

Experience on Essentially Derived Varieties in Japan

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Provision of Essentially Derived Variety on PVP and Seed Act ①

Provision on Breeder's Right over Essentially Derived Varieties

The Plant Variety Protection and Seed Act (Act No. 83 of May 29, 1998)
Article 20 (Effects of the Breeder's Right)

Original Variety A (1) The holder of a breeder's right shall have an exclusive right to exploit, in the course of business, the variety which is registered and varieties which, by the expressions of the characteristics, are not clearly distinguishable from the registered variety.

New Variety B (2) The holder of the breeder's right for **a registered variety** shall also have an exclusive right to exploit varieties described in following items, the scope of which **shall be the same as the right which the breeders of the said varieties would**, if obtained a variety registration, be granted. In this case, the proviso of paragraph (1) of this Article shall apply mutatis mutandis.

Provision of Essentially Derived Variety on PVP and Seed Act ②

New Variety B
Definition of EDV

2(i) varieties which are bred by changing parts of the expressions of the characteristics of the registered variety while retaining the expressions of its essential characteristics **using such methods as selection of a mutant, backcrossing, transformation by genetic engineering or other methods specified by the Ordinance of the Ministry of Agriculture, Forestry and Fisheries** and which are clearly distinguishable from the initial registered variety by the expressions of the characteristics;

Methods

- *Selection of mutant*
- *Backcrossing*
- *Transformation by genetic engineering*
- *Cell fusion (asymmetrical fusion only)*

-- Ordinance of MAFF, Article 15

Provision of Essentially Derived Variety on PVP and Seed Act ③

New Variety B	2(i) varieties which are bred by changing parts of the expressions of the characteristics of the registered variety while retaining the expressions of its essential characteristics using such methods as selection of a mutant, backcrossing, transformation by genetic engineering or other methods specified by the Ordinance of the Ministry of Agriculture, Forestry and Fisheries and which are clearly distinguishable from the initial registered variety by the expressions of the characteristics;
Definition of EDV	

“The judgment whether variety B is EDV of variety A or not is left to the court’s decision.”
 --Guidance of PVP and Seed Act

Japan’s Experience on Examination for Registration

Appeal to the Court	- None
Question raised by a breeder	<ul style="list-style-type: none"> - In 2010, a breeding company K received an advise from its partner company in the Netherlands that there was no need to register every variety which was considered as EDV, if it had registered the parent varieties. - K inquired MAFF about the actual condition of regulations on the EDV. - MAFF explained the <u>notion of EDVs</u> as follows.

Notion of EDVs

Explanation in “Guidance of PVP and Seed Act”

- Whether a given variety is a EDV of a protected variety is a matter to be taken care of among respective breeders (Final decision to be made by the court).
- However, certain examples which may be considered as EDVs are provided.

1. Enhancement of disease resistance
2. Differences in flower color
3. Earliness in ripening
4. Change in plant type or height

Examples in "Guidance book on PVP and Seed Act"

1. Enhancement of disease resistance

Oryza sativaL. (Rice) : SASANISHIKI BL

Difference of Characteristics: Genotype of blast resistance only

	Genotype	Parent	Recurrent parent	Backcrossing times
1GO	Pi-i, Pi-k	Magarikei780	SASANISHIKI	6
2GO	Pi-a, Pi-km	TSUYUAKE	SASANISHIKI	5
3GO	Pi-a, Pi-z	FUKUNISHIKI	SASANISHIKI	6
4GO	Pi-a, Pi-zt	76F6-88	SASANISHIKI	5
5GO	Pi-a, Pi-ta2	Magarikei737	SASANISHIKI	6
6GO	Pi-a, Pi-ta2	Magarikei808	SASANISHIKI	8
7GO	Pi-a, Pi-b	Magarikei872	SASANISHIKI	6

Pyrus pyrifolia (Burm.f.) Nakai var. culta (Mak.)Nakai (Japanese Pear): GOLD NIJISEIKI : 2932

Difference of Characteristics: Black mottle resistance

- Selection of mutant from NIJISEIKI, 55 out of 60 characteristics are the same of the original variety.
- Mutants developed by gamma-ray



Examples in "Guidance book on PVP and Seed Act"

2. Difference in flower color Chrysanthemum x morifolium Ramat

STALLION YELLOW : 6279

Difference of Characteristics: the color of flower only

- Selection of mutant from STALLION, 63 out of 66 characteristics are the same of the original variety.
- Mutants chosen in the field of applicant in the Netherlands.



ALBART HEIJN WHITE : 6278

Difference of Characteristics: the color of flower only

- Selection of mutant from ALBART HEIJN, 62 out of 65 characteristics are the same of original variety.
- Mutants developed by irradiation



3. Change in flowering time

There is no real example variety.

4. Change in growth habit Rosa L. (Rose) : **TSURU PEACE**

Difference of Characteristics: change in growth habit only

- Selection of vine mutant from PEACE, 58 out of 69 characteristics are the same of original variety.