Improving Access to Fertilizers

by

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IFDC

Presented at the
International Workshop on Strengthening and Widening Markets and Overcoming Supply Side Constraints for African Agriculture
June 3-5, 2007
Lusaka, Zambia
Cereal Production, 1961–2001
(% change)

South Asia

Sub-Saharan Africa

www.ifdc.org
Per Hectare Fertilizer Use by Markets 2002/03 (kg/ha)

- Sub-Saharan Africa: Developing Markets 8, Developed Markets 20
- Africa: Developing Markets 61, Developed Markets 69
- South Africa: Developing Markets 8, Transitional Markets 84
- North Africa: Developing Markets 202
- Eastern Europe: Developing Markets 8, Developed Markets 93
- South America: Developing Markets 98, Developed Markets 102
- World: Developing Markets 146, Developed Markets 175
- North America: Developing Markets 202
- South Asia: Developing Markets 146, Developed Markets 175
- Asia: Developing Markets 202
- Western Europe: Developing Markets 146, Developed Markets 175
- East Asia: Developing Markets 202
Nutrient Mining in Agricultural Lands of Africa

1995–97

2002–04

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Continent in need of fertilizer is well endowed with fertilizer resources
Significant Phosphate Deposits of Africa

[Map showing phosphate deposits in Africa with markers for sedimentary and igneous deposits]

www.ifdc.org
Significant Potential Nitrogen and Potash Resources of Africa

Sources for Nitrogen Production
Oil, Natural Gas, Coal

Potash Sources
The Africa Fertilizer Summit
Abuja, Nigeria, June 9-13, 2006

An AU/NEPAD Initiative
Implemented by IFDC
Guiding Principle

- Inorganic fertilizers are essential for agricultural growth in Africa – but they are not enough

- Holistic approach needed to improve:
  - **Access**: Increase volume, range, and quality of inputs using commercial channels
  - **Affordability**: Reduce the price of all inputs
  - **Incentives**: Improve functioning of the output markets
Abuja Declaration

Fertilizer is a Strategic Commodity
Without Borders

Twelve Resolutions Adopted

www.africafertilizersummit.org
AFS- Priority Actions

- Agro-dealer development
- National Agricultural Input Credit Guarantee Facilities
- “Smart” subsidies for the poor and vulnerable
- Regional procurement and production to realize economies of scale
- Fertilizer Development Financing Mech.
Selected COMESA Countries
Total Fertilizer Production 1994 and 2004

- Zambia
- Mauritius
- Zimbabwe
- Libya
- Egypt


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Selected COMESA Countries
Total Fertilizer Consumption 1994 and 2004


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Selected COMESA Countries
Total Fertilizer Exports 1994 and 2004

Mauritius

- 1994: 6
- 2004: 17

Egypt

- 1994: 203
- 2004: 294

Libya

- 1994: 0
- 2004: 332

Selected COMESA Countries
Total Fertilizer Imports 1994 and 2004

- **Libya**: 73,000 mt (1994), 13,000 mt (2004)
- **Zimbabwe**: 63,000 mt (1994), 24,000 mt (2004)
- **Mauritius**: 53,000 mt (1994), 53,000 mt (2004)
- **Zambia**: 53,000 mt (1994), 60,000 mt (2004)
- **Sudan**: 77,000 mt (1994), 60,000 mt (2004)


www.ifdc.org
Constraints Fertilizer Market Development

- Market Development-Related Constraints
- Technical Constraints
- Infrastructural Constraints
Market Development
The Five Pillars of Market Development

- Policy
- Human Capital
- Finance
- Market Information
- Regulation
Infrastructural
## Freight Charges Through Alternative Routes in Zambia

<table>
<thead>
<tr>
<th>Route Description</th>
<th>US $/ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Johannesburg—Lusaka</td>
<td>90</td>
</tr>
<tr>
<td>Lusaka—Kasama/Kapiri</td>
<td>50</td>
</tr>
<tr>
<td>Ia. Total</td>
<td>140</td>
</tr>
<tr>
<td>Ib. Dar-es-Salaam—Kapiri/Kasama</td>
<td>50</td>
</tr>
<tr>
<td>Ic. Net savings in transportation cost via DSM route (Ia minus Ib)</td>
<td>90</td>
</tr>
<tr>
<td>II. Johannesburg—Lusaka</td>
<td>90</td>
</tr>
<tr>
<td>Lusaka—Chipata</td>
<td>40</td>
</tr>
<tr>
<td>IIa. Total</td>
<td>130</td>
</tr>
<tr>
<td>IIb. Nacala to Chipata</td>
<td>60</td>
</tr>
<tr>
<td>IIc. Net savings in transportation cost via Nacala route (IIa minus IIb)</td>
<td>70</td>
</tr>
</tbody>
</table>

Source: Action plan team calculations.
Technical
### Fertilizer Products in Malawi

<table>
<thead>
<tr>
<th>Products</th>
<th>N</th>
<th>P2O5</th>
<th>K2O</th>
<th>S</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>46</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CAN</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>AS</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>AN</td>
<td>34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>DAP</td>
<td>18</td>
<td>46</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SSP</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TSP</td>
<td>0</td>
<td>46</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MOP</td>
<td>0</td>
<td>0</td>
<td>60</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SOP</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>23-21-0+4S</td>
<td>23</td>
<td>21</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Compound B</td>
<td>4</td>
<td>15</td>
<td>18</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Compound C</td>
<td>6</td>
<td>15</td>
<td>18</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Compound D</td>
<td>8</td>
<td>18</td>
<td>15</td>
<td>6</td>
<td>0.1</td>
</tr>
<tr>
<td>Compound J</td>
<td>15</td>
<td>5</td>
<td>20</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>Compound S</td>
<td>6</td>
<td>17</td>
<td>6</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>Compound 3D</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Compound 321</td>
<td>12</td>
<td>19</td>
<td>5</td>
<td>3</td>
<td>0</td>
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<tr>
<td>Compound Super B</td>
<td>5.4</td>
<td>20</td>
<td>24</td>
<td>6</td>
<td>0.1</td>
</tr>
<tr>
<td>Compound Super C</td>
<td>8</td>
<td>20</td>
<td>24</td>
<td>6</td>
<td>0.1</td>
</tr>
<tr>
<td>Compound Super D</td>
<td>10.5</td>
<td>20</td>
<td>24</td>
<td>6</td>
<td>0.1</td>
</tr>
</tbody>
</table>
### Potential Savings From an Efficient Marketing System

<table>
<thead>
<tr>
<th>Item</th>
<th>Landlocked Country (US $/ton)</th>
<th>Coastal Country (US $/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvements in market assessment, procurement, and logistics</td>
<td>50-100</td>
<td>40-50</td>
</tr>
<tr>
<td>Importation of bulk with local bagging</td>
<td>10-20</td>
<td>15-30</td>
</tr>
<tr>
<td>Importation of bulk with local blending and bagging for NPK fertilizers</td>
<td>25-40</td>
<td>30-50</td>
</tr>
<tr>
<td>Improvements in marketing and distribution (transportation, storage, delivery, interest charges, etc.)</td>
<td>30-40</td>
<td>30-40</td>
</tr>
<tr>
<td>Improvements in fertilizer use efficiency (better extension and education, move from low-analysis to high-analysis products, application methods, etc.)</td>
<td>40-50</td>
<td>20-30</td>
</tr>
<tr>
<td><strong>Total Potential Savings (US $/ton/year)</strong></td>
<td><strong>155-250</strong></td>
<td><strong>135-200</strong></td>
</tr>
</tbody>
</table>
“Who were the people that made the changes? The leaders! It was the leaders who made the science and technology useful...Are there two or three, hopefully many more, who have the courage to take the recommendations on the use of fertilizer forward?”

Excerpt from the speech by Dr. Norman Borlaug, 1970 Nobel Peace Prize Laureate, at the Head of State Session of the Africa Fertilizer Summit
Thank You