

Practical Case Study on minimum distances between selected pelargonium varieties

FINAL REPORT

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1. Introduction

CIOPORA together with the CPVO and the Bundessortenamt launched a case study in regard of the Minimum Distance to establish distinctness between Pelargonium varieties. The case study has been completely funded by the CPVO.

The study has been initiated by CIOPORA based on the concern about shrinking distances between varieties to the point that in trade some varieties can be no longer distinguished from each other. According to the CIOPORA Position Paper on Minimum Distance, unanimously adopted by its members, not all characteristics from the current test guidelines and protocols should be used while deciding on Distinctness of a given variety. Instead, a specific set of characteristics that represent a certain importance for the crop concerned should be taken into consideration.

In order to test the feasibility of such an approach to DUS testing, CIOPORA in cooperation with its members (Pelargonium breeders) pre-selected a set of Pelargonium pairs with similar phenotype, which have been declared distinct in their DUS-test in the past. The titleholders of the pre-selected varieties were asked to submit true-to-type plant material to the Bundessortenamt in October 2018. The material was grown in a greenhouse of the Bundessortenamt according to the growing conditions which are used in the DUS-examination of Pelargonium.

The varieties were labelled by the codes 101 to 114. From the material received, cuttings were taken in January 2019. The characteristics of the 15 plants per variety used in the trial were assessed in May and June 2019 according to the CPVO Technical Protocol for Pelargonium (TP/28/2 07/10/2009).

The study aims at defining and harmonizing the legal concept of “***clearly distinguishable***” by addressing only **Important Characteristics** (for trade and enforcement).

The results of the case study have no effect on any rights granted. The names of the varieties were codified and were not directly mentioned in the case study report by the Bundessortenamt. This study also does not mean a priori that the present system of testing

applications will be changed in any way. The results, however, may help in further discussions on this subject at the UPOV, CPVO, and national levels.

On July 11, 2019, a meeting took place at the Bundessortenamt with representatives of the Bundessortenamt, CPVO, and CIOPORA alongside the breeders concerned and other observers, in order to examine the plants grown and to discuss the re-evaluation of the distinctness of the variety pairs concerned based on the Mock Protocol.

For results of the Meeting, see Minutes attached to this document.

Prior to this, on June 28, 2019 a pre-meeting took place in Hanover, with representatives of the Bundessortenamt as well as Dr. Edgar Krieger, the Secretary General of CIOPORA and Micaela Filippo, Legal Counsel of CIOPORA.

2. Background Information

a. CIOPORA's Position on Minimum Distance and the Mock Protocol

At the AGM 2014 in The Hague, CIOPORA members unanimously approved the Position Paper on Minimum Distance / Distinctness. Among other key statements, CIOPORA demands a sufficient minimum distance between varieties for an effective Plant Variety Right.

The requirement “clearly distinguishable” should be assessed on characteristics important for the crop concerned. This means that differences in unimportant characteristics only should not lead to a clearly distinguishable variety.

Moreover, in order to be clearly distinguishable, the distance between two varieties with respect to their important characteristics must be sufficiently broad. In particular, regarding pseudo-qualitative characteristics and quantitative characteristics a **difference of only one note in general should not be considered as a sufficiently broad distance.**

Based on the Minimum Distance Position, CIOPORA, together with experts of a certain variety (including members and non-members), prepared **Mock Test Protocols** for specific pre-selected species (Apple, Pelargonium, and Rose) based on the respective CPVO Test Protocols. The Mock Protocols distinguish between essential and no-essential characteristics (as regards Distinctness) and modify some notes in respect of essential characteristics.

The Mock Protocols were drafted as follows:

1. General expert made a first selection
2. Board-related breeder of the crop concerned reviewed the selection
3. Consolidation in a uniform selection, which is open for discussion with experts of the species (including members and non-members of CIOPORA)
4. The final selection was shared with Naktuinbouw (project leader) and CPVO

As regards Pelargonium species, out of 60 characteristics, 16 characteristics have been classified as “unimportant”, i.e. irrelevant for the determination of distinctness. In addition, 3 important characteristics have been broadened in respect of its notes (increased to 4 notes).

It should be noted that CIOPORA did not seek to delete the “crossed out” characteristics from the protocols. These shall remain for the variety description as well as for purposes of uniformity and stability; yet they shall be considered as “not important” for the evaluation of Distinctness.

b. Prior Study on Minimum Distance

In 2016, in order to test the feasibility of the CIOPORA’s Position on Minimum Distance, a case study (“on paper”) was carried out in cooperation with several Examination Offices (Naktuinbouw – responsible; Bundessortenamt, NIAB, UKZUZ, GEVES) and funded by the CPVO.

The project was designed to study the possible effects of the introduction of the CIOPORA’s Mock Protocol on three selected crops: apple, pelargonium, and rose. The candidate varieties consisted of the last 50 granted rights at the CPVO, which were re-examined based on the Mock Protocols. Re-examination was performed on historical data instead of a growing trial.

The goal was to produce concrete data and examples, as basis for further discussions on the introduction of its approach on Minimum Distance. The results had no effect on any rights granted or neither sought to eliminate from the protocols the “unimportant characteristics”.

As to Pelargonium, 50 newly tested varieties were re-examined using the Mock Protocols against those varieties that were originally also in the trials at the time of testing. The results showed that 2 varieties would not be considered distinct. The expert mentioned that if the

comparison would not have been limited to the varieties in trial, more distinctness problems could have been found in other varieties from the variety collection.

Thus, the parties involved agreed upon carrying out a new study based on living plants, as follow-up.

3. Results of the Empirical Case Study on Pelargoniums 2019

The analysis below is based on the observations made by the Bundessortenamt, by the participants of the meeting on July 11, 2019 and by the IP experts in the pre-meeting on 28 June.

Particularly, the tables show the clear differences observed by the Bundessortenamt within the pairs of varieties. The flower colors were assessed in a room with natural daylight facing north. The color chart used is the Royal Horticultural Society Color Chart, 2015.

3.1. Pair 101 and 102



No	Characteristic	Variety 101 State of expression	Variety 102 State of expression
7	Leaf blade: length	medium (5)	short to medium (4)
8	Leaf blade: width	medium (5)	narrow to medium (4)
21	Inflorescence: height	short to medium (4)	medium (5)
51	<u>Lower</u> petal: colour of margin of <u>upper side</u>	RHS N45B more blue	RHS 45B

52	<u>Lower</u> petal: colour of middle of upper side	RHS N45B more blue	RHS 45B
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The differences observed are in characteristics number 7, 8 and 21, all of them being quantitative characteristics (QN). They are important characteristics according to the CIOPORA Mock Protocol. However, they are only separated by one note. According to the CIOPORA Position Paper on Minimum Distance, in regard to pseudo-qualitative characteristics and quantitative characteristics a difference of only one note in general should not be considered as a sufficiently broad distance.

In addition, there is only a slight difference on the color of the lower petals (margin and middle of upper side), just distinguished by a “more blue” note.

At the meeting on July 11, the BUNDESSORTENAMT experts and the breeders agreed that the varieties are distinct. From the IP-experts’ perspective, the differences between the varieties were not broad enough to declare the varieties “clearly distinguishable”.

During the prior meeting on June 28, the Secretary General and the Legal Counsel of CIOPORA had doubts whether these varieties should be declared distinct.

3.2. Pair 103 and 104



No	Characteristic	Variety 103 State of expression	Variety 104 State of expression
41	<u>Upper</u> petal: colour of margin of <u>upper</u> side	RHS N66C	RHS 73A more red

42	<u>Upper</u> petal: colour of middle of <u>upper</u> side	RHS N66C	RHS 73A more red
44 ***	<u>Upper</u> petal: conspicuousness of marking	strong (7)	medium (5)
54 ***	<u>Lower</u> petal: conspicuousness of marking	strong to very strong (8)	medium to strong (6)

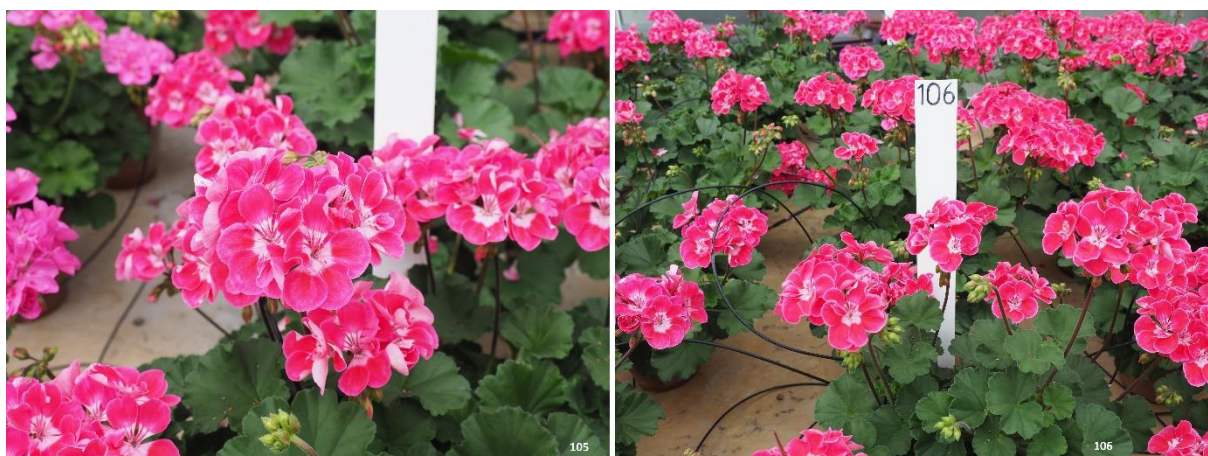
*** In the mock protocol characteristic 44 and 54 were deleted.

The characteristics number 44 and 54 are considered unimportant in the Mock Protocol in regard to distinctness. Therefore, within this pair only differences in the color of the upper petal (margin and middle of upper side) shall be considered.

During the meeting at the Bundessortenamt trial station, there was consensus that there were less differences observed in comparison with pair 101 and 102. The difference in the color was not pointed out - neither by the breeders nor by the IP experts - as specifically different. Instead, it was focused on the quantity of flower – Pair 104 has more flowers than pair 103. This would mean that consumers would rather buy pair number 104. Based on this, the group agreed that the varieties were clearly distinguishable.

During the prior meeting on June 28, the Secretary General and the Legal Counsel of CIOPORA had doubts whether these varieties should be declared distinct.

3.3. Pair 105 and 106



No	Characteristic	Variety 105 State of expression	Variety 106 State of expression
24	Inflorescence: length of largest flower	medium to long (6)	short to medium (4)
25	Inflorescence: width of largest flower	medium to broad (6)	medium (5)
53	<u>Lower</u> petal: colour of <u>lower side</u>	RHS 73C lighter	RHS 73B lighter
58	<u>Lower</u> petal: size of zone at base	medium (5)	small (3)

This pair is considered the most similar pair among all selected varieties.

Differences have been observed by the Bundessortenamt in 24 (QN), 25 (QN), 53 (PQ) and 58 (QN). They are important characteristics according to the CIOPORA Mock Protocol*. The difference in characteristic number 25 (inflorescence: width of largest flower) is only one note, which is, pursuant to the CIOPORA Position Paper on Minimum Distance, not sufficient.

Likewise, the difference in the color of the lower side of the lower petal (characteristic number 53) would not be enough to deem the variety clearly distinguishable.

While distances in characteristics number 24 and 58 are by two notes, during the meeting on July 11, the group did not reach an agreement on whether these differences would be enough for the variety to be declared distinct. At the end the majority of the breeders also declared this pair as distinct.

Also, during the meeting on June 28, the representatives of CIOPORA considered the two varieties too similar and not clearly distinguishable.

* It is confusing that the Mock Protocol considers characteristic 57 (Lower petal: zone at base) as unimportant, but characteristic 58 (Lower petal: size of zone at base) not.

3.4. Pair 107 and 108



No	Characteristic	Variety 107 State of expression	Variety 108 State of expression
7	Leaf blade: length	medium (5)	short to medium (4)
8	Leaf blade: width	medium (5)	narrow to medium (4)
16	Leaf blade: conspicuousness of zone	absent or very weak to weak (2)	strong to very strong (8)
38 ***	Upper petal: width	medium to broad (6)	broad to very broad (8)
51	<u>Lower</u> petal: colour of margin of <u>upper side</u>	RHS N66A more blue	RHS NN74A more red
52	<u>Lower</u> petal: colour of middle of <u>upper side</u>	RHS N66B more blue	RHS NN74A more red

*** In the mock protocol characteristic 38 was deleted.

Pursuant to the CIOPORA Mock Protocol, characteristic number 38 (upper petal: width) is considered unimportant as regards Distinctness.

The QN characteristics number 7 (leaf blade: length) and 8 (leaf blade: width), are separated by one note, which is, pursuant to the CIOPORA Position Paper on Minimum Distance, not sufficient.

Clear differences were observed in the color of the lower petals (characteristics 51 and 52) and in the conspicuousness of zone in the leaf blade (characteristic 16). These characteristics are considered important in the CIOPORA Mock Protocol.

Thus, it was concluded that these varieties are clearly distinguishable.

During the prior meeting on June 28, the Secretary General and the Legal Counsel of CIOPORA had doubts whether these varieties should be declared distinct.

3.5. Pair 109 and 110



No	Characteristic	Variety 109 State of expression	Variety 110 State of expression
2	<u>Only varieties with growth type: upright or semi-upright:</u> Plant: height of foliage	medium (5)	medium to high (6)
16	Leaf blade: conspicuousness of zone	absent or very weak to weak (2)	weak to medium (4)
41	<u>Upper petal: colour of margin of upper side</u>	RHS 75C more red	RHS 65A more blue
42	<u>Upper petal: colour of middle of upper side</u>	RHS 75C more red	RHS 65A more blue

Differences have been observed in characteristics 2, 16, 41 and 42, all of which are considered important in the CIOPORA Mock Protocol. The one-note distance in characteristic number 2 ((QN) Plant: height of foliage) is not sufficient for distinctness, according to the CIOPORA

Position Paper on Minimum Distance. In characteristic 16, the number of notes has been reduced, which indicates that breeders would like to see broader distances in this characteristic.

On the basis of the observations of the BSA and the visual observations, the breeders and examiners considered the differences broad enough to grant both varieties protection.

During the prior meeting on June 28, the Secretary General and the Legal Counsel of CIOPORA had doubts whether these varieties should be declared distinct.

3.6. Pair 111 and 112



No	Characteristic	Variety 111 State of expression	Variety 112 State of expression
2	<u>Only varieties with growth type: upright or semi-upright:</u> Plant: height of foliage	short to medium (4)	medium (5)
41	<u>Upper</u> petal: colour of margin of <u>upper side</u>	RHS 75B more blue	RHS 75B lighter
42	<u>Upper</u> petal: colour of middle of <u>upper side</u>	RHS 75B more blue	RHS 75B lighter
47	<u>Upper</u> petal: colour of spot	RHS N66B	RHS N57B
51	<u>Lower</u> petal: colour of margin of <u>upper side</u>	RHS 75B more blue	RHS 75B lighter
52	<u>Lower</u> petal: colour of middle of <u>upper side</u>	RHS 75B more blue	RHS 75B lighter

57 ***	<u>Lower</u> petal: zone at base	absent (1)	present (9)
58 ***	<u>Lower</u> petal: size of zone at base	not applicable	small (3)

*** In the mock protocol characteristic 57 was deleted. In characteristic 58 a new state of expression "none" was added. For variety 111 the state of expression in characteristic 58 of the mock protocol would be "none".

The main differences between these varieties were observed in the color of the spot of the upper petal (characteristic 47) and the size of zone at base (characteristic 58). These characteristics are important, according to the CIOPORA Mock Protocol.

The difference in the QN characteristic 2 (Plant: height of foliage) is only one note, which is as such not sufficient for distinctness according to the CIOPORA Position Paper on Minimum Distance. In addition, the CIOPORA Mock Protocol considers characteristic number 57 unimportant. The differences in the color of the margin and middle of the upper side in both upper and lower petals (PQ characteristics 41, 42, 51, 52) are not broad enough as regards to distinctness, according to the CIOPORA Position Paper on Minimum Distance.

On the basis of the observations of the BSA and the visual observations, the breeders and examiners considered the differences broad enough to declare the varieties clearly distinguishable. This was also confirmed by the Secretary General and the Legal Counsel of CIOPORA in the meeting on 28 June.

3.7. Pair 113 and 114



No	Characteristic	Variety 113 State of expression	Variety 114 State of expression
13	Leaf blade: main colour (zone excluded)	light green to medium green (4)	medium green (5)
24	Inflorescence: length of largest flower	long (7)	medium to long (6)
29	Flower: type	double (2)	single (1)
47	<u>Upper</u> petal: colour of spot	RHS N66B lighter	RHS N57B
51	<u>Lower</u> petal: colour of margin of <u>upper side</u>	RHS 76D	RHS N155B
52	<u>Lower</u> petal: colour of middle of <u>upper side</u>	RHS 76D	RHS N155B
58	<u>Lower</u> petal: size of zone at base	small to medium (4)	very small to small (2)

According to the CIOPORA Position Paper on Minimum Distance, characteristics 13 (PQ) and 24 (QN) are not sufficient distant as regards Distinctness. However, clear differences between both varieties have been observed in characteristics 29 (QL), 47 (PQ), 51 (PQ), 52 (PQ) and 58 (QN). All these are considered important in the CIOPORA Mock Protocol.

Thus, it has been concluded by examiners and breeders that both varieties are distinct. This was also confirmed by the Secretary General and the Legal Counsel of CIOPORA in the meeting on 28 June.

4. Conclusion

As a first conclusion it can be said that phenotypic differences could be observed in all pairs. The discussion circled around the question whether the differences were enough to declare the varieties distinct / clearly distinguishable.

The evaluation of all varieties was mainly based on the botanical approach, as currently applied by the PBR Offices and Examination Offices. Commercial and legal aspects of the concept of “clearly distinguishable” have been taken into consideration to a limited account.

The examiners of the Bundessortenamt re-confirmed that on the basis of the current rules and their observations all 7 pairs are clearly distinguishable.

The breeders had a dispute whether pair 105/106 should be declared clearly distinguishable. At the end the majority of the breeders also declared this pair as distinct. From the perspective of the IP-experts, the varieties 105/106 were too similar to be declared distinct.

The breeders agreed that pairs 101/102, 103/104, 107/108, 109/110, 111/112, and 113/114 shall be declared clearly distinguishable.

The Secretary General and the Legal Counsel of CIOPORA had doubts whether the pairs 101/102, 103/104, 107/108 and 109/110 should be declared distinct, on the basis of the CIOPORA Position Paper on Minimum Distance. For the pairs 111/112 and 113/114 there was agreement that they were distinct.

The CIOPORA Position Paper on Minimum Distance states in its last key statement:

“The decision on which characteristics are relevant for the determination of “clearly distinguishable”, on how many of such characteristics must differ from each other and on the distance between such characteristics should be made on a crop-by-crop basis by a panel of experts, including representatives of the breeders of the crop concerned.

CIOPORA members and non-members, who breed Pelargonium, are obviously satisfied to a large extent with the actual system. However, there was a dispute in one out of the seven pairs whether these varieties should be considered clearly distinguishable.