



SUMMARY REPORT OF THE MEETING OF THE EXPERT GROUP ON SEED AND PLANT PROPAGATING MATERIAL

“Bio-molecular methods (BMT) – controlling varietal identity and purity”

held on 29th April 2015, Brussels.

Chairperson: Ms P. Mannerkorpi

Experts from Member States were present, except from CY, DK, HU, LU, PL, SI. Experts from CPVO were also present.

1. EU legislation in relation to biochemical and -molecular techniques

The Commission briefly presented the requirements in the existing EU legislation as regards biochemical and -molecular techniques (BMT). Article 7 of the Common Catalogues Directive 2002/53/EC refers to methods which need to be exact and reliable, and which include growing trials. Article 56 of the Regulation (EC) 2100/94 on Community Plant Variety Rights refers to growing trials or any other investigations required. There is no precise reference in the Directives on marketing plant reproductive material except in the Annex of Directive No 2002/57/EC on the marketing of oil and fibre plants (analysis of seed lots of rapeseed). BMT could be used as supplementary/supportive method, in addition to the field inspection and post control or in variety testing but it cannot replace the current rules. There is a need to look at the rules regarding the decision making process.

2. Certification and inspections of plant reproductive material

2.1 OECD Certification

The delegate from the UK presented the requirements in the OECD Seed Schemes and the situation with regard to the use of 'non field based test to determine varietal purity' as an additional testing method. The methods are referred to in the document '*Guidelines for control plot tests and field inspection of seed crops, part III – Additional testing methods for varietal identity and varietal purity*'. The ad-hoc working group of OECD Seed Schemes conducted a survey of the methods used by the members of the scheme for varietal identity, varietal purity and hybridisation. The proposal of the working group is to agree on the basic rule and then to amend part III of the guidelines in order to reflect the new techniques, keeping in mind that these methods are supplementary to field inspection and control plots. Nevertheless some legal questions were raised in the working group about the use of characteristics which were not part of the official description of the variety.

There is a need to define the conditions for their use:

- (i) international validation in order to have stable/solid/reliable methods for seed certification and variety description (to assess also the cost);
- (ii) to have cooperation with other international organisations;

- (iii) these methods could be in the protocol as supplementary tools;
- (iv) to have a species approach and a step by step approach.

2.2 ISTA

The delegate from IT presented the discussions on BMT techniques in ISTA. The experts have identified suitable SSR 'simple sequence repeats' markers for maize, soybean, wheat and rice and 'in house' validated methods. The idea is to describe one common ISTA marker set per species and laboratories add any additional markers. The ISTA markers sets need to be internationally validated through proficiency tests between accredited laboratories. This is a challenge for ISTA to collect/store the reference material and to organise the proficiency tests. The work needs to be extended to other crops (peas, barley, sorghum) and new markers. The correlation between phenotype and genotype needs to be improved. These methods are not expected to be introduced in the ISTA rules soon because of lack of funding for the proficiency test. In addition, it is crucial to reduce the environmental impact between laboratories and to harmonise the application of the technique.

3. Variety registration and protection (DUS testing and protocols)

The representative of the Community Plant Variety Office (CPVO) presented the situation in UPOV. There has been agreement on two models: characteristic specific molecular markers and combining phenotypic and molecular distance in the management of variety collection. The CPVO technical protocols do not include specific reference to BMT methods, because so far no methods could be accepted by CPVO due to lack of validation. Moreover, the protocols are not so detailed to include requirements on reference collections. In general, in order to be used in the EU each method will require a positive assessment by UPOV. In order to be validated by UPOV, new methods shall be compliant with the UPOV convention. CPVO has established an ad-hoc BMT working group in order to address the BMT issue. The idea is to first start with discussions in experts' crop sector groups and then in the BMT working group.

The delegate from the Netherlands presented the situation in Naktuinbouw. BMT techniques are used as complementary tools and are frequently cheaper than a bioassay. Possible new models for use are under discussion in UPOV: (i) BMT technique in order to select similar variety based on DNA profile and then growing field with similar DNA profile varieties (Korean approach) (if non distinct/rejection, if distinct then second year with similar morphology characteristics), (ii) Genetic similarity coefficient between candidate and a set of pre-determined reference varieties (calculation of the distance between the reference varieties and use of genetic distance to distinguish between genotypes, USA approach on maize). The databases are important not only for DNA information but also in combination with other information, and not only for DUS testing but also for certification.

The delegate from the Netherlands also presented how the Netherlands handle the question of ownership of DUS samples and DNA of DUS samples and related data. CPVO noted the importance of addressing the question of access right and ownership.

4. Commission Working Document on the way forward

A more detailed discussion took place on the use of BMT technique for certification and registration and protection of varieties on the basis of the Commission working document.

The Commission will analyse in more detail the possible needs to amend the EU legislation and particular the issue on decision-making. Concerning preparations for the next meeting of the OECD Seed Schemes in June 2015 the Commission took note of the Member States comments. The results of CPVO BMT working group will be used for the preparations of the EU positions for UPOV, most likely not earlier than 2016. The Member States experts noted that a lot of work is needed with regard to DUS testing, therefore VCU is not a priority. Nevertheless some Member States are already using some techniques for VCU (e.g. disease resistance on certain plants, herbicide resistance). Disease resistance is included by some other Member States in the DUS testing protocol of e.g. sunflower, maize and alfalfa as additional characteristic.