Agricultural R&D Trends and Challenges in Mozambique

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Transformation of Agri-food Systems and Commercialization of Smallholder Agriculture in Mozambique: Evidence, Challenges and Implications
Maputo | 9–10 December, 2013
PRESENTATION OUTLINE

- INTRUDUCTION
  - ASTI PURPOSE
  - BACKGROUND ASTI- IIAM COLLABORATION

- AGRICULTURAL R&D MAIN FINDINGS
  - TRENDS
  - MAIN CHALLANGES
INTRODUCTION

Why S&T indicators?

• Formulating policy; Setting priorities
• Understanding strategic planning, M&E
• Provide information for governments, policy research institutes, universities and private sector organizations involved in agricultural S&T;

ASTI is an initiative of IFPRI with a mandate to:

• Compile, process, analyze, and publicize data on institutional developments, investments, and capacity in agricultural R&D at national, regional, and international levels
Purpose of the study: to identify recent trends relating to financial and human resources for agricultural R&D

First joint survey round conducted in 2009 provided data from 2004-2008

Country note published in 2010

Longer term collaborative agreement signed in 2012 to institutionalize data collection

2nd survey round conducted in 2012 provided data from 2009-2011

Country factsheet published in 2013 (Portuguese version coming soon)

3rd survey round to begin in 2014 will collect data from 2012-2013
Trends

- Financial Resources

- Human Resources
Agricultural R&D spending

Million 2005 meticals

Million 2005 PPP dollars

2004 2005 2006 2007 2008 2009 2010 2011

IIAM IIP Higher education
Allocation of spending across cost categories at IIAM

IIAM spending by cost category (million 2005 meticais)

- Salaries
- Operating & program costs
- Capital investments
High share of donor funding at IIAM

IIAM funding sources (million 2005 meticais)

- Government
- Donor
### IIAM and IIP Funding shares (%)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tbody>
<tr>
<td><strong>Government funding</strong></td>
<td>38</td>
<td>32</td>
<td>35</td>
<td>42</td>
<td>44</td>
<td>38</td>
<td>44</td>
<td>60</td>
</tr>
<tr>
<td><strong>Donor funding</strong></td>
<td>62</td>
<td>68</td>
<td>65</td>
<td>58</td>
<td>56</td>
<td>62</td>
<td>56</td>
<td>40</td>
</tr>
</tbody>
</table>
Trends

- Financial Resources

- Human Resources
<table>
<thead>
<tr>
<th>Name of agency</th>
<th>Number of full-time equivalent researchers</th>
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<tbody>
<tr>
<td>Instituto de Investigação Agrária de Moçambique (IIAM)</td>
<td>210.0</td>
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<tr>
<td>Instituto de Investigação Pesqueira (IIP)</td>
<td>38.0</td>
</tr>
<tr>
<td>Instituto Superior Politécnico de Gaza</td>
<td>12.6</td>
</tr>
<tr>
<td>Instituto Superior Politécnico de Manica</td>
<td>15.5</td>
</tr>
<tr>
<td>Universidade Eduardo Mondlane</td>
<td></td>
</tr>
<tr>
<td>Faculdade de Agronomia e Engenharia Florestal</td>
<td>20.7</td>
</tr>
<tr>
<td>Faculdade de Veterinária</td>
<td>13.5</td>
</tr>
<tr>
<td>Escola Superior de Ciências Marinas e Costeiras</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>313.6</strong></td>
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</table>
Researcher trends

Number of FTE researchers (FTEs)

IIAM  IIP  Higher education (5)
Researchers by degree

Total public researchers

Researchers by degree (FTEs)

- PhD
- MSc
- BSc
Researchers by degree by institutional category

Researchers by degree (FTEs)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2008</th>
<th>2011</th>
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<tr>
<td>IIAM</td>
<td></td>
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</tr>
<tr>
<td>IIP</td>
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<tr>
<td>Higher education (5)</td>
<td></td>
<td></td>
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</tbody>
</table>

- PhD
- MSc
- BSc
Researchers by age group and degree

Number of researchers (FTEs)

- <31
- 31-40
- 41-50
- 51-60
- >60

- PhD
- MSc
- BSc
Female researchers by degree

Number of female researchers (FTEs)

- IIAM
- IIP
- Higher education (5)

PhD - Orange
MSc - Green
BSc - Blue

Years: 2008, 2011
Research Focus

![Graph showing research focus by IIAM, IIP, Higher education (5), and Total. The categories include Crops, Livestock, Forestry, Fisheries, Natural resources, and Other.](image)
Policy developments affecting agricultural research

- Strategic Plan for Agriculture Sector Development (PEDSA)
- National Plan for Investments in the Agrarian Sector (PNISA)
- IIAM Strategic Plan
- Platform for Agricultural Research and Innovation Technology (PIAIT)
- Center of Leadership for rice-based cropping systems under the Agricultural Productivity Program for Southern Africa (APPSA)
• Most of the problems related to agricultural research in Mozambique are related to financing.

• Few resources in agriculture particularly for research investments (PNISA financial gap for research is as high as 91.2%)

• Agricultural research depends on quite volatile and short-lived external funds.

• Many younger researchers in need of training.

• Long-term results will only be achieved with sustained investment by the government.
• Participating agricultural R&D agencies (DT e CZ, IIP, UEM, ISPG, ISPM, ESCMe C) for their contributions to the data collection and preparation of the country factsheet;

• Bill and Melinda Gates Foundation for its generous support of ASTI’s work in Africa south of the Sahara.