

Agricultural Productivity Program for Southern Africa (APPSA)

APPSA Overview

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CCARDESA Secretariat



Government of Malawi



Government of Mozambique



Government of Zambia

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CONFERENCE**

27-29 November 2019, Johannesburg, South Africa

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Background and Context

National Agricultural research systems in Africa often challenged by:

- Complex agricultural production systems
- Low levels of financing, spread over many priorities
- Limited access to improved technologies
- Human resource constraints
- Poor quality of facilities, infrastructure
- Weak technology dissemination systems
- Barriers to transnational technology spillover

.....Regional approaches to R&D offers some solutions to these problems.

What is APPSA?

- APPSA part of a commitment by International Development Association (IDA) to help countries enhance long-term availability of safe & nutritious food
- 6-Yr Project (2013 – 2019) financed by the World Bank using a Specific Investment Loan (SIL)
- Project launched in 2013 => Malawi, Mozambique & Zambia.
- Additional countries in SADC region expected join as APPSA evolves & expands

APPSA Objective

To increase the availability of improved agricultural technologies in participating countries by:

- Establishing RCoLs on commodities of regional importance, thereby allowing regional specialization around priority farming systems;
- Supporting regional collaboration in R&D
- Facilitating increased sharing of agric info, knowledge & technologies among participating countries

APPSA Approach

- Each country establishes a RCoL in its respective commodity area that distinguishes it as a leader in the region & beyond.
- Malawi : **maize-based** cropping systems
- Mozambique: **rice-based** cropping systems
- Zambia: **food legume-based** cropping systems
- *Regional Project Coordination* \Rightarrow CCARDESA Secretariat

Project design

Component 1: Technology generation and dissemination

- Collaborative sub-projects (research, dissemination)

Component 2: Strengthening Regional Centers of Leadership

- Upgrading facilities, strengthening programs, training scientists

Component 3: Coordination and facilitation

- CCARDESA facilitation function
- Project management

Key Achievements

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1. Collaborative technology generation & dissemination around priority farming systems

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Regional R&D activities undertaken, covering the following thematic areas: g systems

- Nutrition (vitamin A maize, QPM, high iron/zinc beans, utilization of grain legumes)
- Human health/food safety (aflatoxin, mycotoxin levels in maize and groundnuts)
- Mitigating the effects of climate variability (drought tolerant maize, legumes and rice)
- Soil/water management (soil fertility, CA technologies, water use efficiency)
- Promoting “new” cash crops (soybean, pigeon pea, rice)

Regional R&D activities undertaken, covering the following thematic areas:

- Post-harvest storage (small scale metal silo testing/fabrication, R&D on storage pests)
- Agro-processing , value addition (groundnut, bambara nut, soybean)
- Existing and emerging pest/disease threats (surveillance on MLN, MLN resistance)
- Production and productivity (input use trade-offs, crop rotation)
- Scaling up dissemination (demonstration, field days, media efforts)

74 Regional collaborative R&D projects implemented

Commodity/Thematic Area	Total # Projects
Cassava	5
Climate Smart Agriculture	8
Legumes	28
Maize	21
Rice	10
Sorghum	2
Total	74

Technology Dissemination pathways

- Lead farmers
- Demonstrations
- On-farm Field Days
- Agriculture shows,
- Seed fairs
- Print media
- Electronic media,
- Innovation Platforms
- IEC materials

Agricultural Productivity Program for Southern Africa (APPSA)

4.61
Million

- Beneficiaries (F=35%)
- 41,300 are LEAD Farmers

160

- TIMPs Generated

301

- TIMPs made available to farmers

68

- TIMPs shared across countries



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**Ministry of Agriculture Irrigation, and Water Development
Department of Agricultural Research Services**

**Participatory evaluation of improved rice varieties to
increase productivity in Malawi, Mozambique and Zambia**



**MOTHER BABY VARIETY
SEED MULTIPLICATION**

ENTRIES: 13
SOWN: 01/07/15
TRANSP: 11/08/15

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97,700 farmers trained
in:

- Demonstration plot lay out
- Data collection
- Entrepreneurship, seed production
- Plant genetic resource collection and conservation
- Seed production and storage
- Integrated Crop Management (ICM) technologies
- Conservation Agriculture
- Good Agricultural Practices
- Agro-processing



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Participatory variety selection



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Variety release

	Malawi	Mozambique	Zambia
Legumes	6	8	14
Maize	14	3	5
Rice	2	2	3
Sorghum		4	
Varieties submitted for release	20	16	27

2. Improved technical capacity to lead national & regional R&D agenda

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185 Staff supported for Long Term Training

- Diploma =8 (3F)
- BSc =72 (39 F)
- MSc =75 (26 F)
- PhD =30 (10 F)



Infrastructure Development/Rehabilitation

Infrastructure	Malawi	Mozambique	Zambia
<ul style="list-style-type: none"> Offices/houses/sheds/hostels rehabilitated New construction works 	3- Bvumbwe, Chitedze & Kasinthula 3- Bvumbwe, Chitedze & Kasinthula	5 - Sussundenga, Nametil Nampula, Chókwe & Umbelúzi 1 – Namacurra	2 - Kabwe & Mt-Makulu
Rehabilitated Irrigation systems	1 - Kasinthula	3 - Chókwe, Umbelúzi & Ribaué	2 - Kabwe & Mt-Makulu
Rehabilitated & equipped laboratories	1 - Bvumbwe		9 - Mt Makulu, Kabwe, Msekera, Nanga, Mochipapa, Misamfu, Mutanda, Mifulira & Mansa
Securing of experimental fields			5 - Mt-Makulu, Kabwe, Nanga, Mochipapa & Msekera
Road Infrastructure	1 – Bvumbwe, Chitedze & Kasinthula		2 - Mt-Makulu, Mochipapa

The APPSA Regional Centre of Leadership for Maize and maize based Research, Chitedze



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Chitedze Road Rehabilitation works

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Infrastructure rehabilitation in Mozambique



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Civil works at the new Regional Centre of Leadership for Rice at Namacurra



Construction of water tank and water hole



Laboratory of Biotechnology and Seed lab

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Agricultural Equipment

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Mobile soil testing laboratory - Zambia

Strengthening Seed Systems

- Facilitating multiplication of certified seed
 - ❖ Farmers linked with seed companies;
 - ❖ Training of seed growers;
- Training of seed inspectors to decentralize seed quality control service
- Establishment of satellite seed certification laboratories
- Revision of seed policy / Seed Act taking cognisance of SADC HSRP

3. Effective structures & systems for regional collaboration & R&D management

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- Functional coordination systems developed:
 - ❖ National APPSA Secretariats, Technical committees established
 - ❖ Regional Steering Committee established
 - ❖ Regional M&E system developed
 - ❖ Commodity lead scientists identified
 - ❖ R&D peer reviews

- Support in short-term capacity building
- Support in alignment of national seed regulations with SADC harmonized Regional Seed Policy
 - ❖ National & regional sensitization meetings on harmonized seed laws
 - ❖ Strengthening national phytosanitary measures
 - ❖ Aligning seed regulations to regional seed policy

Development of learning & knowledge sharing mechanisms

- Knowledge sharing mechanisms developed:
 - ❖ Commodity D-groups
 - ❖ M&E WG
 - ❖ Communication WG
 - ❖ Success stories
 - ❖ APPSA web pages www.ccardesa.org/programmes;
www.appsazambia.org; www.dars.mw;
www.iiam.gov.mz; www.facebook.com/iiam.gov.mz
- Networking => Study tours
Benchmarking visits

Key Challenges

- Weak collaboration among scientists
- Ensuring R&D is of high quality
- Moving knowledge & technologies “off the shelf” to farmers at appropriate scales

Key Challenges

- Ensuring seed systems functional enough to make new varieties available to farmers
- Ensuring effective farmer-extension-research feedback mechanisms
- Balancing investment in new technology generation when existing technology is still under-utilized

Lessons Learnt

- Collaboration / Partnerships
 - ❖ Enhanced quality diversity in project execution
 - ❖ Promotes efficiency in resource use
 - ❖ Easier for R&D projects working under Regional Networks & with CG Centres to share technologies across borders
- Monitoring & Evaluation
 - ❖ National reviews, ISMs, MTRs – enhanced learning in the project
 - ❖ Regional M&E system enhanced harmonised reporting

Lessons Learnt

- **Mentorship:**
 - ❖ Skills, inspiration & motivation to young scientists.
- National & Regional Committees
 - ❖ Improved implementation, governance & monitoring.
- Organisation & management of commodity teams
 - ❖ Use of Lead Scientists enriched the technology development process.

Thank You

Obrigado

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