

PLANT VARIETY PROTECTION

SEMIS COURSE ON
NATIONAL PLANT PROTECTION ORGANISATIONS (NPPOs) AND SEED QUALITY HELD ON
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What is a variety?

A plant grouping within a single botanical taxon of the lowest known rank, which grouping, irrespective of whether the conditions for the grant of a breeder's right are fully met, can be:

What is a variety?

- a. defined by the expression of the characteristics resulting from a given genotype or combination of genotypes,
- b. distinguished from any other plant grouping by the expression of at least one of the said characteristics and
- c. considered as a unit with regard to its suitability for being propagated unchanged

Why variety protection ?

- ▶ The development of a new variety is usually a long and costly undertaking and the investor needs a chance to recoup costs and profit from the breeding investment
- ▶ Without the legal protection of rights, breeders can lose control of the commercialization of new varieties to persons who did not contribute towards the breeding costs.

Why variety protection ?

- ▶ The rights scheme also allows countries access to internationally bred varieties which would not be available to them without legal protection thus allowing farmers gain access to an increased number and range of improved varieties.

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Types of IP Protection

A crop variety can be protected by more than one form, and often two or more forms of protection can be used simultaneously

- a. Plant variety rights
- b. Patents
- c. Trade secrets
- d. Trademarks
- e. Biological protection
- f. Contracts

Legislations on variety protection

- Ethiopia: Legal Regime on Plant Variety Protection
- Zimbabwe: TITLE 18: Chapter 18:16 Plant breeders rights act
- Zambia: Chapter 236 the plant variety and seeds act
- Kenya: Seeds and Plant Varieties Act (Cap 326)
- Tanzania: Protection of New Plant Varieties (Plant Breeders Rights) Act (2002)
- Uganda: Plant Variety Protection Bill, 2010:

Plant Variety Protection

This is generally covered under guidelines provided by the UPOV (International Convention for the Protection of New Plant Varieties)

- It is an intergovernmental organization with headquarters in Geneva (Switzerland)
- The Convention was adopted in Paris in 1961 and it was revised in 1972, 1978 and 1991

UPOV – Revisions

UPOV Conferences	Operative
1961	1968
1972	1977
1978	1981
1991	1998

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What is the difference?

UPOV Convention	1978	1991
Requirements	Distinct, Uniform and Stable	Distinct, Uniform, Stable, New
Protects	Commercial use of reproductive material of the variety	All plant varieties and products including plants that are derived
Duration of Protection	15 years from application date for most species. 18 years for trees and vines	20 years from application date for most species. 25 years for trees and vines
Breeder's Exemption	Yes. Acts for breeding and development of other varieties are not prohibited.	Optional. The decision to include an exemption is dependent on each members national legislation.

Requirement for plant protection under TRIPs

- ▶ In 1994
 - Trade-Related Aspects of Intellectual Property Rights (TRIPS) was signed and obligated WTO members to offer some kind of IP protection for plant varieties, whether through patents, “an effective *sui generis system*,” or both.

Plant Variety Protection (PVP)

- ▶ PVP confers IP rights, known as *Plant Breeder's Rights (PBR)*, which *provide an incentive to plant breeders for the development of new varieties of crops*

What are Plant Breeders Rights?

- ▶ Plant Breeders' Rights (PBRs) are rights granted by the State to protect the proprietary rights of plant breeders with regard to breeding and discovery of new plant varieties
- A protected variety with its grant of rights, like other personal property, may be sold, mortgaged or assigned to another person

Who can apply for PBR?

- Only the owner of a new variety is entitled to apply for a grant of PBRs.
 - The owner is the breeder or the discoverer of the variety, his/her employer or his/her successor in title. An application may however be made by an agent on behalf of the owner

What variety qualifies for PBR application?

Four criteria are used:

– **New (Novelty)**

- For Kenya: Not cultivated or offered for sale for more than 1 year from date of application, or 4 years outside the country with consent of the owner

– **Distinct**

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What variety qualifies for PBR application?

- At the time of application, the variety must be different in at least one character in morphology (e.g. shape, color); physiological (e.g. disease resistance); or other (e.g. protein content).
- **Uniform**
 - Variety must be sufficiently uniform
- **Stable**
 - Variety must have repeatedly reproducible characteristics from one generation to another

Extension of PBRs

- ▶ In addition to the original plant variety protection is extended to:
 - a. Any plant variety that is essentially derived from the original plant variety.
 - b. Any plant variety that is not distinct from the original plant variety; and
 - c. Any plant variety where the production requires the repeated use of the original plant variety.

<http://www.ipos.gov.sg/AboutIP/TypesofIPWhatisIntellectualProperty/Whatisplantvarietiesprotection.aspx#>

Term of grant for plant breeders rights

- ▶ Plant Breeders' Rights are granted for a term of 20 years beginning from the date on which the grant of the PBR takes effect.
- As regards fruit trees and their rootstocks, forest and ornamental trees and grape vines, the period prescribed for protection is 25 years

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What are the limitations to these rights?

Exemptions:

1) research exemptions

- A research exemption allows breeders to use the variety as breeding stock to develop new varieties.

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What are the limitations to these rights?

2) farmers' exemptions

- A farmers' exemption allows farmers to save seed of a protected variety for the sole purpose of replanting their own land.

3) Grow or use a protected variety for non commercial purposes

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Patents

- ▶ A plant patent is granted by the Government to an inventor (or the inventor's heirs or assigns) who has invented or discovered and asexually reproduced a distinct and new variety of plant, other than a tuber propagated plant or a plant found in an uncultivated state.
- ▶ The grant lasts for 20 years from the date of filing the application

Patents...

▶ Patent laws :

- do not allow farmers to save seeds or breeders to use a plant variety as parental stock for breeding new varieties.
- cover more inventions and discoveries than do PVPs (plants, seeds, genetic constructs, and enabling technologies)

Patents protection vs PVP

Subject	Patent Protection	Plant Variety Protection
Holder of Protection	Inventor	Plant Breeder
Ease of making application	Requires involvement of patent specialists/lawyers	User friendly; breeder can make the application.
Object of protection	(Industrial) invention	Plant Variety
Field examination	Not required	Required
Plant material for testing	Not required	Required
Conditions for grant of rights	a) Novelty b) Industrial applicability c) Non-obviousness (inventive step) d) Enabling disclosure	a) Novelty b) Distinctness c) Uniformity d) Stability e) Appropriate denomination

Patents protection vs PVP

Subject	Patent Protection	Plant Variety Protection
Determination of scope of protection	Determined by the claims of the patent	Fixed by the national legislation (by UPOV Convention in the case of UPOV member States)
Use of a protected variety for breeding further varieties	May require the authorization of the patentee.	Does not require authorization of the right holder.
Term of protection	20 years from date of application (as per TRIPS Agreement)	25 yrs for trees and vines, 20 yrs for other plants, from date of grant (1991 Convention)

Source: Wachira F. & Ngwediagi 2006

Trade Secrets

- ▶ A trade secret prevents the unauthorized use and disclosure of secret information
- Trade secret protection, unlike patent protection, requires no formal application, and lasts indefinitely— so long as the information is kept secret!

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Trade Secrets

- Trade secrets do not provide any protection against someone who reverse-engineers or independently discovers the information in question
- A classic example of a plant-based trade secret is the genetic information contained in the seeds of the parental inbred lines that are used to produce proprietary hybrid varieties

Trademarks

- Trademarks and geographical indications may also be used to protect plant material, but they are generally less useful than trade secrets, utility patents, and plant patents.

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Trademarks

- Geographical indications are words or phrases that indicate the region from which the plant material originates; they are valuable because they suggest to consumers that the plant material has beneficial traits that are commonly associated with plant material from that region

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Individual breeders protection

- ▶ Coding of inbred lines
- ▶ Coding of materials in Regional Trials
- ▶ Hiding of pedigrees in trial entries
- ▶ Restricted access to nurseries by unauthorized persons
- ▶ Information passed on only “need to know” basis

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Biological protection

- **Prevent** multiplication, e.g. because a variety is sterile or does not produce viable seeds
 - Guarantee that the **characteristics of a variety get lost upon multiplication** (as is the case with hybrids);
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Contracts

▶ Material Transfer Agreements

- Material Transfer Agreements (MTAs) are legal agreements made between a provider and a recipient party when research material is being transferred between institutions.
- The MTA itself contains a written description of the material to be transferred and any limits on the material that the provider wishes

Contracts

▶ Bag Labels

- An explicit contract is described on a bag label which is normally sewn into the seal of a bag. By opening the bag and breaking the seal, the purchaser agrees to comply with the contract.

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Nullity and Cancellation of the Breeder's Right

Nullification

- ▶ A breeder's right must be declared null and void if it is established:
 - (i) that the variety was not novel or distinct at the time of the grant of the breeder's right,

Nullity and Cancellation of the Breeder's Right

- (ii) that, where the grant of the breeder's right has been essentially based upon information and documents furnished by the breeder, the variety was not uniform or stable at the time of the grant of the breeder's right, or
- (iii) that the breeder's right has been granted to a person who is not entitled to it, unless it is transferred to the person who is so entitled.

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cancellation

- ▶ A breeder's right may be cancelled if it is established that the variety is no longer uniform or stable.

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Nullity and Cancellation of the Breeder's Right

- ▶ In addition, a member of the Union may cancel a breeder's right granted by it if, after being requested to do so and within a prescribed period,
 - (i) the breeder does not provide the authority with the information, documents or material deemed necessary for verifying the maintenance of the variety,

Nullity and Cancellation of the Breeder's Right

- (ii) the breeder fails to pay such fees as may be payable to keep his right in force, or
- (iii) the breeder does not propose, where the denomination of the variety is cancelled after the grant of the right, another suitable denomination.

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THANKS

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