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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

**WORKING GROUP ON BIOCHEMICAL AND MOLECULAR
TECHNIQUES, AND DNA-PROFILING IN PARTICULAR**

Thirteenth Session
Brasilia, November 22 to 24, 2011

ADDENDUM

THE USE OF MOLECULAR TECHNIQUES FOR PLANT VARIETY PROTECTION -
APPROVED POSITION OF CIOPORA (AGM, ROME, 12TH APRIL, 2011)

Document prepared by the
International Community of Breeders of Asexually Reproduced Ornamental and Fruit Plants
(CIOPORA)



**International Community of
Breeders of Asexually
Reproduced Ornamental and
Fruit Plants**

The use of molecular techniques for plant
variety protection

Approved position at AGM, Rome, 12th April, 2011

BMT 13th session, Brasilia, 22 - 24 November 2011

Outline

- Introduction on CIOPORA
- Position paper on Molecular Techniques

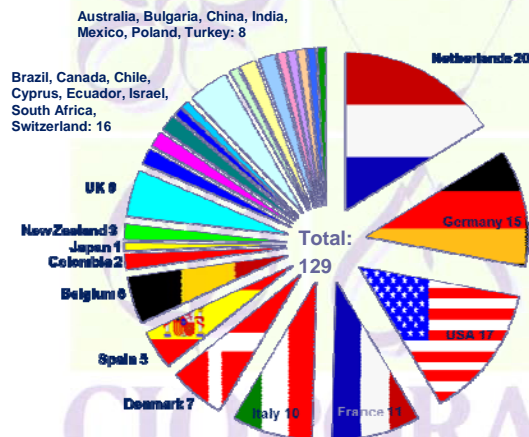


CIOPORA

Information about CIOPORA

- International Community of Breeders of Asexually Reproduced Ornamental and Fruit Plants
- Founded in 1961 (like UPOV)
- Highly specialized in the IP-protection of ornamental and fruit plant innovations by Plant Breeders' Rights, Plant Patents, Patents and Trademarks

CIOPORA membership*



*September 2011

Advising governments on IP- laws

- CIOPORA is advising governments all over the world on IP for plant innovations, such as
 - The minimum content of PBR laws for effective protection for asexually reproduced ornamental and fruit varieties
 - The minimum requirements of laws for the effective enforcement of Plant Breeders' Rights and Plant Patents
 - The interaction between PBR and Trademarks
 - The co-existence of PBR and Patents

Visual Communication

FIND THE FAULT!

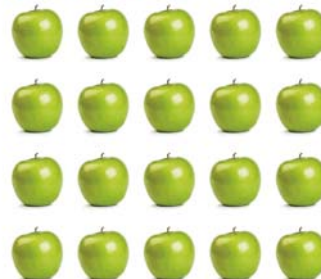


THE FAULT IS THAT THREE OF THE GERBERA HAVE BEEN PROPAGATED WITHOUT A PROPER LICENSE.

Dealing with unlicensed propagating material of a protected variety, and the harvest obtained from it, is a Plant Breeder's Rights infringement. It can have serious consequences for your company and is a criminal act in many countries. Make sure that you deal with legal plant material only. Be aware that anybody in the whole value chain can be held liable for a Plant Breeder's Rights infringement. For more information please visit: www.ciopora.org



FIND THE FAULT!



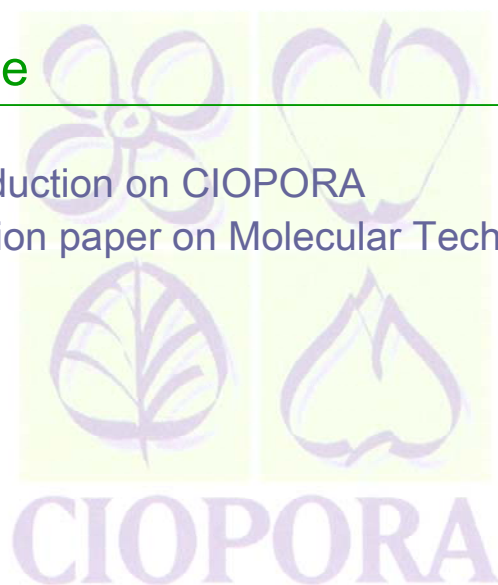
THE FAULT IS THAT THREE OF THE APPLES HAVE BEEN HARVESTED FROM TREES, WHICH HAVE BEEN PROPAGATED WITHOUT A PROPER LICENSE.

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- Introduction on CIOPORA
- Position paper on Molecular Techniques



Status before this position...

- Green Paper on Plant Variety Protection (2002)
 - "As to DNA charts, CIOPORA is in favor of a continued study of this method of description and identification of varieties so that it may be used by Plant Breeders' Rights Offices when it has been proven to be reliable and repeatable enough. For the time being, CIOPORA submits that one should abide by the traditional methods of description for DUS examination"
 - a further study coordinated by UPOV-TC is encouraged
- Position paper on EDVs (2008)
 - use of molecular markers for the assessment of genetic conformity in disputes on EDV

New context...

- Molecular techniques have become common tools
 - in the breeding process;
 - for variety identity and infringement;
 - for genetic conformity in EDV issues
- **Question:**

“Do we as a community of ornamental and fruit breeders also want to promote the use of Molecular Techniques for DUS testing and granting of PBR?”

Enforcement of IP-rights...

- Variety identity and infringement
 - Very useful for variety identification
 - No restriction for any party to use molecular or other techniques in support of its position
 - Case law is continuously evolving
- *CIOPORA supports the elaboration of a standard modus operandi of DNA analysis as a tool to improve the enforcement of IP rights*

Genetic conformity for EDV...

- CIOPORA supports the settlement of crop-specific procedures by its Crop sections, detailing:
 - the method of DNA preparation
 - the fingerprint technique used
 - the number and localization of marker bands included in the analysis
 - etc...
- allowing an independent expert to judge whether the performed analysis is appropriate or not.

Variety examination...

- Nobody is against improvements and progress
 - A PBR title is the basis for IP-protection
 - Integration of different applications
- But...
 - Great awareness for weaknesses of current PVP system
 - Many concerns about the sound application of molecular techniques

Awareness and concerns...

- The existing examination system is more and more under pressure
 - increasing costs for evaluation
 - increasing number of applications both by species and by applications per species
- Growing concern about the application of the current PVP systems worldwide
- Regulatory framework needs to be put in place prior to the introduction and application of molecular techniques

Awareness and concerns...

- Improvement in the benefit of the breeders
 - reproducibility
 - efficiency
 - harmonization of the current DUS examination process
- Continuity of the current PVP system
 - reliability of the testing
 - scope of protection

Variety examination...

A voluntary integration of the procedures for DUS and PBR granting with new tools, such as molecular markers, that could allow a stronger enforcement of plant variety rights is highly desirable.

- In order to achieve such integration, CIOPORA recognizes that the use of molecular markers for the enforcement of IP rights, the determination of Essentially Derived Varieties and variety examination can be useful

Useful for variety examination...

- Characteristic specific markers
 - New procedure is fully corresponding and predictive to the traditional phenotypic characteristic
 - Appropriate and recurrent calibration to the standard procedure needs to be procured

Useful for variety examination...

- Calibrated molecular distances for management of variety collections
 - Phenotypically similar varieties should never be omitted from the comparative trials
 - Applicants and owners of reference varieties must be fully informed and consulted on beforehand about the composition of the trials to avoid appeal etc.
 - It is impossible not to use information: phenotypically identical but different by MM???

Useful for variety examination...

- Use of molecular characteristics
 - As a reference DNA fingerprint
 - part of a certified plant passport, additional to the variety description
 - Fingerprint data are to be
 - confidential and owned by the holder of the variety
 - to be disclosed with the owner's permission
 - a general permission could be granted to the independent examination offices for building databases for their internal use only
 - Methodology must be accessible to qualified labs, external of the examination offices
 - Methodology in line with UPOV-BMT guidelines

Useful for variety examination...

- Use of molecular characteristics
 - In the long term a new system that fully exploits the advantages of molecular marker techniques might be achieved
 - For asexually reproduced ornamentals and fruit crops, such a new system can offer many benefits that need to be further evaluated
 - However, regarding the current state of the art and the limited knowledge about the effect on the scope of protection of titles granted under the current system, this is today not within reach.

Final remarks and conclusions...

- No PVP system is fully able to cover the value of innovative breeding products
 - PVP systems are aimed at achieving a good level of IP protection
 - must be amenable for the enforcement of IP rights
- Serious concern about risks if changing
 - a possible decreasing minimal distance
 - degrading the scope of protection

Final remarks and conclusions...

- CIOPORA is in favor of any improvement
 - to the essential basis for granting PBR
 - the current examination procedures
 - the management of a PVP system
- that creates
 - more transparency
 - improves the reliability of examining
 - strengthens the PVP
 - facilitates enforcement

Final remarks and conclusions...

- CIOPORA
 - is fully aware about what the potential molecular markers can offer
 - supports the integration of their application in the PVP system, at this stage **on a voluntary basis**
- At this moment
 - molecular techniques are not most suited to replace Uniformity and Stability testing
 - also for Distinctness there are severe constraints

Final remarks and conclusions...

- CIOPORA is convinced that a harmonized approach must be followed
 - coordinated at the international level
 - taking into account a necessary transitional period
- the UPOV-BMT working group is best suited to guide the process of finding acceptable applications of molecular markers in these fields

**Thank you
for your attention**

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