



TWO/48/25 Add.

ORIGINAL: English

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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**

Geneva

**TECHNICAL WORKING PARTY FOR ORNAMENTAL PLANTS AND FOREST TREES**

**Forty-Eighth Session**

**Cambridge, United Kingdom, September 14 to 18, 2015**

ADDENDUM TO

INFLUENCE OF DIFFERENT SOURCES ON VEGETATIVELY PROPAGATED MATERIAL  
USED IN DUS EXAMINATION

*Document prepared by the Office of the Union*

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The Annex to this document contains a presentation on the effects of origin of plant material on the expression of DUS characteristics, made by an expert from the Netherlands at the forty-eighth session of the Technical Working Party for Ornamental Plants and Forest Trees (TWO).

[Annex follows]



Effects of the origin of plant material on DUS-characteristics

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Definition of the problem

- Difference between varieties getting smaller
- Influence of environment on vegetatively propagated plant material

Materials

- Two crops → Phalaenopsis (glasshouse)  
→ Tulip (outdoor)
- Phalaenopsis: 1 variety from 3 different laboratories
- Tulip: 2 varieties from 3 different locations

Intention

Species	Variety	Laboratory
• Phalaenopsis	→ 'Evolution'	→ Belgium → Germany → Taiwan, Province of China

Intention

Species	Variety	Location
• Tulip	→ 'Prinses Irene'	→ Breezand (sand) → Andijk (clay) → Obdam (clay)
	→ 'Stronggold'	→ Andijk (clay) → Creil (clay)

### Trial and observations

- Phalaenopsis → Glasshouse → TG/213/2
- Tulip → Outdoor → TG/115/4

Color observations: RHS Colour Chart 2007

Visually observations: All Characteristics.

Measurements: height, length, width

### Results

- Tulip: submitted material of same size and quality
- Phalaenopsis: submitted material of different size and age



### Results Tulip

**'Prinses Irene'**

Visual: small differences in plant height and color

Measurement: small differences in plant height, flower length and flower diameter

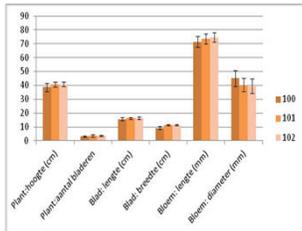
RHS: same number (RHS 28 A orange red)

TG/115/4: no differences



### Results Tulip

**'Prinses Irene'**




### Results Tulip

**'Stronggold'**

Visual: no differences

Measurement: small differences in plant height, flower length and flower diameter

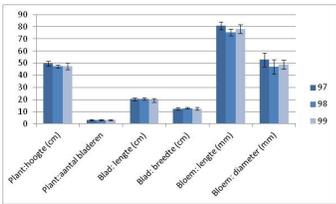
RHS: same number (RHS)

TG/115/4: no differences



### Results Tulip

**'Stronggold'**




## Results Phalaenopsis

- One sample was smaller with a shorter inflorescence  
→ Possible due to smaller size of the submitted plants
- No difference found in other characteristics



## Remarks

- **Small or no differences caused by:**

**Tulip: material from the Netherlands only**

One case with two applications with significant difference in length but complete different source (Japan, Netherlands) but after two years of maintenance completely the same.

**Phalaenopsis: material from different laboratories but controlled by the breeder**

experience with reference material from different source: it takes two or more years to find out if the samples are the same

## Conclusion

- Although it seems that the influence of the source on the morphological characteristics of a variety is limited, we must be careful before taking a decision on DUS, especially with bigger differences between the sources.

*Quality in Horticulture*

[End of Annex and of document]