

**Working Group on Biochemical and Molecular Techniques
and DNA-Profiling in Particular****BMT/16/28****Sixteenth Session
La Rochelle, France, November 7 to 10, 2017****Original:** English
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CONFIRMATION OF VALIDATION FOR DNA VARIETY IDENTIFICATION TECHNIQUE*Document prepared by an expert from Japan**Disclaimer: this document does not represent UPOV policies or guidance*

The Annex to this document contains a copy of a presentation on “Confirmation of validation for DNA variety identification technique”, prepared by an expert from Japan, to be made at the sixteenth session of the Working Group on Biochemical and Molecular Techniques and DNA Profiling in Particular (BMT).

[Annex follows]

CONFIRMATION OF VALIDATION FOR DNA VARIETY IDENTIFICATION TECHNIQUE

Presentation prepared by an expert from Japan



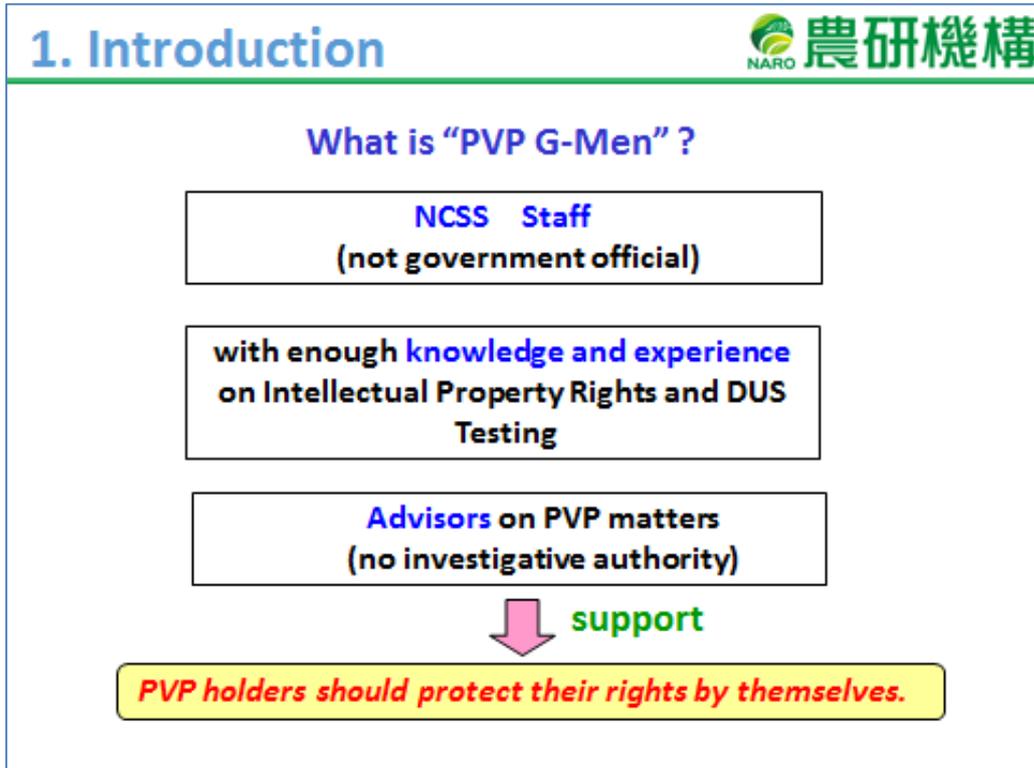
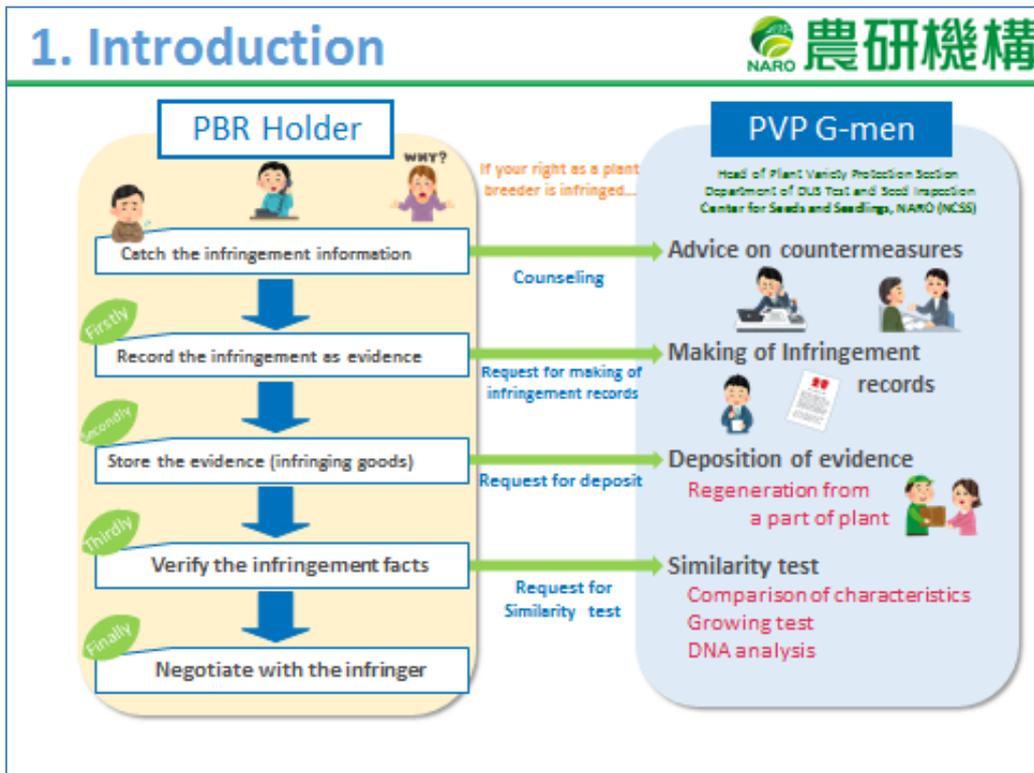
Confirmation of validation for DNA variety
identification technique

Center for Seeds and Seedlings, NARO
PVP-Gmen(Plant Variety Protection Adviser)
Hiroshi GOTO

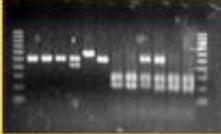
「農研機構」は国立研究開発法人 農産・食品産業技術総合研究機構のコミュニケーションチームです。



1. Introduction
2. Similarity test by DNA analysis
3. Validation of DNA variety identification techniques
4. Consideration



2. Similarity test by DNA analysis 農研機構

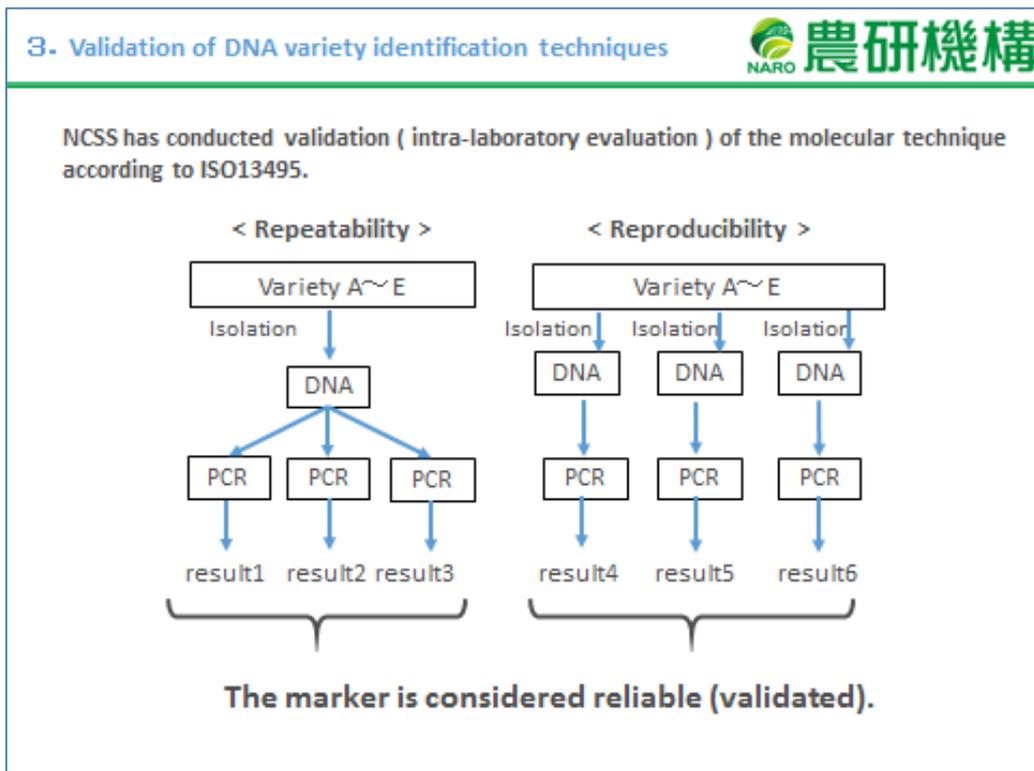
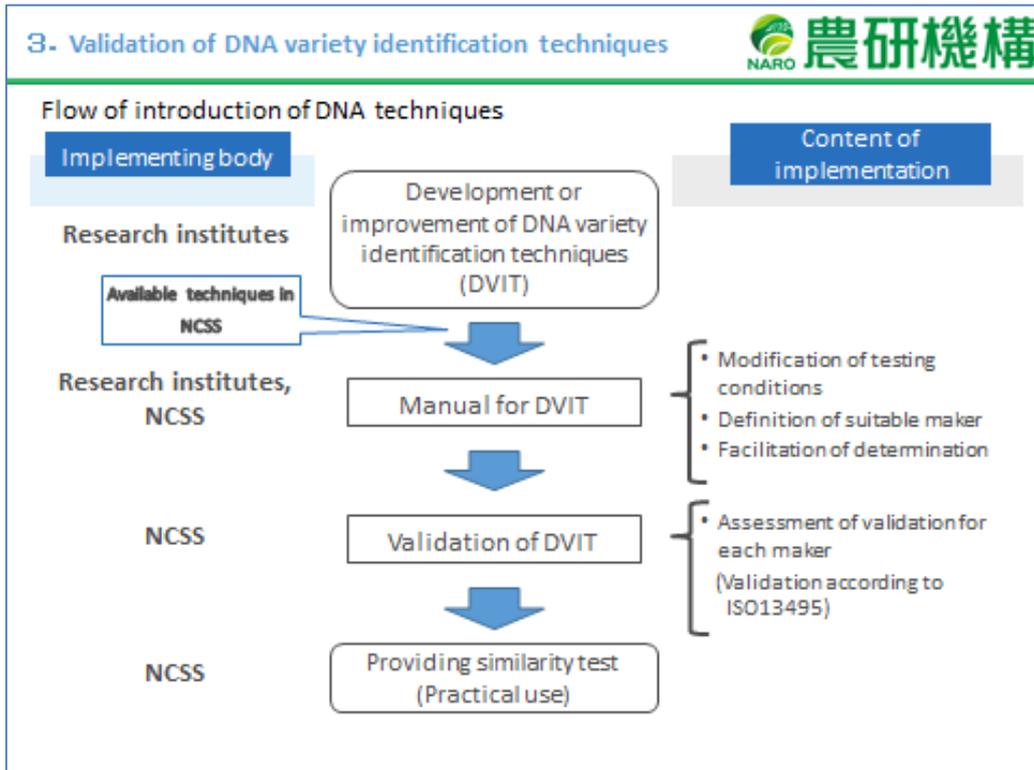
Type of Tests	Detail of Similarity Tests	
<p>Comparison of characteristics</p> <p>Fee: 22,680 JP Yen</p>	<p>To conduct comparative survey for the characteristics of both of protected variety and variety suspected of infringement which is provided from client, by visual assessment and measurement.</p>	 
<p>Growing test</p> <p>Fee: 129,600 JP Yen (minimum charge)</p>	<p>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.</p>	 
<p>DNA analysis</p> <p>Fee: 34,344 JP Yen</p>	<p>To conduct DNA variety identification by using DNA from plant materials or tissues which are provided from client.</p>	 

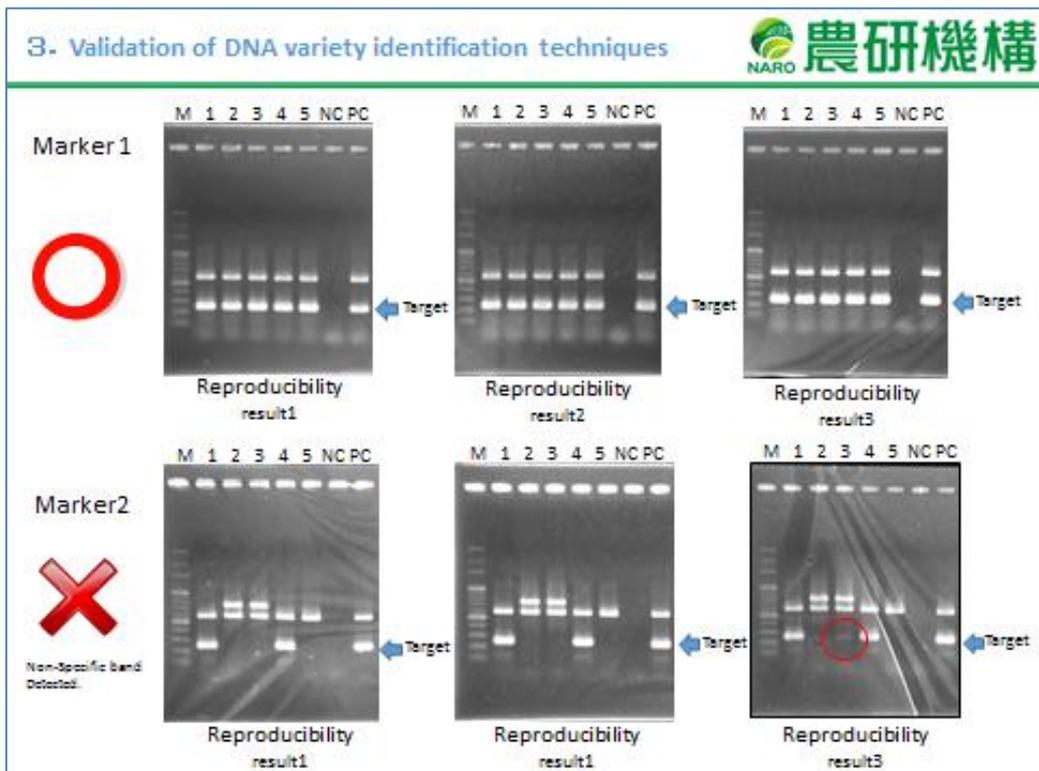
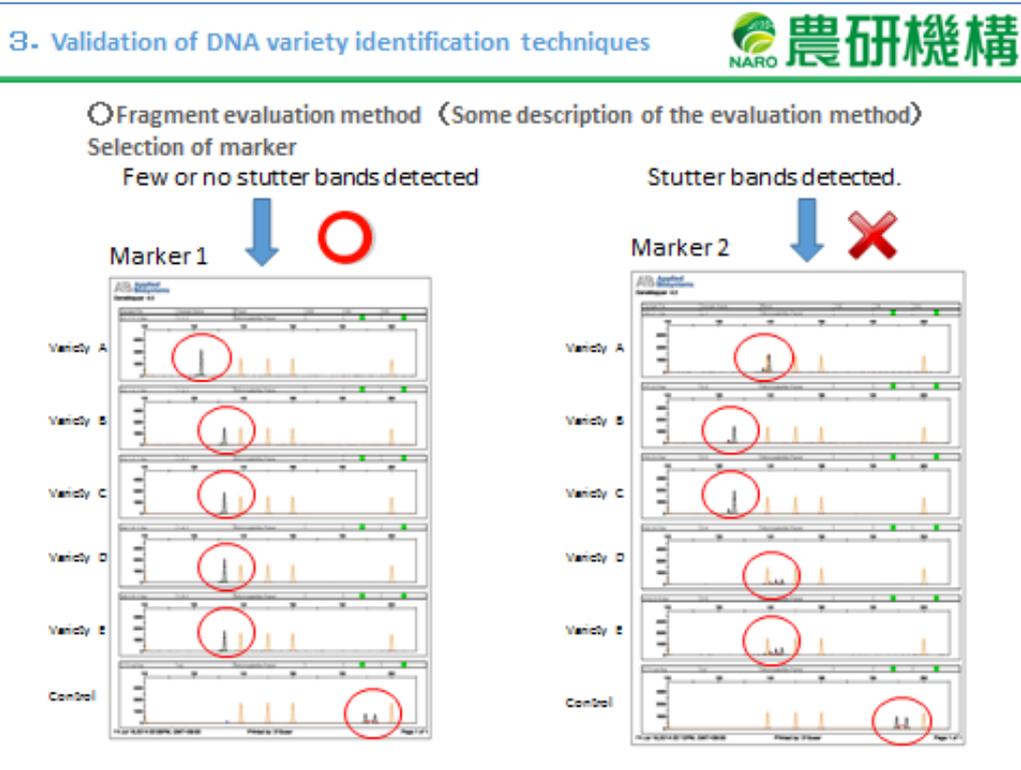
(EUR 1.00=133.66yen,as of OCT 24,2017)
(USD 1.00=113.68yen,as of OCT 24,2017)

2. Similarity test by DNA analysis 農研機構

Species	Image	DNA analysis
Strawberry		CAPS
Kidney bean		RAPD-STS
Azuki bean		RAPD-STS SSR
Igusa rush		SSR
Tea		CAPS
Sweet cherry		SSR
Japanese pear		SSR
Sunflower		SSR
Maize		SSR
Carnation		SSR
Apple		SSR
Pineapple		Retrotransposon
Potato		SSR

CAPS : Cleaved Amplified Polymorphic Sequence
 SSR : Simple Sequence Repeat
 RAPD : Random Amplified Polymorphic DNA
 STS : Sequence Tagged Site





3. Validation of DNA variety identification techniques



Court precedent on infringement of PBR in Japan

In the case of PBR infringement trial in Japan, a judgment was found judged not to be adopted as evidence for DNA variety identification technique whose validity has not been confirmed.

平成27年6月24日判決言渡
平成27年（ネ）第10002号 育成者権侵害差止等請求控訴事件（原審 東京
地方裁判所平成21年（ワ）第47799号、平成25年（ワ）第21905号）
口頭弁論終結日 平成27年4月15日
判 決

Plant name: nameko mushroom

Court precedent by Intellectual Property High Court on June 24th, 2015

URL of court decision: http://www.courts.go.jp/app/files/hanrei_jp/183/085183_hanrei.pdf

- The variety identification technique that was used in this trial was not the technique which was conducted in NCSS.

3. Validation of DNA variety identification techniques



Court precedent on infringement of PBR in Japan

The technique used for the legal advice has not been recognized for a validity in the scientific community, such as double-check, verification, etc. conducted by other researchers as a method for variety identification of nameko mushroom.

For this reason, it is impossible for this result of the legal advice to be adopted as the result of the legal advice in this trial as a method recognized as DNA analysis technology established with validity confirmed.

In order to use the DNA analysis method for variety identification, it is necessary to adopt an analysis method whose validity has been confirmed to ensure its accuracy and reliability.



In the case of infringement, the DNA variety identification technique that has not been validated is not adopted as evidence in the court, and it is highly likely that it will not be able to fulfill the role of proof of infringement at the time of infringement of plant breeders' rights.

For that reason, it is necessary to confirm the validity of the technique for the plant variety identification technique used in legal advice of a trial.

4.Consideration



- If DNA variety identification technique has not been validated, there will be possibility not to be adopted as evidence in the court.
- As a result, it is highly likely that it will not be able to fulfill the role of proof of infringement at the time of infringement of plant breeders' rights.
- What is needed is that anyone can conduct the DNA variety identification technique and whoever makes the judgment will get the same result.

In view of the above, in order to provide variety identification technique based on the DNA analysis technique as a support work for infringement of plant breeder's right at NCSS, we validate this variety identification technique and, at the same time, we are advancing the expansion of plant species and building a database to expand the number of adaptable varieties.



Thank you for your attention!



Center for Seeds and Seedlings, NARO

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