WORKSHOP GOALS AND ACTIVITIES

1. Convene the agricultural systems modeling community and share latest findings, activities, and focus areas.

2. Advance three major focus areas –
   Next Generation Knowledge, Data and Tools; Coordinated Global and Regional Assessments; and Modeling for Sustainable Farming Systems.

3. Plan AgMIP activities and outputs for the years ahead.

WORKSHOP PROGRAM

Tuesday June 28

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>8:00 – 9:00</td>
<td>Check in and packet pick up</td>
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</table>
| 9:00 – 9:30| Introduction from AgMIP Steering Council Co-Chair – Jean-Francois Soussana  
                     Welcome from Montpellier Partners – B. Hubert (Agropolis International), A. Vidal (CGIAR), P. Caron (CIRAD), F. Houllier (INRA) |
| 9:30 – 10:00| Introduction from AgMIP Steering Council Co-Chair – Ghassem Asrar 
                     Plenary: AgMIP Overview – AgMIP PIs Cynthia Rosenzweig, James Jones, John Antle |
| 10:00 – 10:30| Coffee Break                                                             |
| 10:30 – 12:00| Morning Plenary: Coordinated Global and Regional Assessments (CGRA) Assessment protocols; future scenarios; implementation plan; cross-scale and cross-discipline linkages; connections between food security and nutrition metrics |
| 12:15 – 12:30| Group Workshop Photo                                                     |
| 12:30 – 2:00| Buffet Lunch - self organized groups                                    |
| 2:00 – 3:30| Parallel Session 1: Four concurrent sessions of 15 min oral presentations. |

2:00 – 3:30

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
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<tr>
<td>1.1</td>
<td>1.1 Seasonal Forecasts and Climate Extremes Chair: Alex Ruane Sully 1</td>
</tr>
<tr>
<td>1.2</td>
<td>1.2 Crop Model Improvement Chair: Frank Ewert Pasteur Auditorium</td>
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<tr>
<td>1.3</td>
<td>1.3 Developing Adaptation Strategies Chair: Roberto Valdivia Sully 2</td>
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<tr>
<td>1.4</td>
<td>1.4 Climate Change Assessments Chair: Delphine Deryng Sully 3</td>
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2:00

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<thead>
<tr>
<th>Topic</th>
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<tr>
<td>Past and future weather-induced risk in crop production</td>
<td>Joshua Elliott</td>
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<tr>
<td>Inter-comparison of crop models for simulating canola growth and yield</td>
<td>Enli Wang</td>
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<tr>
<td>Developing adaptation packages for West African agriculture while ensuring congruence with climate and RAPs</td>
<td>Ibrahima Hatlie</td>
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<tr>
<td>Regional disparities in the beneficial effects of rising CO2 concentrations on crop water productivity</td>
<td>Delphine Deryng</td>
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www.agmip.org/6th-agmip-global-workshop   @AgMIPnews   #AgMIP6
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<th>Time</th>
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| 2:15  | Dynamic seasonal climate forecast driven probabilistic maize yield prediction over East Africa  
[– Ronald Hutjes](#) | Lessons learned from evaluating APSIM and DSSAT maize model responses to carbon dioxide, temperature, water, and nitrogen  
[– Kenneth Boote](#) | Pasteur Auditorium           |
| 2:30  | Interdisciplinary and cross-scales agroclimatic assessment across The U.S. corn belt: what have we learnt?  
[– Xing Liu](#) | Who has the ‘best’ crop model?  
[– Senthold Asseng](#) | Sully 1                     |
| 2:45  | Forecasting effects of weather extremes: El Niño’s influence maize yields in Mexico  
[– Gideon Kruseman](#) | Global gridded crop model evaluation: benchmarking, skills, deficiencies and implications  
[– Christoph Müller](#) | Sully 2                     |
| 3:00  | Integrated assessment of drought and adaptation scenario impacts on crop production in Austria  
[– Hermine Mitter](#) | The uncertainty cross-cutting theme  
[– Daniel Wallach](#) | Sully 3                     |
| 3:15  | Multiple crop model ensembles for improving broad-scale yield prediction with bayesian model averaging  
[– Xiao Huang](#) | Parameterization induced uncertainty of the epic model to impact climate change impact on global maize yield  
[– Yong He](#) | Sully 4                     |
| 3:30  | Coffee Break                                                             |                                                                           |                           |
| 4:00  | Parallel Session 1 Continued: Four concurrent sessions of 15 min oral presentations |                                                                           |                           |
| 4:00  | 1.5 Stakeholders and Decision Support  
Chair: Amy Sullivan  
Sully 1 | EUROCLIMA Biophysical Modelling, for policy support on agriculture and climate change in Latin America and the Caribbean  
[– Maurits van den Ber](#) | Pasteur Auditorium           |
| 4:15  | Impact of climate change on West Africa’s agriculture: a mid-century assessment of the major economic outcomes for smallholder farmers  
[– Ibrahima Hathie](#) | The AgMIP Coordinated Climate Crop Modeling Project (C3MP) – differences in climate response across 1100+ crop modeling sets  
[– Alex Ruane](#) | Pasteur Auditorium           |
| 4:30  | Nation-wide interdisciplinary assessments of climate change impacts on agriculture and food security  
[– Hideki Kanamaru](#) | Integrated crop model uses remote sensing data to simulate crop growth and carbon flux data  
[– Jonghan Ko](#) | Pasteur Auditorium           |
| 4:45  | Co-production of knowledge for agricultural adaptation: using climate information and crop model outputs in the wine industry and the maipuo adaptation plan  
[– Francisco Meza](#) | Using Earth observation and ancillary data sources as alternative to household surveys for regional integrated assessments for maize production in the Free state of South Africa  
[– Wiltrud Durand](#) | Pasteur Auditorium           |
| 5:00  | Afternoon Plenary: Co-Developed Research with Stakeholders  
stakeholder engagement, participatory stakeholder research methods, climate change scenarios and adaptations, and facilitating research results uptake  
[Pasteur Auditorium](#) | Keynote – Amy Sullivan  
Panel – Wei Xiong, Boubacar Barry, Francisco Meza  
Facilitator – John Antle |                           |
| 6:00  | Poster Session and Reception Dinner |                                                                           |                           |
### Morning Plenary 1: Modeling for Sustainable Farming Systems
Methodological package to evaluate agricultural systems and sustainable solutions in conjunction with national adaptation planning. *Pasteur Auditorium*

**Keynote** – Patricia Masikati  
**Panel** – Marc Corbeels, Rob Bos, Marco Springmann, Myriam Adam  
**Facilitator** – Peter Craufurd

### Morning Plenary 2: Next-generation Tools and Open Data
Open, discoverable, and harmonized data; model improvement; online tools to improve awareness and research results. *Pasteur Auditorium*

**Keynote** – Molly Jahn  
**Panel** – Susan Capalbo, Joshua Elliott, Medha Devare, Sibiry Traore, Bruno Basso  
**Facilitator** – Stan Wood

### Parallel Session 2: Four concurrent sessions of 15 min oral presentations.

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 2.1 - Scenarios and RAPs</th>
<th>Session 2.2 - Nutrition and Food Security</th>
<th>Session 2.3 - Biophysical Impacts of Climate Change</th>
<th>Session 2.4 - Soils and Crop Damage</th>
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<tbody>
<tr>
<td>11:00</td>
<td>Developing National Representative Agricultural Pathways (RAPs) -- Reflections, lessons and outcomes from high level stakeholder consultations in India – Nataraja Subash</td>
<td>Developing a value chain analysis framework to examine the health and environmental trade-offs of dietary patterns: A case study of the Mediterranean diet – Shauna Downs</td>
<td>What would happen to wheat production in cotton-wheat cropping zone of Punjab under mid century scenario? – Ashfaq Ahmad Chatta</td>
<td>Accounting for the legacy of soil and crop management when assessing climate change impact on crop production – Bruno Basso</td>
</tr>
<tr>
<td>11:15</td>
<td>Development of a Climate-Sensitive Representative Agricultural Pathways (RAPs) for West Africa: Stakeholder Interactions – Ibrahima Hathie</td>
<td>Global and regional health impacts of future food production under climate change: a modelling study – Marco Springmann</td>
<td>Climate change impacts on crop yield in Koutiala, Mali – Myriam Adam</td>
<td>Soil/land quality and health modeling within RASLEV framework in conditions of Russia agroecosystems – Ivan Vasenev</td>
</tr>
<tr>
<td>11:45</td>
<td>Representative Agricultural Pathways for Europe – Anne Biewald</td>
<td>Interactions between environmental change, agriculture, nutrition and health: an evidence-based framework – Hanna Tuomisto</td>
<td>Wheat yield potential in Europe under climate change explored by adaptation response surfaces – Roberto Ferrise</td>
<td>Impacts of crop rotation, extreme weather events, crop growth and residue management on soil organic carbon content – Anne Gobin</td>
</tr>
<tr>
<td>12:00</td>
<td>New methods for exploring future farms with stakeholders: the experience of AGMIP's crop livestock intensification project in semi-arid Zimbabwe – Sabine Homann-Kee Tui</td>
<td>An Income-Based Food Security Indicator for Agricultural Technology Impact Assessment – Roshan Adhikari</td>
<td>Towards Coordinating Assessments of Environmental Sustainable ability in Agricultural Systems for SDG2 – Sonali McDermid</td>
<td>Modeling intercropping with cereals in smallholder agroecosystems. From lessons learned in central Brazil to their application in the Peanut Basin in Senegal – Alpha Bocar Baldé</td>
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### Parallel Session 2 Continued: Four concurrent sessions of 15 min oral presentations.

<table>
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<tr>
<th>Time</th>
<th>Session 2.5 - Crop Model Improvement and Genetics Applications</th>
<th>Session 2.6 - Global Economics and Integrated Assessments</th>
<th>Session 2.7 - Regional Integrated Assessments</th>
<th>Session 2.8 Information Technologies and Data</th>
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<tr>
<td>2:30</td>
<td>A basic approach to predicting yields and optimizing inputs using artificial neural networks – Paul Koch</td>
<td>Dynamic economic model of arable crop rotation – Ian McFarlane</td>
<td>Impact of climate change on irrigated maize in Tamil Nadu, Southern India – Geethalakshmi Vellingiri</td>
<td>Enhancing Discoverability and Reuse of CGIAR's Agricultural Data: Challenges and Progress – Medha Devare</td>
</tr>
</tbody>
</table>
Session 2.5 - Crop Model Improvement and Genetics
Chair: Enli Wang

- Importance of crop management for simulating crop phenology in large scale impact assessments – Ehsan Eyshi Rezaei

Session 2.6 - Global Economics and Integrated Assessments
Chair: Hermann Lotze-Campen

- Intensification and production reallocation: Attributing land-use changes to their underlying drivers – Thierry Brunelle

Session 2.7 - Regional Integrated Assessments
Chair: Muhammed Ashfaq

- Assessment of Climate sensitivity to present production system and evaluation of use of adaptation strategies to improve the livelihood security of small and marginal farmers of Indo-Gangetic Plains of India – A multi-crop-climate-economic modeling approach – Nataraja Subash

Session 2.8 Information Technologies and Data
Chair: Cheryl Porter

- DataMill: a new application to interface researchers’ database with crop models – Myriam Adam

2:45

2:45 – 3:00

- Assessing agricultural practices in highly variable environments: SARRA-H spatialized crop model for West Africa – Christian Baron

3:00

- Alternative Futures for Global Food and Agriculture – Martin von Lampe

3:15

- Improved functions for simulating crop water use are necessary to simulate the impact of [CO2] on maize yields – Jean-Louis Durand

3:30 – 4:00

Coffee Break

4:00 – 5:00

Afternoon Plenary: Toward multi-national collaborative frameworks to enable coordinated global and regional assessments
New institutional arrangements and capabilities to enable a community of coordinated global and regional researchers in assessments of future agricultural systems and the alleviation of hunger. 

Panel – Claire Weill, Alain Vidal, Terry Nipp, Heather Mckhann, Harry Clark (remote participation) 

Facilitator – Jean-Francois Soussana

5:00 – 6:30

Poster viewing with beverage refreshment

Thurs. June 30

9:00 – 10:30

Morning Plenary: Observations and Recommendations in Planning 

Keynote – perspectives from AgMIP Steering Council Co-Chairs Jean-Francois Soussana and Ghassem Asrar

Panel Discussion – panel discussion and responses from AgMIP PI's Cynthia Rosenzweig, James Jones, and John Antle

10:30 – 11:00

Coffee Break

11:00 – 12:30

Session 3: Regional Breakout Groups

- regional and national assessments in context of global impacts, shocks, and trends

3.1 South Asia Leader: Nataraja Subash

3.2 Sub-Saharan Africa Leader: Dilys MacCarthy

3.3 Latin America and Caribbean Leader: Roberto Valdivia

3.4 North America Leader: Jim Jones

3.5 East Asia/Oceania Leader: Enli Wang

3.6 Europe Leader: Frank Ewert

3.7 Global Agriculture Leaders: Christoph Mueller and Joshua Elliott

3.8 Global Economics Leaders: K. Wiebe, D. van der Mensbrughe, and H. Lotze-Campen

12:30 – 2:00

Buffet Lunch - self organized groups

2:00 – 4:00

Session 4: Work Group Breakouts

4.1 Global Economics Leaders: K. Wiebe, D. van der Mensbrughe, H. Lotze-Campen

4.2 AgGRID Leaders: Joshua Elliott and Christoph Mueller

4.3 Seasonal Estimates, Data Assimilation, and Climate Shocks Leaders: Alex Ruane and Sonali McDermid

4.4 Regional Integrated Assessments Leader: John Antle

4.5 Crop Model Intercomparison and Improvement Leaders: Peter Thorburn, Senthold Asseng, and Pierre Martre

4.6 Data, Decision Support Systems and IT Leaders: Sander Janssen and Cheryl Porter

4.7 Crop Modeling of Low-Input Smallholder Systems Leaders: Marc Corbeels

4.8 Sustainable Nutrition Security Leaders: Jessica Fanzo, Adam Drenowski, and Dave Gustafson

4.9 Crop-Water-ET Leaders: Jean-Louis Durand and Ken Boote

4.10 Livestock-Grasslands Leader: Jean-Francois Soussana

4:00 – 4:30

Coffee Break

4:30 – 5:00

Afternoon Plenary: Highlights from Regional and Working Team Breakouts

5:00 – 6:00

Synthesis and Wrap-up