

*WORKSHOP ON AWARENESS OF PLANT
VARIETY PROTECTION
UNDER THE UPOV CONVENTION*

**Basic Principles of
Plant Variety Protection and
Benefits of UPOV Membership**

*Peter Button
Vice Secretary-General, UPOV*

*Kingdom of Cambodia
December 9, 2015*

PREVIEW

- Why do we need to encourage plant breeding?
- How does PVP support different types of breeders?
- Why is UPOV membership important?

Who needs plant breeders?



(Photo: iStockphoto.com/monkeybusinessimages)

WHEAT

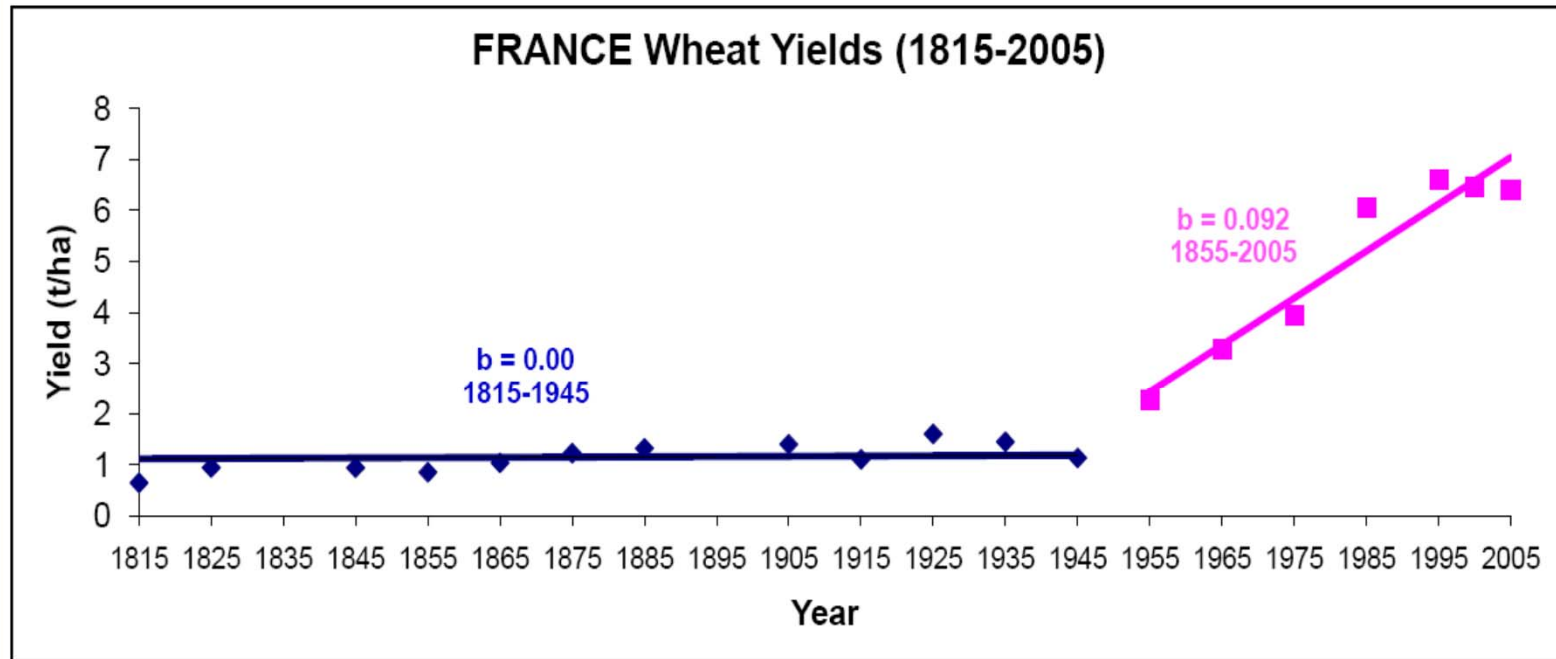


(Photo: iStockphoto.com/AdiGrosu)

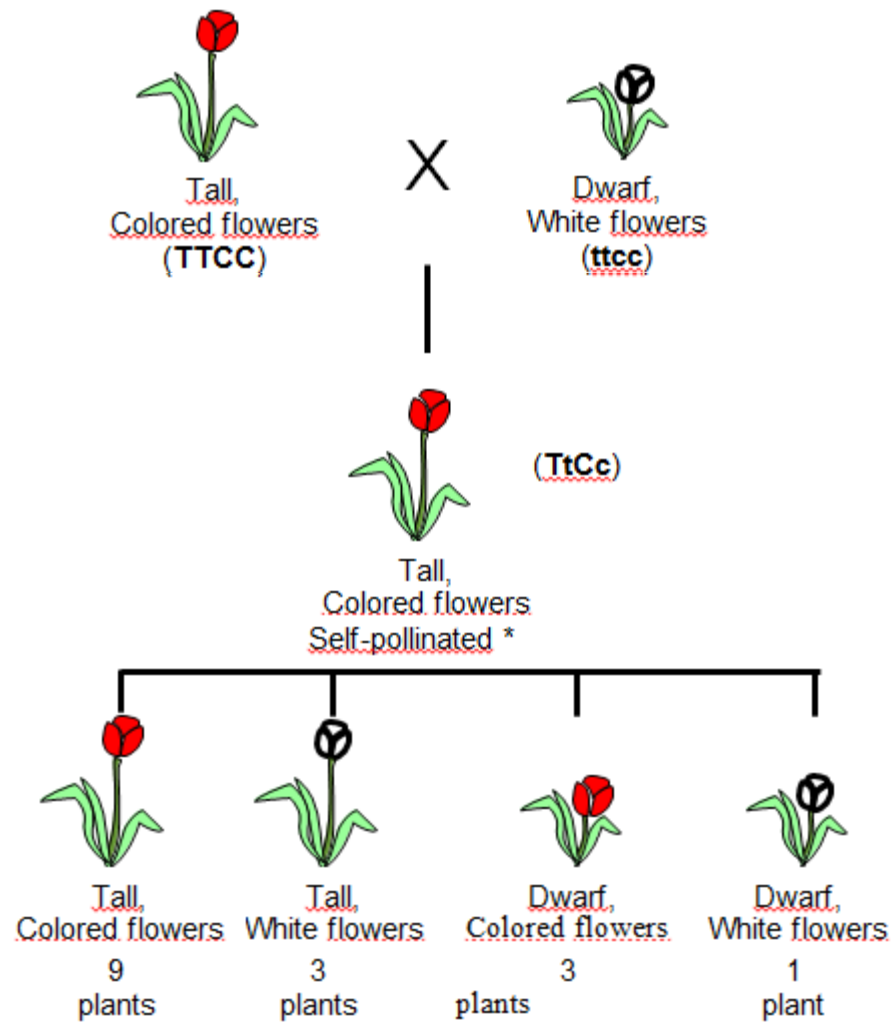


(Photo: iStockphoto.com/Ziva_K)

Evolution of Wheat yield in France



Phenotypal expression



* The plant pollinates itself, i.e., both the male and female gametes come from the same plant

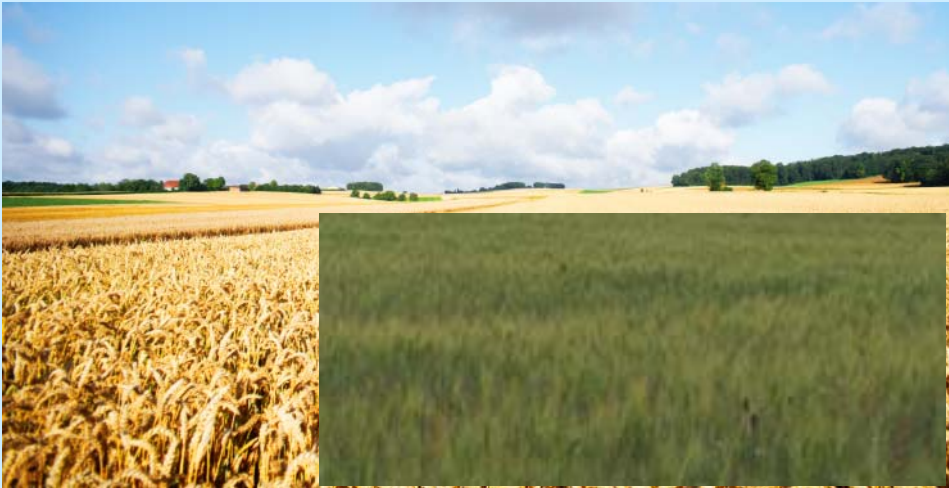
Lodging



(Photo: iStockphoto.com/Ziva_K)

(Photo: BSPB)

Lodging
Height
Earliness



(Photo: iStockphoto.com/Ziva_K)

(Video: iStockphoto.com/monkeySaddamStock)

Lodging
Height
Earliness
Resistance to sprouting

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



(Photo: iStockphoto.com/shellpreast)



(Photo: Agriculture and Horticulture Development Board)

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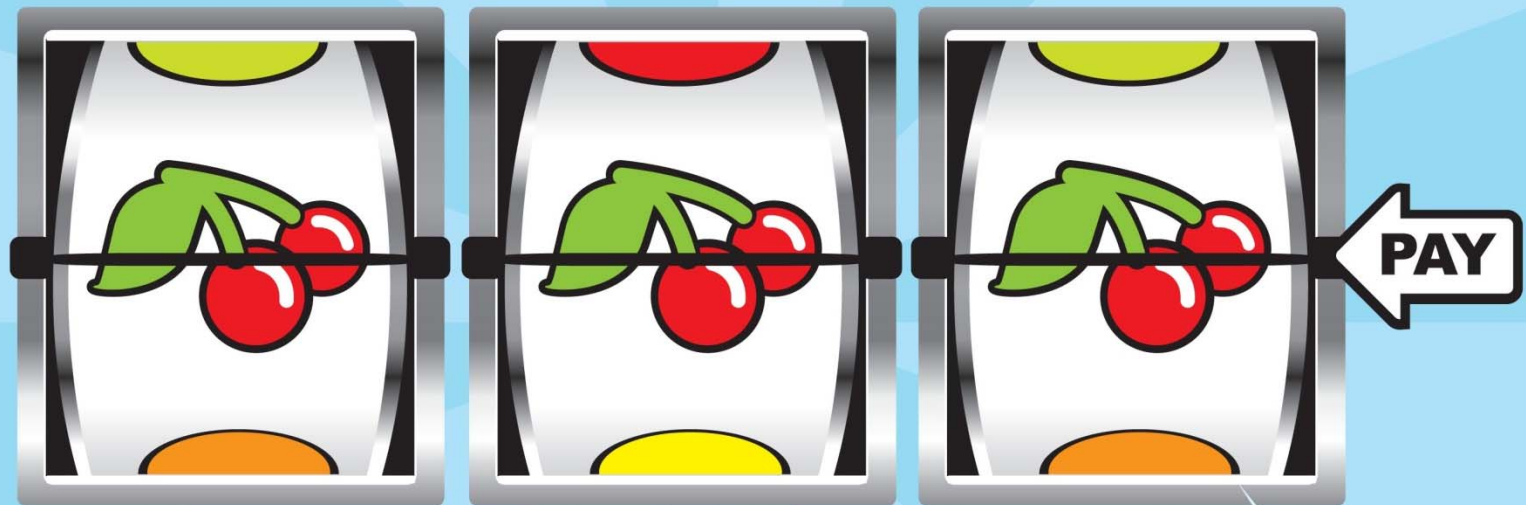
Yield: treated/untreated
Yield: early sown/late sown
Yield: light soil/heavy soil

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

Breadmaking quality
Biscuit making quality
Feed quality





(Illustration: iStockphoto.com/jahachey)

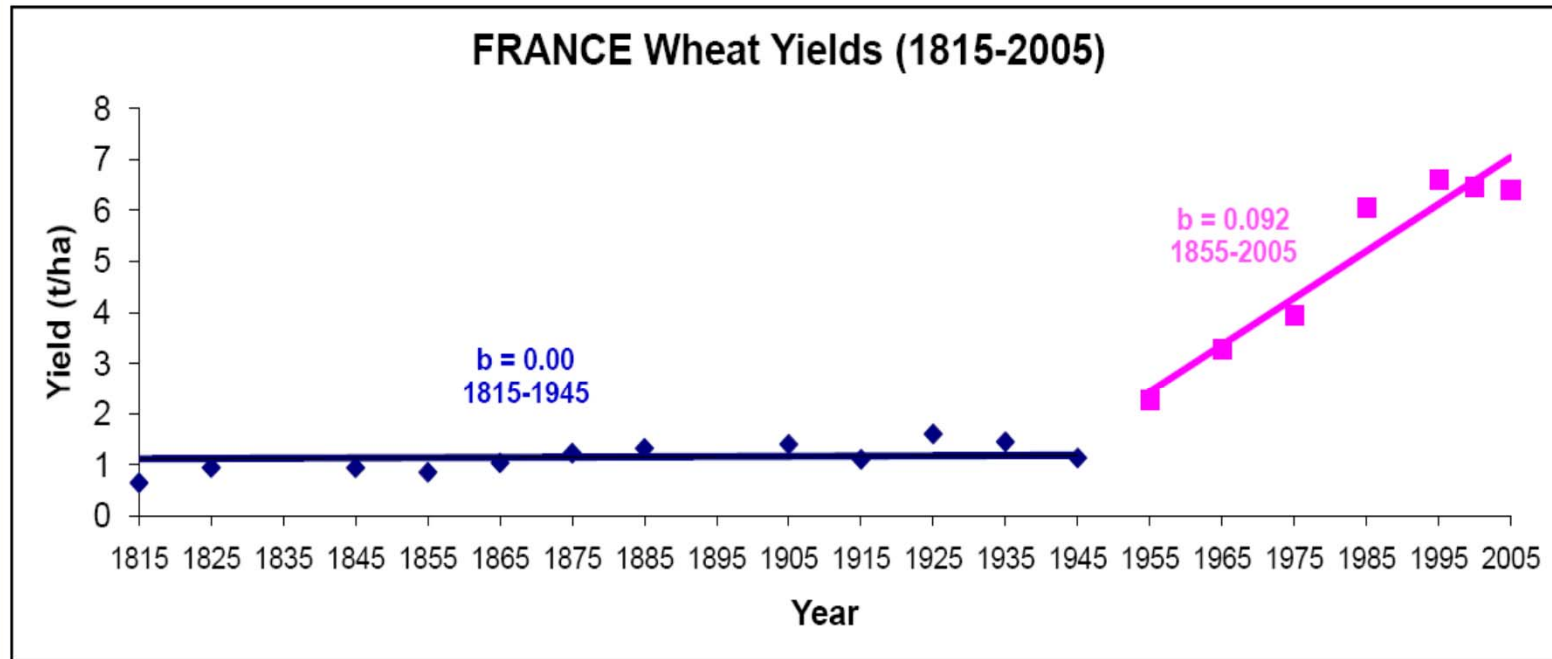


(Photo: iStockphoto.com/julos)



(Video: iStockphoto.com/SaddamStock)

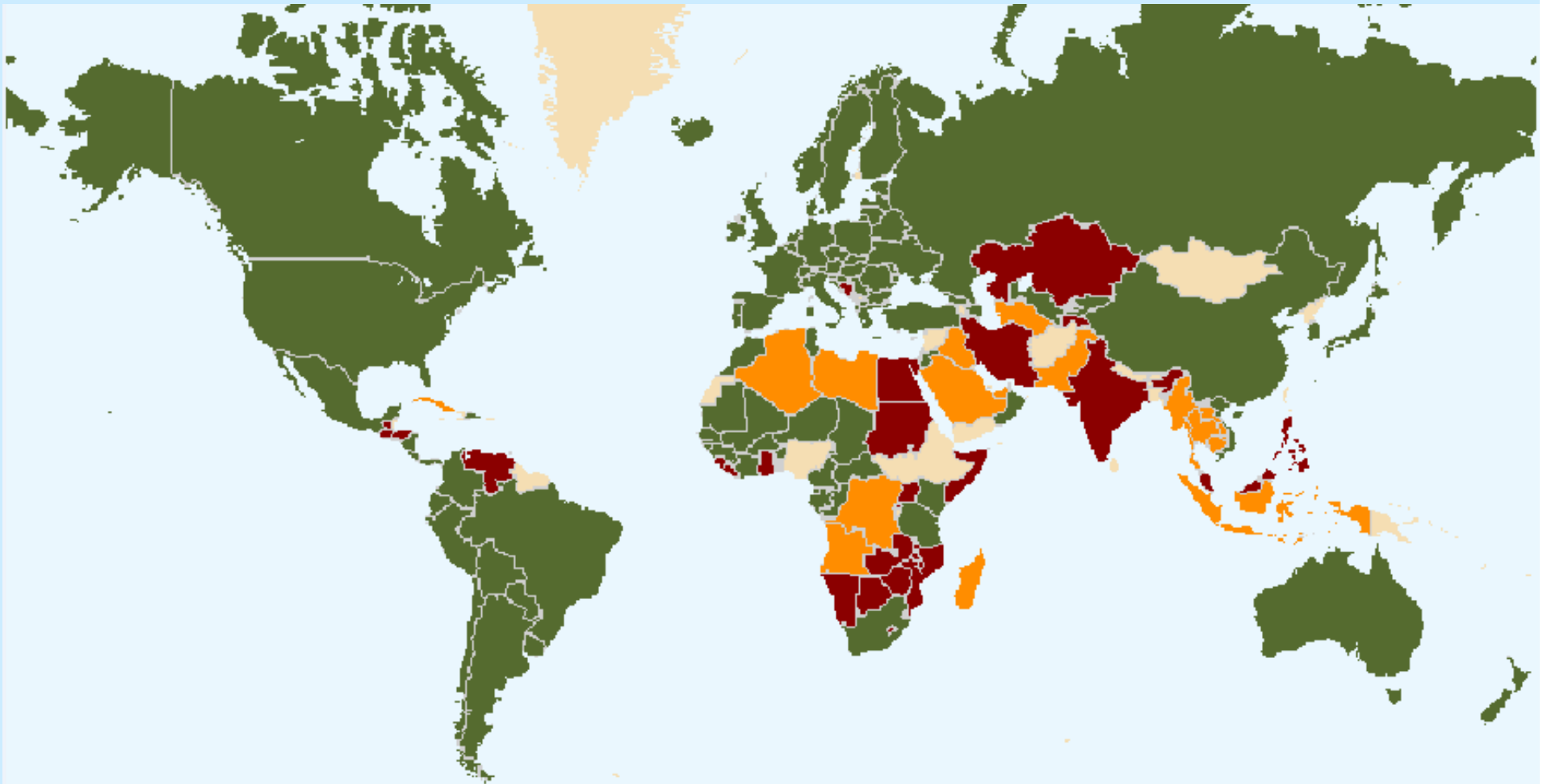
Evolution of Wheat yield in France





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”



Members of UPOV (74)

Initiating States (15) and Organization (1)

States (23) and Organization (1) in contact with the UPOV Office

PREVIEW

- Why do we need to encourage plant breeding?
- **How does PVP support different types of breeders?**
- Why is UPOV membership important?

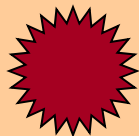
UPOV

UPOV MISSION STATEMENT

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



Plant Breeder's Right (PBR)



- Plant breeding is long and expensive

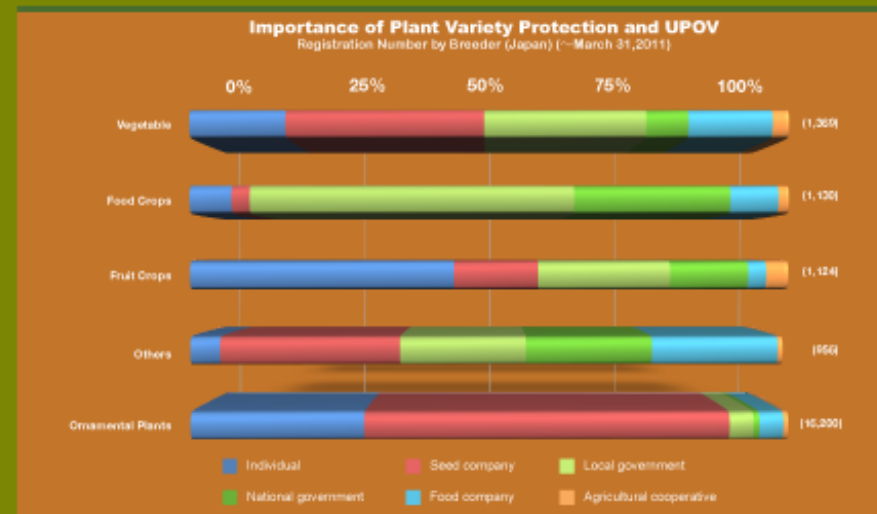
BUT

- Plant varieties can be easily and quickly reproduced

→ Breeders need protection to recover investment

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)



CONDITIONS FOR GRANTING A BREEDER'S RIGHT

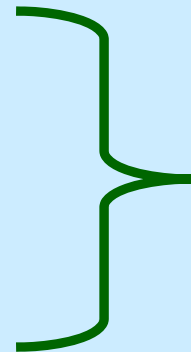
Criteria to be satisfied

- NOVELTY

- DISTINCTNESS

- UNIFORMITY

- STABILITY



“DUS”

...

CONDITIONS FOR GRANTING A BREEDER'S RIGHT

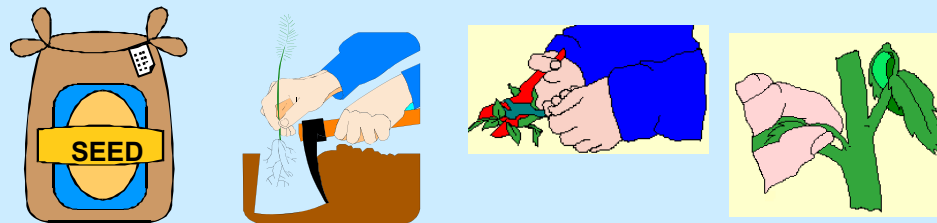
... Other requirements

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

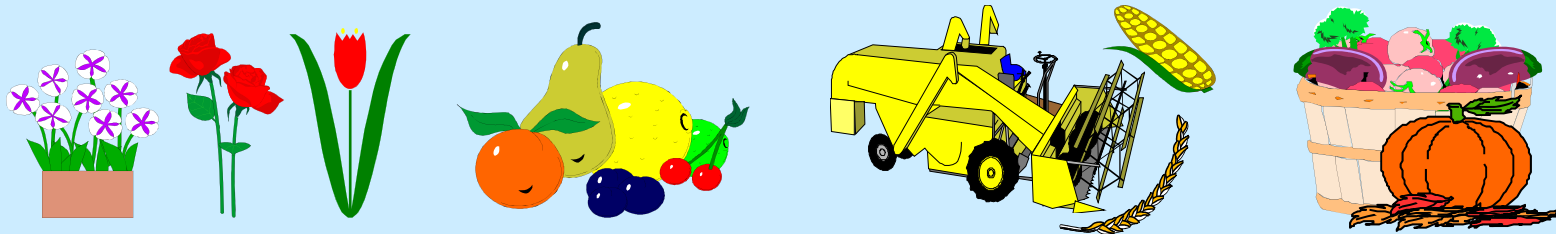
NO OTHER CONDITIONS!

For protected varieties, authorization of breeder required for:

- acts with respect to propagating material



- and under certain conditions, in respect of the harvested material



EXCEPTIONS TO THE BREEDER'S RIGHT

Compulsory

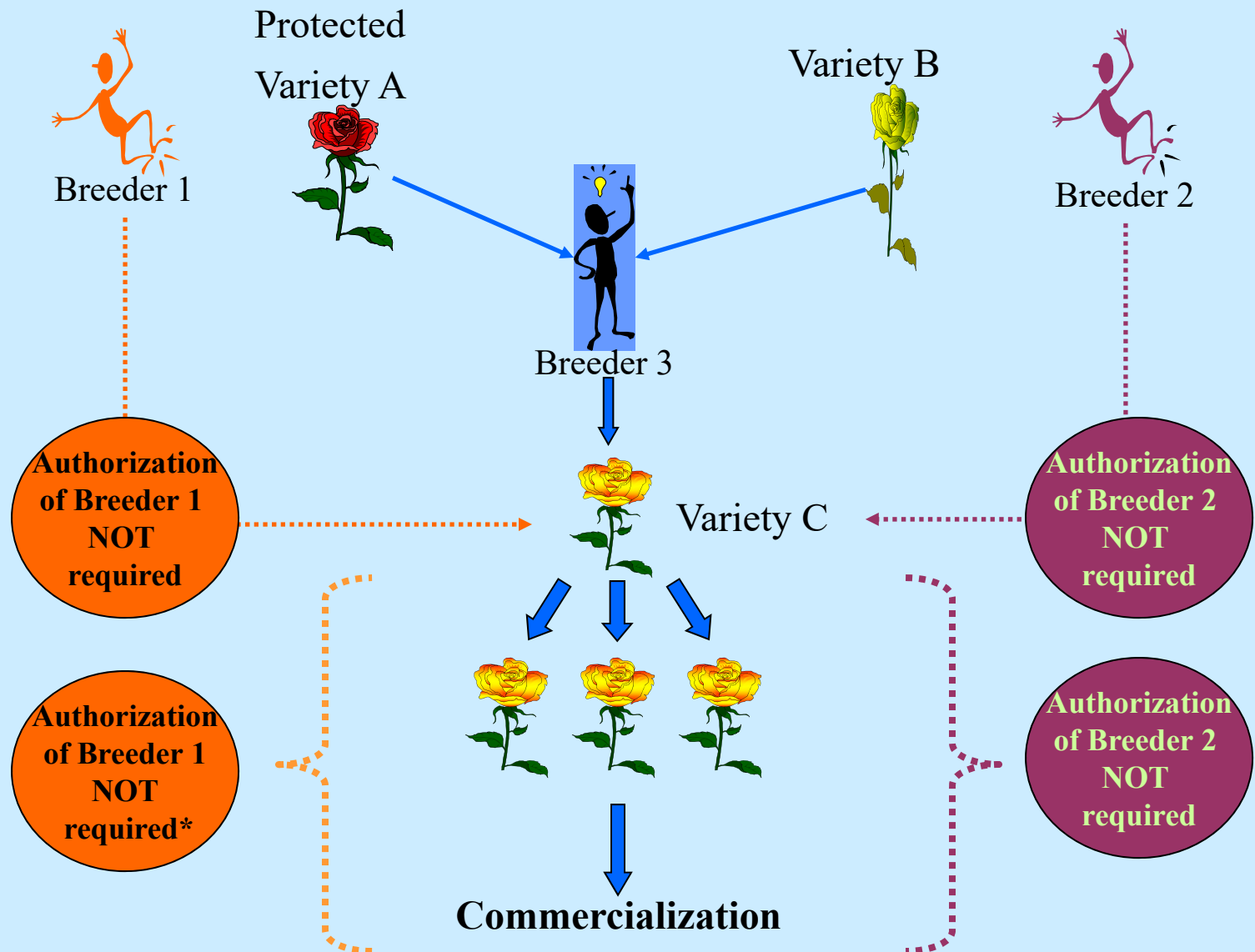
Acts done:

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

Optional

Farm-saved seed

THE BREEDER'S EXEMPTION: *Example*



* Except for:

- (i) varieties which are essentially derived from the protected variety, where the protected variety is not itself an essentially derived variety,
- (ii) varieties which are not clearly distinguishable in accordance with Article 7 from the protected variety and
- (iii) varieties whose production requires the repeated use of the protected variety.

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
- for experimental purposes
- breeding other varieties (“breeder’s exemption”)

Optional

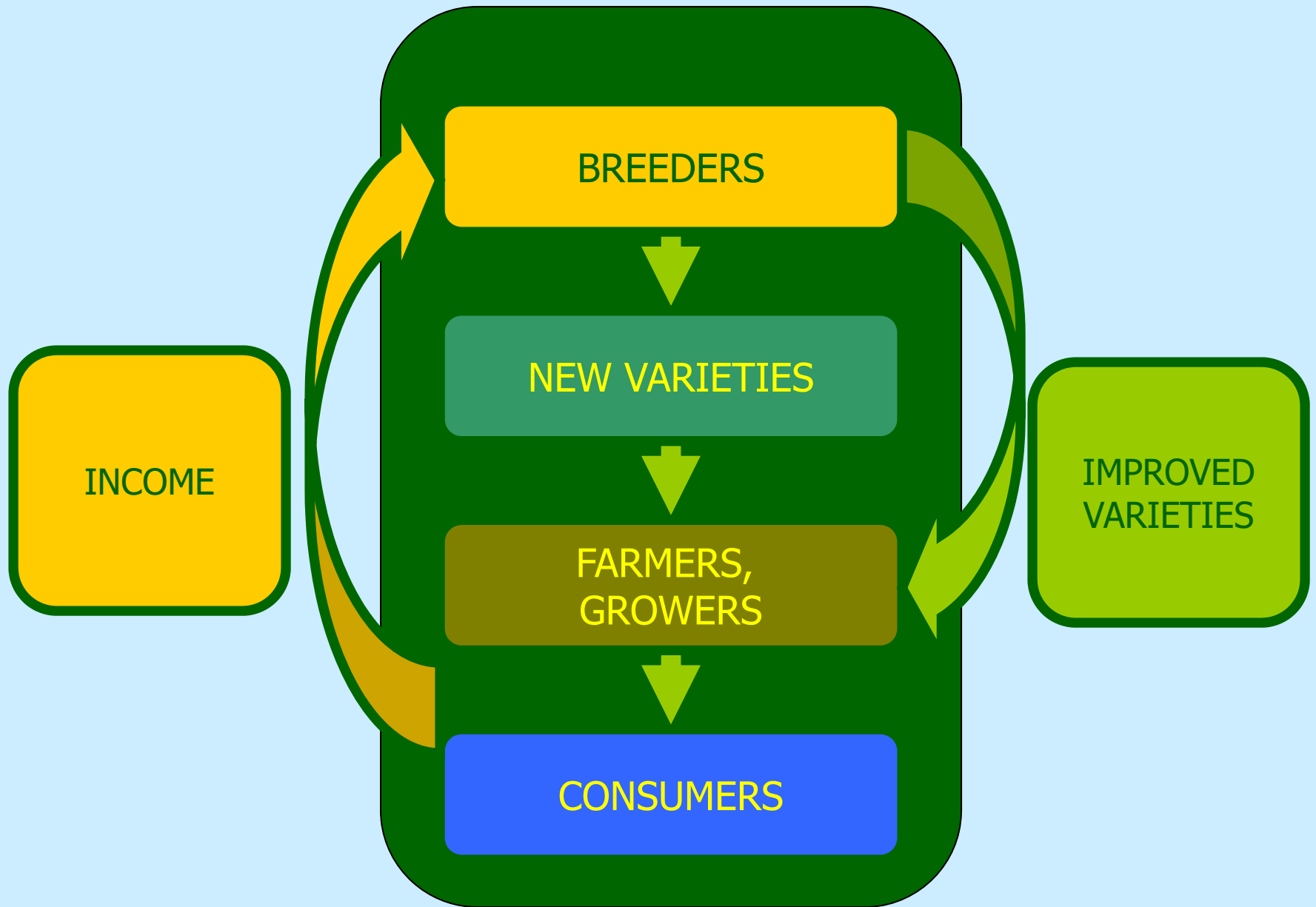
Farm-saved seed

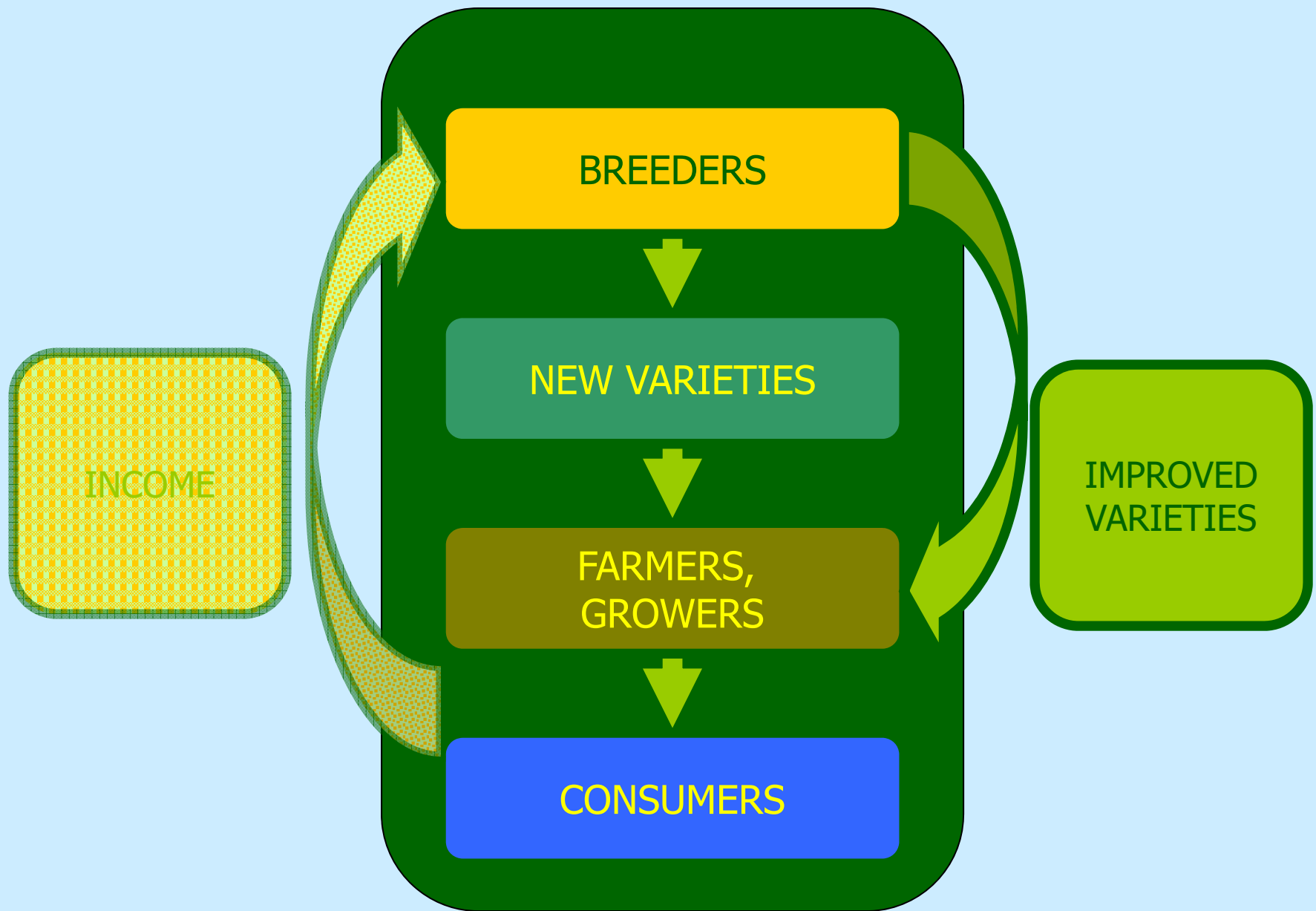
EXCEPTIONS TO THE BREEDER'S RIGHT

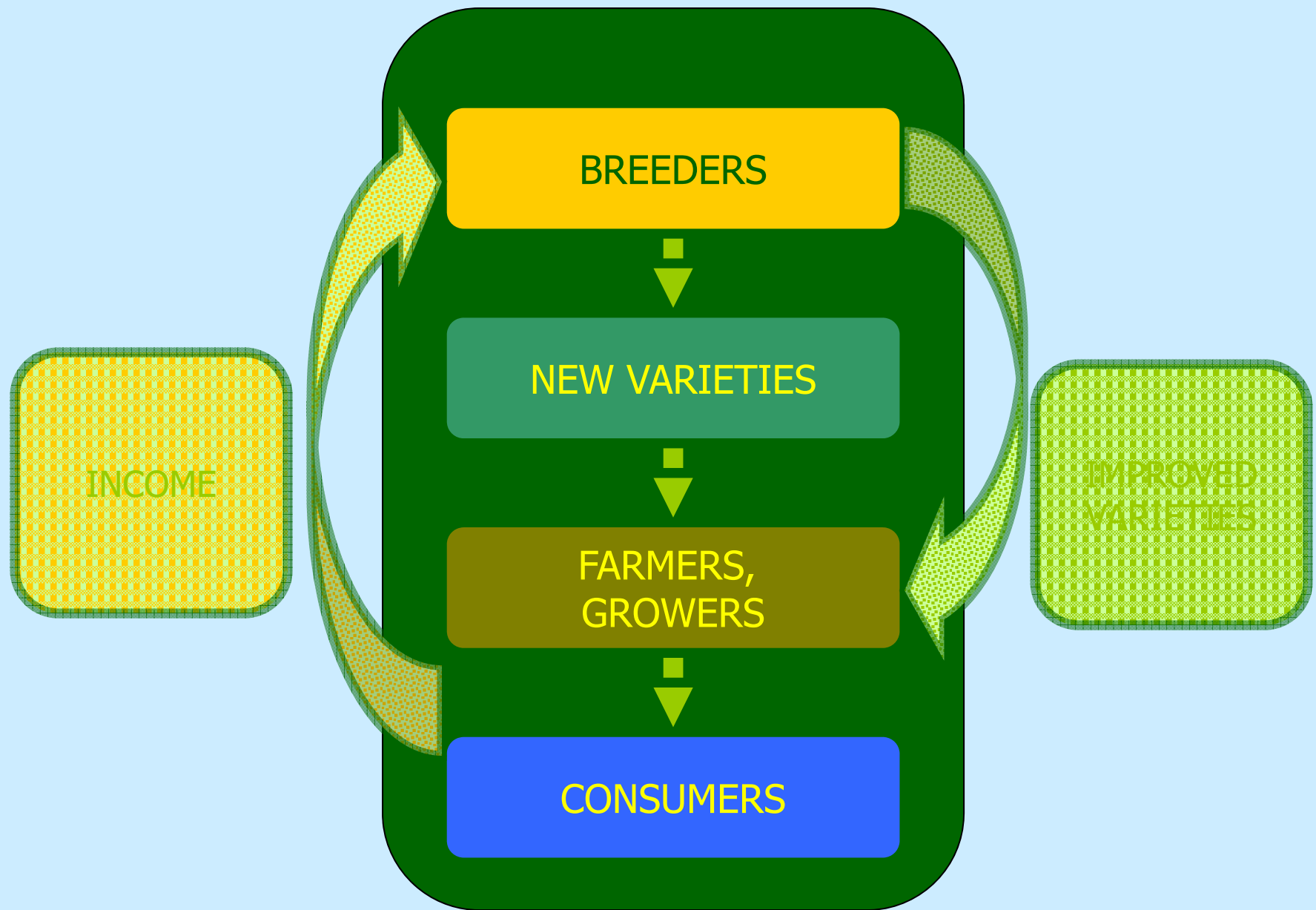
A Contracting Party may restrict breeder's rights in order to permit farmers to use:

- 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

[Article 15(2) and Recommendation of the Diplomatic Conference]









(Photo: iStockphoto.com/VladTeodor)

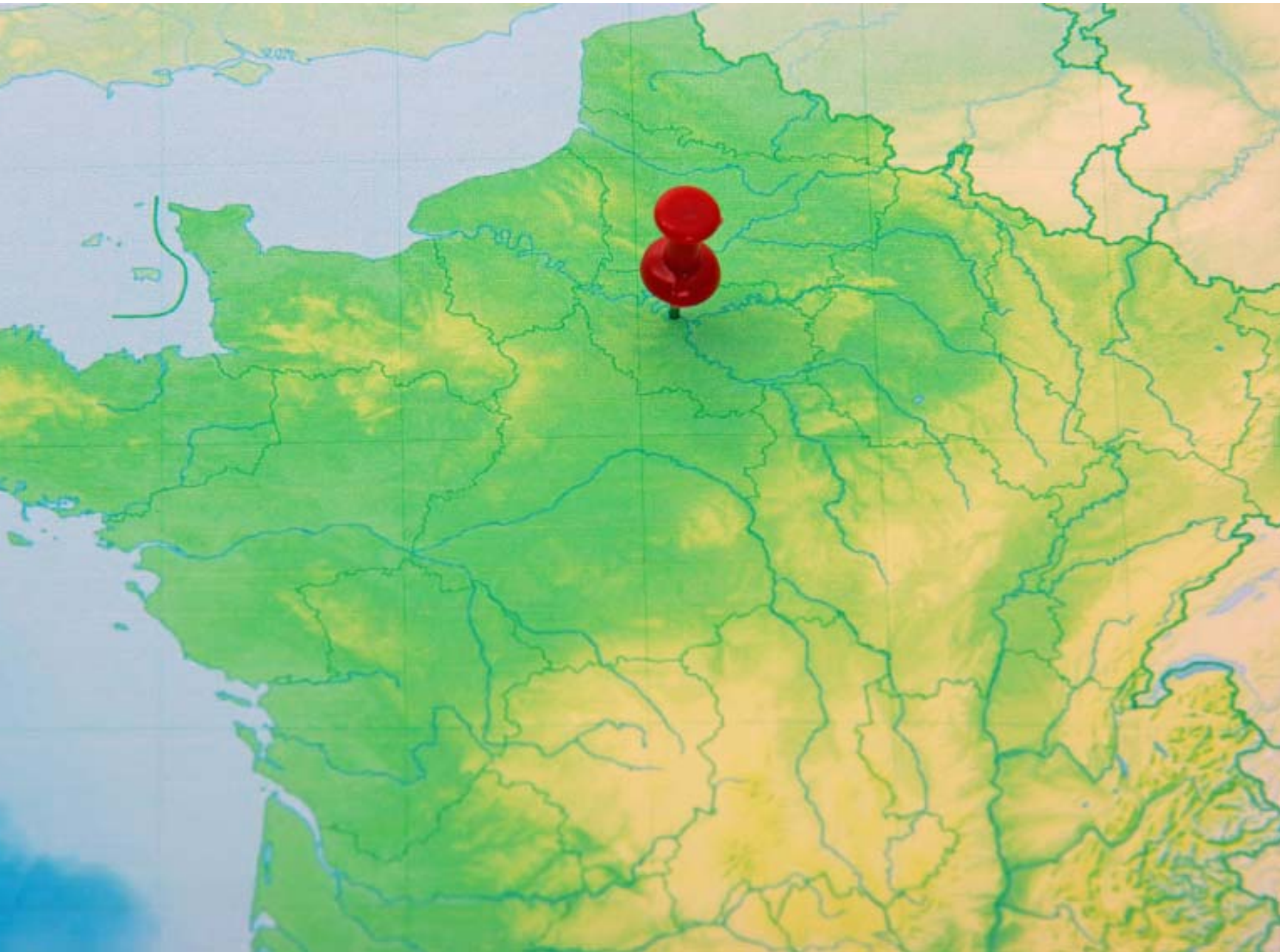


(Photo: iStockphoto.com/luoman)



(Photo: BSPB)

(Illustration: iStockphoto.com/Cory Thoman)



Breeder Performance Test Trials





AGRICULTURAL RESEARCH COUNCIL IN PLANT VARIETY PROTECTION AND TECHNOLOGY TRANSFER IN SOUTH AFRICA

**S. R. Moephuli, Ms. M. A. Moselakgomo
Dr. V. Phehane**



USE OF PVP FOR BENEFIT – SHARING

As a public entity ARC utilizes PVP to enhance benefit sharing:

Effective technology transfer – mainly for agriculture development and growth

Enable competitiveness of the agriculture sector

Contribute cultivars that are important for food security

Incentivise innovation through:

- Further investments into Research and Development*
- Providing a share of the revenue generated to inventor*
- Stimulate enterprise development*
- Facilitate access to poor farmers for development*



Symposium on the Benefits of Plant Variety Protection for Farmers and Growers



uyisile Phehane



er high performance
es to subsistence/small-
farmers

- Local licensing agreement with a South African company
 - for the commercialization of some of the ARC's citrus varieties.
 - A condition of the license: ensure the participation of smallholder citrus producers in the commercialization value-chain.
- Facilitated partnership with the Citrus Growers' Association to access ARC



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*Business Development and
Intellectual Property Manager*

UC Davis InnovationAccess

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UC Davis - international agriculture - UPOV PBR - strawberry variety licensing

- » **UPOV PBR-protected UC Davis strawberry varieties are foundational for master licensees**
- » **Master licensees are conduit of horticultural know-how and newest varieties from UC Davis**
- » **Horticultural know-how leads to improved production, higher value, and improved rural economics**
- » **In the context of strawberry horticulture, UPOV PBR is foundational to UC Davis' ability to improve agriculture internationally**

UC Davis - international agriculture - UPOV PBR - strawberry variety licensing - value added examples

- » **California industry value - \$2.5 B (70% UC Davis)**
- » **Spanish industry from zero to \$1B in 25 years – UC Davis strawberry varieties and know-how**
- » **Other examples;**
 - Chile, Mexico, Morocco, South Africa, Turkey





A Venn diagram consisting of three concentric circles. The outermost circle is labeled 'The World' and contains the text '\$16.50/1000 plants royalty¹'. Inside this circle is a medium-sized circle labeled 'United States' containing '\$9.00/1000 plants royalty'. Inside the United States circle is a small inner circle labeled 'California' containing '\$0.00/1000 plants royalty'. A small yellow square is located in the bottom-left corner of the slide, outside the circles.

The World

\$16.50/1000 plants royalty¹

United States

\$9.00/1000 plants royalty

California

\$0.00/1000 plants royalty

¹royalty shared between UC and master licensees

Wilhem Wicki



Knowledge sharing and part of public and private funding of the Swiss wheat breeding program

Public funding (Agroscope)

Variety development



Final Evaluation



Final Evaluation



Maintenance breeding,
Basic seed production,
PVR protection,
Variety representation in
Switzerland, in Europe and
worldwide

Private funding (DSP Ltd), source: Royalty fees from
protected varieties

Applications for Plant Breeders' Rights

