CRP PIM
Policies, Institutions, and Markets
to Strengthen Food Security and Incomes for the Rural Poor
An overview

MCS Bantilan
Research Program Director
Markets, Institutions and Policies
Policies

Institutions

Markets

to Strengthen Food Security and Incomes for the Rural Poor
Three inter-linked themes

Theme 1.
*Effective Policies and Strategic Investments*

Theme 2.
*Inclusive Governance and Institutions*

Theme 3.
*Linking Small Producers to Markets*

Cross-cutting gender research
Three Interlinked themes

Theme 1: Effective Policies & Strategic Investments
- Theme 1 identifies needed technology policies, investments, and safety nets

Theme 2: Inclusive Governance & Institutions
- Theme 2 clarifies feasibility of policy reforms; shows how property rights, collective action, and asset patterns affect technology adoption

Theme 3: Linking Small Producers to Markets
- Theme 3 identifies sector strategies, regulation and investment needs, and market failures to be overcome

Outcomes:
- Reduced rural poverty
- Improved food security
- Improved nutrition and health
- Sustainable management of natural resources

Theme 2 shows how producer groups and control over assets can help small-scale producers participate in value chains

Theme 3 identifies market opportunities, product quality needs, and certification, food safety, and traceability standards that affect the institutional environment
Tools and methods

Partnership mode of research

Impacts oriented research
IMOD
Unifying Conceptual Framework

A pathway for empowering the poor to escape poverty
Inclusive Market-Oriented Development

Envisions a pathway for empowering the poor by better linking farmers to markets to increase incomes
Inclusive Market-Oriented Development

R4D generates technology and innovations that increase the productivity and value of dryland farming.

Self-reinforcing cycle

Re-invest gains: the engine of growth

Prosperity

From food deficit to surplus

Subsistence

Higher-value agriculture

Market-oriented

Innovations

Social assistance

Resilience

Access to inputs and market opportunities
CRP 2: Research Portfolio

Comprehensive and focused

Theme 1: Effective policies and strategic investments
- Subtheme 1.1: Foresight and strategic scenarios
- Subtheme 1.2: Macroeconomic, trade, & investment policies
- Subtheme 1.3: Production and technology policies
- Subtheme 1.4: Social protection policies

Theme 2: Inclusive governance and institutions
- Subtheme 2.1: Policy processes
- Subtheme 2.2: Governance of rural services
- Subtheme 2.3: Collective action and property rights
- Subtheme 2.4: Institutions to strengthen the assets of the poor

Theme 3: Linking small producers to markets
- Subtheme 3.1: Innovations across the value chain
- Subtheme 3.2: Impact of upgrading value chains

Source: IFPRI
ICRISAT is next to IFPRI in implementing CRP PIM activities.

Total 90 activity proposals submitted by different centres to CRP2 committee

<table>
<thead>
<tr>
<th>Centre</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioversity</td>
<td>4</td>
</tr>
<tr>
<td>CIAT</td>
<td>4</td>
</tr>
<tr>
<td>CIMMYT</td>
<td>4</td>
</tr>
<tr>
<td>CIP</td>
<td>3</td>
</tr>
<tr>
<td>ICARDA</td>
<td>1</td>
</tr>
<tr>
<td>ICRAF</td>
<td>5</td>
</tr>
<tr>
<td><strong>ICRISAT</strong></td>
<td><strong>13</strong></td>
</tr>
<tr>
<td>IFPRI</td>
<td>43</td>
</tr>
<tr>
<td>IITA</td>
<td>4</td>
</tr>
<tr>
<td>ILRI</td>
<td>7</td>
</tr>
<tr>
<td>WorldFish Center</td>
<td>2</td>
</tr>
<tr>
<td>Grand Total</td>
<td>90</td>
</tr>
</tbody>
</table>

13 activity proposals integrated to 10 activity proposals.
CRP PIM - Linked themes

Rural livelihoods
poverty dynamics

Foresight Studies and Priority Setting Tools

Innovations across the value chain
Linkages with Strategic Components with CRP GL

**Inform**
- SC1: Analyzing demand & setting research priorities

**Develop**
- SC2: Developing productive varieties & management practices

**Disseminate**
- SC3: Facilitating legume seed and technology delivery systems

**Promote**
- SC4: Enhancing post-harvest processing & market opportunities

**SC5**
- Fostering innovation & managing knowledge (partnerships, capacity building, monitoring & evaluation, impact assessment)

**Abiotic Stresses & Climate Change**
- PL1
- PL2
- PL3

**Nitrogen fixation**
- PL4

**Biotic Stress**
- PL5

**New Opportunities**
- PL6
- PL7
- PL8
Linkages with Strategic Components with CRP GL

**Inform**
- SC1: Analyzing demand & setting research priorities

**Develop**
- SC2: Developing productive varieties & management practices

**Disseminate**
- SC3: Facilitating legume seed and technology delivery systems

**Promote**
- SC4: Enhancing post-harvest processing & market opportunities

**SC5**
- Fostering innovation & managing knowledge
  (partnerships, capacity building, monitoring & evaluation, impact assessment)

**Abiotic Stresses & Climate Change**
- PL1
- PL2
- PL3

**Nitrogen fixation**
- PL4

**Biotic Stress**
- PL5

**New Opportunities**
- PL6
- PL7
- PL8
Linkages with Strategic Components with CRP DC

SC1: Assembling and making accessible data and knowledge

SC2: Developing improved dryland cereal varieties and hybrids

SC3: Integrating sustainable crop, pest and disease management options

SC4: Promoting effective seed dissemination

SC5: Promoting post-harvest value addition and market access

CRP PIM Foresight Analysis Priority Setting Tools
ICRISAT Framework for ex-ante and ex-post assessments

Identifying the Target Production Environment (PE)

Undertake the innovative research for target PE

Undertake adaptive research in each country

Technology uptake and adoption in each country

Impact = Welfare Gains including spillover benefits

Define Research Domains

Innovative research capacity ($p_y$)

COUNTRY production by PE ($f_{iy}$)

COUNTRY to COUNTRY spillovers ($s_{yj}$)

Unit Cost Reduction for target PE ($k_{ii}^* = u_{ii}$)

Country Unit Cost Reduction ($k_{ij}$)

Adoption ceiling ($x_{ij}$)

Adoption lag

Net supply shift in each country ($p_y a_{yj} x_{ij} k_{yj}$)

Research lags

Adaptive research capacity ($a_{yj}$)

Research lags

$R \times C \times F = S \quad S \times K^* = K \quad G_{gf}$
Tools used for analysis

• Economic surplus – multi region single commodity model
• Spillover model
• Multi country – multi commodity partial equilibrium trade model
• Spatial and GIS tools
• Transaction cost theory to understand adoptive capacity and adoption rate
Observation Farm level

Q2 Analysis

Insights

Platform Dialogue

Policy entry points

Meeting of minds

Synergies
Timely
Tools
Strategic partnerships
Impacts

Voices of the poor heard
Policy change
10 research activities on-going
2012-2014
Bilateral projects – spearheading

1. Village Dynamic Studies in South Asia (VDSA) – (Tracking change in rural poverty in household and village economies in South Asia)
2. Assessing the dynamics of poverty and land degradation in the Sahelian countries in West Africa (IDRC)
3. Global Futures for Agriculture: Integrated Modelling and Scenario Assessment for Ex-ante Research Evaluation (GF)
4. Tracking Improved Varieties in South Asia (TRIVSA)
5. Diffusion of Improved Varieties in Africa (DIVA)
6. ReSAKSS in Africa and MozSAKSS (Strategic Analysis and Knowledge Support for Agricultural Development in Mozambique)
Research portfolio

Bilateral projects – managing components

1. Enhancing grain legumes productivity and production and the incomes of poor farmers in drought prone areas of SSA and South Asia (Tropical Legumes-II) and Treasure Legumes in ESA

2. Harnessing Opportunities for Productivity Enhancement (HOPE) of Sorghum and Millets in Sub-Saharan Africa and South Asia

3. Promotion of conservation agriculture
<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Activity title</th>
<th>CRP 2 Theme</th>
<th>ICRISAT RP-MIP foci</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assessment of <strong>plausible futures</strong> of dryland agriculture in Semi-Arid Tropics (SAT) and alternative technologies/management systems and policy interventions</td>
<td>Effective Policies and Strategic Investments</td>
<td>RP-MIP foci 1 Strategic knowledge and Foresight studies and RP-MIP foci 3 Market studies and institutions Global Futures CRP 3.5 and CRP 3.6</td>
</tr>
<tr>
<td>2</td>
<td>Development and enhancement of <strong>methods and tools</strong> for better targeting, impact assessment and priority setting for SAT agriculture</td>
<td>Effective Policies and Strategic Investments</td>
<td>RP-MIP foci 1 Strategic knowledge and Foresight studies and RP-MIP foci 3 Market studies and institutions CRP 3.5 and CRP 3.6</td>
</tr>
<tr>
<td>3</td>
<td>Study of <strong>dynamic labor market behavior</strong> by using household longitudinal panel data in India</td>
<td>Effective Policies and Strategic Investments</td>
<td>RP-MIP foci 1 Strategic knowledge and Foresight studies and RP-MIP foci 3 Market studies and institutions</td>
</tr>
<tr>
<td>4</td>
<td>Effects of Exogenous Shocks on <strong>Supply Response</strong> and Investment in Agriculture in South Asia- An Agro-ecosystems Perspective</td>
<td>Effective Policies and Strategic Investments</td>
<td>RP-MIP foci 1 Strategic knowledge and Foresight studies and RP-MIP foci 3 Market studies and institutions</td>
</tr>
<tr>
<td>5</td>
<td>Strategies for <strong>sustainable intensification</strong> of increasing agricultural productivity in Semi-Arid Tropics (SAT) Asia</td>
<td>Effective Policies and Strategic Investments</td>
<td>RP-MIP foci 1 Strategic knowledge and Foresight studies and RP-MIP foci 3 Market studies and institutions CRP 3.5 and CRP 3.6; SPIA study</td>
</tr>
<tr>
<td>6</td>
<td><strong>Life cycle economic assessment</strong> of sweet sorghum energy pathway for bioethanol production in Asia</td>
<td>Effective Policies and Strategic Investments</td>
<td>RP-MIP foci 1 Strategic knowledge and Foresight studies and RP-MIP foci 3 Market studies and institutions CRP 3.6</td>
</tr>
<tr>
<td>7</td>
<td>Impacts of <strong>Social Protection Policies</strong> on income, food security and livelihood assets of the program participants in SAT of India and Burkina Faso</td>
<td>Effective Policies and Strategic Investments</td>
<td>RP-MIP foci 1 Strategic knowledge and Foresight studies and RP-MIP foci 3 Market studies and institutions CRP 3.5 and CRP 3.6</td>
</tr>
<tr>
<td>8</td>
<td>Assessing <strong>contractual preferences</strong> between grain producers and processors of sorghum and pearl millet in Niger and Mali</td>
<td>Linking Small Producers to Markets</td>
<td>RP-MIP foci 2 Rural livelihoods/ poverty dynamics and policies CRP 3.6</td>
</tr>
<tr>
<td>9</td>
<td>Strategies to improve <strong>market access</strong> by small holders for dryland cereals and legumes in SA and SSA</td>
<td>Linking Small Producers to Markets</td>
<td>RP-MIP foci 2 Rural livelihoods/ poverty dynamics and policies CRP 3.5 and CRP 3.6</td>
</tr>
<tr>
<td>10</td>
<td><strong>Women's empowerment</strong> in rural South Asia: micro-level evidences on labor participation, institutions and food security</td>
<td>Strategic Research on Gender</td>
<td>Cross cutting theme across all foci CRP 3.5, CRP 3.6, CRP 4</td>
</tr>
</tbody>
</table>
Anchored on the VLS

thorough assessment of the extent of adoption of improved technology
benefits of adoption and identification of specific constraints in adoption
risk, resilience and technology adoption process
Plausible futures – dryland agriculture
Impact assessments
Strategic Planning and priority setting

VLS/VDSA longitudinal panel data

Platform for research
→ Development pathways
→ Empowerment, gender, nutrition and health
→ Interface of technology and intra/inter-household farm dynamics
→ Labor market dynamics

Linkages with other projects
Contractual preferences
Market strategic studies
Leveraging value chains

influence of socio-economic, institutional and policy drivers
Information systems
Supply response and investments in agriculture
Strategic Planning and priority setting
Database and typology construction
micro-level household studies

examined at grass root level
VDSA Research Focus

• Dynamics of Rural Livelihoods and Poverty
• Agricultural Transformation and Development Pathways
• Rural Labour Markets
• Social Safety Nets and Agriculture
• Aggregate Supply and Public Investment
• Food Security, Health, Nutrition and Gender
• Economic Growth, Income Inequality and Poverty
Market studies anchored in the CRP
PIM

Linkages with other projects and CRPS
Grain Legumes
Dryland Cereals

Contractual preferences
Market strategic studies
Leveraging value chains
Cross cutting theme
Strategic gender research

Emphasis on women’s empowerment

Analyze:
the current situation of women’s participation in rural farm/non-farm enterprise and non-land agriculture employment, and prospects for empowering them;

Feminization of agriculture – empowering or disempowering women? Understand, validate and document the process

the role of different institutions towards empowering women’s participation and improving nutritional security of households

ICRISAT CRP 2 Activity
Women’s Empowerment in Rural South Asia: Micro-level Evidences on Labor Participation, Institutions and Food Security

R Padmaja, MCS Bantian and K Kavitha

Introduction

The proposed activity

Feminization of agriculture – empowering women or disempowering? Understand, validate and document the process the role of different institutions towards empowering women’s participation and improving nutritional security of households.

Analyse:
the current situation of women’s participation in rural farm/non-farm enterprise and non-land agriculture employment, and prospects for empowering them;

Empowerment

The dataset provides information on the household level on farm, non-farm, and labor activity, including income, expenditure, employment status, labor force participation, and other related variables. It also includes information on the nutritional status of household members, including height, weight, and body mass index (BMI) for different age and sex groups. The dataset includes information on the role of different institutions towards empowering women’s participation and improving nutritional security of households.

What does the data tell us?

Per capita expenditure on different food items

The effect of various factors, such as age, sex, and education, on women’s empowerment is also analyzed. The data shows that women with higher levels of education and better access to resources are more likely to be empowered. The dataset also includes information on the role of different institutions towards empowering women’s participation and improving nutritional security of households.

Nutrition in the CRI

Figure 1: Agriculture and multisectoral pathways with more (blue) and fewer (green) domains.

ICRISAT CRP 2 Activity
Women’s Empowerment in Rural South Asia: Micro-level Evidences on Labor Participation, Institutions and Food Security

R Padmaja, MCS Bantian and K Kavitha

Introduction

The proposed activity

Feminization of agriculture – empowering women or disempowering? Understand, validate and document the process the role of different institutions towards empowering women’s participation and improving nutritional security of households.

Analyse:
the current situation of women’s participation in rural farm/non-farm enterprise and non-land agriculture employment, and prospects for empowering them;

Empowerment

The dataset provides information on the household level on farm, non-farm, and labor activity, including income, expenditure, employment status, labor force participation, and other related variables. It also includes information on the nutritional status of household members, including height, weight, and body mass index (BMI) for different age and sex groups. The dataset includes information on the role of different institutions towards empowering women’s participation and improving nutritional security of households.

What does the data tell us?

Per capita expenditure on different food items

The effect of various factors, such as age, sex, and education, on women’s empowerment is also analyzed. The data shows that women with higher levels of education and better access to resources are more likely to be empowered. The dataset also includes information on the role of different institutions towards empowering women’s participation and improving nutritional security of households.

Nutrition in the CRI

Figure 1: Agriculture and multisectoral pathways with more (blue) and fewer (green) domains.

ICRISAT CRP 2 Activity
Women’s Empowerment in Rural South Asia: Micro-level Evidences on Labor Participation, Institutions and Food Security

R Padmaja, MCS Bantian and K Kavitha

Introduction

The proposed activity

Feminization of agriculture – empowering women or disempowering? Understand, validate and document the process the role of different institutions towards empowering women’s participation and improving nutritional security of households.

Analyse:
the current situation of women’s participation in rural farm/non-farm enterprise and non-land agriculture employment, and prospects for empowering them;

Empowerment

The dataset provides information on the household level on farm, non-farm, and labor activity, including income, expenditure, employment status, labor force participation, and other related variables. It also includes information on the nutritional status of household members, including height, weight, and body mass index (BMI) for different age and sex groups. The dataset includes information on the role of different institutions towards empowering women’s participation and improving nutritional security of households.

What does the data tell us?

Per capita expenditure on different food items

The effect of various factors, such as age, sex, and education, on women’s empowerment is also analyzed. The data shows that women with higher levels of education and better access to resources are more likely to be empowered. The dataset also includes information on the role of different institutions towards empowering women’s participation and improving nutritional security of households.

Nutrition in the CRI

Figure 1: Agriculture and multisectoral pathways with more (blue) and fewer (green) domains.
Social science research impact pathway

(1) Research prioritization

(2) Technology dev, adaptation and adoption

(3) Impact Assessment

Feedback loops
Thank you for your attention!
<table>
<thead>
<tr>
<th>CRP2 research activity #</th>
<th>Description</th>
<th>W1-2 request 2012</th>
<th>Bilateral funding in 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Assessment of plausible futures of dryland agriculture in Semi-Arid Tropics (SAT) and alternative technologies/management systems and policy interventions</td>
<td>3,27,812</td>
<td>93,750</td>
</tr>
<tr>
<td>23-24-25</td>
<td>Development and enhancement of methods and tools for better targeting, impact assessment and priority setting for SAT agriculture</td>
<td>2,65,307</td>
<td>1,08,931</td>
</tr>
<tr>
<td>26</td>
<td>Study of dynamic labor market behavior by using household longitudinal panel data in India</td>
<td>1,79,690</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Effects of Exogenous Shocks on Supply Response and Investment in Agriculture in South Asia- An Agro-ecosystems Perspective</td>
<td>73,688</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Strategies for sustainable intensification of increasing agricultural productivity in Semi-Arid Tropics (SAT) Asia</td>
<td>92,608</td>
<td>1,20,000</td>
</tr>
<tr>
<td>29</td>
<td>Life cycle economic assessment of sweet sorghum energy pathway for bioethanol production in Asia</td>
<td>44,696</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>1,42,544</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Assessing contractual preferences between grain producers and processors of sorghum and pearl millet in Niger and Mali</td>
<td>55,669</td>
<td></td>
</tr>
<tr>
<td>32-33</td>
<td>Strategies to improve market access by small holders for dryland cereals and legumes in SA and SSA</td>
<td>3,08,040</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Women's empowerment in rural South Asia: micro-level evidences on labor participation, institutions and food security</td>
<td>2,25,437</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>1,71,5491</td>
<td>322681</td>
</tr>
</tbody>
</table>