Agricultural Consultative Forum

Discussing the 2009 National Budget for Zambian Agriculture

Breakfast Workshop: Pamodzi Hotel, Lusaka - 4 Feb, 2009

Comments From ACF/FSRP Cooperating With MACO/CSO

Outline

- FNDP strategic plans/goals
- 2008 performance diagnosis in the budget
- Review selected past performance trends
- 2008 announced & actual budget releases
- Overview agriculture budget trends
- Details – 2009 agriculture sector budget
- Key tax and customs features affecting ag
- Summary

FNDP’s Goals For Agricultural Sector Development

- Attain 90% HH food security by 2015
- Increase agriculture’s contribution to FOREX earnings from 3-5% to 10-20%
- Increase agricultural export output at an annual rate of 20%,
- Grow agriculture from 1% to 7-10% per annum from 2006 onwards
- Increase agriculture’s contribution to GDP from 18-20% to 25%
- Facilitate the role of private sector
- Increase incomes for those in agriculture

2008 Ag Sector Performance – Diagnosis in the Budget Speech

- 2006-2008 Ag sector performed poorly – contracting by 1.2 % annually
- 2008 crop production declined by 7 % leading to contraction in ag. sector by 4 %
- Key constraints mentioned:
  – High cost of inputs;
  – Limited access to credit, inputs and extension services;
  – In adequate infrastructure;
  – Poor livestock management
  – Weakness in FSP;
  – Failure to attract private investment in the sector.

2009 Ag Sector Performance Goals Targets in the Budget Speech

- Growth through competitiveness & diversification
- Focus improving infrastructure and conducive environment for private investors
- Reduce wasteful expenditures with non-appreciable social or economic returns

Before Looking at the Budget Numbers Prior Results and Challenges: Selected Historical Performance

- 8 Result Tables Using Empirical Data
  - CSO/MACO Annual Crop Forecast Data
  - CSO/MACO/ Post Harvest Survey Data
  - CSO/MACO/FSRP PHS Supplemental Survey Data
  - CSO Living Standards Measurement Data

Table 1 Growth Rates in Key Agricultural Indicators in Zambia, 1990 - 2006

Measure	1990 – 1994		1995 – 1999		2000-2005		1990–2005	CAADP 2015 Target
Total crop value	-3.25		1.91		1.31		1.09	6.09
Maize	-0.50		0.66		1.62		0.49	4.84
Cassava	3.30		11.86		3.60		4.33	5.54
Groundnuts	-5.70		1.77		-0.53		2.96	5.35
Cotton	-8.17		-3.88		3.65		3.40	9.37
Crop productivity								
Output per ha	-2.95		-0.75		1.42		-0.06	
Output per HH	-4.76		0.27		0.77		-0.42	
Area planted per HH	-1.81		1.02		-0.65		-0.36	
Poverty levels								
	1991	1993	1996	1998	2004	2006	Average	MDG 2015 target
Urban	49	45	46	56	53	34	47	23
Rural	88	92	82	83	78	80	84	42
Zambia	70	74	69	73	68	64	70	35

Source. Forthcoming FSRP research paper on Trends and Spatial Distribution of Public Agricultural Spending in Zambia: Implications for Agricultural Productivity Growth by Govereh et. al.

PHS & Supplemental Survey 2000 Maize Yield

	Zambia, 2000	
Quintiles of HH maize yield	Median HH maize yield (kg/ha)	Median difference between HH maize yield and district yield (kg/ha)
1 – low	422	-807
2	858	-446
3 – mid	1,373	0
4	2,060	534
5 – high	3,605	2,015
Total	1,373	0

Table 2. Mean Maize Yields on Hectares Planted – CSO/MACO CFS 07/08 Data

Basically Little Change in Mean National Yield on Maize Since 2000 Zambia

(2000 was 1,373 kg/ha compared to 1, 266 kg/ha in 2007/2008)

Lots of low yield

Quintiles of maize yield	Category of Household (based mainly on total cropped area over 13 crops) Category A (> 0 – 2.5 ha) Yield mt/ha	Category A Number of Hhs	Category B (> 2.5 - < 5 ha) Yield mt/ha	Category B Number of Hhs	Category C (> 5 – 20 ha) Yield mt/ha	Category C Number of Hhs	National Level Yield Mean	National Level Number of Households
1- low	56.21	129,464	80.32	40,530	77.87	9,309	62.79	179,303
2	417.15	146,695	413.04	44,517	405.88	8,483	415.76	199,696
3- mid	898.01	153,900	899.92	40,706	895.60	7,128	898.31	201,734
4	1,624.89	139,195	1,648.41	35,741	1,648.90	7,312	1,630.46	182,249
5- high	3,364.54	136,700	3,423.86	37,650	3,569.55	10,375	3,388.15	184,725
Total	1,264.65	705,955	1,235.79	199,146	1,399.82	42,606	1,264.66	947,707

CFS 07/08 – weighted data. All yields are "mean" estimates from smallholder declarations per plot planted/harvested.

2/5 of hhs with well above average yield

Table 3. Mean Maize Yields on Hectares Planted by Use or Non-Use of Fertilizer

Low yield even with fertilizer use?

Fertilizer Use Category	Quintiles of maize yield	Category of Household (Based on total cropped area over 14 crops) Category A (> 0 – 2.5 ha) Yield Kg/ha	Category A Number of HHs	Category B (> 2.5 - < 5 ha) Yield kg/ha	Category B Number of HHs	Category C (> 5 – 20 ha) Yield Kg/ha	Category C Number of HHs	National Level Yield Mean	National Level Number of Households
Use Fertilizer YES	1- low	45.16	23,850	74.69	9,928	69.93	3,308	55.27	37,086
	2	422.88	28,470	437.41	13,328	417.46	3,678	426.70	45,475
	3- mid	936.62	33,920	915.77	17,552	922.73	3,597	929.07	55,069
	4	1,642.22	52,277	1,656.24	21,842	1,688.67	4,849	1,648.95	78,968
	5- high	3,537.01	86,263	3,549.52	30,189	3,665.60	8,716	3,548.98	125,169
	Total	1,939.00	224,780	1,787.81	92,839	1,872.81	24,149	1,893.25	341,767
Use Fertilizer NO	1- low	58.71	105,614	82.15	30,602	82.25	6,001	64.74	142,217
	2	415.77	118,225	402.63	31,189	397.01	4,806	412.53	154,220
	3- mid	887.10	119,980	887.91	23,155	867.96	3,531	886.77	146,665
	4	1,614.46	86,919	1,636.10	13,899	1,570.58	2,463	1,616.33	103,280
	5- high	3,069.58	50,437	2,915.40	7,461	3,064.64	1,658	3,050.13	59,557
	Total	949.63	481,175	753.70	106,307	781.00	18,458	910.12	605,939

CFS 07/08 – weighted data. All yields are "mean" estimates from smallholder declarations per plot planted/harvest

Very good yields with fertilizer use for all categories

High yield without fertilizer use!

Table 4. Maize Area Planted and Harvested - CSO/MACO CFS Data Multiple Years

Ag. Year	% Area Planted that was Harvested – All Crops for Maize Growing Small & Medium-Scale Households		
	Small-S	Medium-S	Total
2000/2001	77.9	82.3	78.4
2001/2002	71.5	59.7	69.5
2002/2003	75.1	80.3	75.9
2003/2004	84.2	79.3	83.3
2004/2005	51.1	48.3	50.6
2005/2006	76.3	84.4	77.5
2006/2007	64.8	69.9	65.7
2007/2008	58.2	53.8	57.5

Table 5. Maize Area Planted/Harvested Within A Given Year - 07/08 CSO/MACO CFS Data

AEZ (Agro-Ecological Zone	Yield 1 kgs harv. /ha harv	Yield 2 kgs harv /ha planted	Harvest Percentage
Zone 1-Southern	1118	532	42 %
Zone 2a Eastern	1848	1162	59 %
Zone 2b Western	650	362	39 %
Zone 3 Northern	2088	1848	87 %
Total	1720	1226	64 %

Good results in a bad year

Table 6. Comparison of Small & Medium Farm Source of Acquisition of Fertilizer - Mostly for Maize

	Crop Forecast Survey/SS – Main Source of Fertilizer Identified as FSP		FSP Data on Program Accomplishments		CFS/SS Main Source –of Fertilizer Identified as Private/Commercial Purchase	
Year	# Small-holders	Metric Tons Fertilizer	# Small-holders	Metric Tons Fertilizer	# Small -holders	Metric Tons fertilizer
02/03 SS	102,450	28,956	120,000	48,000	207,080	50,476
03/04 SS	101,139	33,034	150,000	60,000	171,274	41,507
03/04 CFS	49,824	13,461	150,000	60,000	131,598	24,937
06/07 SS			210,000	84,000		
07/08 SS			125,000	50,000		
07/08 CFS	56,271	14,706	125,000	50,000	259,717	59,366
08/09 CFS			200,000	80,000		

Farmers' declarations FSP fertilizer received

FSP Records of fertilizer distributed to farmers

Farmers' declarations of open mkt purchases

Table 7. HH Categorisation/Targeting Findings – 2004 SS

Indicators/Attributes	Means for Household Quintile Categories Ranked by Household Per Capita Farm Size (Cultivated + Fallow)					Overall Small-holders
	1 Low	2.	3. Mid	4.	5. High	
HH PC Land Hold Size ha/hh	.09	.19	.29	.46	1.11	.41 ha/hh
Number of smallholders	263,430	262,862	262,038	250,437	228,378	1,267,145
% smallholders	20.79	20.74	20.68	19.76	18.02	100 %
Average HH Assets ZMK	1,106 k	1,065 k	1,130 k	1,266 k	2,139 k	1,320,334 ZMK
Land size per HH ha/hh	.64	1.24	1.75	2.42	4.11	1.97
FSP As Source of Fertiliser	2,183	3,396	4,406	7,610	11,361	28,956 mt
FSP HHs Value of HH Assets	678 k	2,198 k	2,458 k	2,490 k	8,784 k	2,886,006 ZMK
Commercial Purchase Source	5,344	5,129	11,239	10,315	18,719	50,746 mt
Pur. HHs Value of HH Assets	4,271 k	3,784 k	5,226 k	4,299 k	6,287 k	1,964,370 ZMK
PAM Food Security Pk Source	398	782	1,177	913	1,037	4,307 mt
PAM HH Value of HH Assets	147 k	1,345 k	1,384 k	483 k	3,401 k	1,277,880 ZMK
Non-Fertiliser Users Assets	1,205 k	1,008 k	927 k	955 k	1,038 k	1,030,192 ZMK
ZambiaTotal Fert. Used mt	9,087	9,506	17,593	18,272	31,948	86,405 mt

Zambian Budget Basics

- Sources of funds
- Spending agents

Where are Agriculture Growth Funds Sourced?

- Government
  - Direct expenditures
  - Indirect through tax incentives
- Development partners
  - Budget and project support
  - Non-budget support
- Private sector including farm households
  - Commercial loans
  - Equity investment funds
  - Outgrower inputs in-kind

Ag Funds Spending Agents

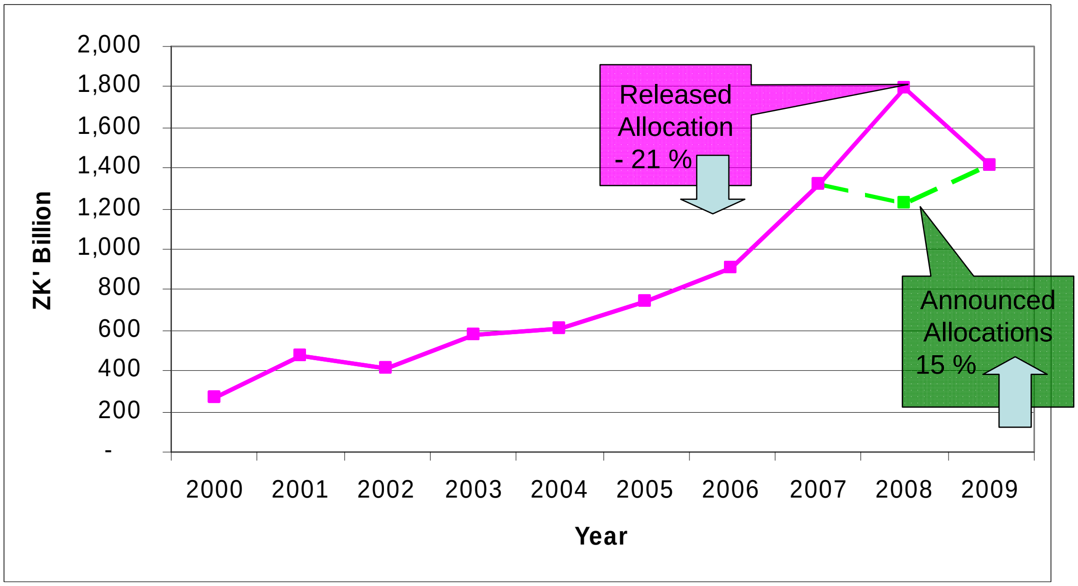
- ***** UN/AU/NEPAD standards define "agriculture" as including crops, livestock, fisheries, forestry & hunting
- Agricultural expenses incurred by other ministries including:
  – Home affairs (prison farms)
  – Community development & social services (food security pack)
  – Defense (Zambia National Service – farm production)
  – Works & Supply (building of agricultural infrastructure)
  – Lands (survey and demarcation of agric lands)
  – ***** Natural resources (forestry) tourism, and environment
  – Energy and water (construction of dams for irrigation)
  – Finance & national planning (loans and investments)
  – Office of President (crop, livestock & forestry projects)
  – ***** Office of Vice President (resettlement & disaster management)

**** Current analysis now includes these – prior work on Zambian budgets by Govereh et. al. did not – results do change***

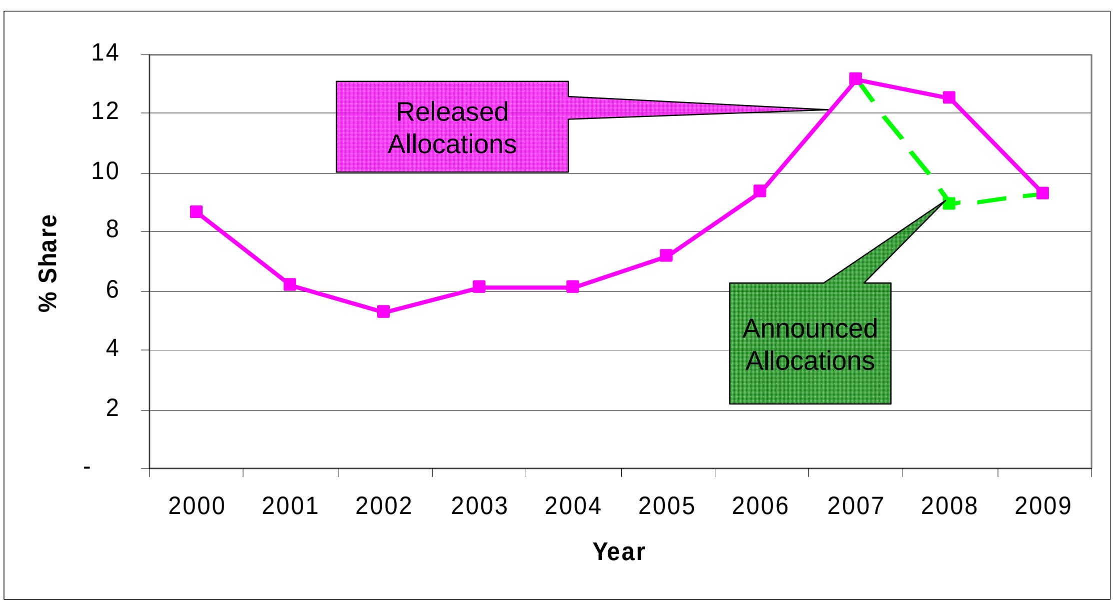
Agricultural Budget Trends in Zambia

- Real size of budget, comparisons & trends
- Agriculture's share of national budget

Real Size of Agricultural Budget 2001 – 2008 (2008 Dec = 100)



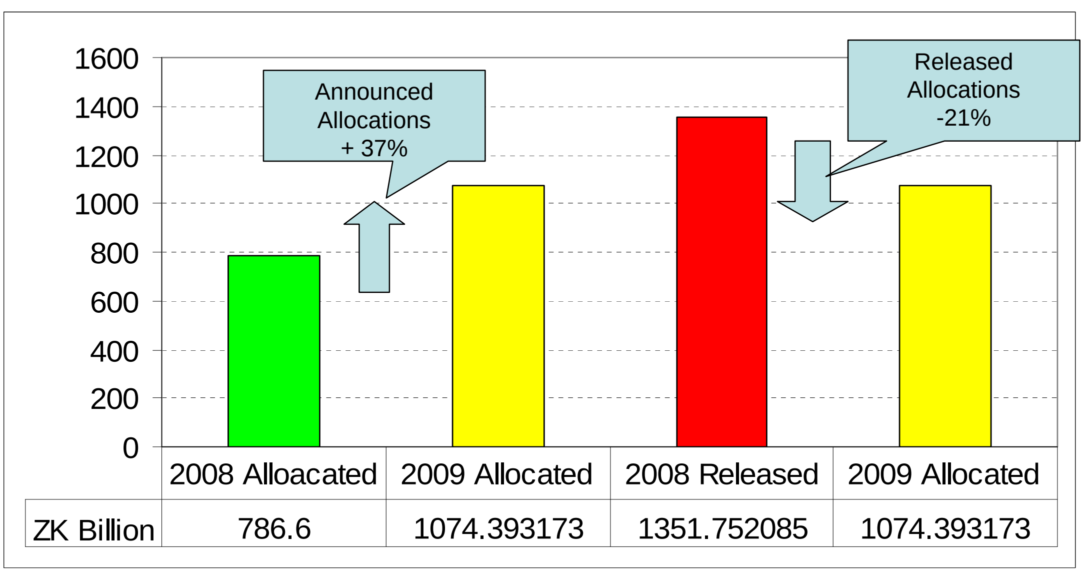
Agriculture's Share of Zambian National Budget



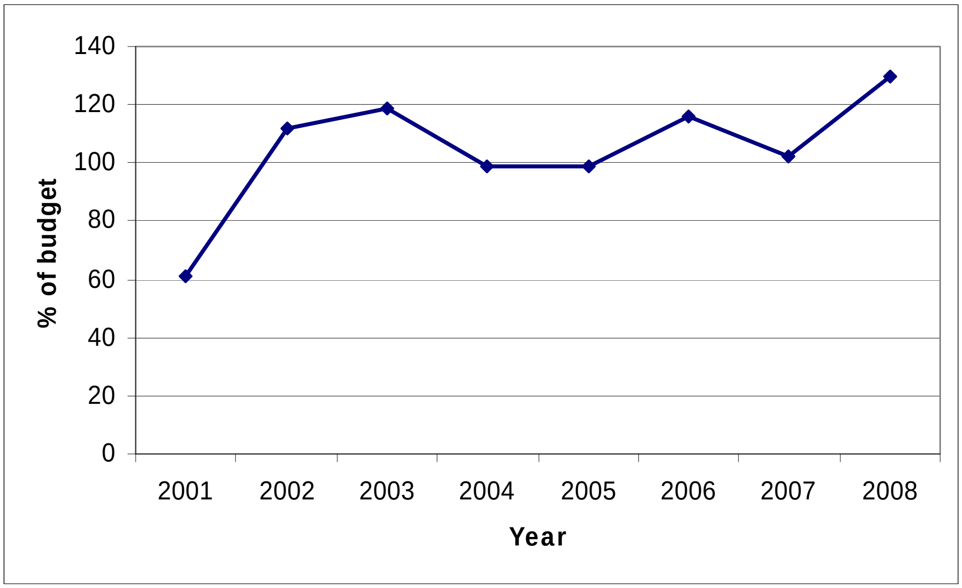
Measuring Trends – What is Measured: Resources Approved vs Actually Released – 2008 Budget

	2008			2009		
	Approved	**Released**		**2009 Allocation**		
Category	ZK' Billion	ZK' Billion	%	ZK` Billion	%	% change 08 to 09
Personal Emoluments	118.1	118.1	100	131.8	10.4	11.5
Recurrent Departmental Charges	100.1	84.1	84	160.1	12.7	90.5
Grants and Other Payments	4.1	4.2	101	3.5	0.3	-16.5
Poverty Reduction Programs	282.9	568.1	201	575.1	45.5	1.2
Capital Expenditure	3.5	3.1	88	42.8	3.4	1297.2
Agricultural show	0.6	2.7	458	2.8	0.2	2.8
Agricultural development Programs	277.3	277.3	100	158.3	12.5	-42.9
Allocation to other ministries	123.3	123.3	100	188.7	14.9	53.0
TOTAL	**909.9**	**1180.9**	**130**	**1263.0**	**100**	6.96

Announced & Released MACO Allocations 2008 - 2009



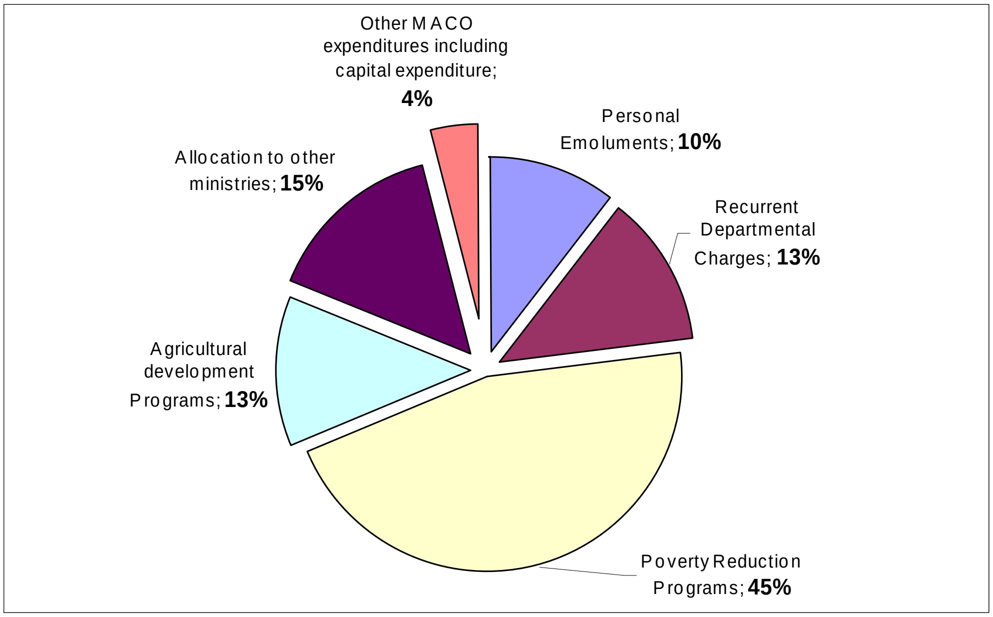
Budget Releases as % of Allocation: MACO 2001 - 2008



2009 – Zambian Agriculture Sector Budget – Key Provisions

- Personnel Emoluments (PEs)
  - Salaries and Wages
- Recurrent Departmental Charges (RDCs)
  - Supplies and other requisites
- Grants and other payments
  - CDT, IFAD, International Red Locust
- Poverty Reduction Programs (PRPs)
  - Fertilizer Support Program, Strategic Food Reserves/FRA
- Agricultural Development Programs
  - ADB, ASP
- Allocation to other ministries
  - Food Security Pack, Construction of Dams and Roads

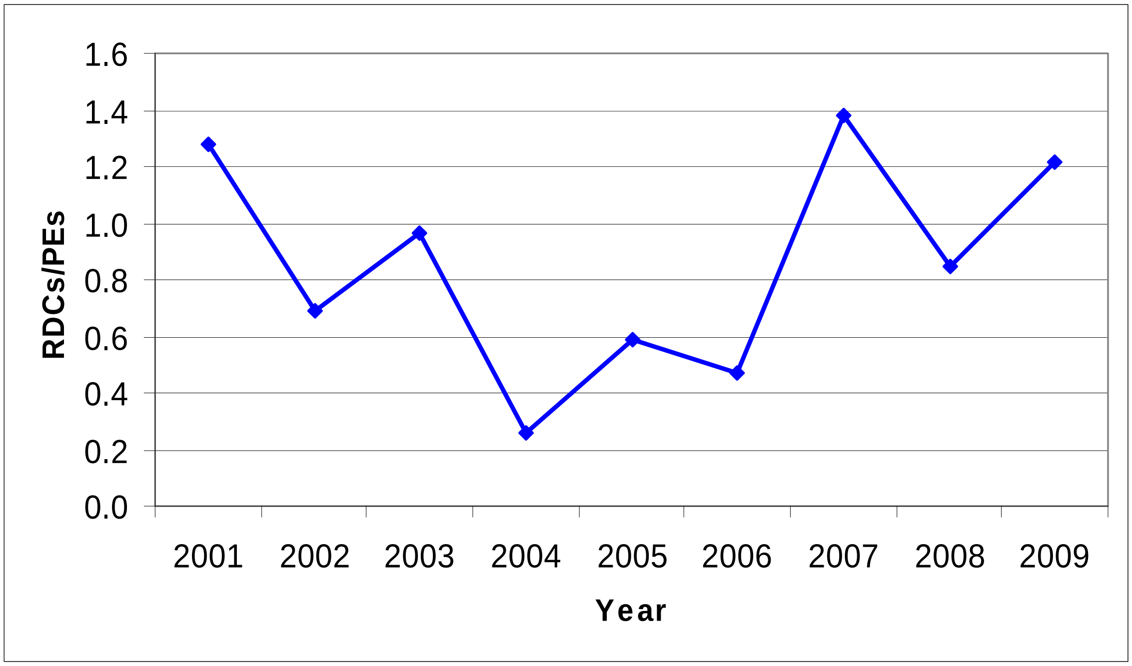
2009 Resource % Allocation Within Agriculture: ZMK893.1 billion



Recurrent Departmental Charges - 2009

	2008 Actual		2009 Allocation	
Category	ZK billion)	(%)	ZK billion)	(%)
Provinces and Districts	45.8	54.4	105.4	65.8
Fisheries, Vet & Agric Research Stations	13.8	16.4	17.1	10.7
Agricultural Training Institutions	11.4	13.5	14.8	9.2
Other Head Quarters Based Departments	13.1	15.6	22.9	14.3
TOTAL	**84.1**	**100**	**160.1**	**100**

Ratio of RDCs to Personnel Emoluments



MACO Poverty Reduction Programs 2008 & 2009

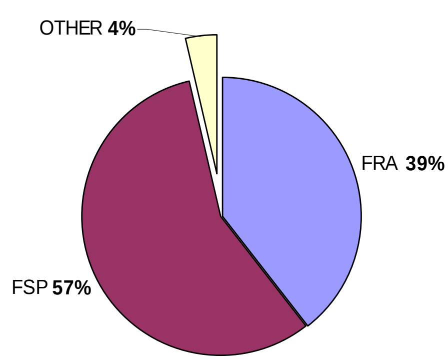
	2008 Actual		2009 Allocation	
Category	ZK billion)	(%)	ZK billion)	(%)
Irrigation support	5.9	0.7	6.0	1.0
Commercialization of farm blocks	6.5	0.7	0.0	0.0
Animal disease control	9.7	1.1	24.0	4.2
Livestock development	1.8	0.2	3.2	0.6
Fertilizer Support Program	490.1	56.8	435.0	75.6
Strategic Food Reserves	340.0	39.4	100.0	17.4
Cooperative Education and training	0.5	0.1	0.1	0.0
Other	7.9	0.9	6.8	1.2
TOTAL	**862.2**	100	**575.1**	100

PRP Resources Approved vs Released 2008

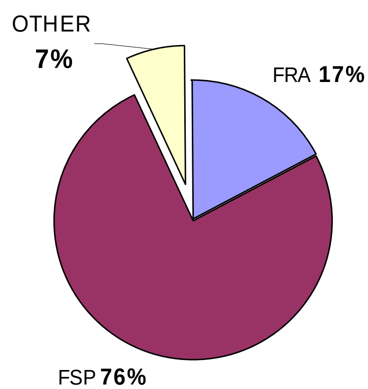
Poverty Reduction Programs	Approved	Released	% increase
	---------ZK Billion--------		
Fertilizer Support Program	187.0	492.1	163.1
Food Reserve Agency	80.0	340.0	325.0
Other	15.9	30.2	90.0
TOTAL	**267.0**	**832.1**	211.6

Composition of Poverty Reduction Programmes 2008 & 2009

2008 Released



2009 Announced



Development Basics: Drivers of Growth in Agriculture

- Research, technology and extension
  - GART, ZARI, NISIR, UNZA,MACO, NGOs
- Soil fertility management & enhancements
  - Fertilizer use & management (timely, levels, methods)
  - Conservation farming
- Irrigation
  - Small scale and large schemes
- Reliable & Competitive Markets
  - Domestic, regional and international
- Strategic Infrastructure
  - Soft and hard (eg. Road building/maintenance, electric power, communication, storage facilities)

FRA – Strategic Reserve

- Buying maize in outlying areas good intention but very costly and may stimulate production of the wrong crops in very high cost locations – counter to goal of diversification
- Many farmers in outlying areas need to first produce more to eat
- Importance of dependable role of strategic reserve so private agents can invest to complement & reduce the need for FRA actions
- Consumer/miller maize subsidies in 2008 have been very costly to GRZ
- In 2009 there is a special FRA challenge – careful rebuilding of the strategic reserve, subject to the size of the crop
  - Large maize crop – buying at market prices can assist the market to keep prices up
  - Small crop - open borders early for private imports to allow supplements to what FRA can procure & to reduce costs to GRZ

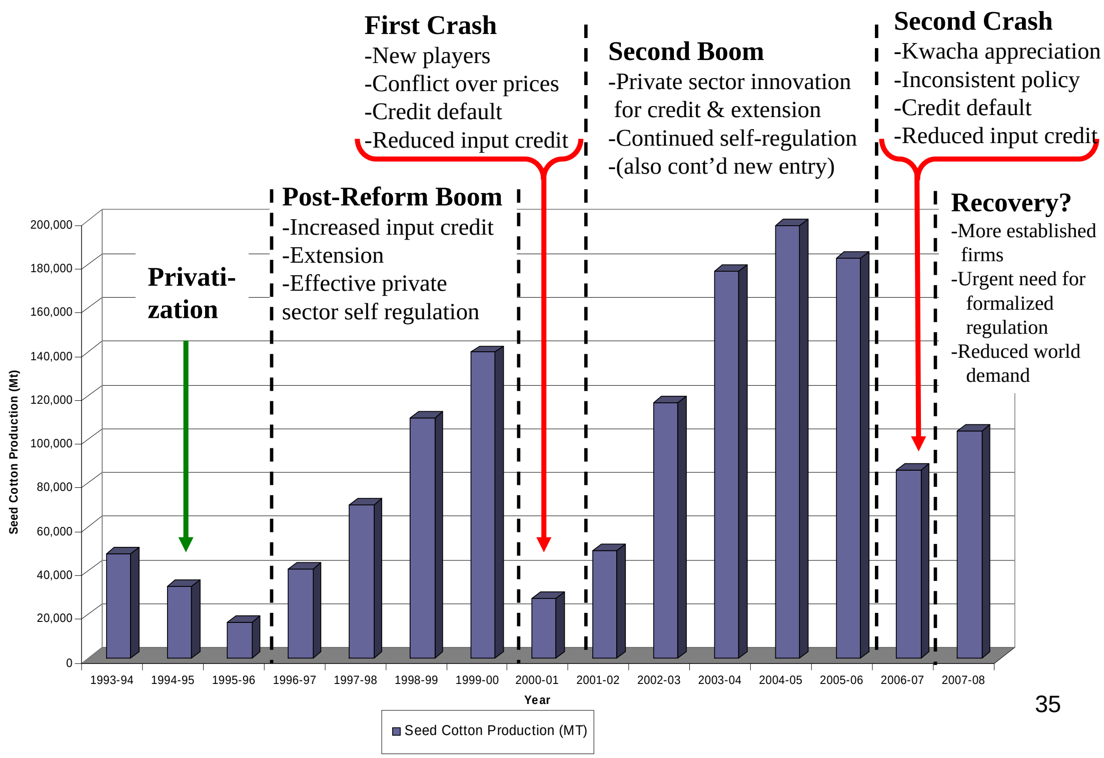
Food Security Pack - PAM

- Zambia - has a unique program in FS Pack/PAM
- Actually predates Food Security Programme
- Targets vulnerable & promotes crop diversification
- Other countries committed to subsidies for smallholders trying to invent this approach
- But FS Pack/PAM has been relatively underfunded. 2009 allocation similar to 2008
- In some prior years funding was over 40 B ZMK
- Additional allocations here could promotes crop diversification & productivity, as well as target vulnerable

Other Agriculture Sector Related Budget Provisions

- Vat zero-rating (promote viability small farmers)
  - Windmills & maize hammer/dehuller mills
  - Two wheel tractors & accessories
  - Tractors to 60 hp
  - Ploughs, harrows, planters & other equipment
  - Pump sets & knap sack sprayers
- Custom Duty Scrapping
  - Crude soybean & sunflower and crude palm oil
- Selected Increases in Taxes
  - Export duty increase on cotton seed 15 % to 20 %
  - Export company tax on earnings from export of cotton lint from 15 to 35 %
- Food security pack allocation about same as prior year

Periods of Success & Challenge in Seed Cotton Production (1993-2008)



Cotton Sector Special Concerns

- Cotton industry in a critical phase
- Conditions have fundamentally changed
  - Domestically
    - More established players unlikely to exit (many left after first crash)
    - Likelihood of even more players without effective regulation (Cotton Board)
    - Too many players will undermine input credit provision
      - This is already happening but could be reversed if action is timely
  - Internationally
    - Reduced demand due to worldwide financial crisis
    - Increased productivity due to GM – further pressure on prices
- Export taxes are seldom effective in promoting local investment
  - On lint: effect limited due to weak domestic demand & competitiveness for lint processing
  - On cottonseed: there has been no additional crushing capacity added, so who will the tax protect?
- Sector needs assistance to stabilize itself and reinvest in productivity
  - Sharp increase in profits tax on lint exports could destabilize the industry, especially in absence of functioning Cotton Board
  - Also reduce ability to offer farmers high seed cotton price

Agricultural Donor Development Programs – 2008 (2009 in progress)

Category	Allocation	
	('ZK billion)	(%)
Smallholder Enterprise and Marketing Programs - mkting	1.6	1
ASIP/ADB Eastern Province – livestock & infrastructure	19.0	7
Small-scale Irrigation Project – irrigation	23.1	8
Program for Luapula Province Agric Rural Dev (PLARD)	16.1	6
Smallholder Livestock Improvement Programme	15.8	6
Agricultural Diversification and Food Security Project – Ext	41.7	15
Agricultural Support Program – crops, livestock & infra	22.0	8
Kwando Zambezi Tsetse and Tryps Eradication Project	21.7	8
Regional Irrigation and Water Management Project	53.1	19
Agricultural Development Support Program (ADSP) – Com	51.6	19
Other	11.7	4
TOTAL	**360.6**	**100.0**

Summary

- Change in 2009 ag. budget size is complex to interpret due to large additional allocations in 2008.
- Overall the trend toward NEPAD/CAADP target is down to 9 % from a peak of some 13 % in 2007
- Ag operating funds for implementation up
- A number of vat zero rating changes enhance growth options
- Poverty reduction programs continue staple centered & are even more dominated in 2009 by FSP.
- Strategic food reserve funding up
- Many drivers of agricultural growth still underfunded
- Budget speech focus for ag sector calls for growth for livestock, irrigation and farm blocks. Implementation critical
- Cotton sector targeted for increased domestic value added but sector recovery challenges for lint production recovery are significant