Benefits of the UPOV Plant Variety Protection System

Manabu Suzuki
Technical/Regional Officer (Asia), UPOV

February 28, 2023
Geneva, Switzerland

Why is effective PVP and UPOV membership important?

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MISSION STATEMENT

"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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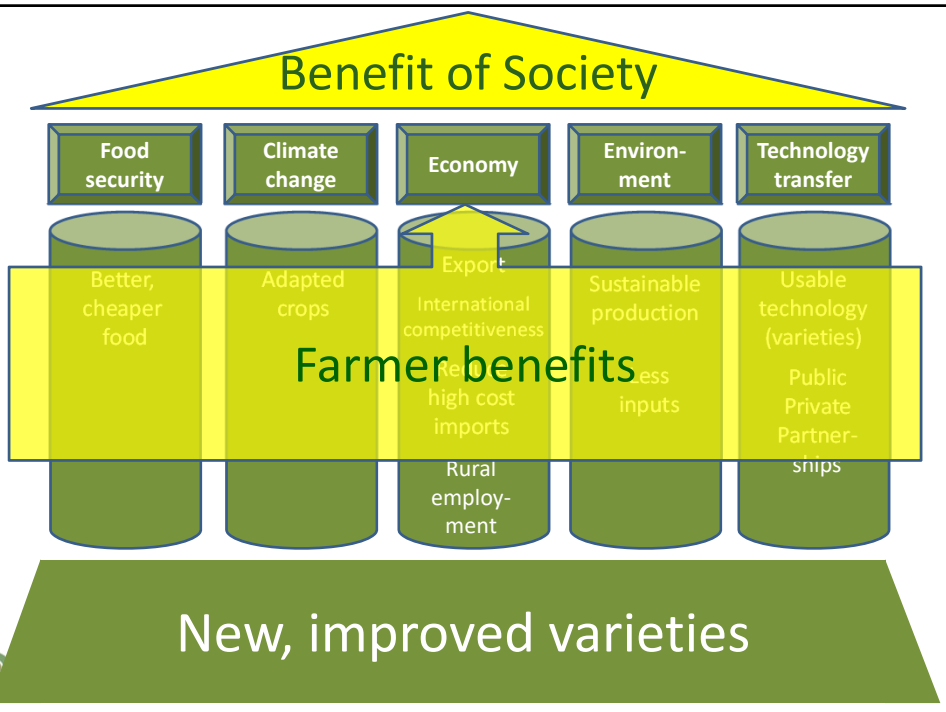

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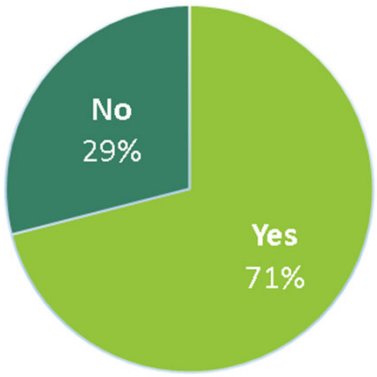
WORLD FARMERS' ORGANISATION

FARMERS'NEEDS AND EXPECTATIONS ON NEW IMPROVED PLANT VARIETIES

Highlights from the WFO consultation and technical workshop

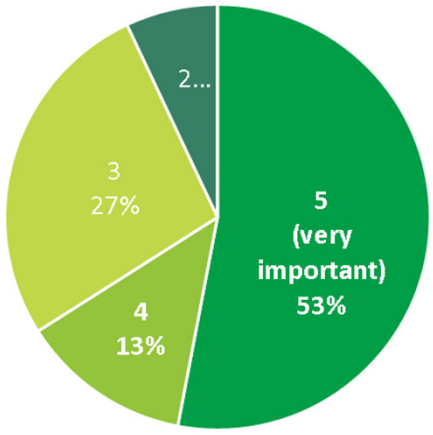
THE BIGGEST INDEPENDENT
GLOBAL FARMERS' VOICE

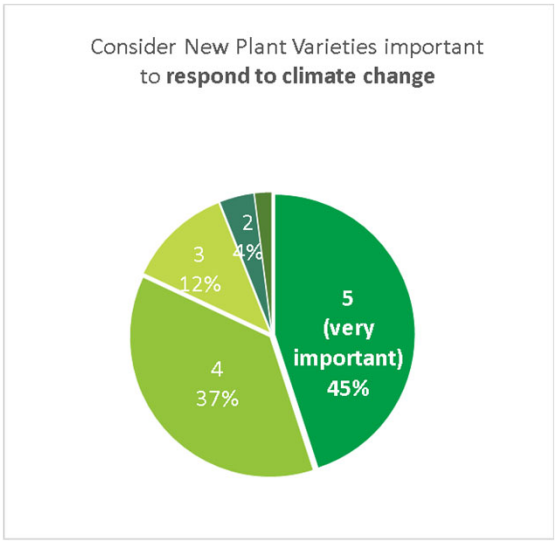
THE CONSULTATION
- Do Farmers use
New Improved Plant Varieties?

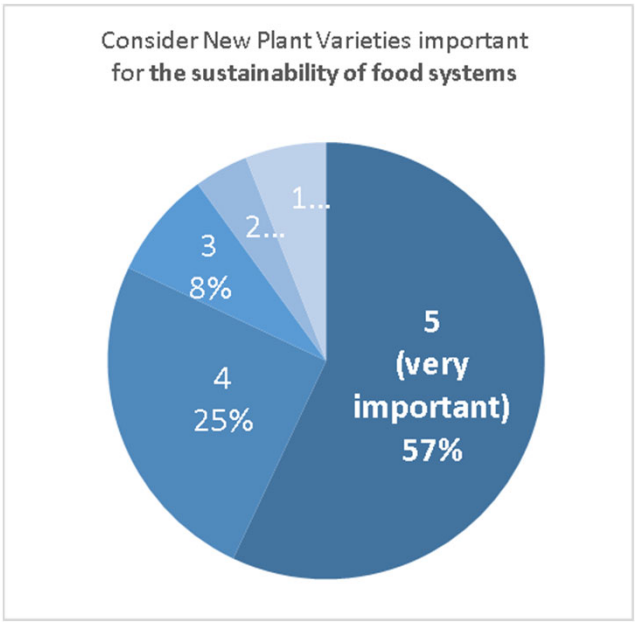


THE CONSULTATION
- If Respondents use
New Improved Plant Varieties?

Importance of New Improved Plant Varieties
for the success of your farm



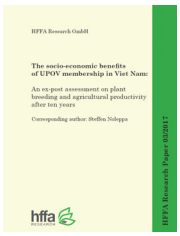




STUDY in VIET NAM*

Annual land productivity developments since Viet Nam joined UPOV in 2006 in

- **1995-2005**: increase in yield mainly through increased level of inputs – no detectable increase due to plant breeding
- **2006-2016**: annual land productivity increase due to plant breeding
  - **Rice** **1.7 %**
  - **Corn** **2.1 %**



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* "The socio-economic benefits of UPOV membership in Viet Nam; An ex post assessment on plant breeding and agricultural productivity after 10 years" (Corresponding author: Steffen Noleppa) by HFFA Research GmbH

STUDY in VIET NAM

Annual value added:

- Arable farming $2.3 billion
- Horticulture $1.0 billion
- Floriculture $ 0.2 billion

- GDP added upstream/downstream (value chains) $1.5 billion

TOTAL ADDED: $5 billion

(> 2.5% GDP)

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STUDY in VIET NAM

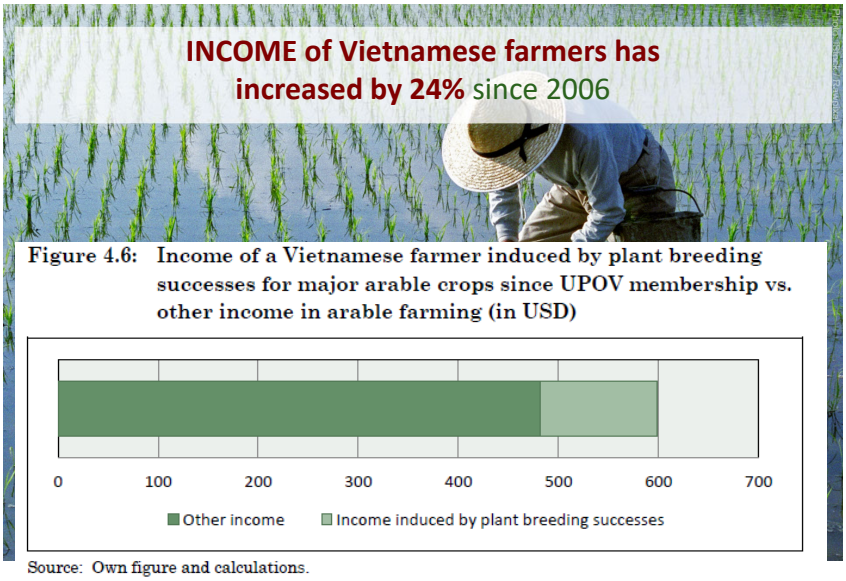

Figure 4.6: Income of a Vietnamese farmer induced by plant breeding successes for major arable crops since UPOV membership vs. other income in arable farming (in USD)

Source: Own figure and calculations.

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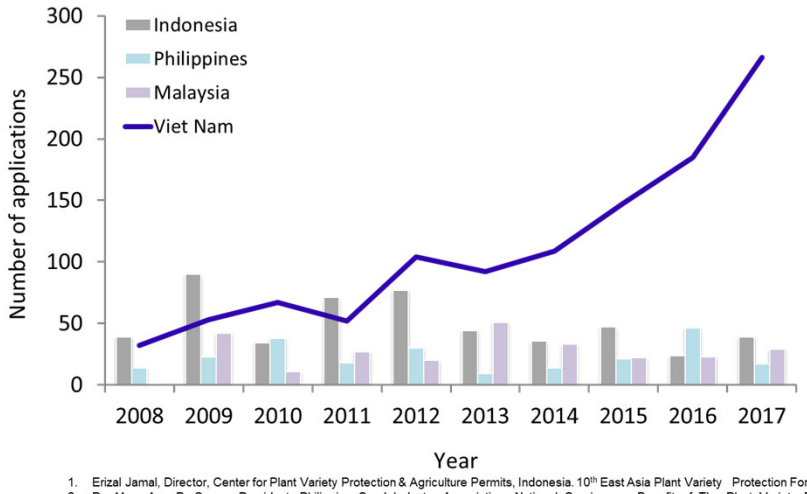
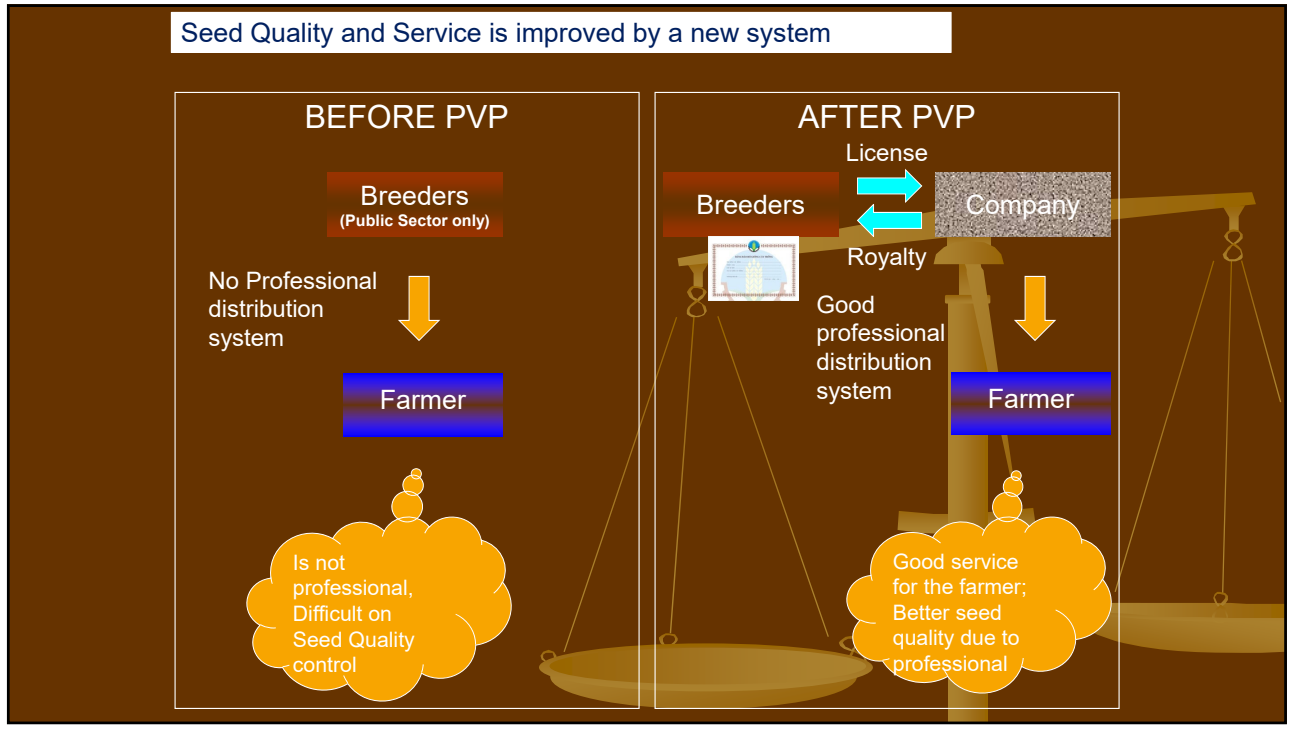
Applications for Plant Breeders' Rights

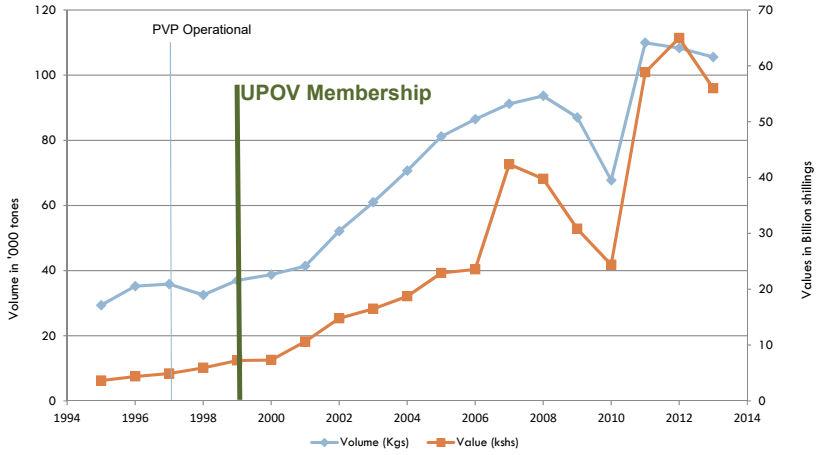


1. Erizal Jamal, Director, Center for Plant Variety Protection & Agriculture Permits, Indonesia. 10th East Asia Plant Variety Protection Forum Meeting
2. Dr. Mary Ann P. Sayoc, President, Philippine Seed Industry Association. National Seminar on Benefit of The Plant Variety Protection System, Philippines (11th EAPVP), August 2, 2018
3. Sri Ikarostika Rahayu Binti Muhammad Ghazi. Department Of Agriculture, Malaysia. National Seminar on Benefit of The Plant Variety Protection System, Philippines (11th EAPVP), August 2, 2018
4. Nguyen Thanh Minh, PVPO, Mard/Viet Nam. National Seminar on Benefit of The Plant Variety Protection System, Philippines (11th EAPVP), August 2, 2018

Seed Quality and Service is improved by a new system



Impact of Plant Variety Protection in Kenya



CUT FLOWER EXPORTS 1995 - 2013

Source: HCDA

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Impact of Plant Variety Protection in Kenya

Simon M. Maina,
Head, Seed Certification and Plant Variety Protection,
Kenya Plant Health Inspectorate Service (KEPHIS)
(website: www.kephis.org)

March 2021

Impact of PVP in Kenya

Employment creation

- It is estimated that the floriculture industry **employs over 150,000 people directly** and **more than 500,000 indirectly** who supply goods and services

Impact of Plant Variety Protection in Kenya

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March 2021

Impact of PVP in Kenya

Cut Flower Industry

- The Kenyan floriculture market was valued at USD 861.6 million in 2018, and is projected to register an annual growth of 4.7% during the forecast period (2020-2025).
- In the year 2020, 142,477.8 MT of fresh flowers **valued at USD 1.09 billion** was produced in Kenya.

Peru: tenth membership anniversary

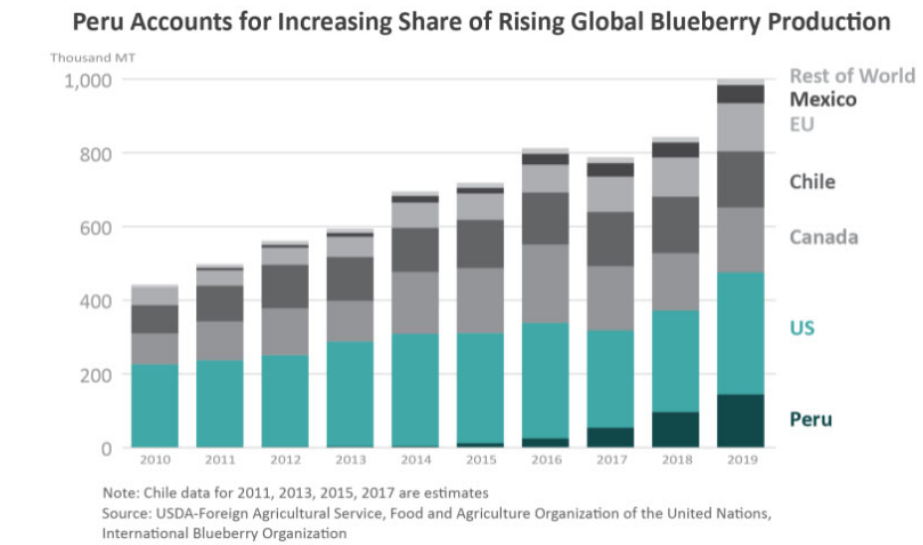
More than eighty new protected varieties of grapes

Fuente: Sunat. Elaboración: ComexPerú.

https://andina.pe/agencia/noticia-exportacion-peruana-uva-fresca-crecio-279-entre-enero-y-abril-2021-849095.aspx

High quality varieties are key for high value crops

More than sixty new varieties of blueberries protected since membership



https://www.fas.usda.gov/data/spotlight-perus-fruit-sector-races-new-heights May 12, 2022

High Level Study Tour (Japan, July 2016)

Koshihikari（越光）
(1,580 ¥)

Tsuyahime
(2,480 ¥)

Rice variety “Tsuyahime”

- High quality variety (good taste)
- Yamagata prefectural government holds the plant breeder’s right
- Royalty free for Yamagata farmers, royalty paid by other farmers
- Location and agronomy (less fertilizer and pesticide) controlled to maintain quality (= high market price)
- Increased farmers’ income

Farmers: income is increased

Example on benefits of Protected Varieties

Items	Protected Varieties	Non protected varieties
Price of Seed (rice, USD/1 kg)	**1.39**	0.64
Price of commercial grain is sold by farmer (rice,USD/Ton)	**292**	236
Average income in 1 ha for farmer (rice); USD	**1897**	1298
Benefits from seed of protected varieties	✓ Better quality, productivity ✓ Better tolerance in bad climate and diseases, insect : for production	? ? ?

* Source: VINA Seed Corporation (report on Nov. 2020)

UPOV = more choice for farmers…

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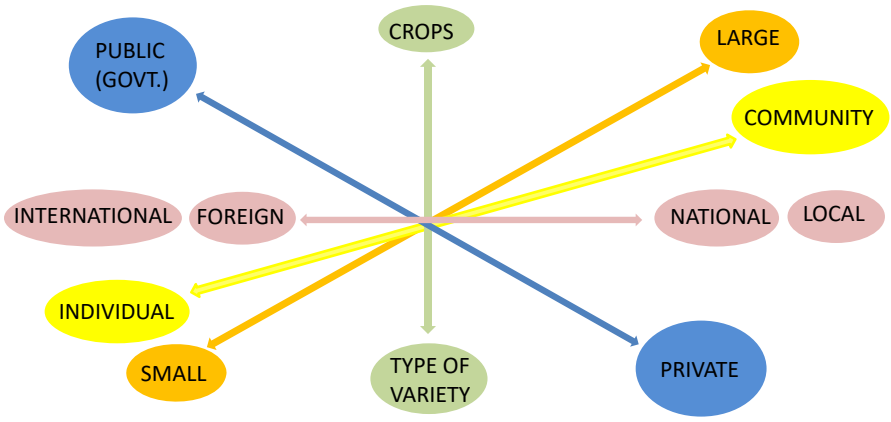

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WIPO Seminar on Intellectual Property, Innovation, and Exports: A Look at the Cocoa Industry in Trinidad and Tobago

Port of Spain - August 2, 2017

Best Practices of Plant Variety Protection (case study)

Michael D. Carriere, Ph.D.
UC Davis Innovation*Access*

UCDAVIS INNOVATIONACCESS
Connecting research to market

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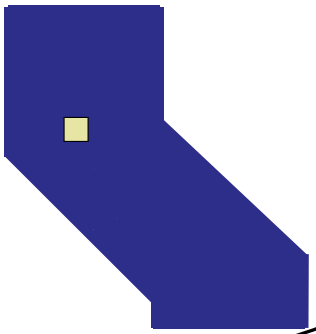
The World
$16.50/1000 plants royalty[1]

[1]royalty shared between UC and master licensees

United States
$9.00/1000 plants royalty

California
$8.00/1000 plants royalty



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UPOV Plant Breeders' Rights (PBR) Filings for UC Davis Strawberry Varieties 'Benicia' and 'Mojave'

Argentina	PBR
Australia	PBR
Belarus	PBR
Brazil	PBR
Canada	PBR
Chile	PBR
China	PBR
Columbia	PBR
Ecuador	PBR
EU	PBR
India	wait for UPOV PBR availability
Israel	PBR
Japan	PBR
Jordan	PBR
Lebanon	wait for UPOV PBR availability
Mexico	PBR
Morocco	PBR
New Zealand	PBR
Peru	PBR
Republic of Korea	PBR
Saudi Arabia	wait for UPOV PBR availability
South Africa	PBR
Switzerland	PBR
Tunisia	PBR
Turkey	PBR
Uruguay	PBR

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Republic of Korea

KSVS Symposium on Plant Variety Protection
Seoul, Republic of Korea (September 3, 2015)

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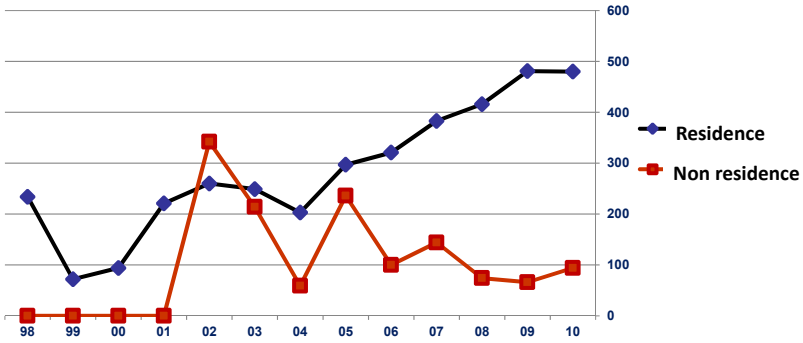
Republic of Korea

Application Ratio of Residents/Non Res.



Dr. CHO, Il Ho, Symposium on Plant Variety Protection - Future Strategy for Enhancing the Effectiveness of the PVP System (Seoul, July 13, 2011)

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www.upov.int

Benefits of the UPOV System: latest VIDEOS

VIDEOS – Benefits of the UPOV system

New Release in 2023

DIVERSITY IN TOMATO
How plant breeding has increased diversity in tomato.

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Benefits of the UPOV System: publications

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International Union for the Protection of New Varieties of Plants

Seminar on the role of plant breeding and plant variety protection in enabling agriculture to mitigate and adapt to climate change

Geneva, October 11 and 12, 2022 (virtual meetings) and October 26, 2022 (hybrid meeting)

https://www.upov.int/meetings/en/details.jsp?meeting_id=71391

UPOV PRISMA

Online PBR Application Tool

A tool to facilitate submission of
Plant **B**reeders' **R**ights applications

UPOV PRISMA

UPOV PRISMA
PBR Application Tool

Quick and easy online tool for transmission of application data for Plant Breeders' Rights

www.upov.int/upovprisma

UPOV PRISMA

Benefits of using UPOV PRISMA

- Online service for PVP applications
- 70+ countries covered
- Language choice to read forms
- Translation of predefined responses
- Copy data to other applications
- Reminders for Novelty & Priority
- Find all PVP Office procedures
- Overview of all submissions

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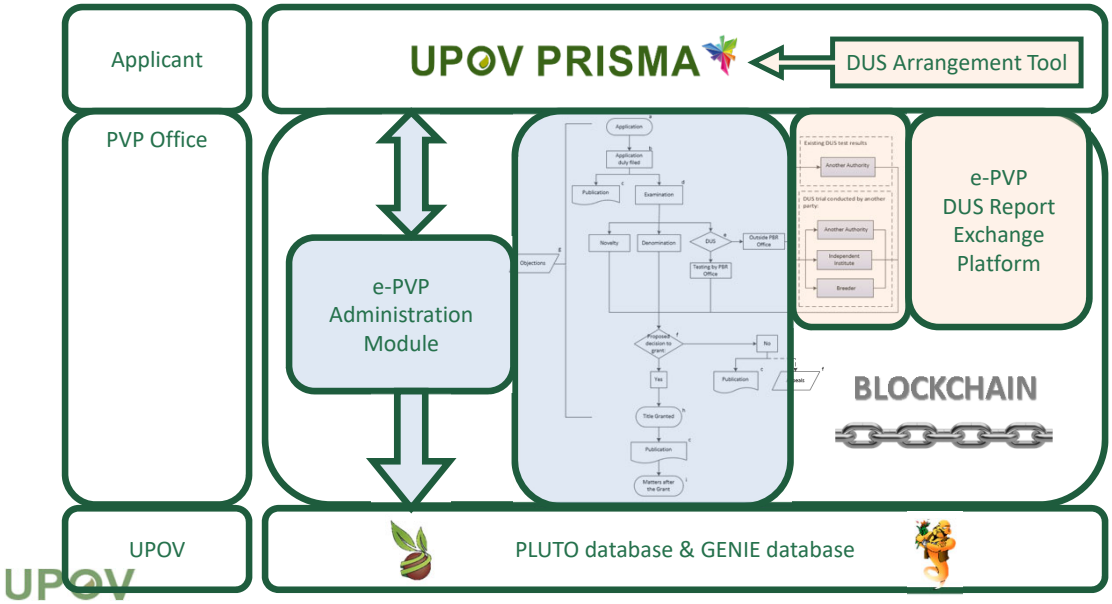
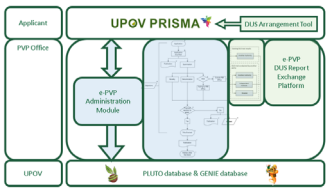
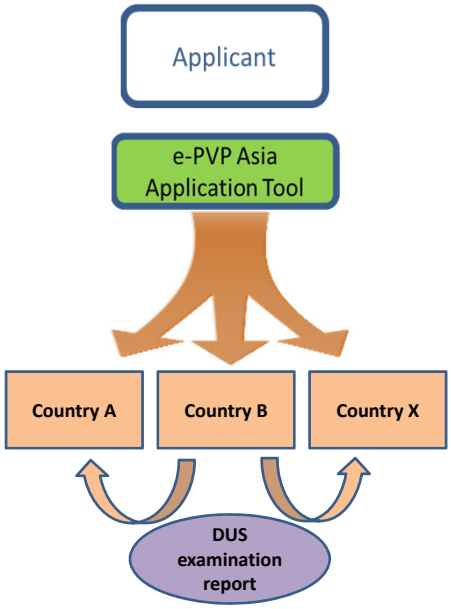
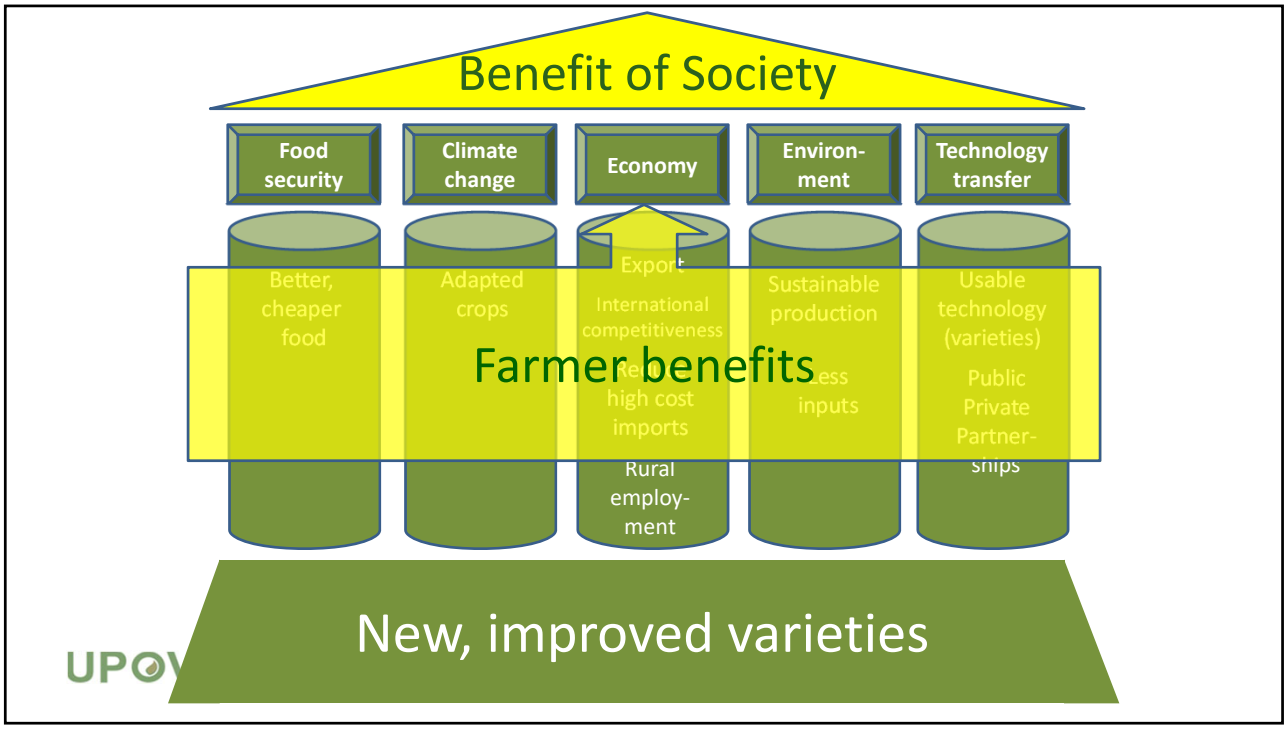
e-PVP



e-PVP Asia (EAPVP Forum Pilot Project)






Benefit of Society
Food security
Climate change
Economy
Environ-ment
Technology transfer
Better, cheaper food
Adapted crops
Export
International competitiveness
high cost imports
Rural employ-ment
Sustainable production
inputs
Usable technology (varieties)
Public Private Partner-ships
Farmer benefits
New, improved varieties