2019 Budget Analysis on Agricultural Diversification and Value Addition

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Presentation at a the Analysis of the 2019 Budget from the Perspective of Agricultural Diversification and Value Addition

Radisson Blu Hotel, Lusaka
27th November, 2018
Flow of the Presentation

1. Benefits of Ag Diversification and Policy Pronouncements
2. Overview of Agricultural Diversification
3. Ag Diversification Opportunities
4. 2019 Budget Analysis on Ag diversification
5. Conclusion and Way Forward
Benefits of Ag Diversification

- Increased productivity as there is less risk to crop failure and in turn reduce poverty
- Prevents soil erosion as land is under cultivation throughout the year
- There is regular and quicker returns obtained from various enterprises
- Enables crop rotations and provides more profitable use of farm equipment and job creation
A diversified and export oriented agriculture is recognised as one of the key drivers of economic transformation.

7NDP - ”emphasizes on diversification away from maize to other high value crops coupled with agro-processing as being essential to socio-economic development”.

SNAP – Promote diversification for agricultural production and utilization.

CAADP - ”increase sustainable crop production, productivity, and value addition for a diversified range of competitive crops apart from maize.” (MAL 2013).
Overview of Agricultural Diversification
## Trends in Crop Diversification - Simpson Index

<table>
<thead>
<tr>
<th>Region</th>
<th>2004</th>
<th>2008</th>
<th>2012</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>.44</td>
<td>.33</td>
<td>.38</td>
<td>.36</td>
</tr>
<tr>
<td>Copperbelt</td>
<td>.38</td>
<td>.26</td>
<td>.27</td>
<td>.27</td>
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<tr>
<td>Eastern</td>
<td>.46</td>
<td>.44</td>
<td>.45</td>
<td>.46</td>
</tr>
<tr>
<td>Luapula</td>
<td>.31</td>
<td>.30</td>
<td>.39</td>
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<tr>
<td>Lusaka</td>
<td>.21</td>
<td>.14</td>
<td>.21</td>
<td>.20</td>
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<tr>
<td>Muchinga</td>
<td>-</td>
<td>-</td>
<td>.52</td>
<td>.49</td>
</tr>
<tr>
<td>Northern</td>
<td>.55</td>
<td>.46</td>
<td>.52</td>
<td>.49</td>
</tr>
<tr>
<td>NorthWestern</td>
<td>.43</td>
<td>.30</td>
<td>.38</td>
<td>.40</td>
</tr>
<tr>
<td>Southern</td>
<td>.30</td>
<td>.27</td>
<td>.30</td>
<td>.29</td>
</tr>
<tr>
<td>Western</td>
<td>.40</td>
<td>.30</td>
<td>.38</td>
<td>.35</td>
</tr>
<tr>
<td><strong>Zambia</strong></td>
<td><strong>.42</strong></td>
<td><strong>.35</strong></td>
<td><strong>.38</strong></td>
<td><strong>.37</strong></td>
</tr>
</tbody>
</table>
Average number of crops grown per household

<table>
<thead>
<tr>
<th>Number of crops</th>
<th>Percent of households</th>
</tr>
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<tbody>
<tr>
<td>1.00</td>
<td>18.2</td>
</tr>
<tr>
<td>2.00</td>
<td>31.7</td>
</tr>
<tr>
<td>3.00</td>
<td>29.3</td>
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<tr>
<td>4.00</td>
<td>13.5</td>
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<tr>
<td>5.00</td>
<td>5.4</td>
</tr>
<tr>
<td>6.00</td>
<td>1.3</td>
</tr>
<tr>
<td>7.00</td>
<td>.4</td>
</tr>
<tr>
<td>8.00</td>
<td>.0</td>
</tr>
<tr>
<td>9.00</td>
<td>.1</td>
</tr>
</tbody>
</table>
% of cultivated area devoted to various crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>All other Crops</td>
<td>6.9</td>
</tr>
<tr>
<td>Gardens</td>
<td>6.15</td>
</tr>
<tr>
<td>Orange Sweet Potato</td>
<td>0.1</td>
</tr>
<tr>
<td>Sweet Potatoes</td>
<td>2</td>
</tr>
<tr>
<td>Cowpeas</td>
<td>0.3</td>
</tr>
<tr>
<td>Mixed Beans</td>
<td>3.2</td>
</tr>
<tr>
<td>Seed cotton</td>
<td>3.3</td>
</tr>
<tr>
<td>Soya Beans</td>
<td>1.5</td>
</tr>
<tr>
<td>Cassava</td>
<td>10.6</td>
</tr>
<tr>
<td>Groundnuts</td>
<td>7.5</td>
</tr>
<tr>
<td>Millet</td>
<td>2.1</td>
</tr>
<tr>
<td>Rice</td>
<td>1.8</td>
</tr>
<tr>
<td>Sorghum</td>
<td>1.1</td>
</tr>
<tr>
<td>Maize</td>
<td>53.6</td>
</tr>
</tbody>
</table>
Share of crops to total quantity produced

- Maize: 71%
- Maize for seed: 2%
- Sorghum: 0%
- Rice: 1%
- Millet: 1%
- Sunflower: 1%
- Groundnuts: 3%
- Sweet Potatoes: 3%
- Irish potatoes: 1%
- Seed cotton: 3%
- Soybeans: 6%
- Pineapples: 0%
- Wheat: 6%
- Mixed beans: 1%
- Virginia Tobacco: 1%
- Seed cotton: 3%
Concerns on Maize Centric Policies

Excessive FRA participation in the maize market promotes maize-centric among smallholder farmers and reduces private sector participation.
But!!

For land constrained smallholder farmers other agricultural enterprises other than maize are much more profitable
Ag Diversification Opportunities
Region IIb:
- Rainfall range 800 – 1,000 mm/annum
- Loamy to sandy soils
- Cassava, sorghum, millet, seseme, cashew nuts, livestock, fisheries

Region I:
- Rainfall Less than 800mm/annum
- Loamy to clay soils
- Cotton, sorghum, millet, seseme, cashew nuts, livestock, fisheries

Region IIa:
- Rainfall range - 800 to 1,000mm/annum
- Inherent fertile plateau soils.
- Maize, cotton, tobacco, sunflower, soybeans, irrigated wheat, groundnuts, flowers, paprika, vegetables, cassava, millet, horticulture, livestock.

Region III:
- More than 1,000mm of rainfall/ annum
- Very deep soils, sandy clay loam.
- Cassava, millet, sorghum, beans, groundnuts, rice, coffee, tea, pineapples, fish farming, livestock.

Crop suitability by agro-ecological zones
Gross margins of cabbage, tomato, and onion are much higher than that of maize: 219 times for cabbage, 179 times for tomato, 138 times for onions.
Livestock Production Opportunities by Province

Cattle Ranching
Small Ruminants
Fish Farming

Cattle Ranching
Dairy
Poultry

Small Ruminants
Fish Farming

Cattle Ranching
Small Ruminants
Fish Farming

Cattle Ranching
Small Ruminants
Fish Farming

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Cattle Ranching
Small Ruminants
Fish Farming

Cattle Ranching
Small Ruminants
Fish Farming

Source: Ministry of Fisheries and Livestock

Indaba Agricultural Policy Research Institute
Livestock Production by Type

Livestock population by type

Baseline (2016)  Planned Target  2018 Performance

Source: Ministry of Fisheries and Livestock
Poultry Production

Production performance by year:

- **2018 Performance**: 

- **Planned Target**: 800,000,000

- **Baseline (2016)**: 200,000,000

Source: Ministry of Fisheries and Livestock

Indaba Agricultural Policy Research Institute
Fish Production Performance

<table>
<thead>
<tr>
<th></th>
<th>Baseline (2016)</th>
<th>Planned Target</th>
<th>2018 Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish Production (MT)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquaculture</td>
<td>30,000</td>
<td>45,000</td>
<td>32,896</td>
</tr>
<tr>
<td>Capture fisheries</td>
<td>83,000</td>
<td>120,000</td>
<td>88,075</td>
</tr>
</tbody>
</table>

Source: Ministry of Fisheries and Livestock
Successes of e-voucher on diversification

**E-voucher promotes diversification**

There is evidence that e-voucher, properly implemented, can support diversification, whereas traditional FISP is a key maize centric policy that constrains diversification.

**Evidence from the previous implementation**

- Some farmers purchased other inputs apart from maize seed and fertilizer, e.g. Veterinary drugs, herbicides, etc.
Problem with reverting to traditional FISP for 40% of farmers is likely to be a major constraint on diversification and is at odds with Government’s stated policy objective on diversification.

Way forward: Re-introduce e-voucher system in 2019 and concentrate on resolving challenges.
2019 Budget Analysis on Ag diversification
% MoA and MFL to total Agriculture Budget in 2018 and 2019

**2018 Allocations**

- MoA, 84.8%: K904.9 million
- MFL, 15.2%: K5,047.7 million

- MoA: K5,047.7 million
- MFL: 78.2% (K4,160.9 million), PE 21% (K1,160.3 million), ADP 57%

**2019 Allocations**

- MoA, 84.8%: K1,160.3 million
- MFL, 21.8%: K4,160.9 million

- MoA: K4,160.9 million
- MFL: 78.2% (K1,160.3 million), PE 16.8% (K4,160.9 million)

Source: Ministry of Finance
# 2019 Allocations within MoA

<table>
<thead>
<tr>
<th>Key spending areas</th>
<th>Allocations in ZMW’million</th>
<th>% of total MoA budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Emoluments</td>
<td>457.9</td>
<td>11.1</td>
</tr>
<tr>
<td>PRPs</td>
<td>2,108.2</td>
<td>51.3</td>
</tr>
<tr>
<td>o/w FISP</td>
<td>1,428</td>
<td>34.7</td>
</tr>
<tr>
<td>FRA</td>
<td>672</td>
<td>16.3</td>
</tr>
<tr>
<td>Recurrent Departmental Charges</td>
<td>108.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Agricultural Development Programs</td>
<td>1,254.4</td>
<td>30.5</td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>7.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Agricultural Show</td>
<td>9.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Grants &amp; other payments</td>
<td>90.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Arrears</td>
<td>73.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Grand total</td>
<td>4,110.2</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Ministry of Agriculture
2019 Budget Speech Key Pronouncements (1)

Positives:
- Re-introduction of e-voucher system and Revision of FRA Act in 2019
- Allocation of K585.7 million to develop irrigation infrastructure
- Promotion of value addition to agricultural produce e.g. fruit and cashew nut processing
- Construction of communication towers across the country
- Proposal to lift ban on exports of raw hides and skin
- These policies have potential to promote diversification and agricultural growth
2019 Budget Speech Key Pronouncements (2)

- We also welcome:
  - Allocation of K483.2 million for Small Ruminants Value Chain Support Project
  - Allocation of K169.2 million for Aquaculture Entrepreneurship Project
  - Allocation of K182.5 million towards rural electrification
  - Upscaling of Social Cash Transfer from K550 million to K699.5 million in 2019
However,

Besides allocations to Climate Resilient Livestock Management and Small Ruminants Value Chain Support Projects, allocations in Ag sector is still business as usual.

Heavy continued spending on traditional FISP and FRA which have not been effective in promoting diversification.
Little expenditure on agriculture research & extension
### Rate of return to agricultural investments: Evidence from Asia

<table>
<thead>
<tr>
<th>Expenditure type</th>
<th>Rank w.r.t. returns to:</th>
<th>Rank</th>
<th>Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agriculture growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural R&amp;D</td>
<td>1</td>
<td>1</td>
<td>35% to 70%</td>
</tr>
<tr>
<td>Roads</td>
<td>2</td>
<td>2</td>
<td>20% to 30%</td>
</tr>
<tr>
<td>Education</td>
<td>3</td>
<td>3</td>
<td>15% to 25%</td>
</tr>
<tr>
<td>Irrigation investment</td>
<td>4</td>
<td>4</td>
<td>10% to 15%</td>
</tr>
<tr>
<td>Fertilizer subsidies</td>
<td>8</td>
<td>8</td>
<td>Negative – 12%</td>
</tr>
</tbody>
</table>

Source: Fan et al. (2008). Expenditure types ranked by returns to agricultural growth.

### Zambia Ministry of Agriculture budget allocations (2019)*

- **FISP**: 50%
- **FRA**: 23%
- **Person Emoluments**: 16%
- **Other**: 7%
- **Operationa l Funds (RDCs)**: 4%

Source: Zambia Ministry of Finance. *excludes donor-funded agricultural development programs.

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**Recommended vs Practice**

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Conclusion

Budget gives hope with regards to going back to 100% e-voucher in 2019/2020 as way of promoting ag diversification.

Generally allocations in Agric sector have maintained same status quo – dismal resources for ag diversification.

There’s evidence that increasing production of high value crops cannot compromise food security.

There’s evidence that agricultural diversification increases levels of household food and nutrition security.
Way Forward

- Increase allocations to extension
- Increase investments in Ag research and development
- Re-introduce e-voucher system in 2019

Risk associated with commodity prices can be minimized by investing more resources in promoting value addition

Invest in road, water, and electricity infrastructure to make markets work
Thank You