

Introduction to Intellectual Property related to Plant Biotechnology

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Biotechnology regulations

Intellectual property

- Patents
- Plant Variety Right
- Database protection
- Copy Right
- Trade mark
- Service mark
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IP harmonisation : TRIPS (1)

- Trade Related Aspects of Intellectual Property Rights
- World Trade Organization (WTO) Agreement (1995) to reduce distortions between different IP systems, as conclusion of the Uruguay round (1986-1994)
- Elaborated in collaboration with the World Intellectual Property Organization (WIPO)

Patent harmonisation : TRIPS (2)

- The agreement covers:
 - Application of basic principles of trading system
 - Adequate protection to IP
 - Enforcement of IP against infringement
 - How to settle disputes on IP
 - Special transitional arrangements

Patent harmonisation : TRIPS (3)

- Not only relating to patents, but also to copyright, trademarks, geographical indications (champagne...), design and trade secrets
- Does not cover Plant Variety Right
 - Reference is made to the International Union for the Protection of New Varieties of plants (Union internationale pour la Protection des Obtentions Végétales UPOV)

Patents: what (1)

- Defensive right: forbids others to use your invention
- Only on novel inventions (see later)
- Limited in time: normally 20 years from filing
- Limited in territory: national patents (problem: law may differ in different countries – differences EC – US)

Patents: what (2)

- Intended to protect inventive effort
- Protection of the effort, in exchange for information on the invention
- Patent is intended to promote innovation

Patents: what (3)

- Limited in territory: national patents (Belgium, US, Japan...)
- Consequence: different rules in different countries!
- Filing can be co-ordinated
- EPO route: « Europe: 38 (also non-EC countries)»
- PCT route: « World-wide »

Patent: conditions

- Invention
- Novelty
- Inventivity
- Industrial applicability

Patent: additional requirements

- Unity of invention
- Sufficient disclosure

Patent: invention

- Invention: discoveries can not be patented
- Find a substance freely occurring in nature is a discovery
- If technical means are needed to isolate the product, it may be patentable

Patent: novelty (1)

- Novelty is absolute: document should describe exactly the same invention
- Everything what is public can be used as prior art (publication, poster, oral presentation)

Patent: novelty (2)

- Date of filing the application counts for evaluating novelty (priority date)
- Normally: filing in one country would be novelty destroying for filing later in other country
- Therefore: filing in foreign country can be recognised as valid priority date (Paris Convention)

Patent: inventivity (1)

- Should be inventive for the “person, skilled in the art”
- Several documents may be combined to proof lack of inventivity
- not absolute: discussion possible

Patent: inventivity (2)

- In EPO: inventivity is assessed by problem solution approach
 - What is closest prior art?
 - What is the remaining problem?
 - How is the problem solved by the invention?
 - Is this solution inventive to the person skilled in the art?

Patent: Industrial applicability

- Covers also agriculture
- Inventions should have a “technical effect”

Patent: unity

- Patent should cover only one invention
- There should be a “unifying concept” that is inventive on its own (e.g. not that all the genes come from the same species)

Patent: sufficient disclosure

- Person, skilled in the art should be able to repeat the experiments without “undue experimentation”
- Person, skilled in the art is not inventive!

Plant Varieties

- According to TRIPS, plant varieties *may (not must)* be patentable OR protected by PVR
- Excluded from patenting in Europe
- Inventions, not limited to a plant variety can be patented (transgenic plants)
- For plant varieties: Plant Variety Right

Plant Variety right: what (1)

- Similar to patents:
 - Limited in time
 - But (in Europe) 25 or 30 (vines or trees) from **grant***
 - Limited in territory

Plant Variety right: what (2)

- Authorisation of holder is needed for
 - Production or reproduction (multiplication)
 - Conditioning for the purpose of propagation
 - Offering for sale
 - Selling or other marketing
 - Exporting or importing
 - Stocking for any of the purposes mentioned above

Plant Variety Right: conditions

- Distinct
- Uniform
- Stable
- New

(often referred as DUS)

PVR: distinctness (1)

- A variety shall be deemed to be distinct if it is clearly distinguishable by reference to the expression of characteristics that results from a particular genotype or combination of genotypes, from any other variety whose existence is matter of common knowledge on the date of the application

PVR: distinctness (2)

- *Note that distinctness is in fact defined as a phenotypical characteristic!*
- *Analytical parameters (secondary metabolites) are normally not accepted in the description*
- *Genotypical description of plant varieties is not yet used...*

PVR: secondary metabolites

In accordance with Article 83(3) of Council Regulation No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the test that a candidate has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characters listed in the protocol.



PVR: uniformity

- A variety shall be deemed to be uniform if, subject to the variation that may be expected from the particular features of its propagation, it is sufficiently uniform in the expression of those characteristics which are included in the examination of distinctness, as well as others used for the variety description

PVR: stability

- A variety shall be deemed to be stable if the expression of the characteristics which are included in the examination for distinctness as well as others used for the variety description, remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle

PVR: novelty (Europe)

- Variety is new if it has not been sold or otherwise disposed with the consent of the breeder
 - earlier than one year before application in the territory of the Community
 - earlier than four years, or in case of trees or of vines, earlier than six years before said date, outside the territory of the community

PVR: essentially derived variety (1)

- PVR is also valid for (*read: a granted PVR covers also*)
 - varieties which are not distinct
 - varieties whose production requires the repeated use of the protected variety
 - varieties which are **essentially derived** from the protected variety

PVR: essentially derived variety (2)

- It is predominantly derived from the initial variety
- It is distinct from the initial variety
- Except from the differences which result from the act of derivation, it conforms essentially to the initial variety

PVR: essentially derived variety (3)

- *According to this definition, a transformant of a certain plant variety, even if it is phenotypically clearly different, is an essentially derived variety and subject to plant variety right*

PVR: breeders exemption

- Breeders may use a plant variety to breed new varieties without paying license fees
- acts done privately and for non-commercial purposes and acts done for experimental purposes are also excluded from PVR

PVR: farmers exemption

- Farmers may produce their own 'propagation material' from a variety covered by PVR
- Farmers exemption limited to agricultural important species
- Not valid for hybrids

PVR: UPOV forms (1)

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TG/258/1

ORIGINAL: English

DATE: 2010-03-24

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

SWEET POTATO

UPOV Code: IPOMO_BAT

Ipomoea batatas (L.) Lam.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Ipomoea batatas</i> (L.) Lam.	Sweet potato	Patate douce	Batate, Süßkartoffel	Camote, Batata

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.



PVR: UPOV froms (2)

TG/258/1

Sweet potato/Patate douce/Batate, Süßkartoffel/Batata, 2010-03-24

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7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
1. VG Plant: growth habit (*)	Plante : port	Pflanze: Wuchsform	Planta: porte			
QN (a)	upright	dressé	aufrecht	erecto	Sinchunmi	1
	semi-upright	demi-dressé	halbaufrecht	semierecto	Younmi	3
	spreading	étalé	breitwüchsig	extendido	Yulmi	5
2. MS/ VG Stem: length of primary shoots	Tige : longueur des rameaux primaires	Stiel: Länge der primären Seitentriebe	Tallo: longitud de los brotes principales			
QN (a)	short	courts	kurz	cortos	Sinchunmi	3
(b)	medium	moyens	mittel	medianos	Koganesengan, Younmi	5
	long	longs	lang	largos	Zami	7

PVR: UPOV Forms (3)

- For full details: see separate pdf file

Conflicts between patent and PVR (1)

- Transformed variety can be covered by patent and PVR
- Owner of patent and PVR may be different
- Compulsory licenses foreseen in law if either patent holder or PVR holder refuses license

Conflicts between patent and PVR (2)

- For compulsory license: advantage should be demonstrated
- Conflicts on level of breeders' exemption:
 - transformed plants may not freely be used for breeding
 - exception is foreseen in PVR

Conflicts between patent and PVR (3)

- Conflict in respect to farmers' exemption: according to patent right, farmer should not be allowed to produce his own product right