

## DUS testing of new species in the Netherlands

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## Naktuinbouw

- Naktuinbouw responsible for DUS-testing in the Netherlands
- Ornamentals, vegetables and agricultural crops
- Main test location: Roelofarendsveen



## New species in NL

- Ca 900 ornamental PBR applications each year
- Yearly 10-20 new species (EU plus national)
- Document TGP/13/1 (October 2009): Guidance for new types and species

## Example



Peperomia caperata Yunck.

First 'variety' described by VKC in NL: ca 1988

Applications:

- 1994 - 1 (first PBR application: discovery).
- 1999 - 1 (mutant)
- 2000 - 2 (mutants)
- 2001 - 2 (mutants)
- **2003 - 10 (seedlings)**
- 2004 - 2
- 2005 - 2
- 2008 - 1
- **2009 - 7 (one 'new' species P. ferreyrae)**



## Approach Peperomia ?



- **Conform TGP/13/1 section 2.1-2.3:** collect information on new species:
  - Experience in NL? No (1994)
  - Experience within UPOV? No
  - TQ-information? Discovered and developed in Ecuador
  - Breeders' information? Yes, Belgium
  - Catalogues? Yes

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## Testing DUS



- **TGP/13/1 section 2.4-2.5:**
  - Distinctness from common knowledge:
    - Visit breeders
    - Internet
    - Botanical gardens
    - Walking reference collection
    - Experience of Naktuinbouw-experts
  - Uniformity:
    - Off-type approach

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## Development of Test Guideline (1)



- **TGP/13/1 section 2.7.3 – 4:**
  - Linnaean (botanical) description
  - Past: plain text. Now: table of characteristics
  - Mention actual value of QL characteristic (e.g. 'netted', 'kidney-shaped')

## Development of Test Guideline (2)

- **TGP/13/1 section 2.7.3 – 4:**
  - QN-chars in absolute format (e.g. leaf width in centimeters) only for the time being
  - PQ-chars (color of leaves) RHS-color chart
  - After several varieties: states of expressions and notes

## Linnaean 'original' till ca 2005

### 15. Description.

- Plant:** ca. 20 cm high and ca. 24 cm broad, herbaceous, compact, medium glossy, with many small leaves.
- Stem:** ca. 6 mm thick at the base, internodes of basal half short and of distal half very short, red (ca. RHS 53 A).
- Leaf:** **petiole** ca. 8 cm long and ca. 3 mm broad, light purple red, flattened; **blade** ca. 44 mm long and ca. 30 mm broad, fleshy, cordate, top acute, concave, between the veins strongly undulated, margin slightly recurved, older blades three-colored, main color light yellow (ca. RHS 8 D), with irregular shaped medium green (ca. RHS 138 B) and medium to dark green (ca. RHS 139 A) spots all over the surface, younger blades two-colored, main color red (ca. RHS 46 B), with irregular shaped dark green (ca. RHS 139 A) spots all over the surface, somewhat glossy, lower side light green (ca. RHS 138 D) with irregular shaped light yellow (ca. RHS 8 D) areas all over the surface.
- Inflorescence:** ca. 25 cm long; **peduncle** round, purple red; **spike** ca. 10 cm long; **anther** thick and short; **stigma** brown.

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## Simplified national protocol till 2008

### Simplified National Protocol Table of characteristics Peperomia

Plant: height (cm)			
Plant: diameter (cm)			
Stem: diameter (mm)			
Stem: pubescence	absent (1)		present (9)
Stem: intensity of green color	light (3)	medium (5)	dark (7)
Stem: anthocyanin coloration	absent (1)		present (9)
Petiole: length			
Petiole: pubescence	absent (1)		present (9)
Petiole: intensity of green color of upper side	light (3)	medium (5)	dark (7)

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## National protocol from 2009

Table of characteristics Peperomia

CHARACTERISTIC	EXPRESSION	NOTE	EXAMPLE VAR.
1. Plant: height	low	(3)	Schumi Red
	medium	(5)	Dafidel
	high	(7)	
2. Plant: diameter	small	(3)	Jolien
	medium	(5)	Damolli
	large	(7)	Amigo Green Split
3. Stem: diameter at base	small	(3)	
	medium	(5)	Dag
	large	(7)	Belly Button
4. Stem: pubescence	absent	(1)	Davicto
	present	(9)	Silver Shadow
5. Stem: color	light green	(1)	Silver Shadow
	medium green	(2)	Amigo Green Split
	dark green	(3)	Dacirru
	red	(4)	Dafuro
	purple red	(5)	Dafidel
	brown red	(6)	Davicto

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## UPOV guideline ??



- Depending on international interest and decisions of TWO
- Or starting a new species procedure from the beginning for *P. ferreyrae*?



# *Quality in Horticulture*