



CALIBRATION MANUAL

Harmonized with
Naktuinbouw and NCSS(/NARO)

DUS Test for GERBERA

Gerbera Cass.

Established in January 24, 2020

Comply with UPOV TG/77/9

CALIBRATION MANUAL

DUS Test for GERBERA

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1. Purpose

This Calibration Manual was established by collaborative activities between Naktuinbouw (Netherlands) and NCSS (/NARO) (Japan).

The purpose of this Calibration Manual is to harmonize techniques for DUS examination in the two countries and use it also internationally.

2. Use of this Calibration Manual

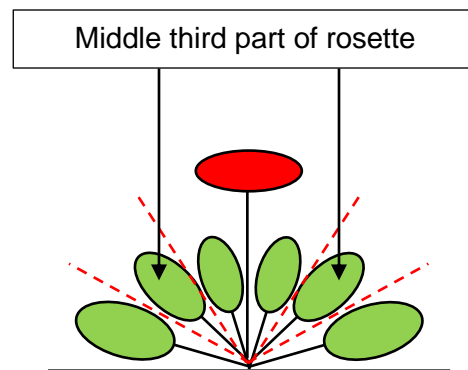
This Calibration Manual indicates only methods of observation for morphological characteristics included in UPOV Test Guidelines.

3. Explanations covering several characteristics

Characteristics containing the following key in the Table of Characteristics should be examined as indicated below:

(a) Unless otherwise indicated, observations should be made at least 4 months after start of trial (NL) or from October to November (JP). Plants should be sufficiently developed.

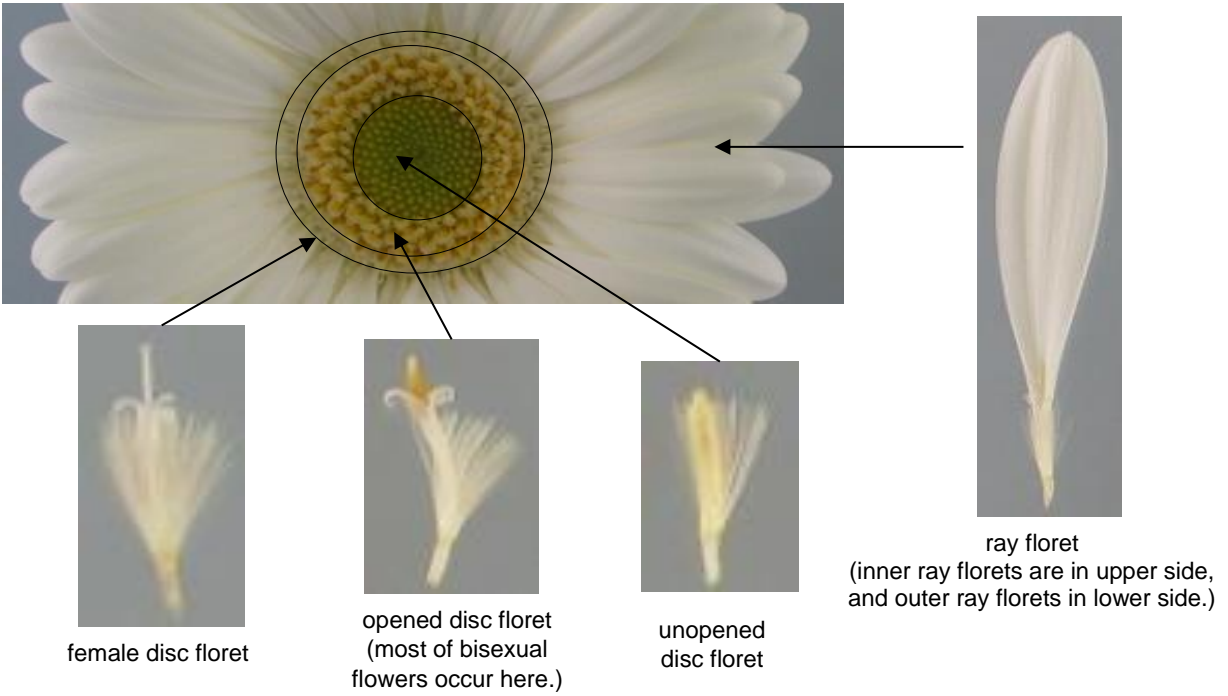
(b) Leaf: Observations should be made on the biggest, undamaged and full grown leaves, collected in the middle third part of the rosette.



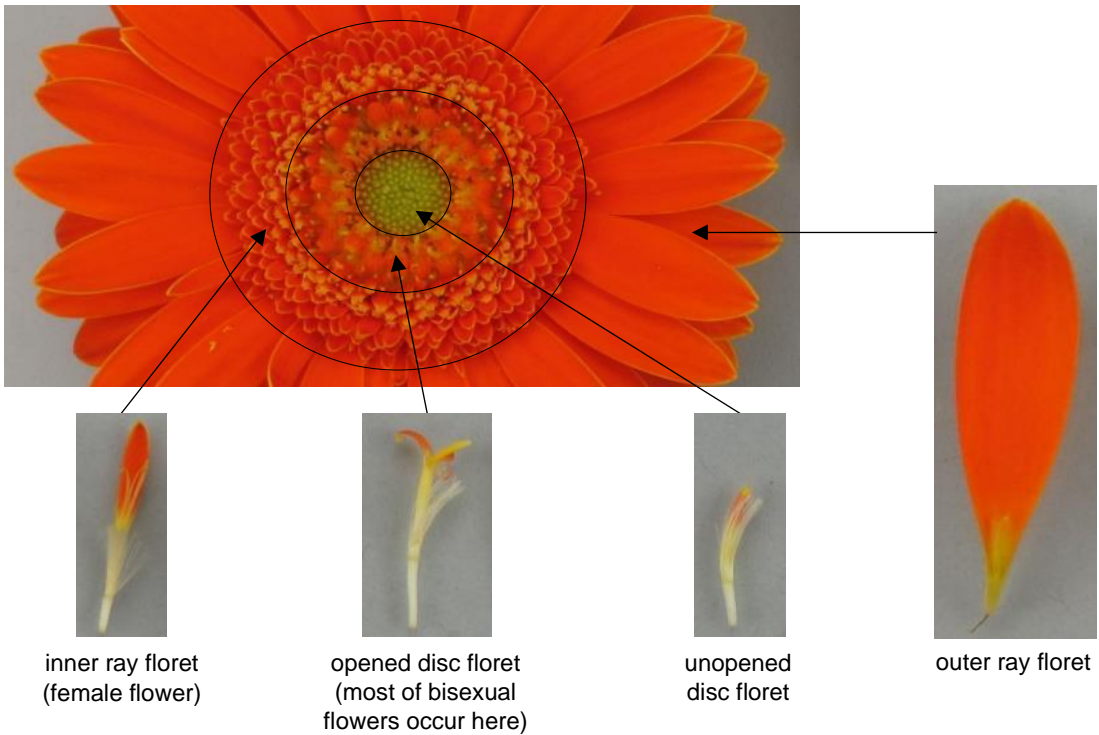
(c) Flower: In single and semi-double varieties, observations should be made when two to three of the outer rows of disc florets are open and anthers are visible. In double varieties, observations should be made when the flower is fully open but before it starts fading.

(d) Explanations of parts of flower:

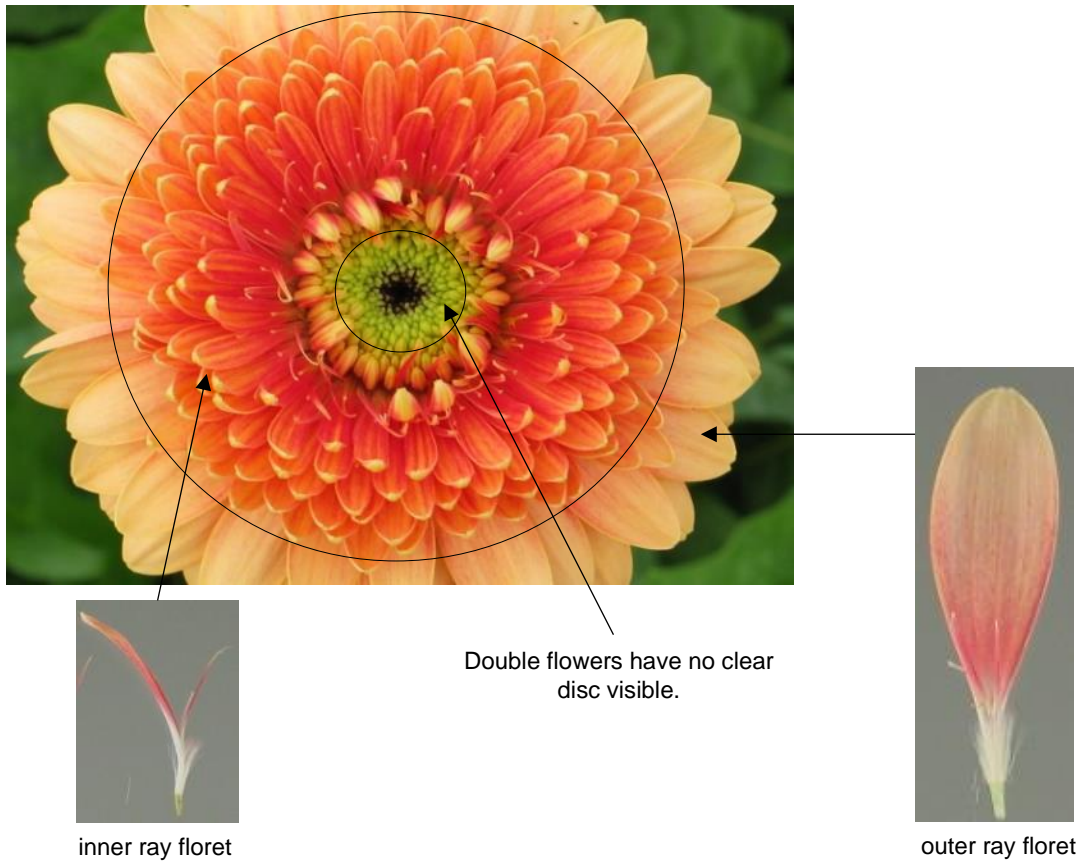
(single flower)



(semi-double flower)



(double flower)



4. Grouping characteristics:

The following have been agreed as useful grouping characteristics:

- (a) Flower head: type (characteristic 12)
- (b) Outer ray floret: color of inner side (characteristic 31)
- (c) Single or semi-double varieties only: dark disc (before opening of disc florets) (characteristic 42)

5. Disclaimer

The information contained in this Calibration Manual is for general information purposes only. The information is provided by Naktuinbouw and NCSS/(NARO) and while we endeavor to keep the information up to date and correct, we make no representations or warranties of any kind, express or implied, about the

completeness, accuracy, reliability, suitability or availability with respect to the Calibration Manual or the information contained on the Calibration Manual for any purpose. Any reliance you place on such information is therefore strictly at your own risk.

6. Method of Observation

Legend

Method of Observation

MG: single measurement of a group of plants or parts of plants

MS: measurement of a number of individual plants or parts of plants

VG: visual assessment by a single observation of a group of plants or parts of plants

VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

“Visual” observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, “G” provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

Types of Expression of Characteristics

To enable the appropriate use of characteristics in DUS testing, it is important to understand the different ways in which characteristics can be expressed. The following section identifies the different types of expression and considers their

application in DUS testing.

QL: Qualitative Characteristics

“Qualitative characteristics” are those that are expressed in discontinuous states (e.g. sex of plant: dioecious female (1), dioecious male (2), monoecious unisexual (3), monoecious hermaphrodite(4)). These states are self-explanatory and independently meaningful. All states are necessary to describe the full range of the characteristic, and every form of expression can be described by a single state. The order of states is not important. As a rule, the characteristics are not influenced by environment.

QN: Quantitative Characteristics

“Quantitative characteristics” are those where the expression covers the full range of variation from one extreme to the other. The expression can be recorded on a one-dimensional, continuous or discrete, linear scale. The range of expression is divided into a number of states for the purpose of description (e.g. length of stem: very short (1), short (3), medium (5), long (7), very long (9)). The division seeks to provide, as far as is practical, an even distribution across the scale. The Test Guidelines do not specify the difference needed for distinctness. The states of expression should, however, be meaningful for DUS assessment.

PQ: Pseudo-Qualitative Characteristics

In the case of “pseudo-qualitative characteristics,” the range of expression is at least partly continuous, but varies in more than one dimension (e.g. shape: ovate (1), elliptic (2), circular (3),obovate (4)) and cannot be adequately described by just defining two ends of a linear range. In a similar way to qualitative (discontinuous) characteristics – hence the term “pseudo-qualitative” – each individual state of expression needs to be identified to adequately describe the range of the characteristic.

(*) Asterisked characteristic

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

(+) Explanations on the Table of Characteristics is indicated by TG/77/9,Chapter VIII.

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
1 MS Leaf: length (*)					
QN	short	Planluck, Planpret	Planluck, Planpret		3
	medium	Terfame	Terfame	Crazy	5
	long	Pretalex	Pretalex	Combo lira	7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (b).

Method of observation: Measurement

The measurement is carried out in a straight line along the mid vein from the base of the leaf to the top.

The mean is calculated after measurement of one leaf per plant and converted into a note.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
2 MS Leaf: width (*)					
QN	narrow	Planluck, Planpret	Planluck, Planpret		3
	medium	Pretalex	Pretalex	Santiara	5
	broad	Terflame	Terflame		7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (b).

Method of observation: Measurement

The measurement is carried out in a straight line on the broadest part of the leaf.
The mean is calculated after measurement of one leaf per plant and converted into a note.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
3 (*)	VG Leaf blade: blistering				
QN	absent or very weak				1
	weak	Planluck	Planluck	Crazy	3
	medium	Ferrari	Ferrari	Combo lira	5
	strong	Daydream	Daydream		7
	very strong				9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (b).

Method of observation: Visual observation

The observation is made on the upper side of the leaf blade.
The degree of blistering between the veins will be determined.
Compare with the example varieties to decide on the proper notes.



These images serve only to illustrate the variation present in the crop and should not be used as absolute reference.

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
4 VG (*)	Leaf blade: pubescence on upper side (midrib excluded)				
QN	absent or very sparse	Daydream, Terflame	Daydream, Terflame	Crazy	1
	sparse	Ferrari	Ferrari	TERADAMARU	3
	medium	Indian-Summer	Indian-Summer	Combo lira	5
	dense	Pretalex	Pretalex		7
	very dense				9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (b).

Method of observation: Visual observation

The observation is made on the upper side of the leaf blade.

The midrib is excluded from the observation.

The degree of pubescence between the veins will be determined.

Compare with the example varieties to decide on the proper notes.

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
5 VG	Leaf blade: depth of incisions on the <u>middle</u> third				
QN	shallow	Preparet, Pretaram	Preparet, Pretaram	Shympathy	3
	medium			Combo lira	5
	deep	Ferrari	Ferrari	Crazy	7

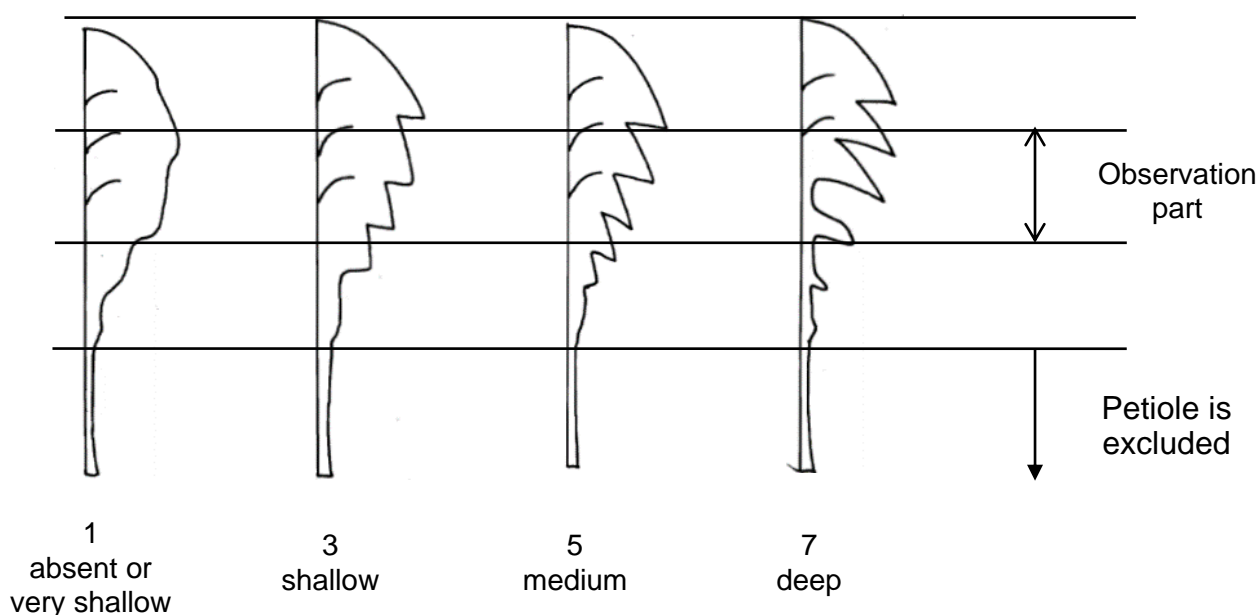
Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (b).

Method of observation: Visual observation

The observation is made on the middle third part of the leaf blade. With this observation, we compare the depth of the incision with the broadest part of the blade.

Compare with the example varieties to decide on the proper notes.



6. Method of observation (example of characterization)



1 absent or very shallow



5 medium



7 deep



3 shallow

※The picture at the bottom shows a leaf with shallow incisions and long lobes.

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
6 VG	Leaf blade: green color of <u>upper</u> side				
QN	light	Termoulin	Termoulin		3
	medium	Ferrari, Indian-Summer	Ferrari, Indian-Summer		5
	dark	Prevamoon	Prevamoon		7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (b).

Method of observation: Visual observation

The observation is made on the upper side of the leaf blade.
Compare with the example varieties to decide on the proper notes.



These images serve only to illustrate the variation present in the crop and should not be used as absolute reference.

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
7 VG	Leaf blade: shape of apex				
PQ	narrow acute	Luna, Otelly	Luna, Otelly		1
	moderately acute	Ferrari, Indian-Summer	Ferrari, Indian-Summer		3
	right angle	Planluck, Pretaram	Planluck, Pretaram		5
	obtuse	Bluebell	Bluebell		7
	rounded	Rosa-Lin	Rosa-Lin		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (b).

Method of observation: Visual observation

The observation is made on the apex of the leaf. With this observation, we consider the angle of apex and shape of tip.

(NL) All of 9 notes are used.

(JP) Since this characteristics is PQ, only note 1, 3, 5, 7 and 9 are used, and the even number notes are not used.



1
narrow acute

6. Method of observation (example of characterization)



3 moderately acute



5 right angle



7 obtuse



9 rounded

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
8 MS Peduncle: length (*)					
QN	short	Planluck	Planluck	MARIMO	3
	medium	Ferrari, Indian-Summer	Ferrari, Indian-Summer	TERADAMARU	5
	long	Sedandy	Sedandy	Combo lira	7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Measurement

The observation is carried out on an undamaged peduncle of a flower, collected in the right stage.

The measurement is carried out in a straight line from the base of the peduncle, to the base of the involucre.

The mean is calculated after measurement of one peduncle per plant and converted into a note.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
9 VG (*)	Peduncle: intensity of anthocyanin coloration at base				
QN	absent or very weak	Victory	Victory	Crazy	1
	weak	Planpret, Sedandy	Planpret, Sedandy	Combo lira	3
	medium	Ferrari, Schrepal	Ferrari, Schrepal	Combo pink	5
	strong	Daydream, Testarossa	Daydream, Testarossa		7
	very strong				9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation should be carried out at the base of a representative peduncle, collected in the right stage.

Compare with the example varieties to decide on the proper notes.

(NL) Observation should be focused on intensity (not area.)

(JP) Observation should be evaluated on Combination of intensity and area of anthocyanin.



These images serve only to illustrate the variation present in the crop and should not be used as absolute reference.

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
10 VG	Peduncle: anthocyanin coloration at top				
QL	absent	Ferrari, Testarossa	Ferrari, Testarossa		1
	present	Ashley, Lucifer	Ashley, Lucifer		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made at the top of a representative peduncle, collected in the right stage.

The color of the anthocyanin coloration may differ from light red to brown red.



1 absent



9 present

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
11 VG	Peduncle: bracts below involucre				
QL	absent	Ashley, Testarossa	Ashley, Testarossa		1
	present	Indian-Summer, Pretalex	Indian-Summer, Pretalex		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made along the length of an undamaged peduncle of a flower, collected in the right stage.

We observe the presence of bracts along the whole length of the peduncle.

The bracts observed in this characteristic are always spreaded and not grouped like the bracts on the involucre.



1 absent



9 present

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
12 (*) (+)	VG Flower head: type				
QL	single	Lucifer	Lucifer		1
	semi-double	Ferrari, Indian-Summer	Ferrari, Indian-Summer		2
	double	Floricitrine	Floricitrine		3

Remarks: None.

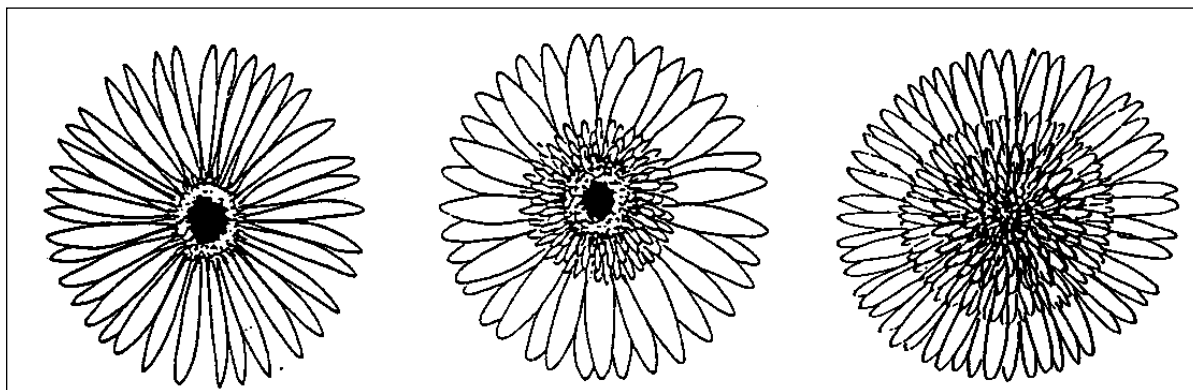
Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

Three different types of flowers are distinguished:

- single flowers: The flower head exist one or more whorls of ray florets of the same size. There is a clear disc visible.
- semi-double flowers: The flower head exist on several whorls of ray florets. The inner ray florets are shorter and / or narrower than the outer ray florets. There is a clear disc visible.
- double flowers: The flower head exist of several whorls of ray florets. The inner ray florets can be shorter and / or narrower than the outer ray florets. There is no clear disc visible.

Comment: Sometimes it appears to be that the outer row of disk florets are developed into something that resembles a row of small ray florets. This gives the impression that a variety is semi-double, but this is not the case. These varieties are classified as single-flowered. See photo next page.



1 single

2 semi-double

3 double

6. Method of observation (example of characterization)



Picture with the comment on the previous page.

The comment is about the bright red row of disc florets within the rows of ray florets (yellow arrow) and around the rows of slightly darker red disc florets (blue arrow). The abnormal disc florets show (only) white stylus, the yellow anthers are here not visible. The yellow anthers are clearly visible in the other disc florets.

6. Method of observation (example of characterization)



1 single

2 semi-double

3 double

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
13 MS (*)	Flower head: diameter				
QN	very small	Teroranje	Teroranje		1
	small	Ashley	Ashley		3
	medium	Daydream, Ferrari	Daydream, Ferrari	Malibu	5
	large	Nevada, Premodal	Nevada, Premodal		7
	very large				9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Measurement

The observation is made on the biggest, undamaged and well-developed round flower. The measurement is performed in a straight line on the largest diameter of the flower. The mean is calculated after measurement of one flower per plant and converted into a note.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
14 MS (+)	<u>Semi-double or double varieties only:</u> Flower head: diameter of mass of inner ray florets compared to that of flower head				
QN	small	Indian-Summer, Nevada	Indian-Summer, Nevada		3
	medium	Ferrari	Ferrari		5
	large	Baby-Doll, Bugatti	Baby-Doll, Bugatti		7

Remarks: Semi-double or double varieties only.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on the biggest, undamaged and well-developed round flower.

Determining the filling is done by two measurements. The first measurement is made at the inner whorls of ray florets and the second on the outer whorls of ray florets.

The first measurement is taken from the edge of the disk to the edge of the inner whorls of ray florets (A).

The second measurement is also taken from the edge of the disk to the edge of the outer whorls of ray florets (B).

Both measurements are performed from the same point and always in a straight line.

The mean is calculated after measurement of one flower per plant and converted into a note.

Formula: Degree of filling = $A / B * 100$

Varieties, where the filling is irregular in shape, require some extra attention. In varieties with an irregular filling the average diameter of the inner whorl of ray florets is measured. Not where the inner whorl of ray florets is the largest.

6. Method of observation (example of characterization)

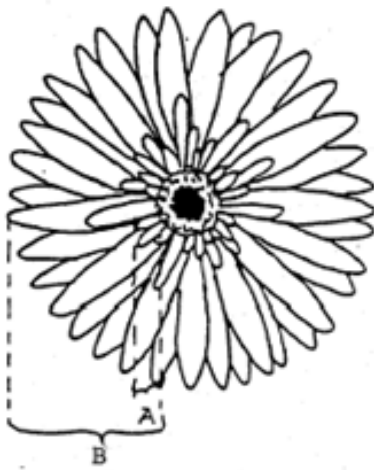


Measurement (A)

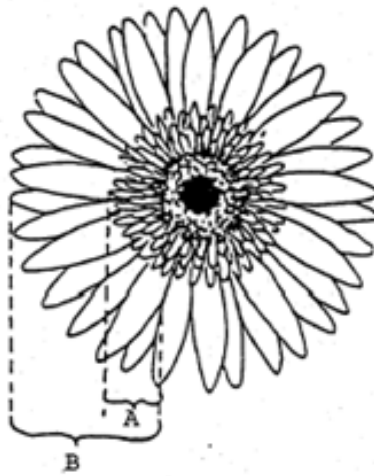


Measurement (B)

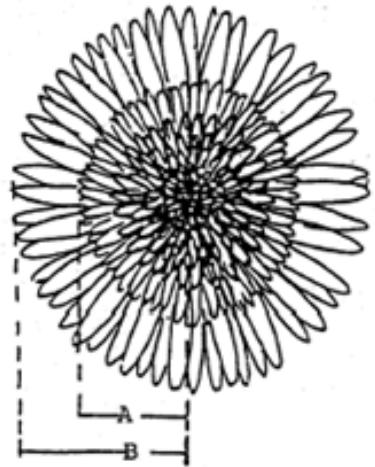
Image from TG/77/9



3 small



5 medium



7 large



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
15 (+)	VG <u>Semi-double or double varieties only:</u> Flower head: border of mass of inner ray florets				
QL	regular	Testarossa	Testarossa		1
	irregular	Ferrari	Ferrari		2

Remarks: Semi-double or double varieties only.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

Assessment should be made on followings for the doubt case

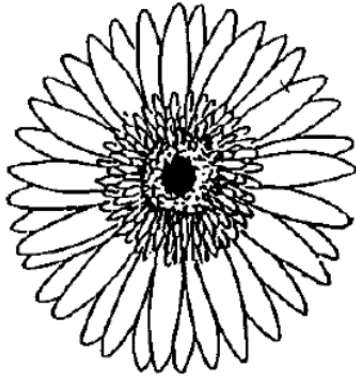
(NL) The filling is called regular (1): if the length of the long and short ray florets does not exceed 10% in difference.

The filling is irregular (9): if the difference in length is more the 20%.

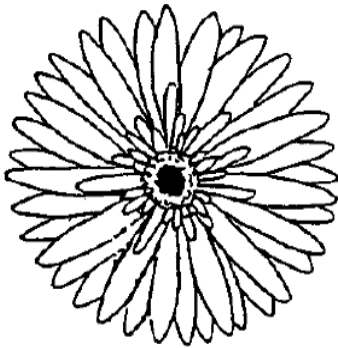
(JP) The filling is called regular (1): If inner ray florets in each row are almost same in length, and they look like circular.

The filling is called irregular (9): The others.

6. Method of observation (example of characterization)



1 regular



2 irregular



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
16 MS	Flower head: height of involucre				
QN	short	Charlim, Flocarin	Charlim, Flocarin		3
	medium	Daydream, Ferrari	Daydream, Ferrari	TERADAMARU	5
	tall	Ashley, Planluck	Ashley, Planluck		7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Measurement

The observation is carried out on the biggest, undamaged and well-developed round flower. The measurement is made at the involucre of the flower, where it has the highest height. Measurement is made from the base of flower to the top of the top of the bracts, parallel to the peduncle. The measurement is made in a straight line. The mean is calculated after measurement of one flower per plant and converted into a note.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
17 MS	Flower head: diameter of involucre				
QN	small	Baby-Doll, Terflash	Baby-Doll, Terflash		3
	medium	Ferrari, Indian-Summer	Ferrari, Indian-Summer		5
	large	Moana, Zsa-Zsa	Moana, Zsa-Zsa		7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Measurement

The observation is made on the biggest, undamaged and well-developed round flower.

The measurement is made on the involucre of the flower, where it has the largest diameter.

The measurement is carried out in a straight.

The mean is calculated after measurement of one flower per plant and converted into a note.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
18 VG	Flower head: position of distal part of bracts in relation to outer ray florets				
QL	apart	Ferrari, Indian-Summer	Ferrari, Indian-Summer		1
	touching	Testarossa, Zsa-Zsa	Testarossa, Zsa-Zsa		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on the distal part of the bracts of the involucre. This observation is checking if the distal part of the bracts are touching the involucre (= 9) or are apart from the involucre (=1). It regularly happens that not all bracts have the same attitude. Then the attitude that occurs most frequently determines the final score.



1 apart



9 touching

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
19 VG (*)	Flower head: anthocyanin coloration at distal part of inner bracts				
QL	absent	Baby-Doll, Ferrari	Baby-Doll, Ferrari		1
	present	Ashley, Nevada	Ashley, Nevada		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is done at the top of the inner bracts of the involucre of the flower. If not all bracts are showing the anthocyanin coloration, but most do, then this will be described as present (9).



1 absent



9 present



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
20 VG	Flower head: intensity of anthocyanin coloration at distal part of <u>inner</u> bracts				
QN	weak	Moana, Planpret	Moana, Planpret	Combo lira	3
	medium	Lucifer, Zsa-Zsa	Lucifer, Zsa-Zsa		5
	strong	Terthermo	Terthermo		7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is done at the top of the inner bracts of the involucre of the flower. Compare with the example varieties to decide on the proper notes.

(JP) In Japan, the combination of intensity and area of anthocyanin is evaluated.



These images serve only to illustrate the variation present in the crop and should not be used as absolute reference.

6. Method of observation (example of characterization)

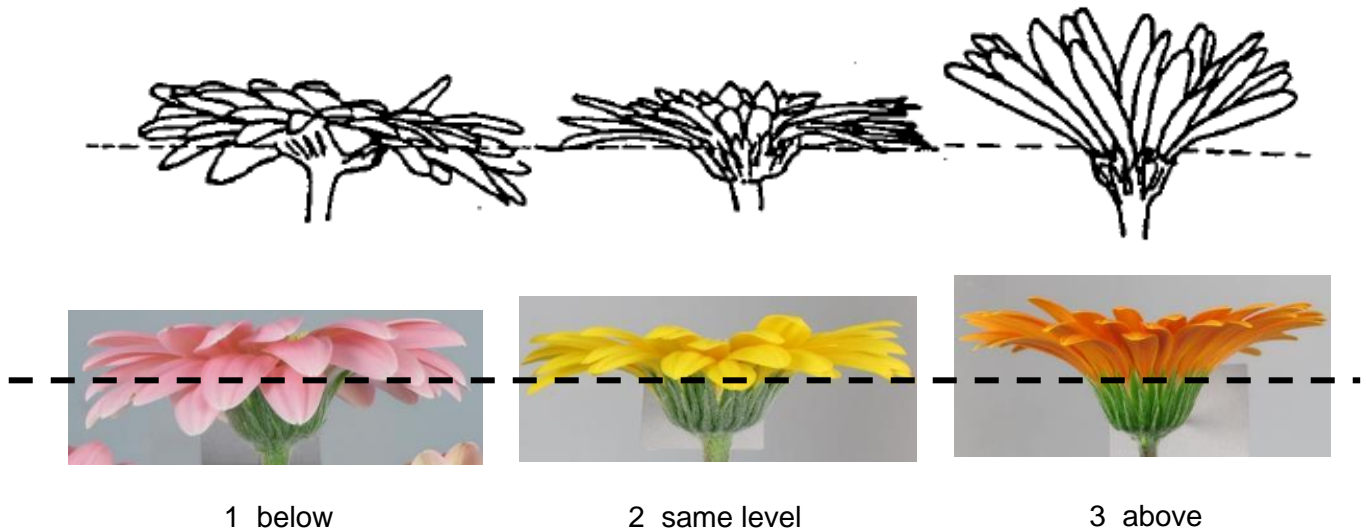
	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
21 (+)	VG Outer ray floret: level of apex relative to top of involucre				
QN (c)	below	Daydream	Daydream		1
	same level	Indian-Summer, Pretalex	Indian-Summer, Pretalex		2
	above	Ashley, Nevada	Ashley, Nevada		3

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation determines the position of the apex of the ray florets compared to the top of the bracts of the involucre. If it is not clear, then determine what is most typifying for the variety.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
22	VG	Outer ray floret:			
(*)		shape			
PQ	narrow elliptic	Ashley, Ferrari	Ashley, Ferrari		1
	narrow obovate	Baby-Doll, Teroranje	Baby-Doll, Teroranje		2

Remarks: None.

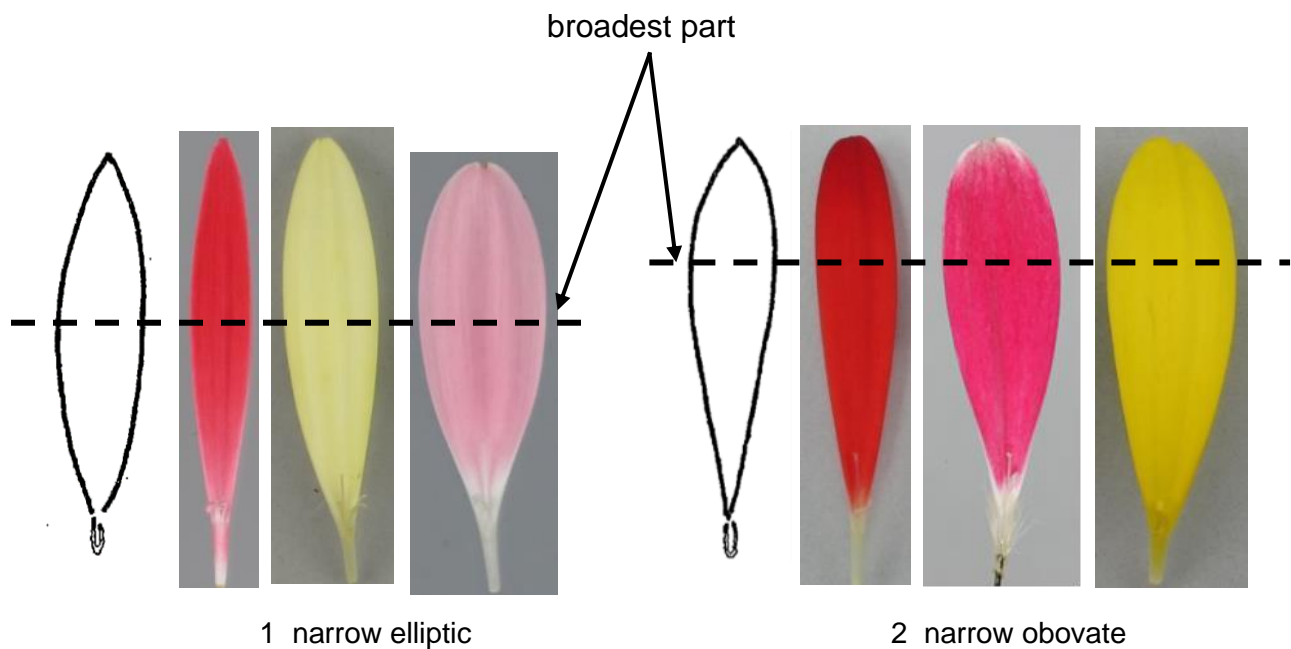
Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on the shape of the ray florets of the outer row of the flower head.

Elliptical: broadest part is located halfway the length of the ray floret.

Obovate: broadest part is located 1/3 from the top (at least at the upper half of the ray floret).



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
23 VG	Outer ray floret:				
(*)	longitudinal axis				
QN	strongly incurving	Floricitrine	Floricitrine		1
	moderately incurving				2
	straight	Ferrari	Ferrari		3
	moderately reflexing	Ashley, Indian-Summer	Ashley, Indian-Summer		4
	strongly reflexing				5

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

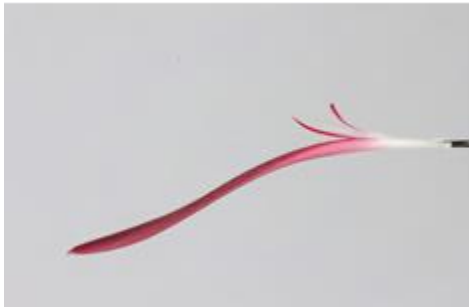
The observation is made on ray florets of the outer row of the flower head.

With these observations, the direction and the degree bowing of the ray floret is determined.

6. Method of observation (example of characterization)



1 strongly incurving



2 moderately incurving



3 straight



4 moderately reflexing



5 strongly reflexing



3 straight



4 moderately reflexing



5 strongly reflexing

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
24 VG	Inner ray floret:				
	longitudinal axis				
QN	strongly incurving	Floricitrine	Floricitrine		1
	moderately incurving	Eeuwsar	Eeuwsar		2
	straight	Ferrari, Moana	Ferrari, Moana		3
	moderately reflexing	Ashley, Nevada	Ashley, Nevada		4
	strongly reflexing				5

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the inner row of the flower head.

With these observations, the direction and the degree of bowing of the ray floret is determined.

In the case of single varieties, the observation is made at the outer ray florets which is closest to the disc.

In the case of semi-double and double varieties, the observation is made at the inner ray florets of the outer ring.



6. Method of observation (example of characterization)



1 strongly incurving



2 moderately incurving



3 straight



4 moderately reflexing



5 strongly reflexing



semi-double

2 moderately incurving



Single



semi-double

3 straight



Single



semi-double

4 moderately reflexing

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
25 (*)	VG	Outer ray floret: profile in cross section of middle part of ray			
QN	concave	Floricitrine, Terflorin	Floricitrine, Terflorin		1
	straight	Ashley, Indian-Summer	Ashley, Indian-Summer		2
	convex	Ferrari, Planpret	Ferrari, Planpret		3

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

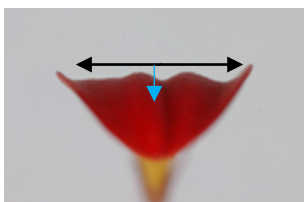
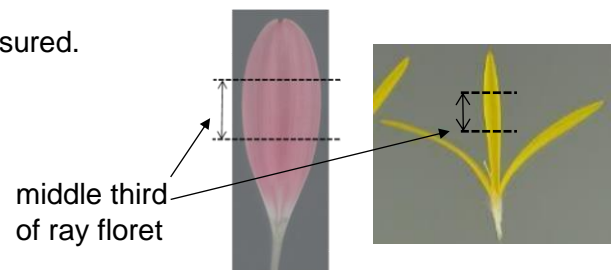
The observation is made on ray florets of the outer row of the flower head.

With these observations, the curvature in the cross section of middle third of the ray floret is determined.

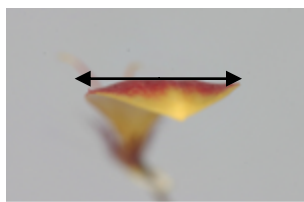
In case of deep incised florets, the longest lobe will be measured.

concave: round-side faced down-wards

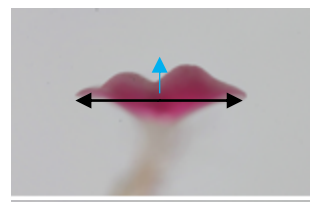
convex: round-side faced up-wards



1 concave



2 straight



3 convex

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
26	MS	Outer ray floret:			
(*)		length			
QN	very short	Tersnow	Tersnow		1
	short	Ashley, Teroranje	Ashley, Teroranje	Malibu	3
	medium	Ferrari, Indian-Summer	Ferrari, Indian-Summer		5
	long	Nevada, Testarossa	Nevada, Testarossa		7
	very long				9

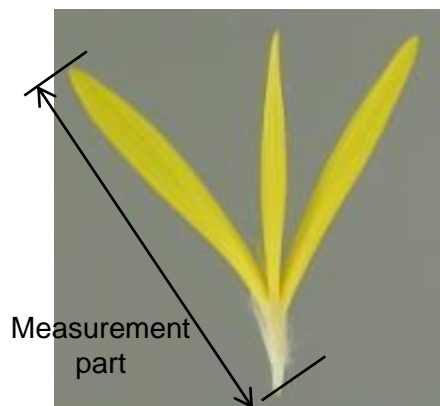
Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Measurement

The measurements are made on ray florets of the outer row of the flower head.
 The length is measured from the top of the ray floret to the attachment to the flower.
 If measuring the length of deep incised ray florets, the longest length will be measured.
 The measurement is made in a straight line.

The mean is calculated after measurement of one flower per plant and converted into a note.



In case: deep incised ray florets

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
27	MS	Outer ray floret:			
(*)	width				
QN	narrow	Planluck, Tersnow	Planluck, Tersnow	TERADAMARU	3
	medium	Ashley, Ferrari	Ashley, Ferrari		5
	broad	Planorg	Planorg		7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Measurement

The measurements are made on ray florets of the outer row of the flower head.

The width is measured at the broadest part.

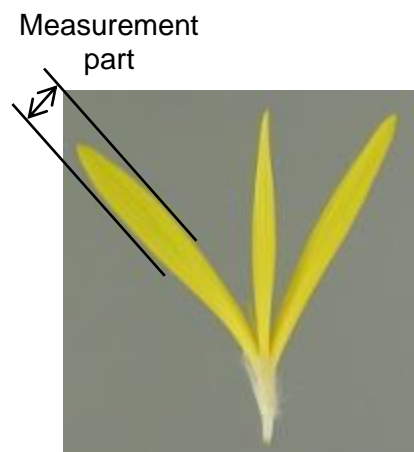
The measurement is carried out in a straight line on the broadest part of the outer ray floret.

The mean is calculated after measurement of one flower per plant and converted into a note.

In case of varieties which have deep incised ray florets:

(NL) There are two strategies: all several parts of the ray floret will be laid down next to each other and measured, or all parts of the ray floret will be broken apart and measured separately and then count them up.

(JP) The measurement is carried out at the widest point of the widest lobe.



In case: deep incised ray florets (JP)

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
28 VG	<u>Outer</u> ray floret: shape of apex				
QL	pointed	Ferrari, Tersnow	Ferrari, Tersnow		1
	rounded	Ashley, Pretalex	Ashley, Pretalex		2

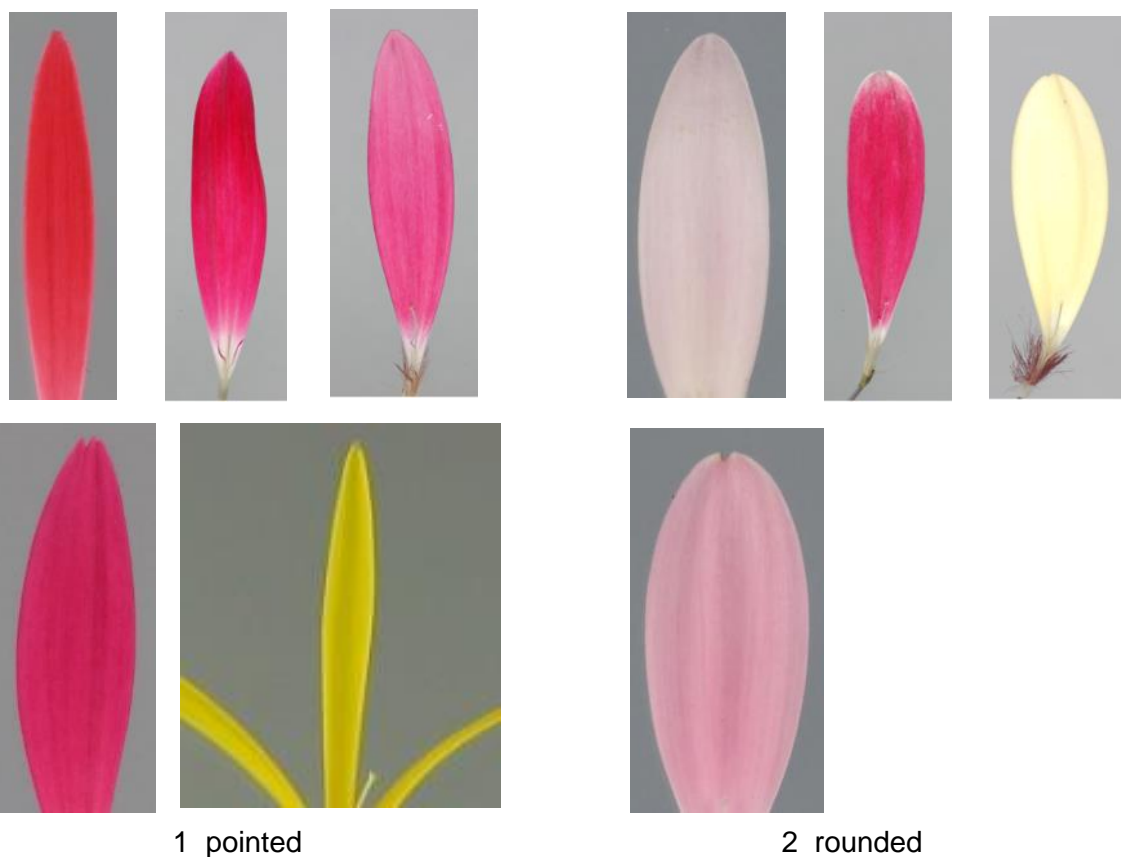
Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on the apex of ray florets of the outer row of the flower head.

When outer ray florets have incisions at tip, you should consider the shape of outline around the incisions.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
29 VG	Outer ray floret: depth of incisions				
QN	absent or very shallow	Planpret	Planpret	Malibu	1
	shallow	Nevada	Nevada	Combo lira	3
	medium	Ashley, Ferrari	Ashley, Ferrari		5
	deep	Pretatrix	Pretatrix		7
	very deep	Daydream, Lucifer	Daydream, Lucifer	Crazy	9

Remarks: None.

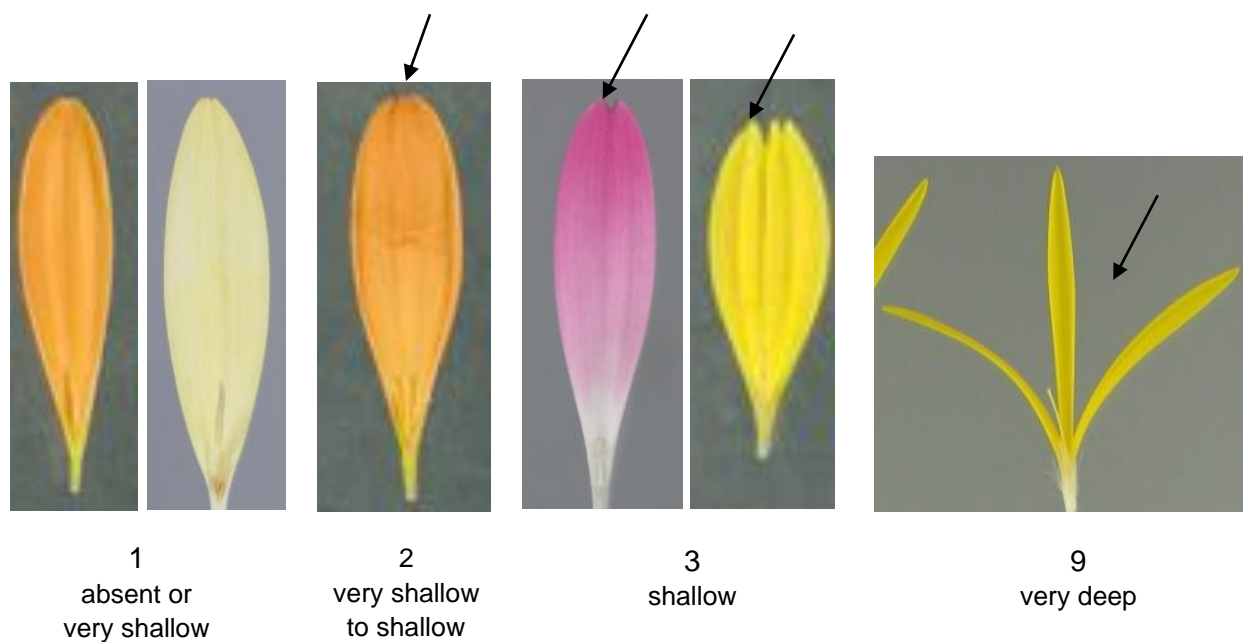
Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head.

It is important to know whether any existing incisions occurs naturally or is caused by touching the ray florets.

Compare with the example varieties to decide on the proper notes.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
30 VG (+)	Outer ray floret: tendency to form long free petals				
QL	absent	Ashley, Baby-Doll	Ashley, Baby-Doll		1
	present	Ferrari, Tersnow	Ferrari, Tersnow		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

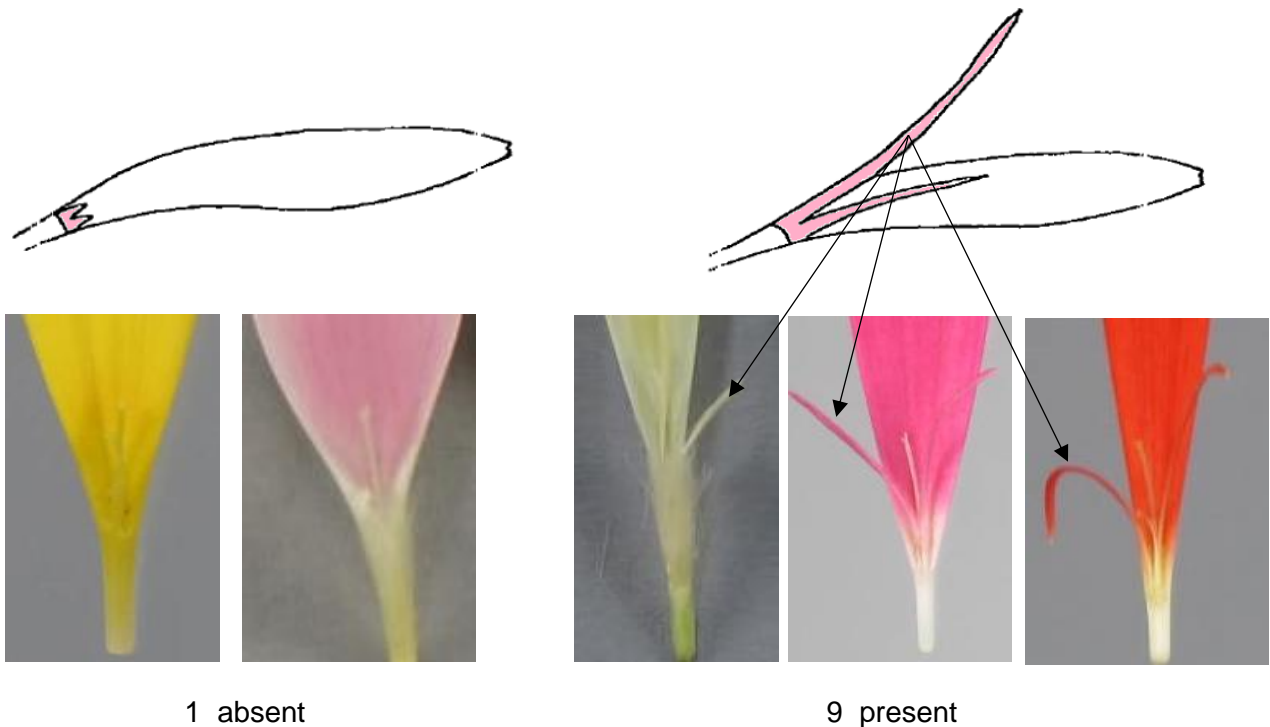
Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head. Long free petals are linear shaped rays, growing from the tube of the outer ray florets.

And long free petals are equivalent to the length of the style or longer than the style.

Sometimes it appears that not all outer ray florets are forming free petals,

If more than half flowers are forming long free petals, than this will be described as present (9).



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
31 (*)	VG	Outer ray floret: color of inner side			
PQ	RHS Colour Chart (Indicate reference number)				

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation on main color of the inner side of an outer ray floret is carried out visually, measured using a RHS colour-chart.

The color is the main color with the largest area on the outer ray floret.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
32	VG	Outer ray floret: number of colors			
(*)					
QL	one	Ferrari, Nevada	Ferrari, Nevada		1
	two	Indian-Summer, Terbase	Indian-Summer, Terbase		2

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head. It is not important where the second color is placed.

Comment: A variety is called two-colored if:

- the colors are clearly distinguishable;
- the colors can be classified in two different color groups;
- they clearly belong to different colors and not only differ in hue;

6. Method of observation (example of characterization)



1 one

2 two

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
33 VG	<u>Single colored varieties only:</u> <u>Outer ray floret only:</u> distribution of color				
PQ	none	Ferrari, Indian-Summer	Ferrari, Indian-Summer		1
	lighter towards base	Planper	Planper		2
	lighter towards top	Indian-Summer, Nevada	Indian-Summer, Nevada		3

Remarks: Single colored varieties only.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head.

There must be determined if the intensity of the color of a ray floret changes, and if so, in what direction it changes.

White color at basal end (the area hidden behind the disc florets) should be excluded from the observation.



6. Method of observation (example of characterization)



1 none



2 lighter towards base



3 lighter towards top



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
34 VG	Outer ray floret: presence of striation				
QL	absent	Ashley, Ferrari	Ashley, Ferrari		1
	present	Indian-Summer, Planluck	Indian-Summer, Planluck		9

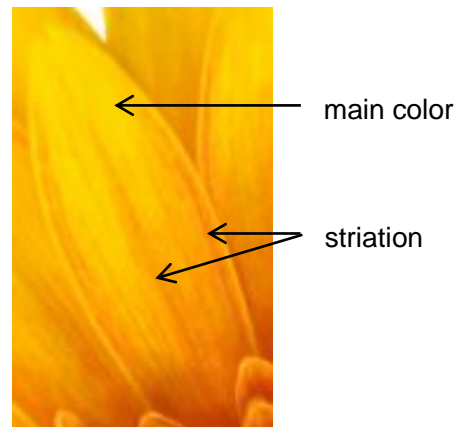
Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head.

This characteristic to be applied for single colored and bicolored varieties.



1 absent



9 present

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
35 VG	<u>Bicolored varieties only:</u> <u>Outer ray floret:</u> <u>secondary color at basal half</u>				
QL	absent	Baby-Doll	Baby-Doll		1
	present	Planper	Planper		9

Remarks: (NL) Bicolored varieties only.

(JP) Observation is made on all varieties. Single colored varieties are evaluated as absent (1).

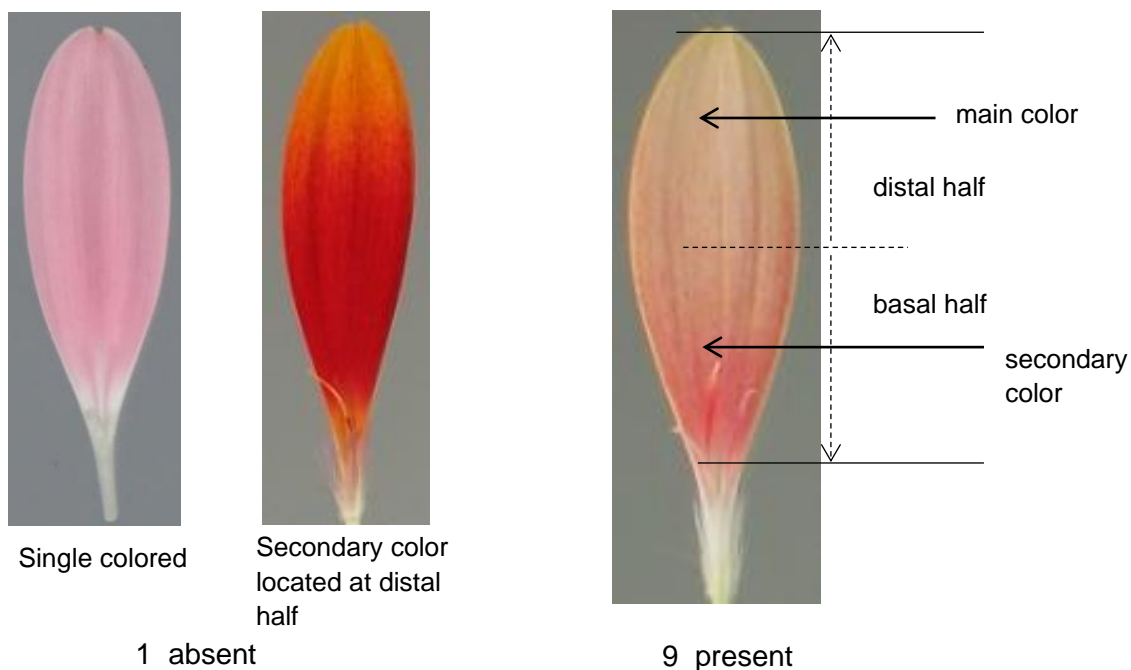
Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head.

In this characteristic it is important where the secondary color is located. This observation only determines whether the secondary color is present at the base of the ray florets or not.

Colors hidden behind the disk florets are not considered secondary colors.



6. Method of observation (example of characterization)



1 absent

9 present

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
36 VG	<u>Bicolored varieties only:</u> <u>Outer ray floret:</u> <u>secondary color at distal half</u>				
QL	absent	Indian-Summer, Planper	Indian-Summer, Planper		1
	present	Baby-Doll	Baby-Doll		9

Remarks: (NL) Bicolored varieties only.

(JP) Observation is made on all varieties. Single colored varieties are evaluated as absent (1).

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head.

In this characteristic it is important where the secondary color is located. This observation only determines whether the secondary color is present at the distal part of the ray floret or not.

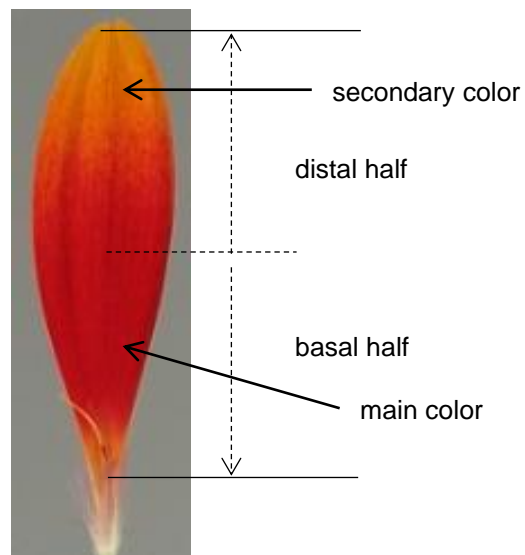


Single colored

1 absent



Secondary color located basal half



9 present

6. Method of observation (example of characterization)



1 absent

9 present

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
37 VG	<u>Bicolored varieties only:</u> <u>Outer ray floret:</u> <u>secondary color at margin</u>				
QL	absent	Baby-Doll, Indian-Summer	Baby-Doll, Indian-Summer		1
	present	Terflame	Terflame		9

Remarks: (NL) Bicolored varieties only.

(JP) Observation is made on all varieties. Single colored varieties are evaluated as absent (1).

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

Observation is made on ray florets of the outer row of the flower head.

In this characteristic important where the secondary color is located. This observation only determines whether the secondary color is present at the margin of the ray floret or not.



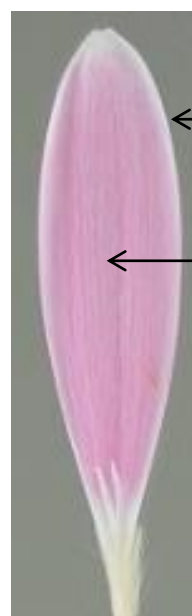
Single colored

1 absent



Secondary color located at distal half

55



secondary color

main color

9 present

6. Method of observation (example of characterization)



1 absent

9 present

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
38 VG	<u>Bicolored varieties only:</u> <u>Outer ray floret:</u> <u>secondary color at tip only</u>				
QL	absent	Indian-Summer	Indian-Summer		1
	present	Baby-Doll, Terfetti	Baby-Doll, Terfetti		9

Remarks: (NL) Bicolored varieties only.

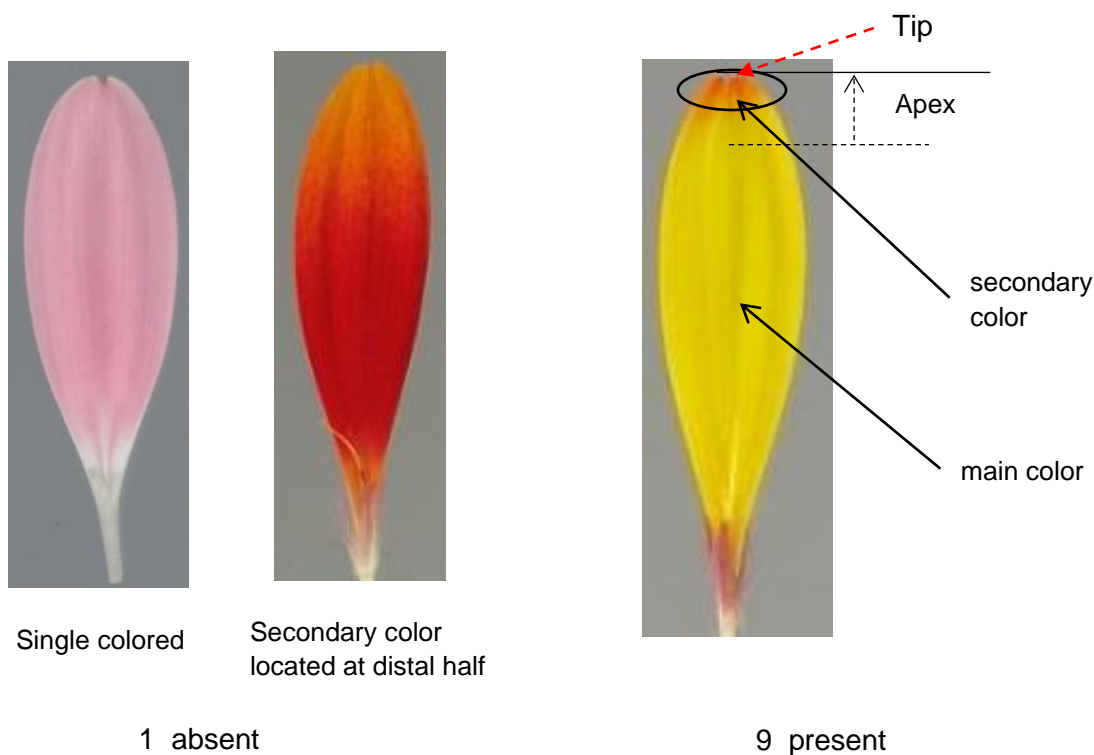
(JP) Observation is made on all varieties. Single colored varieties are evaluated as absent (1).

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head.

In this characteristic it is important where the secondary color is located. This observation only determines whether the secondary color is present at the tip of the ray floret or not.



6. Method of observation (example of characterization)



1 absent



9 present

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
39 VG	<u>Bicolored varieties only:</u> <u>Outer ray floret:</u> secondary color				
PQ	white	Baby-Doll	Baby-Doll		1
	yellow	Planper, Terflame	Planper, Terflame		2
	orange	Indian-Summer	Indian-Summer		3
	pink	Terfetti	Terfetti		4
	red	Glory	Glory		5
	purple	Josiane	Josiane		6

Remarks: Bicolored varieties only.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head.

This observation determines the secondary color.

Colors hidden behind a disk floret are not considered secondary colors.

6. Method of observation (example of characterization)



1 white



2 yellow



3 orange



4 pink



5 red



6 purple

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
40 VG	<u>Outer</u> ray floret: main color of <u>outer</u> side				
PQ	white	Baby-Doll	Baby-Doll		1
	yellow white	Tersnow	Tersnow		2
	yellow green	Ashley	Ashley		3
	green	Adventure, Terstrom	Adventure, Terstrom		4
	yellow	Indian-Summer, Nevada	Indian-Summer, Nevada		5
	orange	Daydream, Ferrari	Daydream, Ferrari		6
	pink	Planpret, Zsa-Zsa	Planpret, Zsa-Zsa		7
	red	Lucifer, Testarossa	Lucifer, Testarossa		8
	purple	Moana	Moana		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made on ray florets of the outer row of the flower head at the underside of the flower.

6. Method of observation (example of characterization)



1 white



2 yellow white



3 yellow green

No picture available



4 green

5 yellow



6 orange



7 pink



8 red



9 purple

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
41 MS	<u>Single or semi-double varieties only:</u> Disc: diameter				
QN	small	Tersnow	Tersnow	Malibu	3
	medium	Ashley, Lucifer	Ashley, Lucifer		5
	large	Floru	Floru		7

Remarks: Single or semi-double varieties only.

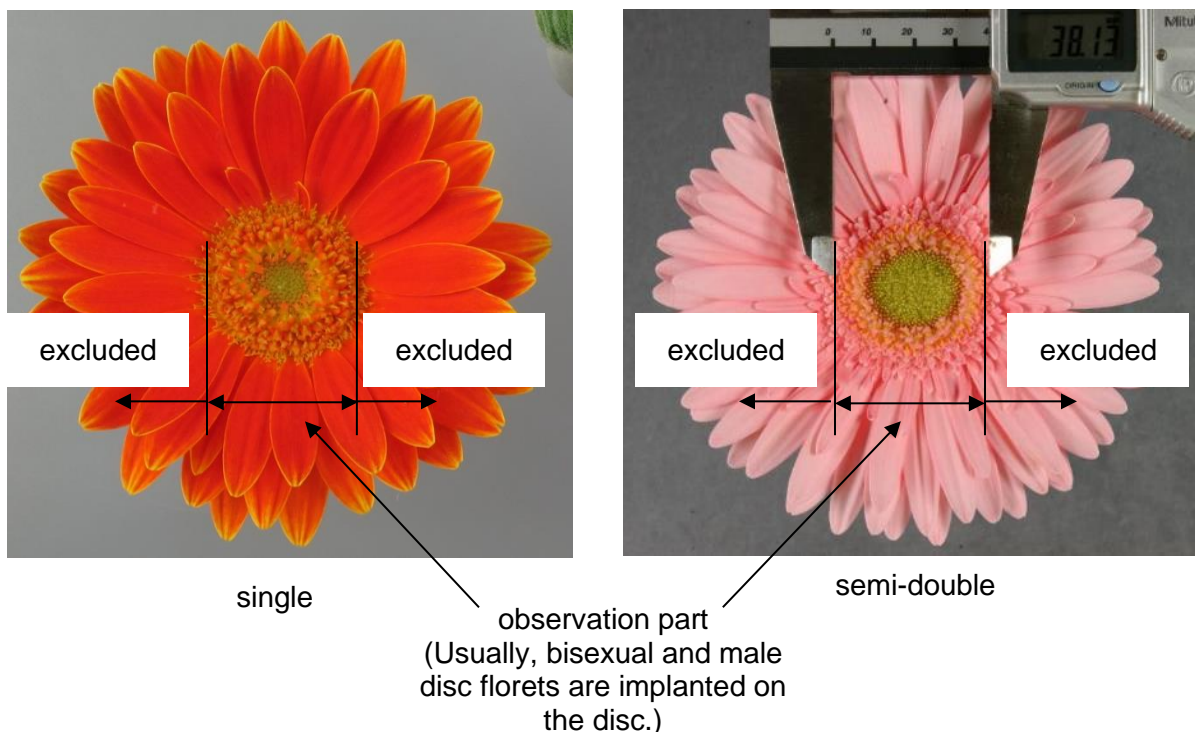
Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Measurement

The observation is carried out on the biggest, undamaged and well-developed round flower. The measurement is performed where the disk has the greatest diameter.

The measurement is carried out in a diameter including only the bisexual and male florets. The female disc florets of single varieties, and the inner ray florets of semi-double varieties, both of them should be excluded from measurement.

The mean is calculated after measurement of one flower per plant and converted into a note.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
42 (*)	VG <u>Single or semi-double varieties only:</u> Dark disc (before opening of disc florets)				
QL	(e) absent	Baby-Doll, Ferrari	Baby-Doll, Ferrari		1
	present	Ashley, Indian-Summer	Ashley, Indian-Summer		9

Remarks: Single or semi-double varieties only.

Stage of observation: See Chapter 3, paragraph (a).

(JP) This characteristic is observed when all disc florets are unopened.



(JP) disc at stage of observation

Method of observation: Visual observation

The observation is carried out on the biggest, undamaged and well-developed round flower. Disc florets before opening should be observed.

If the disk is green or yellow, the dark color is absent (1).

If the disk is purple, brown or black, then the dark color is present (9).



1 absent



9 present

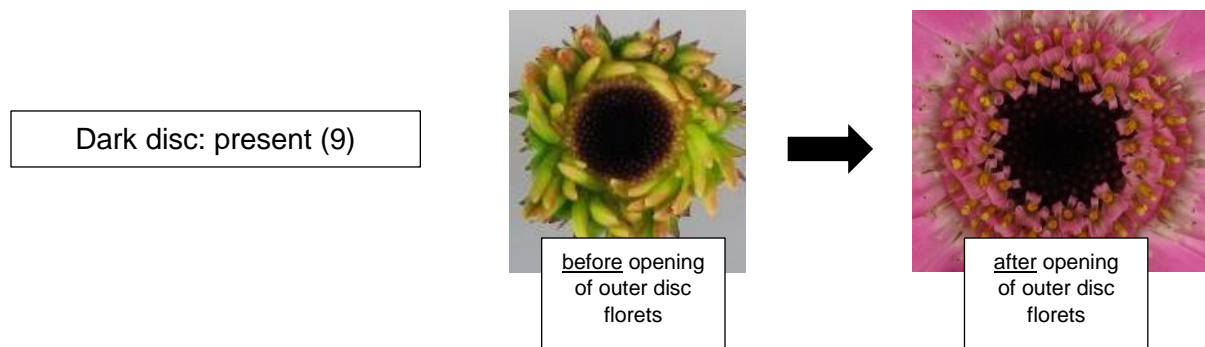
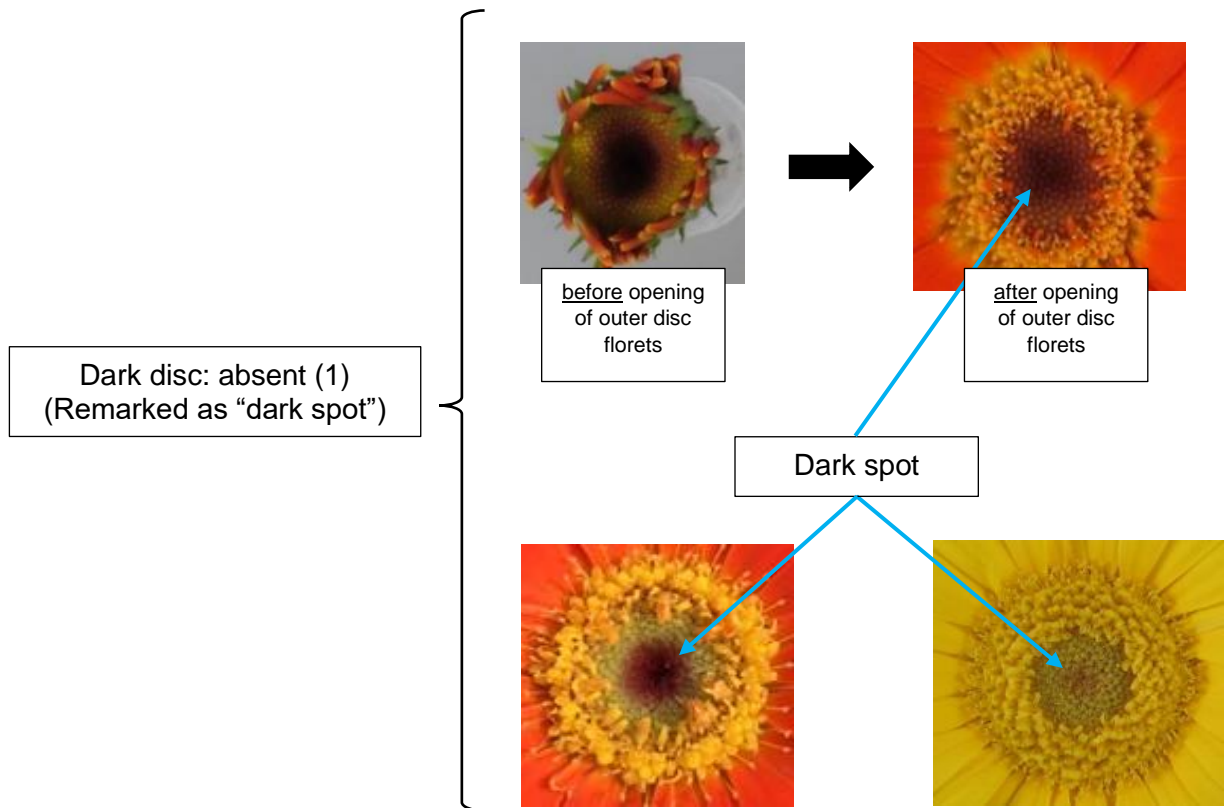


6. Method of observation (example of characterization)

Comment:

(JP) In some varieties, only the central area of the disk is dark-colored. And after opening of the outer disc florets, the dark color become lighter. These cases are recorded as absent(1), and remarked as “dark spot” in report, such as ‘dark spot present in the green disc’.

On the other hand, in the true dark discs, almost all area is dark-colored, and the dark color does not change before and after flowering of disc florets.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
43 (*)	VG <u>Single varieties only</u>: Disc florets of outer rows: main color of perianth lobes				
PQ	white	Tersnow	Tersnow		1
	yellow	Bugatti, Nevada	Bugatti, Nevada		2
	orange	Daydream, Indian-Summer	Daydream, Indian-Summer		3
	pink	Ashley, Baby-Doll	Ashley, Baby-Doll		4
	red	Ferrari, Lucifer	Ferrari, Lucifer		5
	purple	Planpret	Planpret		6
	brown				7

Remarks: Single varieties only.

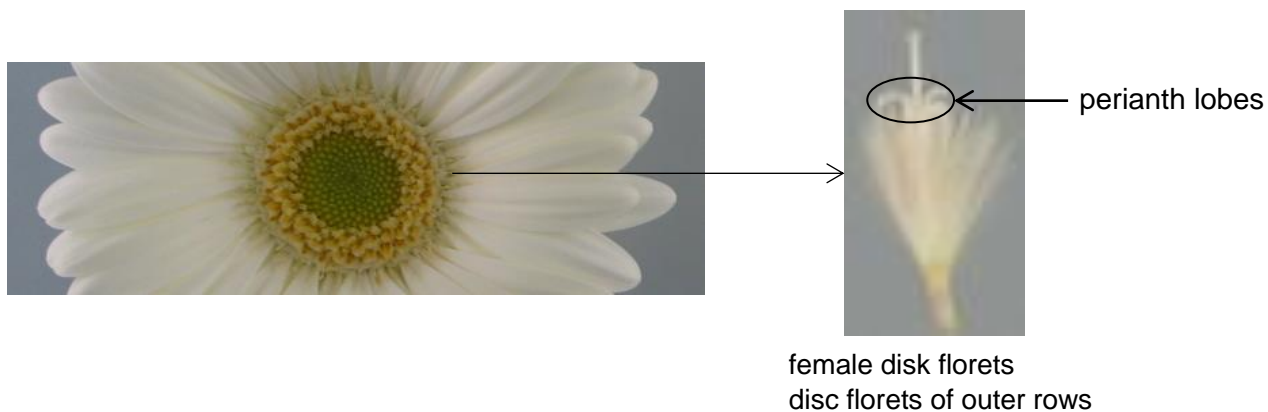
Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is carried out on the biggest, undamaged and well-developed round flower.

The observation is made on the disk of the flower.

This observation considers the predominant color of the disc florets in the outer rows of the disk.



6. Method of observation (example of characterization)



1 white



2 yellow



3 orange



4 pink



5 red



6 purple



7 brown

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
44 (*)	VG	<u>Semi-double and double varieties only:</u> Disc florets of outer rows: main color of perianth lobes			
	PQ	RHS Colour Chart (indicate reference number)			

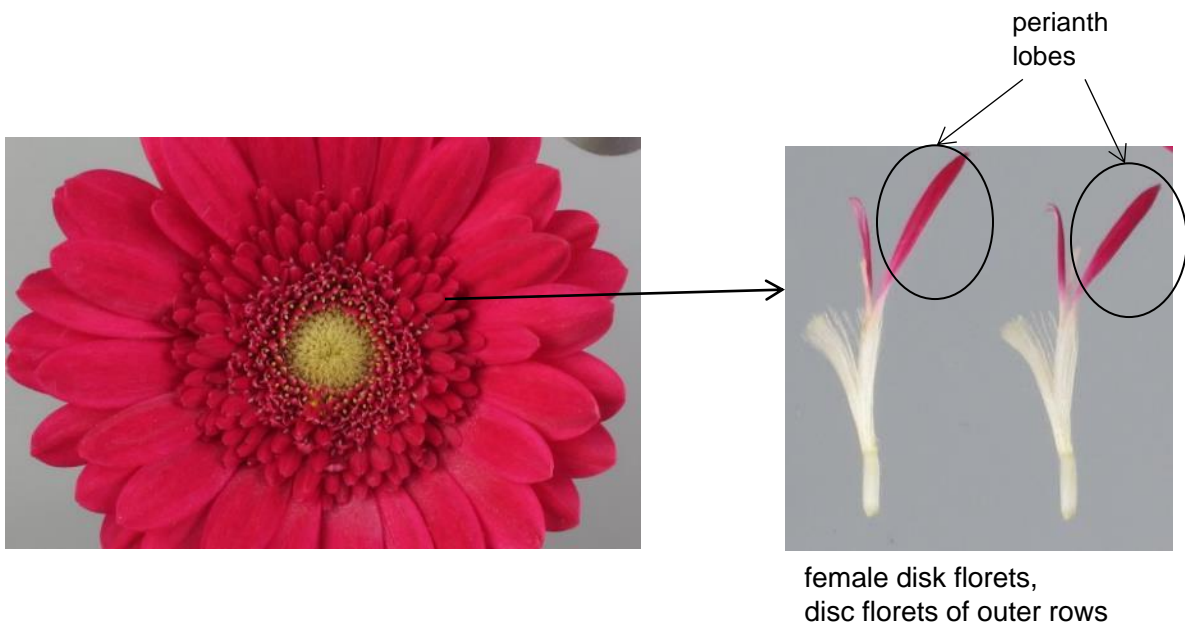
Remarks: Semi-double and double varieties only.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation on main color of the inner side of an outer ray floret is carried out visually, measured using a RHS colour-chart.

The observation is made on the second whorl of ray florets. In the second whorl the ray florets are generally much smaller.



6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
45	VG	Disc: main color of perianth lobes of bisexual florets			
	PQ	white	Tersnow	Tersnow	1
		yellow	Indian-Summer, Nevada	Indian-Summer, Nevada	2
		orange	Daydream	Daydream	3
		pink	Ashley, Baby-Doll	Ashley, Baby-Doll	4
		red	Ferrari, Zsa-Zsa	Ferrari, Zsa-Zsa	5
		purple	Planpret	Planpret	6
		brown			7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

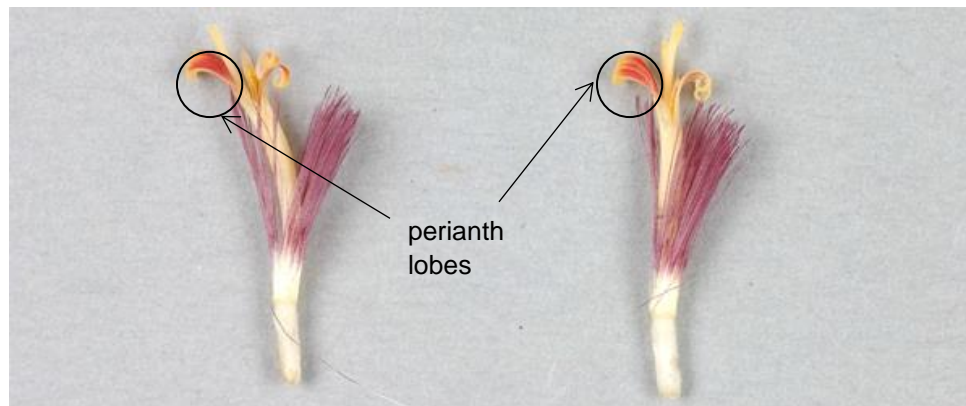
Method of observation: Visual observation

The observation is carried out on the biggest, undamaged and well-developed round flower. The observation is made on the disk of the flower.

This observation considers the predominant color of the bisexual florets.

The bisexual florets are usually implanted in the outer rows of the disk.

This is not always the case, there are varieties in which the bisexual flowers are implanted in the second or third row, by some varieties they even don't exist.



Bisexual flowers with both pistil and stamen. These are typical disk florets.

Mostly they occur in the outer rows of the disk as a transitional stage between ray florets and disk florets.

6. Method of observation (example of characterization)



1 white



2 yellow



3 orange



4 pink



5 red



6 purple

No picture available

7 brown

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
46 (*)	VG Style: main color of distal part				
PQ	white	Ferrari, Nevada	Ferrari, Nevada		1
	yellow	Indian-Summer, Lucifer	Indian-Summer, Lucifer		2
	orange	Bugatti, Testarossa	Bugatti, Testarossa		3
	pink	Floru, Zsa-Zsa	Floru, Zsa-Zsa		4
	red	Ponsy	Ponsy		5
	purple	Ashley	Ashley		6
	brown				7

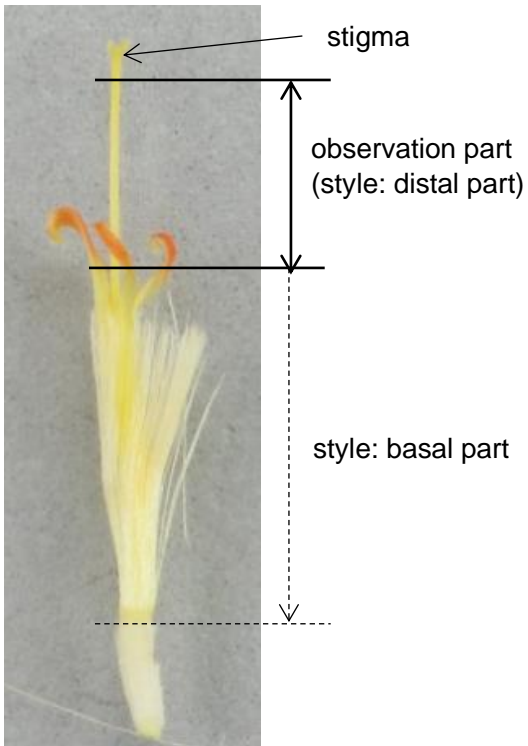
Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is done at the style of female or bisexual disc florets.
This observation is to determine the main color of the distal part of the style.

6. Method of observation (example of characterization)



female disk florets



1 white



2 yellow

No picture available

3 orange

No picture available

4 pink



5 red

No picture available

6 purple

No picture available

7 brown

6. Method of observation (example of characterization)

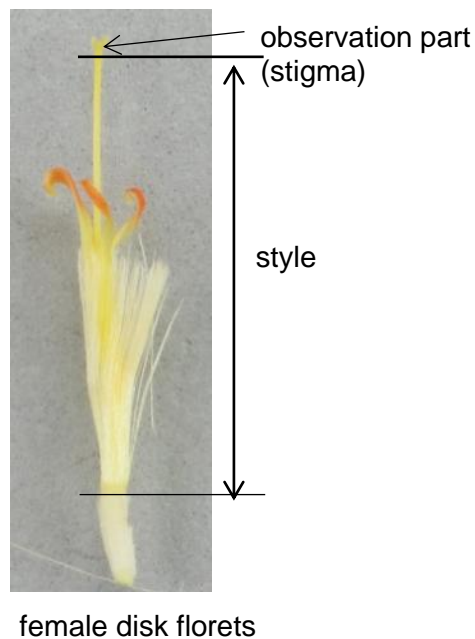
	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
47 VG	Stigma: main color				
PQ	white	Ashley, Tersnow	Ashley, Tersnow		1
	yellow	Ferrari, Terflash	Ferrari, Terflash		2
	orange	Jodi, Sunburn	Jodi, Sunburn		3
	pink	Ponsy	Ponsy		4
	red	Teractie	Teractie		5
	purple	Bluebell, Commodore	Bluebell, Commodore		6
	brown	Malou	Malou		7

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made to determine the main color of the stigma of female or bisexual disc florets.



6. Method of observation (example of characterization)



1 white

No picture available



2 yellow

No picture available



3 orange

No picture available

4 pink



7 brown

5 red

6 purple

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
48 VG	Anthers: main color				
PQ	yellow	Ferrari	Ferrari		1
	orange	Indian-Summer, Tersnow	Indian-Summer, Tersnow		2
	pink	Alami, Sunburn	Alami, Sunburn		3
	red	Amarou	Amarou		4
	purple	Tersanne	Tersanne		5
	brown	Shanty	Shanty		6

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made to determine the main color of the anthers.

The main color of the anthers is usually yellow.

But the yellow color can be overshadowed by a different color.

The question is then what is the dominant color.



6. Method of observation (example of characterization)



1 yellow

No picture available

2 orange

No picture available

3 pink



4 red



5 purple

No picture available

6 brown

In the case of the picture on note 4, you can see that the bottom of the stamen is yellow but with a strong red flush, here is the predominant color red.

6. Method of observation (example of characterization)

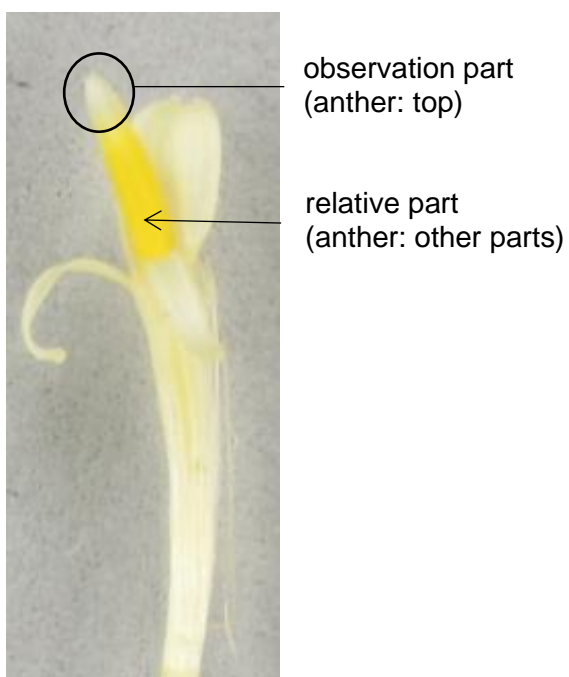
	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
49 VG	Anthers: color of top relative to other parts				
QN	lighter	Ferrari, Terflash	Ferrari, Terflash		1
	same	Indian-Summer, Tersnow	Indian-Summer, Tersnow		2
	darker	Ashley, Nevada	Ashley, Nevada		3

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made to determine the color of the top of the anther compared with the other parts of the anther.



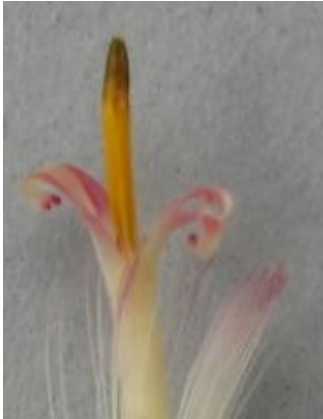
6. Method of observation (example of characterization)



1 lighter



2 same



3 darker

6. Method of observation (example of characterization)

	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
50 VG	Anthers: longitudinal stripes				
QL	absent	Ferrari, Indian-Summer	Ferrari, Indian-Summer		1
	present	Ashley, Nevada	Ashley, Nevada		9

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

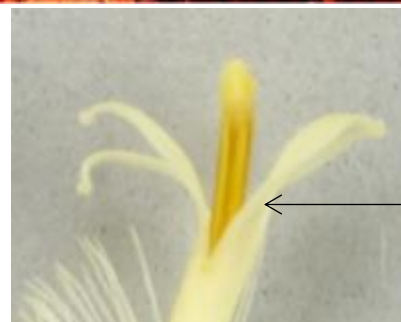
Method of observation: Visual observation

This observation is made to determine if the longitudinal stripes are present or absent on the anthers.

The color of the stripes can be the same as the anther but slightly darker (for example yellow stripes on yellow anthers). The stripes are scored as present (9) if they are clearly visible.



1 absent



observation part
(anthers:
longitudinal
stripes)

9 present

6. Method of observation (example of characterization)

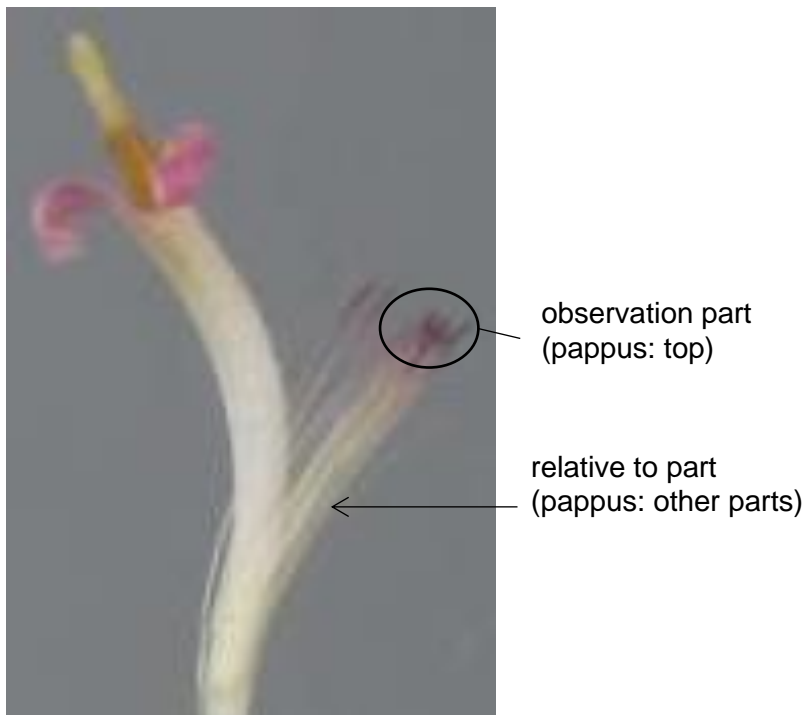
	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
51 (*)	VG Pappus: color of top relative to other parts				
QN	lighter				1
	same	Ferrari, Tersnow	Ferrari, Tersnow		2
	darker	Ashley, Lucifer	Ashley, Lucifer		3

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made to determine the color of top of the pappus compared with the other parts of the pappus.



6. Method of observation (example of characterization)

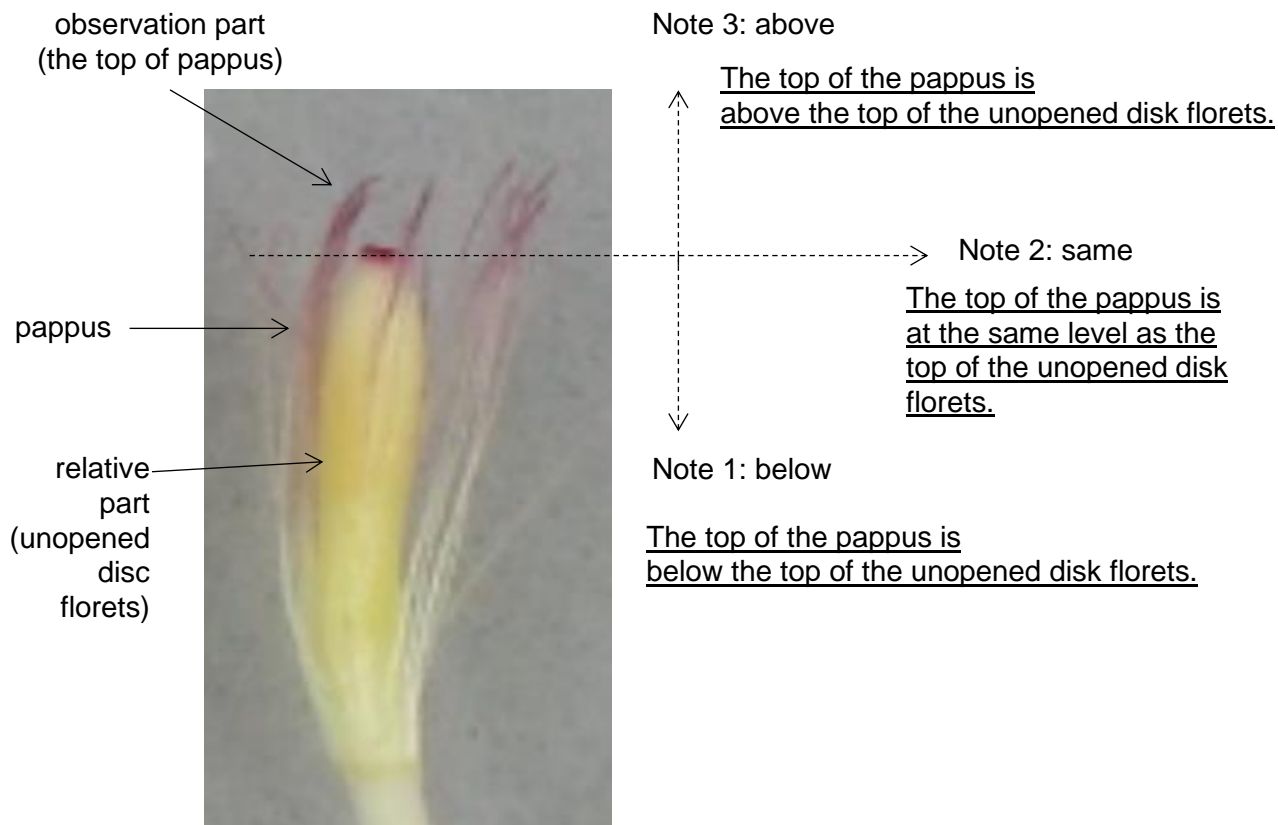
	English	UPOV Example Varieties	Netherlands Example Varieties	Japan Example Varieties	Note
52 VG	Pappus: level of top relative to closed disc florets				
QN	below	Baby-Doll	Baby-Doll		1
	same level	Indian-Summer	Indian-Summer		2
	above	Ferrari, Tersnow	Ferrari, Tersnow		3

Remarks: None.

Stage of observation: See Chapter 3, paragraph (a) and (c).

Method of observation: Visual observation

The observation is made to determine if the top of the pappus is below, at the same level or above the top of unopened disk florets.



6. Method of observation (example of characterization)



1 below



2 same level



3 above