G20 MACS
Agricultural Technology Sharing (ATS) Working Group Progress and Workplan

Dr. Prof. NIE Fengying, Deputy Director General
Center for International Agricultural Research of CAAS
Agricultural Information Institute of CAAS

Tokyo, Japan. 25 April 2019
ATS
Update and Progress
Rationale

**2012 1st MACS**
Deliberated on establishing GRCPs to promote global collective action
- Access to technical documentation
- Access to germplasm documentation
- Improving genetic and genomic data
- Access to agricultural innovation

**2014 3rd MACS**
Reaffirmed support for GRCPs and agreed a subset of members would conduct a pilot project to establish information sharing mechanisms

**2016 5th MACS**
Proposed GRCP-ATS as a pilot to identify ways to strengthen collaboration and technology sharing

Agreed to further evaluate merits and potential of establishing GRCPs
Reiterated the necessities but have not yet discussed in detail
More GRCPs could be agreed for progressing in future years
Agricultural Technology Sharing (ATS)

We need cooperation, collaboration and partnership to meet global challenges for eliminating poverty and hunger faced today such as climate change, environmental degradation, desertification and threat of spread of epidemic diseases and pests.

To serve ordinary users of these technologies, such as smallholder farmers, entrepreneurs, private sectors, we need a user friendly, integrated technology information platform to:

- COLLABORATE
- COOPERATE
- EXCHANGE
- SHARE

For Rapid Agricultural Innovation

That is why we need...
14. ……We agree to set up a working group on Agricultural Technology Sharing (ATS) led by China to map and analyze strengths and weaknesses of existing knowledge and information sharing mechanisms as well as to develop a proposal. ……
Progress-2017

1. Constitution of the Working Group
   11 Member Countries, 6 International Organizations

2. Developed the Concept Paper and conducted the Needs Analysis Survey in consultation with the Working Group, Sept.-Nov. 2016

3. Presenting Interim reports to Meeting of G20 Agricultural Deputies in May 2017, Germany

4. Presentation of ATS in G20 Linked Open Data in Agriculture, Sep. 2017, Germany
   Discussion on standards of data and information sharing

5. Presentation of ATS in 6th G20 MACS, Nov. 2017, Germany
13. We acknowledge that the Working Group on Agricultural Technology Sharing (ATS) will further elaborate on the proposal and, based on the presentation and discussions at the 6th MACS, will present a thematically focused detailed proposal for discussion……
6. Discussion on Working Mechanism and priority areas to focus on

7. China worked on a demo to explore challenges, operational practices and standards

8. Participated in 7th G20 MACS, May. 2018, Argentina
12. We recognize the need to follow up on the Agricultural Technology Sharing (ATS)
9. Identify key steps and work plan
   Terms of Reference for sustainable working mechanism
   Work Plan drafted with participatory approach
   Workshop organized as planned and agreed

10. Organize the G20 MACS ATS Working Group Workshop 2018 to discuss and finalize the working mechanism and work plan

11. Circulate the ToR and Workplan of the Working Group

12. Develop ATS demo
Terms of Reference (ToR) of ATS Working Group
Procedure

Drafted and sent to ATS Working Group on 21st Sep., 2018

Discussed during G20 MACS ATS Working Group Workshop 2018 on 27-28th Sep. 2018

Sent to ATS Working Group on 5th March 2019

Finalized on 31st March 2019
Working Mechanism

- ATS Working Group participating countries/international organizations meet annually in-person or virtually for common decisions and actions. The ATS Working Group should report the working progress to G20 MACS regularly and when required.
- The activities promoted by the ATS Working Group support and follow the principles of Global Research Collaboration Priorities (GRCPs).
- A coordination unit of the ATS Working Group is proposed to be set up in the Chinese Academy of Agricultural Sciences (CAAS).
ATS Demo
Features

- Multiple category of Users: Policy maker, Entrepreneur, Farmer, Scientists
- Multiple dimensions to demonstrate the metadata of technology
  - 8 Classifications 189 sub-classifications, 4 User categories, 6 Areas.
- Text, images, videos, differently constructed sources of information enabled to be seamlessly integrated
- User friendly precise searching with multiple options
- Intelligent matching and recommendation of provision and demand of agriculture technology
A cross-species high-efficency SNP genotyping array

Promulgator: ATS
Release time: 2019/04/02 10:00:18

Keywords:
Classification: > Planting > Plant variety > Grain > Rice

Related Information
Ownership Unit: ATS

TOP ranking list
01. A cross-species high-efficency SNP genotyping array
02. Nutrient Expert, a new fertilizer recommendation approach
03. GrainCounting

Technology Profile
Title: A cross-species high-efficency SNP genotyping array
User Category: Scientists
Language: English
Country: China
Area Category: Technologies combating Climate Change impacts on agriculture and environment, Technologies enabling sustainability and improving crop and farm productivity and incomes, Technologies preventing loss of Agricultural Biodiversity

Technology Detail
A cross-species high-efficency SNP genotyping array
Based on the large-scale data by sequencing and resequencing of major crops, including food crops, cotton and oil crops, vegetable crops and fruit crops, we are going to design a high density SNP array. The special and unique characters of this SNP array are listed as follows.
1. Cross-species: the array can be used to detect polymorphism for 4-6 crops simultaneously;
2. Economy: the cost is only 1/4-1/3 of current market price, acceptable price worldwide;
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Please fill in the title</td>
</tr>
<tr>
<td>Technology classification</td>
<td>The primary classification</td>
</tr>
<tr>
<td>Keywords</td>
<td>Keywords1, Keywords2, Keywords3, Keywords4</td>
</tr>
<tr>
<td>Institutions Involved in Key Area</td>
<td>can not be empty !</td>
</tr>
<tr>
<td>Description</td>
<td>Please note: the word file cannot exceed 20M !</td>
</tr>
<tr>
<td>Respective Funding Projects</td>
<td>can not be empty !</td>
</tr>
<tr>
<td>User Category</td>
<td>please select</td>
</tr>
<tr>
<td>Area Category</td>
<td>Technologies combating Climate Change impacts on agriculture and environment</td>
</tr>
<tr>
<td></td>
<td>Technologies improving water conservation and use</td>
</tr>
<tr>
<td></td>
<td>Technologies enabling sustainability and improving crop and farm productivity and incomes</td>
</tr>
<tr>
<td></td>
<td>Technologies combating desertification, land and environmental degradation and enabling rejuvenation</td>
</tr>
<tr>
<td></td>
<td>Technologies preventing and managing impacts and transboundary spread of plant, animal and zoonotic diseases and pests</td>
</tr>
<tr>
<td></td>
<td>Technologies preventing loss of Agricultural Biodiversity</td>
</tr>
<tr>
<td>Tel of Organization</td>
<td>country code + Domestic area code + phone number</td>
</tr>
<tr>
<td>Email of Organization</td>
<td>Please fill in Email</td>
</tr>
<tr>
<td>Tel of Experts</td>
<td>Please fill in contact details of experts</td>
</tr>
</tbody>
</table>
Workplan of ATS Working Group
Workplan

- Propose the discussion on standards for sharing of agricultural technology metadata in 2019
- Further improve the ATS Demo in 2019
- Evaluate the performance and improve the demo to summarize good practices for sharing and scale up in 2020
THANK YOU