

## **ESSENTIALLY DERIVED VARIETIES - CASE LAW IN THE NETHERLANDS and CONNECTED OBSERVATIONS**

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### **Outline**

- Introduction;
- Three published cases;
- Which level of conformity for finding EDVs?
  - genetically;
  - phenotypically?
- Other views on “predominant derivation”;
- Conclusions.

## Open questions on assessment of EDVs

- What is “derived”?
- When is a variety “predominantly” derived?
- When is there conformity in (the expression of) the essential characteristics?;
- How do we know whether the expression of characteristics results from the genotype of the INV?

## Published NL court rulings on EDVs

- the Freesia case (2008);
- the Blancanieves case (2002 - 2009);
- The Bambino case (2007 – 2010).

## The Freesia case (2008):

- INV: Ricastor;
- EDV: Mercurius;
- DNA (AFLP): no genetic difference;
- Phenotypical comparison:  
identical in 38 out of 39 characteristics (slightly rougher stem);  
difference in flower size: not listed;
- Prov. Judge: infringement & injunction upon Hofland to further market its variety.



## Gypsophila II: Bambino (2007 – 2010)

Dangypmini(P) Million Stars®:



Bambino:



## **Bambino – facts & claims:**

Danziger (owner of Dangypmini(P)):

- AFLP test – Similarity 0.91 Jaccard;
- High phenotypic similarity in essential characteristics; differences caused by act of derivation (possibly radiation);

Biological Industries (Bambino):

- Counter-AFLP (only later): genetic difference is 13% +;
- Clear morphological differences in at least 9 of the relevant characteristics mentioned in the UPOV DUS Guidelines.

## **P.I. Judge DC The Hague (07-09-07):**

- Expert opinion that treatment with radioactive radiation may lead to 3,5% genetic difference (8 out of 228 markers);
- Reference to threshold Jaccard values below 0.90 for other crops (cotton - 0.82; corn – 0.875);
- Claimed non-use of plaintiff's variety was deemed to lack credibility;
- Morphological differences considered irrelevant and/or insignificant because not part of DUS Protocol.

## Blancanieves: the case

Blancanieves:



Dangypmini (P) Million Stars®:



## Blancanieves – facts & claims:

Danziger:

- AFLPs – Similarity 0.944 Jaccard and 0.937 Jaccard;
- High phenotypic similarity in essential characteristics; differences caused by act of derivation (polyploidization);

Astée Flowers:

- Counter-AFLP: 0.822 Jaccard;
- Substantial phenotypic differences: differences in 17 out of 21 of the characteristics mentioned in the UPOV DUS Guidelines.

Final ruling: **Court of Appeal The Hague 29-12-09:**

## Required level of genetic conformity

- UPOV art. 14 (b) I (as referred to in doc IOM/6/2):
  - “Derived” means that genetic materials of the INV have been used in the creation of the later variety;
  - “The examples of essential derivation given in Article 14(5)(c) make clear that the differences which result from the act of derivation should be one or very few.” (also: ISF RED)
- Determination of genetic conformity:
  - The use of AFLP markers is “**open to objections**”;
  - (reliable) determination of genetic conformity by means of DNA markers requires use of **multi-allelic markers** and reliable and representative sampling of the entire genome (230 to 260 markers considered insufficient).

## Assessment of phenotypic similarity

Court of Appeal’s general remarks on phenotypic similarity:

- the alleged EDV and the initial variety must also be phenotypically similar to such a high degree that the one variety differs from the other variety **only in one or a few inheritable characteristics**;
- the determination of **distinctiveness** focuses on the differences in *essential characteristics*, whereas the determination of **derivation** focuses on the similarities of *essential characteristics in which the genome is expressed*;
- DUS test showed **17 morphological differences** with *Dangyppmini*, of which **9** characteristics are related to plant architecture and flower morphology; these are specifically characteristics which are relevant for the cultural and practical value of a cut flower such as *Gypsophila*;
- 9 differences is more than only in *one or a few* inheritable characteristics -> therefore no EDV;

## CIOPORA on predominant derivation:

### CIOPORA Position:

- Monoparentals – **totally** derived;
- Varieties “(...) destined for circumventing the exclusive right (...) (plagiarism or *me-too-varieties*)”: if they retain all essential characteristics of INV and only show changes in insignificant characteristics these should be deemed “**predominantly** derived” and therefore EDVs;
- General genetic threshold for reversal of burden of proof for all ornamental crops (0,90 Jaccard) – open to debate;
- Note: this view brings crosses into the realm of EDV: Is at odds with “one or very few”. Is this desirable?

## Conclusions:

- Prevailing view of court rulings in the Netherlands:  
For a variety to be qualified an EDV the differences with the INV should not be more than one or very few inheritable characteristics (both in terms of genetics and phenotype);
- The use of AFLP-fingerprinting is open tot criticism;
- Breeders need clear guidance on:
  - Definition of ‘*derived*’: whether or not physical use of the INV is a condition?
  - Definition of the term ‘*predominantly derived*’ (only “one or very few” or could it be more?);
  - whether or not **crosses** (except repeated back-crossing) are inside or outside the scope of EDV by definition;
  - the meaning of ‘*essential*’ in essential characteristics.