Issues around PVP in Public Research Institute in Japan

Ryudai Oshima
Deputy Director, Intellectual Property Division
Ministry of Agriculture, Forestry and Fisheries (MAFF)

About NARO
The National Agriculture and Food Research Organization (NARO):

• The largest public research institute addressing “Agriculture, Food and Rural Affairs” in Japan

• Breeding of “basic” and “leading” varieties
  - Food crops (ex: Rice, Wheat, Soybean)
  - Horticultural crops (ex: Fruit, Vegetable)
3

Organization

14 stations nationwide

NARO’s Duty

• NARO is a *public* research institute
• Its most important duty is to transfer and disseminate research outcome for public uses.
Role of IP Center

• Founded as an internal office within NARO headquarter, in April 2006
• Purpose: Centralization of IP management
• Main task: Acquisition and utilization of intellectual property rights
• Management of:
  - Patent right
  - Breeder’s right,
  - Copyright (Computer program & Database only)

IP Policy

• Established the “Intellectual Property Policy” in April 2006
• Dissemination of research outcome
  - Acquisition of rights and commercialization through licensing
  - Publication of research outcome
Patent Policy

- Domestic Patent
  - Inventions intended for commercial use

- Foreign Application
  - Inventions intended for commercial use in foreign countries
  - Cost considerations given

PBR Policy

- Domestic PBRs:
  - Varieties with new characteristics
  - Varieties with genotypes useful for use as a breeding material
PBR Policy (cont’)

• Foreign Application
  - Varieties intended for commercial use in foreign countries
  - Consideration for influences on Japanese agriculture

Flow of PBR Acquisition

• “Employee-breeding Rule”
  Breeding by employees
  ↓
  Recognition as “employee-breeding”
  ↓
  Applicants’ title assigned to NARO
  ↓
  Application and PBR acquisition
Changes after 2001

Before March 2001
Applicant’s title: Government

Transformation into Independent Agency

After April 2001
Applicant’s title: NARO

• IPRs owned by government as of April 2001 were transferred to NARO

“2nd Middle-term Plan”

• The Minister of Agriculture, Forestry and Fisheries established targets for FY2006-FY2010 of NARO.

• NARO set the “2nd Middle-term Plan” to attain the targets.
1. Domestic PBRs

- Target for number of domestic PBR applications in the “2nd Middle-term Plan” : >140 varieties (FY2006~FY2010)

- About 40 applications annually (FY2006~)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>34</td>
<td>45</td>
<td>39</td>
<td>38</td>
</tr>
<tr>
<td>PBRs in force (cum)</td>
<td>383</td>
<td>402</td>
<td>426</td>
<td>458</td>
</tr>
</tbody>
</table>

1. Domestic PBRs (cont’)

<table>
<thead>
<tr>
<th>Category</th>
<th>PBRs in force (2010/3/31)</th>
<th>Applications (FY2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>74</td>
<td>8</td>
</tr>
<tr>
<td>Wheat</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Soy Bean</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>Fruit crops</td>
<td>89</td>
<td>9</td>
</tr>
<tr>
<td>Ornamental crops</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Vegetables</td>
<td>44</td>
<td>3</td>
</tr>
<tr>
<td>Potato/Sweet Potato</td>
<td>51</td>
<td>4</td>
</tr>
<tr>
<td>Forage crops</td>
<td>65</td>
<td>4</td>
</tr>
<tr>
<td>Others</td>
<td>71</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>458</strong></td>
<td><strong>38</strong></td>
</tr>
</tbody>
</table>
2. Foreign PBRs

- PBRs in force (~2010/3/31)
  - Soy Bean: 2
  - Fruit crops: 24
  - Sweet Potato: 6
  - Total: 32

- Applications:
  - EU, U.S.A., New Zealand, Israel, Australia, China etc.

Joint Research

- Joint research with partners from food and agriculture industry
- Joint ownership of research outcome including intellectual properties

  Jointly-bred varieties
  ↓
  Joint ownership with private enterprise, prefecture or other agencies
Utilization of IPs

- Mere application and registration are nothing
- Utilization of IPs is crucial for the benefit of the society
  → Active licensing

Licensing Policies

General rule

- Non-exclusive license
- Royalty:
  Negotiation on a case-by-case basis
Royalty Income

- Royalty: important revenue for NARO
- A part of royalty income is given to breeders as a compensation payment, the rest is used for intellectual property management within the NARO

Royalty Policies (cont’)

- **Amount:**
  
  Sales of seeds/seedlings $\times$ Royalty rate
Royalty Policies (cont’)

- Before 2001;
  → Fixed at 0.16% or 0.32%

- After 2001;
  - Transformation as an independent agency
  - Need for NARO’s own income source
  → Royalty rate amended to 1~5%

- Consideration for political priority;
  - Improvement of food self-sufficiency
  → Royalty rate for major crops remains lower

Compensation

- Incentive payment to breeders

- Amount of compensation
  1) Royalty income of the FY \( \leq 5,000,000 \text{ yen} \)
    \( \text{Profit} \times \frac{50}{100} \)

  2) Royalty income of the FY \( > 50,000,000 \text{ yen} \)
    \( (\text{Profit} - 50,000,000) \times \frac{20}{100} + 16,500,000 \text{ yen} \)
Response to Infringement

• “Infringement Countermeasures Committee” was established within NARO

• Measures against infringement
  - Warning
  - Appeal to the court for injunction

Conclusion

• PVP leads to development of elite plant varieties (royalty-breeding cycle)
• Active utilization is the key
• IPRs as the core for dissemination of research outcome for public uses
THANK YOU FOR YOUR ATTENTION