




AN OVERVIEW OF NARO RESEARCH AGENDA FOR AGRICULTURAL TRANSFORMATION IN UGANDA

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PAPER PRESENTED DURING REGIONAL CONSULTATIVE WORKSHOP ON ROLLING OUT THE SCIENCE AGENDA FOR AGRICULTURE IN AFRICA
 19TH-21ST APRIL 2017, KIGALI, RWANDA



CHALLENGES OF UGANDA AGRICULTURE

- Predominance of traditional practices, over reliance on the hand hoe, local land races, mind sets, Mother nature, land fragmentation
- Low adoption of improved technologies and knowledge; and asymmetrical information flow
- Poor access to input and output markets
- Predominant rain-fed agriculture
- Heavily degraded and depleted soils
- Inadequate levels of mechanization
- Pests and diseases
- Low value addition, low household incomes, food and nutrition insecurity
- Skewed gender desegregated/disfranchised activities
- Climate change and variability
- Inadequate financing mechanisms for sustained AR/D

NATIONAL AGRICULTURAL RESEARCH ORGANISATION

- ☐ NARO is the apex body for guidance and coordination of all agricultural research activities in the National Agricultural Research Systems (NARS) in Uganda
- ☐ NARO is a public institution established by an Act of parliament enacted on 21st November 2005
- ☐ NARO is a body corporate with perpetual succession and a common seal and can sue or be sued

ROLE OF NARO IN THE AGRICULTURE SUB-SECTOR

- ☐ Primary goal: livelihood improvements of the >68% resource poor subsistence farmers operating in very militating environments.
- ☐ Research agenda: solving food/nutrition insecurity, unlocking employment opportunities and wealth creation.
- ☐ Issues: increasing production, productivity, value addition, market access and institutional capacity development
- ☐ Core business: generation and promotion of TIMPS in crops, livestock, fisheries and
- ☐ Integration of IK with modern scientific methods in some of our research agenda e.g. biodiversity conservation, characterisation, bio-prospecting

OVERARCHING POLICY / PLANNING FRAMEWORKS

- ☐ Sustainable Development Goals (2015 - 2030); 1, 2, 3, 12, 13, 15
- ☐ National Development Plan II (2015/16 - 2019/2020)
- ☐ National Agriculture Policy (2015)
- ☐ Agriculture Sector Strategic Plan (2015/16 - 2019/2020)
- ☐ NARO Strategic Plan (2007/08 - 2017/18)

VISION, MISSION AND GOAL

VISION
 "A market-responsive, client-oriented and demand-driven agricultural research system that generates and disseminates problem-solving, profitable and environmentally sound technologies, knowledge and info on a sustainable basis"

MISSION
 "Generation, adoption and dissemination of appropriate and demand-driven technologies, knowledge and info through an effective, efficient, sustainable, decentralised and well coordinated agricultural research system"

GOAL
 "Enhance the contribution of agricultural research to sustainable agricultural productivity, economic growth, food security and poverty eradication through generation and dissemination of appropriate technologies, knowledge and info"



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PUBLIC AGRICULTURAL RESEARCH INSTITUTES (PARIs)

- ☐ PARIs are composed of 7 National Agricultural Research Institutes (NARIs) and 9 Zonal Agricultural Research and Development Institutes (ZARDIs)
- ☐ NARIs manage and carry out agricultural research of strategic nature and national importance
- ☐ ZARDIs manage and carry out agricultural research whether applied or adaptive for a specific agro-ecological zone



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Research for Development

Impact-oriented research for development are underpinned by:

- ☐ Technology generation
- ☐ Research - Extension- Farmer interface
- ☐ Institutional capacity strengthening



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BUDGET COMMITMENT TO NARO

2016/2017

TOTAL GOVERNMENT = UGX 22 TRILLION

MAAIF MTEF = UGX 793.22 BN (3.45%)

NARO MTEF = UGX 107.86 BN (0.47%)

OFF BUDGET = UGX 30 BN (28.1%)



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KEY PERFORMANCE INDICATORS

KPI	Planned	Actual	Remarks
Generation of Technologies			
No. of research studies under competitive grants scheme			
No. of production technologies generated			
No. of new varieties/ prototypes submitted to Variety Release Committee for release			

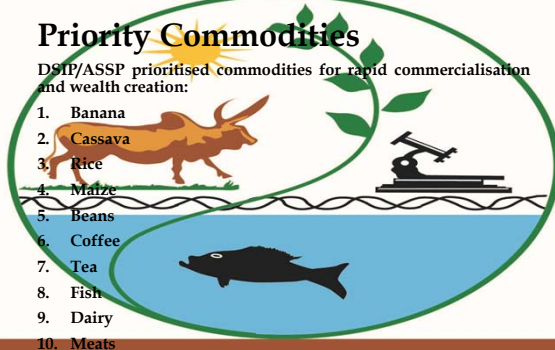
KEY PERFORMANCE INDICATORS

KPI	Planned	Actual	Remarks
Research-Extension			
No. of technological innovations delivered to uptake pathways			
No. of technological innovation platforms established/supported			

Priority Commodities

DSIP/ASSP prioritised commodities for rapid commercialisation and wealth creation:

1. Banana
2. Cassava
3. Rice
4. Maize
5. Beans
6. Coffee
7. Tea
8. Fish
9. Dairy
10. Meats
11. Horticultural fruits (Mango, Citrus, Pineapple)
12. Potato (Solanum)



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CURRENT AND FUTURE STRATEGIC RESEARCH DIRECTIONS


- Genetic improvement of crop varieties and animal breeds
- Improving crop and animal management practices
- Management of plant and animal health
- Product development and diversification for a number of value chains
- Mechanization of production and value addition
- Gender mainstreaming in agri-enterprises
- Natural resource management including Climate smart agriculture
- Application of modern biotechnology
- Bioprospecting of indigenous plants: aquatic, terrestrial and subterranean



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Other strategic areas of Research

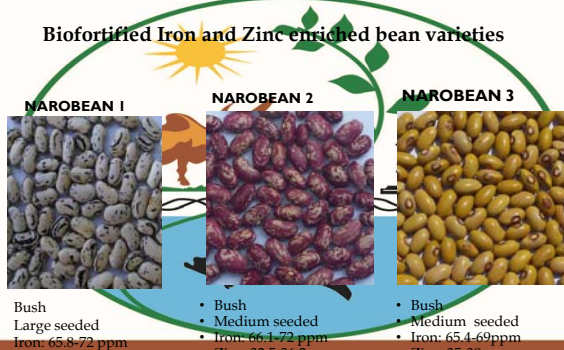
- ① Sustainable land management (SLM)
- ① Climate change and variability
- ① Forest and forestry products
- ① Prototype development of equipment and machines for drudgery reduction, water harvesting, post-harvest handling, storage & value addition, and renewable energy



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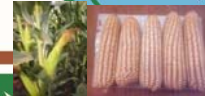
Biofortified Iron and Zinc enriched bean varieties

NAROBEAN 1	NAROBEAN 2	NAROBEAN 3
		
<ul style="list-style-type: none"> • Bush • Large seeded • Iron: 65.8-72 ppm • Zinc: 31.4-34.2 ppm • Yield: 1500-2000 kg/ha • Maturity: 60-68 days 	<ul style="list-style-type: none"> • Bush • Medium seeded • Iron: 66.1-72 ppm • Zinc: 32.5-36.2 ppm • Yield: 1600-2200 kg/ha • Maturity: 58-68 days 	<ul style="list-style-type: none"> • Bush • Medium seeded • Iron: 65.4-69 ppm • Zinc: 35-38 ppm • Yield: 1500-2000 kg/ha • Maturity: 58-68 days



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Released stress tolerant maize varieties

	<p>NARO Maize 03 (UH5503)</p> <ul style="list-style-type: none"> • Yield potential of 6-7 T/ha • Resistant to common foliar diseases • Matures in 120-126 days
	<p>NARO Maize 56 (UH5556)</p> <ul style="list-style-type: none"> • Tolerant to MLN • Yield potential of 8-9 T/ha • Stay-green characteristics • Matures in 135-140 days
	<p>NARO Maize 57 (UH5557)</p> <ul style="list-style-type: none"> • Very stable in drought and low soil fertility • Yield potential of 6-7 T/ha • Matures in 125-130 days



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NEW INITIATIVES FOR POSSIBLE S3A INTEGRATION

1. ECAATP
 - Draft components for investments by Uganda include:
 - C₁ Strengthening the infrastructural and R&D capacity for agricultural research;
 - C₂ Support to demand driven technology generation, training and dissemination;
 - C₃ Strengthening seed systems, animal germplasm and policy harmonization;
 - C₄ Strengthening conditions for enhancing research and commercialization of agricultural technologies; and
 - C₅ Project coordination, management, M&E.



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2. Rice Agri-Food Systems (RICE)

- FP1: Accelerating impact and equality
- FP2: Upgrading rice value chains
- FP3: Sustainable farming systems
- FP4: Global Rice Array
- FP5: New rice varieties

3. TAAT
Cassava, Rice, Horticultural crops

4. ISSD
Seed systems

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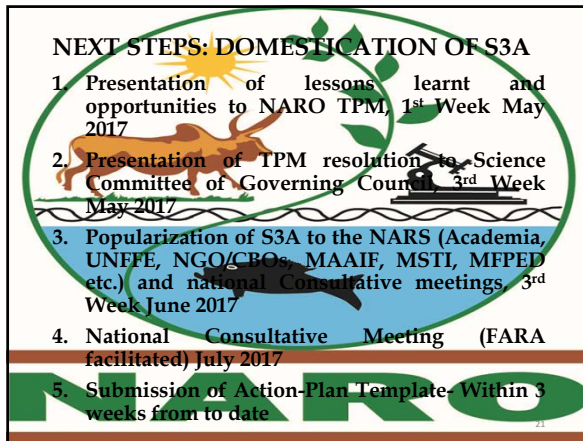


CONCLUDING REMARKS

Implement The Five "I"s of African agricultural transformation

1. Strengthen the *institutions* including investment in agricultural research and development
2. Availability and affordability of improved *inputs*
3. Expansion of high quality rural *infrastructure*
4. *Incentives* for producers to enhance their uptake of technology including an optimally functional market system
5. Adequate and timely supply of *information* to support production and marketing decision (Swanson *et al.*, 1997)

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NEXT STEPS: DOMESTICATION OF S3A

1. Presentation of lessons learnt and opportunities to NARO TPM, 1st Week May 2017
2. Presentation of TPM resolution to Science Committee of Governing Council, 3rd Week May 2017
3. Popularization of S3A to the NARS (Academia, UNFFE, NGO/CBOs, MAAIF, MSTI, MFPED etc.) and national Consultative meetings, 3rd Week June 2017
4. National Consultative Meeting (FARA facilitated) July 2017
5. Submission of Action-Plan Template. Within 3 weeks from to date

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NEXT STEPS: DOMESTICATION OF S3A

Support required

- ASARECA lobby development partners
- ASARECA/FARA facilitating consultative meetings
- S3A DOCs

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Thank you for
listening

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