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GENEVA

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

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THE USE OF MOLECULAR TECHNIQUES IN VARIETY VERIFICATION OF *ROSA* L. VARIETIES

Document prepared by experts from the Community Plant Variety Office of the European Union (CPVO)

OCVV
Office Communautaire des Variétés Végétales

The use of molecular techniques in variety verification of *Rosa* L. varieties

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UPOV BMT Meeting, November 2011

Summary

1. Background
2. R&D project – Deliveries
3. Pilot project– Objectives
4. Pilot project – Technical aspects
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Background

- The project “European variety collection of rose varieties” was finalised in 2006
- Presentation of the findings at BMT 2008
- Meantime consultation with project partners, breeders and AC on follow up and implementation
- Project launched in 2011

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R&D project – Deliveries

- 380 rose varieties covering several cultivation types
- 12 selected SSR markers of public domain
- For each variety available in a database :
  - Physical DNA sample
  - DNA fingerprint

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Pilot project - Objectives

- DNA sample from the plant material used for the DUS test as “official sample” provides an added value
- Sample taking performed by a CPVO entrusted EO
- Extraction by an accredited laboratory according to an agreed procedure

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Pilot project - Objectives

- To keep, in addition to the variety description, a DNA sample from the original material of the variety

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Pilot project - Objectives

Interest of extraction and storage of DNA samples for the purpose of:

- Comparison of DNA fingerprints of material submitted as reference for a DUS test with DNA fingerprints obtained from the official DUS material
- Possible use by the holder in enforcement cases (note that identical finger prints does not in all cases rule out phenotypical differences)
- If fingerprint techniques are developed in the future further use could be made of the DNA samples using such techniques

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Pilot project - Technical aspects

CPVO prepared protocol and procedure:

1. DNA sampling of all candidate varieties from plant material used for DUS test
2. Examination Offices (EOs) prepare and send sample leaves to the accredited lab
3. The lab extracts and stores DNA samples
4. DNA sample will be kept as long as variety exists

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Pilot project - Cost aspects

- CPVO organised a call for tenders
- Offers from 3 labs
- Selected lab – NAKTUINBOUW
- Costs are covered by the CPVO

Pilot project – Legal aspects

Keeping of the DNA sample and ownership of possible analytical data

- The CPVO keeps samples
- The breeder/holder of the variety owns the fingerprint in cases he has requested it and it has been made for him
- The CPVO owns the fingerprint in cases it has been established on request of the CPVO

Pilot project – Legal aspects

Access to the DNA sample (Art. 88.4 of BR)

- The breeder/holder has access to a DNA subsample upon request to the CPVO
- CPVO entrusted EOs for roses may have access to subsamples in the frame of a technical examination

Pilot project – Outlook

It has been agreed with the stakeholders that the taking of DNA samples during the technical examination of rose varieties starts as from the growing season 2011 on.

The project will be evaluated after 5 years.

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