EVALUATION OF THE 2006/7 AGRICULTURAL INPUT SUPPLY PROGRAMME, MALAWI

INTERIM REPORT

conducted for the
Ministry of Agriculture and Food Security

Imperial College London     Wadonda Consult     Michigan State University
Overseas Development Institute

funded by

DFID

USAID
Future Agricultures (DFID)

Lilongwe, March 2007
Outline: 2006/7 Subsidy Programme

- Report objectives
- Background
  - 2005/6 subsidy programme
- Stakeholders, objectives, systems
- Implementation & outcomes
- Impact on input supply system
- Production & livelihood impacts
- Preliminary recommendations
  - Objectives
  - Principles
  - Improvements within the current system
  - System changes
  - Scheduling
Report Objectives

- Present preliminary findings about implementation & outputs
- Provide structured information for stakeholders
- Stimulate informed debates and decisions about immediate (2007/8) and longer term programme plans

Note:
- Extremely complex issues
- Multiple & diverse stakeholders
- Many uncertainties
- Partial analysis of limited field work
Background: Key Issues

- Most farming households are poor and own food production lasts up to September – November, and so they are net consumers.

- Highly volatile maize prices
  - Force poor consumers to grow maize even with very low yields
  - Inhibit investment in maize production

- *The rural economy is trapped in low productivity maize cultivation*
## Key statistics

<table>
<thead>
<tr>
<th></th>
<th>North</th>
<th>Center</th>
<th>South</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor households (% rural pop)</td>
<td>56</td>
<td>47</td>
<td>64</td>
<td>52</td>
</tr>
<tr>
<td>Mean rural daily/ capita</td>
<td></td>
<td></td>
<td></td>
<td>174</td>
</tr>
<tr>
<td>consumption (kcal): poor</td>
<td>1738</td>
<td>1811</td>
<td>1703</td>
<td>6</td>
</tr>
<tr>
<td>Incidence of stunting in children (% 6 mths - 5 years)</td>
<td>39.6</td>
<td>47.9</td>
<td>40.8</td>
<td>43.7</td>
</tr>
<tr>
<td>Median month 04/05 own food exhausted (actual)</td>
<td>September</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median month 05/06 own food exhausted (est.)</td>
<td>November</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landholdings less than 0.5 ha (%)</td>
<td>12.1</td>
<td>15.4</td>
<td>25.4</td>
<td>19.9</td>
</tr>
<tr>
<td>0.5 to 1.0 ha (%)</td>
<td>19.3</td>
<td>25.2</td>
<td>28.7</td>
<td>26.3</td>
</tr>
<tr>
<td>1.0 to 2.0 ha (%)</td>
<td>30.1</td>
<td>33.5</td>
<td>24.9</td>
<td>29</td>
</tr>
<tr>
<td>more than 2.0 ha (%)</td>
<td>28.8</td>
<td>16.2</td>
<td>7.7</td>
<td>13.4</td>
</tr>
<tr>
<td>Maize growers (%)</td>
<td>93</td>
<td>97</td>
<td>99</td>
<td>97</td>
</tr>
<tr>
<td>Fertilizer use (kg/ha)</td>
<td>32</td>
<td>45</td>
<td>24</td>
<td>34</td>
</tr>
</tbody>
</table>
Maize yields & rainfall

Hybrid yield
MMP!
Local yield

MK/kg (1990)

Maize yields & real prices

![Graph showing maize yields and real prices from 1990/91 to 2006/07. The graph includes lines for peak price, minimum price, and hybrid yield. The x-axis represents the crop years, and the y-axis represents the price per tonne in MK/kg in 1990. The graph highlights fluctuations in prices and yields over the years.]
Low producer investment

Unstable maize

Low maize & agric productivity

Consumer ‘lock in’ to low productivity maize

Low & vulnerable real incomes

Low demand for non-agric goods & services

Unstable maize prices

SLOW PRIVATE SECTOR DEVELOPMENT

UNSTABLE WEATHER

UNSTABLE POLICIES

POOR ROADS

SLOW PRIVATE SECTOR DEVELOPMENT

POOR ROADS

UNSTABLE POLICIES

UNSTABLE WEATHER
National fertiliser sales, 1972-2007

Total Imports

Total sales


Total Imports

Total sales

National fertiliser imports breakdown, 1998-2007

```
National fertiliser imports breakdown, 1998-2007

ADMARC.SFFRM  Private sector
% Private sector

0'000 tonnes


ADMARC.SFFRM  Private sector

% Private sector

0%  20%  40%  60%  80%  100%  120%

0  50  100  150  200  250

```
National fertiliser sales breakdown, 1998-2007

Sales

- ADMARC/SFFRM
- Private sector **

'000 tonnes


National fertiliser sales breakdown, 1998-2007
National fertiliser purchases breakdown, 1998-2007

Purchases

- Subsidised*
- Unsubsidised **
- Total
- Trend

0 50 100 150 200 250 300

1000 tonnes

2005/6 subsidy: coupon allocation & sales

- 2 million NPK and urea coupons base allocation; 0.74 million D compound & CAN
- NPK & urea redeemable for 950MK; D compound & CAN for MK1450
- Approx. 1.1 million supplementary coupons printed; 0.58 million issued; total issued 3.32
- 3.3 million total issued; 2.6 million total redeemed: fertiliser stock constraint
- 6,000 MT OPV at MK150/3kg (not MK500)
- Coupon targeting criteria highly variable
- 2, 1 or 0 coupons per household
## 2005/ 6: 1st maize coupon allocation & urea & NPK sales

<table>
<thead>
<tr>
<th></th>
<th>Total (‘000)</th>
<th>Per ha</th>
<th>Per hh</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Allocn. coupns</td>
<td>Sales bags</td>
<td>Alloc. coupn</td>
</tr>
<tr>
<td>North</td>
<td>391</td>
<td>416</td>
<td>2.16</td>
</tr>
<tr>
<td>Centre</td>
<td>863</td>
<td>1008</td>
<td>1.32</td>
</tr>
<tr>
<td>South</td>
<td>746</td>
<td>756</td>
<td>1.27</td>
</tr>
<tr>
<td>National</td>
<td>2,000</td>
<td>2,180</td>
<td>1.41</td>
</tr>
</tbody>
</table>
2005/6 Total Urea & 23:21 voucher allocations to maize hectarage by district
Fertiliser procurement & disbursement

- 70,000 tonnes out of 147,000 supplied by private sector
- All distributed/ sold through ADMARC/SFFRM
- Distribution late & some districts over supplied while others went short
Impact

- MK7.2 billion cost (MK5.1 billion budget)
- 131,000 tonnes fertiliser sold
- Incremental maize fertiliser use about 45,000 tonnes?
  - large drop in commercial sales, due to subsidy & price rise?
  - Contraction in private sector distribution network
- Record maize production, 2.6 million tonnes
  - Good rains
  - Input subsidy leads to 300,000 – 400,000MT grain??
- Low maize prices and higher wages benefit poor rural consumers
2006/ 7 Subsidy Programme

- 2005/6 popular & considered broadly successful, support for 2006/7

- Objectives?
  - Improve land & labour productivity
  - Production of food and cash crops
  - Promote economic growth
  - Reduce vulnerability - food insecurity & poverty

- Processes?
  - National food security/ self sufficiency?
  - Household food security / self sufficiency?

- Stakeholders?
  - Farmers (surplus/deficit), consumers, tax payers, politicians, technicians, donors, input businesses, civil society ....
Development of the programme

- Constant change from April to October
  - Fertiliser procurement tenders for ADMARC / SFFRM distribution
  - Roles, terms & private sector players in fertiliser distribution
  - Donor funding for seed with fixed value vouchers; logistics unit; printing of coupons; communications; transport; financing facility for unsold government fertiliser stocks

- Development of new systems & opportunities
- but ... uncertainty & delay for all stakeholders
Coupon allocation & distribution

- 3 million fertiliser coupons (50kg fertiliser bags)
  - 2.6 million NPK and urea coupons base allocation; 0.4 million D compound & CAN
- All four types of fertiliser redeemable for 950MK
- 2 million seed coupons
  - No farmer payment, each coupon worth MK400 (2kg hybrid, 3kg OPV)
- Security printed coupons, serial numbers, triplicate
- Base allocation proportional to maize & tobacco hectarage between regions & between EPAs, adjustments between districts, finalized end September
- 0.767 million supplementary coupons issued in December in response to demand
## Total coupon allocations by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Maize fertilisers</th>
<th>Tobacco fert</th>
<th>Maize Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base</td>
<td>Supp.</td>
<td>Total</td>
</tr>
<tr>
<td>North</td>
<td>326</td>
<td>318</td>
<td>644</td>
</tr>
<tr>
<td>Centre</td>
<td>1180</td>
<td>157</td>
<td>1337</td>
</tr>
<tr>
<td>South</td>
<td>1094</td>
<td>292</td>
<td>1386</td>
</tr>
<tr>
<td>National</td>
<td>2600</td>
<td>767</td>
<td>3367</td>
</tr>
</tbody>
</table>
## Coupon allocations per ha & per hhold

<table>
<thead>
<tr>
<th></th>
<th>Maize fertilisers</th>
<th>Tobacco ferts</th>
<th>Maize Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base</td>
<td>Supp.</td>
<td>Total</td>
</tr>
<tr>
<td>North</td>
<td>1.80</td>
<td>1.76</td>
<td>3.56</td>
</tr>
<tr>
<td>Centre</td>
<td>1.80</td>
<td>0.24</td>
<td>2.04</td>
</tr>
<tr>
<td>South</td>
<td>1.86</td>
<td>0.50</td>
<td>2.36</td>
</tr>
<tr>
<td>National</td>
<td>1.83</td>
<td>0.54</td>
<td>2.37</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>0.90</td>
<td>0.88</td>
<td>1.79</td>
<td>1.22</td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centre</td>
<td>0.98</td>
<td>0.13</td>
<td>1.11</td>
<td>0.62</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>0.68</td>
<td>0.18</td>
<td>0.86</td>
<td>0.30</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>0.82</td>
<td>0.24</td>
<td>1.06</td>
<td>0.61</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2006/7 Maize fertiliser coupon allocations to hectarage by district

Urea voucher allocations per maize ha

District

Chitipa
Kaponga
Kachalabate
Mzimba
Rumphi
Nchisi
Dowa
Mchinji
Kasungu
Salima
Nkhotakota
Lilongwe
Dedza
Ntchisi
Balaka
Mangochi
Machinga
Zomba
Chiradzulu
Mwanza/Neno
Thyolo
Phalombe
Mulanje
Blantyre
Chikwawa
Nsanje
2006/7 Maize fertiliser coupon allocations to grower hholds by district

Urea voucher allocations per maize hh

- Districts: Chitipa, Karonga, Nkheleka, Mzimba, Rumphi, Ntchisi, Dowa, Mchinji, Kasungu, Salima, Nkhotakota, Lilongwe, Dedza, Ncheu, Balaka, Mangochi, Machinga, Zomba, Chiradzulu, Mwanza/Neno, Thyolo, Phalombe, Mulanje, Blantyre, Chikwawa, Nsanje

- 2nd round
- 1st round
Coupon distribution

- Distributed through districts, ADC’s/ EPAS
- Variable involvement of TAs
- People unaware of numbers of coupons per village, often disappointed & suspicious of misappropriation, but difficult to determine its extent
- Coupons & funding to districts in Oct/(Nov)
- Coupon targeting criteria highly variable
- 2, 1 or 0 coupons per household
Input procurement for SFFRM depots

Many tender/delivery changes - very costly

<table>
<thead>
<tr>
<th></th>
<th>Initial contracts</th>
<th>Adjusted</th>
<th>Final contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kemira</td>
<td>6000</td>
<td>16600</td>
<td>12600</td>
</tr>
<tr>
<td>Agrimark</td>
<td>3365</td>
<td>7000</td>
<td>7000</td>
</tr>
<tr>
<td>Transglobe</td>
<td>16600</td>
<td>7900</td>
<td>7900</td>
</tr>
<tr>
<td>Simama</td>
<td>5000</td>
<td>2500</td>
<td>2695.9</td>
</tr>
<tr>
<td>Sealand</td>
<td>13900</td>
<td>13900</td>
<td>22695.9</td>
</tr>
<tr>
<td>Optichem</td>
<td>10000</td>
<td>10000</td>
<td>26165</td>
</tr>
<tr>
<td>Nyiombo</td>
<td>16165</td>
<td>17165</td>
<td>15500</td>
</tr>
<tr>
<td>Mulli</td>
<td>7500</td>
<td>7500</td>
<td>41415</td>
</tr>
<tr>
<td>Export Trading</td>
<td>53652</td>
<td>53652</td>
<td></td>
</tr>
<tr>
<td>SFFRFM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Many tender/delivery changes - very costly
Planned deliveries to SFFRM depots

...difficult to schedule...
Actual deliveries to SFFRM depots

...difficult to schedule... and delayed
**Sales:** Late depot deliveries...

**Southern region NPK**

- **Weeks:** 04-Sep, 18-Sep, 02-Oct, 16-Oct, 30-Oct, 13-Nov, 27-Nov, 11-Dec, 25-Dec, 09-Jan, 23-Jan, End
- **Units:** '000 mt (thousand metric tons)
- **Graph:**
  - To depot line, indicating a peak around 15 December due to rains.
Southern region NPK

Sales: Late depot deliveries... market deliveries ...

Weeks

000 mt

To depot

to markets

Rains
Sales: Late depot deliveries… market deliveries …& sales

Southern region NPK

Weeks

04-Sep 18-Sep 02-Oct 16-Oct 30-Oct 13-Nov 27-Nov 11-Dec 25-Dec 09-Jan 23-Jan End

Rains

'000 mt

To depot
to markets
ADMARC sales
Total sales
Sales: Late depot deliveries… market deliveries …& sales

Southern region NPK

- To depot
- To markets
- ADMARC sales
- Total sales

Weeks:
- 04-Sep
- 18-Sep
- 02-Oct
- 16-Oct
- 30-Oct
- 13-Nov
- 27-Nov
- 11-Dec
- 25-Dec
- 09-Jan
- 23-Jan
- End

0'000 mt
- 0
- 5
- 10
- 15
- 20
- 25
- 30
- 35

Rains

- Late coupons
- Late district funds...
- Late market opening.
- Late retail agreements
Sales: Late depot deliveries... market deliveries ...& sales

Southern region NPK

Queues
Stock-outs
Late use
Lost time
Tips
Exclusion
Sellers’ market

04-Sep 18-Sep 02-Oct 16-Oct 30-Oct 13-Nov 27-Nov 11-Dec 25-Dec 09-Jan 23-Jan End

Weeks

To depot
to markets
ADMARC sales
Total sales

1000 mt
Coupon redemption

- Coupons only redeemable in district of issue
- Fertiliser sellers: sort & return coupons with invoices to LU
  - No returns from ADMARC/SFFRM
- Seed sellers: return to seed suppliers
  - Seed suppliers sort & return coupons with invoices to LU
  - Seed suppliers pay commission to seed sellers
  - Returns from ADMARC/SFFRM
<table>
<thead>
<tr>
<th></th>
<th>NPK</th>
<th>Urea</th>
<th>CAN</th>
<th>D Comp</th>
<th>Total</th>
<th>Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subsidy Sales</strong> ('000MT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMARC/SFFRM sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>7.81</td>
<td>7.74</td>
<td>2.10</td>
<td>1.97</td>
<td>19.61</td>
<td>0</td>
</tr>
<tr>
<td>CR</td>
<td>21.64</td>
<td>24.37</td>
<td>3.48</td>
<td>4.23</td>
<td>53.72</td>
<td>0</td>
</tr>
<tr>
<td>SR</td>
<td>24.65</td>
<td>24.20</td>
<td>0.96</td>
<td>0.92</td>
<td>50.74</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>54.10</td>
<td>56.31</td>
<td>6.54</td>
<td>7.12</td>
<td>124.07</td>
<td>0</td>
</tr>
<tr>
<td>Retail sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>4.12</td>
<td>4.81</td>
<td>0.70</td>
<td>0.65</td>
<td>10.28</td>
<td>0.15</td>
</tr>
<tr>
<td>CR</td>
<td>12.41</td>
<td>11.07</td>
<td>3.88</td>
<td>2.10</td>
<td>29.46</td>
<td>0.88</td>
</tr>
<tr>
<td>SR</td>
<td>4.32</td>
<td>3.83</td>
<td>0.57</td>
<td>0.49</td>
<td>9.20</td>
<td>0.66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20.84</td>
<td>19.71</td>
<td>5.15</td>
<td>3.24</td>
<td>48.93</td>
<td>1.68</td>
</tr>
<tr>
<td>Total sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>11.92</td>
<td>12.55</td>
<td>2.80</td>
<td>2.62</td>
<td>29.89</td>
<td>0.15</td>
</tr>
<tr>
<td>CR</td>
<td>34.04</td>
<td>35.44</td>
<td>7.36</td>
<td>6.33</td>
<td>83.18</td>
<td>0.88</td>
</tr>
<tr>
<td>SR</td>
<td>28.97</td>
<td>28.03</td>
<td>1.53</td>
<td>1.41</td>
<td>59.94</td>
<td>0.66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>74.94</td>
<td>76.02</td>
<td>11.69</td>
<td>10.36</td>
<td>173.00</td>
<td>1.68</td>
</tr>
</tbody>
</table>

*likely overestimate of ADMARC/SFFRM sales by 3,000 to 4,000 mt
## Subsidy Sales % by region

<table>
<thead>
<tr>
<th></th>
<th>NPK</th>
<th>Urea</th>
<th>CAN</th>
<th>D Comp</th>
<th>Total</th>
<th>Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMARC/SFFRM sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>14%</td>
<td>14%</td>
<td>32%</td>
<td>28%</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>40%</td>
<td>43%</td>
<td>53%</td>
<td>59%</td>
<td>43%</td>
<td></td>
</tr>
<tr>
<td>SR</td>
<td>46%</td>
<td>43%</td>
<td>15%</td>
<td>13%</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>Retail sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>20%</td>
<td>24%</td>
<td>14%</td>
<td>20%</td>
<td>21%</td>
<td>9%</td>
</tr>
<tr>
<td>CR</td>
<td>60%</td>
<td>56%</td>
<td>75%</td>
<td>65%</td>
<td>60%</td>
<td>52%</td>
</tr>
<tr>
<td>SR</td>
<td>21%</td>
<td>19%</td>
<td>11%</td>
<td>15%</td>
<td>19%</td>
<td>39%</td>
</tr>
<tr>
<td>Total sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>16%</td>
<td>17%</td>
<td>24%</td>
<td>25%</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>CR</td>
<td>45%</td>
<td>47%</td>
<td>63%</td>
<td>61%</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>SR</td>
<td>39%</td>
<td>37%</td>
<td>13%</td>
<td>14%</td>
<td>35%</td>
<td>39%</td>
</tr>
</tbody>
</table>
## Voucher redemption

<table>
<thead>
<tr>
<th></th>
<th>NPK</th>
<th>Urea</th>
<th>CAN</th>
<th>D Comp</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Vouchers redeemed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>74%</td>
<td>78%</td>
<td>108%</td>
<td>101%</td>
<td>80%</td>
</tr>
<tr>
<td>CR</td>
<td>102%</td>
<td>106%</td>
<td>121%</td>
<td>104%</td>
<td>105%</td>
</tr>
<tr>
<td>SR</td>
<td>84%</td>
<td>81%</td>
<td>117%</td>
<td>108%</td>
<td>83%</td>
</tr>
<tr>
<td>Total</td>
<td>89%</td>
<td>90%</td>
<td>117%</td>
<td>104%</td>
<td>92%</td>
</tr>
</tbody>
</table>
Programme Costs

- **2005/06 AISP**
  - MK6.9bn (45% above budget)
  - 140,327 MT of fertilizers
  - Fully funded by government

- **The 2006/07 AISP is likely to cost government 24% more than the budget**
  - Budget MK7.2bn (government)
  - Additional: MK1.4bn (donors)
  - Expected Expenditure: MK10.2bn
  - Government deficit: MK1.7bn
  - Donor contribution: MK1.3bn
Costs and Financing

<table>
<thead>
<tr>
<th>Million Kwacha</th>
<th>Total Cost</th>
<th>Donors</th>
<th>Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Costs</td>
<td>9,341</td>
<td>405</td>
<td>8,936</td>
</tr>
<tr>
<td>Seed Subsidy</td>
<td>2,315</td>
<td></td>
<td>2,315</td>
</tr>
<tr>
<td>Private Fertilizers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parastatal Fertilizers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The diagram illustrates the distribution of costs and financing sources, with a breakdown of million Kwacha for each category.
Programme Costs …

- Major part of parastatal costs is supply to SFFRFM depots
  - Average price US$434/tonne (MK60.700)

- Difficult to compare ADMARC/SFFRFM and private sector cost - efficiency:
  - Matching invoice / sales quantities data not currently available for private sector
  - ADMARC/SFFRM overhead costs difficult to establish
  - ADMARC/SFFRFM served more remote areas
Information, Education and Communication

- *Ad hoc* IEC activities tailored towards AISP
  - No specific allocation of funding for IEC in the design
  - IEC focused on technology and post-harvest activities
    - Lack of clarity of messages on AISP
    - Mistrust between traditional leaders and communities – due to too few coupons
    - Varied understanding of eligibility criteria
    - Lack of public relations management
Operational Funds

- Limited operational support to implementing agencies
  - Operational budgets for ADMARC and SFFRFM not fully funded e.g. ADMARC only got 33%
    - Unable to recruit required staff in markets
    - Regular shortages in receipt books
    - Long queues and kick backs

- Delayed and inadequate funding to districts to support sensitization and coupon distribution
  - DAs had to use funds from normal operating budget
Availability of Inputs

- Inclusion of private sector improved access to inputs, with seed availability much better due to participation of agro-dealers
  - Most rural areas not served by private traders
  - Long queues at parastatal and private markets, worst at ADMARC markets
  - Limited stocks and slow replenishment, particularly at ADMARC markets
  - Mismatch between stock allocations and demand
  - Mismatch between fertilizer types and available coupons or required fertilizers
    - Coupons of different fertilizer exchanged for available fertilizers
  - Lack of commercial fertilizers at ADMARC and SFFRFM outlets, where there were no private outlets
Coupon Redemption and Payment System

- Cumbersome process, time consuming and delays in honouring invoices
  - Additional staff required to sort coupons and receipts by serial numbers and EPA
  - One receipt per coupon records expensive and time consuming
  - Substantial delays in reimbursing private sector
    - Average weekly outstanding MK2.2m
    - About 2.5 weeks delay in payments
    - Livelihood implications for farm-based seed producing organisations such as FUNWE
Management of Sales Revenues

- The sales revenue from the subsidized sale of fertilizers at ADMARC/SFFRFM are poorly monitored
  - Extent to which ADMARC/SFFRFM have been depositing into the government account is not known.
  - It is not known how much the government will recoup back or whether these form part of implicit subsidies to parastatals.
  - Inability to account for the sales is likely to raise the cost of the subsidy to government.
The extent of irregularities varied across districts, with irregularities reported more in areas where traditional leaders managed the distribution of coupons.

- Hard evidence is missing but the reported irregularities were not systematic and significant given the scale of the programme
- Less reported incidence of irregularities in Mzimba and Rumphi than in Kasungu, Lilongwe, Machinga and Blantyre.
- Press (media) reports tended to pick isolated bad stories - although some of those were confirmed in selected sample districts
Some of the Irregularities

- Use of duplicate coupons were reported in limited cases – sales staff in some cases were unable to distinguish the original and the copy.

- Sale of coupons were reported both in the press and some of the interviews in the selected districts – Kasungu, Blantyre, Salima, Chiradzulu.
  - Most of were suspicions and rumours which could not be substantiated, prompted by:
    - Inadequacy of coupons
    - Lower numbers of base allocations in selected areas that received in 2005/06.
Some of the Irregularities ....

- Fake coupons were not widely reported
  - The security features in some cases led to confusions

- The process of allocation of coupons at VDC level was not transparent in most districts
  - Traditional leaders were more powerful and secretly allocated coupon, particularly in the central region
  - But allocations not based on political and religious affiliations
  - The lack of transparency perpetuated by lack of clarity on eligibility
Some of the Irregularities …..

- Tips on purchase of inputs were the most common irregularity in most districts
  - Mostly reported in central and southern districts
  - In the northern region, the VDCs were actively monitoring malpractices at the markets
  - Reported in both parastatal and private sector retail markets
  - Ranged from MK50 – MK500
  - Exacerbated by long queues on retail markets

- Exchange of coupons for different items or inputs were reported but hard evidence was lacking
  - Most common was exchange of coupon for different types of fertilizers in private retail markers
  - Incentive to take high redemption value coupons for low cost fertilizers high – NPK coupons for CAN fertilizers brought max of MK1,028 per 50 kg
  - This has the potential to raise costs for subsidy from private sector operations
Beneficiary Access

- Lack of clarity on targeting criteria led to variations in inclusion and exclusion errors
  - Wide variations in targeting criteria
    - Affordability
    - Marital status
    - Poverty
    - Participation in related programmes
    - Disadvantage households
    - Participation in development activities

- Some households were too far from input markets and travelled as much as 30 km
  - High transport and transaction costs
  - Long queues

- Some households had difficulties in obtaining cash
  - Limited safety net opportunities cf. 2005/06
Aggregate sales growing 1997/98 to 2006/07
Since 2000, commercial sales typically 160,000 MT/yr.
Market characterized by growing competition at import, distribution, and retail levels
2005/06 subsidy shuts out private sector and commercial sales fell to 93,000 MT
Context: Seed

- Data series on seed sales not as developed as for fertilizer
- Generally low share of area planted to improved seed each year
- Particularly low use of hybrids
- Seed sector perceives government programs favoring OPV (e.g., OPV distribution of 2005/06)
Methods: Indicators Used

- Volumes supplied and sold in 2006/07 compared to previous 3 years
- Costs of participating in the programme
  - Costs of processing vouchers
  - Impacts on cash-flow and financing
- Confidence in the sector
  - Entries and exits
  - Investments and innovations
- Profits
Methods: Sources of Information

- Interviews of key actors in seed and fertilizer procurement (public and private)
- Collection/review of time series on import and sales trends for fertilizer
- Survey of 271 retailer outlets in six districts:
  - Mzimba and Rumphi in North
  - Lilongwe and Kasungu in Center
  - Blantyre and Machinga in South
- Use of quantitative and qualitative information
What is/ is not in preliminaries

- Complete accounting of fertilizer and seed sales for 2006/07 is not yet done
- Key informant interviews done in January and early February, so some views (particularly of costs) may have changed.
- Analysis of retailer survey is very preliminary; no attempt to look at impacts by different characteristics of firms other than «type» of business: distributor, government, coop, and agrodealer
Results: Fertilizer Volumes

- Commercial imports/sales better than 2005/06 but not back to earlier levels
- Hypotheses about lower commercial sales
  - Most of stocks in country went to supply subsidy with few imports for commercial sales (supply constraint)
  - Late announcement of program details caused farmers to delay credit applications/purchases until it was too late
  - Farmers used subsidized fertilizer in lieu of rather than in addition to their normal purchases (displacement)
Results: Seed Volumes to date

- Big increase in demand for hybrids attributed to flexibility of seed voucher system
  - 69% subsidized volumes in North
  - 78% in Center
  - 70% in South
- Displacement not mentioned as an issue by key informants but data for two firms suggests it may be in range 36-44% of normal commercial sales
Results: Costs

- Both seed and fertilizer sectors had same cost issues, but magnitudes differed
  - Costs of poorly implemented tenders
  - Costs due to late announcement of the program
  - Costs of hiring extra sales personnel
  - Costs of processing vouchers
  - Costs of capital
Results: Confidence

- Fertilizer sector confidence improved over 2005/06 but many still very cautious about investing
- Seed sector enthusiastic about prospects for hybrid promotion and investing in it
- Independent retailers (agrodealers) still having problems
- Government confidence in private sector seems to be improving
- Most envision a future with some type of public/private collaboration, particularly at the retail level
Strengths of 2006/07 Programme

- Very efficient Logistics Unit
- Involvement of the private sector
- GOM, donor, private sector dialogue
- Use of GOM infrastructure
- Seed program left choice to farmers
- Seed marketing opportunity
- Poor farmers benefited
- Sales for most improved over 2005/06
Weaknesses of 20067/07 Programme

- **VERY late design and implementation**
- Poor tendering process
- Poor voucher design
- Low fertilizer redemption value
- MK rather than US$ redemption value
- Slow voucher processing by ADMARC
- Slow voucher redemption → poor cash flow
- Weak institutions for monitoring product quality
- Information campaign not adequate
- Appears to be “displacement”
Addressing Weaknesses

- Use the flexible seed voucher for all inputs
- Earlier voucher distribution (April-June)
- Distribution control to agricultural staff and VDC
- Increase private sector share of market
- Improve product quality monitoring
- Enforce sanctions for violations
- Develop agrodealers (esp remote areas)
- Develop programs and activities to sustain maize prices
Programme Impacts

- Record national fertiliser sales: 259,120MT
- Incremental fertiliser use? 80,000 MT?
  - *Almost 55% of subsidy goes to displacement of commercial sales?*
- Increased hybrid area: +20% on 2005/6
- Incremental production?? 650,000MT??
- With good rains, record crop estimate.
- Reduced search for ganyu employment
  - Higher wages
  - More farm production
- Low returns & disincentives for surplus maize growers
Recommendations: objectives

- Clear long term developmental objectives must guide design & implementation decisions

- Proposed objectives:
  - Increase land & labour productivity
  - Lower maize prices, raise real incomes, stimulate non-farm demand
  - With low stable maize prices allow diversification out of maize into other crops & non-farm goods & services to meet domestic demand

- Major implications for beneficiary targeting, maize price stabilisation, policy stability & transitions, complementary programmes
Low producer investment

Unstable maize prices

Low maize & agric productivity

Consumer ‘lock in’ to low productivity maize

Low & vulnerable real incomes

Low demand for non-agric goods & services

UNSTABLE POLICIES

UNSTABLE WEATHER

SLOW PRIVATE SECTOR DEVELOPMENT

POOR ROADS

PRIVATE SECTOR, NON-FARM

ROADS

MAIZE PRICE & TRADE POLICY

CREDIT, RESEARCH, EXTENSION, CASH & OIL CROPS

INPUT SUBSIDY

SOCIAL PROTECTION

UNSTABLE POLICIES

UNSTABLE WEATHER

SLOW PRIVATE SECTOR DEVELOPMENT

POOR ROADS

PRIVATE SECTOR, NON-FARM

ROADS

MAIZE PRICE & TRADE POLICY

CREDIT, RESEARCH, EXTENSION, CASH & OIL CROPS

INPUT SUBSIDY

SOCIAL PROTECTION
Recommendations: Principles….  

- An agricultural input subsidy programme with clear objectives can be justified:  
  - for a limited period of time  
  - part of a set of coordinated policies and programmes  

- Timely decision making, transparency and predictability are essential for stakeholders to work together effectively  

- Minimize displacement of commercial sales  

- Strict budgetary control to avoid de-stabilization of macro-economic management & complementary programmes
Programme Principles (cont.)

- Three-year rolling programme framework with flexibility to adapt to weather
- Target smallholders as primary direct beneficiaries
- Promote development of the private sector agricultural input supply chain
- Private/public partnerships to increase access in remote areas over time
- Ensure efficiency and cost effectiveness to release resources for complementary investments
Recommendations: Improvements to current programme design

*General system operation & management*

- Early programme review, design & implementation with an agreed schedule – coupon distribution starting as early as April
- Establishment of an Agricultural Input Programme Committee including major stakeholders and meeting regularly to ensure timely coordination, decision making and action
- Greater transparency & accountability to stakeholders throughout the programme, including beneficiaries during coupon distribution
Recommendations: Improvements to current programme design (cont.)

*Coupon allocation & distribution*

- All activities to start much earlier (allocations, printing, communication, district funding, distribution)
- Allocations at all levels to be determined in proportion to farming households / growers
- Clear & consistent beneficiary targeting criteria & methods or comprehensive smallholder coverage
- Social protection programmes to assist participation of the poor with land but without cash
- Pre-registration & public listing of beneficiaries & of coupon allocations
Recommendations: Improvements to current programme design (cont.)

*Coupon allocation & distribution (cont.)*

- Lesson learning from successful local systems for coupon and sales management
- Improved coupon design & printing, control of serial numbers; duplicate not triplicate books
- Eliminate influence of TAs in distribution (not allocation)
- Early & widespread communication about the system’s scale & operation
- PR strategy to manage information to the press
- Formal controls on the implementation of supplementary coupons
Recommendations: Improvements to current programme design (cont.)

*Input procurement & distribution*

- Announce size of 07/08 programme & level of participation of private sector as soon as possible (timely procurement)
- Expand role of private sector to allow ADMARC/SFFRM to improve services in remaining locations, with timely adequate budget allocations
- Joint strategy to increase private sector reach to remote areas over time (with role for independent agro-dealers in programme)
- Review SFFRFM tendering procedures
- Auditing systems & strong penalties against fraud
**Recommendations: Improvements to current programme design (cont.)**

*Promote integrity of the supply chain*
- finalise fertiliser association statutes
- codes of business for fertiliser/seed association members
- licensing of agro-dealers
- review input quality testing systems
- prompt payments
- allowance for currency exchange movements in coupon payments
- fertiliser & seed associations to collect industry statistics on sales, imports, etc
Recommendations: Improvements to current programme design (cont.)

Coupon redemption

- Addressed by many earlier recommendations (eg timing, communication, coupon design)
- Drop Logistics Unit requirement to sort coupons (bar codes)
- Alternatives to individual cash sale receipts with each coupon
- Harmonize donor procedures for reimbursement
Wider programme design

- Strong advantages with a targeted system rather than general price support
- Strong advantages with a voucher system rather than distribution through farm clubs
- Advantages of the current system need to be better communicated to the public—with a debate on how to control fraud
- Major questions about scale
  - To control costs with rising fertiliser prices
  - To avoid over-shoot with rising efficiency through reduced displacement & greater use of fertiliser
  - Closely related to longer term questions about consistency, phasing & management of transitions
Proposal: comprehensive fixed face value vouchers

- Comprehensive allocation of coupons to all smallholder farm families
- Smaller subsidy value per beneficiary
- Fixed face value discount coupon for any fertilizer or seed type/quantity instead of fixed co-payment for specific quantity/type
- Higher value discount for remote areas to allow for higher delivery costs
  - Differentiated (higher) face values for less accessible EPAs & districts, according to transport costs (preferred) or
  - Uniform face values with variable top ups for more remote districts

Wider programme design (cont.)
Illustrative programme option costs in 2007/8

- MK8.3 billion government costs for 150,000 MT in 2006/7
- 25% increase in fertiliser prices
- Existing system
  - With 950MK/bag cash payment, total cost MK11.1 billion
  - With fixed MK8.3 billion budget, farmer cost of MK1,800
- Comprehensive fixed face value discount coupon, 3.28 million farm hh
  - With fixed MK8.3 billion budget: MK2500 average value of coupons, MK2,000 top up for 50kg bag of fertiliser (or two 25kg bags) or coupon sufficient for one 25kg bag (?) & some seed?)
Longer term design options

- Review fertilizer formulations and recommendations for different agro-ecologies to improve profitability
- Link with incentives for participation in soil conservation and soil physical fertility improvements to increase response - pilots
- Smart cards - pilots
  - Significant potential programme & wider benefits
  - Major challenges
- National ID system
<table>
<thead>
<tr>
<th>Action/Decision</th>
<th>2007/8 programme</th>
<th>Following years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish Input Subsidy Programme Committee</td>
<td>Immediate (mid-March)</td>
<td>N/A</td>
</tr>
<tr>
<td>Review scale of programme &amp; negotiate private and public sector shares</td>
<td>immediate</td>
<td>February</td>
</tr>
<tr>
<td>Announce programme scale &amp; parasttal/private sector shares</td>
<td>mid-April</td>
<td>End Feb</td>
</tr>
<tr>
<td>Finalize programme modalities (target group, coupon design, processing etc)</td>
<td>end-April</td>
<td>Mid-Mar</td>
</tr>
<tr>
<td>SFFRFM tender documents issued</td>
<td>end April</td>
<td>End Feb</td>
</tr>
<tr>
<td>Beneficiary pre-registration campaign</td>
<td>Mid Apr – Jul</td>
<td>Feb - Mar</td>
</tr>
<tr>
<td>SFFRFM tender awards</td>
<td>End June</td>
<td>April</td>
</tr>
<tr>
<td>Awareness campaign</td>
<td>May - July</td>
<td>Mar– May</td>
</tr>
<tr>
<td>Coupon Distribution</td>
<td>July - Aug</td>
<td>Apr - May</td>
</tr>
<tr>
<td>Coupon Redemption</td>
<td>July – Dec</td>
<td>Apr - Dec</td>
</tr>
<tr>
<td>Coupon Processing and Payment</td>
<td>July - Jan</td>
<td>April - Jan</td>
</tr>
</tbody>
</table>
EVALUATION OF THE 2006/7 AGRICULTURAL INPUT SUPPLY PROGRAMME, MALAWI

INTERIM REPORT

conducted for the Ministry of Agriculture and Food Security

Imperial College London Wadonda Consult Michigan State University
Overseas Development Institute

funded by

DFID USAID Future Agricultures (DFID)

Lilongwe, March 2007