

# Workshop on awareness of Protection of Plant Variety under the UPOV Convention

## Basic Principles of the UPOV Convention and Benefits of UPOV membership

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*Technical/Regional Officer (Asia), UPOV*

*December 19, 2018*  
*(Vientiane, Lao People's Democratic Republic)*



International Union for the Protection of New Varieties of Plants

# Preview

1. Introduction to UPOV and Plant Variety Protection
2. Key features of the 1991 Act of the UPOV Convention
3. Diversity in plant breeding to deliver maximum benefits for farmers
4. Examples of how farmers and society have benefited in UPOV members

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# UPOV: INDEPENDENT INTERGOVERNMENTAL ORGANIZATION

The International **Convention** for the  
Protection of New Varieties of Plants

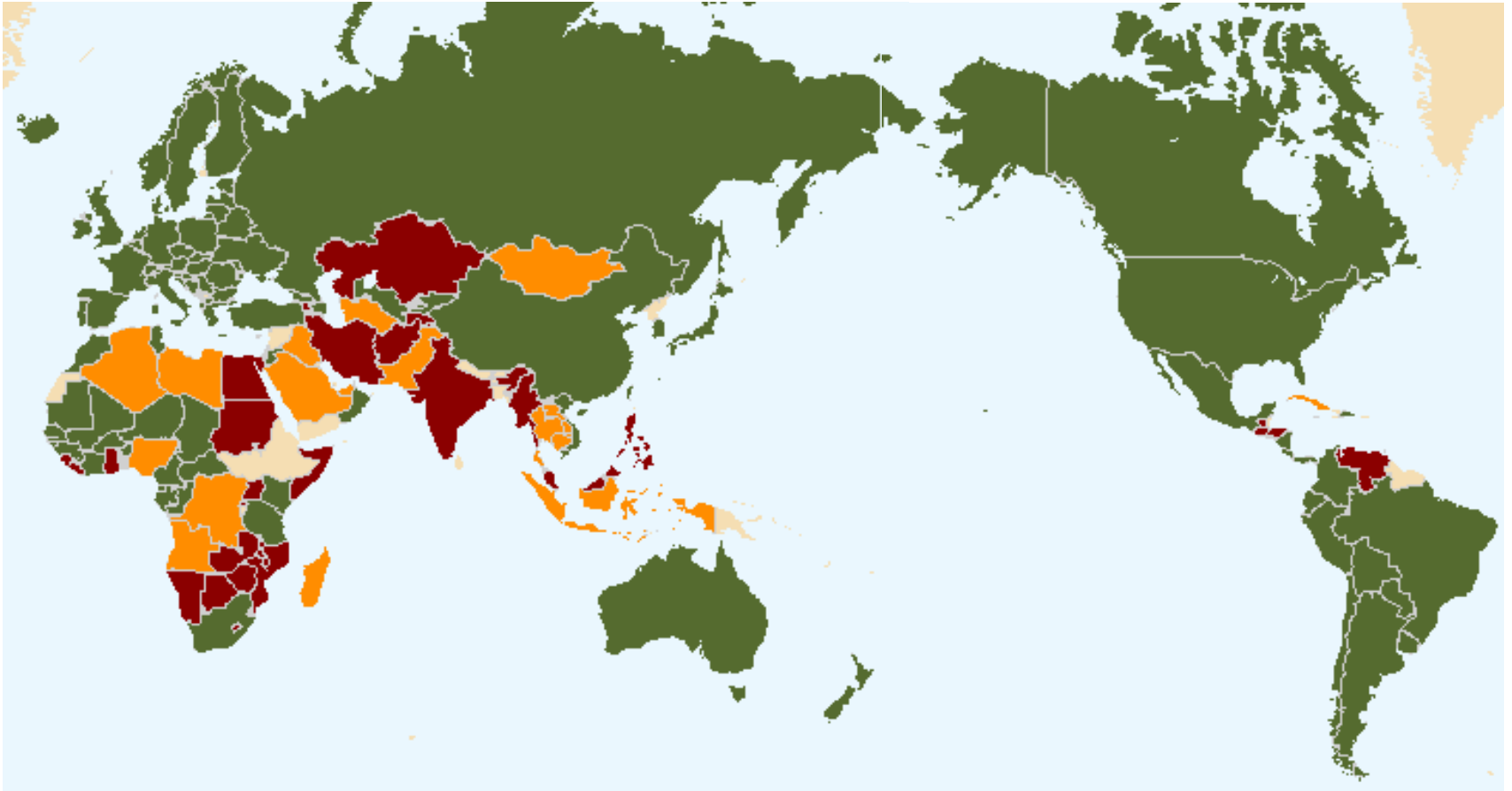
established in 1961

The International **Union** for the Protection of  
New Varieties of Plants

**U**nion internationale pour la  
**p**rotection des **o**btentions **v**égétales

# UPOV status

October 29, 2018



The boundaries shown on this map do not imply the expression of any opinion whatsoever on the part of UPOV concerning the legal status of any country or territory

**Members of UPOV (75) covering 94 States**

**Initiating States (17) and Organization (1)**

**States (25) and Organization (1) in contact with the UPOV Office**



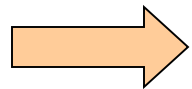
## UPOV MISSION STATEMENT

**“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”**

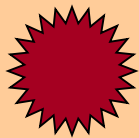


## MISSION STATEMENT

“To provide and promote an effective system of **Plant Variety Protection [PVP]**, [...]



**Plant Breeder's Right (PBR)**



# Preview

1. Introduction to UPOV and Plant Variety Protection
2. **Key features of the 1991 Act of the UPOV Convention**
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## **SOME KEY PROVISIONS OF THE UPOV CONVENTION (1991 Act)**

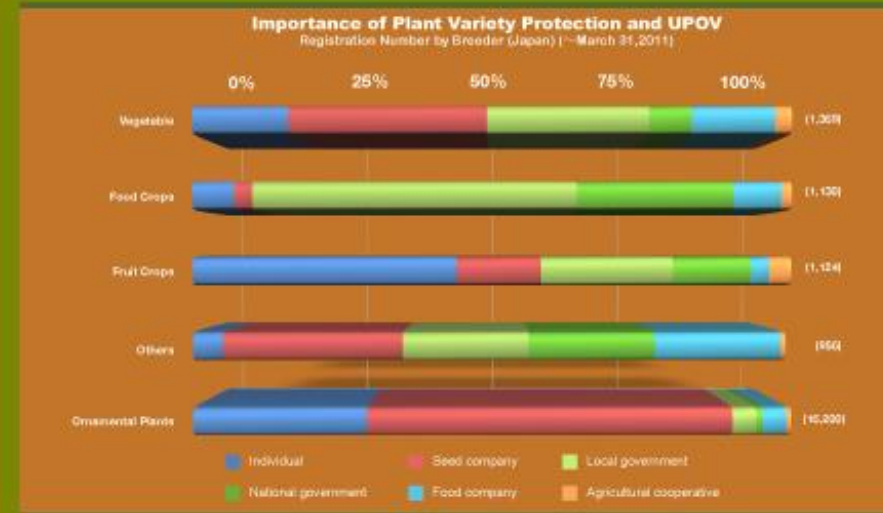
- (a) Breeders and varieties**
- (b) Genera and species
- (c) National treatment
- (d) Conditions of protection
- (e) Breeder's right and exceptions

# **BREEDER**

The person who  
bred, or discovered  
and developed, a  
variety

## Who can protect a plant variety?

There are no restrictions on who can be considered to be a breeder under the UPOV system: **a breeder might be an individual, a farmer, a researcher, a public institute, a private company etc.**



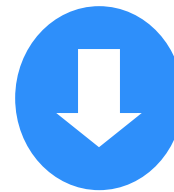
### Japan Registration Case Study

(click to see full view)



# BREEDER

The person who  
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**DEVELOPMENT  
IS NECESSARY**

## **SOME KEY PROVISIONS OF THE UPOV CONVENTION (1991 Act)**

- (a) Breeders and varieties
- (b) Genera and species**
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# **GENERA AND SPECIES TO BE PROTECTED**

(1991 ACT: New members of the Union)

- At least 15 plant genera or species on becoming bound by the UPOV Convention
- ALL plant genera and species within 10 years

# MEETING the CHALLENGE

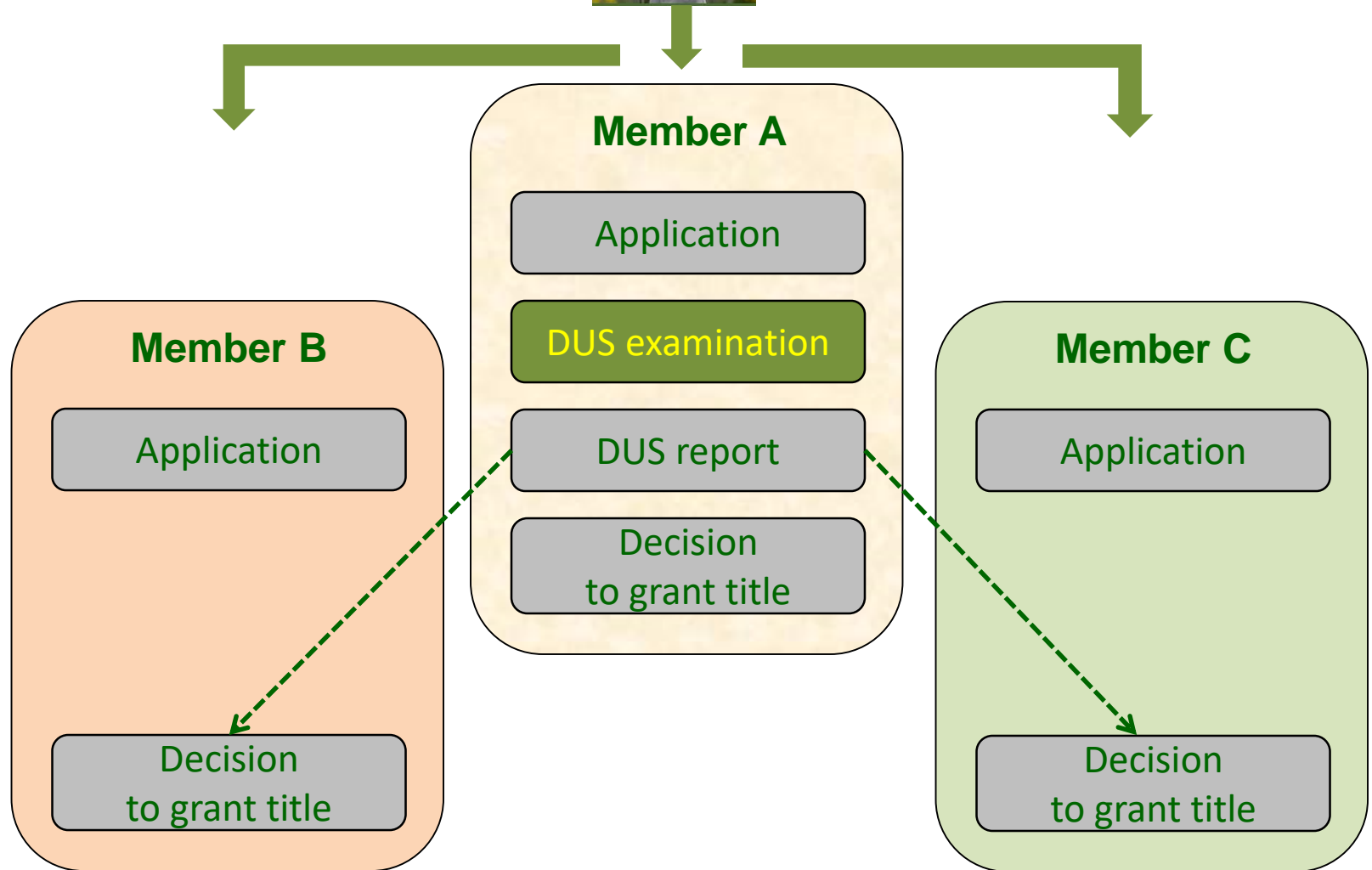
- Cooperation between Authorities can involve:
  - **purchase of DUS Test Reports** from other Authorities
  - **bilateral arrangements** to remove the need for duplication of DUS Tests
  - **centralized DUS testing** at regional or global level
- Cooperation with Breeders
- Support from UPOV
  - other members of the Union
  - UPOV Office



# Cooperation between Authorities

Cooperation between Authorities can involve:

- **use of existing DUS Test Reports** from other Authorities



**UPOV Model administrative agreement  
(TGP/5): 350 CHF (prior application)**

# COOPERATION

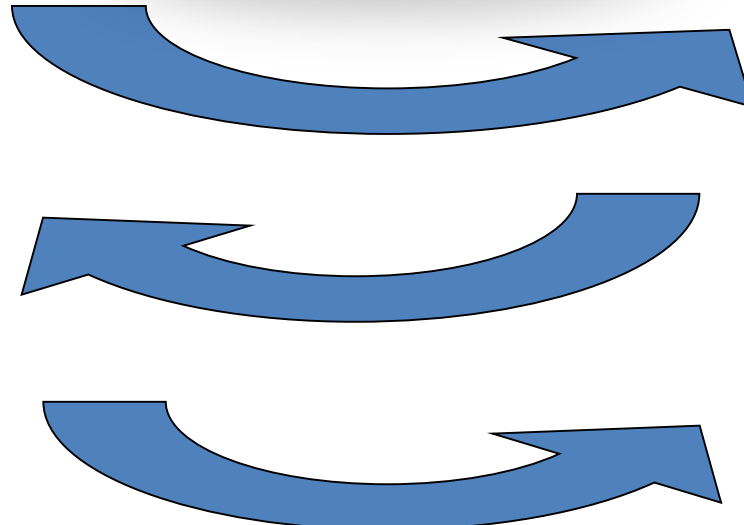
**Cooperation between UPOV members is a key benefit of UPOV membership**



*Practical DUS  
experience  
offered for >3,583  
genera and  
species*

*Number of  
genera/species for  
which varieties  
protected by members  
of the Union: > 3,628  
(>15,000 titles granted  
/annum)*

*Agreements for  
cooperation between  
members of the  
Union: > 2,018*



## **SOME KEY PROVISIONS OF THE UPOV CONVENTION (1991 Act)**

- (a) Breeders and varieties
- (b) Genera and species
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# NATIONAL TREATMENT

- National treatment, within the territory of a member of the Union, for nationals and residents of any other members of the Union

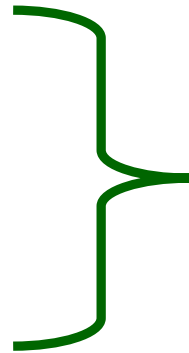
## **SOME KEY PROVISIONS OF THE UPOV CONVENTION (1991 Act)**

- (a) Breeders and varieties
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- (e) Breeder's right and exceptions

# CONDITIONS FOR GRANTING A BREEDER'S RIGHT

## *Criteria to be satisfied*

- NOVELTY
- DISTINCTNESS
- UNIFORMITY
- STABILITY



**“DUS”**

...

# **CONDITIONS FOR GRANTING A BREEDER'S RIGHT**

## **... Other requirements**

- **VARIETY DENOMINATION**
- **FORMALITIES**
- **PAYMENT OF FEES**

**NO OTHER CONDITIONS!**



## **SOME KEY PROVISIONS OF THE UPOV CONVENTION (1991 Act)**

- (a) Breeders and varieties
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# MINIMUM DURATION OF PROTECTION

**TREES and VINES** **25** years

**OTHER PLANTS** **20** years

**To be counted from the date of grant**

## Authorization of breeder required for:

- Production or reproduction (multiplication)
- Conditioning for the purpose of propagation
- Offering for sale
- Selling or marketing
- Exporting
- Importing
- Stocking for any of the above purposes

*.... for any protected variety*

# EXCEPTIONS TO THE BREEDER'S RIGHT

## Compulsory

Acts done:

- privately and for non-commercial purposes
- for experimental purposes
- breeding other varieties  
(breeder's exemption")

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# EXCEPTIONS TO THE BREEDER'S RIGHT

- Compulsory

(i) Acts done privately **and** for non-commercial purposes

- propagation of a variety by a **farmer exclusively** for the production of a **food crop to be consumed entirely by that farmer and the dependents of the farmer** living on that holding  
**therefore**

**“subsistence farming”** where these constitute acts done privately and for non-commercial purposes, may be considered by a UPOV member to be excluded from the scope of the breeder's right

**Acts Possibly falling within the scope of the exception**

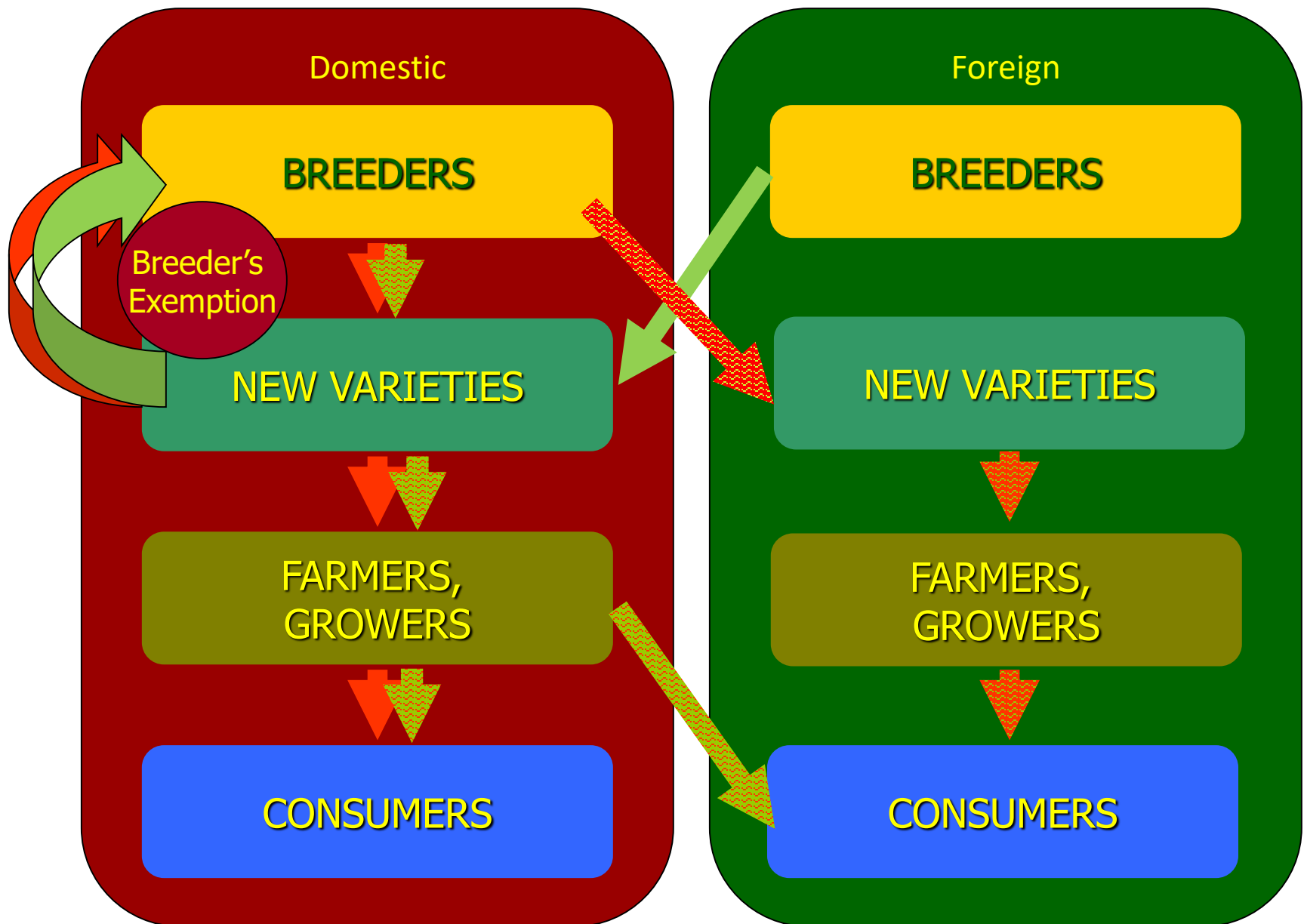


# EXCEPTIONS TO THE BREEDER'S RIGHT

## Compulsory

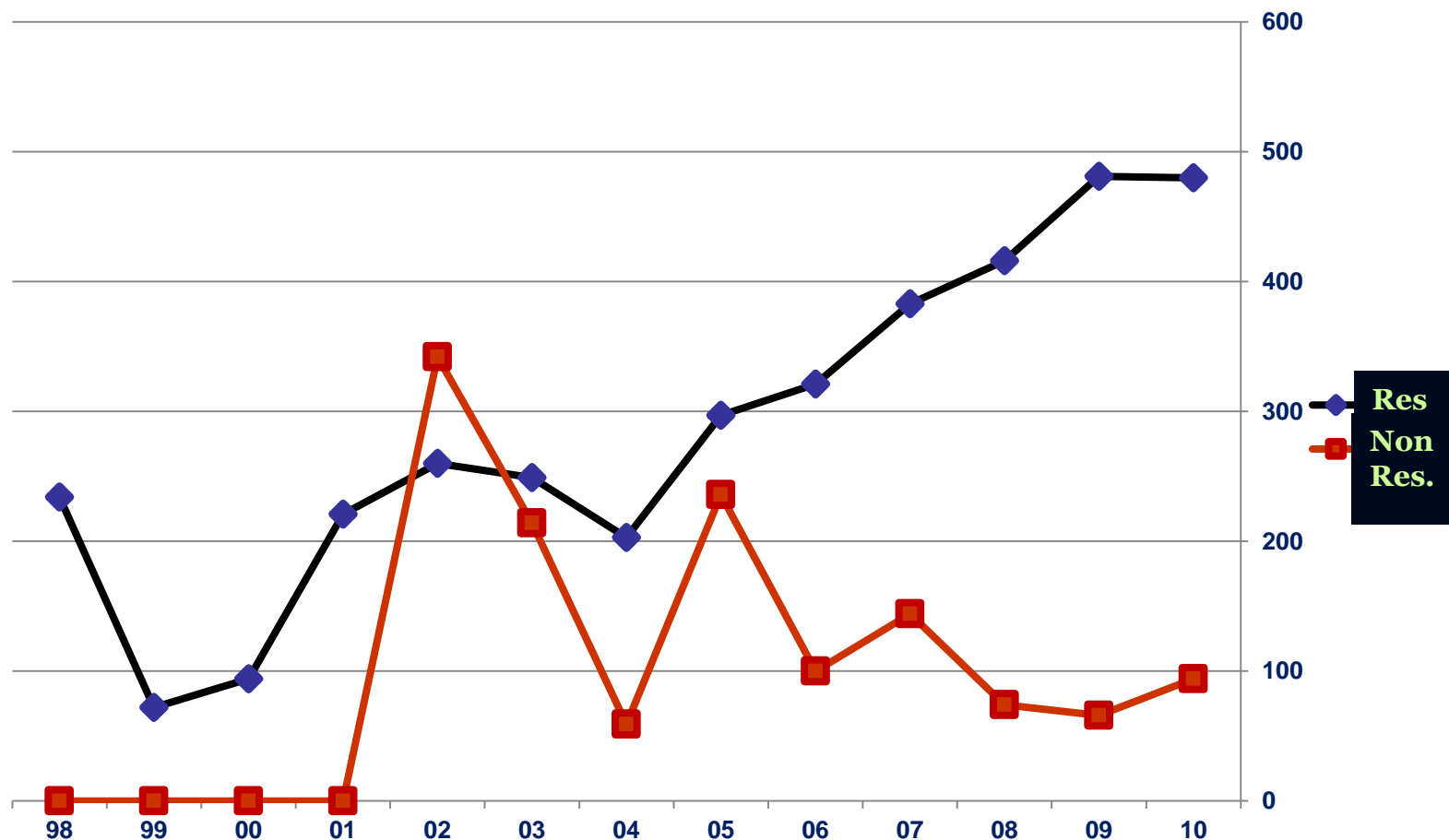
Acts done:

- privately and for non-commercial purposes
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# 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)

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

## Korean Rose Breeding Converts a Royalty Payer into a Receiver

Charlie Jeong/wonwoo trading

## Becoming Royalty Receiver

1. Korean pay rose royalty abroad about 1,040,000plants in year 2014
2. GARES rose varieties are sold about million in year 2014
3. Korea change from royalty payer to royalty receiver

# EXCEPTIONS TO THE BREEDER'S RIGHT

## Compulsory

Acts done:

- privately and for non-commercial purposes
- for experimental purposes
- breeding other varieties (breeder's exemption")

## Optional

**Farm-saved seed**

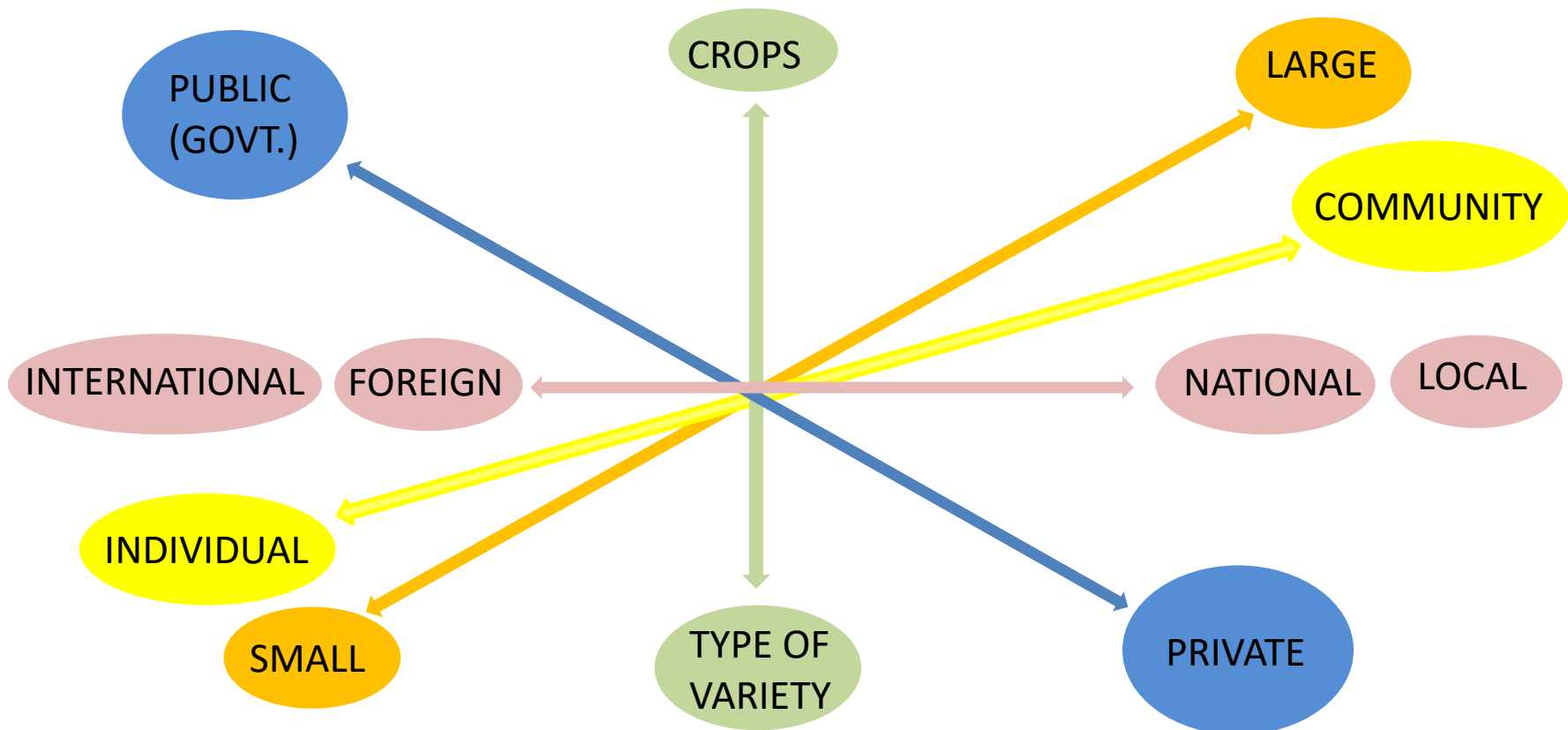
# OPTIONAL EXCEPTION TO THE BREEDER'S RIGHT (Farm-saved seed)

A Contracting Party may restrict the breeder's rights in order **to permit farmers to use:**

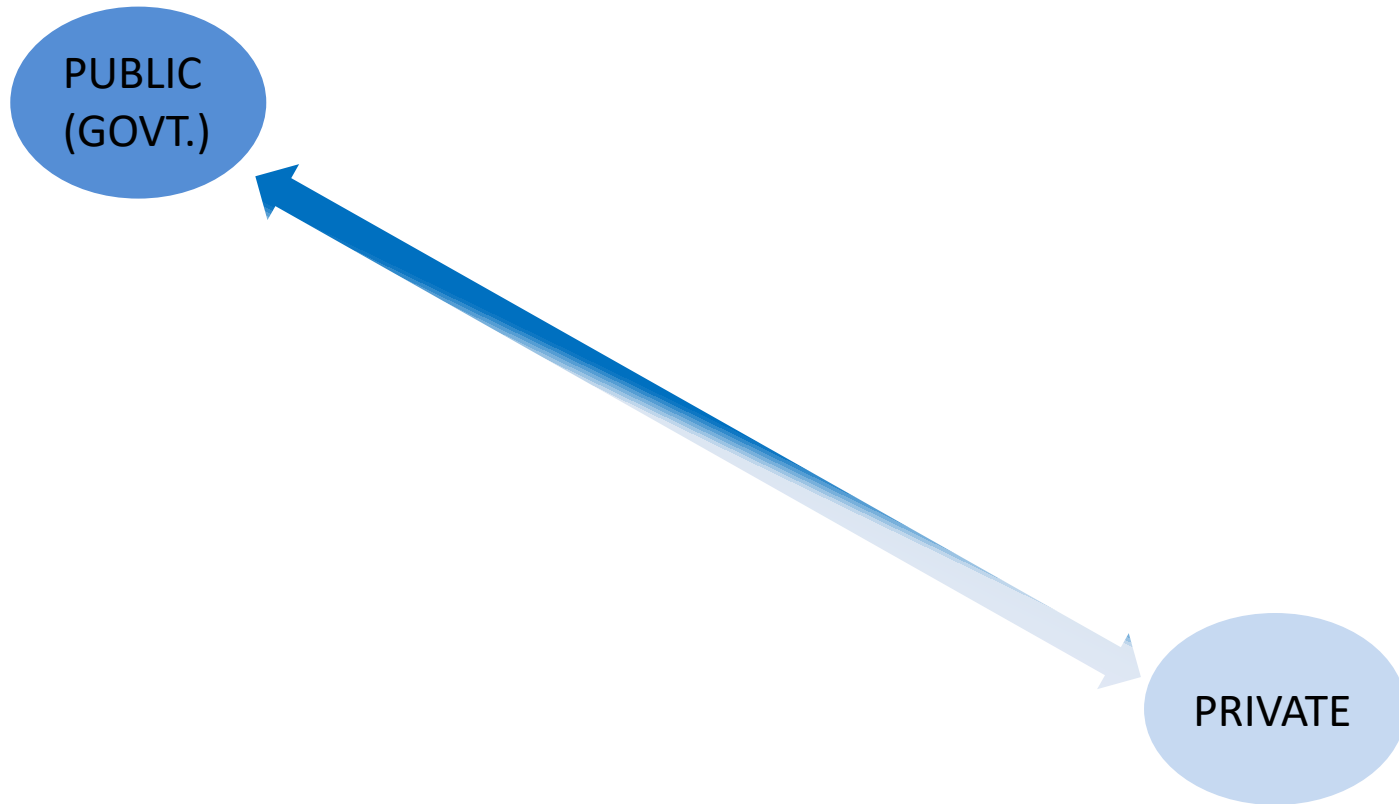
- for propagating purposes **on their own holdings**  
the product of the harvest
- **obtained on their own holdings**  
from the protected variety
- **within reasonable limits**
- subject to **safeguarding legitimate interests of the breeder**

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# How can PVP be used to achieve maximum “public good”?



# What are the practical challenges for technology transfer and commercialization?

or...

How to:

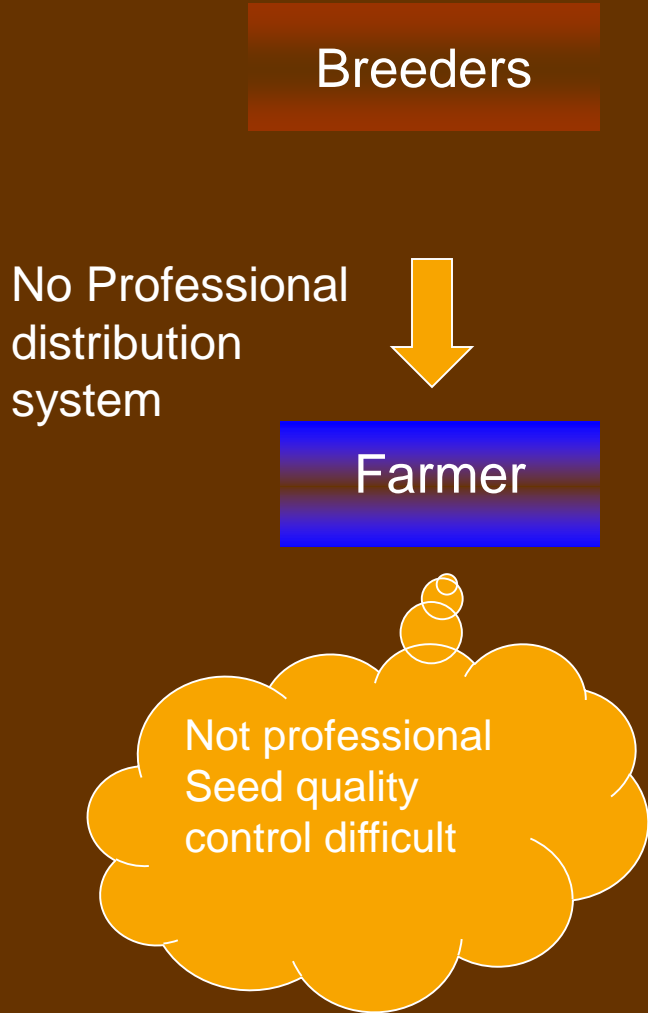
- identify important variety performance characteristics for farmers,
- breed varieties with those characteristics
- deliver good quality seed/propagating material in a timely way



# Change the mode on the agriculture production (Viet Nam (Minh 2017))

## Seed distribution system of new varieties

### BEFORE PVP



### AFTER PVP



# Shine Muscat case

(NHK morning news program “Ohayo Nippon”, Dated: Sep. 4, 2018)



Title:

Outflow of Japanese premium fruit variety overseas



*Shine Muscat* producing farmer [in Japan]

Mr. Kojiro Muroyama,  
commenting on Shine Muscat produced in China

“It is a threat.”

(<https://www.nhk.or.jp/ohayou/digest/2018/09/0904.html>)

# Shine Muscat case (cont.)

(NHK morning news program “Ohayo Nippon”, Dated: Sep. 4, 2018)



Shine Muscat producing farmer [in China], commenting on producing Shine Muscat

“Income increased. If it goes well, income could become five times.”



Shine Muscat is now produced in 24 Provinces and autonomous prefectures in China.

(<https://www.nhk.or.jp/ohayou/digest/2018/09/0904.html>)

# The international perspective



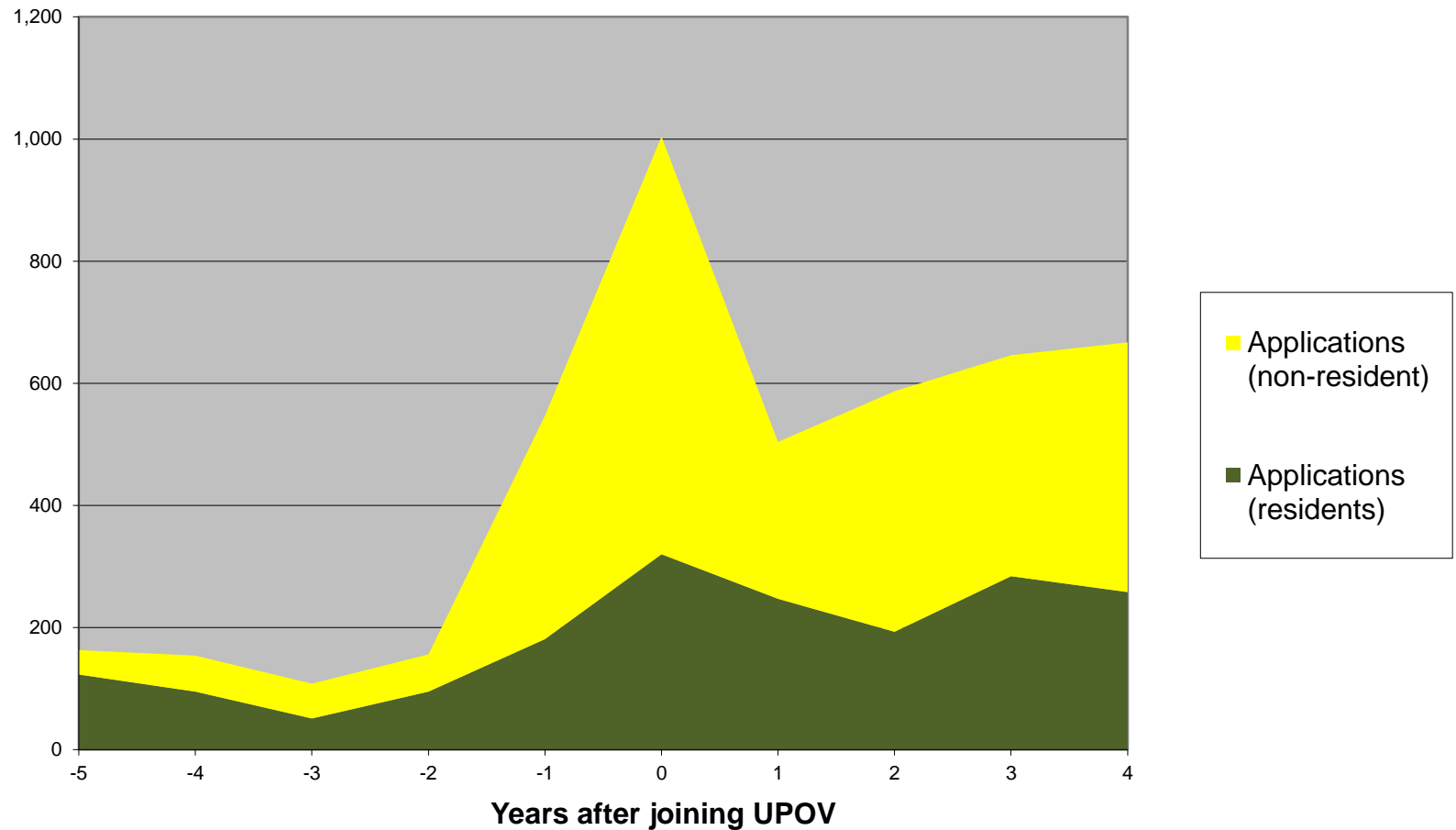


# HOW TO BECOME A MEMBER OF UPOV

**State/Intergovernmental Organization must:**

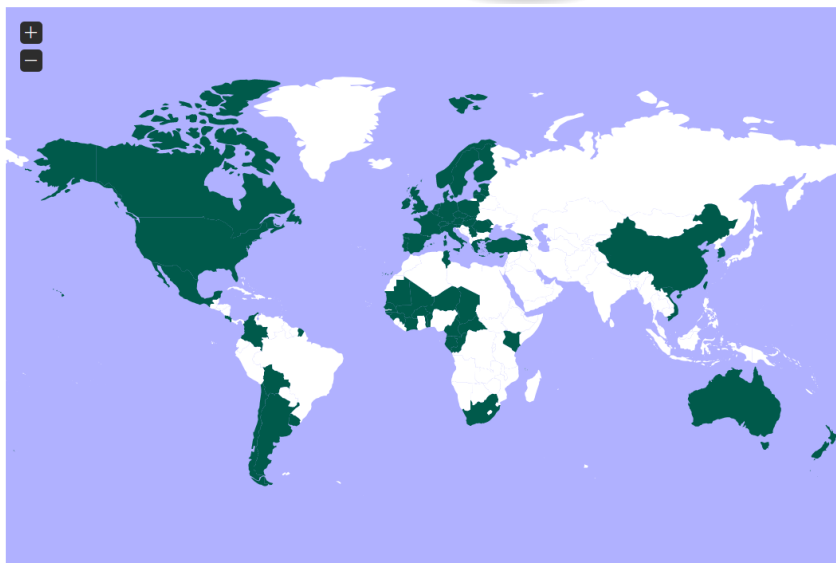
- **Have a law which conforms to the UPOV Convention**
- **Ask advice of the Council of UPOV**
- **If advice positive: deposit instrument of accession**

## Latin America Countries acceding to UPOV between 1994 & 2000



# UPOV PRISMA

## *Online PBR Application Tool*



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Online application tool to submit application data to participating PVP Offices in required format

Easy access to PVP application forms, which can be displayed in a range of languages

Much of the information provided in the Technical Questionnaire will be automatically translated

Relevant data can be re-used in subsequent applications

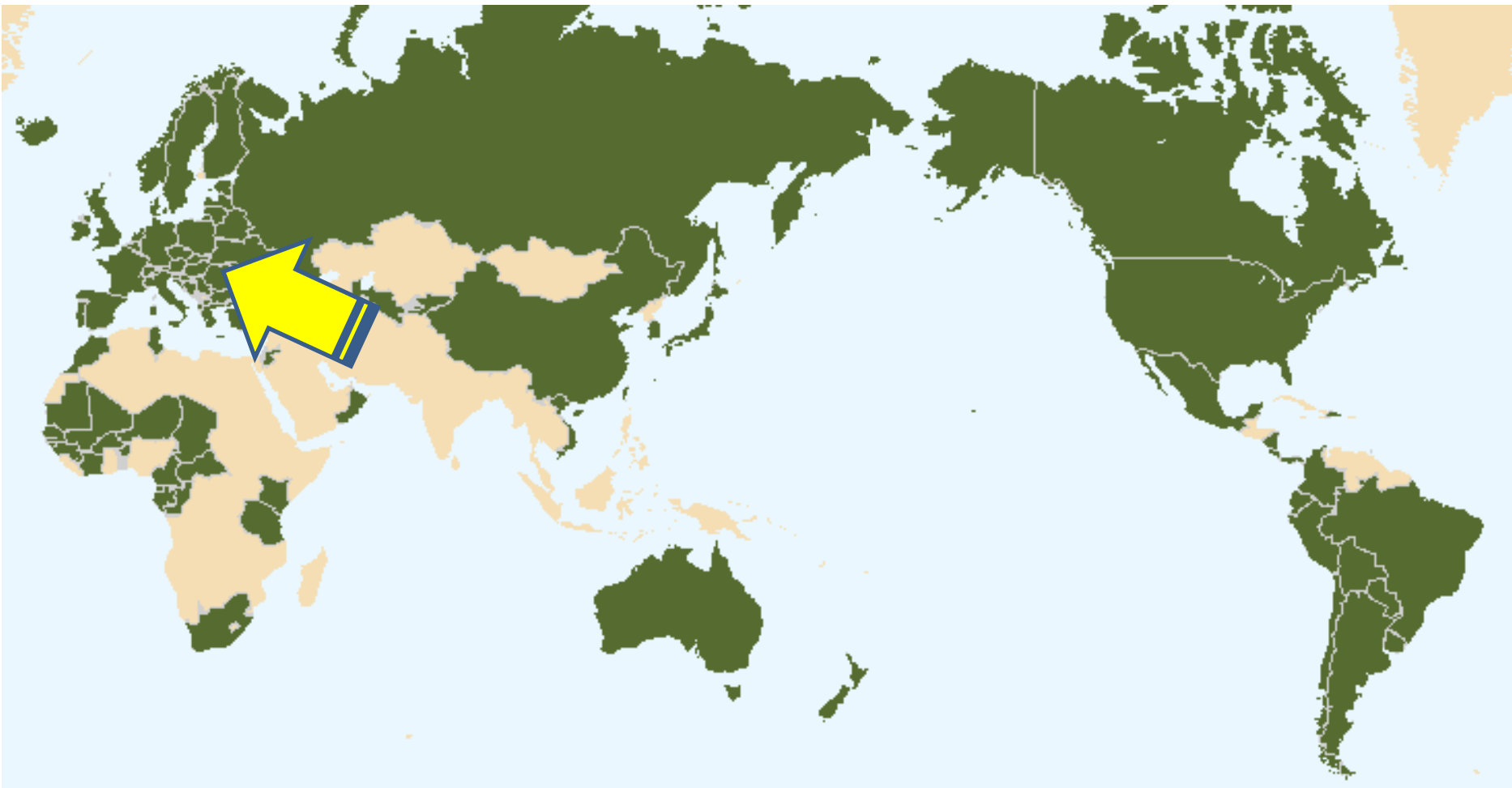
Different user roles can be specified (e.g. drafter, signatory, translator, agent)

Controlled access, secure and confidential



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**Food  
security**

**Climate  
change**

**Economy**

**Environ-  
ment**

**Technology  
transfer**

# The economic, social and environmental value of plant breeding in the European Union

2000-2013

– Results achieved so far\* –

**Steffen Noleppa**  
HFFA Research GmbH



*\* This research has been initiated and financially supported by ETP. The results of the study are the sole responsibility of the author and have never been influenced by the initiator and supporter of the study.*

October 13<sup>th</sup>, 2015, Vienna

# WHEAT

Plant breeding in the last  
15 years has increased  
**wheat harvests by 15%**  
keeping the cost of  
wheat down by

**7%**

**which impacts  
the price of  
your bread.**

Research source: <http://bit.do/plantetp-HFFAResearch>  
More info: [www.plantetp.org](http://www.plantetp.org)



## PLANT BREEDING THE ECONOMIC IMPACT



1.2 million European  
farmers and farm  
workers would be

**30%** worse off  
without plant breeding,  
earning €7,000  
less annually  
(on average),  
and putting  
rural jobs at risk.



By 2030, this figure could  
be up to €14,000.





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# High Level Study Tour (Japan, July 2016)



Koshihikari  
(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



# UPOV Videos



Tsuyahime **NEW**

A new rice variety bringing  
increased income for farmers in  
Japan

Languages available:  
EN audio  
Subtitles: FR, ES (ZH, TH)

This new rice variety is enjoying a **30% premium**

Tsuyahime was developed by Yamagata prefecture, which has created a breeding station because they consider new rice varieties to be one of the most **effective means of providing benefits to farmers.**

They are willing to **invest time and resources** into the breeding process because they are able to **develop and protect varieties** that benefit their farmers.

Atsushi Suginaka, Director, Intellectual Property Division, MAFF, Japan.

For Japanese rice variety Tsuyahime, the breeder's right holder utilizes the **breeder's right to allow Tsuyahime production only to the farmers who can make environmentally friendly and high quality rice production.**

This is a good example that internationally harmonized PVP system can **contribute to the development of local agriculture.**



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E

HFFA Research GmbH

### The socio-economic benefits of UPOV membership in Viet Nam:

An ex-post assessment on plant breeding and agricultural productivity after ten years

Corresponding author: Steffen Noleppa



HFFA Research Paper 03/2017



[Ashiro Rindo Story](#)



[Introduction to UPOV](#)

of Agronomy of the 'Universidad de la Republica' of Uruguay

(2011)  
[Technology Transfer: The Benefits of Public-Private](#)

[Protection for Farmers and Growers](#) (2012)

[Protection](#)

# STUDY in VIET NAM\*

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

Rice, Corn (maize) and Sweet Potatoes

- **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 %
  - Sweet potatoes 3.1 %

\* “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

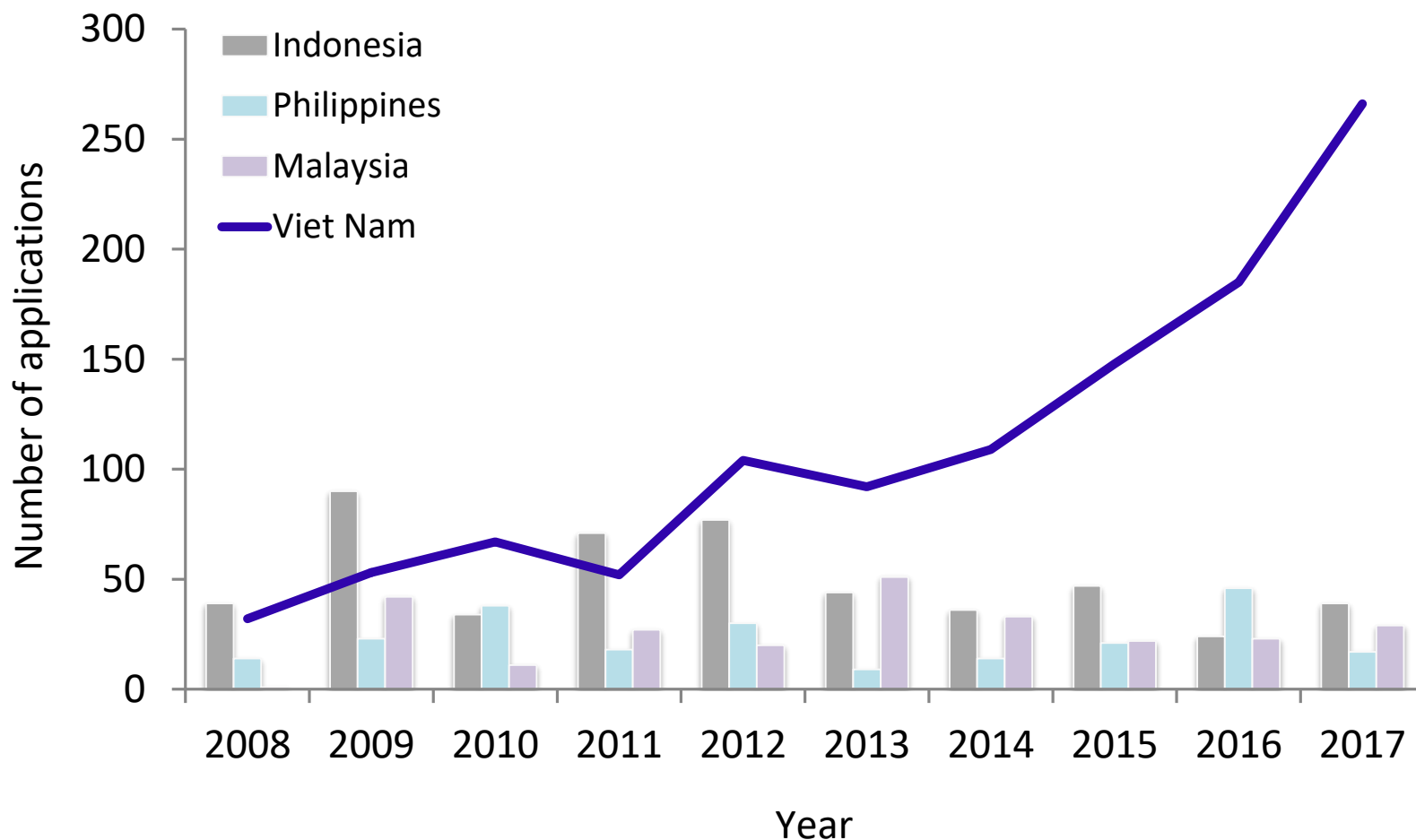
## Annual value added:

- 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)**

# Applications for Plant Breeders' Rights



1. Erizal Jamal, Director, Center for Plant Variety Protection & Agriculture Permits, Indonesia. 10<sup>th</sup> 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 (11<sup>th</sup> 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 (11<sup>th</sup> EAPVP ), August 2, 2018
4. Nguyen Thanh Minh, PVPO, Mard/Viet Nam. National Seminar on Benefit of The Plant Variety Protection System, Philippines (11<sup>th</sup> EAPVP ), August 2, 2018



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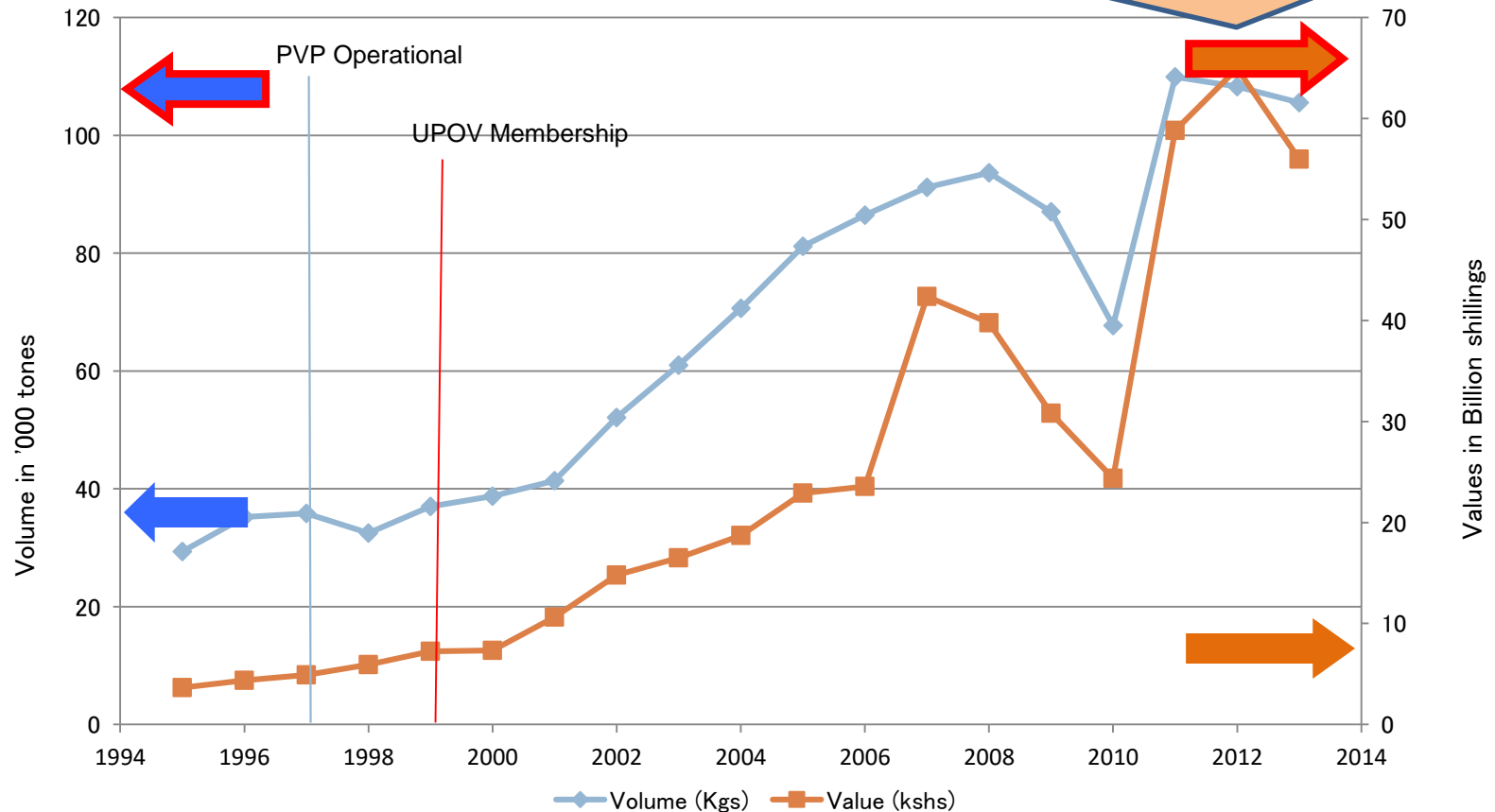
**Economy**

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# Impact of Plant Variety Protection in Kenya

65 Billion Kenya Shillings = \$645 million (approx. Aug. 2018)



**CUT FLOWER EXPORTS 1995 - 2013**

Source: HCDA



# Successes/Impact Resulting from PVP cont'

## Employment creation

- It is estimated that over 500,000 people (including over 90,000 flower farm employees) depend on the floriculture industry.





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Protected  
plant varieties

Unprotected plant varieties

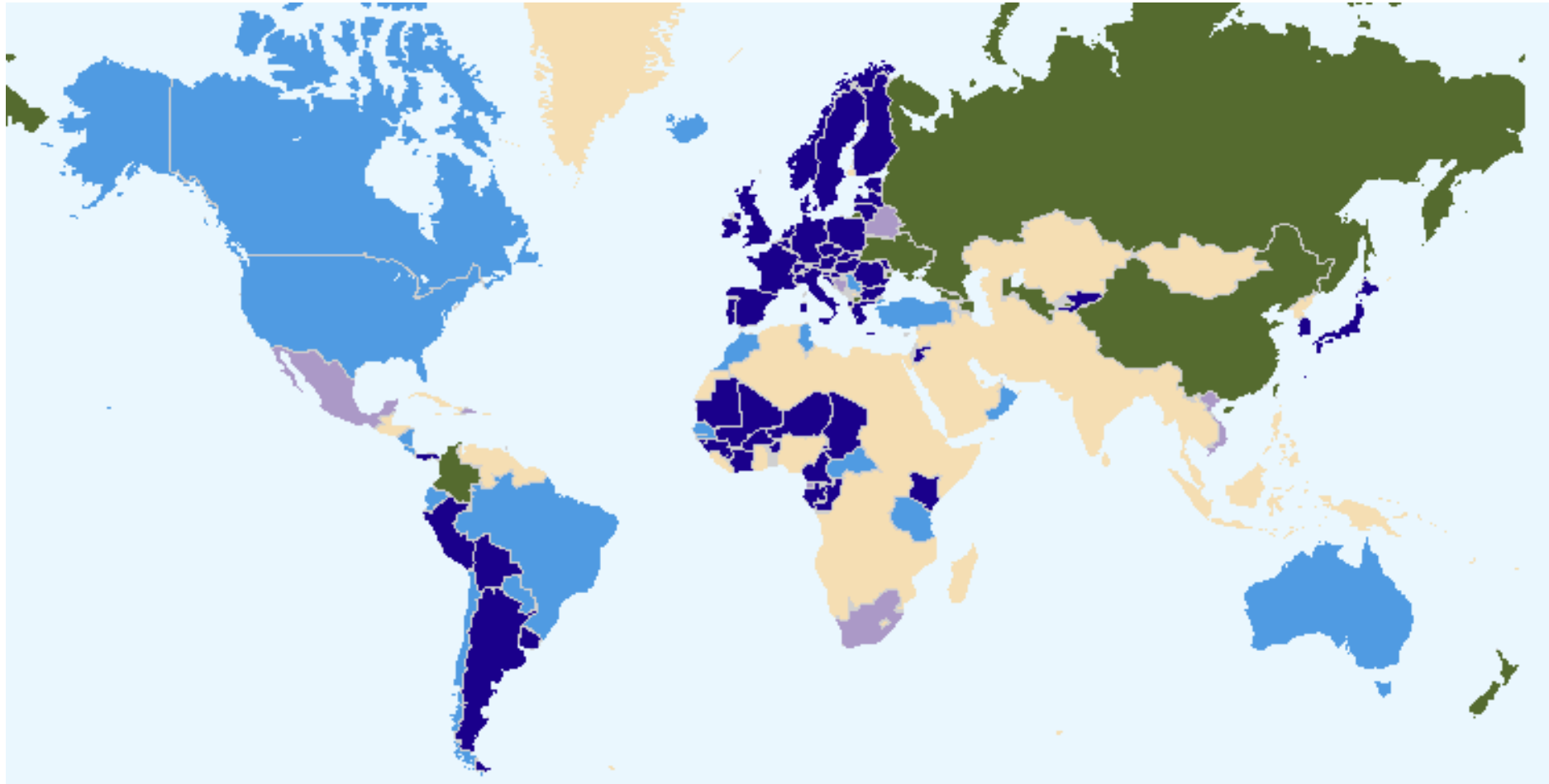
**Not regulated by UPOV**

(ITPGRFA, CBD, seed marketing  
regulations etc.)


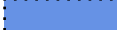


Wild populations

# States and organizations bound by the UPOV Convention indicating those that are also bound by the ITPGRFA and/or the Nagoya Protocol

as of April 13, 2018



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	UPOV/ITPGRFA/Nagoya Protocol
	UPOV/ITPGRFA
	UPOV/Nagoya Protocol
	UPOV only



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## Benefits of the UPOV System

VIDEO



Using the UPOV system to benefit custodians of native wild germplasm in Argentina



The role of PVP in the development of a new blackberry variety that improves farmers' working conditions.

## Mecardonia

Variedades INTA

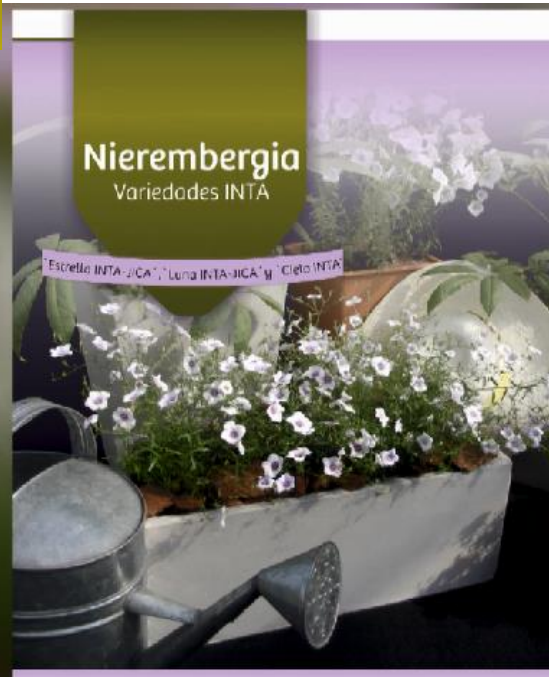
'Peggy Amarillo INTA' y 'Guaraní Amarillo INTA'



## Nierembergia

Variedades INTA

'Esmeralda INTA-JICA', 'Luna INTA-JICA' y 'Cielo INTA'



# Using the UPOV System to benefit custodians of native wild germplasm in Argentina



“The royalties derived from commercialization of the variety are shared between the breeder and **the provinces that contributed the native plant genetic resource.**”

“A large part of the profits, basically, **50 per cent**, that are generated from the commercialization **return to those provinces.**”



# Using the UPOV System to benefit custodians of native wild germplasm in Argentina



Verónica Derna  
Minister of Ecology and Renewable Natural Resources,  
Misiones Province

The benefits for Misiones Province in terms  
of their native renewable resources are manifold.

“the erosion/loss from their natural habitat is reduced and this is therefore our own contribution, working together with INTA, for the conservation of our native natural resources.”