

International Seminar on Benefit of PVP under the UPOV system

Impact of PVP and UPOV membership on the development of agriculture

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Technical/Regional Officer (Asia), UPOV

August 2, 2018 (Muntinlupa, Philippines)



International Union for the Protection of New Varieties of Plants

Overview

- Why was UPOV created?
- Impact of PVP and UPOV membership
- Benefit of UPOV membership for implementing PVP

Overview

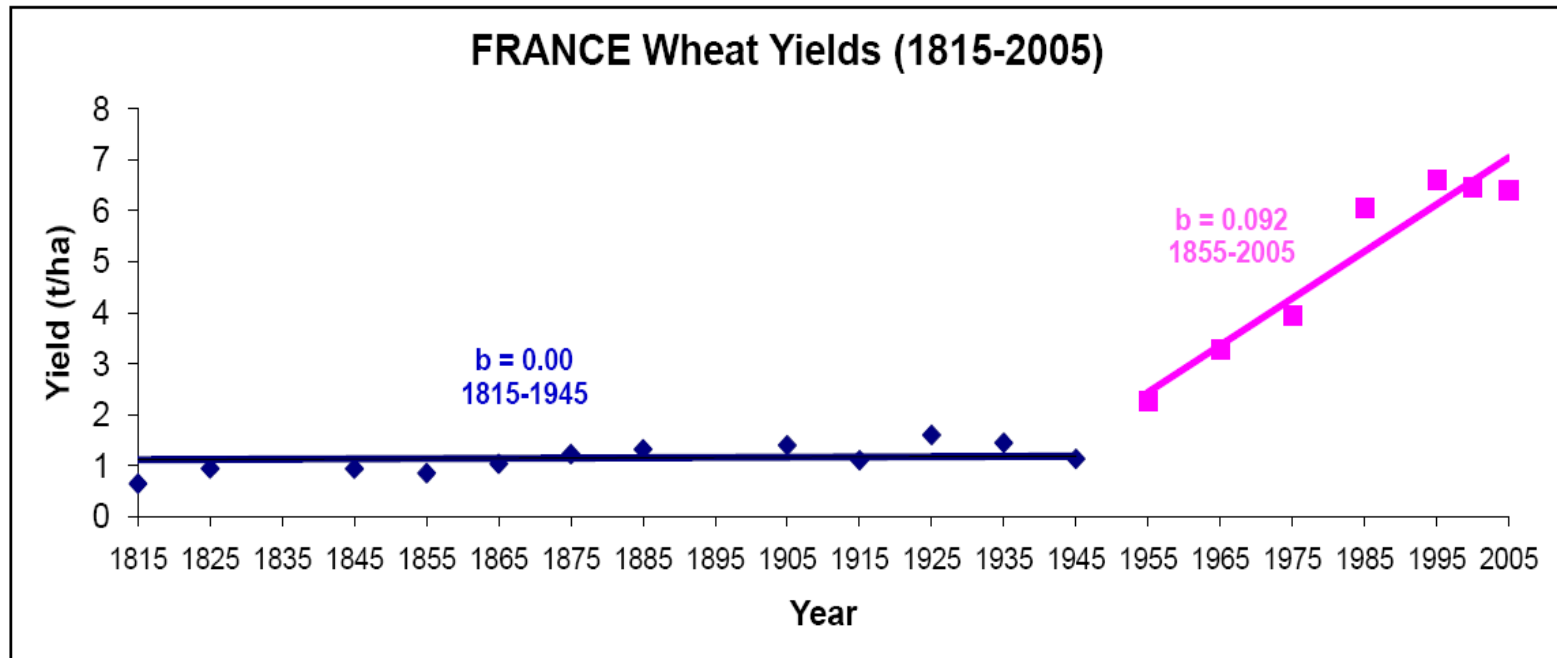
- Why was UPOV created?
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MISSION STATEMENT

“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”

Evolution of Wheat yield in France



Bernard Le Buanec,
Second World Seed Conference (Rome, September 2009)

More than half of the yield gain due to new plant varieties

Improved Varieties

Hot pepper

Development of disease resistant variety



Dok-Ya-Cheong-Cheong

Resistant to phytophthora blight/virus

Phytophthora blight (Fungal disease):

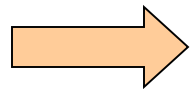
- above : **Resistant variety**
- below: **Susceptible variety**

Chang Hyun Kim, Second World Seed Conference

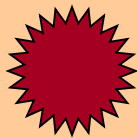


MISSION STATEMENT

“To provide and promote an effective system of **P**lant **V**ariety **P**rotection [**PVP**], [...]

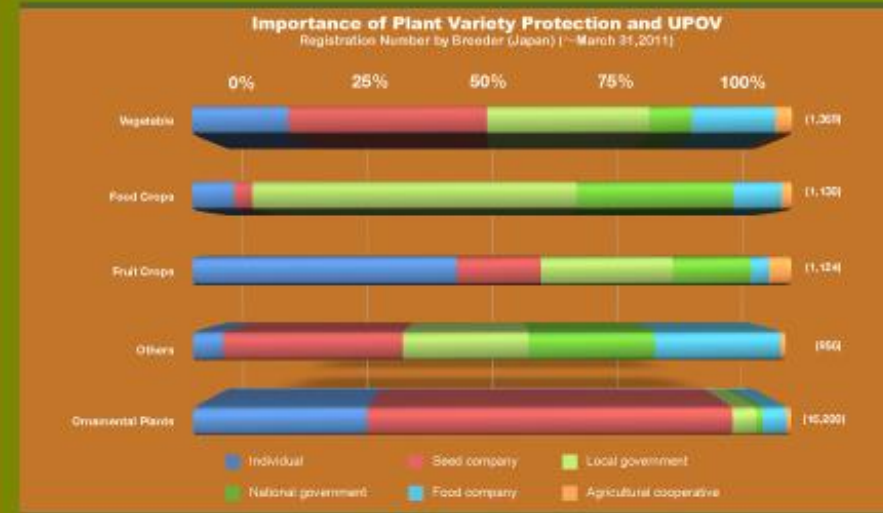


Plant **B**reeder's **R**ight (**PBR**)



Who can protect a plant variety?

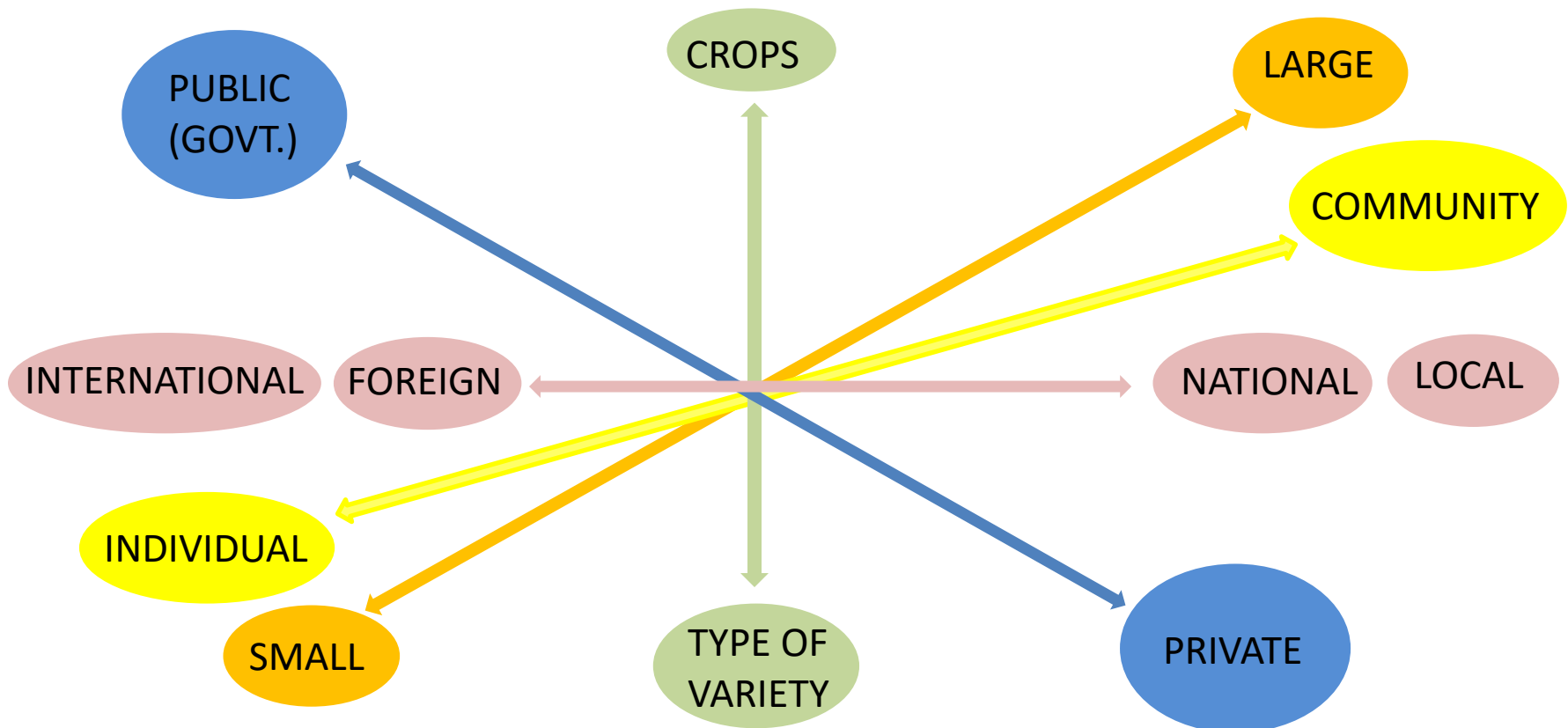
There are no restrictions on who can be considered to be a breeder under the UPOV system: **a breeder might be an individual, a farmer, a researcher, a public institute, a private company etc.**



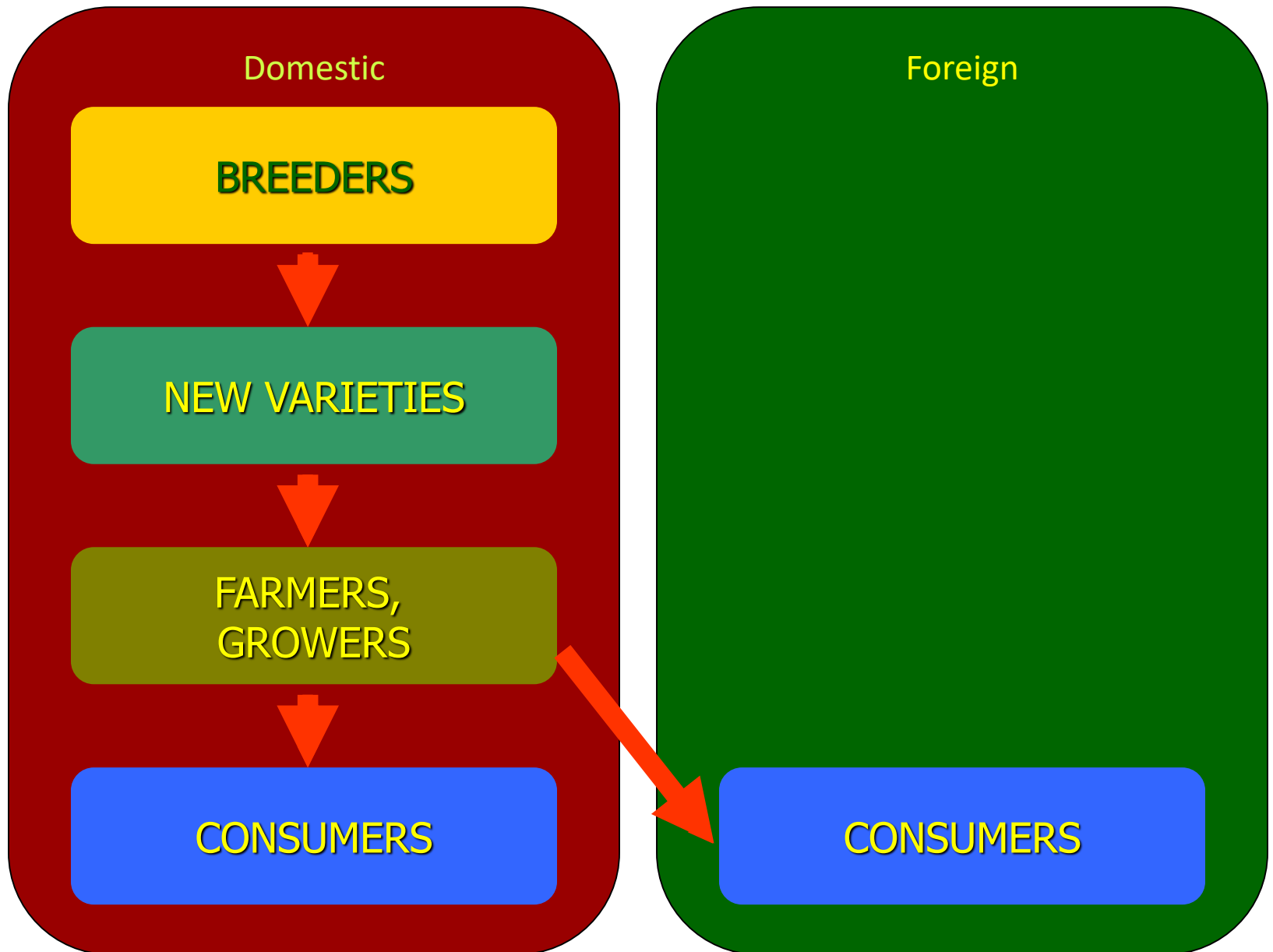
Japan Registration Case Study

(click to see full view)







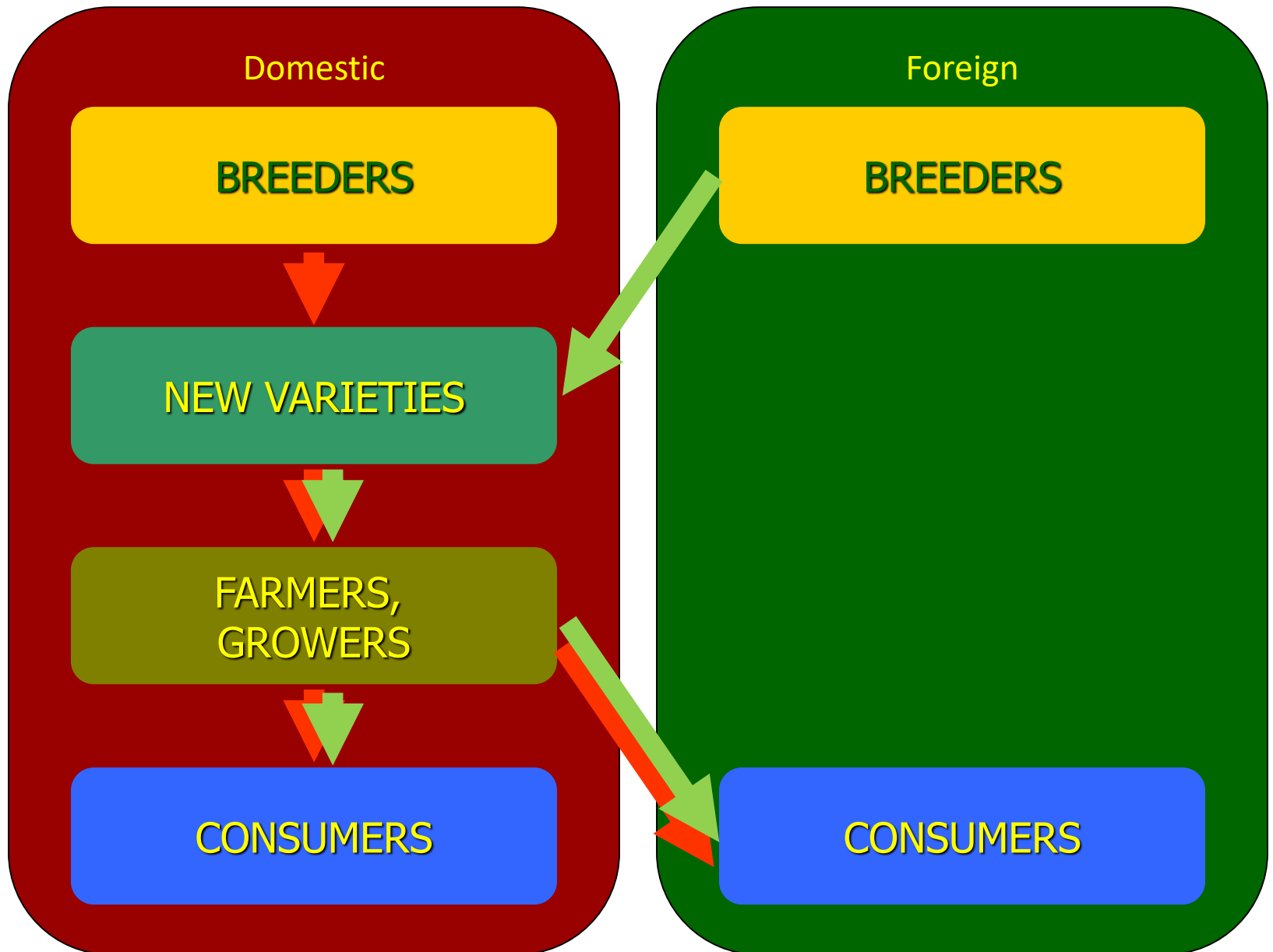




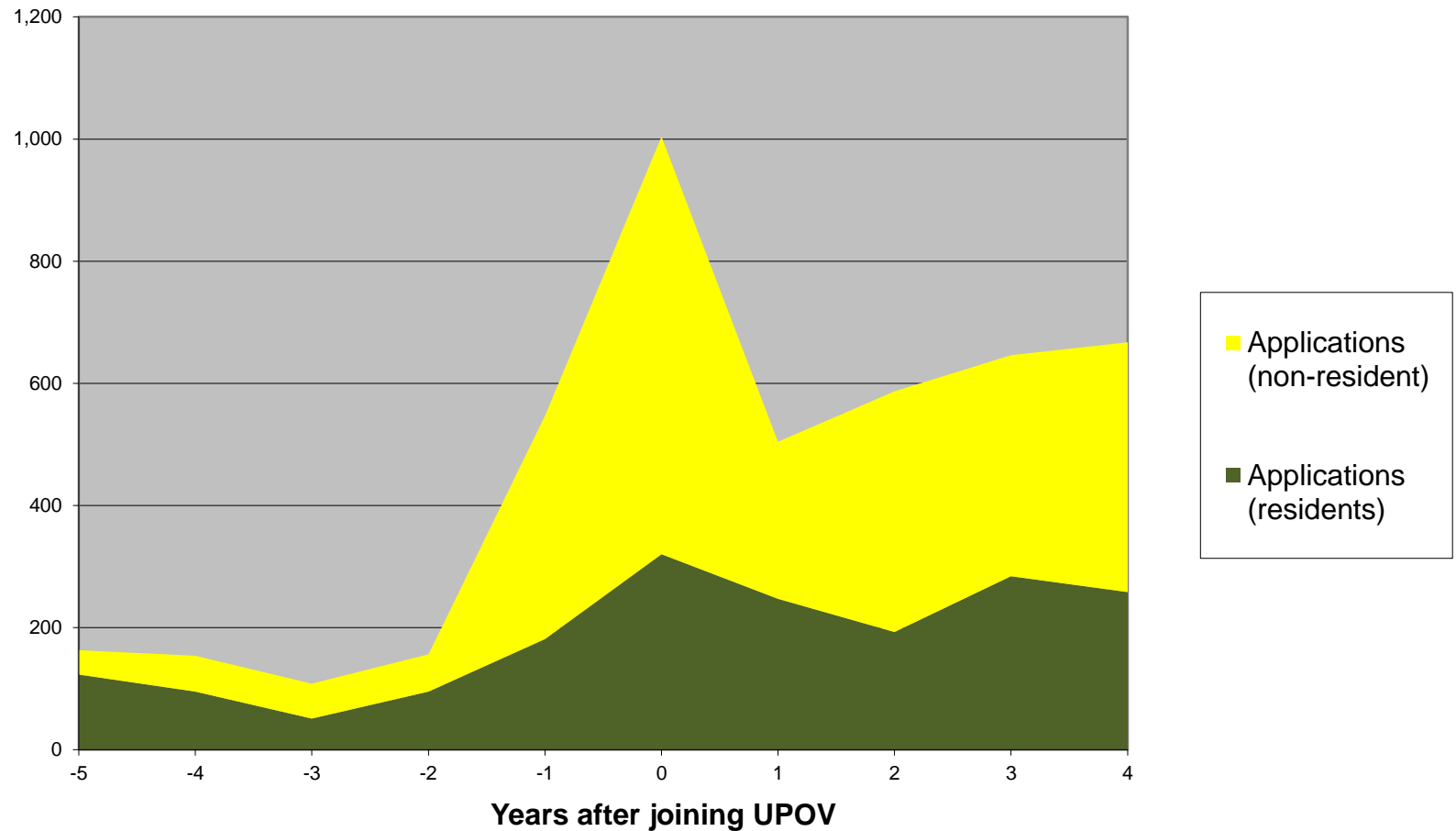
HOW TO BECOME A MEMBER OF UPOV

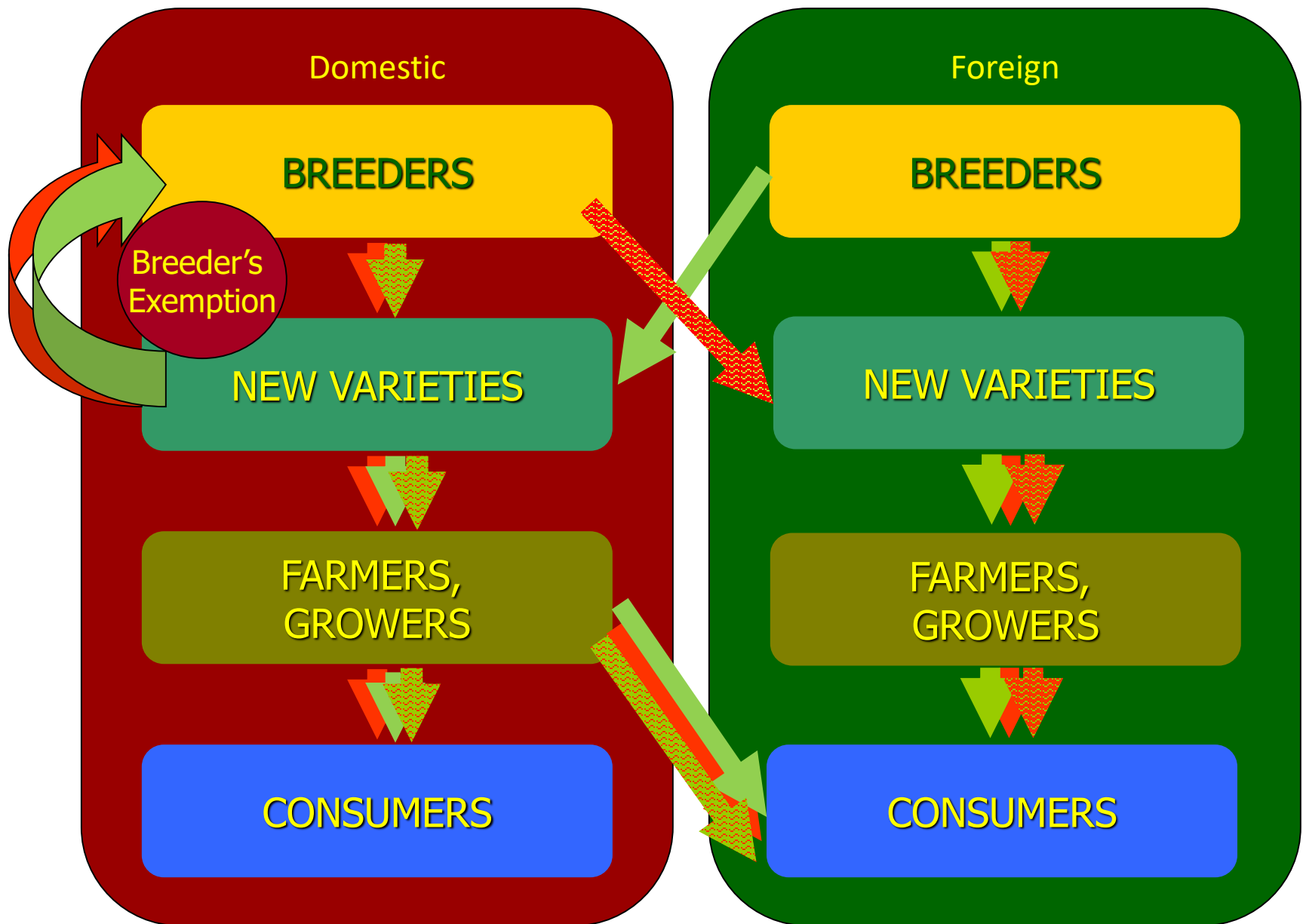
State/Intergovernmental Organization must:

- 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





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Benefit of Society

Food
security

Climate
change

Economy

Environ-
ment

Technology
transfer

Better,
cheaper
food

Adapted
crops

Export
International
competitiveness
Reduce
high cost
imports

Sustainable
production

Usable
technology
(varieties)

Public
Private
Partner-
ships

Rural
employ-
ment

Farmer benefits

New, improved varieties

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 13th, 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



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.



PLANT BREEDING FOR SUSTAINABILITY

CO₂

Without plant breeding, Europe would need an extra 19 million hectares of farm land to produce the same amount of food.

CO₂

CO₂

CO₂

**Turning 19 million
hectares of forests,
wetlands and other
habitats into farmland
would release 3.4 bn
tons of CO₂.**

Annualised, that's the same as all the greenhouse gas **emissions from traffic in Germany**, or the annual CO₂ emissions of a **country like the Netherlands**.





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

**Food
security**

**Climate
change**

Economy

**Environ-
ment**

**Technology
transfer**

UPOV

International Union for the Protection of New Varieties of Plants

April 13, 2018

High Level Study Tour (Japan, July 2016)



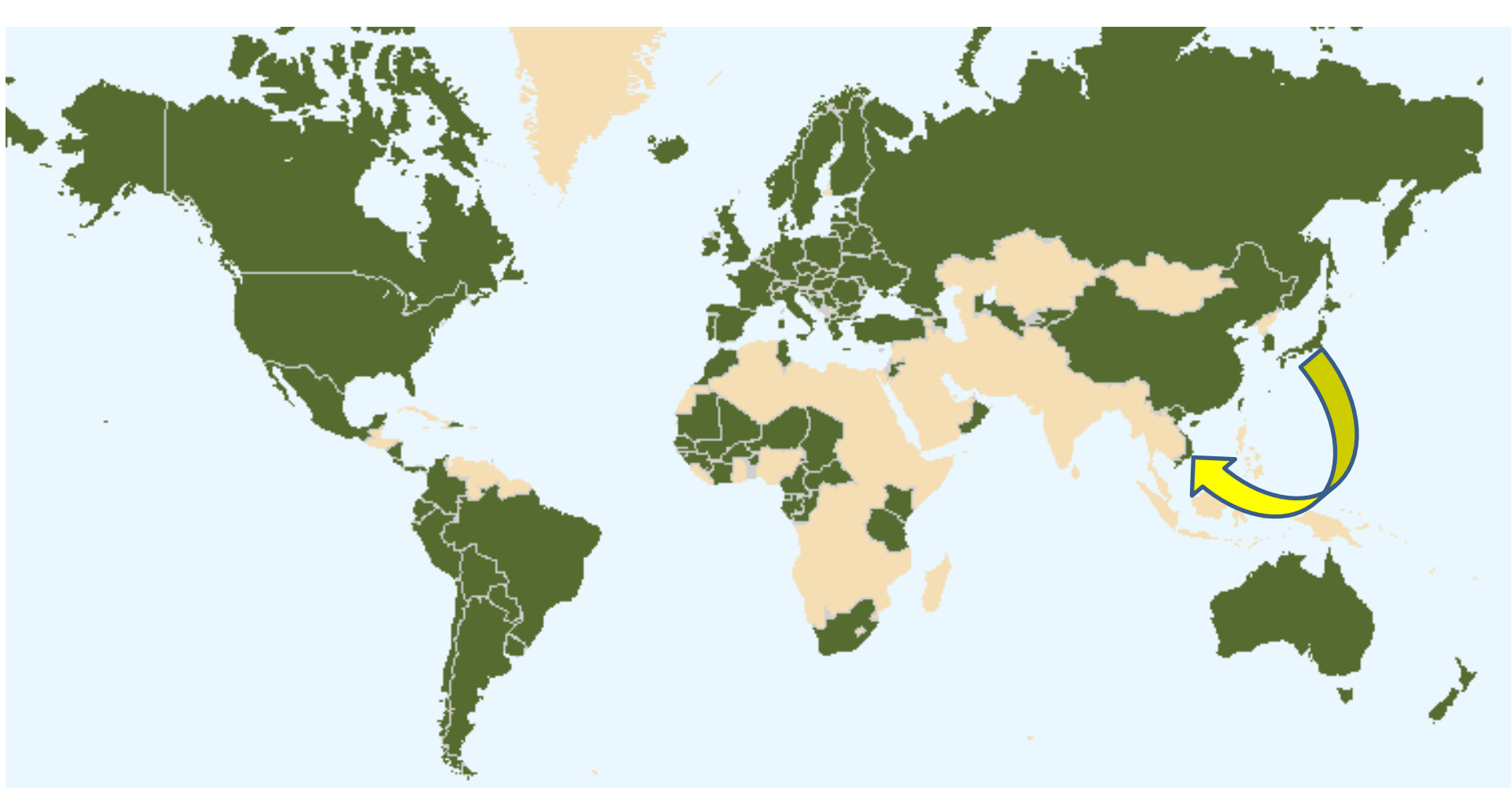
Koshihikari
(1,580 ¥)

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



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transfer**

UPOV

International Union for the Protection of New Varieties of Plants

April 13, 2018

STUDY in VIET NAM*

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

Rice, Corn (maize) and Sweet Potatoes

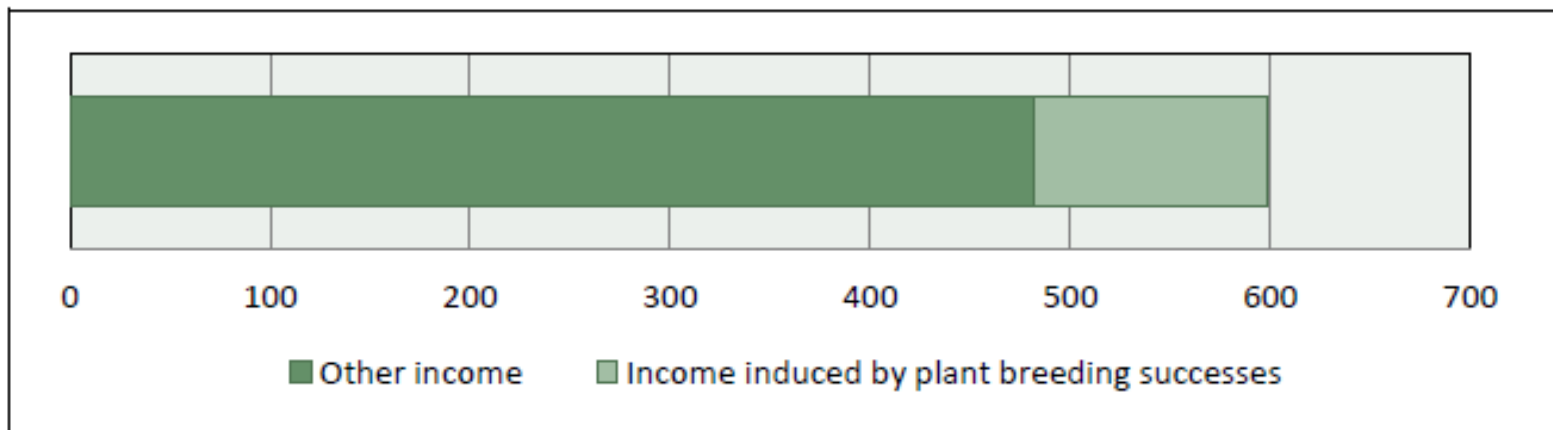
- **1995-2005:** increase in yield mainly through increased level of inputs – no detectable increase due to plant breeding
- **2006-2016:** annual land productivity increase due to plant breeding
 - Rice 1.7 %
 - Corn 2.1 %
 - Sweet potatoes 3.1 %

* “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

INCOME of Vietnamese farmers has increased by 24% since 2006

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.

STUDY in VIET NAM

Annual value added:

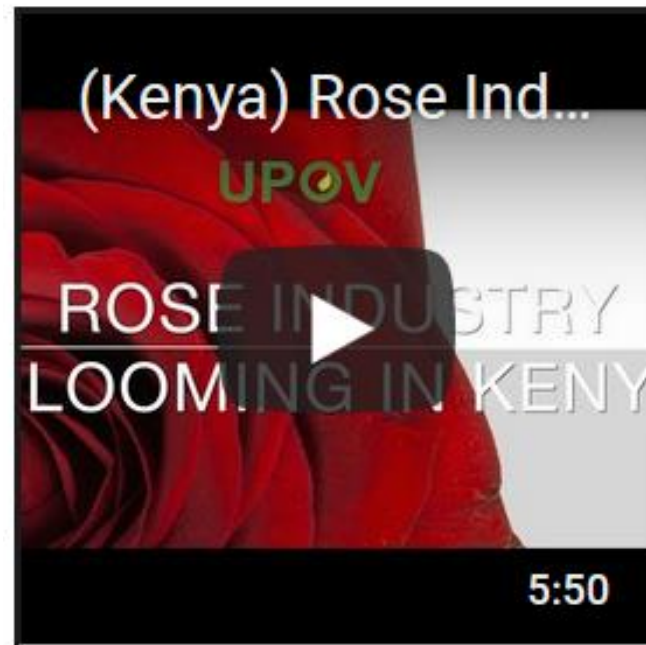
- Arable farming \$2.3 billion
- Horticulture \$1.0 billion
- Floriculture \$ 0.2 billion
- GDP added upstream/downstream (value chains)
\$1.5 billion

TOTAL ADDED: \$5 billion

(> 2.5% GDP)

Benefits of the UPOV System

VIDEOS



Rose industry blooming in Kenya

Discover how the UPOV system enabled Kenya to develop a \$500 million cut-flower industry that employs 500,000 Kenyans

http://www.upov.int/about/en/benefits_upov_system.html

(Kenya) Rose Industry Blooming Kenya



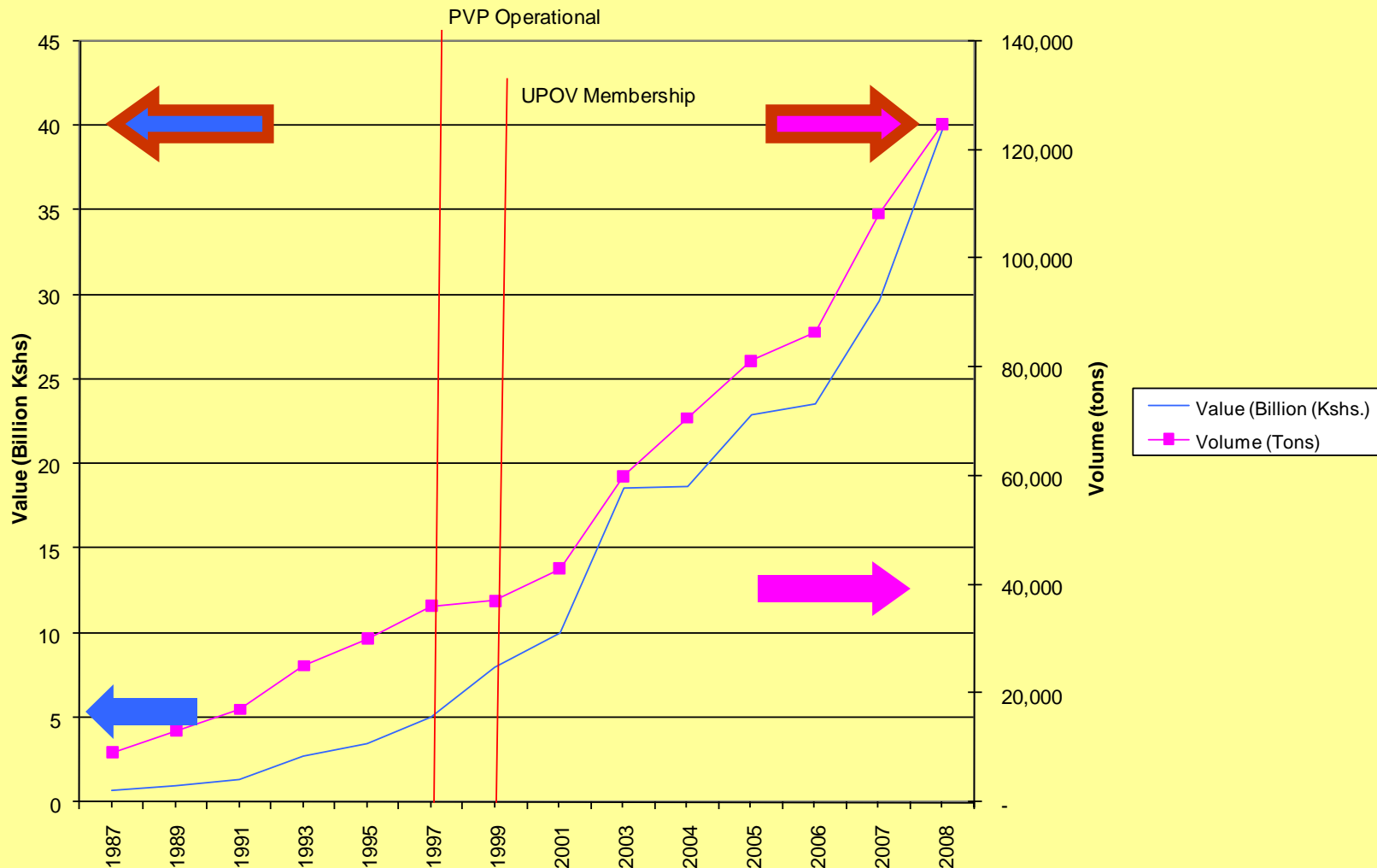
Esther KIMANI

Managing Director,
Kenya Plant Health Inspectorate Service
(KEPHIS)

“Because of the fact that we acceded to UPOV, we are able to **access varieties of any plant cultivar from any part of the world** because the breeders are confident that they will get their rights protected.”

International Market Development

Export of Kenyan Cut Flowers



Sikinyi, Second World Seed Conference

THE ROSE INDUSTRY HAS HELPED IMPROVE LIVELIHOODS



ABOUT UPOV

Mission Statement

Overview

Organigram

Office of UPOV

Officers

UPOV Convention

Benefits of UPOV System

Key Issues

FAQs

Publications

HOME » ABOUT UPOV »

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

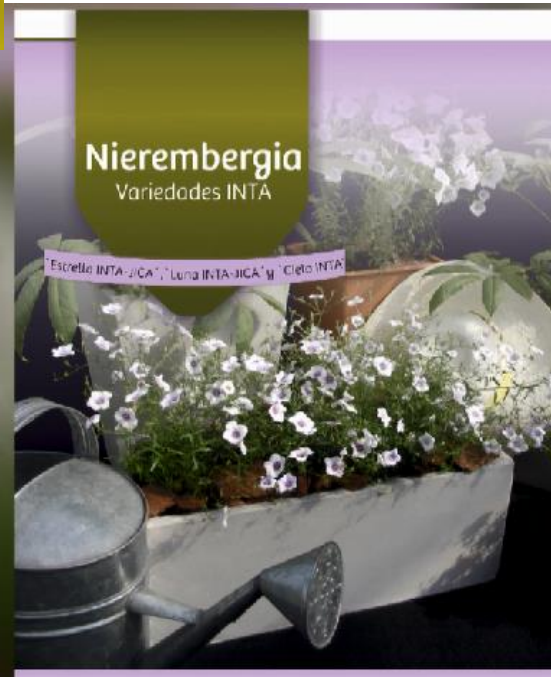
'Peggy Amarillo INTA' y 'Guaraní Amarillo INTA'



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.**”

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



“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

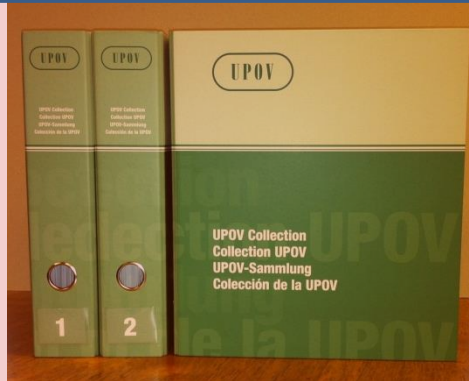


“the erosion/loss from their natural habitat is reduced and this is therefore our own contribution, working together with INTA, for the conservation of our native natural resources.”.

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Harmonization and Cooperation



		Harmonization	Cooperation
IMPLEMENTATION	PVP Law	<ul style="list-style-type: none"> • UPOV Convention • Explanatory Notes 	<ul style="list-style-type: none"> • UPOV Lex
	➤ Application	<ul style="list-style-type: none"> • Model Application Form 	<ul style="list-style-type: none"> • PBR Application tool (EAF)
	➤ Variety Denomination	<ul style="list-style-type: none"> • INF/12: “Explanatory Notes on Variety Denominations” • UPOV Code 	<ul style="list-style-type: none"> • PLUTO database
	➤ DUS Testing	<ul style="list-style-type: none"> • General Introduction • TGP Documents • Test Guidelines 	<ul style="list-style-type: none"> • GENIE Database • Exchangeable software
		<ul style="list-style-type: none"> • Distance Learning course • UPOV events & activities • Assistance by individual UPOV members 	

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

COOPERATION

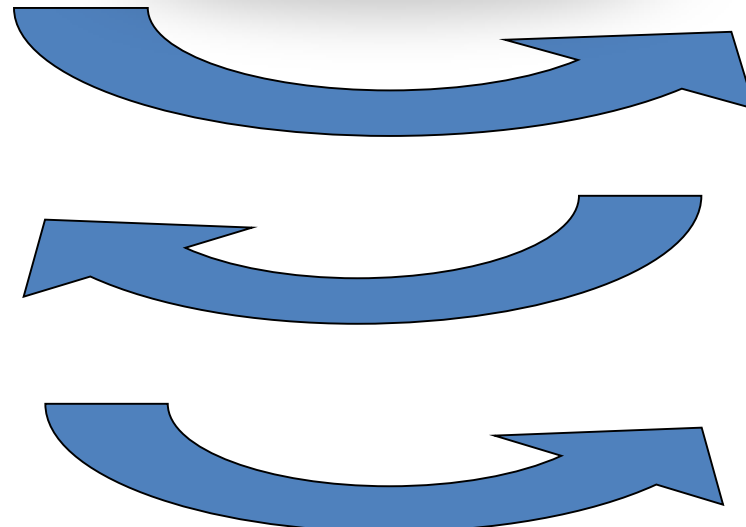
Cooperation between UPOV members is a key benefit of UPOV membership



*Practical DUS
experience
offered for >3,320
genera and
species*

*Number of
genera/species for
which varieties
protected by members
of the Union: > 3,500
(>15,000 titles granted
/annum)*

*Agreements for
cooperation between
members of the
Union: > 1,970*



New PBR Application Tool

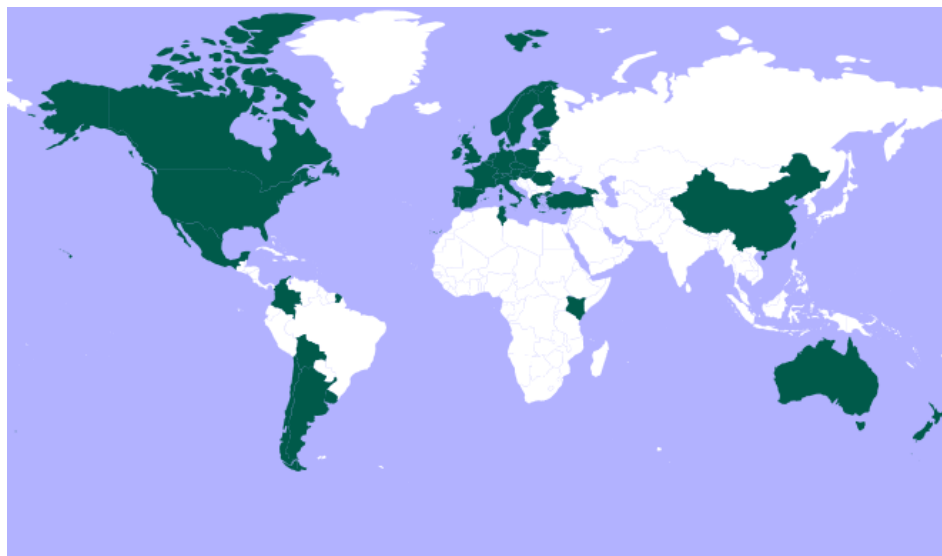
UPOV PRISMA 



Version 2 released **early February 2018**

UPOV PRISMA

Online PBR Application Tool



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.

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

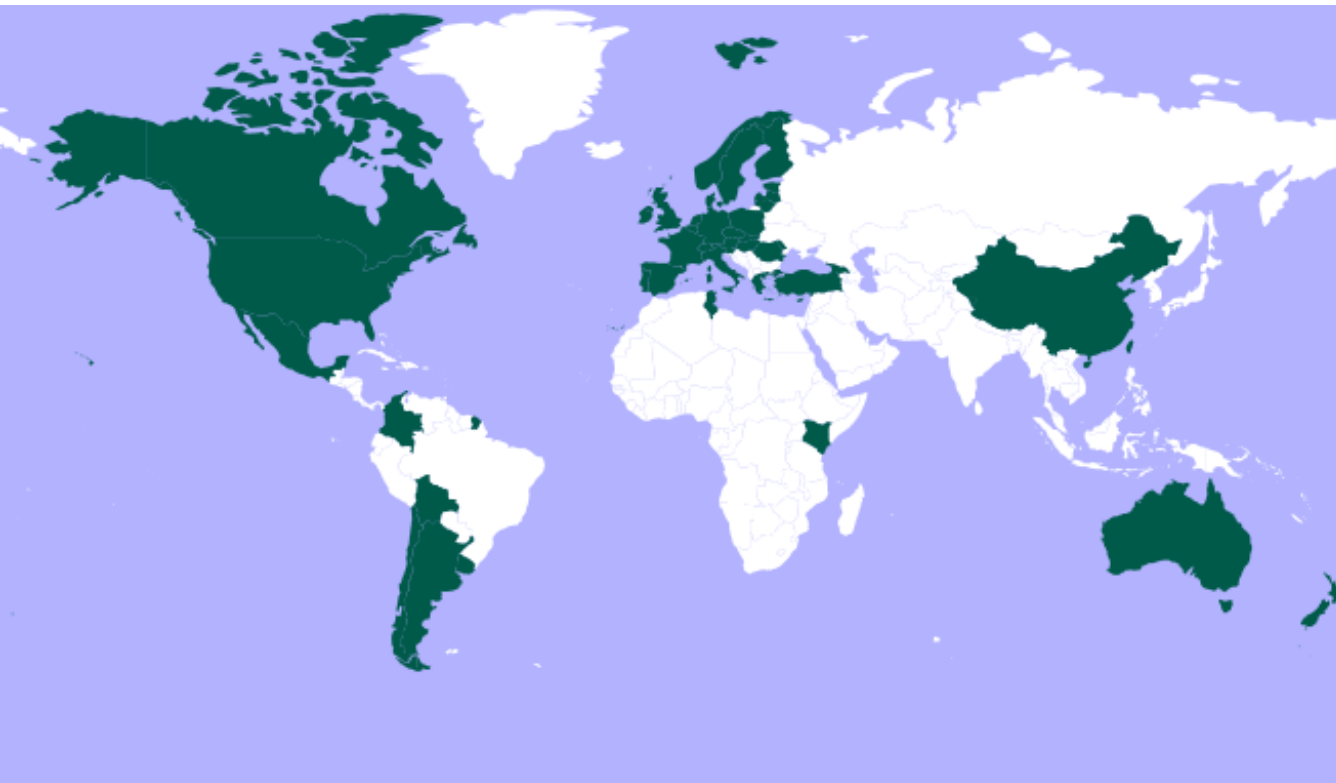
Relevant data can be re-used in subsequent applications

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

Controlled access, secure and confidential

UPOV PRISMA

Coverage- 22 Members (including CPVO)



Argentina

Australia
Bolivia (Plurinational State of)
Canada
Chile
China
Colombia
European Union
France
Georgia
Kenya
Mexico
Netherlands
New Zealand
Norway
Paraguay
Republic of Moldova
Switzerland
Tunisia
Turkey
United States of America
Uruguay

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Where to find UPOV PRISMA on the UPOV Website



UPOV

ABOUT UPOV

MEMBERSHIP

UPOV SYSTEM

PVP DATA & STATISTICS

MEETINGS

NEWS

Get started now and use UPOV PRISMA
for **FREE** until **DECEMBER 2018!**

UPOV PRISMA
tool

Stakeholder features

- Breeders
- Farmers and Growers
- Policy makers
- General Public



UPOV PRISMA
PBR Application Tool

GENIE Database



UPOV Lex



Plant Variety Database (PLUTO)

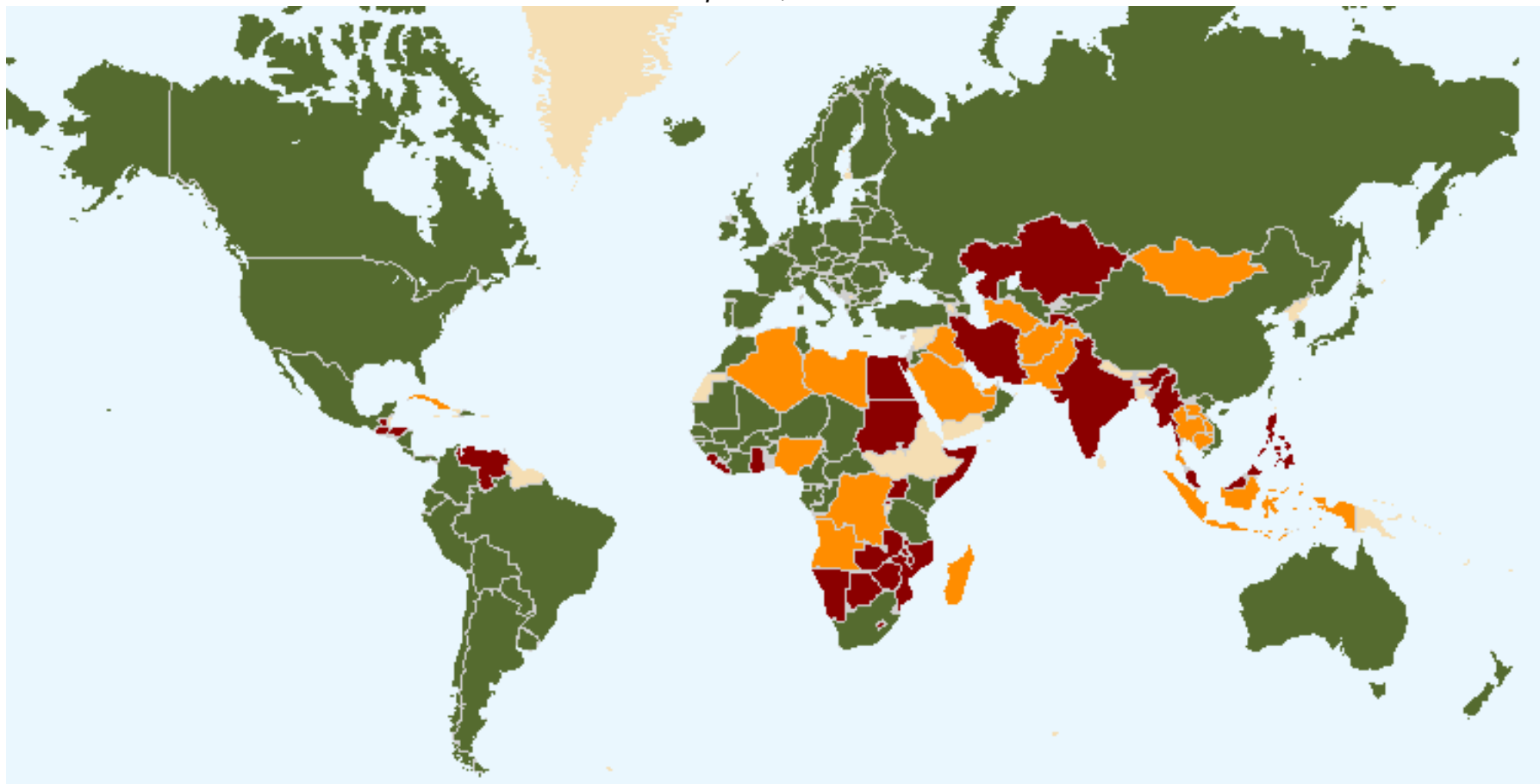
Quick Links

- Introduction to UPOV
- Benefits of UPOV
- UPOV Collection
- UPOV PRISMA (Information)




Information

UPOV STATUS

on April 13, 2018



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-  Members of UPOV (75 - covering 94 States)
-  Initiating States (16) and Organization (1)
-  States (26) and Organization (1) in contact with the UPOV Office

UPOV

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