

International Seminar on Role of plant variety protection in development of agriculture

Benefits for national development goals of the UPOV PVP system

Yolanda Huerta, Vice Secretary-General, UPOV

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Ghana's membership to UPOV is critical to its food and nutrition security as well as meeting its national development goals



SUSTAINABLE DEVELOPMENT GOALS



The vision of the **2030 Agenda for Sustainable Development** (see <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>) includes a world where

- food is sufficient, safe, affordable and nutritious
- there is sustained and inclusive economic growth, social development, environmental protection and the eradication of poverty and hunger
- development and the application of technology are climate-sensitive, respect biodiversity and are resilient



UPOV

1 NO
POVERTY



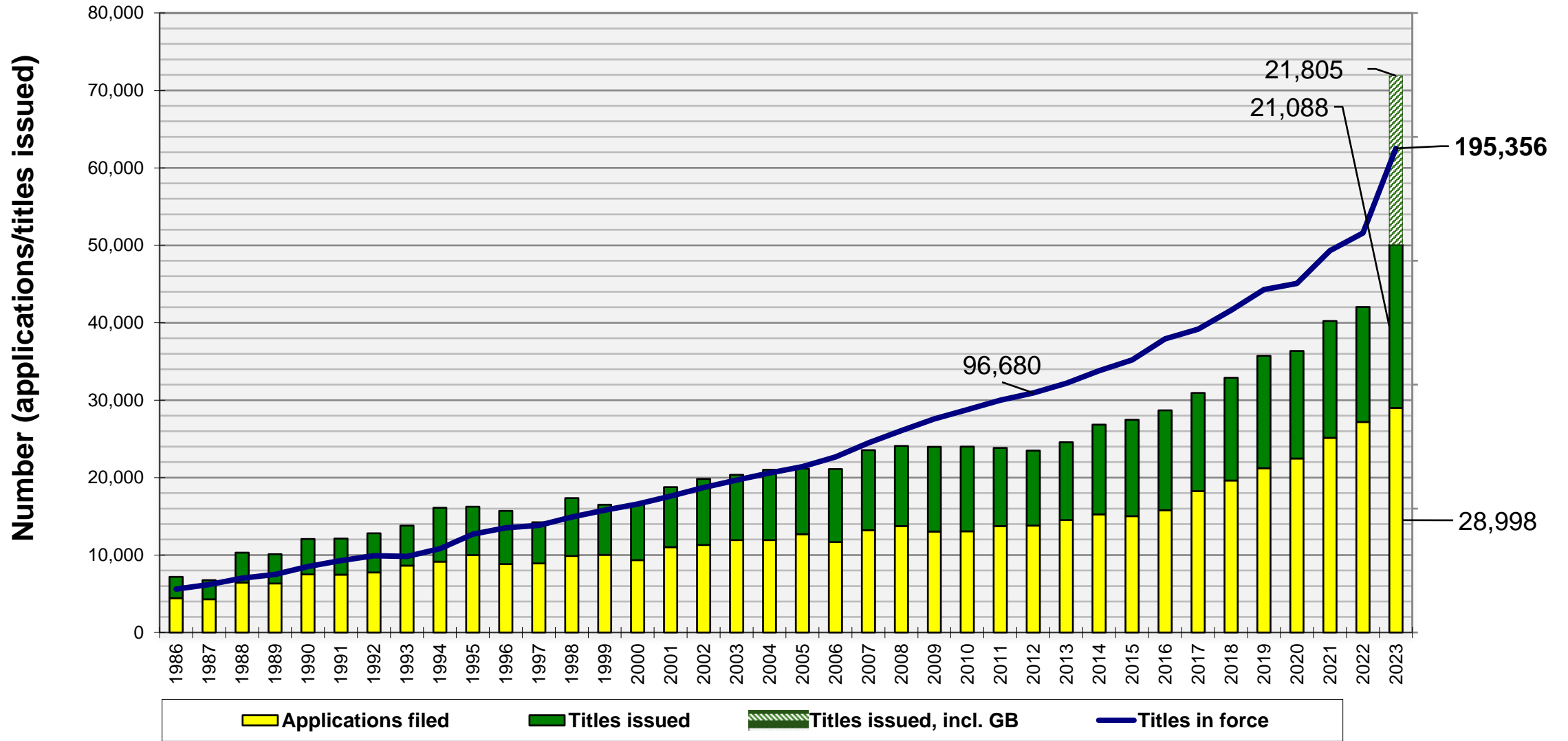
The tremendous growth in agricultural productivity in various parts of the world is largely based on

improved varieties

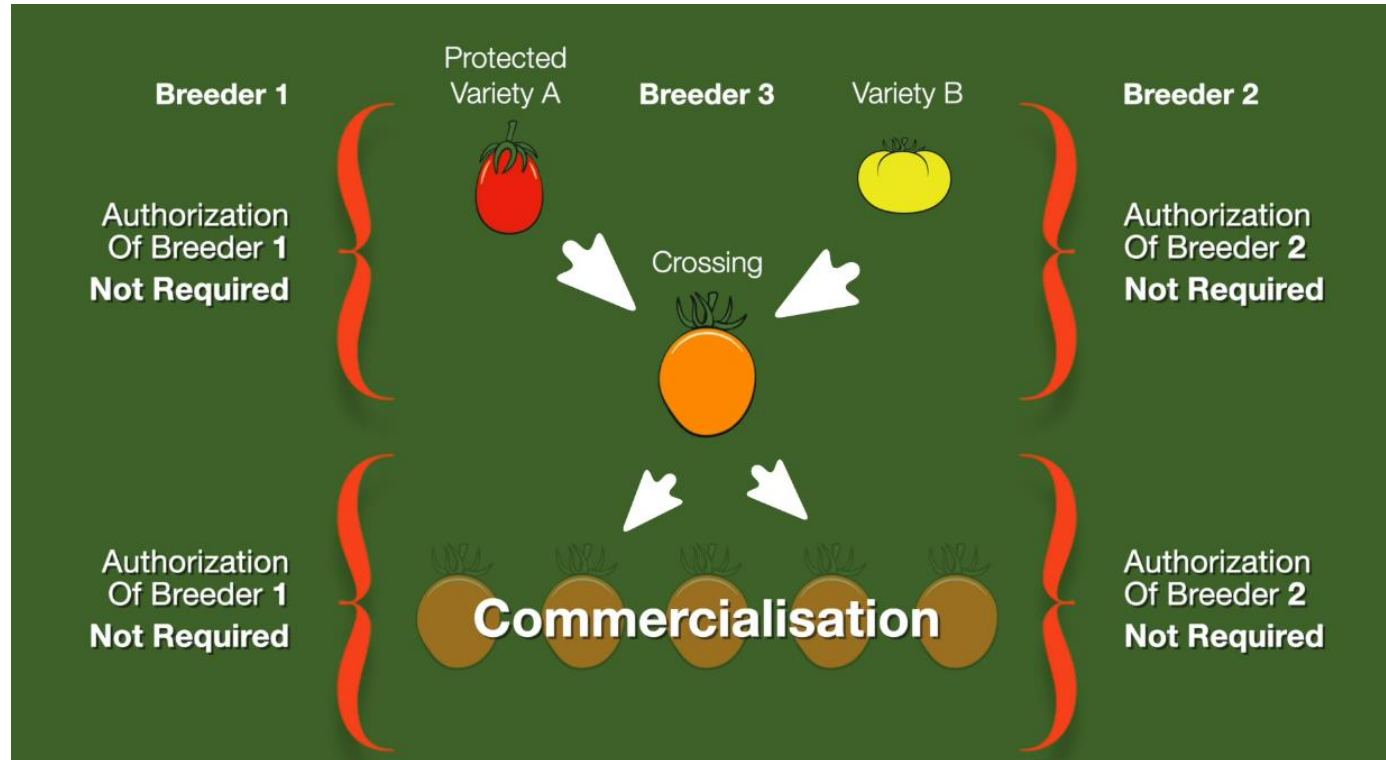
+

improved farming practices

Total applications filed, titles issued and titles in force



Advantages of the breeder's exemption under the UPOV Convention



- Variety improvement is enhanced: there is continuous progress in breeding
- Genetic basis for plant improvement is broadened and is actively conserved

PERU

More than sixty new varieties of blueberries protected since UPOV membership



<https://www.bioeconomia.info/2020/07/20/peru-se-consolida-como-primer-exportador-de-arandanos/>



Vuyisile Phehane



- Delivering high performance varieties to subsistence/smallholder 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

2 ZERO
HUNGER



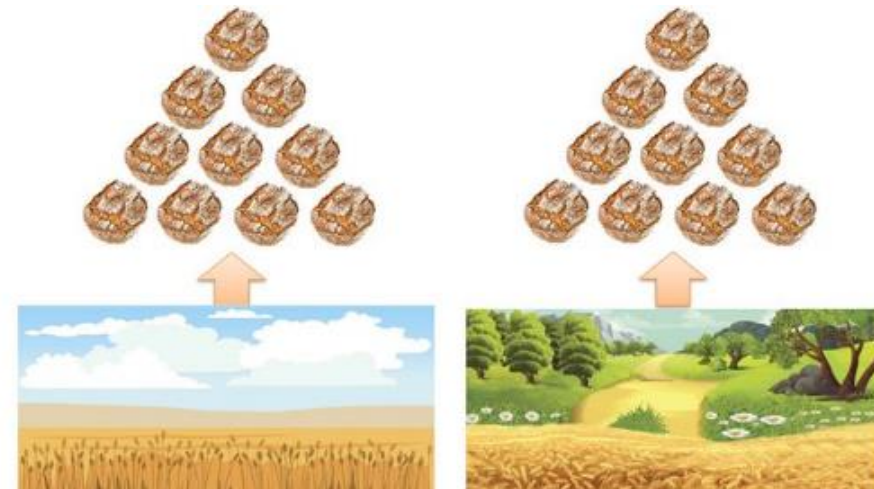
New Plant Varieties with improved yield, plant pest and disease resistance, salt and drought tolerance and better adaptation to climatic stress



Producing more, better... with less

and in more challenging conditions

70 % of the food is plant based



New Zealand Success Story



A study found that in 2022, **kiwifruit exports** generated **\$2.9 billion in export revenue**, making it the country's most significant single horticulture export in terms of both volume and value.

60% of the revenue generated by kiwifruit exports is attributable to **PVR protected cultivars**.

This figure includes the entire supply chain (PBR owner, licensed growers, transporters, packhouses, marketing and retailers).

The report is available at [Plant Variety Rights: Economic and public good benefits \(iponz.govt.nz\)](https://www.iponz.govt.nz)

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



UPOV's mission is to provide and promote an effective system of Plant Variety Protection with the aim of encouraging the development of New Plant Varieties for the **benefit of society**

Kenya: the Floriculture Industry

Access to new plant varieties from UPOV members promotes horticultural trade

- Kenya is a leading exporter in cut flowers
- **breeders of roses feel confident** to have their new varieties being protected and commercial exploited in Kenya
- the altitude is very important, you get larger rose heads, better quality flowers because the relevant locations in **Kenya are at 2400** meters above sea level.



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Kenya: the Floriculture Industry

Joining UPOV sends a clear message to breeders

- The floriculture sector in Kenya has had an impressive development
- Breeders invest important financial and other resources to **develop new varieties for roses** – the process may take between **five to seven years**, then the first **economical return will come after seven years**



Kenya: the Floriculture Industry

The rose industry has helped improve rural livelihoods

- it has provided an important source of employment
- employees while working here they are able to take their kids to school, they are able to help their parents



Lucy Monior
Human Resources Manager
Uhuru Flowers, Nanyuki



Kenya: the Floriculture Industry

The development of the rose industry has inspired future breeders

“I did a diploma in horticulture – after some years - I can also do breeding and I can also start selling to the growers”



Tonny Chenge

Packhouse Manager
Uhuru Flowers, Timau, Nanyuki

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Farmers need new plant varieties to respond to the continuous evolution of pests & diseases, **climate change and users' needs**

Improved Varieties –example Republic of Korea

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**

2022 UPOV Climate Change Seminar

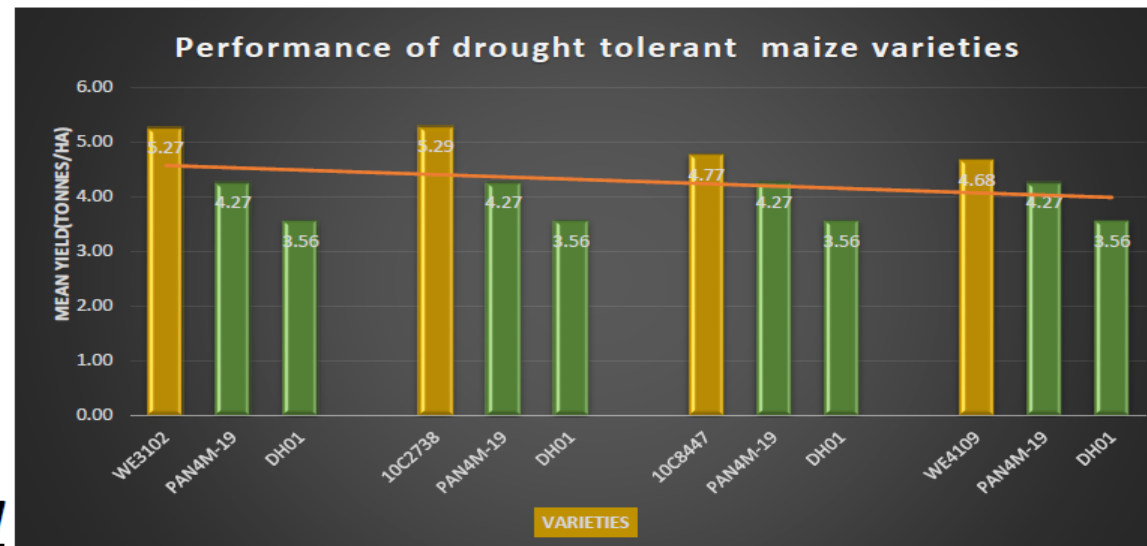
example of Kenya

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



Development of Climate Smart Varieties

Increased production through breeding of better yielding and drought tolerant varieties



Legend

	New drought tolerant varieties
	Check Varieties

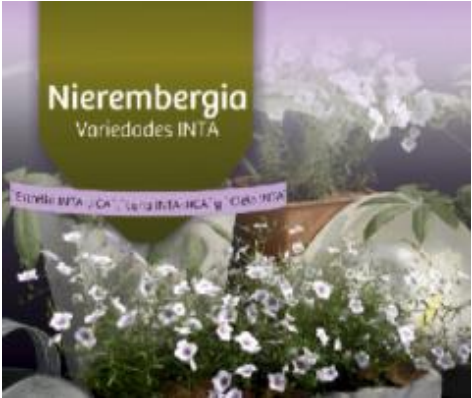
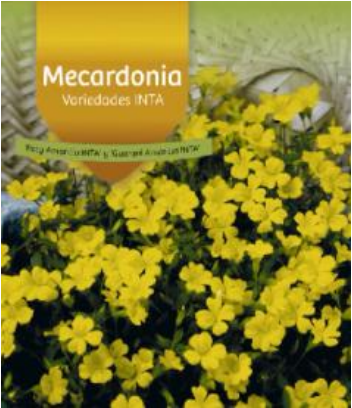
Source: KEPHIS VCU Data - 2017

15 LIFE
ON LAND



New Plant Varieties are a key element in increasing productivity and product quality in agriculture, horticulture and forestry, whilst minimizing the pressure on the natural environment

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.

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

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.



17 PARTNERSHIPS
FOR THE GOALS



Plant Variety Protection supports
long-term investment in Plant
Breeding

+

provides a framework for investment
in the delivery of seed and other
propagating material of varieties
suited to farmers and growers' needs

China's flower industry

China's flower industry employs over 5 million people becoming a significant sector for achieving socio-economic development goals.



Impact 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

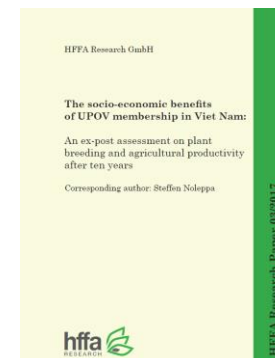
- Rice 1.7 %
- Corn 2.1 %

- “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
- https://www.upov.int/about/en/benefits_upov_system.html

Annual value added:

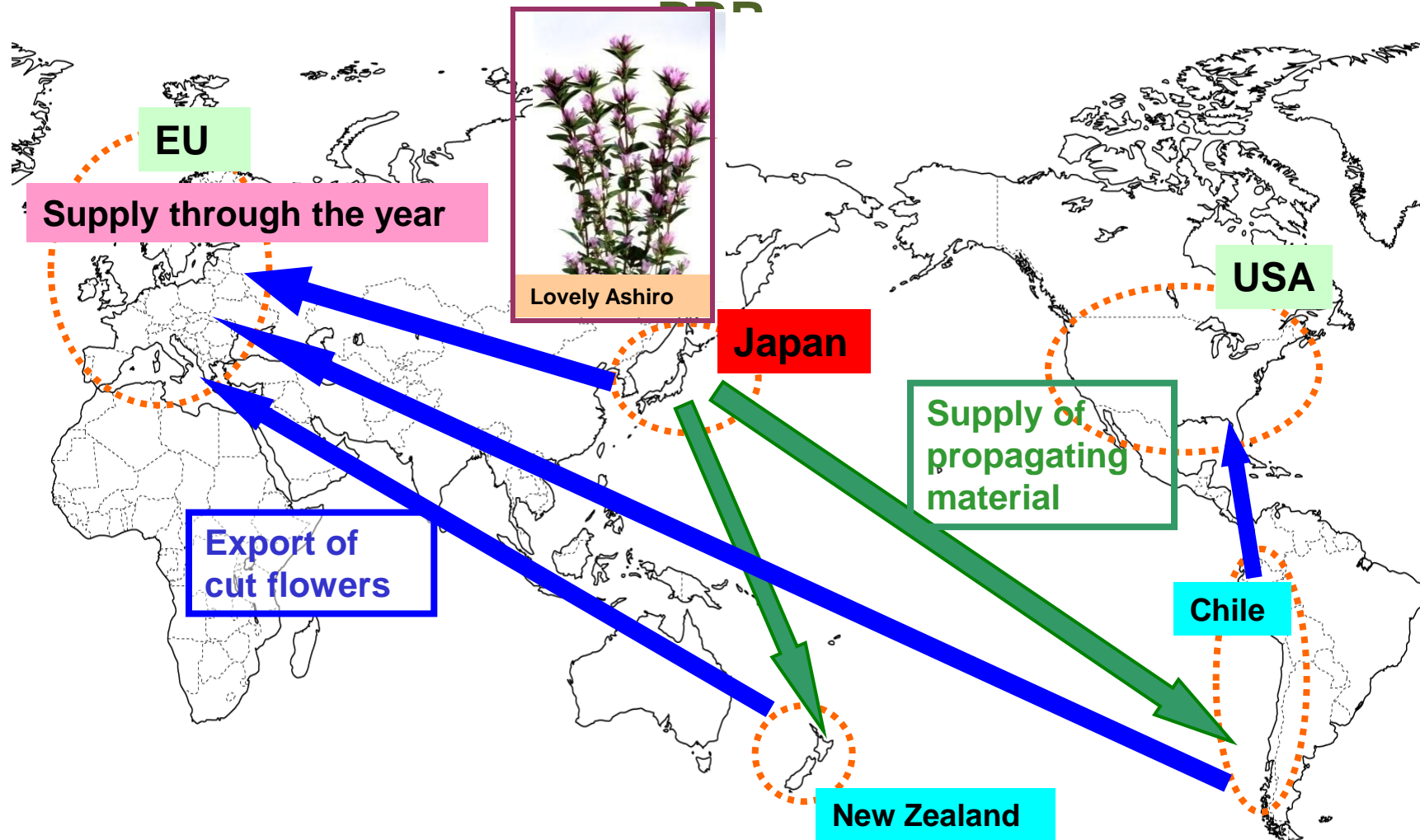
- Arable farming \$2.3 billion
- Horticulture \$1.0 billion
- Floriculture \$ 0.2 billion
- GDP added upstream/downstream (value chains) \$1.5 billion

TOTAL ADDED: \$5 billion
(> 2.5% GDP)



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JAPAN: World Branding Strategy of “Ashiro” Rindo based on PVP



Yasunori Ebihara
International
Symposium

https://multimedia.wipo.int/upov/en/japan_ashiro_rindo.mp4

Benefits of the UPOV Plant Variety Protection System

