Enhancing the Effectiveness of the PVP System in the Next 10 Years

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Outline

1. Review of the PVP System in Japan
2. Impacts of Operating the PVP System in Japan
3. Future Strategy for Enhancing the Effectiveness of the UPOV system in the next 10 years
1. Review of the PVP System in Japan
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 UPOV Convention
   (Act of 1978)

1998 Full-Amendment on “Plant Variety Protection and Seed Act” (“The Act”)
   Accession to the UPOV Act of 1991

2003 Amendment on “The Act”
   -Expansion of coverage of penal provisions to harvested material

2005 Amendment on “The Act”
   -Expansion of the effect of PBR to products made directly from harvested material

2007 Amendment on “The Act”
   -Improved procedure for civil remedy and strengthening of penal provisions etc.
Outline of the PVP System in Japan

- Variety Registration and the Granting and Protection of Plant Breeder's Right under the Plant Variety Protection and Seed Act -

Breeder (new variety)

Examination and registration

Application

On site Inspection

Granting of Breeder’s Right

Intellectual Property Division, PVP Office, MAFF

NCSS

Claim for Civil Remedy

Injunction, compensate for damages, restoration of credit, etc.

Criminal penalties

Imprisonment with work or fines

Unauthorized user

Measures against infringement

License Fee

Authorization

User

Duration of PBR: 30 years for perennial plants
25 years for other plants

The holder of a breeder's right has an exclusive right to, in the course of business, produce, transfer, export, import and store, etc. "propagating material," “harvested material” and “processed products” of registered varieties.

Plant Breeder's Right

License

Fee

Authorization

Unauthorized user

Duration of PBR: 30 years for perennial plants
25 years for other plants

Applications and Grant of PBRs

Protected Varieties by Types of Crops

(FY 1978-2010, Total Number: 20,779)
Foreign-bred Protected Varieties by Country

(FY 1978-2009, Total Number: 7,806)
Protected Varieties by Breeder’s Status

(FY 1978-2010, Total Number: 20,779)
Protected Varieties by Breeders’ Status × Crop Type

- **Ornamental Plants**
  - Individual: 3,988
  - Seed company: 8,679
  - Local government: 551
  - National government: 1,40
  - Food company: 82
  - Agricultural cooperative: 17

- **Food Crops**
  - Individual: 74
  - Seed company: 527
  - Local government: 245
  - National government: 82
  - Food company: 17
  - Agricultural cooperative: 40

- **Vegetable**
  - Individual: 194
  - Seed company: 419
  - Local government: 327
  - National government: 188
  - Food company: 36

- **Fruit crops**
  - Individual: 467
  - Seed company: 143
  - Local government: 237
  - National government: 128
  - Food company: 31
  - Agricultural cooperative: 48

- **Others**
  - Individual: 49
  - Seed company: 244
  - Local government: 187
  - National government: 186
  - Food company: 181
  - Agricultural cooperative: 12

(subtotal)

Organizational Arrangement for PVP in Japan

**MAFF (Ministry of Agriculture, Forestry and Fisheries)**
- **Intellectual Property Division**
  - Administration of IP & PVP
  - Promotion of Seed Industry
  - Supervision of NCSS, etc.
- **PVP Office**
  - Establish Test Guidelines
  - Examine DUS, Novelty, Denomination
  - Examiners (23)

**National Center for Seeds and Seedlings (NCSS):**
- Incorporated Administrative Agency
- **HQ and 10 stations, 1 sub-station**
  - DUS Test (60 staff)
  - Production of Foundation Seeds
  - Seed Inspection, etc.
Location of NCSS Stations

- Unzen st.
  - Ornamental plants, vegetable

- Yatsugatake st.
  - Ornamental plants

- Nishi-Nihon st.
  - Ornamental plants, crop

- Headquarter DUS test division
  - Test design, instruction

Website of PVP Office in Japan

The Plant Variety Protection and Seed Act
The Plant Variety Protection System in Japan
The outline of Plant Variety Protection System
Test Guidelines
Searching Plant Variety (DATABASE)
PICS (DATABASE)
Links

ABOUT PVP
- The Plant Variety Protection and Seed Act
- The Plant Variety Protection System in Japan
- The outline of Plant Variety Protection System
- Test Guidelines

DATABASE

- Searching Plant Variety -

Any user can search for varieties which were published or granted under the Japan's PVP.

- pics

This system allows the user to easily obtain information on plant varieties from the color of the flower.

-- How to use PICS

Links

Links

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1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo, 100-8950, JAPAN


2. Impacts of Operating the PVP System in Japan
New Varieties as a Building-block for Development of Agriculture

- Comparative disadvantages surrounding Japanese agriculture
  - Small holdings in narrow and steep mountainous area
  - Aging farming communities
  - High costs for farming inputs, facilities and labor

- Global tendency toward free trade is adding an additional pressure on Japanese agriculture

Basic strategy for development of agriculture

Supplying agricultural products meeting consumers’ demands by;

- use of unique varieties
- application of advanced agricultural practices

PVP system facilitates breeders’ incentive for developing innovative varieties
Impact of New Varieties
- historical increase in rice yield -

Yield (t/ha)

- Improvement of rice variety

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield (t/ha)</th>
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<tbody>
<tr>
<td>1890</td>
<td></td>
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<tr>
<td>1900</td>
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<tr>
<td>2000</td>
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</table>

Rice Variety:
- Koshihikari
- Hinohikari
- Akitakomachi
- Sasanishiki
- Hitomebore
- Nihonbare
- Nourin 1 gou

Top 10 Varieties of Rice

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td>✻</td>
<td>Koshihikari</td>
</tr>
<tr>
<td>2</td>
<td>○</td>
<td>Hitomebore</td>
</tr>
<tr>
<td>3</td>
<td>○</td>
<td>Hinohikari</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Akitakomachi</td>
</tr>
<tr>
<td>5</td>
<td>○</td>
<td>Kinuhikari</td>
</tr>
<tr>
<td>6</td>
<td>◎</td>
<td>Nanatsuboshi</td>
</tr>
<tr>
<td>7</td>
<td>○</td>
<td>Haenuki</td>
</tr>
<tr>
<td>8</td>
<td>○</td>
<td>Kirara397</td>
</tr>
<tr>
<td>9</td>
<td>◎</td>
<td>Tsugaruroman</td>
</tr>
<tr>
<td>10</td>
<td>◎</td>
<td>Massshigura</td>
</tr>
</tbody>
</table>

- ✻: registered (protected) variety as of Jun, 2011
- ○: ex-registered variety (rights already expired)
- ※: the brand “KOSHIHIKARI” includes both registered and non-registered varieties; old variety “Koshihikari” is not registered, while new varieties of “Koshihikari BLs” are registered (all the BLs are bred with a parent with resistance to different races of rice blast disease, back-crossed with Koshihikari)
• “Ashiro,” the small mountainous area in northern Japan, has engaged actively in breeding of Gentian to compete with other area.

• License for production of these varieties is given only to farmers of Ashiro in order to maintain high quality and to protect the ”Ashiro” brand.

• Ashiro is also successfully exporting cut flowers to EU market throughout the year with “Ashiro” brand, by granting license for production to growers in New Zealand and Chile where seasons are reverse.

• Needless to say, PBR on the series of “Ashiro” gentians in each country is essential to protect their varieties.

• Now, “Ashiro” is trying to expand, with Chilean production of cut flowers, their market to the US.
Cut flowers produced in NZ and Chile are exported to EU and US markets to achieve year-round supply of Ashiro brands.
※ Ashiro no Natsu and Ashiro no Aki currently have a share of 30% in Japanese Rindo cut flower market (2005)
Zespri Gold

- New variety of kiwi fruit, bred by a NZ company.
- PBR holder is a NZ private company
- Authorization of production and sale of Zespri Gold given to Japanese farmers
<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2008</th>
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<tbody>
<tr>
<td><strong>Zespri Gold</strong></td>
<td>Production: 258 tons</td>
<td>Production: 1,300 tons</td>
</tr>
<tr>
<td></td>
<td>Sales: more than 1.4 M USD</td>
<td>Sales: more than 6.8M USD</td>
</tr>
<tr>
<td></td>
<td>Share in the prefecture: 3.1% (Weight)</td>
<td>Share in the prefecture: 14% (weight), 20%( sales)</td>
</tr>
<tr>
<td></td>
<td>Unit price: <strong>5 dollar/kg</strong></td>
<td>Unit price: <strong>5 dollar /kg</strong></td>
</tr>
<tr>
<td><strong>Kiwi Fruit in</strong></td>
<td>Production: 8,300 tons</td>
<td>Production: 9,600 tons</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>Sales: 28 M USD</td>
<td>Sales: <strong>34 M USD</strong></td>
</tr>
<tr>
<td>in Ehime Prefecture</td>
<td>Unit price: <strong>3.4 dollars /kg</strong></td>
<td>Unit price : <strong>3.5 dollars /kg</strong></td>
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Development of New Varieties of Fruit Crops

• Main varieties of fruits had not been changed for many years.
• In recent years, development of new fruit varieties have been increasing gradually and shift in cultivated varieties has been taking place.

- Apple
  △ (increased) "shinanosweet", "shinanogold", "akibae"
  ▼ (decreased) “Fuji”, “tsugaru”, “Ourin”

- Mandarin Orange
  △ “ishiji”, “hinoakari” “Ootsu-4gou”
  ▼ “MiyakawaWase”, ”OkitsuWase”, ”Aoshimaunshyu”

- Pear
  △ “akiduki”
  ▼ “kousui”, ”housui” “20seiki”

※ underlined varieties : protected varieties

3. Future Strategy for Enhancing the PVP system
1. Acceleration of Examination
   - Shorten the period of examination
     2.6 years (at present) => 2.3 years (in 2014)

2. Enhancement of measures to infringement
   - Improvement the system of G-men
   - Development and enhancement of the analysis of DNA variety identification

3. Active promotion of the EAPVP Forum

4. Promotion of Cooperation in Examination
Thank you for your attention!