

Introduction of PVP G-men's activity at NCSS

“Efforts of support for Plant Variety Protection System in Japan”

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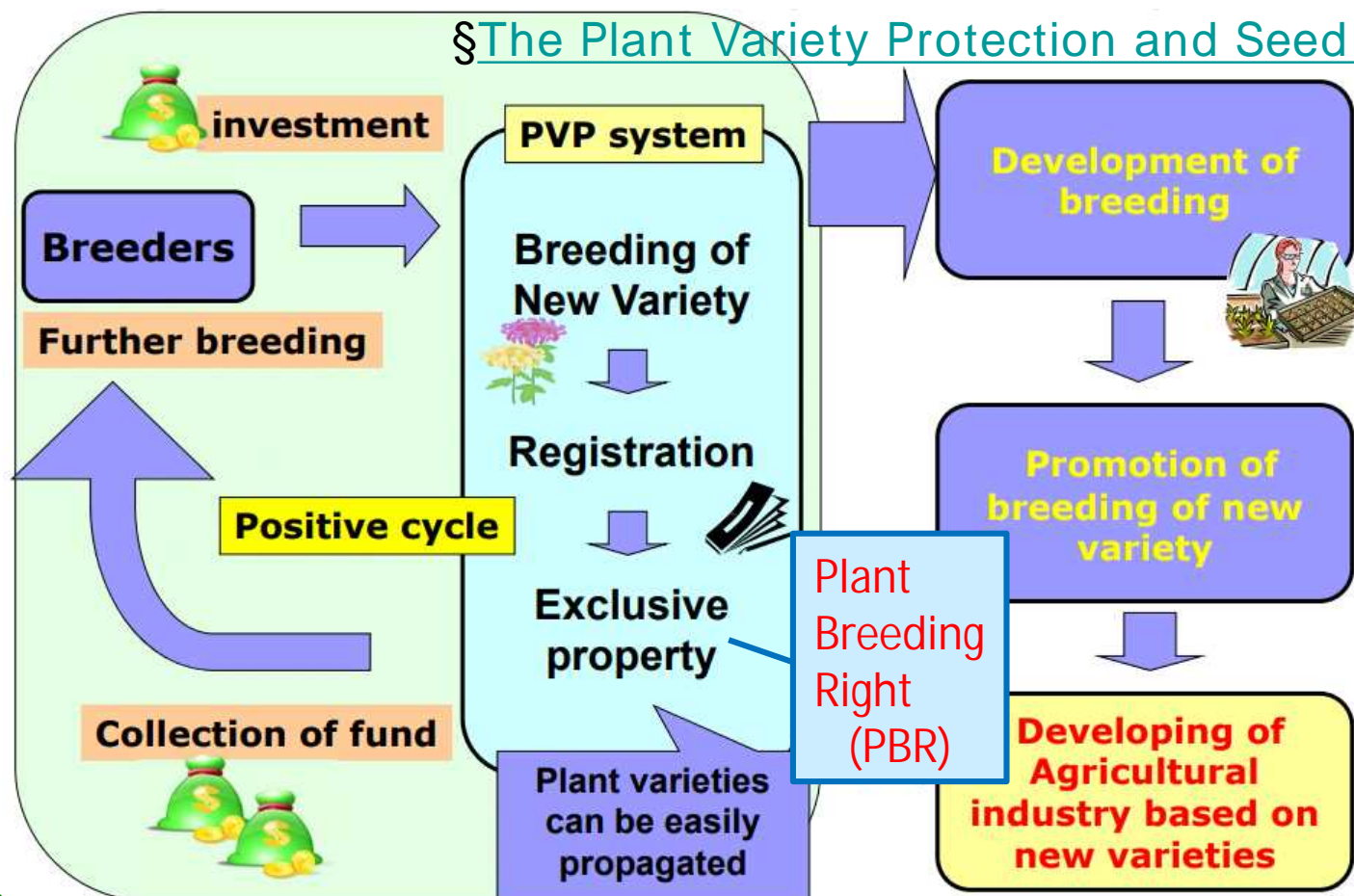
Center for Seeds and Seedlings, NARO



Plant Variety Protection (PVP) system in Japan and about NCSS

Center for Seeds and Seedlings, NARO

§The Plant Variety Protection and Seed Act

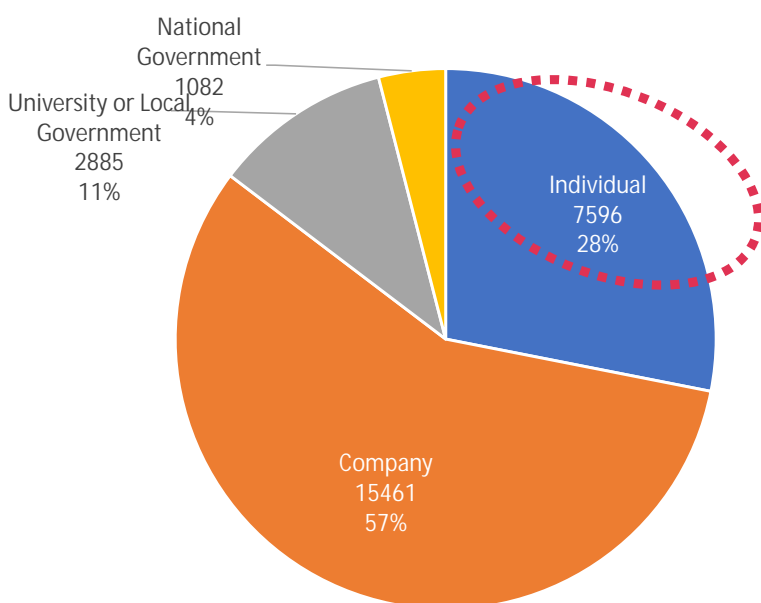


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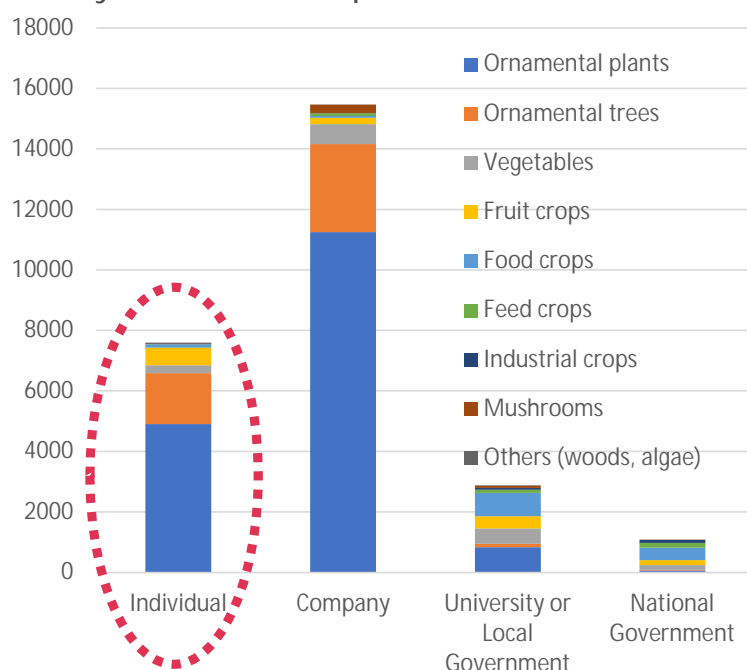
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Number of Protected Varieties by Breeders

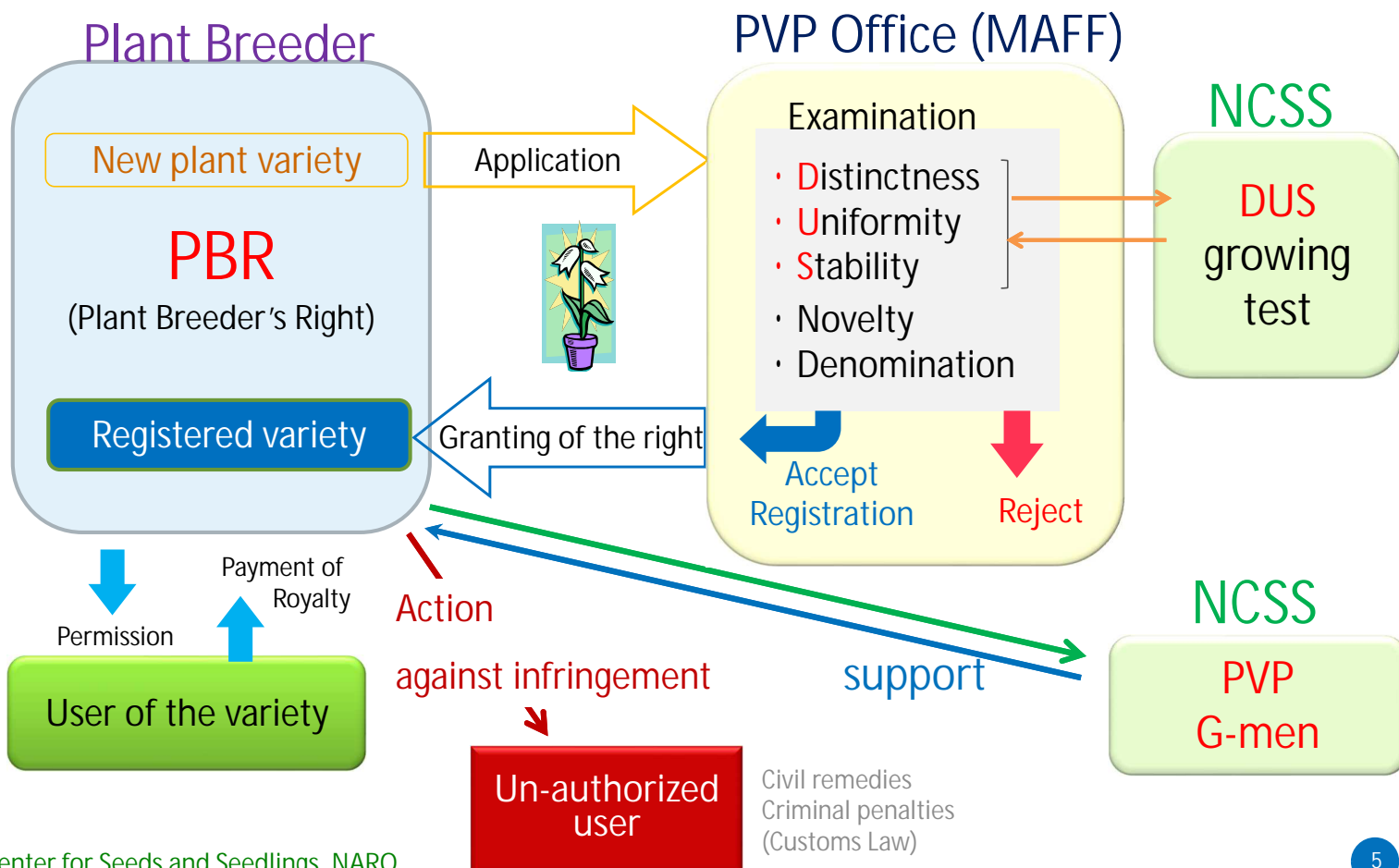
The Ratio of Protected Variety by Breeders



The Number of Protected Variety by Breeders and plant classes



As of Dec 11, 2020



Main Duties in NCSS

DUS growing test for PVP

Under the UPOV Convention and the PVP & Seeds Act, NCSS cultivates candidate varieties with similar existing varieties and evaluates the characteristics. The result of the testing shall be reported to the Minister of MAFF.



Assessment of plant characteristics

Facilitation of Plant Variety Protection

Consultation service on Plant Variety Protection (PVP G-Men activities)

- Counseling and advice on infringement of PBR
- Similarity test for variety identification: DNA analysis etc.
- Infringement records
- Deposition of evidence



consultation

Research and development

Research and development of new technologies to apply them to NCSS's activities in cooperation with various research institutes

Seed Inspection

- Under the instruction of MAFF Minister, NCSS implements commercial seeds inspection on labeling and quality.
- NCSS issues seed quality certificates as an accredited laboratory of ISTA based on the request of seed dealers.



Germination test



Seed health test

Production of foundation seeds

NCSS produces and distributes disease-free and high quality foundation seeds of potato and sugarcane. Seed potato is the only designated plant for domestic quarantine.



Tokachi Potato Foundation Seeds Farm



Virus-free plantlet

Conservation of plant genetic resources

NCSS conserves vegetative crops (e.g. potatoes, fruit trees) as a sub-bank of "Gene Bank Project" in close cooperation with other NCSS activities.

What is PVP G-men ?

What is "PVP G-Men" ?

NCSS Staff

(NO government official)

Advisors on PVP matters
(NO investigative authority)
(NO attorney)

with enough **knowledge and experience**
on Intellectual Property Rights and DUS Testing



Support as a third party

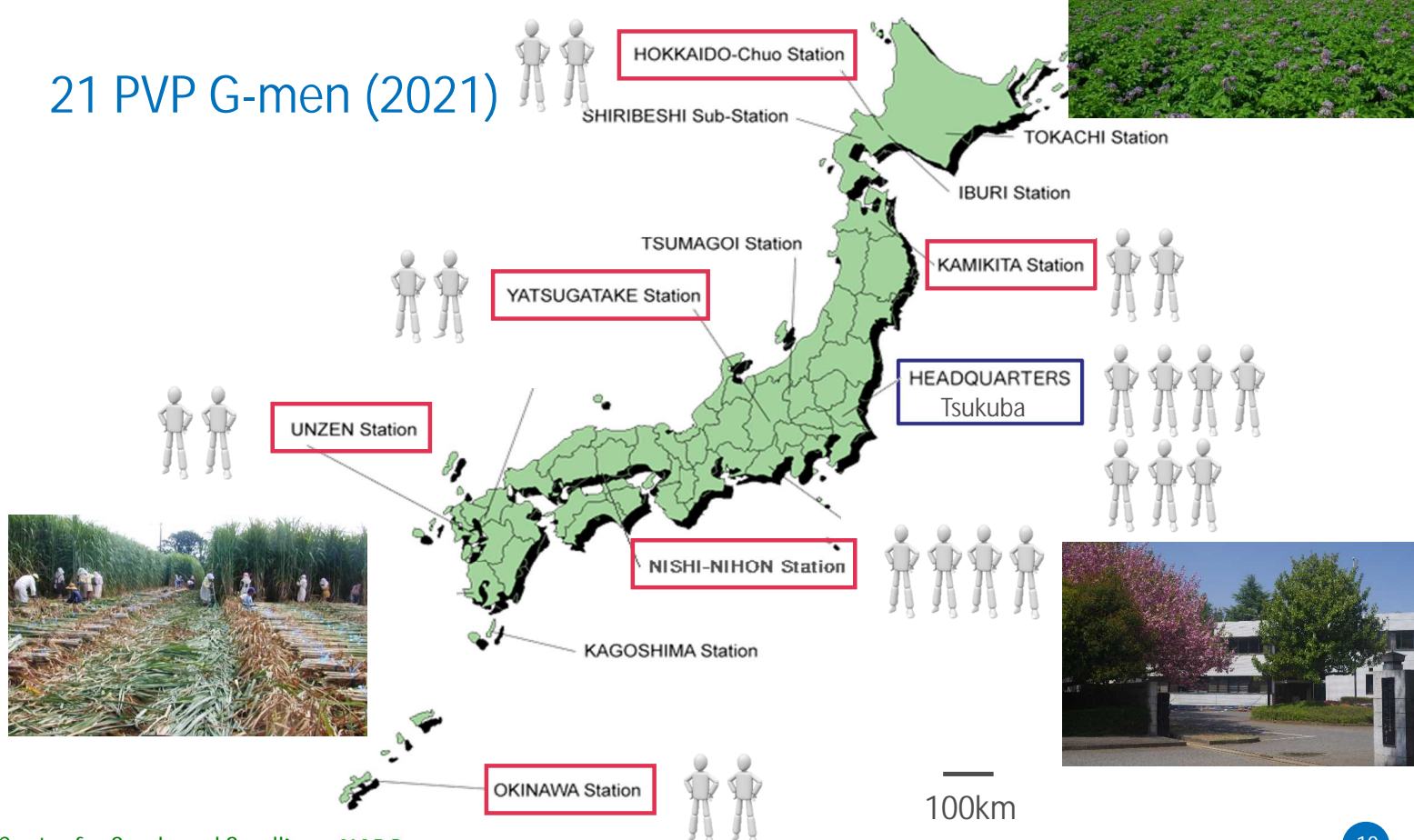
PBR holders should protect their rights by themselves

- It is essential for PVP G-men that Knowledge of Intellectual Property Rights, especially PBR.
- Regulations of PVP G-men qualification, were enacted in 2007.
 - 1) To attend a PVP training course
 - 2) To pass a Qualifying examination
 - 3) the Experience of DUS growing tests or Seed inspections

These 3 points are requested for PVP G-men.

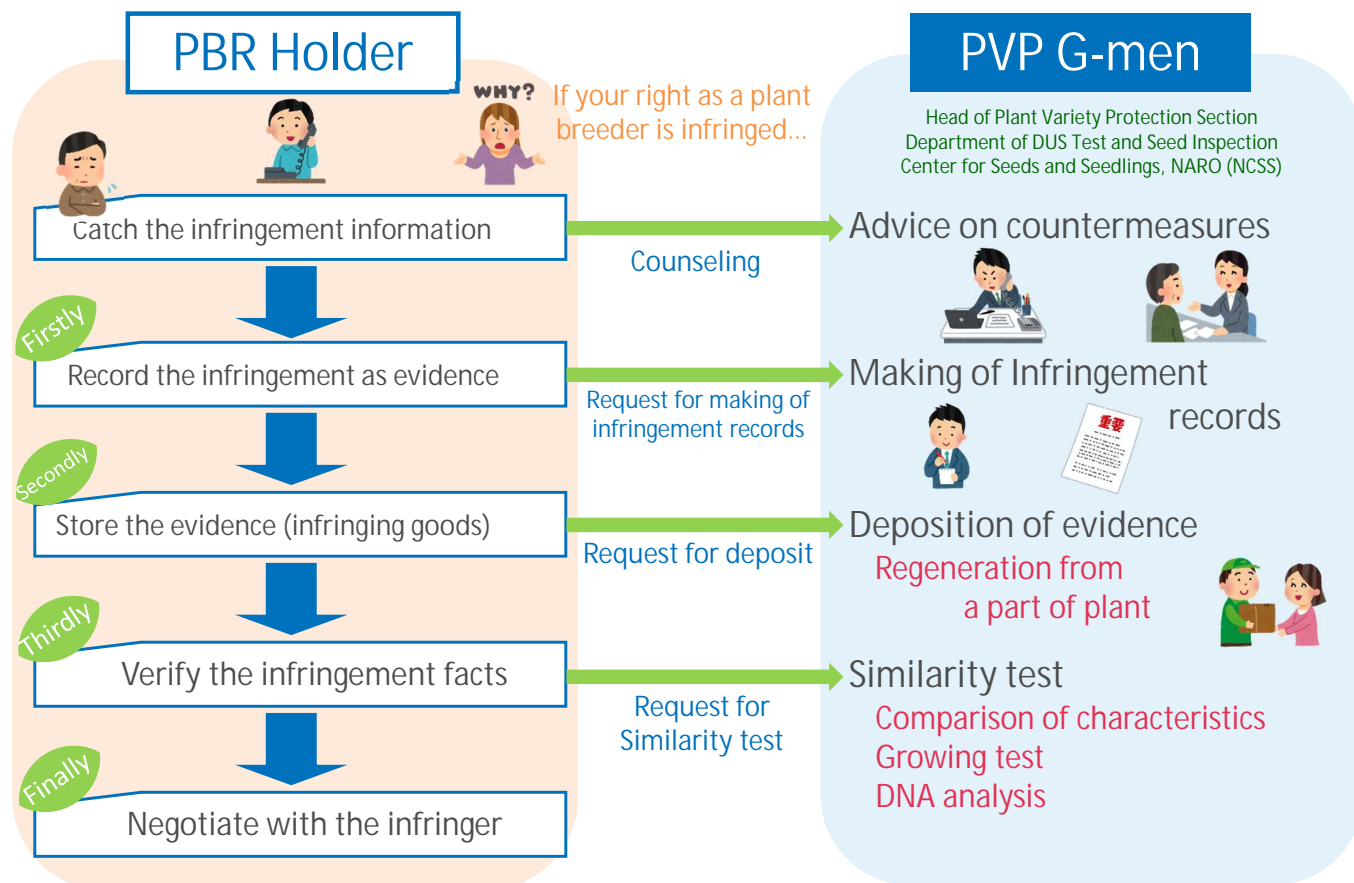
Arrangement of PVP G-men

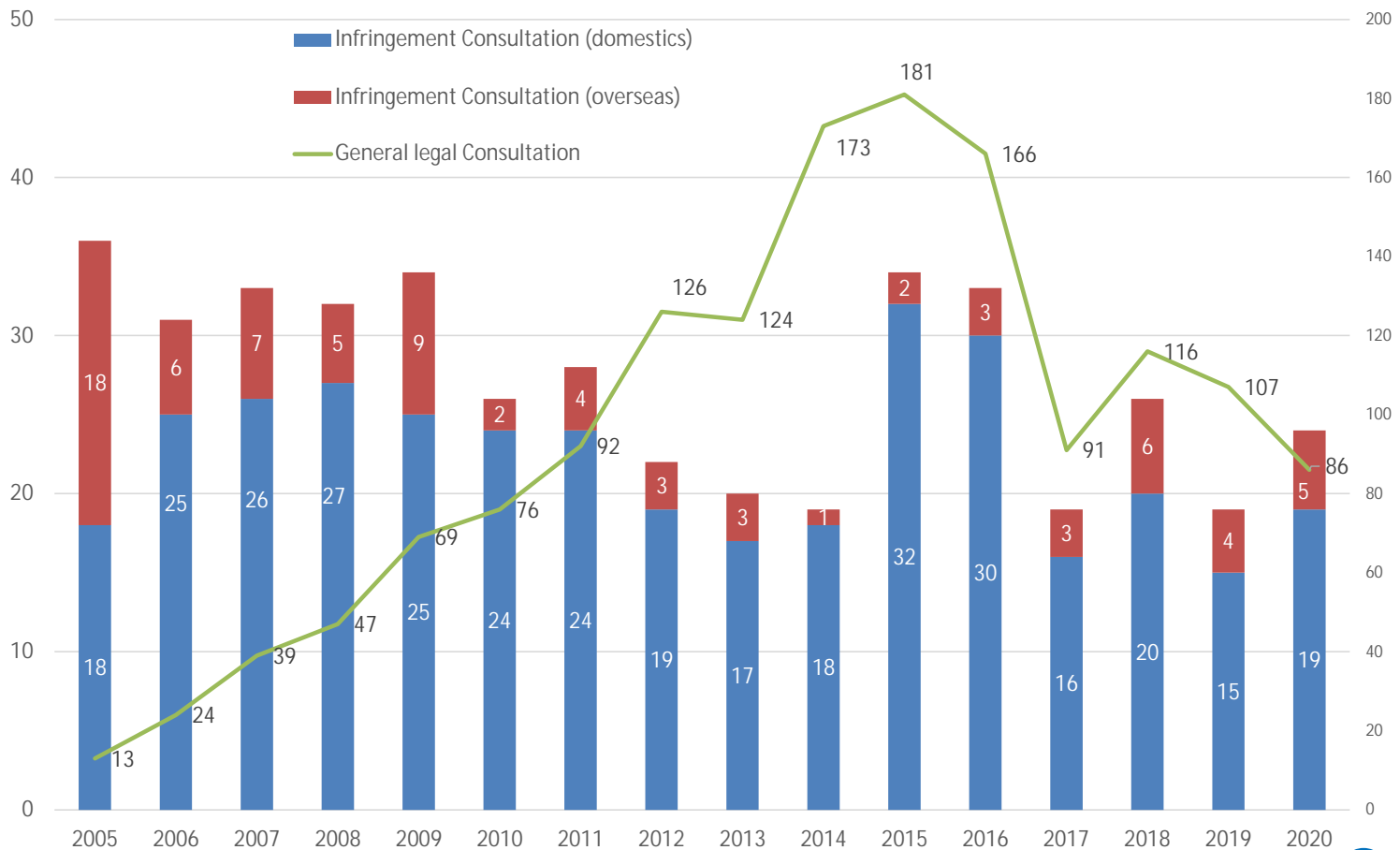
21 PVP G-men (2021)



Activities of PVP G-men

Services of Plant Variety Protection Advisers (PVP G-men)



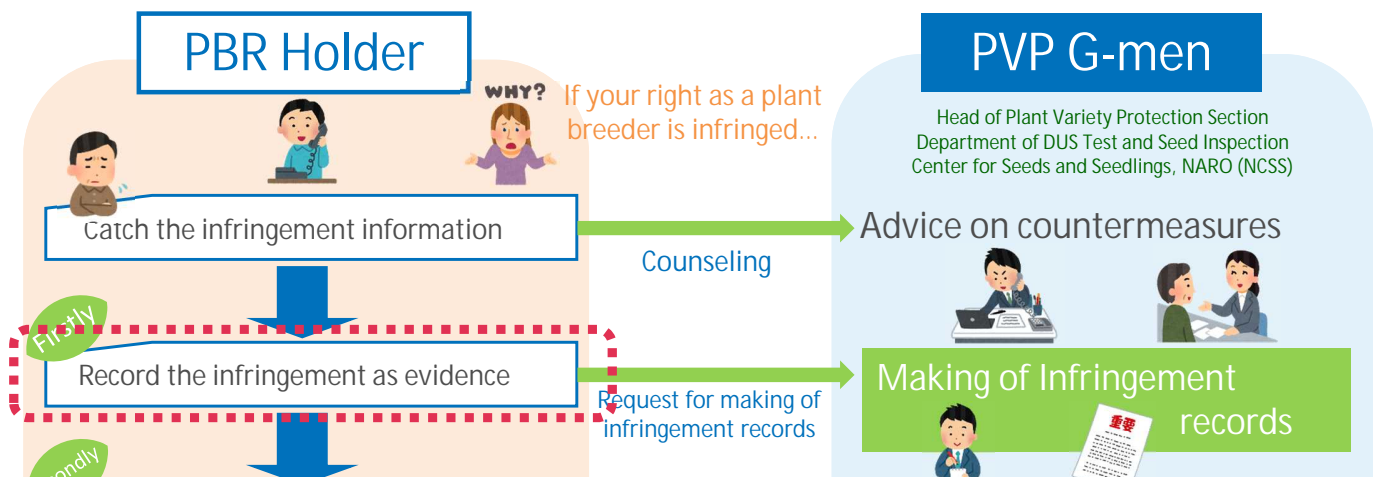


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Services of Plant Variety Protection Advisers (PVP G-men)



“the PVP and Seed Act” says that PBR holders must prove the infringement details suffered.

So, they need to prove the suspected infringement of date, quantity and price as the evidence.



Survey and sampling in the market

Fee: 12,100 JPY + transportation costs for G-men

Deposition of Evidence



Type of Deposition

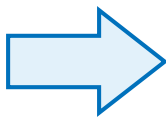
- seed
- bulb
- seedling
(propagation material)
- cut flower
- processed materials
- DNA



Deposition Fee: 2,860 - 5,610 JPY

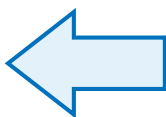


Finding the infringement product suspected

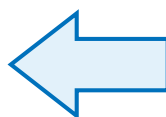


Confirming the infringement product suspected

The client sends the products to a station which will conduct characteristics testing.



Sealing the infringement product suspected

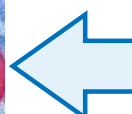
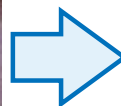
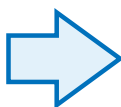


Shipping Fee and Material Costs : as necessary

Regeneration from a part of plant



Cut flower



Deposition
Similarity test

Regeneration Fee: 13,090 JPY

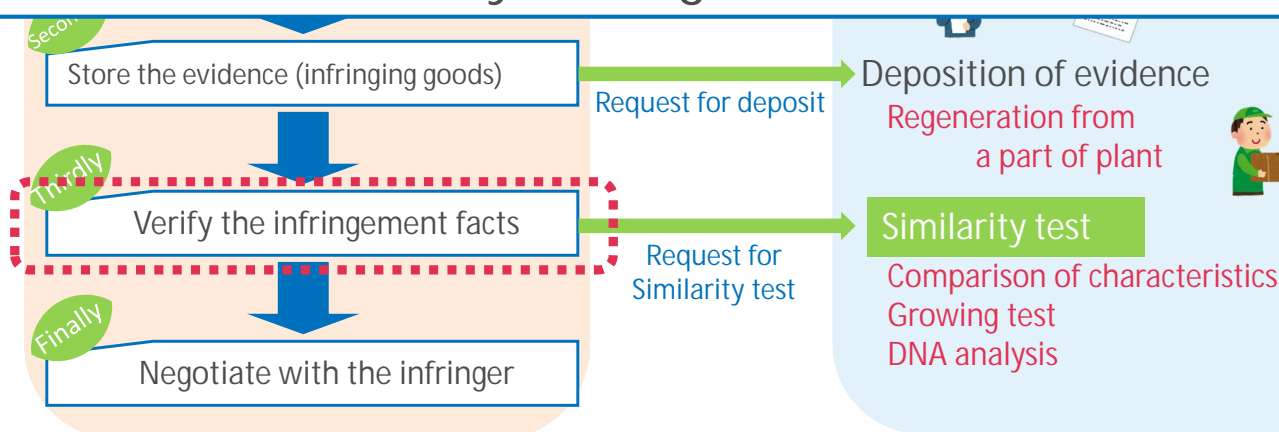
PBR Holder

WHY? If your right as a plant breeder is infringed...





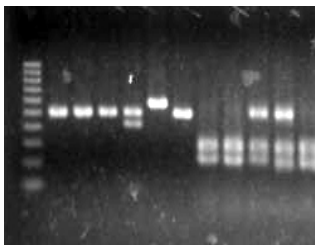
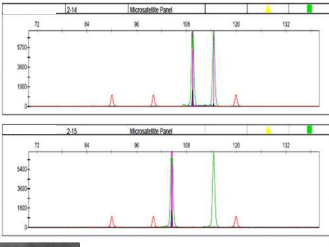
PVP G-men

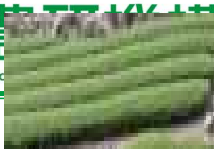
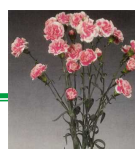
Head of Plant Variety Protection Section
Department of DUS Test and Seed Inspection
Center for Seeds and Seedlings, NARO (NCSS)

“the PVP and Seed Act” says that plants getting PBR include not only bred variety, but also nor clearly distinguishable varieties from it.



Verify infringement facts

Type of Tests	Detail of Similarity Tests
Comparison of characteristics Fee: 23,100 JPY	To conduct comparative survey for the characteristics of both of protected variety and variety suspected of infringement which are provided from client, by visual assessment and measurement.  
Growing test Fee: 132,000 JPY (minimum charge)	To survey characteristics comparison for the plants which are provided from client, by using the same methods of DUS growing test on the PVP system.  
DNA analysis Fee: 34,980 JPY	To conduct DNA variety identification by using DNA from plant materials or tissues which are provided from client.  



Similarity test (DNA analysis)

Plant	Use	Tech	Identification of variety (Number of variety)
Apple	Leaf	SSR	MORINOKAGAYAKI , OZENOKURENAI , KOTARO , etc(9)
Carnation	Leaf	SSR	KAREN ROUGE , SANGO , DAISUKI , etc(34)
Citrus	Leaf	CAPS	SETOKA , KANPEI , HAREHIME , etc(12)
Grape	Leaf	SSR	SHINE MUSCAT , NAGANO PURPLE , QUEEN NINA , etc(7)
	Fruit	SSR	
Green tea	Leaf	SSR	SAINOMIDORI , SAKIMIDORI , HARUMOEGI , MIYAMAKAORI , MUSASHIKAORI , RYOFU , etc(30)
Japanese pear	Leaf	SSR	AKIDUKI , OUSHUU , SHUUREI , etc(24)
Maize	Leaf	SSR	YUMESODACHI , YUMECHIKARA , YUMETSUYOSHI , etc(15)
Pine apple	Leaf	RBIP	GOLD BARREL , JURIO STAR , SUMMER GOLD , YUGAFU (4)
Strawberry	Leaf or Calyx	CAPS	FUKUOKA S6 GO , SAGAHONOKA , BENIHOPPE , etc(62)
Sunflower	Leaf	SSR	LEMONADE (1)

Abbreviation

Full Spell

CAPS ; Cleaved Amplified Polymorphic Sequence

RBIP ; Retro transposon-Based Insertional Polymorphism

SSR ; Simple Sequence Repeat



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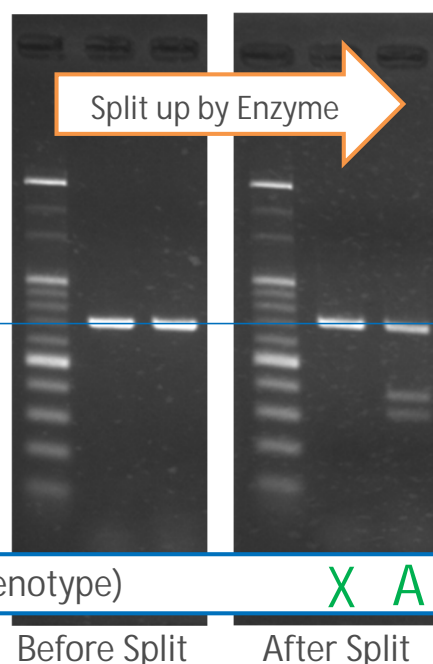
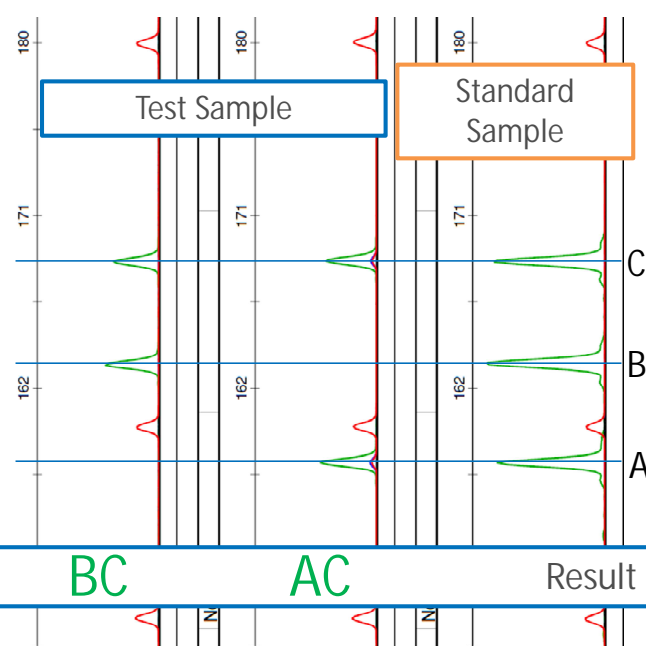
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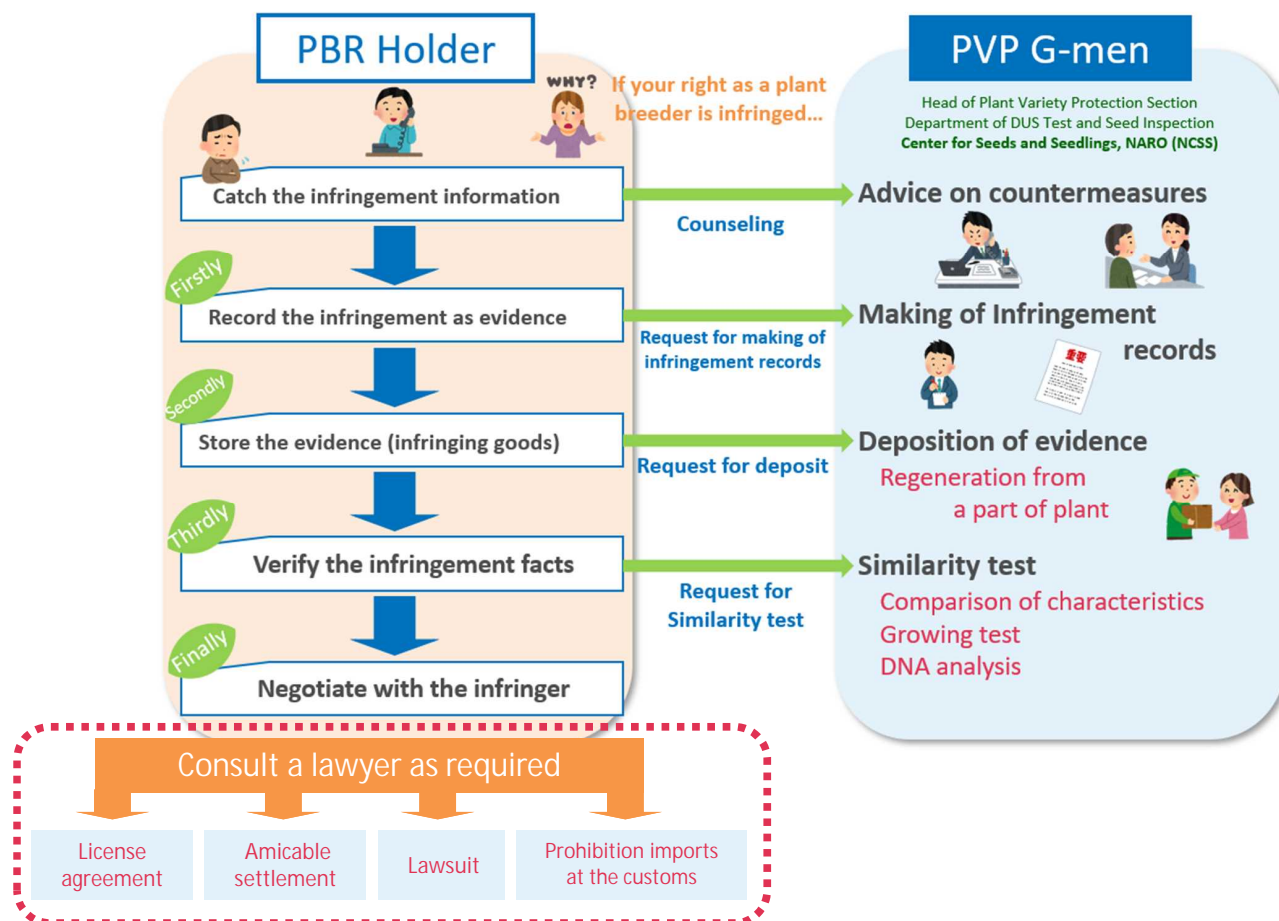
We validate these manuals in our laboratory
to check explicit results after the analysis

SSR

CAPS

RBIP

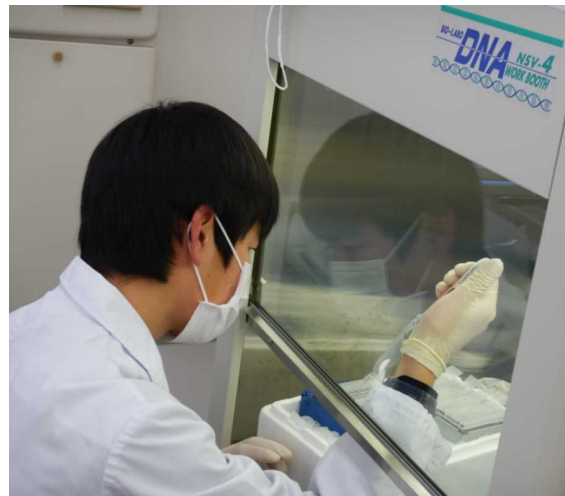




Conclusion

- PBR shall be effective when upon a registration on PVP system in its country or unit.
- PBR holders should protect their rights by themselves.*
- PVP G-men are **just staffs of NCSS** (not policemen or not attorney), but **we can support** PBR holders or stakeholders suspected holders because we have enough knowledge and experience on intellectual property rights and DUS growing test.
- There are 4 Service** upon request from the clients.
 - Advice on countermeasures
 - Making of infringement records
 - Deposition of evidence (for seed, seedlings, etc.)
 - Similarity test (comparison of characteristics, growing test or DNA analysis)

Thank you for your attention!



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