

Impact and Benefit of PVP system in Japan

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1. Agriculture and Food Industry in Japan



1-1. Circumstance of Agriculture and Food

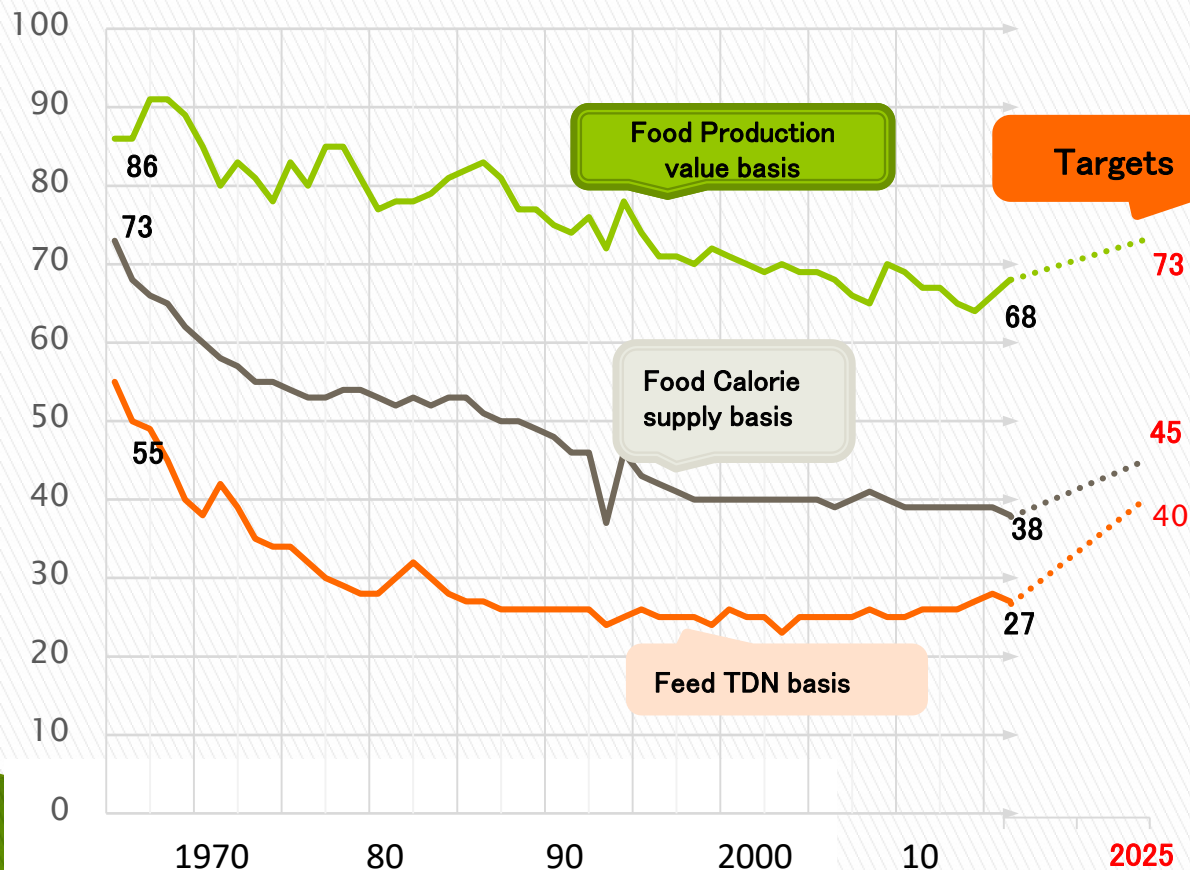
For sustainable development of Agriculture and promotion of rural area in Japan, it is necessary to strengthen the competitiveness of Agriculture.

- Aging society and decreasing population
- High reputation for agriculture products from overseas market
- Enhancing Competitiveness of Japan's Agriculture
- Development of strategic export system
- High cost of input and distribution /processing
- Inefficient input supply and output distribution channel
- Small and scattered farm land
- Reduce cost of inputs (Agricultural chemical, Machinery, Fertilizer, Seeds, etc.)
- Streamline distribution/ processing
- Revision of land improvement system

1-2. Self-sufficiency ratio

Food self-sufficiency ratio is trending downward over the long term due to such factors as changes in dietary patterns.

Self-sufficiency ratio trends and targets



Self-sufficiency ratio of main commodities

	Calorie supply basis	Production value basis
Rice	98	99
Wheat	12	12
Vegetables	76	78
Fruits	35	67
Livestock products	16	63
Fed by imported feeds	47	11
Fish and shellfish	59	50

*Livestock products fed by imported feeds is not included in self-sufficiency ratio

1-3. Establishing the Food Value Chain (FVC)

Connect the created value

Production



Manufacturing & Processing



Distribution



Consumption



Value

- Seeds and farming machines
- Agricultural infrastructure
- Chemical inputs

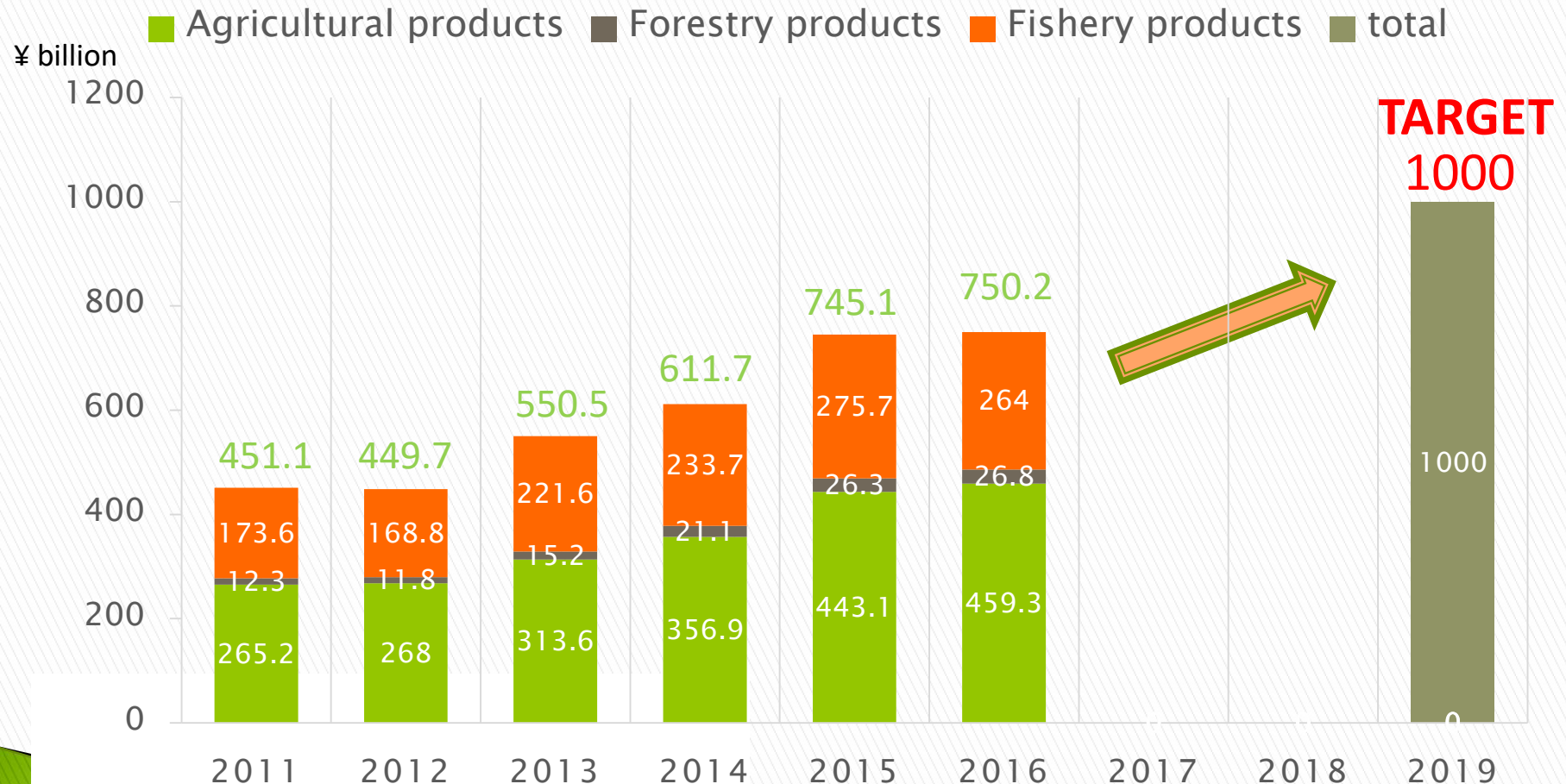
- Food manufacturing facilities

- Cold chains
- Cold distribution centers
- Wholesale
- Supermarkets, department stores

- Restaurants

1-4. Export of Agricultural products and foods

Expansion target of the export value of AFF and Foods



1-5. New legal support for seed industry

Main Crop Seeds Act (old act)

Evaluation of the act

- ① Main objective of the act as for supplying high quality seeds mainly by public sector had been already achieved,
- ② The act may hinder competitiveness of agricultural sector including private sector,

As the result, the act was abolished in April 2017.

Agriculture Competitiveness Enhancement Support Act (new act)

was enacted in May 2017, after the abolished the Main Crop Seeds Act, Under the new act which is cover not only seed industry, for the seed industry described as follows,

- ➡ To encourage private sector to entry into seed industry, by offering new knowledge developed by public sector to private sector, for developing new technology and variety etc.

2. PVP system and Seed industry in Japan



2-1. History of PVP System in Japan

The UPOV Convention

1961 Adopted

(Entry into force in 1968)

1972 Amendment

1978 Amendment

(Entry into force in 1981)

1991 Amendment

(Entry into force in 1998)



JAPAN

1978 “Plant Variety Protection and Seed Act”

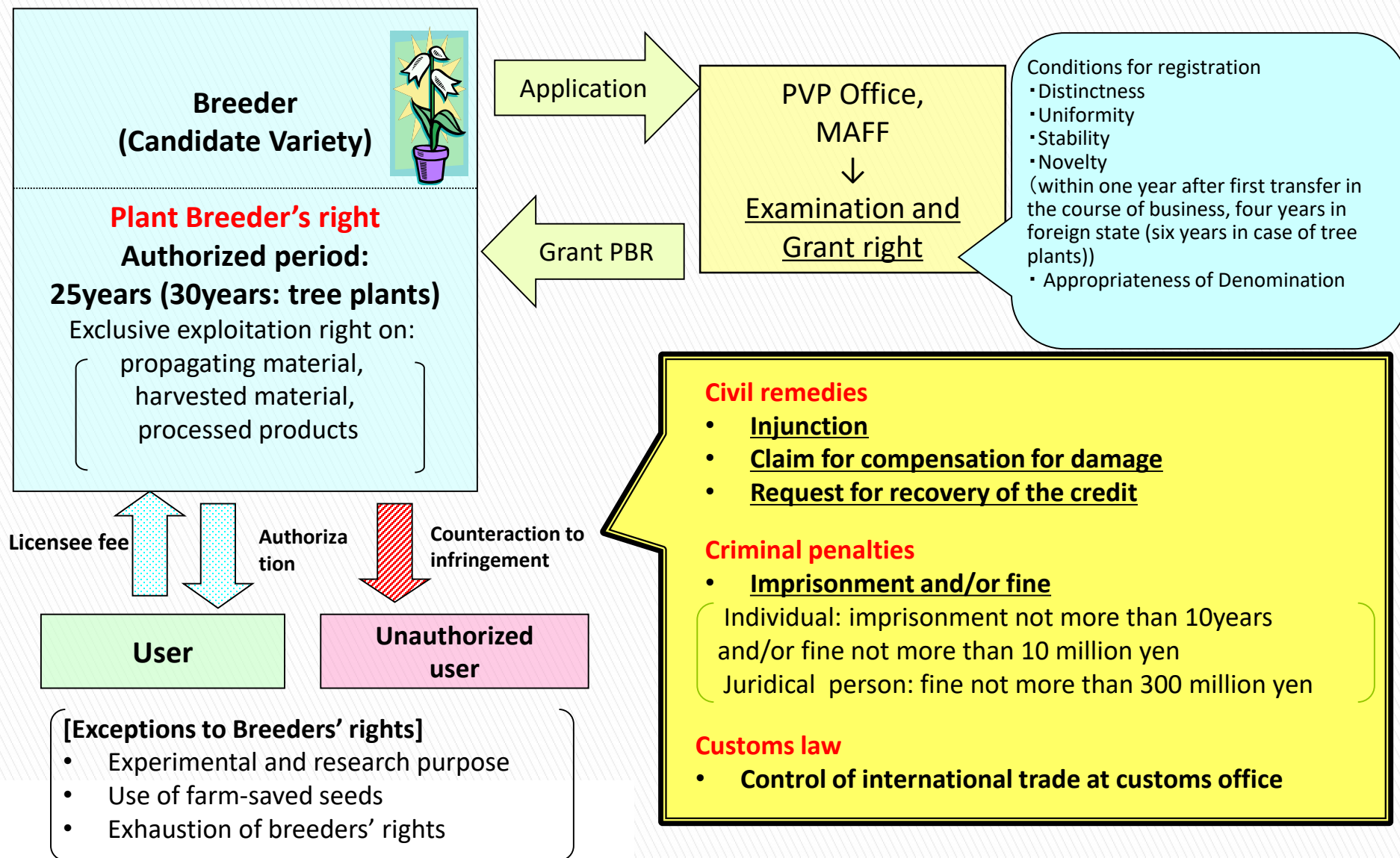
1982 Accession to the 1978 UPOV Convention

1998 Full-Amendment on “Plant Variety Protection and Seed Act”

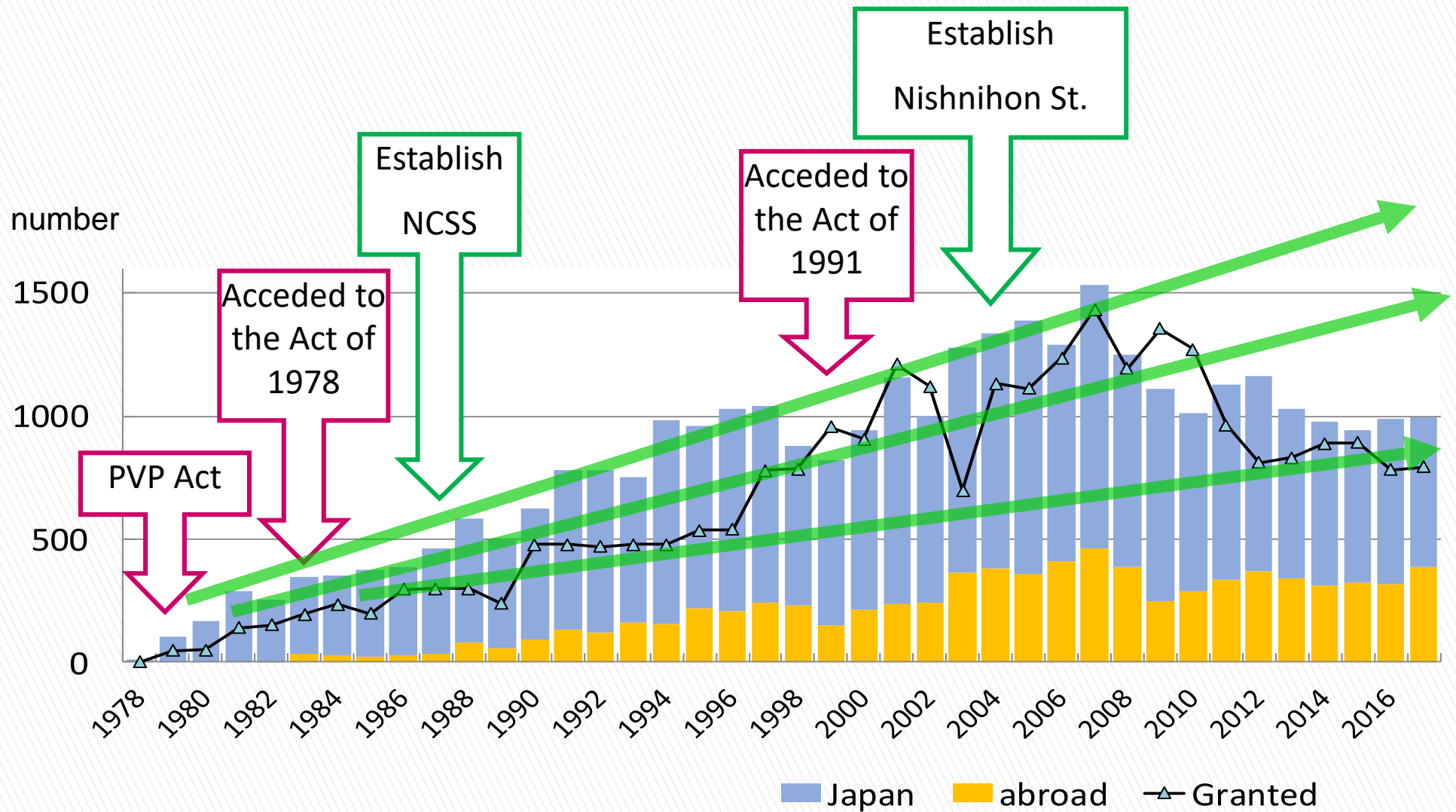
Authorization of “Breeder’s right”

Accession to the 1991 UPOV Convention

2-2. Outline of PVP System in Japan



2-3. Trend of Applications

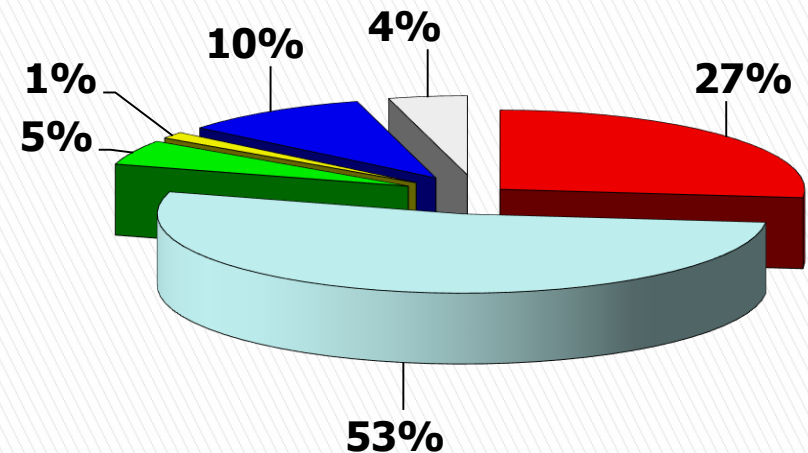
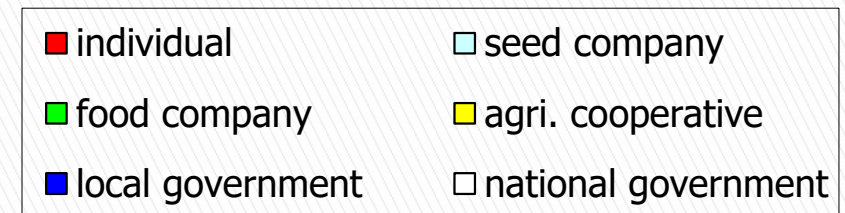
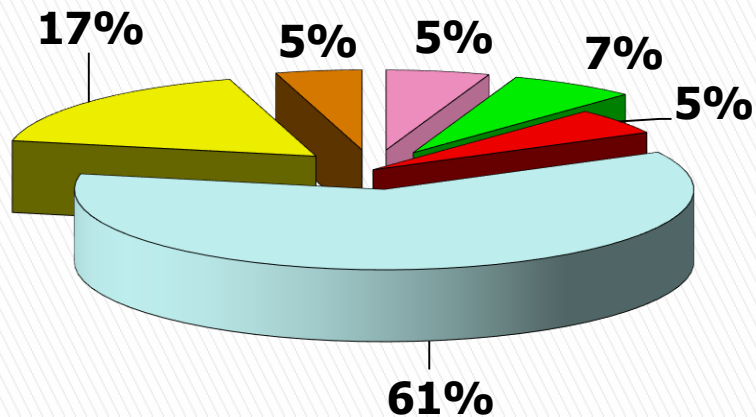
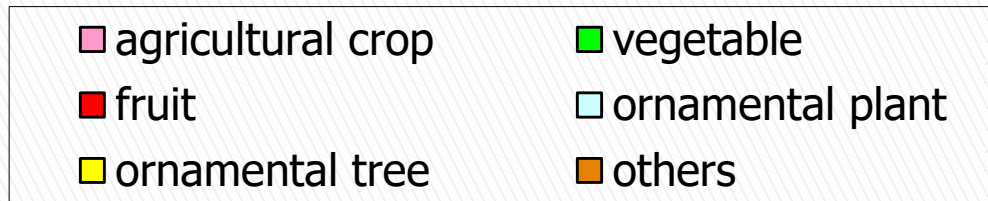


(2017FY) Application(Total) : 993 (100%)

// (from abroad) : 389 (39%)

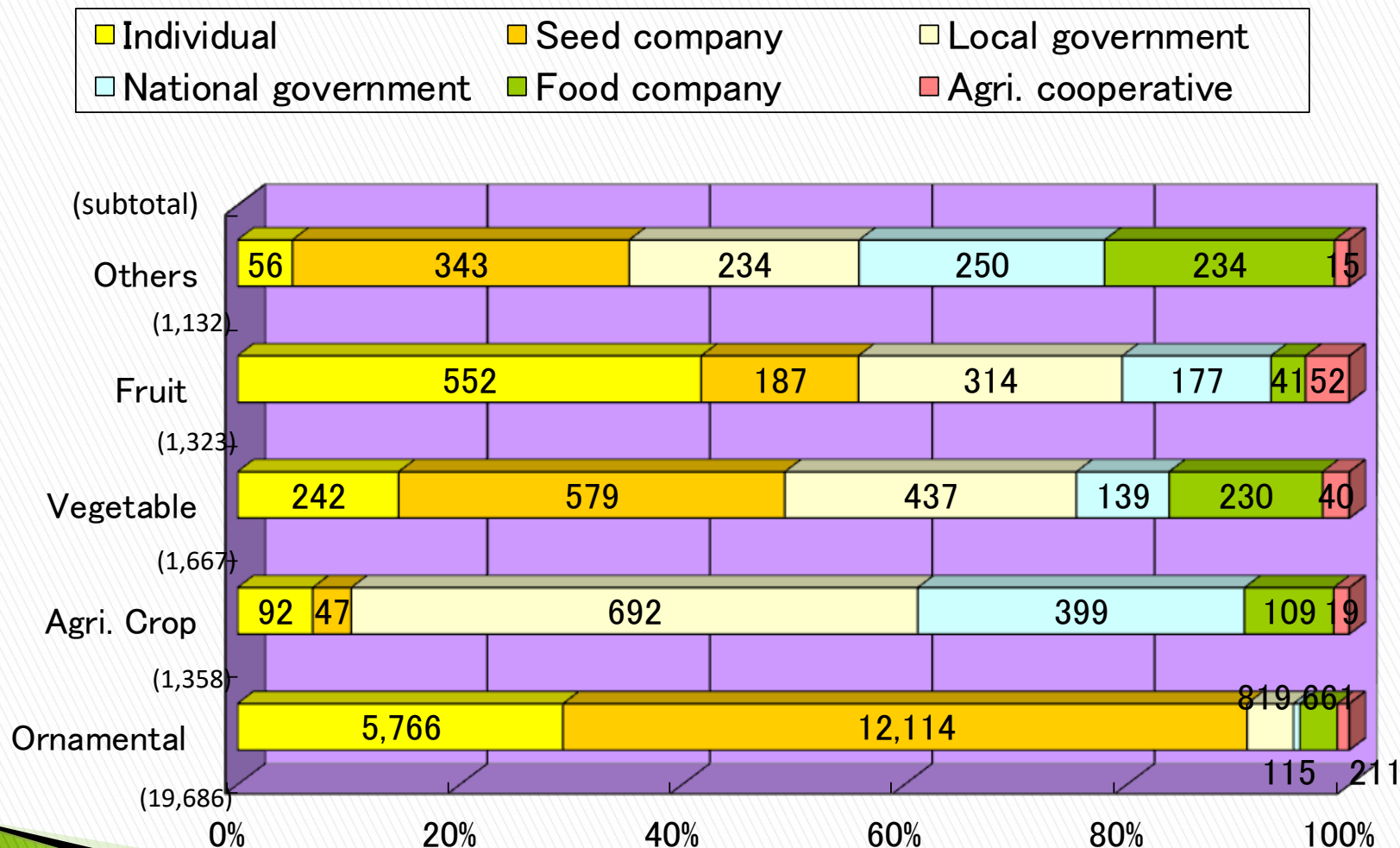
2-4. Granted PBRs by crops and Types of Breeders (1)

Total Number: 25,166 (~Mar. 31, 2016)



2-5. Granted PBRs by Crop and Type of Breeder (2)

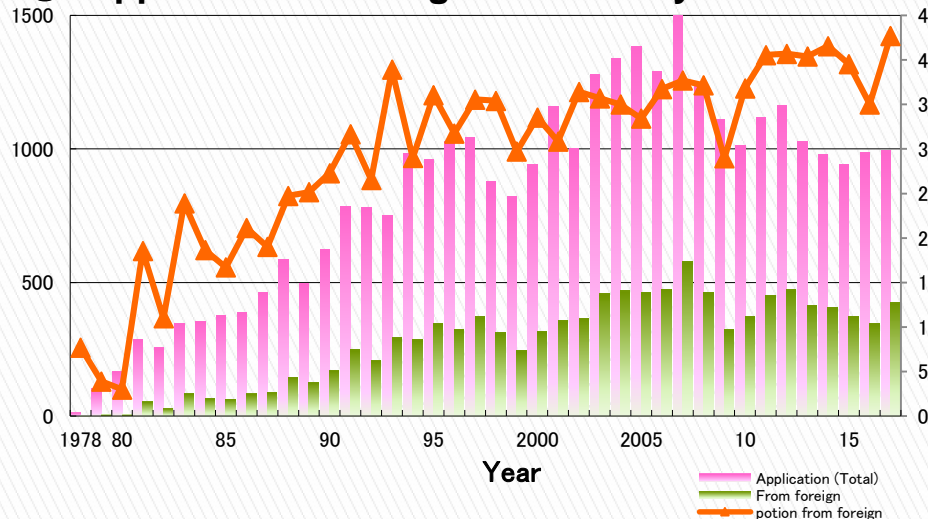
Total Number: 25,166 (~Mar. 31, 2016)



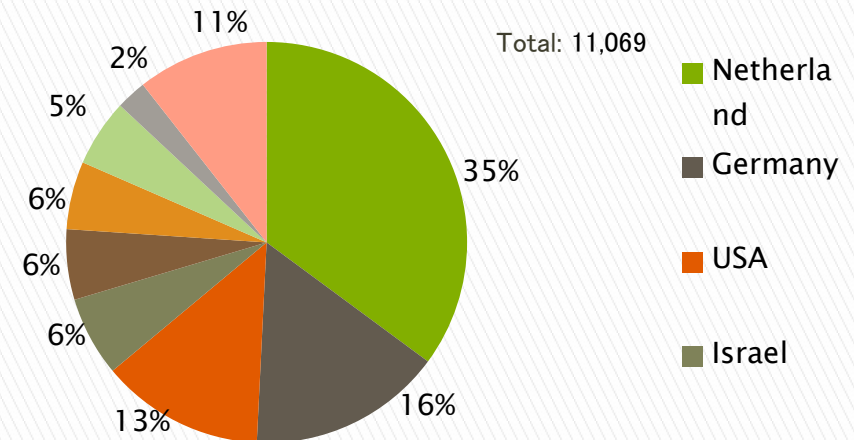
2-6. Application for/from foreign countries

- Among application in Japan, around 40% of application is foreign bred varieties. And dominant crops applied from foreign countries are ornamental crops. Main country from applied are , Netherland, Germany, USA and Israel.
- Application to foreign countries are around 200/ year. (only to UPOV members)

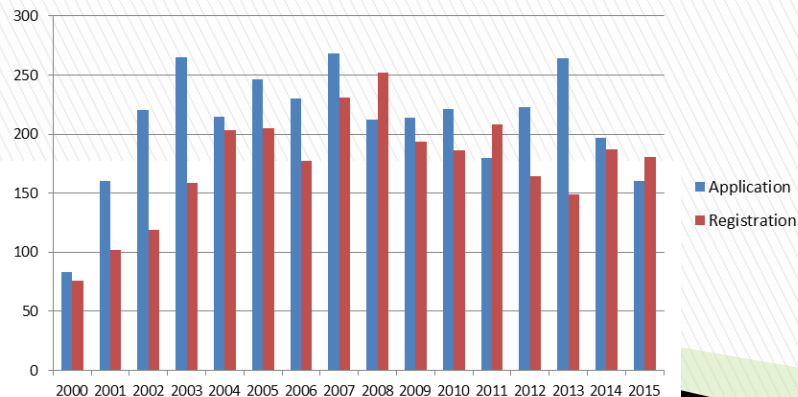
① Application of foreign bred variety



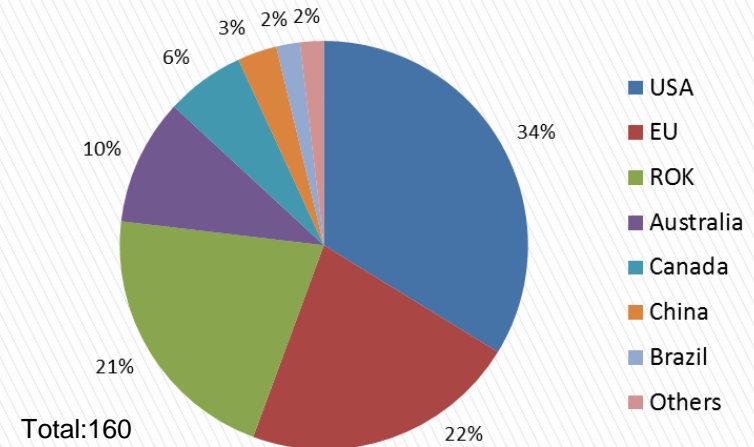
② Countries form applications (1978-2017)



③ Application to foreign countries (UPOV only)



④ Countries to application from Japan (2015)



2-7. Consumer's demands and response from agriculture sector

Consumers' needs/ interest

- Price
- Taste/ Delicious
- Freshness
- Nutrient/ Safety/ Health
- Environment friendly (organic etc)
- Good looking (color, shape, etc)
- Production region (branding) etc.

Manufacturer's/ distributor's needs

- Price
- Uniformity
- Stable supply etc.

Seed company
Public research organization
Breeders/ Farmers

Farmer's needs

- High yield
- High quality
- Good looking
- Disease/Pest resistance
- Uniformity
- Stable yield, quality

PVP system

2-8. Seed industry in Japan

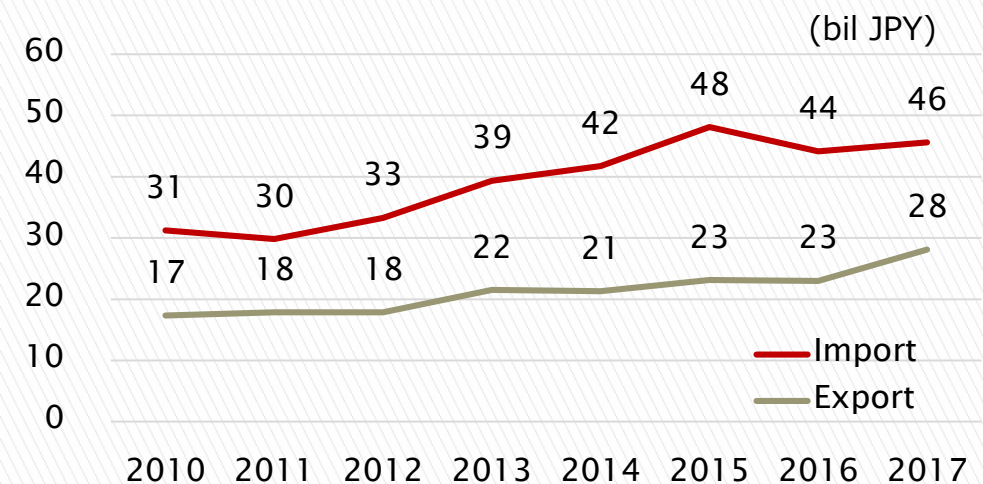
- Japan is 9th largest seed industry, but seed exports is relatively small.
- Amount of international trade of seeds and seedlings has been increased in general. Recent export and import of seed and seedlings are 281 and 456 billion yen in 2017 respectively.

(1) Status of Seed industry of Japan

Country	Domestic consumption	Export	Total (Mil.US\$)
USA	12000	1531	13531
China	9950	251	10201
France	2800	1804	4604
Brazil	2625	165	2790
Canada	2120	323	2443
Netherland	590	1583	2173
India	2000	67	2067
Germany	1170	727	1897
Japan	1350	145	1495
Argentina	990	150	1140
Italy	767	315	1082
Turkey	750	55	805
Spain	660	145	805
Others	7163	3282	10445
Total	44925	10543	55468

* The number only indicating seed only

(2) Trends of international trade of seed and seedlings

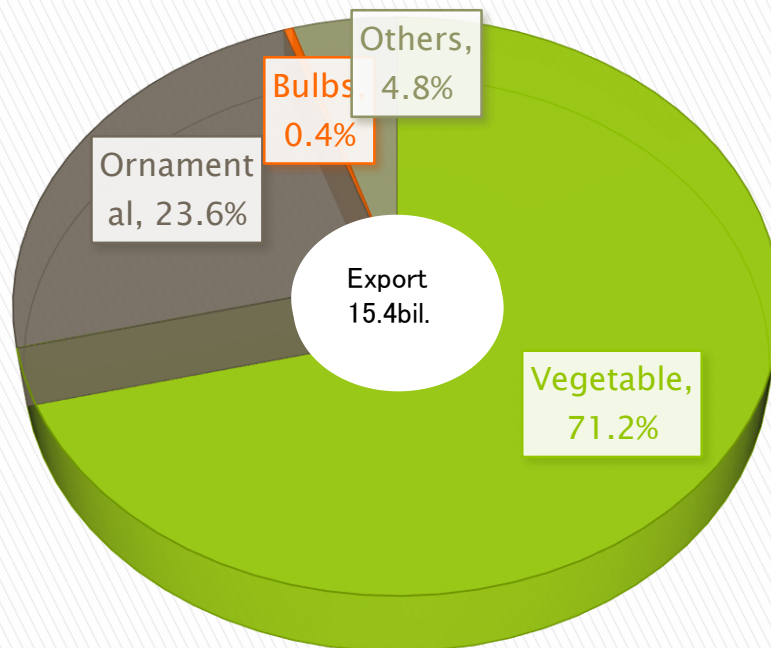


* The number includes seed and seedlings

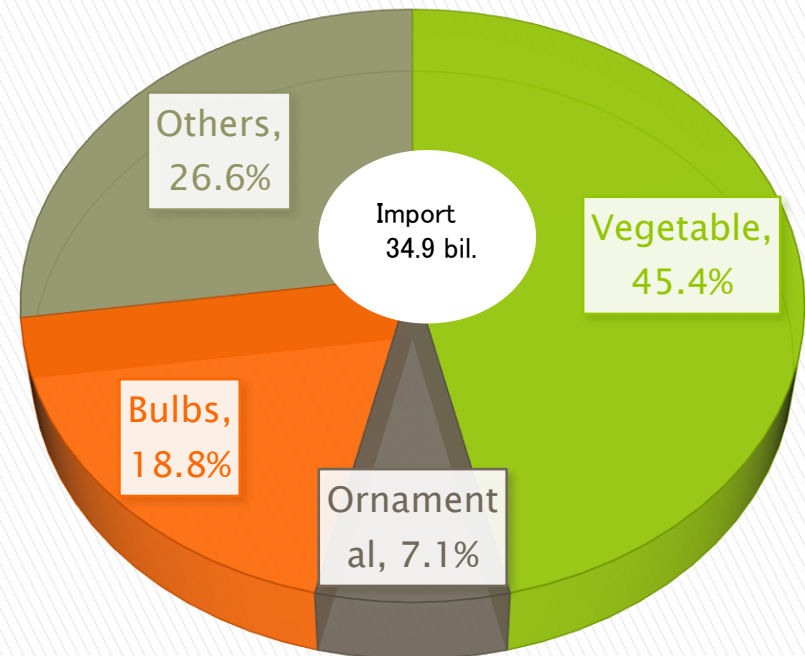
2-9. International seed trade in Japan

- Vegetable and ornamental, mainly developed by private sector, are main crop groups in international trade of seeds

(1) Export Value of Seed (2017)



(2) Import Value of Seed (2017)



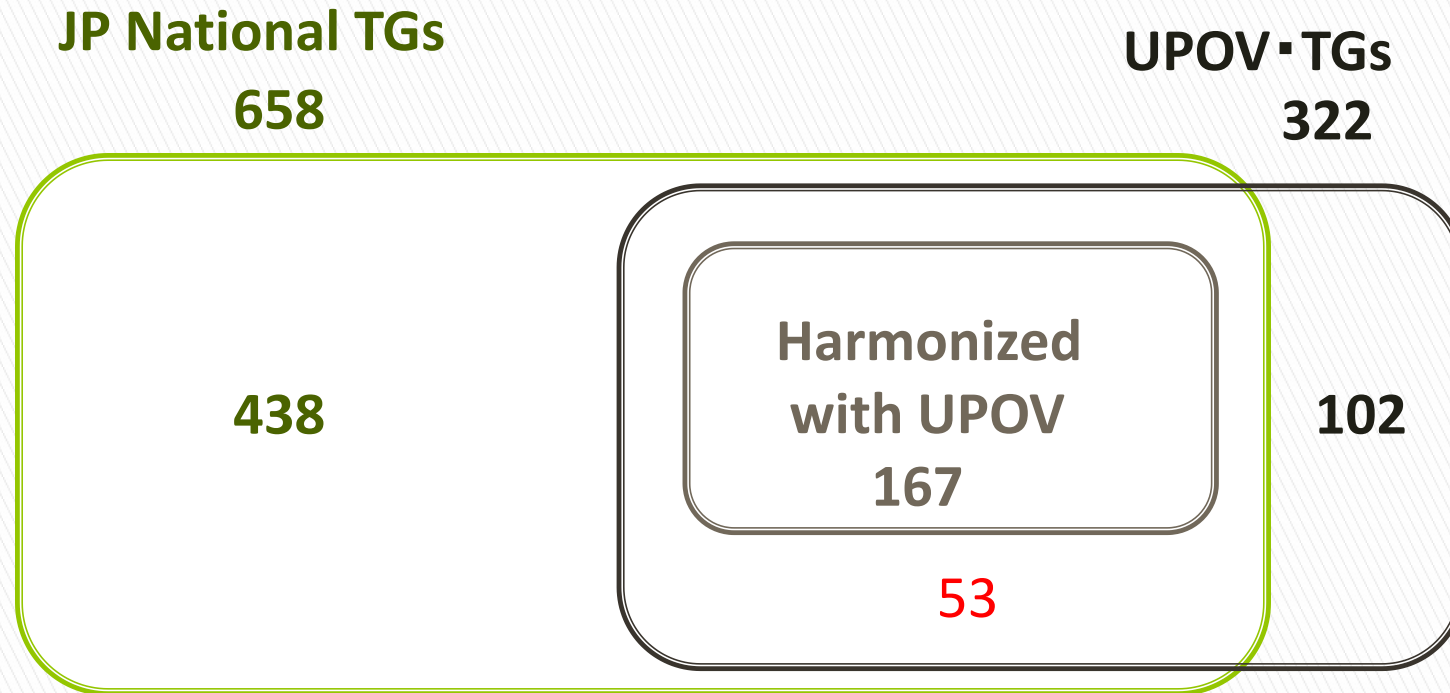
2-10. Effective implementation of PVP system

- ▶ Japanese PVP Office has more than 600 National Test Guidelines (TGs).
 - After ratifying 1991 UPOV convention in 1998 Japan been receiving around 20 new genera and species as applications in every years.
 - Developing National TGs for new genera and species.
 - Harmonizing National TGs according to UPOV TGs.
 - Japanese National TGs in English on website by Latin name order.

http://www.hinsyu.maff.go.jp/en/en_top.html



2-11. Developing and Harmonizing National TGs



- Harmonization of TGs has been conducted since 2007.

Strengthening of Test Guidelines (TGs)

- Development of new national TGs : 11 genera and species in 2016
- Revision of existing national TGs harmonizing with the UPOV TGs: 4 genera and species in 2016

2-12.Cooperation for Plant Examination

Japanese PVP office offers UPOV member states the examination report at no charge by exchanging the Memorandum of Cooperation (MOC) since 2016.

- For Japanese plant breeders, they can expect PBR registration with shorter period and lower cost
- For UPOV members, they can save the cost of DUS growing test.



Australia



Federative
Republic of Brazil



New Zealand



swiss
confederation



Socialist Republic
of Vietnam



EU



Russian
Federation



Republic of
Kenya



United
Mexican States



State of Israel



Kingdom of
the Netherlands



Republic of
Turkey



Canada



Republic of
Peru

20

UPOV member countries that Japan has shared test reports since 2016

Country	Plant name
Australia	Hibiscus
Brazil	Chrysanthemum, Alstroemeria
Canada	Cape Periwinkle, Citrus, Hydrangea, Ranunculus
Israel	Rose
Kenya	Carnation

Country	Plant name
New Zealand	Satsuma Mandarin
Russia	Strawberry
Turkey	Lettuce
Viet Nam	Chrysanthemum, Rice, Sweet potato, Poinsettia

3. Agricultural and Social benefit using PVP system



3-1.Case study in Japan

- **Gentian “Ashiro Rindo”**
Hachimantai city, Iwate Prefecture

- **Oryza sativa “Tsuyahime”**
Yamagata Prefecture



3-2. Blanding strategy under the PVP system

TSUYAHIME: New rice variety developed by local government

History of Development

- 1998 Start breeding (Prefectural research center)
- 2007 Establish Branding Strategy committee
(Prefectural government, Farmers' Association (JA Yamagata) ,Rice traders)
- 2009 Apply for Plant Breeders Right
- 2010 Full-scale planting, sales start, Trademark registration of package design)
- 2011 Granted Plant Breeders Right

Comprehensive branding strategy designed by the Committee

- ◆ Securing high quality
Limited farmers, cultivation area and methods, severe standard for shipping
- ◆ Advertising strategy
Nationwide TV promotion film, Newspaper AD,
Registered trademark of package design
- ◆ Sales promotion
Top sales by the Governor, PR by “Tsuyahime lady” at events, tasting events

3-3. Securing high quality by a guideline

Farmers who wish to grow “Tsuyahime” need to be certified by the branding board (headed by **the Governor of Yamagata prefecture**) according a guideline follows;

- Under the designed planting area for optimum growing
(Planting area map is published considering climate and geographical condition)
- Cultivation methods are allowed only Organic or Reduced chemical farming
- Comply to restricted shipment rule
 - Grain quality 1st grade or 2nd grade
 - Protein content less than 6.4%

The Governor = PBR holder can control distribution of seeds by contract.

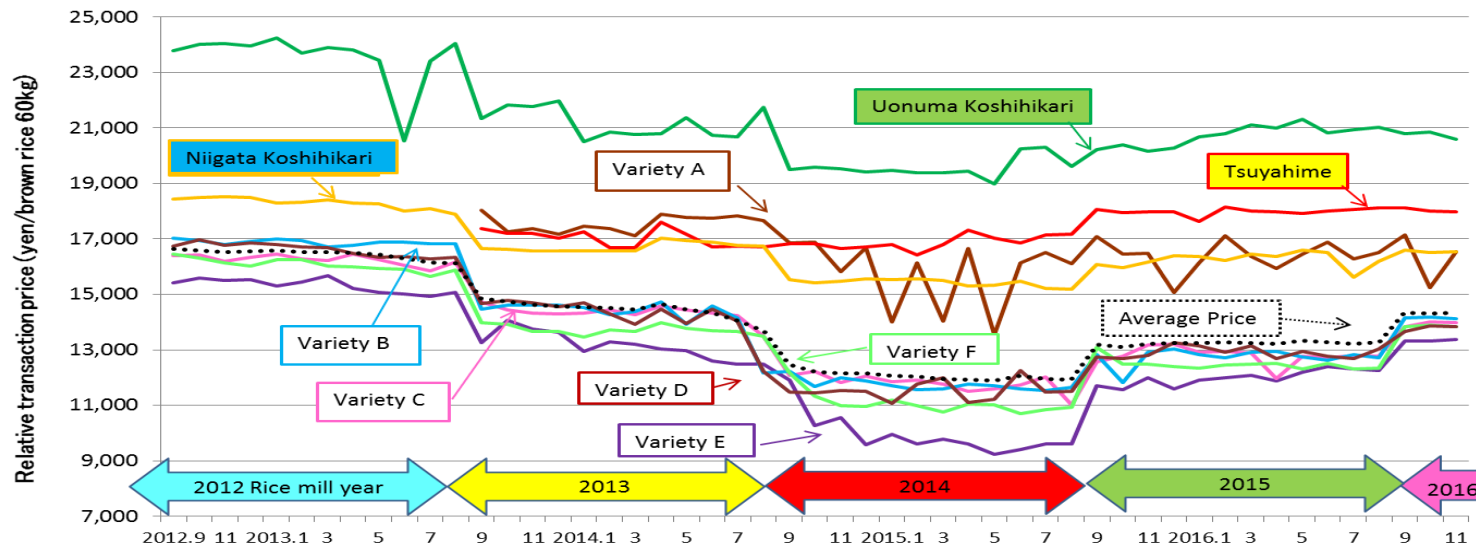
High appreciation from market and consumers

Expansion of Production



3-4. Result of the promotion

- Secure price position equal to or better than Niigata Koshihikari



- Cultivation area and distribution volume increase about 3 times

- cultivation area 2,500ha(2010) → 8,807ha(2016)
- growers 2,520 unit(2010) → 5,320unit(2016)
- distribution inspection amount 12,267t(2010) → 35,949t(2016)

- However, nationwide awareness is still on progress
Production share 0.8% (Koshihikari 36.1%)

3-5. Continuous effort to keep benefit of PVP

Enforcement for infringement

- As the “Tsuyahime” became popular, information on suspicious distributor without proper contract was brought to PBR holder. Then, Yamagata Prefectural Police Department arrested the suspect by violating the PVP and Seed Act after thorough investigation. The Yamagata District Court gave a sentence of one and half years' imprisonment with a three years' stay of execution, and a fine of 500,000 yen to the accused.

Keep high quality with responding request from consumer

- In order to response to consumers request, it is necessary to expand production area and producers who can follow the production guideline which keep quality as established bland.

3-6. Blanding strategy under the international PVP system

ASHIRO RINDO (Gentian) : Flower bland developed by local government

History of Development

- 1972 Start cultivation of Gentian as new crops
- 1980th~ Start developing new variety (municipal research center cooperation with farmers group)
- 1996 **First variety granted in Japan**
- 1999 Variety granted in EU as well as Japan
- ~2015 **16 varieties registered in Japan and other countries, distributed under the same trade mark as “ASHIRO RINDO”**

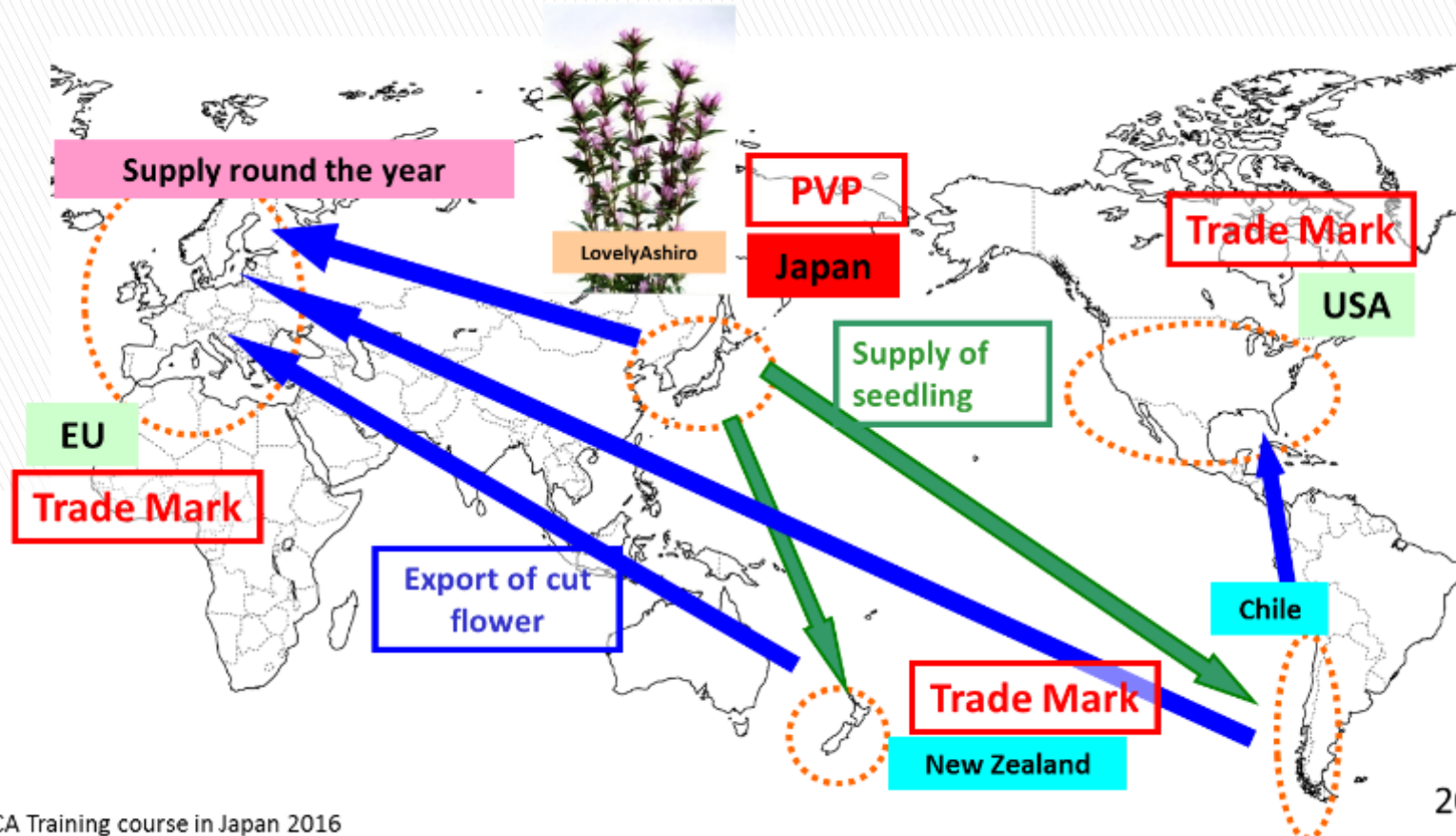
Background and purpose of the Blanding strategy

- ✓ Maintaining superiority of Gentian production area in Hachimantai city
- ✓ Expansion of demand by international branding
- ✓ Continuous development of new plant varieties through collection of royalties
- ✓ Regional development

3-7. Ashiro rindo: Promotion of varieties under the harmonized system

Outline of Blanding strategy

- PBR and Trade Mark granted in Japan also granted some third countries.
- Producers not only export their flowers but also supply seedlings some producers in Southern hemisphere by exclusive use contract with royalty.
- ASHIRO gentian is now shipped to EU and USA round the year.



3-8. Varieties and trademark

➤ Registered Varieties of “Ashiro Rindo” (Ashiro Gentian)

Ashiro no Aki (1996)

Merhen Ashiro (1999) **E**

Lovely Ashiro (2002) **E,N,C**

Ashiro no Hatsuaki (2007)

Ashiro 2007-1 (2009)

Ashiro 2008-1 (2010)

Ashiro 2012-1 (2014)

Ashiro 2012-3 (2015)

E: EU, N: NZ, C: CI, U: US

Ashiro no Natsu (1999)

Shine Blue Ashiro (1999) **E**

Ashiro no Hitomi (2007)

Cristal Ashiro (2008)

Ashiro 2007-2 (2009)

Ashiro 2010-1 (2012)

Ashiro 2012-2 (2014)

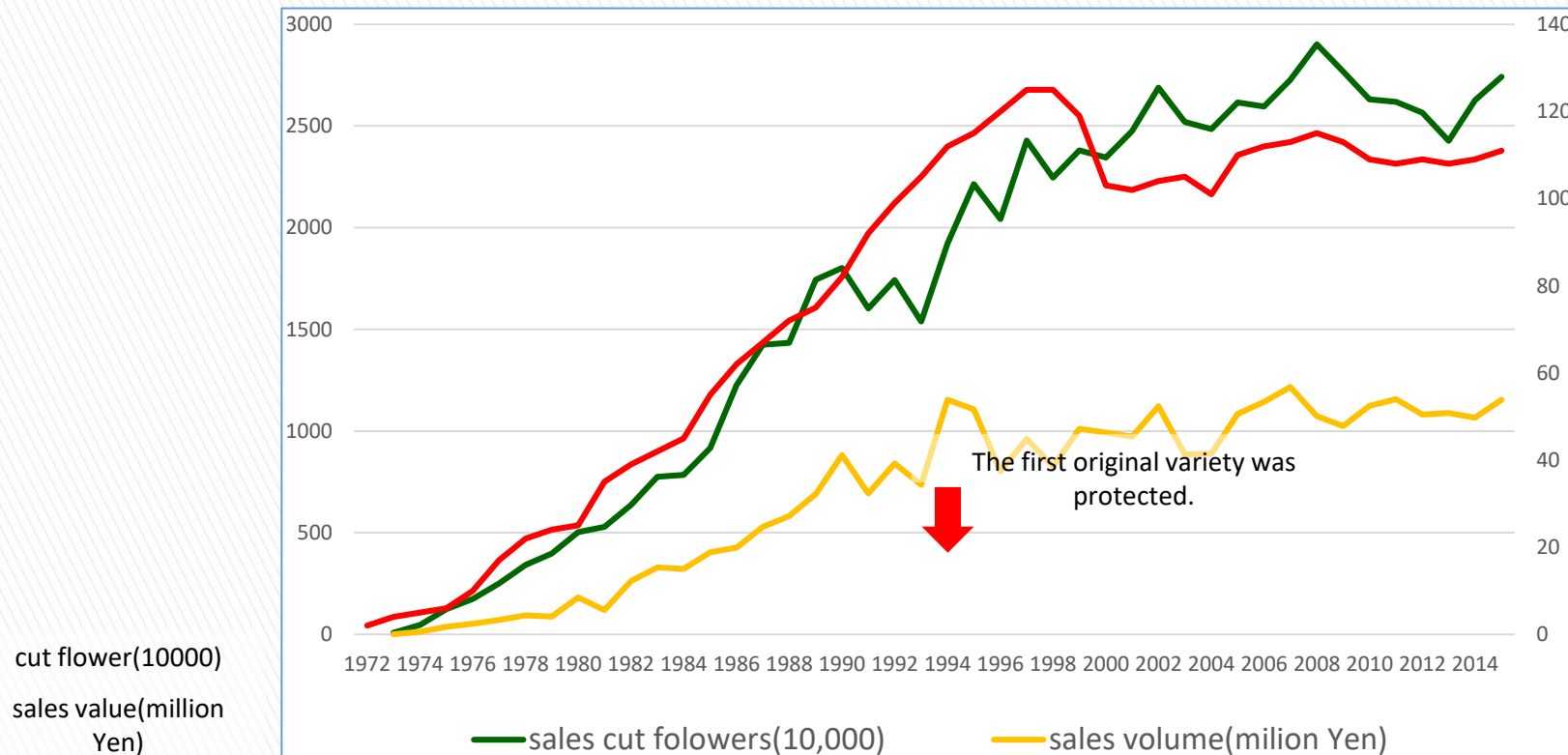
RI0405128 (2015) **E,N,U**

➤ Trademark “Ashiro Rindo” registration in Japan and overseas (**JP, CN, EU, NZ, US**)



3-9. Result of the activity

- Under the same registered trademark “Asiro Rindo”, some registered varieties are now delivered not only Japan but also in US or EU.
- As a result, Asiro is now one of the leading “Rindo” production area in Japan.



- ✓ Achieved 30 billion yen from the start of production in 1972
- ✓ Achievement of 1 billion yen of year production amount last 10 years

4. Conclusion

- PVP system is beneficial to both of farmers and seed industry.
- Close cooperation of farmers and seed industry is essential to agricultural development.
- PVP system is a strong tool for bland strategy using new variety and combination of other IP tool is also important.
- Effective implementation of PVP system is important and international cooperation is crucial for this.



Thank you for your attention

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