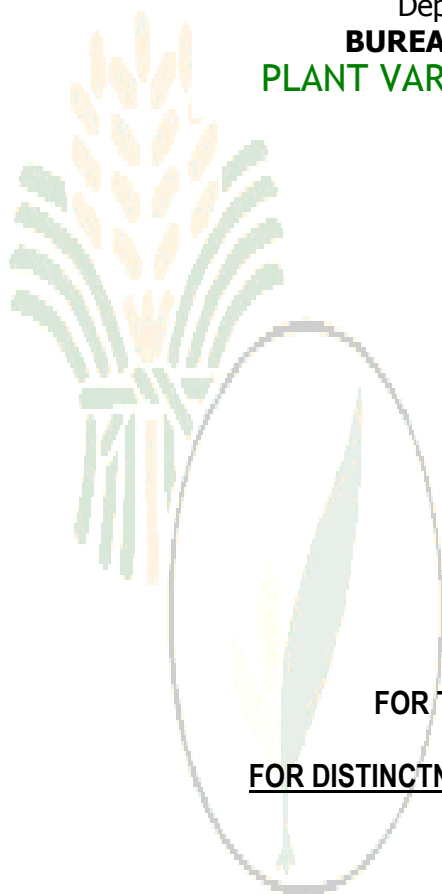


Republic of the Philippines
Department of Agriculture
BUREAU OF PLANT INDUSTRY
PLANT VARIETY PROTECTION OFFICE



GUIDELINES
FOR THE CONDUCT OF TESTS
FOR DISTINCTNESS, UNIFORMITY AND STABILITY



EGGPLANT
Solanum melongena L.

TABLE OF CONTENTS

I.	Subject of these Guidelines	.....3
II.	Material Required	.....3
III.	Conduct of Tests	.....3
IV.	Methods and Observations	.....4
V.	Grouping of Varieties	.....4
VI.	Characteristics and symbols	.....4
VII.	Table of Characteristics	.....5-12
VIII.	Explanations on the Table of Characteristics	.....12-13
IX.	Literature	.....13
X.	Technical Questionnaire	.....14-16

I. Subject of these Guidelines

These Test Guidelines apply to all varieties of Solanum melongena L.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the seed required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must make sure that all customs formalities are complied with. The minimum quantity of plant material to be supplied by the applicant in one or several samples should be:

15 g.

The quantity of the seed to be delivered should not be below the standards of seeds for certification or marketing in the country concerned, especially in regard to germination capacity and moisture content.

2. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

III. Conduct of Tests

1. The minimum duration of tests should be two similar growing periods.
2. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.
3. The tests should be carried out under conditions ensuring normal growth. The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the growing period. As a minimum, each test should include a total of 20 plants. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.
4. Additional tests for special purposes may be established.

IV. Methods and Observations

1. All observations determined by measurement or counting should be made on 20 plants or parts of 20 plants.
2. All observations on the leaf should be made on flowering branches at the early flowering stage.
3. All observations on the fruits should be made on normally developed fruits during the 2nd-3rd harvest period.

V. Grouping of Varieties

1. The collection to be grown should be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary or to vary only slightly, within a variety and which in their various states are fairly evenly distributed within the collection.
2. It is recommended that the competent authorities used the following characteristics for grouping varieties:
 - (i) Fruit: length (characteristic 17)
 - (ii) Fruit: ratio length/diameter (characteristic 19)
 - (iii) Fruit: general shape (characteristic 20)
 - (iv) Fruit: color of skin at commercial harvesting (characteristic 25)
 - (v) Fruit: stripes (characteristic 27)
 - (vi) Fruit: color of flesh (characteristic 38)

VI. Characteristics and symbols

1. To assess distinctness, homogeneity and stability, the characteristics and their states as given the three UPOV working languages in the Table of Characteristics should be used.
2. Notes (1 to 9), for the purposes of electronic data processing, are given opposite the states of the different characteristics.
- 3 Legend:
 - (*) Characteristics that should be used every growing period for the examinations of all varieties and should always be included in the description of the variety, except when the states of expression of a proceeding characteristics or regional environmental conditions render this impossible.
 - (+) See explanations of the Table of Characteristics in Chapter VIII.

VII. Table of Characteristics

<i>Traits</i>	<i>Characteristics</i>	<i>Description/ Category</i>	<i>Reference (Example)Varieties</i>	<i>Note/ Remarks</i>
1. (*)	Seedling: anthocyanin coloration of hypocotyls	absent	NE Green	1
		present	Dumaguete Long Purple	9
2.	Seedling: intensity of anthocyanin coloration of hypocotyls	weak	Mistisa	3
		medium	Mara	5
		strong	Dumaguete Long Purple	7
3. (*)	Plant: attitude/growth habit	erect	Dumaguete Long Purple Mistisa	3
		semi-erect	Purple Emperor	5
		prostrate/spreading		7
4.	Plant: height	short	EG 203	3
		medium	Mara/ NE Green	5
		tall	Dumaguete Long Purple	7
5.	Length of stem 9from cotyledon to node of first flower)	Short		3
		Medium		5
6. (*)	Stem: anthocyanin coloration	long		7
		absent	NE Green	1
		present	Dumaguete Long Purple	9

Traits	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
7.	Stem: intensity of anthocyanin coloration	weak	Mistisa	3
		medium	Mara	5
		strong	Dumaguete Long Purple	7
8.	Stem: hairiness	weak	Dumaguete Long Purple Mara	3
		medium	NE Green	5
		strong		7
9.	Branch: length of internodes	short		3
		medium		5
		long		7
10.	Leaf: size	small	Mistisa	3
		medium	Dingras Long Purple NE Green	5
		large		7
11. (*) (+)	Leaf: margin	entire	-	1
		dentate	Mistisa	2
		sinuate	Dumaguete Long Purple	3
12.	Leaf: degree of sinuation of margin	weak	-	3
		medium	-	5
		strong	-	7
13.	Leaf: blistering	absent	-	1
		present	-	9

Traits	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
14.	Leaf: spininess	absent or very weak	Mistisa	1
		weak	Dingras Long Purple	3
		medium	-	5
		strong	EG 203	7
		very strong	-	9
15. (*)	Leaf: color	Green	NE Green	1
		Bluish green	-	2
		Violet green	Dumaguete Long Purple	3
16.	Flower: purple color	Light	NE Green	3
		Medium	Mistisa	5
		Dark	Dumaguete Long Purple	7
17. (*)	Fruit: length	Short	Concepcion	3
		Medium	Mara	5
		Long	Dumaguete Long Purple	7
18.	Fruit: diameter	Small	Dingras Long Purple Dumaguete Long Purple	3
		Medium	-	5
		Large		7
19. (*)	Fruit: ratio length/diameter	Very small	NE Green	1
		Small		3
		Medium	Mara	5
		Large		7
		Very large	Dumaguete Long Purple	9

Traits	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
20. (* (+)	Fruit: general shape	Pear-shaped	-	1
		Ovoid	EG 203	2
		Globular	NE Green	3
		cylindrical	Dumaguete Long Purple	4
21. (* (+)	Fruit: size of pistil scar	Small	Dumaguete Long Purple Concepcion	3
		Medium	NE Green	5
		large		7
22. (* (+)	Fruit: shape of apex	Indented	Dumaguete Long Purple Mistisa	1
		Rounded	Senorita/Davao	2
		pointed		3
23.	Fruit: depth of indentation of apex	Shallow	Mara	3
		Medium	Dumaguete Long Purple	5
		Deep		7
24. (* (+)	Fruit: curvature (only for cylindrical types)	Absent or very weak	Casino	1
		Weak	Mistisa	3
		Medium	Dumaguete Long Purple Dingras Long Purple	5
		Strong	-	7
		Very strong		9

Traits	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
26.	Fruit: intensity of color of skin (except for white; as for 25)	Light	NE Green	3
		Medium	Dumaguete Long Purple	5
		Dark	-	7
27. (*)	Fruit: stripes	Absent	Dumaguete Long Purple Mistisa/NE Green	1
		Present		9
28.	Fruit: density of stripes	Sparse	NE Green	3
		Medium	Concepcion	5
		dense	Mistisa	7
29.	Fruit: glossiness at harvest maturity	Weak	Dumaguete Long Purple Mara	3
		Medium		5
		Strong	Senorita	7
30. (*)	Fruit: ribs	Absent	Dumaguete Long Purple	1
		Present	-	9
31.	Fruit: prominence of ribs	Weak	-	3
		Medium	-	5
		strong	-	7
32.	Fruit: size of calyx	Small	Dumaguete Long Purple NE Green	3
		Medium		5
		Large	Mistisa	7
33. (*)	Fruit: anthocyanin coloration <u>below</u> calyx	Absent	NE Green	1
		Present	Dumaguete Long Purple	9

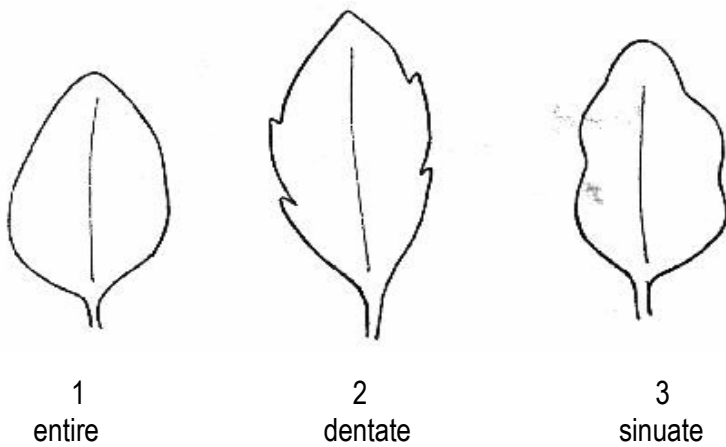
Traits	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
34.	Fruit: intensity of anthocyanin coloration <u>below</u> calyx	Weak	Mistisa	3
		Medium	Dingras Long Purple Dumaguete Long Purple	5
		Strong		7
35. (*)	Fruit: anthocyanin coloration <u>of</u> calyx	Absent	NE Green	1
		Present	Dumaguete Long Purple	9
36.	Fruit: intensity of anthocyanin coloration <u>of</u> calyx	Very weak	-	1
		Weak	-	3
		Medium	Mara	5
		Strong	Dumaguete Long Purple -	7
		Very strong		9
37.	Fruit: spinyiness of calyx	Absent or very weak	Mistisa	1
		Weak	Dumaguete Long Purple NE Green	3
		Medium		5
		Strong	- EG 203	7
		Very strong		9
38. (*)	Fruit: color of flesh	Whitish	Mistisa	1
		Greenish	Dumaguete Long Purple	2
39.	Fruit: color of skin at <u>physiological ripreness</u>	Yellow	NE Green	1
		Ochre	Dumaguete Long Purple -	2
		Brown		3

Traits	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
40. (*)	Time of beginning of flowering	Early	Mistisa	3
		Medium	Dumaguete Long Purple NE Green	5
		Late		7
41. (*)	Time of physiological ripeness	Early	Mistisa	3
		Medium	Dumaguete Long Purple NE Green	5
		Late		7
42.	Fruit firmness	Soft	Dumaguete Long Purple Dingras Long Purple	3
		Medium	NE Green	5
		Firm		7
43.	Fruit shelf life	Short	Dumaguete Long Purple Dingras long Purple	3
		Medium	Mistisa	5
		Long		7
44.	Resistance to Leaf hopper	Susceptible	Dumaguete Long Purple Dingras long Purple	3
		Intermediate	Mistisa	5
		Resistant		7
45.	Resistance to Eggplant shoot and fruit borer (ESFB)	Susceptible	Dumaguete Long Purple Mistisa	3
		Intermediate		5
		Resistant	-	7
46.	Resistance to Bacterial Wilt (BW)	Susceptible	Dumaguete Long Purple Mistisa	3
		Intermediate		5
		Resistant	EG 203	7

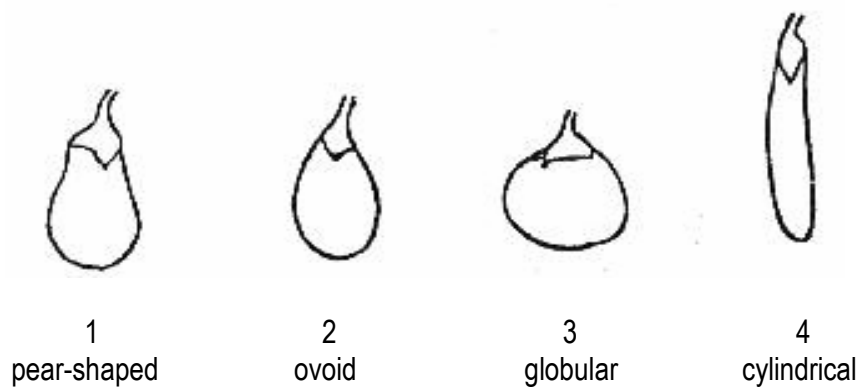
Traits	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
47.	Resistance to Phomopsis	Susceptible	Dingras long Purple Mistisa	3
		Intermediate	-	5
		Resistant	-	7

VIII. Explanations on the Table of Characteristics

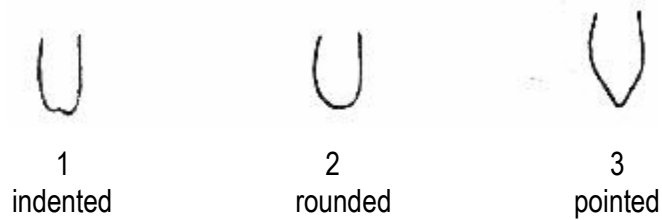
Leaf: margin



Fruit: general shape



Fruit: shape of apex



IX. Literature

- Khan, R., 1979: "Solanum melongena and the problems of its origin and phylogenetic affinities," J. Indian Bot. Soc., 58; pp. 99-109
- Khan, R., 1979: "Solanum melongena and its ancestral forms," In: Hawkes, J.G., Lester, R.N. and Skelding, A.D. eds.: "The biology and taxonomy of the Solanaceae," London, Academic Press, pp. 629-636
- Martin, F.W. and Rhodes, A.M., 1979: "Subspecific grouping of egg plant cultivars," Euphytica 28, pp. 367-383
- Pearce, K., and Lester, R.N., 1979: "Chemotaxonomy of the cultivated egg plant – a new look at the taxonomic relationships of Solanum melongena." In: Hawkes, J.G., Lester, R.N., and Skelding, A.D., eds.: "The biology and taxonomy of the Solanaceae." London, Academic Press, pp. 616-628
- Tindall, H.D., 1983: "Local Garden Egg." In: "Vegetables in the Tropics." London, MacMillan Press, pp. 360-365

X. Technical Questionnaire

Reference Number
(not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1.	Species	<i>Solanum melongena</i> L.
		EGG PLANT

2. Applicant (Name and address)

3. Proposed denomination or breeder's reference

4. Information on origin, maintenance and reproduction of the variety

5. Characteristics of the variety to be given (the number in brackets refers to the corresponding characteristics in the Rest Guidelines; please mark the state of expression which best corresponds)

	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
5.1 (17)	Fruit: length	short		3
		medium		5
		long		7
5.2 (19)	Fruit: ratio length/ diameter	Very small		1
		Small		3
		Medium		5
		Large		7
		Very large		9
5.3 (20)	Fruit: general shape	Pear-shaped		1
		Ovoid		2
		Globular		3
		Cylindrical		4
5.4 (21)	Fruit: size of pistil scar	Small		3
		Medium		5
		Large		7
5.5 (22)	Fruit: shape of apex	Indented		1
		Rounded		2
		Pointed		3

	Characteristics	Description/ Category	Reference (Example)Varieties	Note/ Remarks
5.6 (24)	Fruit: curvature (only for cylindrical types)	Absent or very weak		1 []
		Weak		3 []
		Medium		5 []
		Strong		7 []
		Very strong		9 []
5.7 (25)	Fruit: color of skin at <u>commercial harvesting</u>	White		1 []
		Yellow		2 []
		Green		3 []
		Mauve		4 []
		Purple		5 []
5.8 (27)	Fruit: stripes	Absent		1 []
		Present		9 []
5.9 (35)	Fruit: anthocyanin coloration <u>of</u> calyx	Absent		1 []
		Present		9 []
5.10 (38)	Fruit: color of flesh	Whitish		1 []
		Greenish		2 []
6.	Similar varieties and differences from these varieties			
	<u>Denomination of varieties</u>	<u>Differences</u>		
7.	Additional information which may help to distinguish the variety			
7.1	Resistance to pests and diseases			
7.2	Special conditions for the examination of the variety			
7.3	Other information			

[end of document]