Current Situation of New Plant Variety Protection System in Myanmar

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Content

- Introduction
- Ministry of Agriculture and Irrigation
- Procedure for New Varieties in Myanmar
- Seed Flow
- Released Varieties
- Genetic Resources in Myanmar
- Collaborative Program and Achievements
Content (Continued)

- Present Situation of Seed Industry in Myanmar
- Seed Industry Development
- Trust Areas for Seed Development
- Myanmar Seed Law
- Activities on Awareness of PVP system
- Future Plan
- Conclusion
Introduction

Climate
- Diverse agro-ecological conditions
  (Tropical, Sub-tropical, Temperate)

Crop
- Rich bio-diversity (over 60 species)
- Rich land and water resources

Agricultural country
- GDP - 26%  
- Export earnings - 16.4%  
- Labor force - 61.2%  

Source: Myanmar Agriculture in Brief 2013, DAP, MOAI
### Introduction (continued)

<table>
<thead>
<tr>
<th>Sown area</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Cereal</td>
<td>(39.7%)</td>
</tr>
<tr>
<td>- Pulses</td>
<td>(21.2%)</td>
</tr>
<tr>
<td>- Oilseeds</td>
<td>(16.2%)</td>
</tr>
<tr>
<td>- Industrial crops</td>
<td>(4.8%)</td>
</tr>
<tr>
<td>- Horticultural crops</td>
<td>(1.6%)</td>
</tr>
<tr>
<td>- Other Crops</td>
<td>(16.5%)</td>
</tr>
</tbody>
</table>

*Source: Myanmar Agriculture in Brief 2013, DAP, MOAI*
Ministry of Agriculture and Irrigation

1. Department of Agricultural Planning
2. Department of Agriculture (DOA)
3. Department of Industrial Crops Development (DICD)
4. Department of Agricultural Research (DAR)
5. Settlement and Land Records Department
6. Irrigation Department
7. Agricultural Mechanization Department
8. Water Resources Utilization Department
9. Myanmar Agricultural Development Bank
10. Yezin Agricultural University
11. Survey Department
Procedure for New Varieties in Myanmar

Hybridization and selection

Introduction

Indigenous selection

Mutation Breeding

Molecular Breeding

Observation on stable lines

Yield trial (at least 3 times)

Adaptability test (at least 2 times)

 Farmers’ field testing

Promising varieties by Technical subcommittee

National seed Committee (NSC)

Nomination new varieties and producing

Seed multiplication
# Released Varieties in 2013-2014

<table>
<thead>
<tr>
<th>Rank</th>
<th>Crop</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rice</td>
<td>9</td>
</tr>
<tr>
<td>2.</td>
<td>Hybrid corn</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Sweet corn</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Wheat</td>
<td>6</td>
</tr>
<tr>
<td>5.</td>
<td>Groundnut</td>
<td>1</td>
</tr>
<tr>
<td>6.</td>
<td>Sesame</td>
<td>1</td>
</tr>
<tr>
<td>7.</td>
<td>Pulses</td>
<td>8</td>
</tr>
<tr>
<td>8.</td>
<td>Vegetable</td>
<td>1</td>
</tr>
</tbody>
</table>
Genetic Resources in Myanmar

- Seed Bank was established in 1990
- Collected accessions - 483
- Characterization, Evaluation (Rice) - 1095
  and Data management (Landrace) - 137
  (other) - 230
- Short term storage (10ºC) - 12370
- Medium long term (-5ºC) - 12130
Collaborative Program and Achievements

- Exchange of germplasm with IRRI
- Joint characterization & evaluation with ICRISAT
- National distribution - 4617 germplasms (10 crops)
- International distribution - 7472 germplasms (18 crops)
  (Thailand, Japan, Korea, Columbia, Belgium, Norway)
- Morphological characterization data of Rice catalogue vol.1 has been published in 2009. (4500 accessions)
Present Situation of Seed Industry in Myanmar

- Enacted on 7 February, 2011
- Embodies the foundation of the seed industry
- Takes effect 2 years after (7 February, 2013)
- Seed development projects started in 1977
- Seed flow – DOA, DAR, Private seed companies
- National seed committee established since 2004 supervises seed programs
- Both public and private sector need strengthening in seed industry
- Needs strong seed certification system and valid quality control system
- Strengthening of seed industry requires both local support and international assistance
Seed Industry Development

- Area coverage under major crop
  (Cereal crops- 38%, Oil crops- 20%, Pulses- 15%, Industrial crops – 4%)
- All countries identify under developed seed industry as the main factor limiting agricultural productivity
- Majority of the farmers are still producing their own seeds or using the grains as seeds
- Urgent need in Myanmar to enhance the seed replacement rate of various crops
Trust Areas for Seed Development

- Variety development, protection and production
- Quality assurance
- Seed distribution and marketing infrastructure facilities
- Transgenic plant varieties
- Import of seeds and planting materials
- Export of seeds
- Promotion of seed industry
- Strengthening of monitoring system
Myanmar Seed Law

- has been drafted since 2000, repeatedly under review and revision.
- recently been submitted to the Attorney General’s office for approval and enactment, also sent to UPOV
- grants the protection to new plant varieties and encourages Research and breeding of new varieties
- particularly in the private sector in line with Myanmar’s obligations under TRIP agreement
- Farmers right to save, use, exchange, share and seeds for commercial purpose
Activities on Awareness of PVP system

- Became a party to the Convention of Biodiversity in 1994
- Became a member of WTO in 1995
- Became aware of Intellectual Property Rights
- 2004 - Participated to the UPOV- INGER Workshop
- 2006 - Participated to conduct DUS test (INGER)
- 2012 - PVP System Awareness Raising Seminar in Myanmar
- 2003-2014 - PVP related Trainings, Workshops, Seminars
Future Plan

- To set up PVP office
- Collection of Reference varieties of main crops
- Continuous orientation of the staff on the use of UPOV CD-ROM
- In Country Training for Human Resource Development on plant variety system management
- Evaluation of Groundnut and Sesame varieties to assist for Development of Reference Varieties and National Test Guidelines
Conclusion

- Realize the establishment of PVP system
- Is inevitably important in Agriculture for the protection of plant breeder rights
- Require expertise from national and international organizations
- Needs national and international training and seminar
- Must and urgent need to establish in Myanmar for the collaboration and cooperation in agriculture with the international organizations
Thank you