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**THE SPANISH EXPERIENCE (GESLIVE-IRTA) ON THE ENFORCEMENT OF PLANT
VARIETY RIGHTS: DNA-FINGERPRINTING**

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THE SPANISH EXPERIENCE (GESLIVE-IRTA) ON THE ENFORCEMENT OF PLANT
VARIETY RIGHTS: DNA-FINGERPRINTING

Antonio Villarroel López de la Garma, Lawyer,
GESLIVE Managing Director / ANOVE Secretary General
Pere Arús, Head of the Plant Genetic Department, IRTA

1. Enforcement of plant breeders' rights might encounter several difficulties, arising in the first place from the exact identification of the variety to which the plant material suspected of being illegally reproduced belongs. According to Article 1 (vi) of the 1995 Act of the UPOV Convention, a plant variety is defined by the expression of the characteristics that result from a given genotype or combination of genotypes, in terms of a morphological description and involving technical examination by field trials. Nonetheless, for many crops (fruits, flowers, vegetables), it is not possible in practice to implement these technical examinations as observation could require a long time, even several years, of field trials; the reproductive material and the harvested product would not coincide; or reproduction of characteristics is hardly possible (hybrids). In those cases, practical enforcement of plant breeders' rights requires techniques to identify the variety at any stage of plant development and in different tissues. Molecular Markers (PCR – Microsatellites, SNP's, etc.) are not only an easy and cheap tool, but in many cases the only way to prove the varietal identity.

2. To ensure the efficient and rigorous application of this technology in the defence of plant breeders' rights, in 2003 the *Agrupación de Obtentores de Variedades Vegetales* (GESLIVE) and the Institute of Agro-Food Research and Technology (IRTA) concluded an "Agreement for the development of a genetic data base for plant variety identification, with the aim of identifying the genetic profile of protected plant varieties by developing specific molecular markers and systematising all this information in a data base (BDGIVV).

3. The creation of the IRTA database has enabled GESLIVE to secure information of the greatest value in the investigation of possible infringements of plant breeders' rights. Every campaign, hundreds of samples from suspicious materials are genetically analyzed by comparing them with the (BDGIVV).

4. Until now, GESLIVE has made use of the genetic identification technique of plant varieties in many infringement cases in front of the Spanish Courts, which have fully admitted the validity as evidence of DNA analysis, for at least reversing the burden of proof. Most varieties concerned were of the species peach-nectarine, carnation, citrus and wheat.

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