

DanSeed Symposium 2017

How wide is the coverage of the
1991 Act of the UPOV Convention
and the other Acts and
what are the trends for the future?

Peter Button

Vice Secretary-General, UPOV

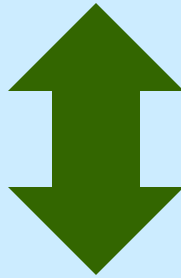
Hotel Kobaek Beach, Denmark

March 13, 2017

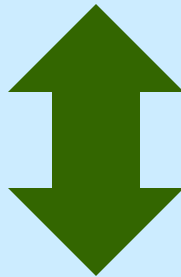
Preview

- **Introduction to UPOV**
- **Relationship with other systems**
- **Evolution of UPOV**
 - **Membership**
 - **1991 Act**
 - **Services**

BREEDERS' RIGHTS



FARMERS' BENEFITS



NEEDS OF SOCIETY

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

MINISTRY OF FOOD—Rationing Year 1953-54

| 4 Week Period | Week No. | RATION WEEK Sunday—Saturday | 4 Week Period | Week No. | RATION WEEK Sunday—Saturday |
|------------------|-------------|--------------------------------|------------------|-------------|--------------------------------|
| 1 | 1 | 17 May – 23 May | 7 | 25 | 1 Nov. – 7 Nov. |
| | 2 | 24 May – 30 May | | 26 | 8 Nov. – 14 Nov. |
| | 3 | 31 May – 6 June | | 27 | 15 Nov. – 21 Nov. |
| | 4 | 7 June – 13 June | | 28 | 22 Nov. – 28 Nov. |
| 2 | 5 | 14 June – 20 June | 8 | 29 | 29 Nov. – 5 Dec. |
| | 6 | 21 June – 27 June | | 30 | 6 Dec. – 12 Dec. |
| | 7 | 28 June – 4 July | | 31 | 13 Dec. – 19 Dec. |
| | 8 | 5 July – 11 July | | 32 | 20 Dec. – 26 Dec. |
| 3 | 9 | 12 July – 18 July | 9 | 33 | 27 Dec. – 2 Jan. |
| | 10 | 19 July – 25 July | | 34 | 3 Jan. – 9 Jan. |
| | 11 | 26 July – 1 Aug. | | 35 | 10 Jan. – 16 Jan. |
| | 12 | 2 Aug. – 8 Aug. | | 36 | 17 Jan. – 23 Jan. |
| 4 | 13 | 9 Aug. – 15 Aug. | 10 | 37 | 24 Jan. – 30 Jan. |
| | 14 | 16 Aug. – 22 Aug. | | 38 | 31 Jan. – 6 Feb. |
| | 15 | 23 Aug. – 29 Aug. | | 39 | 7 Feb. – 13 Feb. |
| | 16 | 30 Aug. – 5 Sept. | | 40 | 14 Feb. – 20 Feb. |
| 5 | 17 | 6 Sept. – 12 Sept. | 11 | 41 | 21 Feb. – 27 Feb. |
| | 18 | 13 Sept. – 19 Sept. | | 42 | 28 Feb. – 6 Mar. |
| | 19 | 20 Sept. – 26 Sept. | | 43 | 7 Mar. – 13 Mar. |
| | 20 | 27 Sept. – 3 Oct. | | 44 | 14 Mar. – 20 Mar. |
| 6 | 21 | 4 Oct. – 10 Oct. | 12 | 45 | 21 Mar. – 27 Mar. |
| | 22 | 11 Oct. – 17 Oct. | | 46 | 28 Mar. – 3 Apl. |
| | 23 | 18 Oct. – 24 Oct. | | 47 | 4 Apl. – 10 Apl. |
| | 24 | 25 Oct. – 31 Oct. | | 48 | 11 Apl. – 17 Apl. |
| For F.O. use | | | 13 | 49 | 18 Apl. – 24 Apl. |
| | | | | 50 | 25 Apl. – 1 May |
| | | | | 51 | 2 May – 8 May |
| | | | | 52 | 9 May – 15 May |

R.B. Serial No.

A R.B.1/16

FORM R.G.12A

PLEASE USE BLOCK LETTERS

SURNAME.....

OTHER NAMES.....
(IN FULL)

ADDRESS.....

B

C

D

FOR FOOD OFFICE USE

From
F.O.

To (F.O. Code)

NM--C

3

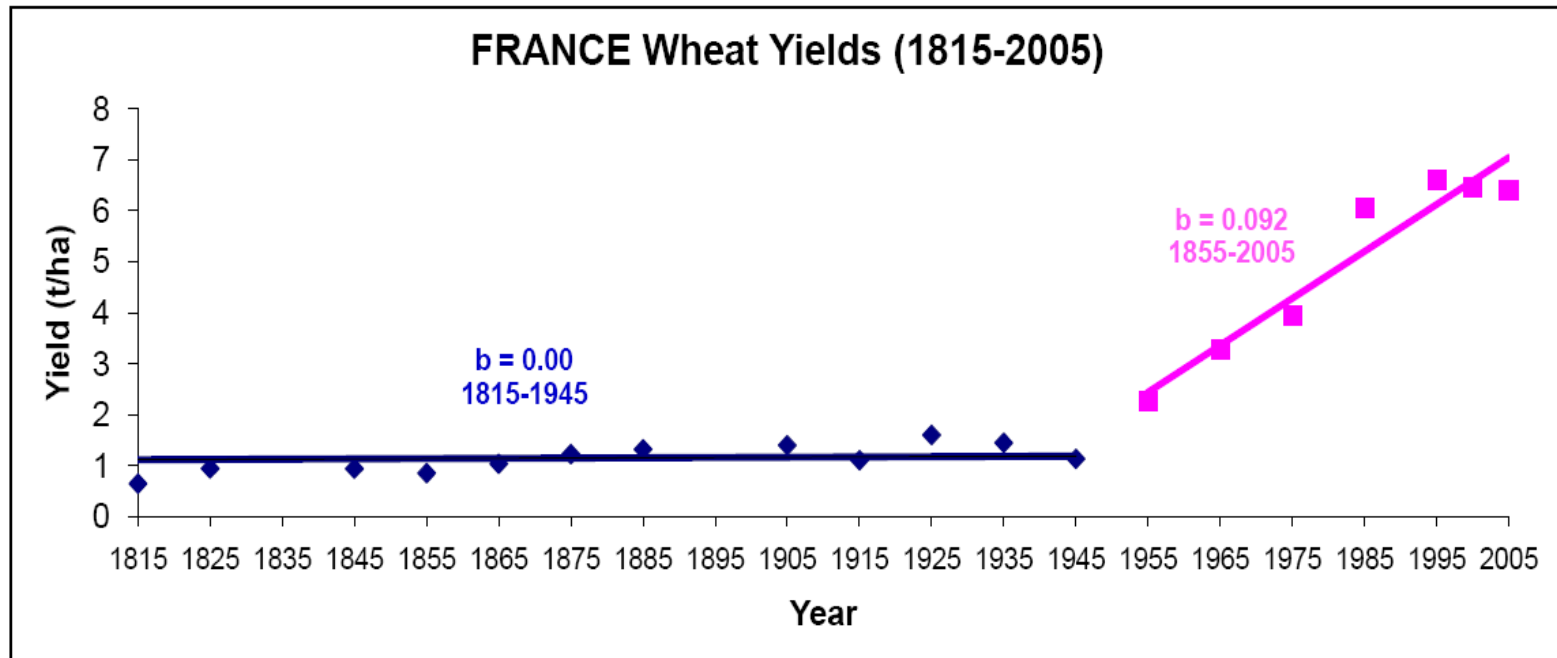
Date.....



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





Lodging
Height
Earliness
Resistance to sprouting

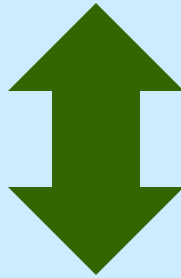
Mildew
Yellow rust
Brown rust
Septoria nodorum
Septoria tritici
Eyespot
Fusarium ear blight
Orange wheat blossom midge

Yield: treated/untreated
Yield: early sown/late sown
Yield: light soil/heavy soil

Breadmaking quality
Biscuit making quality
Feed quality



BREEDERS' RIGHTS



FARMERS' BENEFITS

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

– 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.*

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.



STUDY in VIET NAM

(Noleppa, S. (2017) (interim report))

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 %

STUDY in VIET NAM

(Noleppa, S. (2017) (interim report))

Without those developments since 2006,
current annual yields in Viet Nam would be lower by:

- Rice 16 %
- Corn 19 %
- Sweet potatoes 27 %

STUDY in VIET NAM

(Noleppa, S. (2017) (interim report))

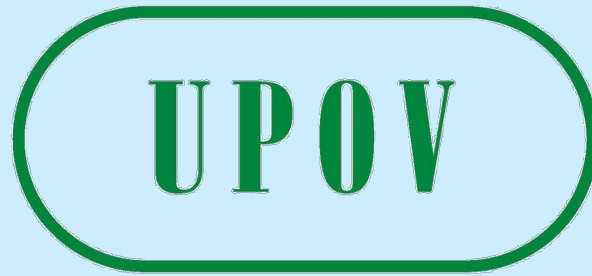
Annual value added:

- 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

(more than the annual GDP of 40 countries)

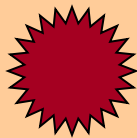


UPOV MISSION STATEMENT

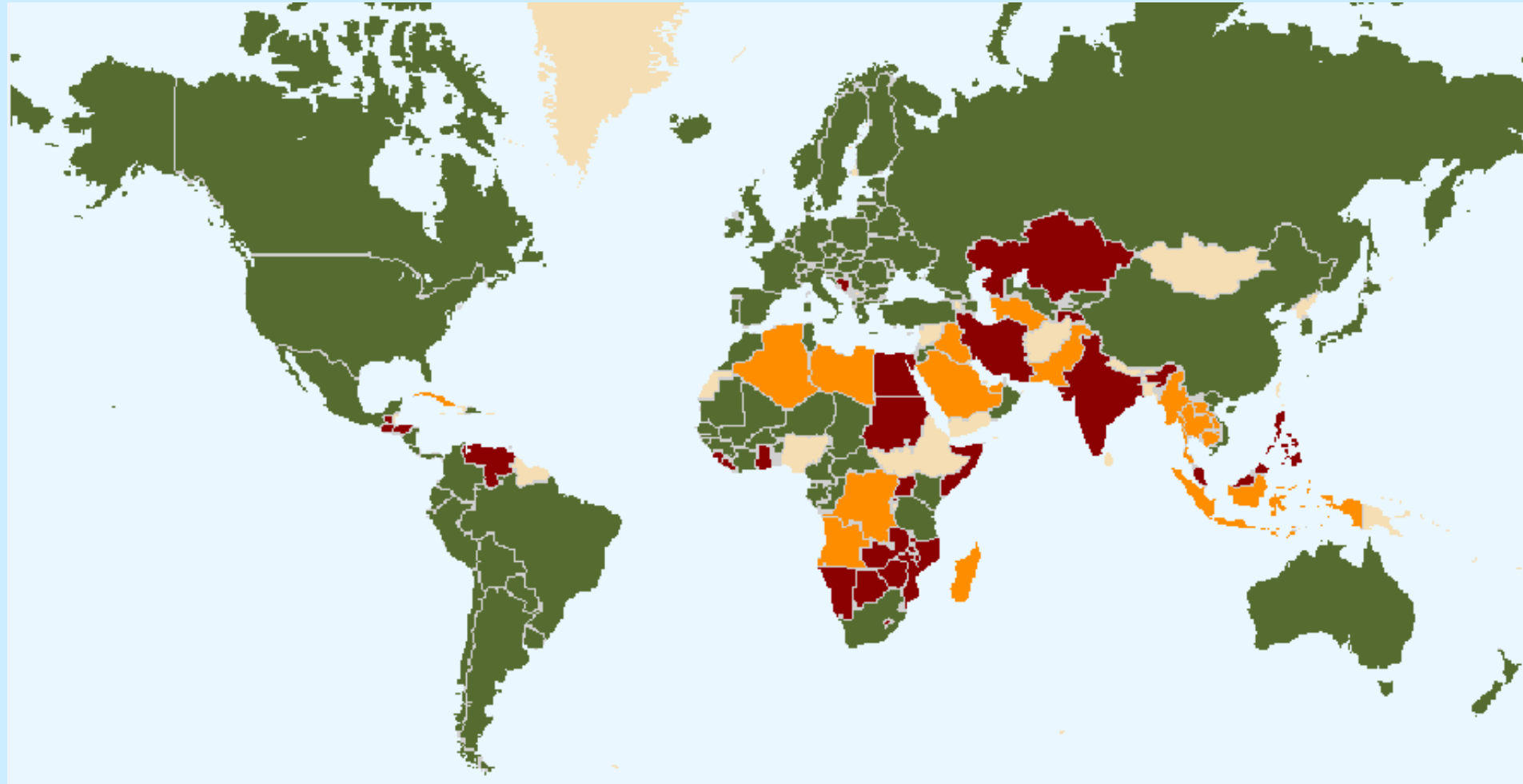
“To provide and promote an effective system of plant variety protection (PVP), [...]”



Plant Breeder's Right (PBR)



UPOV status



Members of UPOV (74) covering 93 States

Initiating States (15) and Organization (1)

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

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

Preview

- Introduction to UPOV
- **Relationship with other systems**
- Evolution of UPOV
 - Membership
 - 1991 Act
 - Services



Protected
plant varieties

Unprotected plant varieties

Not regulated by UPOV

(ITPGRFA, CBD, seed marketing
regulations etc.)

Landraces
Wild populations

Relevant Treaties

UPOV

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

WTO/TRIPS

Protection and enforcement of **intellectual property rights** in order to reduce distortion and impediments to international trade

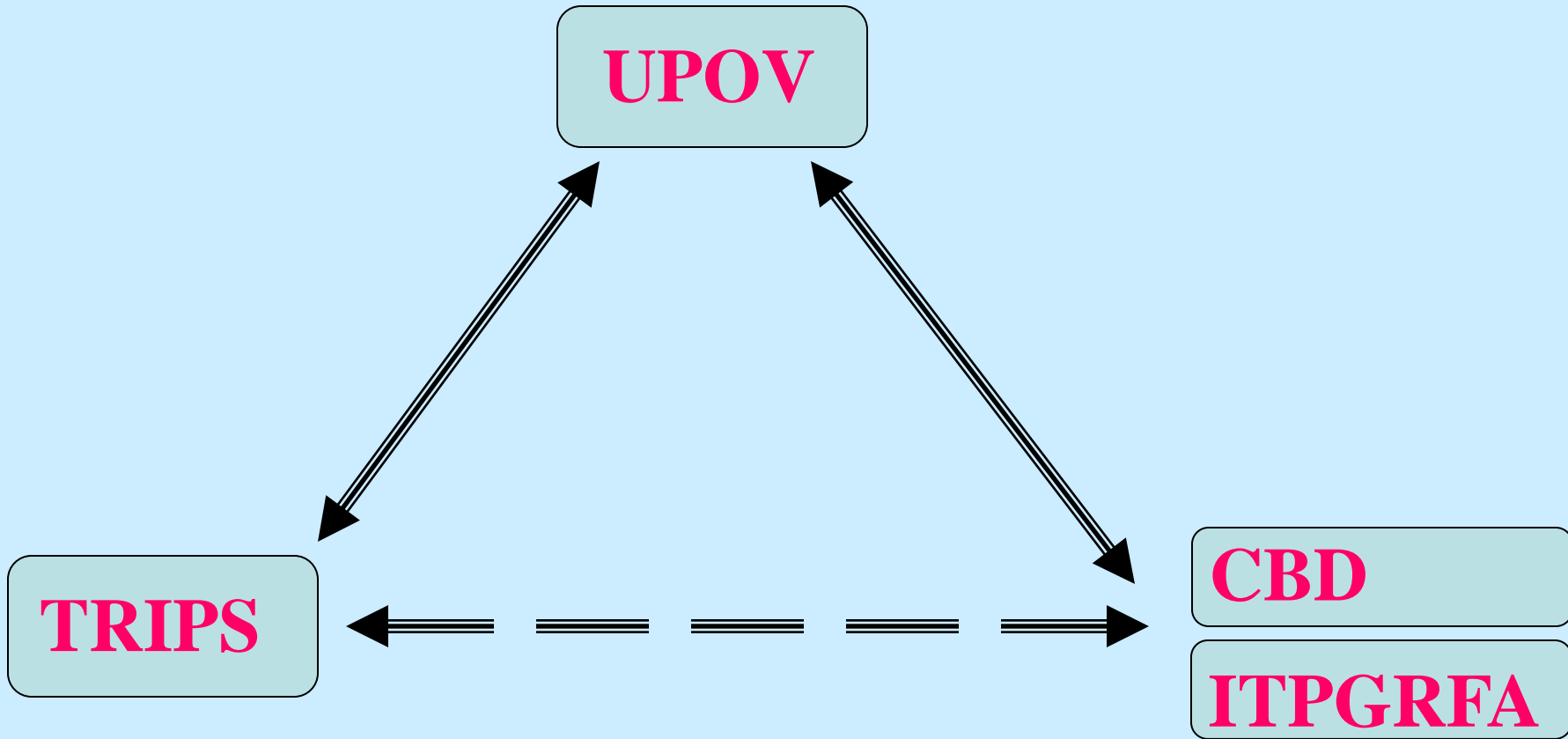
CBD/COP

Conservation of biological diversity, **sustained use** of its elements and **benefit sharing** of the advantages flowing from exploitation of these genetic resources

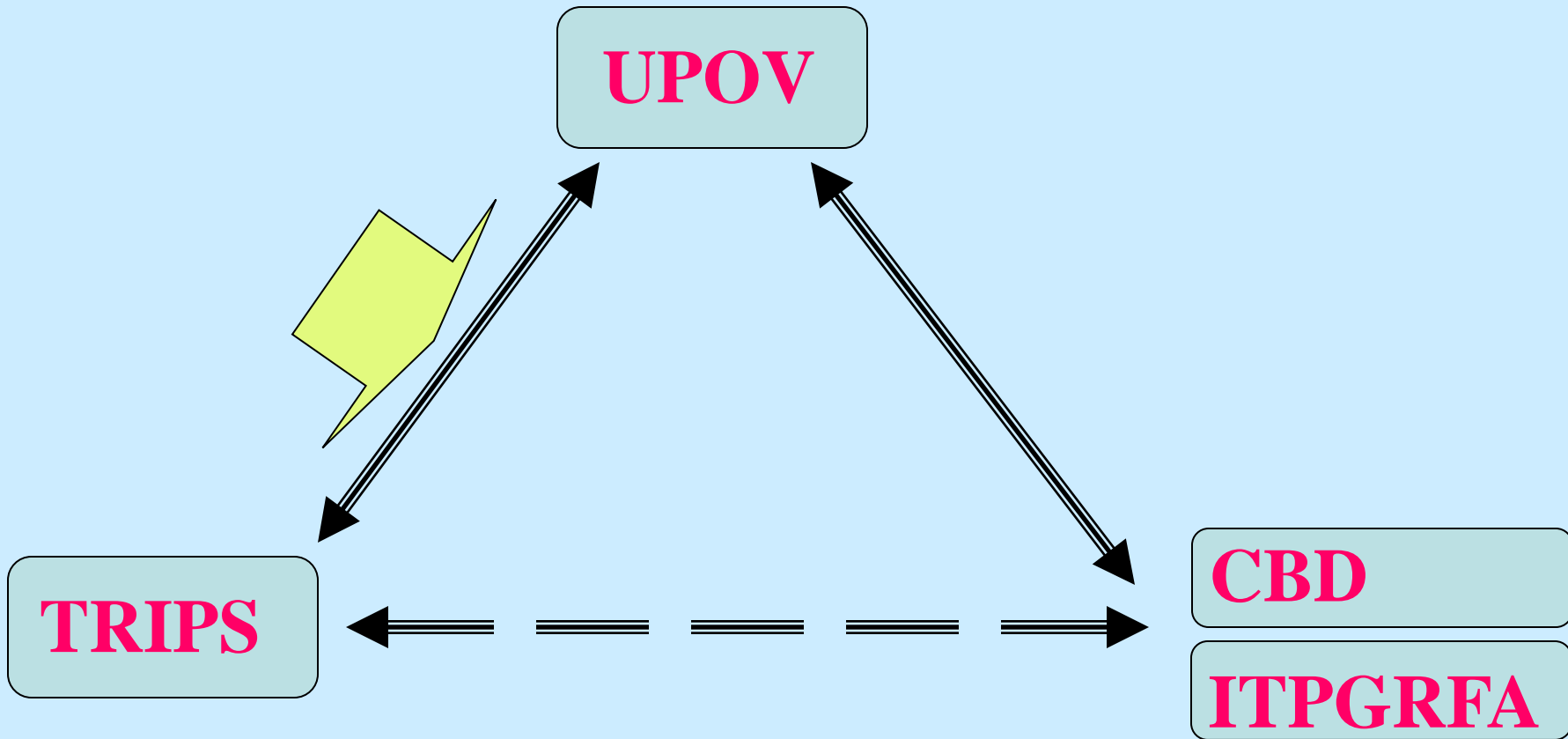
FAO/ITPGRFA

Conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable **sharing of the benefits** arising out of their use for sustainable agriculture and food security

Relevant Treaties



Relevant Treaties



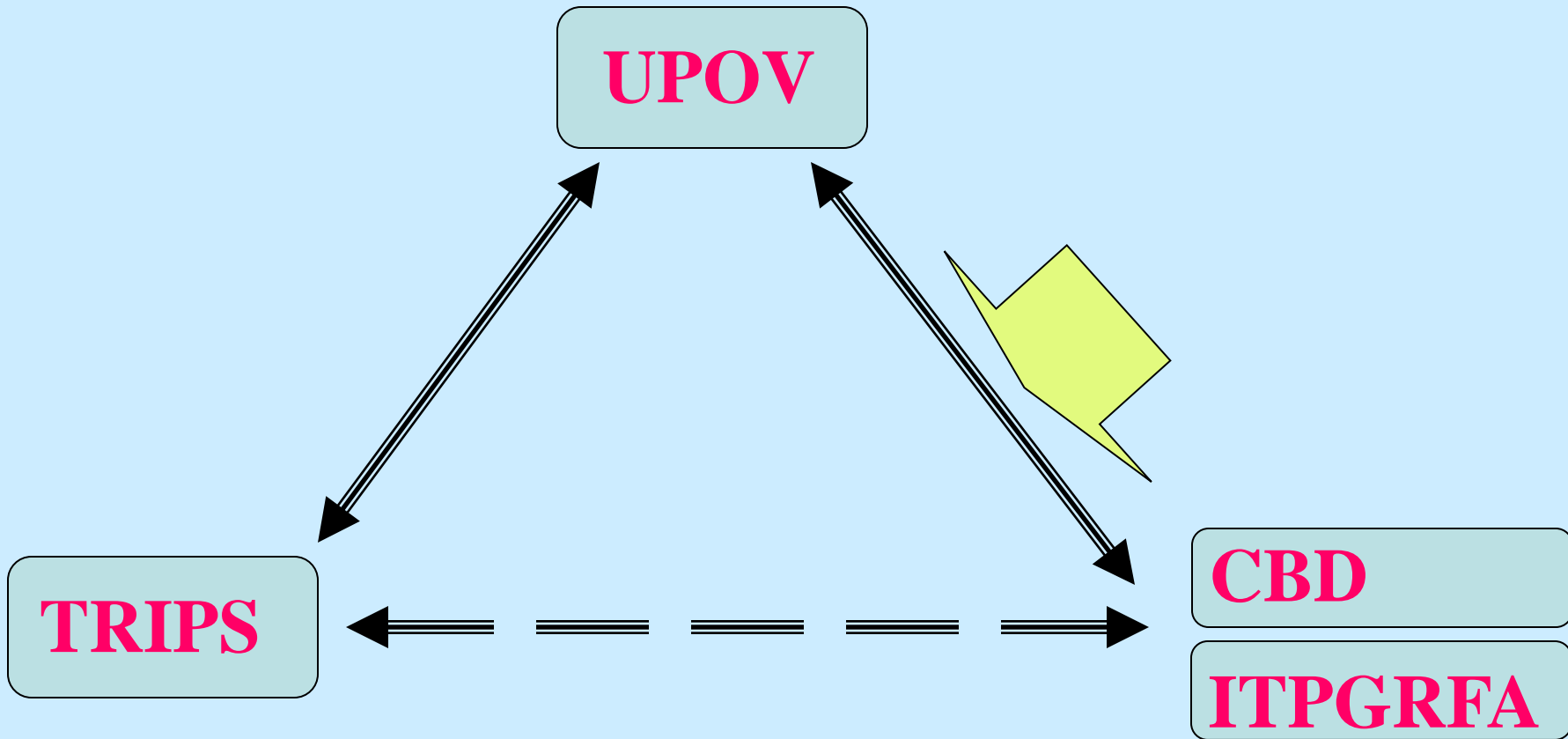
Relevant Treaties

TRIPS Article 27

Patentable subject matter

1. ..., patents shall be available for any invention, ...,
3. Members **may also exclude from patentability** [...]
- (b) **plants** and animals other than micro-organisms, However, Members shall provide for the **protection of plant varieties either by patents or by an effective *sui generis* system** or by any **combination thereof ...**

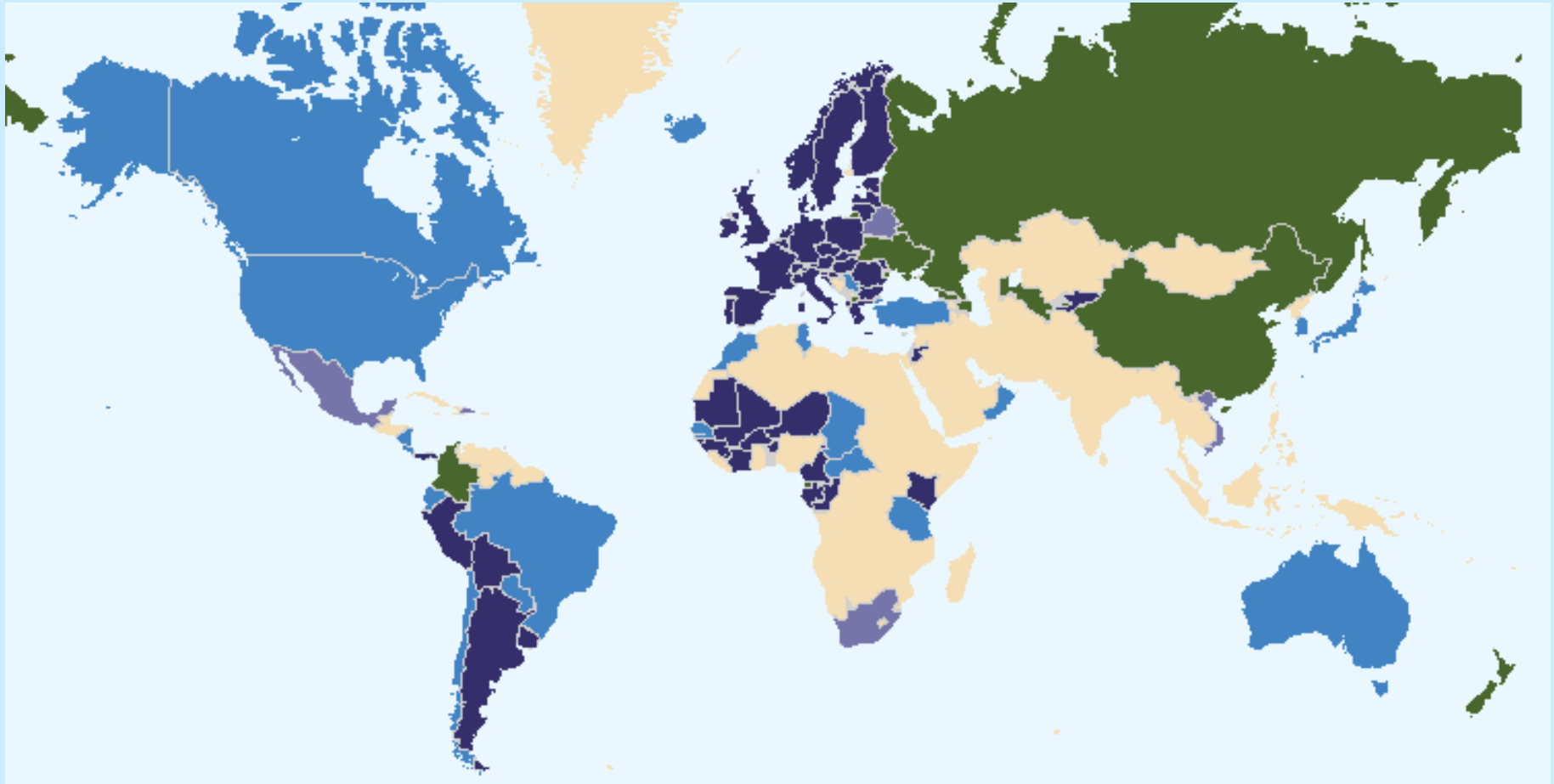
Relevant Treaties







FAQ: What is the relationship between the UPOV Convention and international treaties concerning genetic resources, e.g. the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)?

- The UPOV Convention, the CBD and the ITPGRFA are all international instruments
- The objectives of the CBD and the ITPGRFA are the conservation and sustainable use of genetic resources and the sharing of benefits arising from their use
- Both the ITPGRFA and the UPOV Convention aim to support plant breeding activities and to encourage the development of new varieties of plants. The ITPGRFA does so by providing a system for facilitated access to plant genetic resources, while the UPOV Convention does so by establishing a system for plant variety protection. When implemented by UPOV members, the relevant legislations dealing with these matters should be compatible and mutually supportive

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



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| | |
|--|------------------------------|
|  | UPOV/ITPGRFA/Nagoya Protocol |
|  | UPOV/ITPGRFA |
|  | UPOV/Nagoya Protocol |
|  | UPOV only |

as of March 14, 2017

Some other things NOT regulated by UPOV

- **Genetically modified organisms**
 - **Market regulation**
**(e.g. seed certification,
official register of varieties
admitted to trade)**

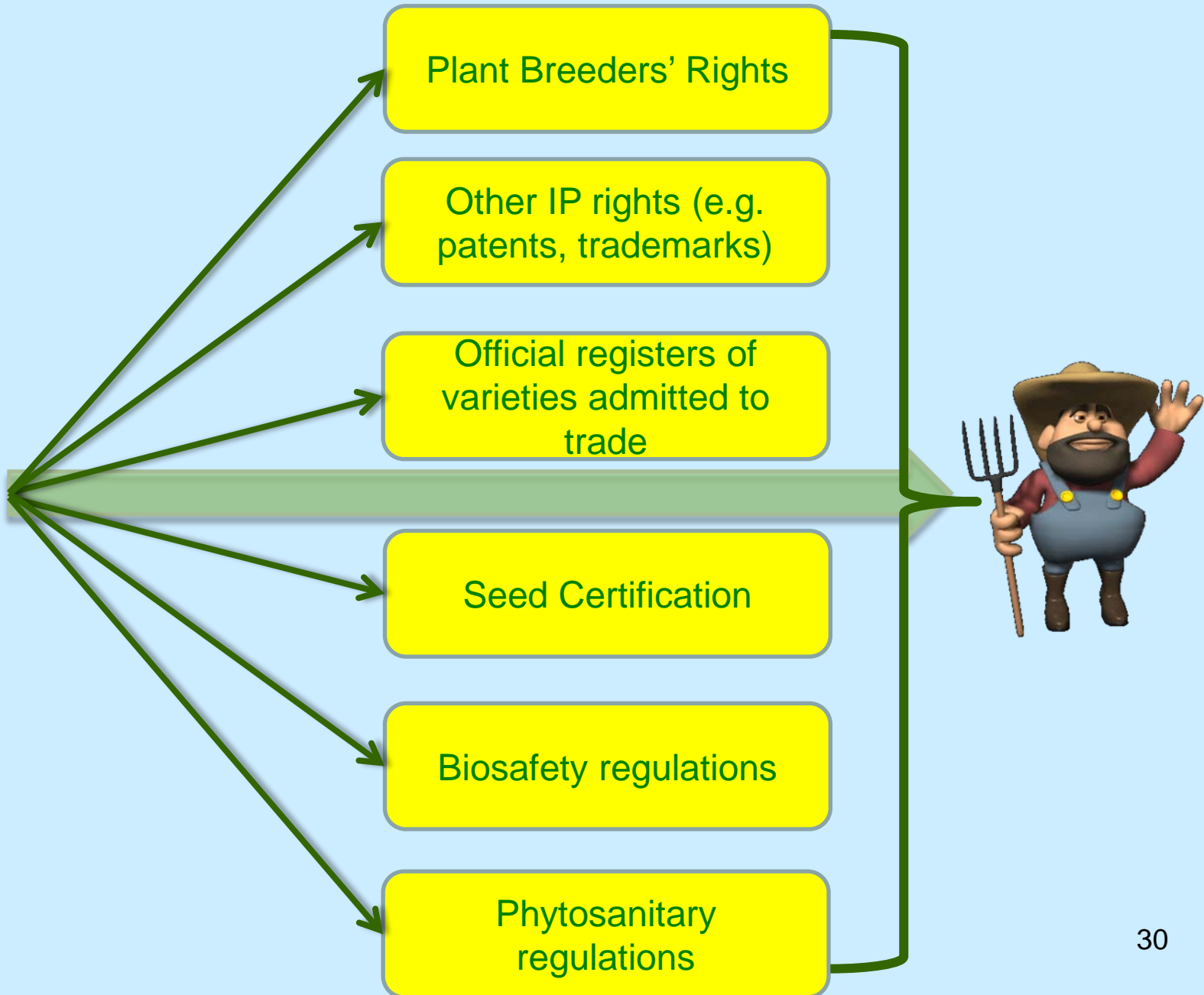
Biotech Crop Countries and Mega-Countries*, 2012



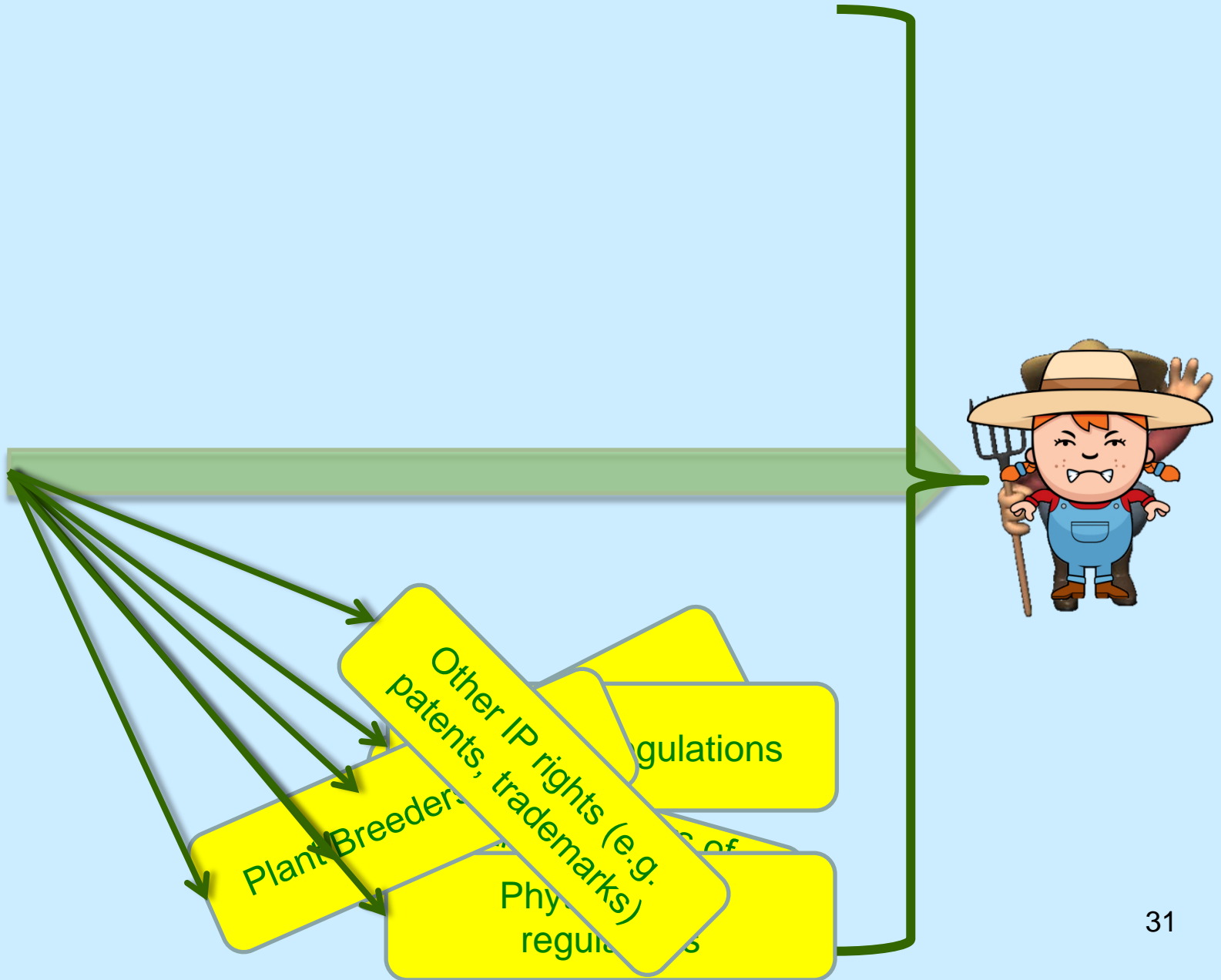
* 18 biotech mega-countries growing 50,000 hectares, or more, of biotech crops.

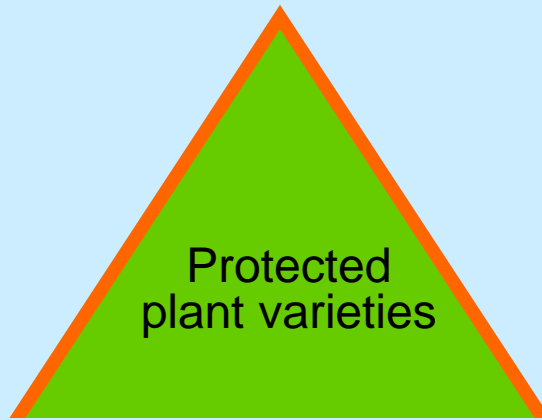
Source: Clive James, 2012.

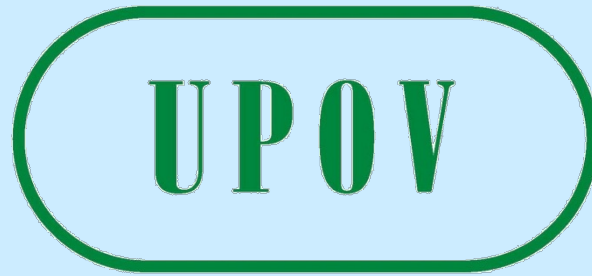
Some systems in the Seed Sector...



Some systems in the Seed Sector...





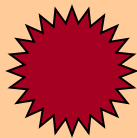


UPOV MISSION STATEMENT

“To provide and promote an effective system of plant variety protection (PVP), [...]”



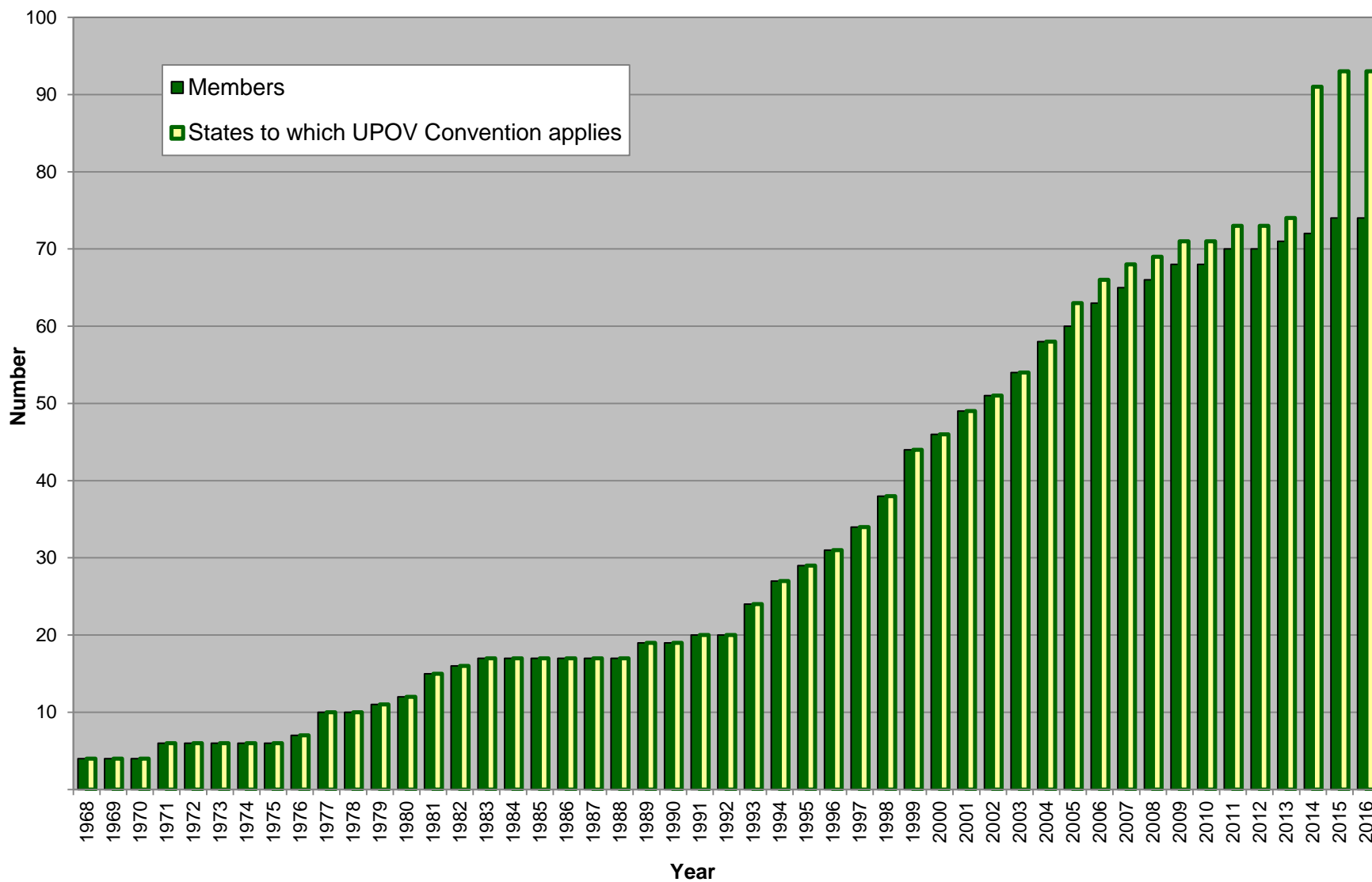
Plant Breeder's Right (PBR)



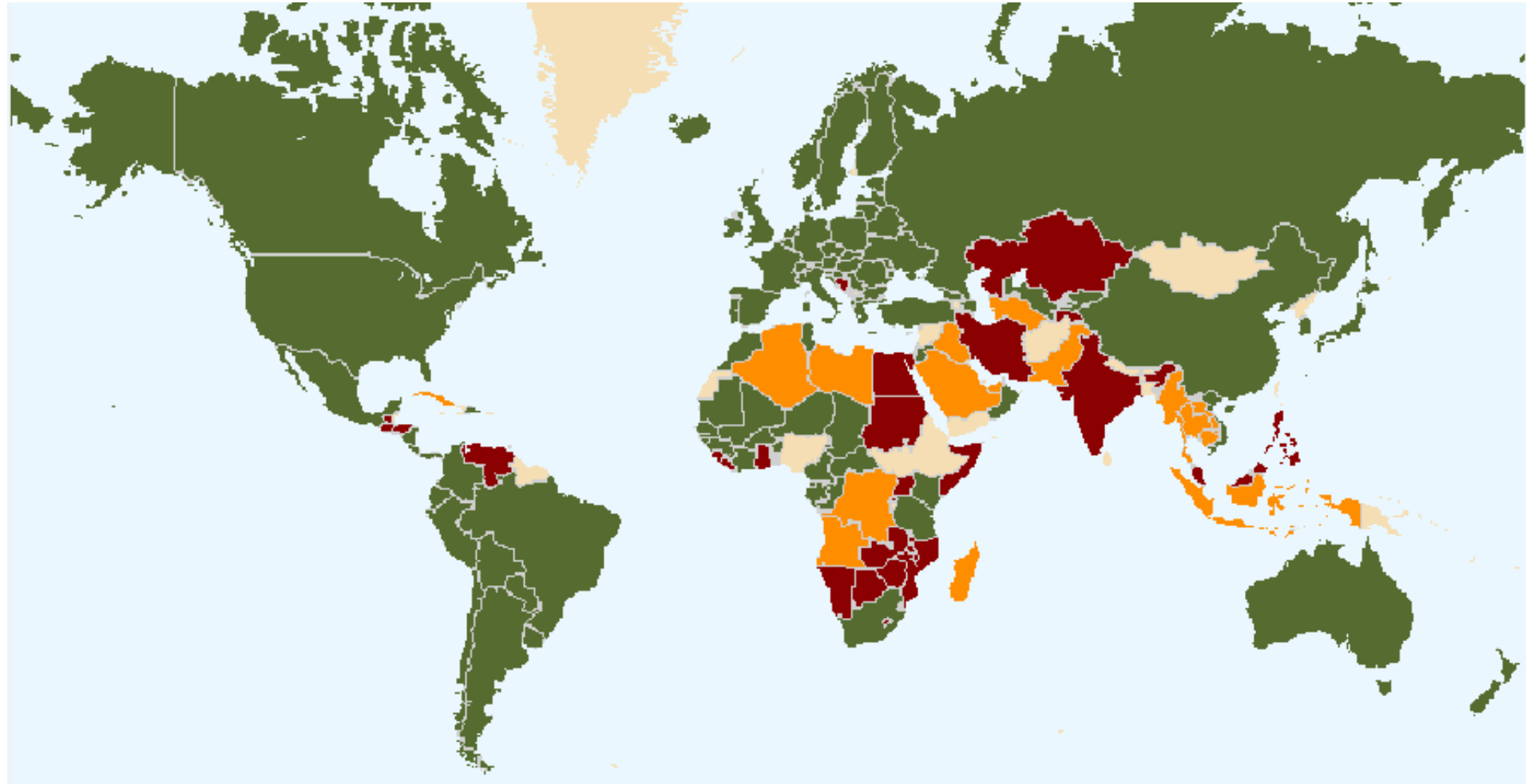
Preview

- Introduction to UPOV
- Relationship with other systems
- **Evolution of UPOV**
 - **Membership**
 - **1991 Act**
 - **Services**

Development of UPOV



UPOV status

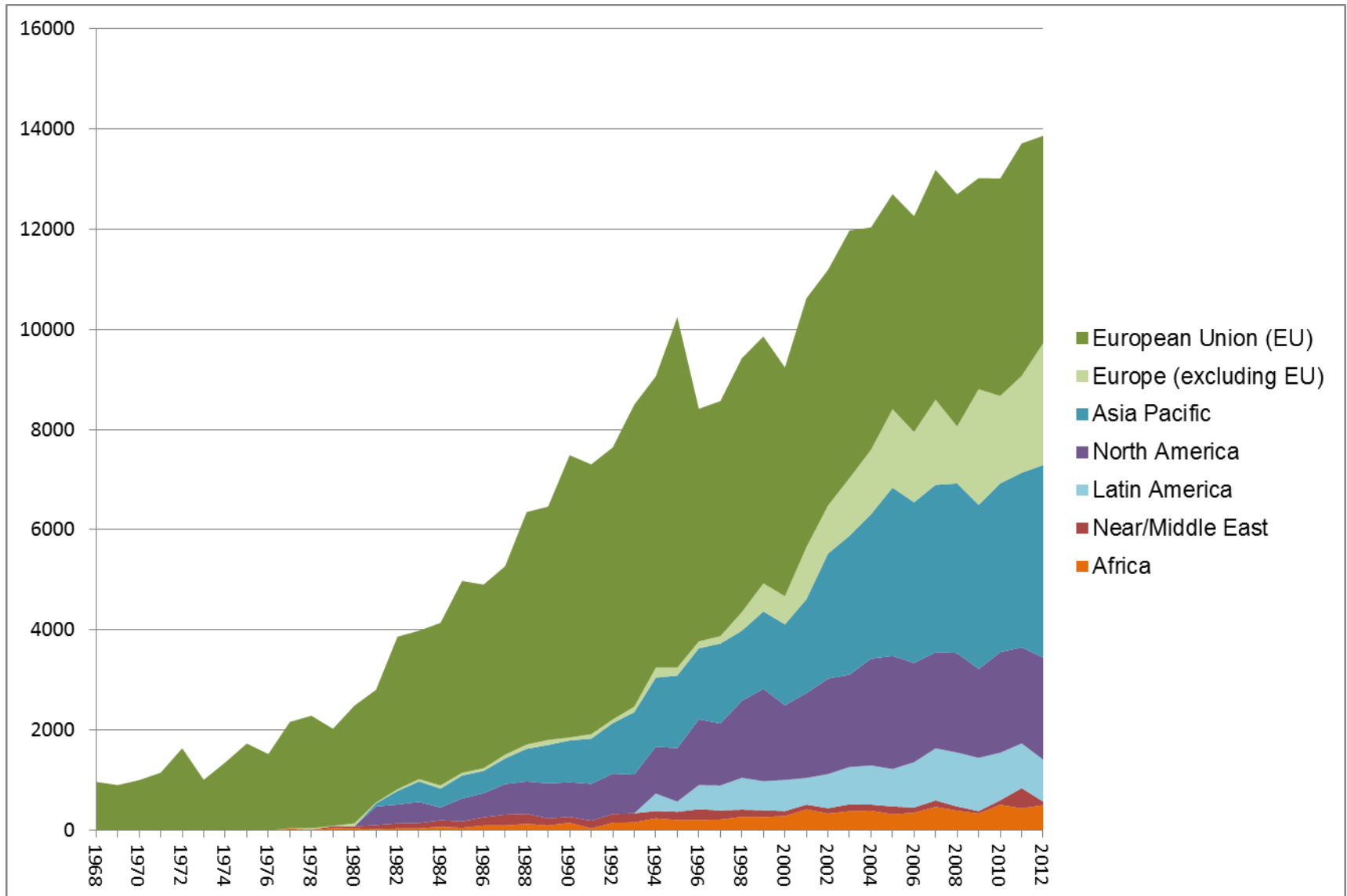


Members of UPOV (74) covering 93 States

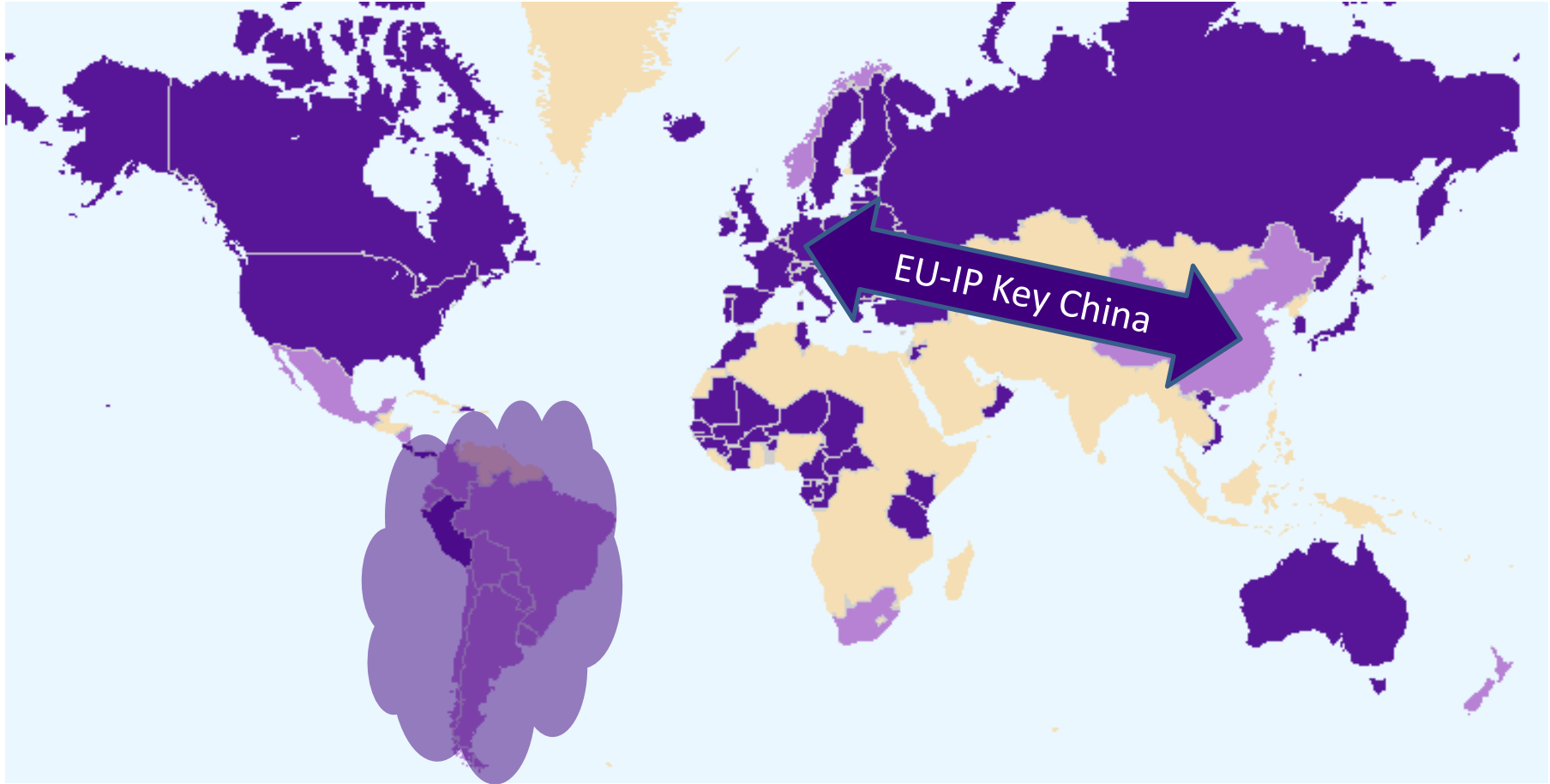
Initiating States (15) and Organization (1)

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

Applications for Plant Breeders' Rights



UPOV Membership



1991 Act: 56 members – Other Acts: 18 members

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PREVIEW

Some key provisions of the 1991 Act:

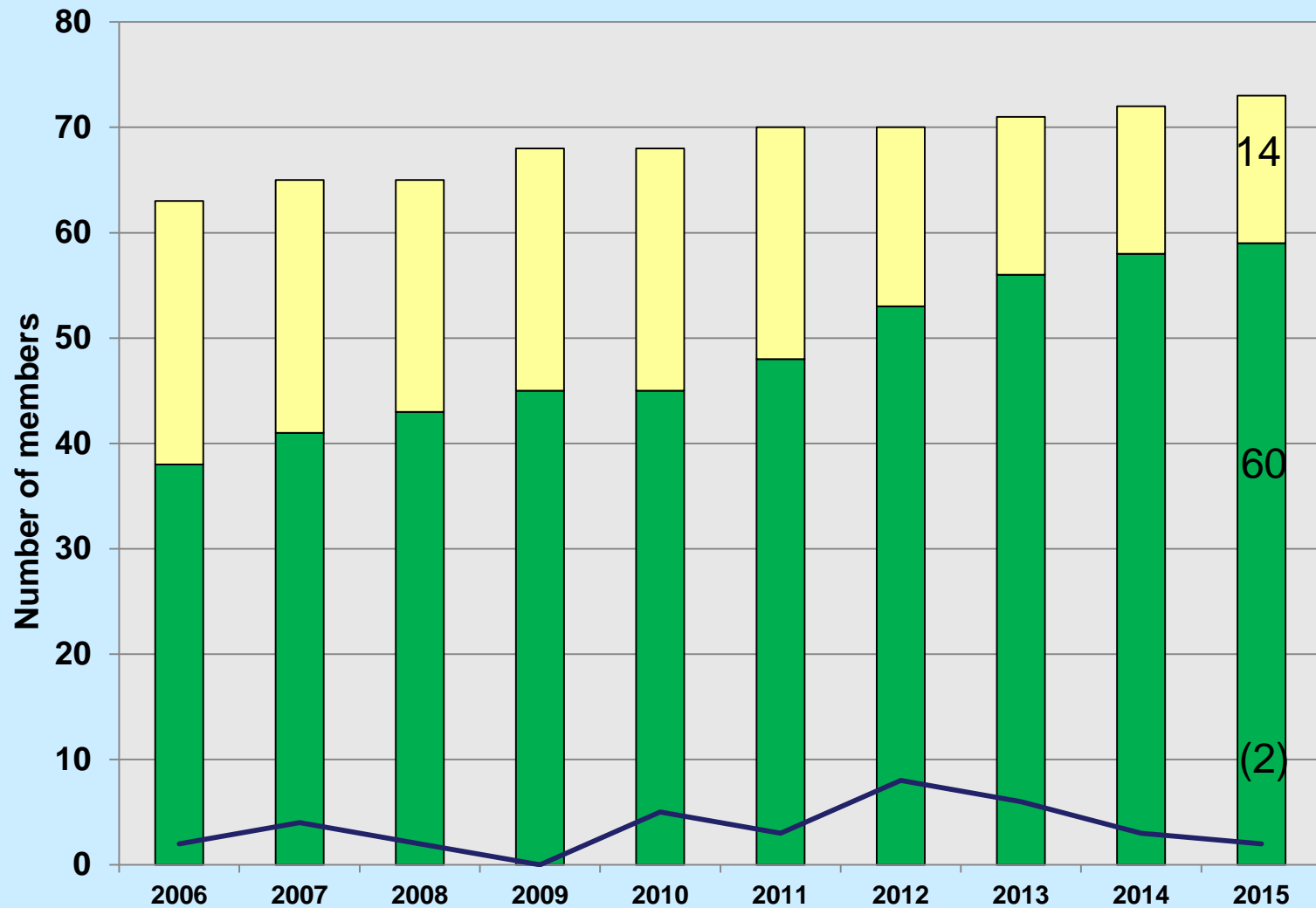
- 1. Breeder and Variety**
- 2. Plant Genera and Species**
- 3. Provisional Protection**
- 4. Duration**
- 5. Scope/Exceptions**

PREVIEW

Some key provisions of the 1991 Act:

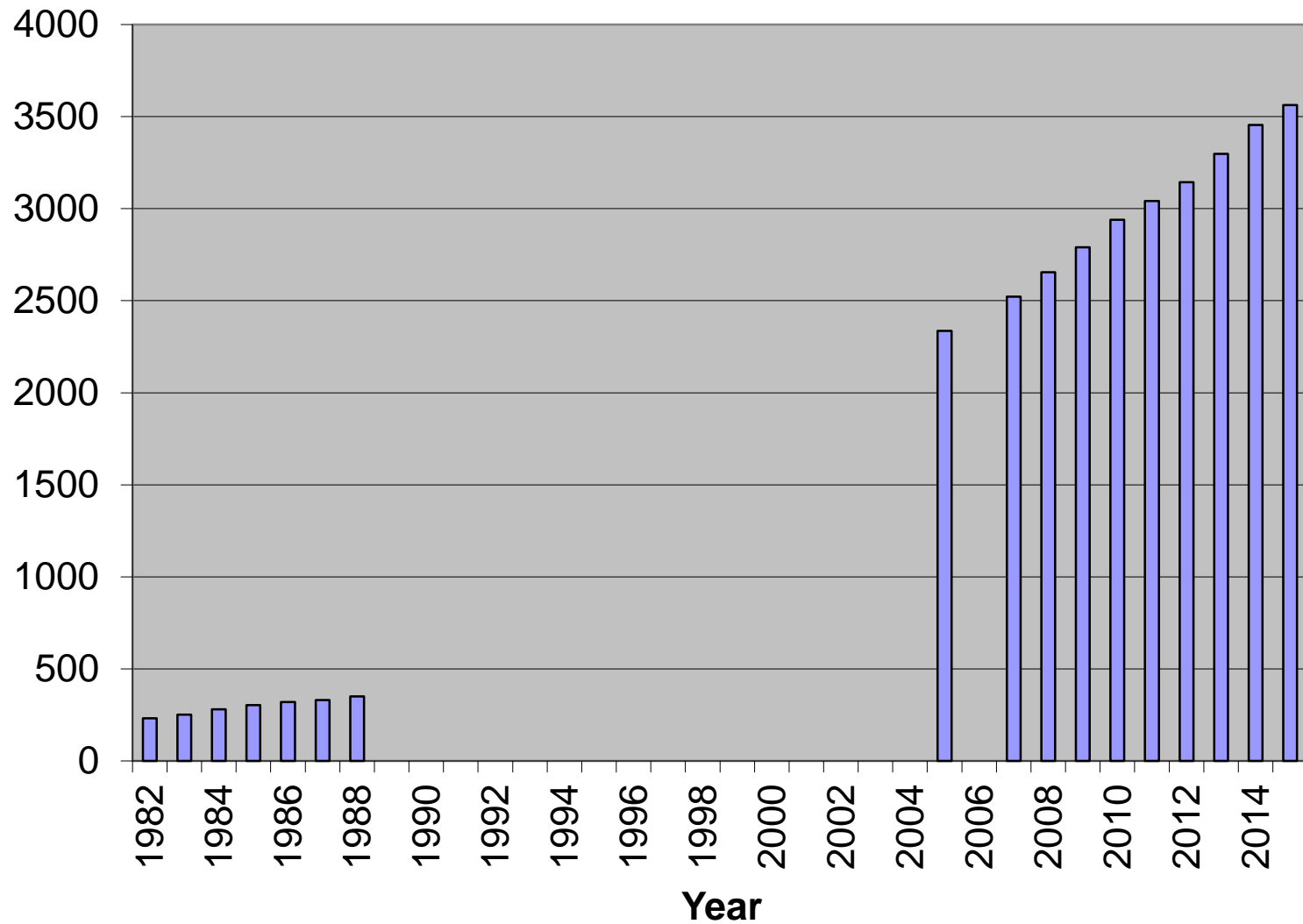
1. Breeder and Variety
2. **Plant Genera and Species**
3. Provisional Protection
4. Duration
5. **Scope/Exceptions**

Taxa protected by the members of the Union (C/49/6)

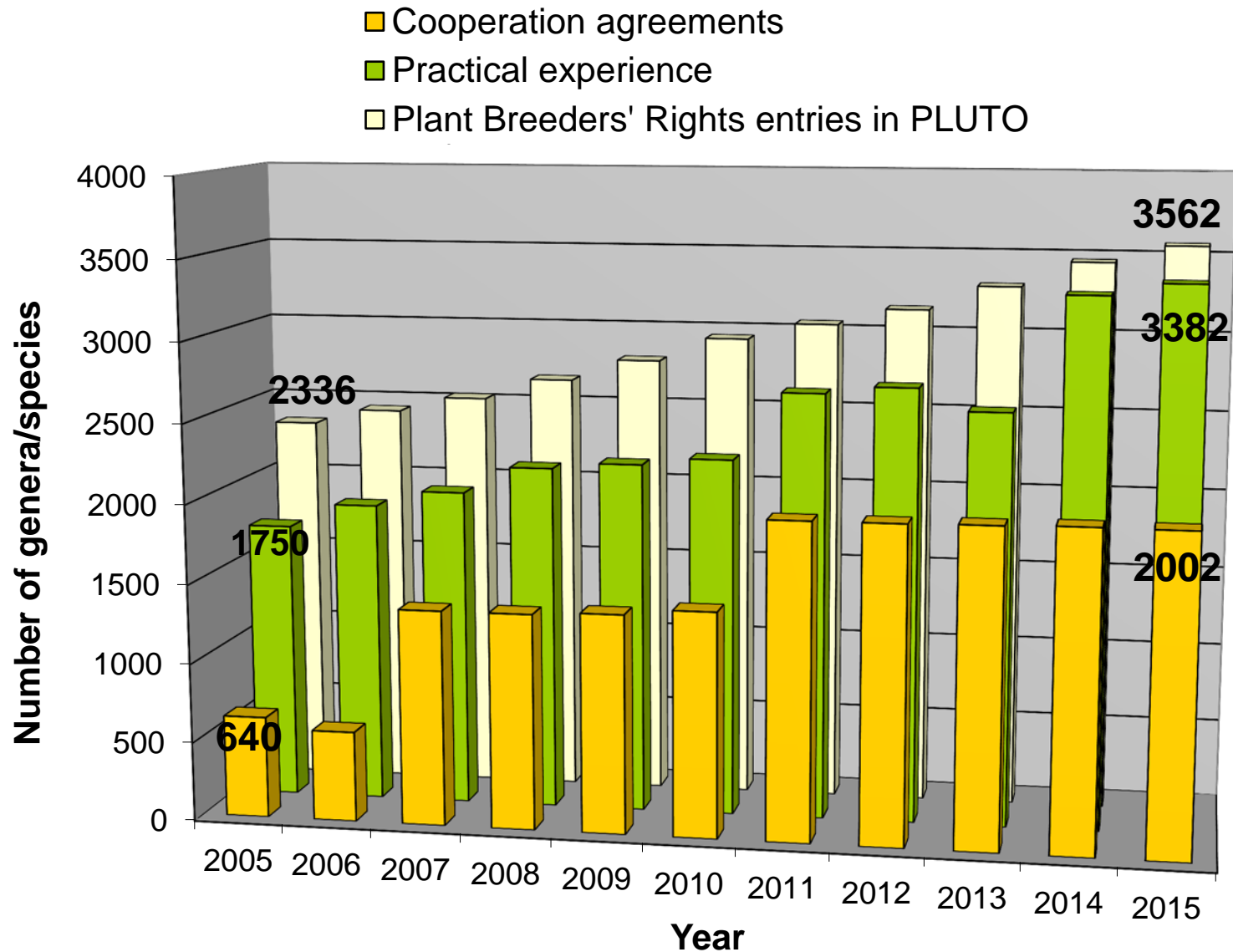


- Number of members offering protection to a limited number of plant genera and species
- Number of members offering protection to all plant genera and species
- Number of members extending protection to additional plant genera and species

Number of plant genera and species for which protection sought (UPOV Members)



Cooperation in examination (C/49/5)



GENIE Database

(Genus / species)



Scope of the PBR (1991 Act)

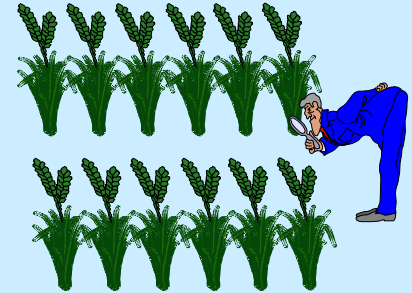
1. Duration
2. Acts covered
3. Material covered
4. **Varieties covered**
5. **Exceptions**

VARIETIES COVERED

In addition to the protected variety itself...

VARIETIES:

- **not clearly distinguishable** from the protected variety
- whose production **requires the repeated use** of the protected variety
e.g. hybrids requiring repeated use of parent lines
- which are **essentially derived** from the protected variety
...



ESSENTIALLY DERIVED VARIETIES

PURPOSE:

to ensure sustainable plant breeding development by:

- providing effective protection for the breeder and
- encouraging cooperation between breeders and developers of new technologies such as genetic modification

ESSENTIALLY DERIVED VARIETIES

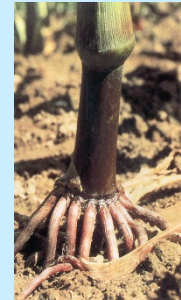
Protected plant variety

Patented genetic
element

>===<

Protected by Patent?
Protected by PBR?

- if EDV (1991 Act only)



Distinct

ESSENTIALLY DERIVED VARIETIES

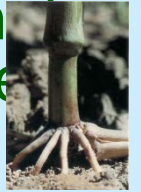
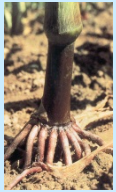
...a variety shall be deemed to be **essentially derived from** another variety (“the **initial variety**”) when

UPOV/EXN/EDV/2 Draft 7

(i) it is **predominantly derived** from the **initial variety**, or from a variety that is itself predominant derived from the initial variety, **while retaining the expression of the essential characteristics** that result from the genotype or combination of genotypes of the initial variety,

(ii) it is **clearly distinguishable** from the initial variety and

(iii) except for the differences which result from the act of derivation, it **conforms to the initial variety in the expression of the essential characteristics** that result from the genotype or combination of genotypes of the initial variety.



Scope of the PBR (1991 Act)

1. Duration
2. Acts covered
3. Material covered
4. **Varieties covered**
5. **Exceptions**

EXCEPTIONS TO THE BREEDER'S RIGHT (1991 Act)

Compulsory

Acts done:

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

Optional

Farm-saved seed

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 (1991 Act)

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

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

Preview

- **Introduction to UPOV**
- **Relationship with other systems**
- **Evolution of UPOV**
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 - **Services**

UPOV- Electronic Application Form

- Easy way to transfer and re-use your PBR application data, using an efficient multi-lingual e-system available online for all participating countries worldwide



Breeder 1



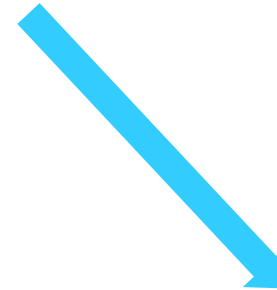
Available in different
languages (EN, FR, ES,
DE, Other)



PVP Office 3



PVP Office 2



PVP Office 1



PVP Office DB

Breeder 2



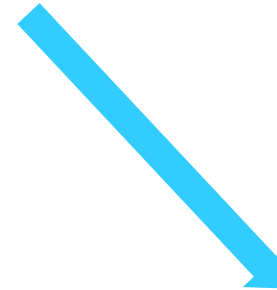
Breeder DB



PVP Office 3



PVP Office 2



PVP Office 1



PVP Office DB

UPOV

UPOV- Electronic Application Form

- Online PBR application tool to provide application data to participating PVP Offices in required format (hard copy, e-mail notification, system-to-system)
- Application forms can be displayed in range of languages (answers must be provided in an acceptable language for the PVP Office)
- Variety data can be re-used in subsequent applications
- Different user roles can be specified (e.g. drafter, signatory, translator, agent, procedural representative)
- Controlled access to all PBR application data
- Secure and confidential
- Track your applications...

Participating UPOV members in development of the EAF

- Argentina
- Australia
- Bolivia
- Brazil
- Chile
- Canada
- China
- Colombia
- Czech Republic
- Dominican Republic
- Ecuador
- European Union (28 member States)
- France
- Georgia
- Germany
- Japan
- Kenya
- Mexico
- Netherlands
- New Zealand
- Norway
- Oman
- OAPI (17 member States)
- Paraguay
- Republic of Korea
- Republic of Moldova
- Sweden
- South Africa
- Switzerland
- Tunisia
- United States of America
- Uruguay
- Viet Nam

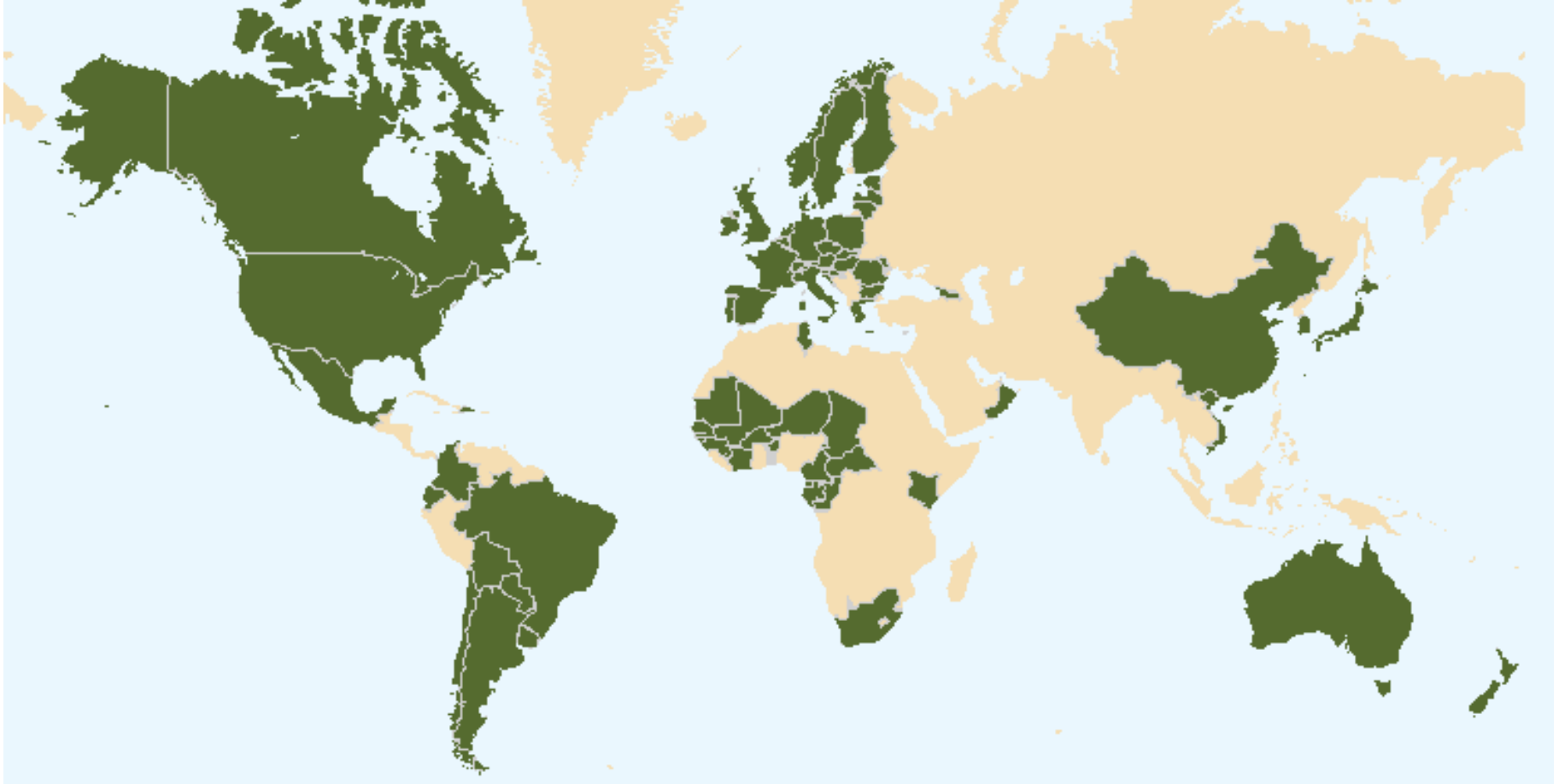
Partners

- UPOV Office
- WIPO
- CPVO
- ISF
- CIOPORA
- CropLife

33

cover 76 countries

Participating UPOV members in EAF



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Launch Version 1.0: January 2017

Crops

| |
|------------------|
| Apple |
| Lettuce |
| Potato |
| Rose |
| Soya Bean |

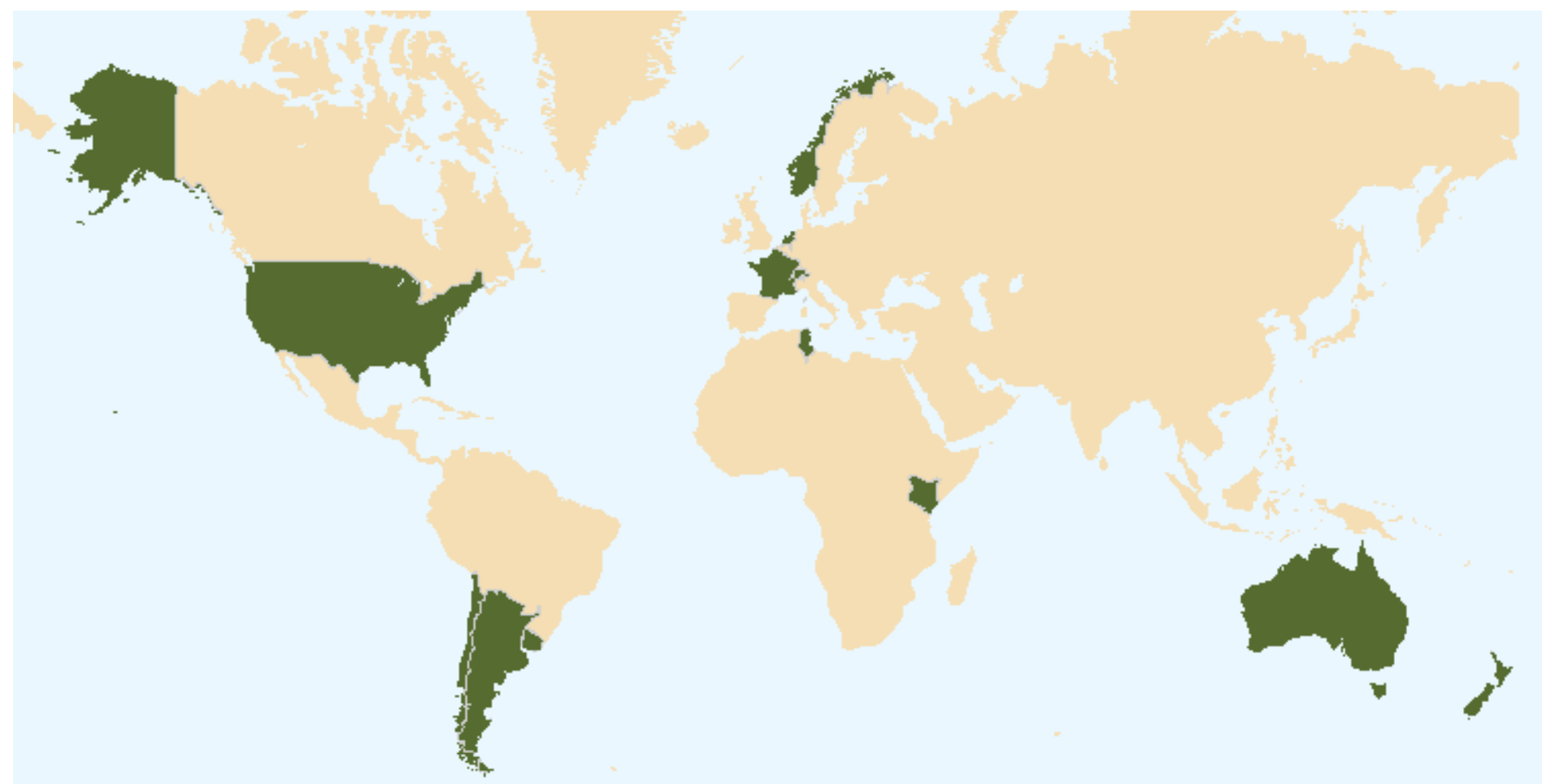
Languages

| |
|----------------|
| English |
| French |
| German |
| Spanish |

Launch 1.0: January 2017: UPOV members

| Authority | | Soya Bean | Lettuce | Apple fruit varieties | Rose | Potato | Total |
|---------------------------------|-----------|-----------|---------|-----------------------|------|--------|-------|
| Argentina | AR | ✓ | - | ✓ | ✓ | ✓ | 4 |
| Australia | AU | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| Chile | CL | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| France | FR | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| Kenya | KE | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| Netherlands | NL | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| New Zealand | NZ | - | ✓ | ✓ | ✓ | ✓ | 4 |
| Norway | NO | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| Switzerland | CH | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| Tunisia | TN | ✓ | ✓ | ✓ | ✓ | ✓ | 5 |
| United States of America | US | ✓ | ✓ | - | - | - | 2 |
| Uruguay | UY | ✓ | - | ✓ | - | ✓ | 3 |
| Total | 12 | 11 | 10 | 11 | 10 | 11 | |

Launch 1.0 January 2017: UPOV members



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UPOV- Electronic Application Form

The screenshot shows the UPOV website homepage. At the top, there is a language selector with options: Deutsch, Español, Français, and Other. Below this is a search bar and links for Contact us, Site map, and YouTube. A navigation menu includes ABOUT UPOV, MEMBERSHIP, UPOV SYSTEM, PVP DATA & STATISTICS, MEETINGS, and NEWS. The main content area features a large image of a sunflower with the text "New UPOV logo" overlaid. To the right, a "Stakeholder features" box lists Breeders, Farmers and Growers, Policy makers, and General Public. Below this, a "NEW Electronic Application Form (EAF)" link is highlighted with a red arrow. Further down, there are links for GENIE Database, UPOV Lex, and Plant Variety Database (PLUTO). A "Quick Links" section on the right lists: Introduction to UPOV, Benefits of UPOV, UPOV Collection, EAF Information, Test Guidelines, Distance Learning Courses, Seminars & Symposia, and FAQs. A "Welcome" section on the left provides information about UPOV's mission and history. A red arrow points from the "EAF Information" link in the Quick Links section to the "Welcome" section. At the bottom left, there is a "Top of page" link.

UPOV

Deutsch Español Français Other »

Search

Contact us Site map YouTube

ABOUT UPOV MEMBERSHIP UPOV SYSTEM PVP DATA & STATISTICS MEETINGS NEWS

MISSION STATEMENT OVERVIEW ORGANIGRAM OFFICE OF UPOV OFFICERS UPOV DOCUMENTS BENEFITS OF UPOV KEY ISSUES FAQs PUBLICATIONS

New UPOV logo

Stakeholder features

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

NEW Electronic Application Form (EAF)

GENIE Database

UPOV Lex

Plant Variety Database (PLUTO)

Quick Links

- Introduction to UPOV
- Benefits of UPOV
- UPOV Collection
- EAF Information
- Test Guidelines
- Distance Learning Courses
- Seminars & Symposia
- 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.

▲ Top of page



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”

UPOV status



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