

# Plant Related Intellectual Property

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Elaine T.L. Wu  
Attorney-Advisor  
Office of Policy and International Affairs  
USPTO



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# WIPO

## Inside WIPO

### What is WIPO?

WIPO is the global forum for intellectual property services, policy, cooperation and information. We are a self-funding agency of the United Nations, with 186 member states.

Our mission is to lead the development of a balanced and effective international intellectual property (IP) system that enables innovation and creativity for the benefit of all. Our mandate, governing bodies and procedures are set out in the WIPO Convention, which established WIPO in 1967.

### Quick facts

History: established in 1967 | Membership: 186 member states | Director General: Francis Gurry | Headquarters: Geneva, Switzerland



Visit WIPO in Geneva (Photo: WIPO) [Me]

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## WTO Agreement on Trade Related Aspects of International Property Rights (the TRIPs Agreement)



- The most detailed and comprehensive multilateral agreement on intellectual property yet negotiated



## TRIPs – What's the big deal?

- In a single agreement, it establishes minimum standards of protection for the most important forms of intellectual property, including patents, undisclosed information, trademarks and geographical indications.
- It establishes standards for enforcement of those forms of intellectual property.
- It provides a binding, enforceable dispute settlement mechanism.



## TRIPs Article 27

- Article 27 (1): Requires that patents be available for any invention, whether products or processes, in all areas of technology provided that they are new, involve an inventive step and are capable of industrial application
- Article 27(2): Members may exclude from patentability inventions under the following conditions:
  1. the prevention is necessary to protect *ordre public* or morality, including protecting human, animal, or plant life and the environment; and
  2. exclusion is not made because exploitation is prohibited by law.



## TRIPs Article 27 – Bottom line

- **TRIPs Article 27(1) – Patentable Subject Matter**
  - Explicit obligation to give protection
    - Inventions – whether products or processes – in all fields of technology
    - Microorganisms
- **TRIPs Article 27(2) – Exclusions from patentability:**
  - Explicit permission to exclude from patent protection
    - Plants and animals
    - Diagnostic, therapeutic and surgical method
  - Permission not to give protection
    - Discoveries
    - Substances existing in nature



## TRIPs Article 27 – Patentable Subject Matter

- **Article 27(3) – Plant Variety Protection**
  - Members must provide for the protection of plant varieties either by patents or by an effective *sui generis* system or any combination thereof.
  - UPOV is an excellent example of a *sui generis* system.



## TRIPs Article 28

- **Article 28(1) – Exclusive Rights conferred**
  - Patents for products confer the right to prevent others from making, using, offering for sale, selling or importing for these purposes the patented product without the consent of the patent owner.
  - Applies to process patents and protects at least the product obtained directly by the patented process.



## TRIPs Article 29 – Conditions on Patent Applications

- **Members shall require patent applicants to**
  - Disclose the invention in a sufficiently clear and complete fashion.
- **Members may require patent applicants to**
  - Indicate the best mode and
  - Provide information concerning corresponding foreign applications and grants.



## TRIPs Article 39.2

- **Natural and legal persons shall have the possibility of preventing information lawfully within their control from being disclosed to, acquired by, or used by others without their consent in a manner contrary to honest commercial practices so long as such information:**
  - (a) is secret in the sense that it is not, as a body or in the configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question;
  - (b) has commercial value because it is secret; and
  - (c) has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information to keep it secret.



## Example: U.S. Law

- **What is patentable? – 35 U.S.C. Section 101**
  - Any person who “invents or discovers any new and useful:
    - Process
    - Machine
    - Manufacture
    - Composition of matter; or
    - Improvement thereof;May obtain a patent subject to the conditions and requirements of the law”

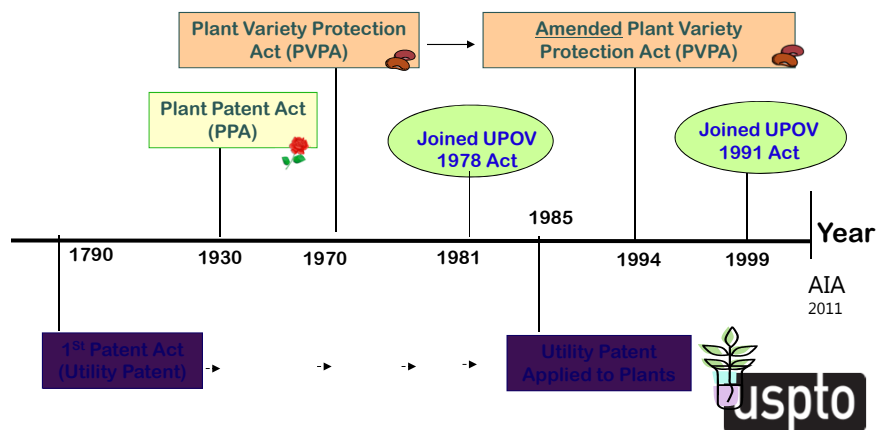


## U.S. Law

- Novelty (“new”) – 35 U.S.C. Section 102
- Industrial application (utility)- 35 U.S.C. Section 101
- Inventive step (unobvious) – 35 U.S.C. Section 103
- Written Description/Enablement – 35 U.S.C. Section 112



## Long History of Plant Protection



## IP Protection for Plants in U.S.

U.S. Patent and  
Trademark Office (USPTO)

- **Utility Patent**
  - All technologies
- **Plant Patent (PPA)**
  - Asexually reproduced plants

USDA-Plant Variety  
Protection Office (PVPO)

- **Plant Variety Protection Certificate (PVPA)**
  - Seed reproduced varieties
  - Edible tubers

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## UTILITY PATENTS (Patents for Inventions)



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uspto



## Utility Patents

Possible to protect:

- Modified plant genes, proteins, products
- Transgenic plants
- Class of varieties with specific traits
- Plant variety
- Plant parts-cells, tissues, etc.
- Methods of producing or using plants/varieties
- Etc.

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## Utility Patents

- 20 years protection from date of filing
- Right to exclude others from making, using, selling, offering for sale, and importing the claimed invention
- Effective only within the United States, U.S. territories, and U.S. possessions
- Requires maintenance fees

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## Commercial Agricultural Products Examples

| Product                        | Genetic Modification | Purpose   |
|--------------------------------|----------------------|---|
| soybean, corn                  | herbicide tolerance  | improve weed control  |
| cotton, corn                   | Insect resistance    | reduce insecticide use  |
| oilseed rape                   | heat stability       | improve processing quality, permit new food uses for healthier oils |
| corn, sunflower, soybean, rice | improved nutrition   | increase essential amino acids, vitamins, and nutrients             |

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## Trade Secrets

- **What can be protected:**
  - New processes
  - New methods of breeding
  - New software used for breeding
  - New device used in breeding
  - A plant variety



## Trade Secrets

- **What is a trade secret?**
  - Information that
    - Derives independent economic value from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and
    - Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.
- **No registration system needed**
- **The protection can last forever as long as the trade secret is kept secret**



## PLANT PATENTS

### Asexually Reproduced Plants



## Plant Patent



- Plant Patent Act, 1930 (35 U.S.C. §§ 161-164)
- Requirements: plant is new, distinct, asexually reproduced + basic patentability standards
  - Utility
  - Non-obviousness
  - Written Description

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## Plant Patent

- 20 year term from date of filing
- Right to **exclude** others from making, using, selling, offering for sale and importing the plant, or any of its parts
- Protects a single plant and **asexual** progeny
- No maintenance fee

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## Utility v. Plant Patents

- An invention may support both a utility patent and a plant patent if the claims are not identical.
- Utility Patent may be useful if the invention is not limited to a particular variety or where method claims are desired.
- Plant Patent may be useful where it is difficult to meet the written description or enablement requirements of a utility patent.

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## PLANT VARIETY PROTECTION U.S. Department of Agriculture (USDA)

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## Plant Variety Protection Act (PVPA)

- Plant Variety Protection Office (PVPO), USDA
  - [www.ams.usd.gov](http://www.ams.usd.gov)
- Encourages the development of new varieties of sexually reproduced plants
- Provides protection to those who breed, or discover and develop them
- Applies to plants:
  - Sexually (seed) reproduced
  - Tuber propagated
  - F1 hybrids

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## Requirements for Plant Variety Protection under PVPA

### A Variety must be:

- New (available less than 1 year in the US; less than 4 years in a foreign country)
- Distinct from all other varieties
- Uniform (all plants look alike)
- Stable (reproduces true to type)

\*Applicant submits evidence for NDUS



## PVP Rights Granted

- Term: 20 years (25 years for trees or vines) from issuance of the certificate
- Rights to exclude others from
  - Selling or marketing
  - Conditioning or stocking
  - Offering for sale or reproducing
  - Importing or exporting
  - Using the variety to produce (as distinguished from develop) a hybrid or different variety
- No maintenance fee



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## UPOV


The International Convention for the Protection  
of New Varieties of Plants  
1961 revised 1972, 1978, 1991

The International Union for the Protection of  
New Varieties of Plants

Inter-governmental Organization  
based in Geneva, Switzerland



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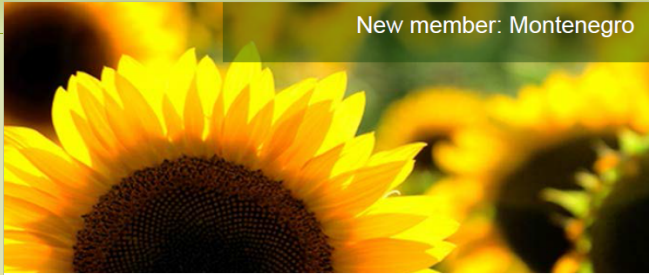


INTERNATIONAL UNION FOR  
THE PROTECTION OF NEW VARIETIES OF PLANTS

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Site map

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ABOUT UPOV | MEMBERSHIP | UPOV SYSTEM | PVP DATA & STATISTICS | MEETINGS | NEWS



### New member: Montenegro

#### Quick Links

- Introduction to UPOV
- Situation in UPOV
- Benefits of UPOV
- UPOV Collection
- Test Guidelines
- Distance Learning Course
- Seminars & Symposia
- Ashiro Rindo story
- FAQs


### Welcome

The International Union for the Protection of New Varieties of Plants (UPOV) is an intergovernmental organization with headquarters in Geneva (Switzerland).


UPOV was established by the International Convention for the Protection of New Varieties of Plants. The Convention was adopted in Paris in 1961 and it was revised in 1972, 1978 and 1991.

UPOV's mission is to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.


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GENIE Database



UPOV Lex

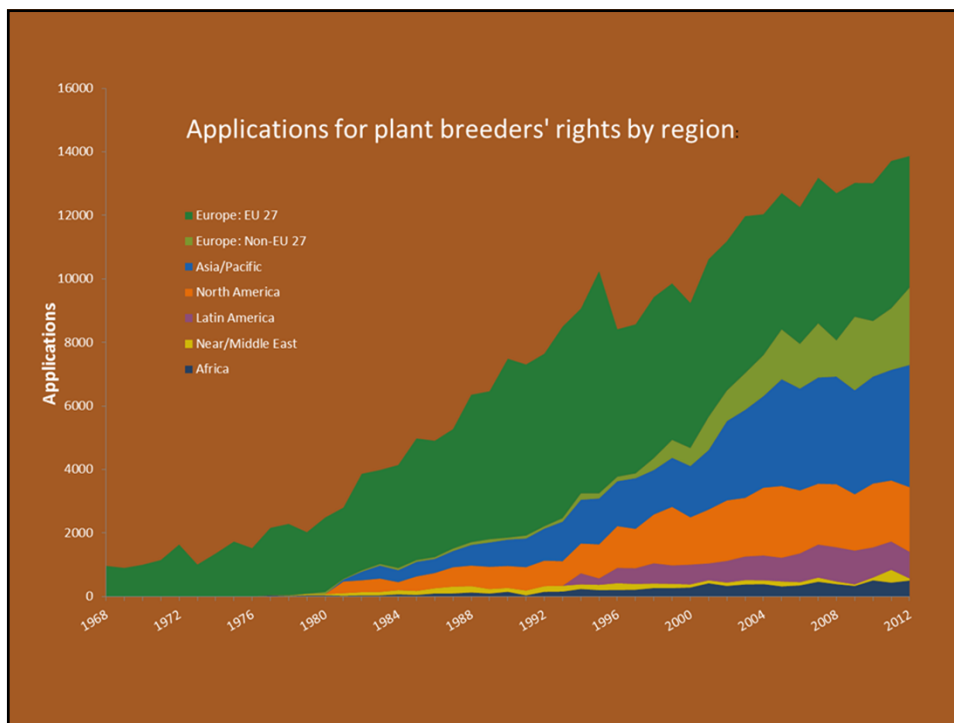


Plant Variety Database (PLUTO)

#### News & Upcoming Events

Benefits of UPOV

[More News](#)





## Benefits of new varieties of plants

- Improve yield and crop productivity
- Provide alternative renewable energy
- Increase farmers' income
- Ensure food security
- Respond to climate change
- Improve health and nutrition
- Expand trade and economic growth

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**THANK YOU!**  
**QUESTIONS?**



