CHALLENGES AND OPPORTUNITIES FACING AGRICULTURE IN AFRICA

Seed Industry Perspective

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Global Development
CHALLENGES ARE INEVITABLE, FAILURE IS OPTIONAL

**External Challenges**
- Political – Food security, at any cost!
- Economic – Global recessions
- Social – Anti-technology
- Technological – Adoption of modern tools
- Environmental - Climatic
- Legal – Land and Water issues

**Internal Challenges**
- Start-ups (birth pains)
- Expansion (growth pains)
- Succession (aging pains)
GEOPOLITICAL MOVES & COMPETITION

- Africa’s human and natural resources will continue to attract global interest

- The ‘look East’ nicking with the “Go global” policies
  - India-Africa Summits
  - China-Africa Summits
  - Agri-business interests
CHINA AGRICULTURAL PROWESS

China has achieved outstanding poverty reduction through agricultural development...


(Percnet of Population)

The fall in the poverty rates in China account for MOST of the world’s fall in poverty between 1985 and 2005, and agriculture, as the sector most of the rural population works in, is the main contributor.

...China gaining position to help with Africa’s agricultural development

- Plenty of experience gained during China’s internal ag. reform process, e.g. policy, management, model, etc.
- Deep knowledge in SHF-based practical technology
- Strong R&D capacity for potential tech transfer to Africa, illustrated by 60+ Chinese ag research institutes
- Close to 1 mn technicians in China’s internal extension system, with practical skills
- 2,000+ experts with 2+ years experiences in Africa
- Continuous aid to Africa, e.g. ag demo centers, experts, loans and ag-infrastructure construction, etc.
- More and more Chinese companies investing in Africa, bringing in capital and ag engineering technology transfer, e.g. CADFund
China has a long history of development cooperation around agriculture with African countries…

Before 2006:
• China-Africa agricultural cooperation can trace back to 1959, when China provided food aid to Guinea during a famine
• Used to focus on bilateral cooperation, mainly on technology training and ag-infrastructure construction

Since 2006:
• After 2006 FOCAC, agriculture aid has shifted its focus more on sustainability, localization, and synergy between aid projects and business development
• MOFCOM is under pressure to reform foreign aid practices in recent years
• There are three main forms of ag aid:
  • Ag technology demonstration center
  • Sending senior experts to Africa to facilitate and advise local policy-making, industrial development, etc.
  • Sponsoring African technician for training on management, technology, etc. in China

…and recent years have witnessed extensive scope of cooperation

• $2.5 bn ag aid pledged by top-level Chinese gov’t from 2009~2012 showed strong emphasis from top
• By 2009, 47 irrigation projects had been built in Africa
• China designed and established together with African countries nearly 90 farmlands in Africa
• China sent out 104 senior agricultural scientists/practitioners to 33 African countries through bi-lateral channels to provide technical consultation during 2006-2009, particularly on national agricultural planning and development
• By 2012, more than 20,000 African agriculture personnel have been invited to take short-term training courses in China
At the Beijing Summit of FOCAC in 2006, President Hu Jintao announced the establishment of ADCs.

Over $100 million has been spent purely for ADC construction, with comparable size of funding from private sector as well as public concessional loans.

Three main functions are:
- experiment and research
- technology demonstration and training
- serving as platform for private investment

ADC is one key format of Ag Aid...

... and they have been set up throughout SSA
• Agricultural subsidies and land tenure policies changing farming structures

• Farm lobbies by urban-based, educated politically influential leaders may shift the power from consumers to producers

• Households whose primary residence is urban control 10-30% of national land (Jayne et al 2015)

• Farming becoming profitable for those with capital to acquire good land and modern inputs

• The new emerging segment requires creativity in the use of the media including digital platforms
**SOIL DEGRADATION & BROKEN SEED SYSTEMS**

- Monoculture reducing soil organic carbon to very low levels
- Yield gains severely affected
- More fertilizers, soil management practices, other soil augmenting practices critical to ensure sustained yields
- Most subsidy driven programs increased production from area and not yield (Zambia, Malawi, Kenya)
- More holistic approach going beyond individual inputs like seed

<table>
<thead>
<tr>
<th>Country</th>
<th>Yield t/ha</th>
<th>Hybrid adoption</th>
<th>Varietal turnover</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>3.3</td>
<td>40%</td>
<td>15 years</td>
<td>Yields driven by fertilizers</td>
</tr>
<tr>
<td>Uganda</td>
<td>2.6</td>
<td>29%</td>
<td>10 years</td>
<td>Young seed industry, poor quality seed</td>
</tr>
<tr>
<td>Zambia</td>
<td>2.5</td>
<td>54%</td>
<td>10 years</td>
<td>Rich soils, low fertilizer use and growing seed industry</td>
</tr>
<tr>
<td>Malawi</td>
<td>2.4</td>
<td>43%</td>
<td>+15 years</td>
<td>Adoption driven by seed and fertilizer subsidies</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1.7</td>
<td>20%</td>
<td>+15 years</td>
<td>Small seed industry, poor quality seed</td>
</tr>
<tr>
<td>Kenya</td>
<td>1.5</td>
<td>57%</td>
<td>+18 years</td>
<td>Dominance of gvt seed company</td>
</tr>
<tr>
<td>Tanzania</td>
<td>1.3</td>
<td>15%</td>
<td>+15 years</td>
<td>Poor quality seed, low fertilizer use</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>1.1</td>
<td>76%</td>
<td>+15 years</td>
<td>Very low access to fertilizers, poor economy</td>
</tr>
</tbody>
</table>
DEMOGRAPHIC FACTORS

The graph shows the total rural population (in millions) for different regions and countries over the years from 1950 to 2050. The regions and countries include China, India, Sub-Saharan Africa (SSA), Other South Asia, and South-East Asia. The graph indicates a significant rise in rural populations in these regions, particularly in China and India, with India showing a peak around 2015. The population trends suggest a decline in rural populations in China and South-East Asia after reaching their peaks, while other regions continue to show growth.
An addition of 1.3 billion people between now and 2050 is staggering - It means a bigger market (more mouths to feed/bellies to fill)

Greater pressure on infrastructure, education, health, communication, transport

Need for new jobs – 17M/year youth entering the labour market for the next 10 years - Non-farm and urban to absorb about 65%

Need for public policy, appropriate technology investments to improve incentives and profitability of farming to attract the youth

Modernization of the food systems and diets
PARTNERSHIPS FOR AGRICULTURAL TRANSFORMATION

Public – Private – Philanthropy Partnership (4P) for a sustainable win-win political, profitable, social, economic benefits

Right farmer in Right Segment

- **2X2 segmentation** (Ag potential X Market Access)
  - Ag potential – land suitability for rainfed crop production; long-term ave temp, rainfall, slope, soil type (depth/texteure/fertility) across crops
  - Market access is the time it takes to access a centre with at least 100k people – 2,3 or 4 hours
  - We aim for segments where production will be profitable

Right Tools

- Tools & technologies must be demand-driven to systematically address farmer needs
- We will simulate and model impact of the intervention packages

Right Policies

- We work with governments to develop right policies to create the right implementing environment to drive private-sector led growth
- Policies that promote trade help the farmers maximize net farm value

Creation of rural economies in virtuous cycle where investment in productivity increases incentives for rural processors to invest in value-added activities close to production and vice-versa
Data Source: World Development Indicators, FAO via the World Bank
ASANTE!
THANK YOU!