis

- 1 White
- 2 Yellow
- 3 Green
- 4 Blue
- 5 Light purple
- 6 Purple
- 7 Other (specify in descriptor **7.4 Notes**)

7.2.1.11 Filament length [mm] (6.2.5)

Average filament length of 10 representative flowers selected from different plants. Observed immediately at anthesis

7.2.1.12 Stigma exertion (6.2.6)

In relation to anthers at full anthesis. Average of 10 stigmas from representative flowers selected from 10 random plants

- 3 Inserted
- 5 Same level
- 7 Exserted

★ **7.2.1.13 Male sterility** (6.2.8)

- 0 Absent
- 1 Present

7.2.1.14 Calyx Pigmentation

- 0 Absent
- 1 Present

7.2.1.15 Calyx margin

(See Fig. 9)

(4.2.4)

- 1 Entire
- 2 Intermediate
- 3 Dentate
- 4 Other (specify in descriptor 7.4 Notes)

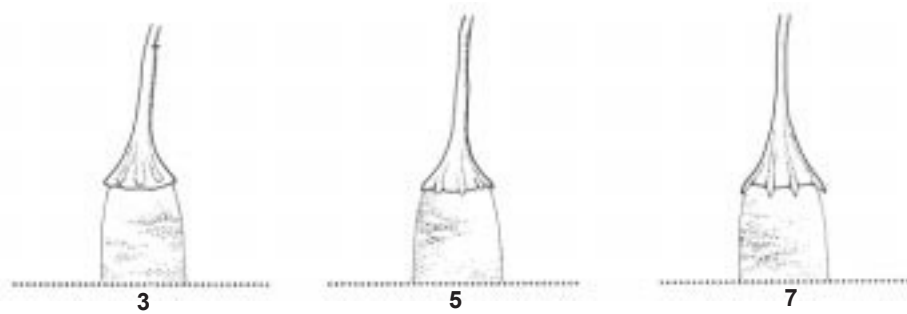


Fig. 9 Calyx margin

7.2.1.16 Calyx annular constriction

(4.2.5)

At junction of calyx and pedicel. Observed at mature stage.

(See Fig. 10)

- 0 Absent
- 1 Present

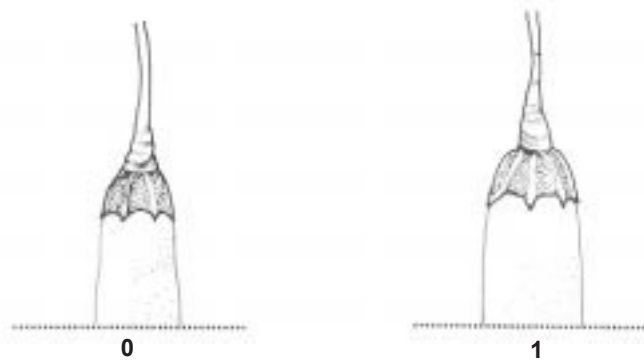


Fig. 10 Calyx annular constriction

7.2.2 Fruit descriptors

Recorded on mature fruits in the first harvest unless specified

- ★ **7.2.2.1 Days to fruiting** (6.2.9)
Number of days from transplanting until 50% of the plants bear mature fruits at the first and second bifurcation
- 7.2.2.2 Anthocyanin spots or stripes** (6.2.14)
Recorded just before the ripening stage
0 Absent
1 Present
- ★ **7.2.2.3 Fruit colour at intermediate stage** (4.2.7)
Recorded on fruits just before the ripening stage
1 White
2 Yellow
3 Green
4 Orange
5 Purple
6 Deep purple
7 Other (specify in descriptor **7.4 Notes**)
- 7.2.2.4 Fruit set** (6.2.10)
Recorded before harvest
3 Low
5 Intermediate
7 High
- 7.2.2.5 Fruit-bearing period [d]**
Number of days from first fruit set to last fruit formation
- ★ **7.2.2.6 Fruit colour at mature stage** (4.2.8)
1 White
2 Lemon-yellow
3 Pale orange-yellow
4 Orange-yellow
5 Pale orange
6 Orange
7 Light red
8 Red
9 Dark red
10 Purple
11 Brown
12 Black
13 Other (specify in descriptor **7.4 Notes**)

- ★ **7.2.2.7 Fruit shape** (4.2.10)
(See Fig. 11)
- 1 Elongate
 - 2 Almost round
 - 3 Triangular
 - 4 Campanulate
 - 5 Blocky
 - 6 Other (specify in descriptor **7.4 Notes**)
- ★ **7.2.2.8 Fruit length [cm]** (4.2.9)
Average fruit length of 10 ripe fruits of the second harvest
- ★ **7.2.2.9 Fruit width [cm]** (6.2.11)
Measured at the widest point. Average fruit width of 10 ripe fruits of the second harvest
- ★ **7.2.2.10 Fruit weight [g]** (6.2.12)
Average fruit weight of 10 ripe fruits of the second harvest
- 7.2.2.11 Fruit pedicel length [cm]**
Average length of 10 pedicels of the second harvest to one decimal place
- 7.2.2.12 Fruit wall thickness [mm]** (6.2.13)
Average of 10 ripe fruits of the second harvest, measured at point of maximum width to one decimal point
- 7.2.2.13 Fruit shape at pedicel attachment** (4.2.11)
(See Fig. 12)
- 1 Acute
 - 2 Obtuse
 - 3 Truncate
 - 4 Cordate
 - 5 Lobate
- ★ **7.2.2.14 Neck at base of fruit** (4.2.12)
(See Fig. 13)
- 0 Absent
 - 1 Present
- 7.2.2.15 Fruit shape at blossom end** (4.2.13)
Average of 10 fruits. (See Fig. 14)
- 1 Pointed
 - 2 Blunt
 - 3 Sunken
 - 4 Sunken and pointed
 - 5 Other (specify in descriptor **7.4 Notes**)

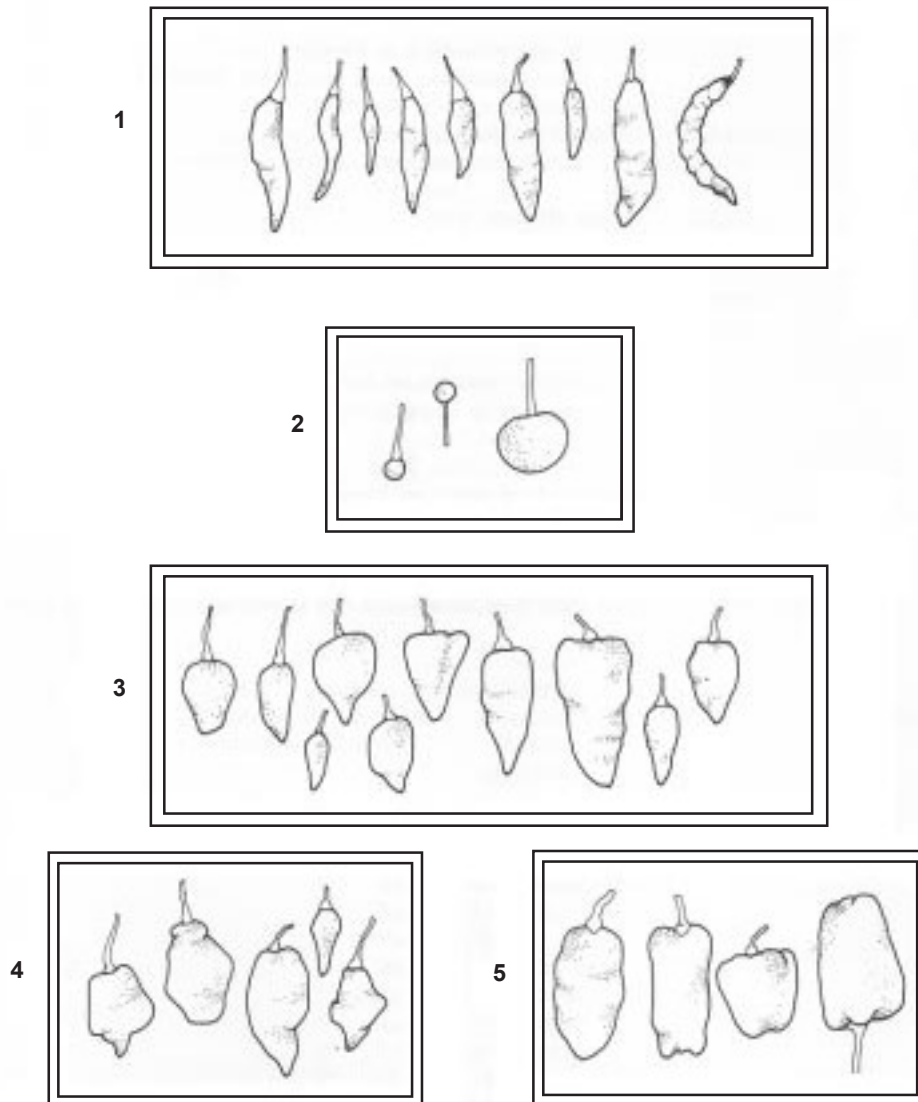


Fig. 11 Fruit shape

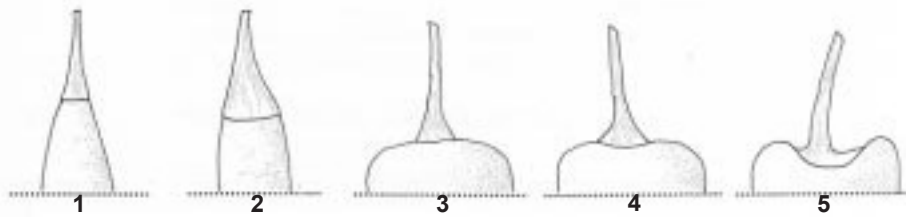


Fig. 12 Fruit shape at pedicel attachment



Fig. 13 Neck at base of fruit



Fig. 14 Fruit shape at blossom end

7.2.2.16 Fruit blossom end appendage

(See Fig. 15)

- 0 Absent
- 1 Present

7.2.2.17 Fruit cross-sectional corrugation

(4.2.14)

Average of 10 fruits (1/3 from pedicel end). (See Fig. 16)

- 3 Slightly corrugated
- 5 Intermediate
- 7 Corrugated

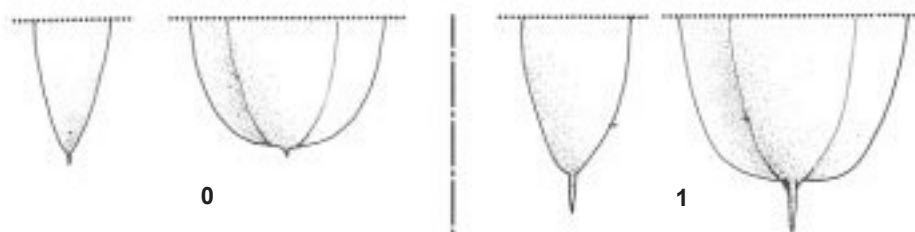


Fig. 15 Fruit blossom end appendage



Fig. 16 Fruit cross-sectional corrugation

7.2.2.18 Number of locules

Observe 10 fruits, if the locule (chamber) number is uniform, record it; if not, record the most frequent two numbers (or the percentage of the all categories)

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7.2.2.19 Fruit surface

- 1 Smooth
- 2 Semiwrinkled
- 3 Wrinkled

7.2.2.20 Ripe fruit persistence

(4.2.15)

7.2.2.20.1 Pedicel with fruit

- 3 Slight
- 5 Intermediate
- 7 Persistent

7.2.2.20.2 Pedicel with stem

- 3 Slight
- 5 Intermediate
- 7 Persistent

7.2.2.21 Placenta length

- 1 <1/4 fruit length
- 2 1/4-1/2 fruit length
- 3 >1/2 fruit length

7.2.2.22 Varietal mixture condition

- 3 Slight
- 5 Medium
- 7 Serious

7.3 Seed (4.3-6.3)

★ **7.3.1 Seed colour** (6.3.1)

- 1 Straw (deep yellow)
- 2 Brown
- 3 Black
- 4 Other (specify in descriptor **7.4 Notes**)

7.3.2 Seed surface

- 1 Smooth
- 2 Rough
- 3 Wrinkled

7.3.3 Seed size

Average of 10 randomly selected seeds

- 3 Small
- 5 Intermediate
- 7 Large

7.3.4 Seed diameter [mm] (6.3.2)

The maximum diameter of 10 seeds to two decimal places

★ **7.3.5 1000-seed weight [g]** (6.3.3)

★ **7.3.6 Number of seeds per fruit**

Average of at least 10 fruits selected from 10 random plants

- 1 <20
- 2 20-50
- 3 >50

7.4 Notes

Any additional information, especially in the category of 'other' under various descriptors above, may be specified here

EVALUATION

8. Plant descriptors

8.1 Yield and quality characteristics

- ★ **8.1.1 Fruit yield/plant [g]**
Fruit yield average on 30 plants
- 8.1.2 Fruit dry matter content [% DW]**
- 8.1.3 Fresh to dry fruit weight ratio**
- 8.1.4 Ascorbic acid content [mg 100 g⁻¹ FW]**
- ★ **8.1.5 Capsaicin content [%]**
- 8.1.6 Organoleptic content [%]**
- 8.1.7 Oleoresin content**
- 8.1.8 Soluble solids [%]**
Average of at least five samples recorded as percentage solids read directly from a brix scale superimposed over the refractive index scale
- 8.1.9 Ripe fruit pungency** (4.2.16)
Indicate method of testing
- 8.1.10 Seed yield (fresh fruit) [mg 100 g⁻¹]**
Weigh using dry seed and fresh fruit. Average of at least 10 fruits per accession
 - 1 <60
 - 2 61-100
 - 3 101-200 4 >201

8.2 Notes

Specify here any additional information

9. Abiotic stress susceptibility

Scored under artificial and/or natural conditions, which should be clearly specified. These are coded on a susceptibility scale from 1 to 9 viz.:

- 1 Very low or no visible sign of susceptibility
- 3 Low
- 5 Intermediate
- 7 High
- 9 Very high

- 9.1 Low temperature** (7.1)
- 9.2 High temperature** (7.2)
- 9.3 Drought** (7.3)
- 9.4 High soil moisture** (7.4)
- 9.5 High humidity** (7-5)
- 9.6 Water salinity**
- 9.7 Reaction to acidic soil**
- 9.8 Reaction to saline soil**
- 9.9 Reaction to alkali soil**
- 9.10 Mineral deficiencies**
- 9.11 Sunburn**

10. Biotic stress susceptibility

In each case, it is important to state the origin of the infestation or infection, i.e. natural, field inoculation, laboratory. Record such information in descriptor **10.6 Notes**. These are coded on a susceptibility, scale from 1 to 9 viz.:

- 1 Very low or no visible sign of susceptibility
- 3 Low
- 5 Intermediate
- 7 High
- 9 Very high