Effective Pathways to Africa's Agricultural Transformation

Speakers: Dr. Agnes Kalibata, Jean Claude U. Munyangabo, Dr. Rose Omari, Kwame A. Boateng, Francois Nsengiyumva, and Patrice Hakizimana

Moderator: Carol Jenkins
Dr. Agnes Kalibata
President, Alliance for a Green Revolution in Africa

Dr. Agnes Kalibata is the President of the Alliance for a Green Revolution in Africa (AGRA), where she leads the organization’s efforts with partners to ensure a food secure and prosperous Africa through rapid, sustainable agricultural growth that focuses on building systems required for farmers to access technologies that improve productivity and livelihoods of millions of smallholder farmers in Africa. Prior to joining AGRA, Dr. Kalibata was Rwanda’s Minister of Agriculture and Animal Resources (MINAGRI) from 2008 to 2014. Dr. Kalibata has also held several other leadership positions, and she has a distinguished track record in Africa and globally as an agricultural scientist, policymaker and thought leader. In December 2019, she was appointed the UN Secretary-General’s Special Envoy for the 2021 Food Systems Summit. In this capacity, Dr. Kalibata works with the United Nations system and key partners to provide leadership, guidance, and strategic direction towards the 2021 Food Systems Summit. Dr. Kalibata sits on various boards, councils and commissions including the Global Commission on Adaptation, the Global Agenda Council of the World Economic Forum, the Malabo-Montpellier Panel, the Food and Land Use (FOLU) Coalition, the Architecture for REDD + Transactions (ART), the International Fertilizer Development Corporation (IFDC), Bioversity International, and Africa Risk Capacity, among others. Dr. Kalibata has a distinguished track record as an agricultural scientist, policymaker and thought leader. She was awarded the Yara Prize, now the Africa Food Prize, in 2012, Honorary Doctorate from the University of Liège in 2018, the National Academy of Sciences’ Public Welfare Medal in April, 2019 for her work to drive Africa’s agricultural transformation through modern sciences and effective policy thereby improving livelihoods of smallholder farmers and the Honorary Doctorate from MacGill University, Canada, June 2019.
Remarks from Dr. Kalibata
Dr. Rose Omari is a Senior Research Scientist at the Science and Technology Policy Institute, Council for Scientific and Industrial Research (CSIR-STEPRI), Ghana. She is a multidisciplinary researcher with experience in policy development, analysis, monitoring and evaluation as well as stakeholder and high-level policy engagements and advocacy at the national and continental levels. She has conducted several policy studies and situational analysis that, among others, assessed policies and legislative frameworks for biofortification, aflatoxin management, continental food safety systems and digital applications for improving food safety traceability and monitoring systems. Dr. Omari has coordinated the development of Ghana’s National Policy and Technical Regulation for Aflatoxin Control in Food and Feed. She was part of the team of experts who developed the FAO/WHO Food Safety Risk Communication Handbook, ECOWAS Aflatoxin Control Action Plan and the Strategy for the Partnership for Aflatoxin Control in Africa (PACA). Rose is also a food safety and risk communication trainer and has conducted several trainings for varied audiences including researchers, regulators, Codex Contact Points and various segments of the public. She has facilitated many technical meetings and has authored several peer-reviewed food safety-related papers and technical reports. Dr. Omari is a member of the International Association for Food Protection (IAFP) and the African Continental Association for Food Protection (ACAFP). She holds a PhD Degree in Rural Sociology (Food Studies) from the Wageningen University and Research Center in the Netherlands, MPhil Degree in Food Science and BSc. Degree in Biochemistry and Food Science from the University of Ghana, Legon.
Kwame A. Boateng is the founder and CEO of Sahel Grains Ltd., based in Techiman, Ghana. Sahel Grains is a vertically integrated value chain provider with upstream operations in farm mechanization and downstream primary and secondary processing. Sahel Grains is about applying the highest quality food safety standards to traditional African food, with no trade-off between tradition and health. Sahel Grains' focus on quality has made it the primary supplier of maize to Nestle Ghana for their Cerelac brand. Sahel Grains also has the Faast Mmori brand, the only FDA approved fermented corn dough product (for the preparation of Koko and Banku), that is widely available in Ghana. Kwame previously worked as a Consultant with McKinsey & Co. in New Jersey, and as an Integrated Circuit Design Engineer with the IBM Microelectronics Division in Rochester, Minnesota. Kwame holds an MBA in Finance from the Wharton School, and BSc in Electrical Engineering from the University of Washington, Seattle.
Francois Nsengiyumva
Senior Value Chain Specialist, BEED Ltd

François Nsengiyumva is the CEO of KILIMO GENERAL BBUSINESS (KGB) Limited, a professional seed company and actual Chairperson of the Chamber of Agriculture and Livestock in Rwanda Private Sector Federation (PSF). He is an agribusiness expert who has previously worked for the Ministry of Agriculture and Animal Resources where he successfully implemented the Crop Intensification Program and generation of momentum that led to scaling up and scaling out in Rwanda. While at Ministry of Agriculture, François NSENGIYUMVA was in charge of coordination of seeds and fertilizer importation, auctioning and efficient private sector driven distribution in Rwanda. He was also assigned to introduce the development of post-harvest storage best practices and infrastructures in Rwanda which led to successful management of the Food Strategic Reserves in Rwanda and played an active role to build capacities for farmers, value chains actors and supporters in line Ministries, Local Administration and Private Sector.
Jean Claude U. Munyangabo
Chief Executive Officer, BK TecHouse

Jean Claude U. MUNYANGABO, is the Chief Executive Officer of BK TecHouse since October 2018. Jean Claude has accumulated 15 years of experience in the Telecommunication and Technology Business. Prior to joining BK TecHouse, Jean Claude has worked in the Business Development Capacity with different Telecommunication and Technology companies including but not limited to KT Rwanda Network (KT RN) from 2014 to 2016, Broad Band System Corporation (BSC Ltd) from 2012 to 2014 and New Artel Ltd. from 2008 to 2012. Jean Claude MUNYANGABO holds a Master’s Degree in Business Administration from Maastricht School of Management (MSM) and is a Certified Business Mediator from London International Dispute Resolution Center.
Patrice Hakizimana
Program Manager, USAID/Rwanda

Mr. Patrice Hakizimana joined USAID/Rwanda in December 2012 as Agriculture and Rural Development Specialist. He is a MSc holder in Agriculture and Biology Engineering from Catholic University of Louvain (UCL/Belgium). He has twenty-one years of experience in Agricultural Development including management of projects and programs in domains of agricultural research and extension, higher education and rural development. Prior to USAID, Patrice respectively worked for the Government of Rwanda as a scientist on rice and sorghum crops at the National Institute for Agricultural Research called ISAR (a French acronym), then he served as Director of Rwanda Agricultural Development Authority (RADA) and later as Deputy Vice Chancellor of Higher Institute of Agriculture and Animal Husbandry (the French acronym was ISAE). He has also worked for FAO-Rwanda as consultant on the Plant Genetic Resources for Food and Agriculture (PGRFA) project. Patrice is passionate about culture and contemporary history, economics and in his free time he likes running.
Aflatoxin Policy and Technical Regulation in Ghana

Dr. Rose Omari
Ghana Case Study
Importance of aflatoxin control
Policy rational, goal, objectives, achievements, sustainability
Why is Aflatoxin control important to smallholder farmers and the private sector?

• Aflatoxins are toxins produced by some species of moulds or fungi that grow on food products e.g. grains and their processed products

• Humans, livestock and fish get exposed by
  • Eating contaminated food or feed, Occupational exposure, Mother to child

• Health effects of aflatoxins
  • Liver diseases/cancer, immune suppression, stunting, delayed recovery from PEM, reduced micronutrient status, aflatoxicosis, death

• Economic & food security effects of aflatoxins
  • Loss of revenue due to product rejections by buyers (industry, exporters markets, aggregators/warehouses, large-scale buyers, consumers
  • Loss of food, livestock & fish, low productivity e.g. low egg-laying capacity
  • Health costs due to disease burden; Loss of productivity due to ill-health
Rational for a National Policy and Technical Regulation for Aflatoxin Control

• Aflatoxin control activities were fragmented and poorly coordinated leading to low impacts and inefficient resource utilization.

• Having a National Policy will enable us to harness the collective skills and strengths of various stakeholders for the efficient management of aflatoxins.

• Nat. Policy spells out the key issues, what needs to be done, what every stakeholder will do, resources required and funding sources

• The policy also aligns with the
  • ECOWAS Aflatoxin Control Action Plan
  • Strategy of the Partnership for Aflatoxin Control in Africa (PACA)

• A TECHNICAL REGULATION is required to
  • Provide guidelines for the enforcement of aflatoxin standards and legislations.
  • Ensure compliance with standards by value actors
Goal, Strategic objectives of the Aflatoxin Policy

- **Vision:** To improve harmonization and coordination of activities among all stakeholders for effective management and control of aflatoxins in food and feed.

- **Goal:** To protect human and animal health and increase income of food value chain actors by reducing aflatoxin contamination in food and feed.

- **Strategic objectives:**
  1. Facilitate the development, harmonization and enforcement of policies, legislations and standards for aflatoxin control
  2. Increase public awareness, advocacy, communication and demand for aflatoxin-safe products
  3. Strengthen research and technology transfer on aflatoxins
  4. Strengthen surveillance systems for the detection of aflatoxin-related diseases
  5. Develop mechanisms for strengthening consumer protection
  6. Increase domestic and international trade in aflatoxin-safe products
  7. Mobilize resources for aflatoxin-related activities.
Achievements

• Technical Regulation for aflatoxin control in maize enacted by Ghana’s parliament in December 2020
• Four Ministries (MOFA, MOTI, MOH, MESTI) have endorsed and will own the policy
• Draft Policy going through Cabinet’s approval process
• Different categories of Stakeholders sensitized on the policy and technical regulation
• Heightened awareness and interest by stakeholders in Aflatoxin issues
  • Farmers & Institutions contacting us for advice & collaboration
  • Media interest and reportage has increased
Sustainability

• The policy has an implementation plan with key activities, roles, budget, & funding sources
• Resource Mobilization and M&E plan developed
• National Steering Committee for Aflatoxin Control (NSCAC) inaugurated to ensure sustained interest & investments
• Project proposals being developed to seek funding e.g. STDF PPG already secured.
• Stakeholder sensitization and collation of project ideas

• Key lesson: Policy development is complex. It requires adequate resources, time and the patience of all stakeholders and funders
Thank You

Rose Omari, rose.omari@yahoo.com; romari@csir-stepri.org
Aflatoxin-safe Maize
Integrated Value Chain Approach

Kwame A. Boateng
SAHEL-AT-A-GLANCE

- Founded in 2010 with the vision of applying the highest food safety standards to traditional African foods. We believe that there should be no tradeoff between tradition, taste, and health.

**Description**

- 25,000 metric ton primary processing capacity
- 10,000 metric ton storage
- Dozens of field equipment (tractors, planters, trucks, etc)

**Facilities**

**Products**

- Aflatoxin-safe maize;
- Poultry maize;
- Faast Mmori koko (FDA, GSA approved, and endorsed by the Paediatric Society of Ghana);
- Faast Banku Mmori (FDA, GSA approved);
- Faast Banku Mmori (bucket type for restaurants)

**Selected customers**

- Faast Mmori line of products: ShopRite, Game, MaxMart, The Buka Restaurant, Opoku Trading, China Mall, etc
- Aflatoxin-safe maize: Nestle, Instant Delights (our first export to the UK)
- Feed maize: Raanan Fish Feed, Flour Mills of Ghana
YADIS

Framework for smallholder engagement

Template on how to incorporate improved quality (and health) in smallholder engagement; also addresses how to begin to think about the export market

AGRA Partnership

Youth agripreneurs
• 300 youth farmers;
• Average acreage between 2-3 ha;
• Immersive entrepreneurship and leadership training;
• Agronomic training;
• Input support

Sahel Grains
• Implementing partner;
• Mechanized input support (planting, threshing, ploughing);
• Primary market access;
• Primary processing with full suite of equipment;

Nestle
• Defines quality standards and works with all parties, including participating in agripreneur outreach and training, to reach there;
• Final demand backstop;

AGRI-LINKS
Examples of Aflatoxin Work Results

- Supplier of maize to Nestle for Cerelac (less than 3 ppb)
- Endorsed by Paediatric Society of Ghana
- Maize exports to the EU
- FDA and GSA certified
HOW DO WE ACHIEVE THESE AFLATOXIN RESULTS?

<table>
<thead>
<tr>
<th>Field Services</th>
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<tbody>
<tr>
<td>Training on all our quality metrics – mycotoxins (aflatoxin, fumonisin);</td>
</tr>
<tr>
<td>Really compromised maize can’t be cleaned properly, no matter how great the equipment you have</td>
</tr>
<tr>
<td>Mechanized services to anchor farmer relationship</td>
</tr>
<tr>
<td>As a supplement to, not a replacement of, field level work;</td>
</tr>
<tr>
<td>Onsite aflatoxin testing is crucial for rapid quality monitoring</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary processing</th>
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</thead>
<tbody>
<tr>
<td>Extends quality approach to our traditional foods that we process;</td>
</tr>
<tr>
<td>Quality concerns at this point extends beyond aflatoxin to include metal residues, water contamination</td>
</tr>
<tr>
<td>Important to keep in mind that there are additional sources of health risk</td>
</tr>
<tr>
<td>Aflatoxin safety as a marketing attribute is can’t be a primary sales driver for the mass market;</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Secondary processing</th>
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<tbody>
<tr>
<td>Sales</td>
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</table>

**Description**
Nestle as Pivot For International Markets

Started with Nestle supply relationship

Took lessons from Nestle and applied to traditional Ghanaian fermented corn

Successfully applied lessons from Nestle to UK maize exports
Kwame A. Boateng
Sahel Grains Ltd.

Kwame@sahelgrains.com
Seed industry development in Rwanda

François NSENGIYUMVA
Chairperson of Rwanda Agriculture and Livestock Chamber | Private Sector Federation
Make Rwanda the HUB of high quality seeds in the region
Background

• GoR used to import and distribute seeds mainly from Kenya, Zambia and Tanzania 2007-2019 (100% hybrid maize, wheat and soya bean)
• The subsidy program was costing about 10 Millions USD per year
• It was so difficult to meet the seasonal timelines
• Some times there were gaps in quality and quantities
• 2016 GoR came out with Seed Policy that was emphasizing on the role of Private sector to develop the seed Industry in Rwanda
• 2018-2019 AGRA came in with Catalytic role to make the Seed Policy and Law effective
Achievements

• MoU to develop the private led seed industry signed between GoR and Private Sector Federation in January 2020
• Early 2021, GoR Privatized the Seed Processing Plant
• Now 30 private seed companies are operational in seeds production, processing and marketing in Rwanda

• For the first time, all seeds needs (hybrid maize:4000MT, wheat:1000MT and soyabean:600MT) for ongoing season 2022A are 100% covered by local produced seeds by private companies
• Smallholder farmers are timely receiving high quality seeds
• Based on seeds value chains, the seeds companies are organized in seed chapters and the National seed Consortium for self coordination and regulation
Challenges

• Adoption rate of the use of improved seeds is still below 30%
• Luck of skills in variety planting material management and maintenance
• 100% vegetable seeds are still imported
• Adapted financial products and financing mechanism to provide required capital
• Climate change effects
• COVID-19
Way Forward

• Private Companies are determined to increase the adoption rate of the use of improved seeds and make Rwanda the HUB of high quality seeds in the region

• Permanent public and private dialogue to discuss policy issues and strategies,
Way Forward

• Strengthen the seed Chapters and Consortium
• Inhouse capacity building development
• Set up a financial mechanism well tailed to the seed industry financial cycle and challenges.
Thank You!

Francois NSENGIYUMVA
francois6812@gmail.com
Digitization of the distribution of the subsidized Agro-inputs in Rwanda, 

*Smart Nkunganire System (SNS) case study,*

By BK TecHouse Ltd.

Presented by Jean Claude U. Munyangabo
SNS Overview,

*Digitizes the supply chain for the Rwanda Inputs Subsidy Program in Public Private Partnership (PPP) between RAB & BK TecHouse.*
System overview & so far achieved PPP Tasks

**Public Private Partnership**

PPP between BK Techouse and the Rwanda Agriculture & Animal Resources Development Board, concluded in 2017

**Digital Supply Chain**

Smart Nkunganire System, a Supply Chain management system to digitize the Rwanda Agro Inputs Subsidy Program

**Season 2021 a**

1.3M registered farmers,
694,000 Active farmers
Bought 21B RWF (~$21M USD)
Avg. order ~50K RWF ($50USD)
1,300 Agro-dealers
416 Sector Agronomist
32 Suppliers
15 crops

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**SNS**

Developed and operated by BK Techouse in partnership with RAB to digitize the Rwanda Inputs Subsidy Program

**SNS is designed to:**

Increase program impact
Increase program efficiency and
Accelerate Public Private Cooperation.

**SNS current scope:**

SNS in its current state digitizes the supply chain of subsidized seeds and fertilizers from the farmer order to farmer acquisition of inputs
3 Years SNS Scale up roadmap (2021-2023)

A 3 years grant from the Bill and Melinda Gates Foundation (BMGF), was awarded in late 2020 to support the scale and expansion of SNS with impact goals around Farmer productivity, Financial Inclusion and Value Chain Digitization.
## Targeted Key Performance Areas

### Targeted improvements

<table>
<thead>
<tr>
<th>Access to agro-inputs</th>
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<tbody>
<tr>
<td>Financial &amp; Digital Literacy</td>
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<tr>
<td>Access to affordable credit, insurance and pymts</td>
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<tr>
<td>Access to structured and stable market</td>
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<tr>
<td>Digitization of value chains</td>
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<tr>
<td>Digital Farmer Profile</td>
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<tr>
<td>Digital Financial Inclusion</td>
</tr>
<tr>
<td>Connected SNS Ecosystem</td>
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<tr>
<td>Digital best practices</td>
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### Desired impact

| Farmer productivity and Income |
| Effective access to digital farmer services |
| Improved risk tolerance for inputs financing |
| Consistent income & farmer incentive to invest |
| Value chain efficiency and SMEs enablement |
| Customized digital financial services |
| Lower Credit Risk for Small Scale Producers |
| Small Scale Producers Digital adoption |
| Public Good Insights that can be replicated |

The BMGF Grant essentially “closes the loop” with SNS, delivering full-life cycle services and developing the capacity to sustainably deliver profitable and affordable services to the SNS farmer community.

**SNS platform**

- Farmer Registration
- Agri-Dealer Enrollment
- Aggregate Input Demand
- Secure Input Supply
- Financial services
- Advisory services
- Farmer Acquires Inputs
- Agri-Dealer Acquires Stock
- Farmer Orders Stock
- Farmer Orders Inputs
- Post harvest market linkages

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The BMGF Grant essentially “closes the loop” with SNS, delivering full-life cycle services and developing the capacity to sustainably deliver profitable and affordable services to the SNS farmer community.
Thank you!

Contact for more details:
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Email: bktechouse@bk rw
Phone no: +250 788 143 000
USAID/Rwanda perspective to agricultural transformation

Strategy and Actions

Patrice Hakizimana
Strategic framework

CDCS goal: Rwanda has the strengthened human capital, robust private sector and accountable institutions required to advance self-reliance.

PROSPER purpose and CDCS DO3 Objective: To catalyze private-sector led economic growth in Rwanda that is sustainable and inclusive.
PROSPER intermediate results

- Enabling environment for private sector strengthened,
- Agriculture modernized as a driver of growth and,
- Youth and women’s employment and entrepreneurship increased.
Seed systems development

Purpose: Building a commercially viable seed industry led by private sector.
Objectives

• Increasing the production and utilization of improved seeds;
• Enhancing the operational capacity of the domestic seed market system and;
• Supporting and operationalizing policies that regulate the seed sector
Major interventions

- PPDs to improve coordination, collaboration and address policy and operational issues: private sector leading the seed business and government taking the regulatory and facilitating roles.
- Strengthening Government capacity to regulate the seed sector: policy reform and operationalization of seed law and regulations, improve seed inspection and certification services.
- Increase private sector investment in seed industry through development of appropriate financial mechanisms.
- Awareness creation for more use of improved seeds by farmers;
- Digitization of seed certification, distribution and marketing services.
Thank you for your attention