



**USDA** **Plant Variety Protection Office**  
**August 2024**



# Agenda

- Plant IP Protection in the US
- Basic Program Information
- PVP Enforcement







# Plant Variety Protection Office

- Located in Washington DC
- Part of the USDA, Agricultural Marketing Service, Science & Technology Program
- Plant Variety Protection (PVP) is the same as Plant Breeders Rights (PBR) Internationally



# Types of Plant IP Protection in the US

## US Department of Agriculture

- Plant Variety Protection Office
  - **PVP Certificate:** Seed, Tuber, and Asexually Reproduced Plants
- Applications accepted for varieties sold for no more than one year in the US and four years Internationally



## US Department of Commerce

- Patent and Trademark Office
  - **Plant Patents:** asexually reproduced plants
  - **Utility Patents:** genes, traits, methods, plant parts, and plants
- Applications must be filed within one year of the date of sale, both in the US and Internationally



# Comparison of Plant IP Protection in the US

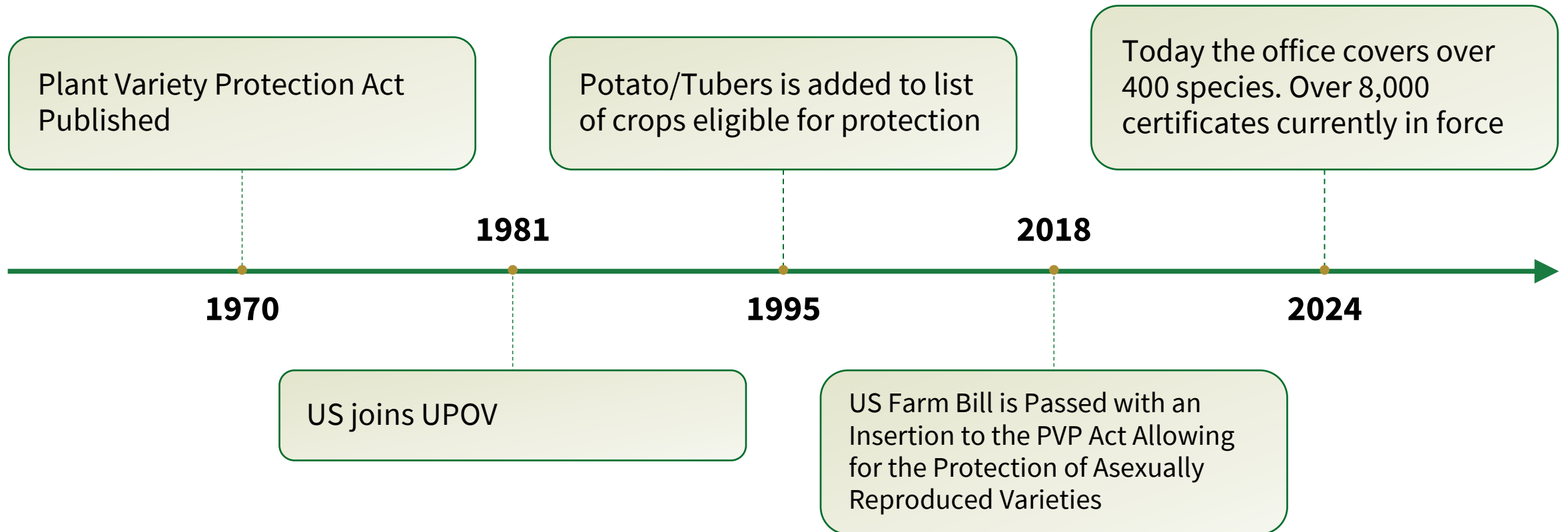
	Plant Patent	PVP	"Varietal Utility"
Type of Reproduction	Asexual	Both Sexual and Asexual	Both Sexual and Asexual
Deposit Requirement	No	Delay Deposit Form/ In House Maintenance	Yes
Scope of Protection	Only Specific Cultivar Developed, Including Whole Plants and All Parts	Specific Cultivar + Essentially Derived Varieties (Not Parts)	Specific Cultivar + Hybrids, Plant Parts, Mutants, Breeding, Marker Identification etc.
Limits on Protection	Exhaustion of All Rights Except Reproduction For Any Plants Sold	Research/Breeders Exemption Specifically Allows Breeding  Crop/Farmers Exemption Does Not Apply to Asexual Reproduction	Exhaustion of Plant Rights for Plants That Are Sold, Maybe Exhaustion of Method Claims, No Exhaustion of Downstream Plants
Time Frame for Filing	1 Year From First Sale or Public Availability Anywhere in the World	1 Year From US Sale; 4-6 Years from Sale Elsewhere	1 Year From First Sale or Public Availability Anywhere in World
Duration of Protection	20 Years from <u>Filing</u>	20/25 Years from <u>Issuance</u>	20 Years From <u>Filing</u>

# Plant IP Protection Strategies and Combinations

**PVP is an essential component in an IP protection strategy and can be used together with a patent!**

- PVP is ideal for additional protection when exporting your variety, the PVP act provides language that can protect varieties in transit
- PVP is the choice for longer protection or protection if patent novelty bar has been exceeded
- PVP protects Essentially Derived Varieties (EDV)
- PVP allows priority filing in other UPOV authorities

# PVPO History of IP Protection





# US PVPO Requirements

- **The US is a member of UPOV and follows the 1991 convention.**
- **To be protected, the variety must be:**
  - New:** Not sold commercially or not sold for more than a year in the US or more than 4 years internationally (6 years for trees and woody vines)
  - Distinct:** Distinguishable from any other publicly known variety
  - Uniform:** Any variations are describable, predictable, and commercially acceptable
  - Stable:** When reproduced, the variety will remain unchanged from the described characteristics
  - Denomination:** The variety shall be designated by a denomination which will be its generic designation. The denomination must be different from an existing variety of the same plant species or a closely related species.





# Establishing DUS

- **Distinctness, Uniformity, and Stability (DUS) is demonstrated and accomplished through field trials,** where the Subject Variety (SV) is grown side by side with a Most Similar Variety (MSV) under the same set of environmental conditions where morphological characteristics are observed, measured, and recorded
- **The outcome of the field trials should show how the SV is different from the MSV.**
- **Under the UPOV Convention, field trials can be conducted by one of three parties:**
  1. a government authority conducts the field trials itself;
  2. a government authority arranges for another party to conduct the field trials; or
  3. a government authority considers the results of field trials carried out by the applicant/breeder  
(The US follows the 3<sup>rd</sup> option)



# US PVPO Requirements

**In addition to the five UPOV conditions of protection, the PVP Act requires a germplasm deposit.**

- **This requirement has been waived for asexual varieties** due to technical challenges
- **Waiver is in place until further notice**
  - The requirement will not be applied retroactively
  - The applicants must maintain own germplasm and make it available upon request by PVPO ( in rare situations)



# Who can apply?

- **Anyone who meets the basic requirements can apply from *anywhere in the world!***
  - A US agent is not required
  - Applicant does not need to reside in the US
  - Attorneys are not required to file an application





## How much?

- **Total cost to apply: \$5,150**
  - One time fee paid at application filing – no annual maintenance fee
  - Payments can be made electronically or by check
  - PVPO operation is completely covered by the user fee
  - Consistent usage by applicants and support by seed and plant industries demonstrate the important role PVP plays in benefiting society



# Application Components

- **Applicants must complete all sections of the application (ST-470)**
  - General Owner Information (ST-470)
  - Exhibit A: Variety Origin and Breeding History
  - Exhibit B: Statement of Distinctness
  - Exhibit C: Objective Description of Variety
  - Exhibit D: Optional Additional Information
  - Exhibit E: Statement of the Basis of Ownership

The image shows three overlapping forms related to the Plant Variety Protection Certificate application process. The top form is the 'Application for Plant Variety Protection Certificate' (Form ST 470) with a title and USDA logo. The middle form is the 'Application for Plant Variety Protection Certificate' (Form ST 470) with a title and USDA logo. The bottom form is the 'Description of Variety' (Form ST 470) with a title and USDA logo.

# Exhibit C: Objective Description of Variety

- **Objective Description of Variety = DUS Results = DUS Reports**
- **Under the applicant-conducted field trials system**, field trials are conducted by the owner/applicant, breeder, agent, or someone contracted by the applicant
- **The DUS results are submitted to the PVPO as part of an application.** This makes it necessary to complete the field trials **before an application is filed**, in contrast to situations where government authorities conduct the trials after an application has been filed
- **Alternatively, applicants can submit DUS Reports from other UPOV members**



# On-Site DUS Examinations

- **On-Site DUS examinations are offered on a voluntary basis for asexually reproduced crops**
- **The goal is to produce DUS reports that are accepted by other UPOV members**
- **Staff have trained with the Canadian PBR Office at on-site DUS examinations for several years**

# Guidelines for Conducting Field Trials

## UPOV Test Guideline (TG) Documents

- PVPO follows UPOV guidelines and requires applicants to follow the UPOV Test Guideline documents to conduct field trials for their relevant varieties
- UPOV TGs  
[https://www.upov.int/test\\_guidelines/en/](https://www.upov.int/test_guidelines/en/)

## Description of Field Trials

- Information describing the site location(s) and the test parameters for the trial (e.g., plot size, planting density of plots, number of replications, number of plants, plant spacing, number of pots per variety, size of pots, number of plants per pot, application of plant growth regulator, etc.) should be included with the application in Exhibit A

## Submission of Photographs

- Submission of one or more photographs in jpeg format is required to help with the examination of the variety
- Photographs can be taken in the field or indoors against a neutral background if possible. A common reference of measure can be included such as a ruler
- It is also ideal to include both the SV and MSVs in the same photograph, with each labeled accordingly





# Guidelines for Conducting Field Trials

## Two Locations in One Year or One Location in Two Years

- Field trials to assess the variety's characteristics, uniformity, and stability are to be conducted for a minimum of two years at one location or for one year at two locations

## Selection of the Most Similar Variety (MSV)

- The MSV is usually the same species as the Subject Variety (SV) and is the most similar morphologically to the SV, if there are other MSVs, these can also be used for comparison
- The selected MSV is normally a variety of common knowledge
- The MSV(s) should ideally be a variety that has been protected by PVPO or another UPOV authority
- If such a variety is not available, then the MSV should be described with an Exhibit C form

## Setup of Field Trials

- Field trials should be conducted under normal growing conditions for the plants being observed
- Both the SV and MSV in the field trials should be subjected to the same conditions
- The SV and MSV should be grown at the same location for two years or at two separate locations in one year
- The SV and MSV should be grown in the same area of the greenhouse or the same field



# **Breeder-Conducted DUS Trials – Systemic Integrity**

**Trust and credibility are built into the system because of the strong connection and collaboration among federal, state, and local governments, breeders, and the agricultural industries.**

- All PVP applications are published on the website in total transparency.**
- The Federal and State governments conduct extensive compliance monitoring and testing of seed covered by the Federal Seed Act, including IP enforcement for PVP varieties.**
- PVPO is regularly contacted by Federal and State agencies to confirm ownership and the characteristics of varieties being inspected or tested.**
- PVPO is alerted by multiple partners when unusual activities with new varieties are suspected, especially in the case of varieties that are required to be sold as a class of seed (i.e., foundation, registered, and/or certified) and are confirmed by seed laboratories**



# **Breeder-Conducted DUS Trials – Systemic Integrity**

**Federal, state, and county government authorities are active in the industry and are aware of the varieties being developed in their areas and information is broadly shared. County cooperative extension service offices produce reports of the varieties that have been developed in their areas, the characteristics of these varieties, the owners, and where they can be purchased.**

**The US breeders are a closely linked community who are familiar with the varieties being developed and aware of the owners.**

**The US seed and horticultural associations are active in the industry and most breeders are members and are well-informed of variety developments**



# Guidelines for Submitting DUS Reports Produced by Other Authorities

- PVPO accepts DUS reports produced by other UPOV authorities for all asexually and some sexually reproduced crops if they follow the UPOV TGs for those species
- Applicants can provide the DUS reports to PVPO as an attachment when applying using the ePVP System or include it with the application forms; or ask PVPO to request DUS reports from relevant authorities





# Sharing of DUS Reports

- **PVPO participates in the UPOV DUS Report Exchange Module and shares its DUS reports**
- **We continue to pursue collaboration with other authorities to expand DUS sharing**
- **Current arrangements:**

Canada - Accepts US DUS reports for all vegetative varieties without additional field trials

Japan - Accepts US DUS reports on varieties that are rare in Japan, and on a case-by-case basis

# How to Apply



## **PVPO accepts applications for Plant Variety Protection in multiple ways!**

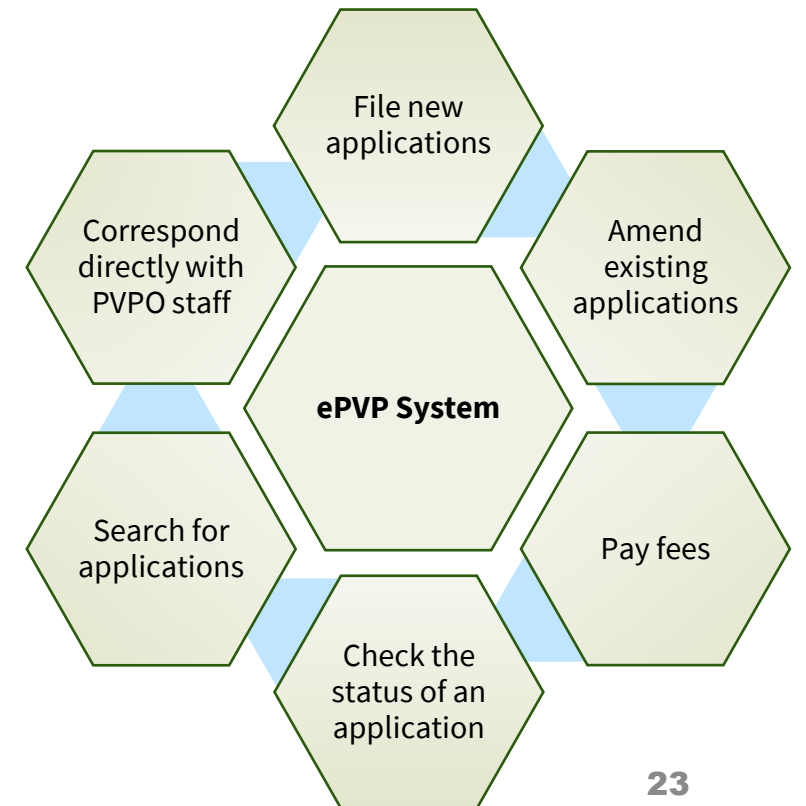
1. Electronic Plant Variety Protection (ePVP) System
2. PDF application emailed to [PVPOMail@usda.gov](mailto:PVPOMail@usda.gov)
3. Mailed to PVPO in Washington, DC:

USDA, AMS, S&T, Plant Variety Protection Office  
1400 Independence Ave., S.W.  
Rm. 2915-South Bldg., Mail Stop 0274  
Washington, DC 20250-0002



# ePVP System

**The ePVP System is the best way to apply - It is free to use and can be accessed anywhere in the world!**







# Examination Process: Overview

1. Verify that complete characteristic data is provided
2. Confirm that the most similar variety is adequately described
3. Develop appropriate search parameters to compare the subject variety against all others in the ePVP database
4. Determine other search tools needed
5. Generate DUS report



# Examination Process: Searching the ePVP Database



- **The database contains all protected varieties and known varieties that are adequately described**
  - The search is unique for each crop kind and includes qualitative traits and quantitative ranges
  - The developed search parameters are loaded into the application record in the database
  - When the search is run, the parameters exclude competing varieties
  - The subject variety is shown as either unique or not



# Distinctness Search Example

- **Subject Variety**



- **Most Similar Variety**



Number of Varieties	Plant Characteristic	Varieties
10	Total Plants in Database (Same Crop Kind)	
8	Plant Type (Compact)	
5	Number of Flower Petals (Three - Six Petals)	
2	Leaf Color (Dark Green)	
1	Flower Color (Red)	





# DUS Report

Eligibility  
information

Denomination  
clearance

Breeding  
history

Statement of  
distinctness

Morphological  
Description of  
SV

Morphological  
Description of  
MSV

Basis of  
ownership





# Post Issuance Process

## • Enforcement of Rights

- Owners of a protected variety may bring civil action against persons infringing on his or her rights
- Owners may ask a court to issue an injunction to prevent others from further violations
- Resources available on PVP infringement and enforcement include Seed Innovation and Protection Alliance (SIPA) and Farmers' Yield Initiative
- PVPO will provide application and evidence support

## • Research Exemption

- **Private Use:**
  - Protected varieties may be propagated when the propagating material is to be used for private and non-commercial purposes
- **Experimental Use**
  - Protected varieties may be used in research
- **Plant Breeding**
  - Protected varieties may be used for breeding and developing new plant varieties



# **Seed Innovation & Protection Alliance (SIPA)**

- **Promotes the understanding and value of seed innovations**
- **Facilitates and promotes the respect of intellectual property rights**
- **1-844-SEED-TIP**

# Protection, Prevention & Enforcement



## 1. Protection

- BMP Checklists
- Ed Unit Webinars
- SIPA IP Alerts
- Policy updates
- Global IP

## 2. Prevention

- "Neighborhood Watch"
- SIPA Tip Line Awareness
- Market Research
- Seed IP Insights (#seedIPinsights)
- Digital Media Campaigns
- Collateral & Ads
- Network relationships

## 3. Enforcement

- Tip-Line Awareness
- Enforcement options
- Membership skillsets
- Natl IPR Coordination Center
- Seed Control Officials
- SIPA Stewardship Program
- SIPA Mediation

January 22, 2024

© 2023 Seed Innovation and Protection Alliance. All Rights Reserved

# PPE



**Thank you!**

**Website:** <https://www.ams.usda.gov/services/plant-variety-protection>

**Email:** [PVP@mail.usda.gov](mailto:PVP@mail.usda.gov)