Facts about Zambia Agriculture Sector

Antony Chapoto, PhD
Presented at the Duo Western/Southern Provincial Outreach Meeting
Livingstone, 13th November, 2015
Why this Presentation?

Highlight key facts about Zambia’s Agriculture
• Discuss key policy levers to achieve broad based pro-poor agricultural growth in Zambia

Dialogue with MAL District and Provincial Staff
• help trigger and implement agriculture policy changes that will change the structure of agriculture in order to achieve broad based poverty reduction.

Set the stage for the other presentations in this workshop
• Agricultural diversification
  • Crops
  • Fish & Livestock
• Climate change and natural resources issues
Presentation outline

- Zambia
- Agricultural development goals
- Stock-taking: Where are we?
- Where do we what to go?
- How do we get there?
- Concluding remarks
Zambia Ag. Development Goal

Reduce poverty through broad-based income growth for those in the agricultural sector
Malabo Declaration, 26-27 June 2014

To uphold Maputo declaration of allocating at least 10% of public expenditure to agriculture

To sustain annual agricultural GDP growth of at least 6%

To end hunger and cut poverty in half by 2025

To accelerate agricultural growth by doubling current agricultural productivity levels by 2025

To halve Post-Harvest Losses by the year 2025

To triple agricultural intra-African trade by 2025

To eliminate child under-nutrition by bringing down stunting to 10% and underweight to 5% by 2025

Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods
Where are we?
Zambia’s Economic Achievements

- Zambia
  - Classified as low-middle income by World Bank
  - GDP growing at 6% per annum
  - Agricultural growth rate at 7% - above 6% CAADP Goal
  - Three consecutive maize bumper harvest years
Rural Poverty in Zambia

Source: GRZ’s Central Statistical Office and RALS 2012 and 2015

HOW CAN WE HELP THE FARMERS?
Rural Poverty: Southern Province
Rural Poverty: Western Province
Persistently low maize yields

Can Zambia achieve this target under the current agricultural policies?

Sources: MAL/CSO Crop Forecast Surveys, 2006/07 - 2013/14
Western Province: Maize Yields

Source: RALS 2015
Average yields of key commodities compared to global average

Source: CFS datasets, various years with Global figures obtained from COMESA
Progressive Policies

- Open borders
- E-voucher Piloting
- Agricultural Diversification
  - Fisheries and Livestock
  - Irrigation
- Private sector led investments

More support for progressive policies!!!
Where do we want to go?
ZAMBIA OPEN FOR BUSINESS

- Diversified Agricultural Sector
- Hunger Free Zambia
- Private sector led agricultural growth
- Zero Post harvest Losses
- High agricultural GDP growth
- Breadbasket of the Region
- Lower rural poverty rates
- Open Borders
- Zero malnutrition
Under exploited potential

Zambia is in a unique position

- Abundance of fertile land
- Water
- Generally, favorable climate for agricultural production
- Growing population, rapid urbanization and rising incomes creating more opportunities for smallholder farmers
- Can easily become a ‘Breadbasket’ for the region

Are Zambia’s agricultural policies amenable to these opportunities?
How do we get there?
Evidence  Evidence  Evidence  Evidence  Evidence  Evidence  Policy
Appreciating the underappreciated facts about Zambia agriculture
Fact # 1

Many smallholder households are land constrained

- More than 25% have less than 0.5 ha of land
- 58% indicate there is no unallocated land in village
Percent of smallholder that say “There is NO land available”

Source: RALS 2015
Why are Zambia Farmers land constrained?


Considerable land is covered by water, national parks, GMA

Settlements concentrated on areas with infrastructure

Hence, the land constraints in a land-abundant country is not a paradox

Fact # 2

- Nearly 30% of rural farm HHs are net buyers of maize
  - More than 50% of rural farmers do not sell maize

Net Buyers Negatively affected by high FRA maize prices

Source: RALS 2012
Western has more than 50% of the households who are net buyers

Source: RALS 2012
Fact # 3

- Highly concentrated patterns of maize surplus generation
  - 2-5% of smallholder farm households account for 50% of marketed maize
  - Maize surplus generation is highly associated with area cropped and household assets
## Highly concentrated patterns of maize surplus production, Zambia

<table>
<thead>
<tr>
<th></th>
<th>2001/12</th>
<th>2012/13</th>
<th>2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households reporting that they will sell maize (N)</td>
<td>647,937</td>
<td>606,736</td>
<td>619,880</td>
</tr>
<tr>
<td>Proportion of farms accounting for 50% of total expected maize sales (N and %)</td>
<td>72,052 (6%)</td>
<td>64,134 (5.2%)</td>
<td>70,095 (4.8%)</td>
</tr>
<tr>
<td>Households not selling maize</td>
<td>46.5%</td>
<td>50.7%</td>
<td>53.1%</td>
</tr>
</tbody>
</table>

Source: MAL/CSO Crop Forecast Survey
Government expenditure on FISP is benefiting mostly the larger and relatively already well off HHs with very little impact on yields and poverty reduction.
## Land size, poverty and FISP in Zambia

<table>
<thead>
<tr>
<th>Total area cultivated</th>
<th>Number of farms</th>
<th>% of farms</th>
<th>% of farms receiving FISP fertilizer</th>
<th>kg of FISP fertilizer received per farm household</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
<td>(E)</td>
</tr>
<tr>
<td>0-0.99 ha</td>
<td>515,415</td>
<td>34.1</td>
<td>83</td>
<td>18</td>
</tr>
<tr>
<td>1-1.99 ha</td>
<td>503,656</td>
<td>33.3</td>
<td>80</td>
<td>39</td>
</tr>
<tr>
<td>2-4.99 ha</td>
<td>408,169</td>
<td>27.0</td>
<td>68</td>
<td>50</td>
</tr>
<tr>
<td>5-9.99 ha</td>
<td>70,822</td>
<td>4.7</td>
<td>35</td>
<td>61</td>
</tr>
<tr>
<td>10-20 ha</td>
<td>14,316</td>
<td>0.9</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,512,378</strong></td>
<td><strong>100.0</strong></td>
<td><strong>75</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

Source: RALS 2012
Import and export bans do not help to keep grain prices within reasonable bounds for consumers and producers?
When grain prices spike above import parity, consumers are being unnecessarily taxed by an inefficient market

Import ban/restriction

When grain prices fall below export parity, producers are denied income opportunities from crop sales

[Export Ban]
Zambia: Maize Market + Ad-hoc Policies

- Deficit years
- World Food Crises
- Bumper harvest

Nominal US$ per metric ton

Year:
- 1994
- 1996
- 1998
- 2000
- 2002
- 2004
- 2006
- 2008
- 2010
- 2012
- 2014

Price:
- CIF from South Africa
- Lusaka wholesale price
Export bans and trade restrictions

- Generally doesn’t stop trade from occurring but raises smuggling costs, which depress prices for farmers and raise costs for consumers.
The majority of farmers selling maize to a private trader do it in their village even in the most remote and isolated areas.

- Long distances traveled by about 10% of the smallholder population to sell maize is generally not indicative of severe market access problems.
- Reasonable degree of competition among village level grain assembly traders exists.
## Distance to nearest largest maize sale transaction to private assembly traders

<table>
<thead>
<tr>
<th>Percentile of farm household distribution</th>
<th>Distance to nearest Boma (km)</th>
<th>Distance to nearest private assembly traders (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>37</td>
<td>6.9</td>
</tr>
<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>6.0</td>
<td>0.0</td>
</tr>
<tr>
<td>25&lt;sup&gt;th&lt;/sup&gt;</td>
<td>13.0</td>
<td>0.0</td>
</tr>
<tr>
<td>50&lt;sup&gt;th&lt;/sup&gt;</td>
<td>30.0</td>
<td>0.0</td>
</tr>
<tr>
<td>75&lt;sup&gt;th&lt;/sup&gt;</td>
<td>58.0</td>
<td>3.0</td>
</tr>
<tr>
<td>90&lt;sup&gt;th&lt;/sup&gt;</td>
<td>80.0</td>
<td>21.0</td>
</tr>
</tbody>
</table>

Sources: Zambia: MACO/CSO Crop Forecast Surveys 2011
“How many private traders come into this village to buy maize from farmers?”

Sources: Zambia: MACO/CSO Crop Forecast Surveys 2011
Market intermediation by traders bridge the geographic distances between farmers and urban markets weakening the link between geographic location and market access.

So called “Briefcase Traders” play a key role in providing a market for farmers in remote and isolated areas.
Realigning Zambia’s Agricultural Budget to more productive Investments
Budgetary Allocations to Agriculture

Includes allocations via other Ministries

<table>
<thead>
<tr>
<th>Year</th>
<th>Allocation to Agriculture (K' million)</th>
<th>% of Agriculture to National budget (right Y-scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>7.2%</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>9.3%</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>6.5%</td>
<td></td>
</tr>
</tbody>
</table>
Where should the funds be invested?

- Quality expenditure of the funds is critical to achieve sustained agricultural growth
- There is need for effective investments in the key drivers of agricultural growth
  - agricultural R&D
  - extension services
  - livestock production and disease control
  - rural infrastructure i.e. feeder roads
  - Irrigation
### Ranking of Returns of Investment in Poverty Reduction: Evidence from Asia and Africa

<table>
<thead>
<tr>
<th>Investment Category</th>
<th>China</th>
<th>India</th>
<th>Thailand</th>
<th>Vietnam</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural R&amp;D</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Roads</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Education (Agricultural Extension Services)</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Political economy of public resource allocation

- **Government budget**
  - Long-term productive investments: R&D, infrastructure, education, etc.
  - High social payoffs
  - But payoffs come 5-20 years later
  - Critical for sustained poverty reduction

- **Input subsidy programs**
  - Marketing board price supports

- Presumably have **Immediate political payoffs**;
  - Visible support to constituencies
  - Contribution to sustained growth / poverty reduction is unclear
Allocations to Poverty Reduction Programmes

2016 Budget allocation

- Quality of expenditure?
- Too little to key drivers of agricultural growth
  - agricultural R&D
  - extension services
  - livestock production and disease control
  - rural infrastructure i.e. feeder roads
  - Irrigation

Allocations to Poverty Reduction Programmes

Personnel Emoluments
K462 [15%]

Grants & Other Payments
K92 [3%]

FISP 56%

FRA 42%

All Other 2%

Allocation to PRPs K1,793m
# Budget Allocations Versus Releases

<table>
<thead>
<tr>
<th>Main Budget Lines</th>
<th>2015 Allocations (K' million)</th>
<th>Released by Sept 2015 (K' million)</th>
<th>% Released</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Emoluments</td>
<td>449</td>
<td>270</td>
<td>60%</td>
</tr>
<tr>
<td>Recurrent Departmental Charges</td>
<td>365</td>
<td>128</td>
<td>35%</td>
</tr>
<tr>
<td>Grants and Other Payments</td>
<td>91</td>
<td>68</td>
<td>75%</td>
</tr>
<tr>
<td>Poverty Reduction Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o/w FRA</td>
<td>2,377</td>
<td>2,902</td>
<td>122%</td>
</tr>
<tr>
<td>o/w FISP</td>
<td>993</td>
<td>1,135</td>
<td>114%</td>
</tr>
<tr>
<td></td>
<td>1,338</td>
<td>1,510</td>
<td>113%</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>148</td>
<td>67</td>
<td>45%</td>
</tr>
<tr>
<td>Agricultural show</td>
<td>11</td>
<td>10</td>
<td>91%</td>
</tr>
<tr>
<td>Agricultural Development Programs</td>
<td>646</td>
<td>136</td>
<td>21%</td>
</tr>
<tr>
<td>Total</td>
<td>4,108</td>
<td>3,588</td>
<td>87%</td>
</tr>
</tbody>
</table>
Why Frequent Negative Returns for Subsidies Programs?

- Subsidized inputs crowd out the private sector deliveries & discourage investments in new private input dealer networks
- Misallocation and inefficiencies – leading to unsustainable fertilizer use
- Diversion and rent seeking raises incomes of some but does little to raise crop productivity
- Late delivery of inputs does not improve productivity
Concluding remarks

Zambia has:

• potential to have broad-based economic growth;
• potential to address the stubbornly high rural poverty rates and high malnutrition;
• potential to be the ‘breadbasket for the region’;
BUT......

- We should not expect different results from the same policies
- Policies should evolve and take advantage of the many agricultural opportunities arising from the rising food demand, rising urban incomes and the changing consumption patterns.
If governments intervenes too heavily, then markets will not develop

- We aught to have a system where private sector takes the lead in linking producers and consumers to the market not the other way around.
- Governments’ role should be limited to providing clear policies and regulations to enhance value chain activities.
Thank You
Zambia has one of the highest rates of child malnutrition in the world.