REPUBLIC OF ZAMBIA

AGRICULTURAL AND PASTORAL PRODUCTION

(Small and Medium Scale Holdings) 1997-98

STRUCTURAL TYPE AND POST-HARVEST DATA

(Executive Summary Only)

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PREFACE

Agriculture and pastoral production statistics for the small and medium scale sub-sector of agriculture are produced by the Agriculture and Environment Division of the Central Statistical Office (CSO). The Division conducts sample surveys annually and censuses after every ten years. The results of these annual surveys are published under the series: Agriculture and Pastoral Production (Small and Medium Scale Holdings) Report.

This report covers only the operations of the small and medium scale farmers in the country. Operations of the large-scale farming sub-sector are covered under a separate report, which is presently under preparation. Information contained in this report relates to the agriculture season, which commenced on 1st October, 1997 and ended on 30th September, 1998.

The information presented here-in is on: number of rural households and type of agricultural activity they are engaged in; crop production and input use; soil conservation practices, on-farm storage, and irrigation; livestock and poultry inventory and the transactions carried out during the 197/98 agricultural season. Further, information on households member's labour and hired casual labour on various crop production tasks; and, use of animal draught power and mechanical power by type and source is also published in this report.

An inventory of draught animals and farm equipment was taken, estimated values, purchases and sales of these items were also collected. In order to capture other aspects of livestock production, data on cattle infections, treatment using modern medicines, and number of deaths resulting from infections were also recorded. Presented alongside data on infection is information on cattle vaccinations and tick control practices.

The 1997/98 post-harvest survey was third such survey to be conducted with funding from the Agriculture Sector Investment Program (ASIP). The first and second surveys covered the 1995/96 and 1996/97 agricultural seasons, respectively. Reports of the earlier two surveys have since been published.

This time around, it has been decided to produce individual provincial reports. The reason behind this decision is that the main user of agricultural data, the Ministry of Agriculture Food and Fisheries, has since been restructured. To effectively implement the ASIP, District Agricultural Coordinators (DACOs) have been appointed and District Agricultural Committees (DACs) have been formed in each district for this purpose.

The Department hopes that these provincial reports will be of use to the district decision-makers and policy formulators in fostering agricultural development in their respective areas.

Data analysis in this report has concentrated on inter-district comparisons and in some cases temporal comparisons with the previous season.

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EXECUTIVE SUMMARY

Demographic Characteristics

During the 1997/98 agricultural season there were 921,061 households in the rural areas of the country. Female headed households made up 23.0% of this number. Western Province reported the highest percentage of Female headed households at 29.0% and Lusaka Province, the lowest with 18.2%.

The mean age of female heads of households was 48.1 years compared to 43.3 years for the male heads. Female heads mean age ranged from 45.7 years to 49.6 years with the Northern Province recording the highest and Copperbelt Province the lowest. Male heads mean age ranged between 41.3 and 46.3 years

Rural Households Heads by Sex and Age-group

At national level, 33.8% of male heads households were below the age of 35 years, compared to only 19.3% of female heads. Eastern, Lusaka, Southern and Luapula Provinces recorded. 37.9%, 36.8%, 36.5% and 35.0, respectively of male heads below 35 years. Central, North-western and Western Provinces recorded less than 30% of male heads below 35 years of age. In all the provinces, over 70% of female heads were aged 35 years and older, with 85.1% in Northern Province as the highest and 74.4% in Luapula as the lowest.

TABLE 1: RURAL HEADS OF HOUSEHOLDS BY SEX AND AGE-GROUP DURING THE 1997/98 AGRICULTURAL SEASON.

GEOGRAPHIC AREA	MALE HEADS			FEMALE HEADS		
	Total Heads	% Below 35 Years	% 35 Years & Older	Total Heads	% Below 35 Years	% 35 Years & Older
ZAMBIA	**709,044**	**33.8**	**66.2**	**212,17**	**19.3**	**80.7**
Central	67,746	29.1	70.9	19,633	20.1	79.9
Copperbelt	30,079	32.5	67.5	9,612	17.4	82.6
Eastern	145,339	37.9	62.1	49,852	17.8	82.2
Luapula	102,993	35.0	65.0	24,708	25.6	74.4
Lusaka	18,463	36.8	63.2	4,116	17.2	82.8
Northern	133,072	33.4	66.6	35,894	14.9	85.1
North-Western	45,958	29.7	70.3	10,972	17.8	82.2
Southern	89,568	36.5	63.5	26,325	19.9	80.1
Western	75,826	28.0	72.0	30,905	21.9	78.3

Agricultural Households

The majority of rural households were engaged in agricultural activities during the 1997/98 agricultural year. In all, 97.4% of the rural households were engaged in agriculture. All provinces recorded over 95% of the rural households engaged in agriculture, except Lusaka Province which recorded 73.3%.

Crop growing was the major agricultural activity in which the majority of agricultural households were engaged, with all provinces reporting more than 95% of the households. Copperbelt Province recorded 100% of agricultural households having been engaged in crop growing.

Livestock raising was reported by relatively lower percentages of agricultural households. Central, Eastern, Lusaka, Northern and Southern Provinces reported 27.4%, 43.7%, 26.5% and 49.6, respectively. The lowest proportions of livestock raising households were reported in Copperbelt Province (14.7%), Luapula Province (12.9%) and North-western Province (14.2%).

Poultry raising was reported by more than 50% of the agricultural households in all the provinces. Central Province (70.3%), Luapula Province (73.6%), Northern Province (73.6%) and Southern Province (80.9%) reported the highest proportion of poultry raising households.

Fish farming is still not a widespread activity. However, fish farming is being practised in all provinces, except in Lusaka, Southern and Western Provinces. It is probable that these provinces may have some fish farmers, who could not be captured due to their sparseness vis-à-vis the sampling scheme adopted for the survey. The highest proportion of households engaged in fish farming was recorded in Northern Province (10.3% of agricultural households in the province).

TABLE 2: RURAL HOUSEHOLDS BY AGRICULTURAL ACTIVITY DURING THE 1997/98 AGRICULTURAL SEASON

GEOGRAPHIC AREA	TOTAL H/HOLDS	PERCENT AGRIC H/HOLDS	% Agricultural H/Holds Engaged in ……..			
			CROPS	LIVESTOCK	POULTRY	FISH FARMING
ZAMBIA	921,061	97.4	97.8	29.3	67.1	0.3
CENTRAL	87,379	95.8	95.9	27.4	70.3	0.0
COPPERBELT	39,691	97.3	100.0	14.7	51.7	0.1
EASTERN	195,191	99.4	99.3	43.7	62.8	0.1
LUAPULA (*)	127,701	97.3	95.6	12.9	73.6	0.6
LUSAKA	22,579	73.3	97.4	26.5	55.9	-
NORTHERN	168,966	98.4	97.0	25.4	73.6	10.3
NORTH-WESTERN	56,930	99.1	99.0	14.2	56.3	0.3
SOUTHERN	115,893	98.1	96.7	49.6	80.9	-
WESTERN	106,731	97.0	99.1	21.9	53.1	-

Crop-growing Households

Maize, Groundnuts, Cassava and Millet were the crops reported by large proportions of crop-growing households. Maize growing households accounted for 70.3%, Groundnut growing 38.8%, Cassava growing, 40.1% and Millet growing 18.5% of crop-growing households.

The total area planted to various crops was 1.19 million hectares. The area planted to maize accounted for 43.9% of the total area planted to crops that season. In second place was cassava which accounted for 23.6%, and third was groundnuts under 10.1% agricultural season.

The production of both Burley and Virginia Tobacco is "localized" and the sampling scheme used is not adequate enough to capture comprehensive data on these crops. Hence, this may account for the low hectorage under these crops in this report. Similarly, cow peas and ground beans, which many instances are grow in mixture with other crops such as maize and sorghum tend to occupy small areas in the fields where they are grown. Food crop production totaled 1.04 million metric tons, and the major component of this food stock was maize (60.3%), followed by cassava (22.3%), millet (4.3%), and groundnuts (4.2%).

TABLE 3: CROP-GROWING HOUSEHOLDS, AREA UNDER CROP AND PRODUCTION

CROP	HOUSEHOLDS REPORTING	AREA UNDER CROP(Ha)	AVERAGE CROP AREA PER H/HOLD (Ha)	PRODUCTION (Metric Tons)	PRODUCTION Per Ha. (Metric Tons)	AVERAGE PRODUCTION PER H/HOLD (Metric Tons)
Maize	615,905	521,069	0.85	625,015	1.20	1.01
Sorghum	79,568	36,030	0.45	23,697	0.66	0.30
Rice (Paddy)	23,579	9,608	0.41	7,540	0.78	0.32
Millet	162,309	63,859	0.39	44,730	0.70	0.28
Sunflower	15,653	12,310	0.79	6,129	0.50	0.39
Groundnuts	340,326	120,511	0.35	43,722	0.36	0.13
Soyabeans	9,196	4,909	0.53	2,374	0.48	0.26
Seed Cotton	85,735	79,272	0.92	72,560	0.92	0.85
Irish potatoes	4,804	1,352	0.28	2,167	1.60	0.45
Tobacco (Virginia)	3,268	2,064	0.63	1,175	0.57	0.36
Tobacco (Burley)	4,393	3,464	0.79	3,493	1.01	0.80
Mixed Beans	79,585	24,011	0.30	9,913	0.41	0.12
Ground Beans	14,687	2,550	0.17	1,122	0.44	0.08
Cow peas	6,977	2,265	0.32	486	0.21	0.07
Sweet potatoes	92,724	21,317	0.23	37,842	1.78	0.41
Cassava	351,103	280,637	0.80	231,230	0.82	0.66

Chemical Fertilizers Use

Out of 615,905 households that grew maize during the 1997/98 agricultural season, 17.0% used basal dressing fertilizers, and 18.3% top dressing fertilizers to their maize crop. Of the total quantity of basal dressing fertilizers used, 85.8% was applied to maize, 4.0% to burley tobacco, and 2.8% to virginia tobacco. These three crops accounted for 92.6% of the basal dressing fertilizers used during the

season. On the other hand, top dressing fertilizers used during the season was applied to maize (85.9%), burley tobacco (3.1%), and virginia tobacco (1.6%).

Considerable proportions of households that grew tobacco used chemical fertilizer on the crop compared to households that grew other crops. For virginia tobacco, 97.3% of the growers reported using basal dressing fertilizers and 96.1% used top dressing fertilizers on the crop. Burley tobacco growers recorded proportions of 76.7% and 67.8% of households using basal and top dressing fertilizers, respectively.

Table 4a: CHEMICAL FERTILIZER APPLICATION BY HOUSEHOLDS AND CROP DURING THE 1997/98 AGRICULTURAL SEASON

CROP HOUSEHOLDS GROWING CROP		APPLICATION OF CHEMICAL FERTILIZERS			
		BASAL DRESSING		TOP DRESSING	
		% H/HOLDS APPLYING	QUANTITY APPLIED (KG)	% HOUSEHOLDS APPLYING	QUANTITY APPLIED (KG)
Maize	615,905	17.0	14,677,247	18.3	14,575,494
Sorghum	79,568	0.1	2,675	-	-
Millet	162,309	1.3	115,900	0.3	20,125
Sunflower	15,653	2.3	37,875	-	-
Groundnuts	340,326	0.1	39,100	-	-
Soyabeans	9,196	1.3	12,200	-	-
Seed Cotton	85,735	2.8	10,590	0.2	3,730
Irish Potatoes	4,804	2.2	1.166	3.3	1,590
Tobacco (V)	3,268	97.3	487,500	96.1	269,950
Tobacco (B)	4,393	76.7	683,620	67.8	432,460
Mixed beans	79,585	2.1	77,150	0.7	22,225
Sweet Potatoes	92,724	0.2	2,175	-	-

Households Purchasing Chemical Fertilizers by Source

The main source of chemical fertilizers for the 1997/98 agricultural season was the private trader, followed by co-operative union and then farmer. Country-wide,
76% of the households that purchased chemical fertilizers reported the private trader as their main source, 8% reported co-operative union and 6% fellow farmer. Western Province, however, recorded less than 50% of households reporting the private trader as the main source of chemical fertilizers with 32.5% for basal dressing fertilizers and 47.1% for top dressing fertilizers. The province also recorded the highest proportions of households reporting NGO as the main source of fertilizers with 27.6% for basal, and 26.1% for top fertilizers. North-Western Province recorded the highest proportion of households reporting co-operative union as the main source of top dressing fertilizers (26.8%).

TABLE 4b: HOUSEHOLDS PURCHASING BASAL DRESSING FERTILIZERS BY SOURCE

GEOGRAPHIC AREA	HOUSEHOLDS REPORTING	% HOUSEHOLDS REPORTING SOURCE AS ……					
		CO-OP UNION	NGO	PRIVATE TRADER	CREDIT CO-ORDINATOR	FELLOW FARMER	OTHER
ZAMBIA	109,321	7.9	2.1	76.1	3.2	6,4	4.4
CENTRAL	19.969	14.6	2.2	73.3	3.6	4.8	1.4
COPPERBELT	7,736	8.9	1.3	81.7	-	7.2	0.9
EASTERN	28,880	1.4	0.5	83.5	-	7.7	6.9
LUAPULA	6,306	8.6	-	72.6	5.7	13.1	-
LUSAKA	3,974	13.0	1.7	83.8	1.4	0.2	-
NORTHERN	21,081	1.0	2.6	85.5	6.6	2.8	1.6
NORTH-WESTERN	1,286	10.4	-	79.2	10.4	-	-
SOUTHERN	18,010	17.9	2.0	57.9	3.6	9.4	9.2
WESTERN	2,079	1.4	27.6	32.5	8.9	8.9	20.6

TABLE 4c: HOUSEHOLDS PURCHASING TOP DRESSING FERTILIZERS BY SOURCE

GEOGRAPHIC AREA	H/HOLDS REPORTING	% HOUSEHOLDS REPORTING SOURCE AS ……..					
		CO-OP UNION	NGO	PRIVATE TRADER	CREDIT CO-ORDINATOR	FELLOW FARMER	OTHER
ZAMBIA	113,459	**8.3**	2.3	**76.3**	**2.7**	**6.2**	**4.2**
CENTRAL	21,023	13.7	1.9	72.4	3.4	5.3	3.2
COPPERBELT	8,260	11.5	1.2	82.3	-	4.9	-
EASTERN	33,847	1.7	1.1	85.6	-	6.1	5.5
LUAPULA	5,721	7.8	-	76.1	4.9	11.2	-
LUSAKA	3,429	16.8	2.0	77.6	1.6	2.0	-
NORTHERN	17,053	1.2	3.5	82.2	7.7	3.5	1.9
NORTH-WESTERN	1,727	26.8	-	65.5	7.8	-	-
SOUTHERN	20,204	16.0	2.6	61.6	2.6	9.4	7.8
WESTERN	2,195	1.4	26.1	47.1	-	8.5	16.9

Households Reporting Using Organic Manure By Type of Organic Manure

Organic manure are used by very few households. In all, only 5.0% of crop-growing households reported using organic manure. Southern and Western Provinces had significant proportions of households reporting using organic manure with 17.6% and 11.1% respectively, of crop-growing households. The most commonly used type of organic manure is animal manure with over 80% of households reporting use of organic manure.

TABLE 4d: HOUSEHOLDS USING ORGANIC MANURE BY TYPE OF ORGANIC MANURE

GEOGRAPHIC AREA	TOTAL H/HOLDS REPORTING		% HOUSEHOLDS REPORTING USING …….		
	NUMBER	AS % OF CROP-GROWING HOUSEHOLDS	ANIMAL MANURE	GREEN MANURE	BOTH TYPES OF ORGANIC MANURE
ZAMBIA	44,155	5.0	89.6	8.9	1.4
CENTRAL	4,314	5.4	87.3	12.7	-
COPPERBELT	670	1.7	100.0	-	-
EASTERN	5,119	2.7	96.1	3.9	-
LUAPULA	915	0.7	100.0	-	-
LUSAKA	719	4.5	85.0	15.0	-
NORTHERN	1,454	0.9	99.1	0.9	-
NORTH-WESTERN	186	0.3	100.0	-	-
SOUTHERN	19,351	17.6	95.1	3.5	1.4
WESTERN	11,427	11.1	83.8	13.0	3.1

Households Members' Labour Input on Land Preparation, Planting, Weeding and Harvesting by Sex and by Crop Grown

In most instances members' of agricultural households get involved in agricultural production by providing their labour for no remuneration. Crop production is one activity that involves many tasks before yields are realized. The tasks related to crop production are land preparation, planting, weeding and harvesting.

During land preparation, female accounted for not less than 50% of the households members' who participated for all the crops except for seed cotton, irish potatoes, and burley tobacco.

Female households members also presented higher participation in planting of all crops, except for irish potatoes, virginia and burley tobacco. The highest female involvement in planting was recorded for mixed beans (63.2%), ground beans (65.0%) and cow peas (72.4%).

Weeding of millet, ground nuts, soya beans, mixed beans, ground beans, cow peas, sweet potatoes and cassava was done by 55% or more female members of households, the highest proportions being recorded for ground beans (64.3%), cow peas (64.4%) and cassava (60.3%).

Similarly, over 50% of those who harvested crops were female members of households, the highest proportions being recorded for millet (63.7%), ground beans (60.4%) and cassava (66.4%).

TABLE 5a: HOUSEHOLD MEMBERS' LABOUR INPUT ON LAND PREPARATION, PLANTING,WEEDING, AND HARVESTING.

CROP	LAND PREPARATION		PLANTING		WEEDING		HARVESTING	
	TOTAL MEMBERS	FEMALES %	TOTAL MEMBERS	FEMALES %	TOTAL MEMBERS	FEMALES %	TOTAL MEMBERS	FEMALES %
Maize	2,146,851	51.2	2,148,597	52.9	2,183,902	52.8	2,087,259	52.6
Sorghum	284,807	51.8	274,485	52.6	270,964	53.9	268,969	53.5
Rice (Paddy)	74,483	50.6	72,335	53.2	62,935	52.7	64,966	54.8
Millet	517,559	50.1	527,800	53.6	400,870	55.6	439,228	63.7
Sunflower	73,996	50.1	76,187	51.1	70,971	49.0	69,308	51.5
Groundnuts	1,194,281	53.0	1,127,585	57.2	1,143,457	58.1	1,203,409	55.4
Soyabeans	37,622	52.7	36,475	53.6	36,159	55.9	33,913	54.4
Seed Cotton	339,941	48.0	355,770	50.2	351,746	49.1	362,108	48.9
Irish Potatoes	12,856	42.6	11,985	45.6	11,649	47.3	13,592	43.1
Tobacco (Virginia)	13,764	45.3	13,769	44.0	13,433	44.8	12,895	47.3
Tobacco (Burley)	22,117	44.9	21,831	63.2	20,658	44.6	22,110	44.9
Mixed Beans	247,686	51.1	202,528	65.0	164,730	55.1	241,563	53.7
Ground Beans	44,172	56.5	37,471	72.4	36,834	64.3	40,278	60.4
Cow Peas	24,025	50.3	36,299	58.2	26,885	64.4	25,183	59.4
Sweet Potatoes	268,050	50.9	247,108	58.2	137,330	57.7	276,729	56.7
Cassava	955,838	51.4	841,695	58.9	890,783	60.3	663,139	66.4

Hired Casual labour on Crop Production

Like in previous surveys, the Post-Harvest Survey 1997/98 did not collect numbers of persons hired on piece-work basis to carry out agricultural operations during the season. The reasons for this are that previous attempts proved futile due to memory lapses on the part of the respondents as to who and how many people were hired for the various production tasks. However, not to be without data on hired casual labour, the survey collected information on households that engaged casual labour and the expenses incurred on this labour.

At the land preparation stage, 27.3% of virginia tobacco growing households reported hiring casual labour, recording the highest proportion during the season. Cassava, mixed beans and millet growing households recorded proportions of 19.5%, 15.4% and 14.8% respectively, of households that had hired casual labour. The total expenditure on hired casual labour for land preparation was K5,531.2 million, of this maize accounted for 41.6%, cassava accounted for 23.7%, ground nuts for 9.4% and millet for 7.4%.

On planting much fewer households reported employing hired casual labour, less than 5% of the households reported using hired casual labour on planting various crops, except on planting virginia tobacco, sunflower and rice where 9.1%, 6.4% and 5.2% respectively, of the households growing the crop reported employing hired casual labour. A total of K612.6 million was spent on hired casual labour

during planting of crops. Expenditure on hired casual labour during planting maize was 43.3%, seed cotton 13.4% and cassava 10.3% of the total spent on hired casual labour during planting of crops.

Use of hired casual labour during weeding was reported by 24.4% of the households that grew virginia tobacco, 18% of the households that grew seed cotton and 11.9% by those that grew maize. An estimated K3,816.3 million was spent on weeding of the various crops by hired casual labour with maize accounting for 54.6%, seed cotton 14.4%, cassava 11.3% and groundnuts 10.4%.

Total expenditure on hired casual labour during the three crop-growing operations amounted to K11,977.8 million, with maize accounting for 43.5%, cassava 15.9%, seed cotton 13.0% and groundnuts 10.4% of the total expenditure.

TABLE 5b: COSTS OF HIRED CASUAL LABOUR ON LAND PREPARATION, PLANTING, FEEDING, AND HARVESTING BY CROP

CROP	H/holds Growing Crop	Land Preparation		Planting		Weeding		Harvesting		Total Costs (K'mil)
		% H/holds Reporting	Costs (K'mil)	% H/holds Reporting	Costs (K'mil)	% H/holds Reporting	Costs (K'mil)	% H/holds Reporting	Costs (K'mil)	
Maize	615,905	11.6	2,299.0	2.6	265.5	11.9	2.084.1	3.1	562.6	5,212.2
Sorghum	79,568	8.4	116.0	0.4	3.4	4.4	54.5	1.5	29.0	202.9
Rice (Paddy)	23,579	10.6	84.9	5.2	30.1	4.0	28.6	11.9	75.5	219.1
Millet	162,309	14.8	409.2	2.1	45.4	4.2	108.5	9.6	171.9	735.0
Sunflower	15,653	6.1	17.9	6.4	11.6	9.3	58.0	9.7	83.1	170.6
Groundnuts	340,326	9.8	518.5	1.8	50.7	7.9	397.1	6.1	284.0	1,250.3
Soya beans	9,196	8.5	12.5	0.6	2.5	11.2	8.0	1.6	2.7	25.7
Seed Cotton	85,735	9.3	316.6	4.7	82.0	18.0	549.0	18.0	614.4	1,562.0
Irish Potatoes	4,804	1.9	0.9	-	-	2.1	1.0	-	-	1.9
Tobacco (V)	3,268	27.3	44.8	9.1	9.5	24.4	14.7	26.1	23.7	92.7
Tobacco (B)	4,393	10.3	20.5	0.5	0.3	11.1	23.3	13.8	19.7	63.8
Mixed Beans	79,585	15.4	201.0	3.5	29.4	1.8	21.4	2.9	29.4	281.2
Ground Beans	14,687	9.4	8.4	4.3	2.7	5.9	4.3	4.4	3.6	19.0
Cow Peas	6,977	0.4	0.8	-	-	2.1	2.6	2.1	2.2	5.6
Sweet Potatoes	92,724	11.5	169.8	1.0	16.7	1.4	28.6	0.4	11.0	226.1
Cassava	351,103	19.5	1,310.4	1.8	62.8	9.8	432.6	2.2	103.9	1,909.7

Use of Animal Draught Power on Land Preparation

During the 1997/98 agricultural season, the largest number of households that reported to have used animal draught power for land preparation grew maize. These were 185,992 representing 30.2% of maize growing households. In second place were households that grew groundnuts with 73,624 households reporting, respectively 21.6% of the growers. Households that grew seed-cotton recorded the third highest number of households that used animal draught power land preparation. There were 32,904 households, 38.4% of those that grew seed cotton.

The majority of crop growing households used oxen during land preparation for various crops. For all the crops, not less than 60% of the households reported to have used oxen, except for burley tobacco (55.2%), cow peas (55.3%), and sweet potatoes (44.2%). Use of donkeys was reported by 217 households that grew maize, a mere 0.1% of maize growing households. Female cattle for draught power were more prominent among burley tobacco, ground beans, cow peas, and sweet potatoes growing households. More than 10% of households growing each of these crops reported use of female cattle for land preparation. A combination of female cattle and oxen was mostly used by households that grew sweet potatoes (43.2%), cow peas (31.1%), sunflower (27.7%), groundnuts (21.9%) and virginia tobacco (19.5%).

TABLE 6a : USE OF ANIMAL DRAUGHT POWER BY HOUSEHOLDS ON LAND PREPARATION BY CROP FOR THE 1`997/98 AGRICULTURAL SEASON.

Crop	H/HOLDS GROWING CROP	PER CENT HOUSEHOLDS USING …….					TOTAL HOUSEHOLDS USING ANIMAL POWER	
		FEMALE CATTLE	OXEN	DONKEYS	OXEN AND FEMALE CATTLE	TOTAL	NUMBER	AS % OF GROWERS
Maize	615,905	6.2	79.0	0.1	14.7	100.0	185,992	30.2
Sorghum	79,568	2.9	90.9	0.1	6.1	100.0	15,190	19.1
Rice (Paddy)	23,579	-	100.0	-	-	100.0	6,212	26.4
Millet	162,309	0.3	94.9	-	4.8	100.0	13,708	8.4
Sunflower	15,653	4.7	67.4	0.2	27..7	100.0	9,342	59.7
Groundnuts	340,326	6.5	71.5	0.1	21.9	100.0	73,624	21.6
Soyabeans	9,196	-	100.0	-	-	100.0	2,628	28.6
Seed cotton	85,735	4.5	84.0	-	11.5	100.0	32,904	38.4
Irish Potatoes	4,804	-	100.0	-	-	100.0	267	5.6
Tobacco (Virginia)	3,268	-	80.5	-	19.5	100.0	1,075	32.9
Tobacco (Burley)	4,393	44.8	55.2	-	-	100.0	297	6.8
Mixed Beans	79,585	7.9	91.6	-	0.5	100.0	5,084	6.4
Ground Beans	14,687	20.2	63.3	-	16.5	100.0	1,320	9.0
Cow peas	6,977	13.6	55.3	-	31.1	100.0	3,168	45.4
Sweet potatoes	92,724	11.7	44.2	0.8	43.2	100.0	5,467	5.9
Cassava	351,103	-	100.0	-	-	100.0	2,693	0.8

A total of K1,517.2 million was used on hiring animal draught power of land preparation for the 1997/98 agricultural season. Hire of oxen cost K1.358.7 million (89.6% of the total cost of hiring animal draught power for land preparation). An amount of K110.1 million (7.3%of the total) was spent on hiring combinations of female cattle and oxen, while K48.4 million (3.2% of the total) was spent on hire of female cattle for draught power. The largest amount spent on hire of animal draught power was used on land preparation for maize. Which accounted for 12.4%, and third was groundnuts amounting for 6.7% of the total expenditure on land preparation using animal draught power.

TABLE 6b: COSTS OF HIRED ANIMAL DRAUGHT POWER USED ON LAND PREPARATION FOR THE 1997/98 AGRICULTURAL SEASON

CROP	FEMALE CATTLE (K'MIL)	OXEN (K'MIL)	DONKEYS (K'MIL)	OXEN AND FEMALE CATTLE (K'MIL)	TOTAL COSTS (K'MIL)
Maize	42.8	973.1	-	97.0	1,101.9
Sorghum	-	15.6	-	-	15.6
Rice (Paddy)	-	33.2	-	-	33.2
Millet	-	7.0	-	-	7.0
Sunflower	-	5.1	-	-	5.1
Groundnuts	4.3	92.1	-	5.1	101.5
Soya beans	-	9.9	-	-	9.9
Seed Cotton	-	185.4	-	21.5	187.9
Tobacco (Virginia)	-	4.0	-	-	4.0
Mixed Beans	-	3.9	-	-	3.9
Ground Beans	1.3	-	-	-	1.3
Cow Peas	-	-	-	5.5	5.5
Sweet Potatoes	-	2.9	-	-	2.9
Cassava	-	26.5	-	-	26.5

Use of Animal Draught Power During Planting

The largest number of households that reported using animal draught power during planting grew maize. These were 105,652 households (17.2% of households growing maize). Groundnuts recorded the second largest number of households using animal draught power in planting (35.2% of total households growing the crop).

Oxen are the most commonly used for animal draught power. Over 60% crop-growing households reported to have used oxen during planting of various crops, except for the planting of sunflower where only 48.0% of the households growing the crop reported used of oxen use of female cattle for animal draught power was prominent among growers of mixed beans, ground beans and cow peas where 15.6%, 15.7 and 25.8% respectively of the households growing each of the crops reported having used female cattle for draught power during planting. Combinations of oxen and female cattle for draught power were more used during planting. All households growing virginia tobacco, 46.4% of households growing sunflower, 27.1% of those growing groundnuts and 25.1% of household growing seed cotton used this type of draught power during planting of the crops. Donkeys were used by 0.5% of maize growing households.

TABLE 6c: USE OF ANIMAL DRAUGHT POWER BY HOUSEHOLDS ON PLANTING FOR THE 1997/98 AGRICULTURAL SEASON

CROP	H/HOLDS GROWING CROP	PERCENT HOUSEHOLDS USING ……					TOTAL HOUSEHOLDS SUING ANIMAL POWER	
		FEMALE CATTLE	OXEN	DONKEYS	OXEN AND FEMALE CATTLE	TOTAL	NUMBER	AS % OF GROWERS
Maize	615,905	5.6	73.5	0.5	20.5	100.0	105,652	17.2
Sorghum	79,568	1.9	86.8	0.3	11.1	100.0	7,184	9.1
Rice (Paddy)	23,579	-	100.0	-	-	100.0	2,043	8.7
Millet	162,309	2.8	86.2	-	11.0	100.0	5,945	-
Sunflower	15,653	5.2	48.0	0.4	46.4	100.0	5,516	35.2
Groundnuts	340,326	9.6	63.3	-	27.1	100.0	39,182	11.5
Soyabeans	9,196	-	100.0	-	-	100.0	342	3.7
Seed Cotton	85,735	6.3	68.6	-	25.1	100.0	14,174	16.5
Tobacco (Virginia)	3,268	-	-	-	100.0	100.0	74	2.3
Tobacco (Burley)	4,393	-	100.0	-	-	100.0	122	2.8
Mixed Beans	79,585	15.6	84.4	-	-	100.0	2,553	3.2
Ground Beans	14,687	15.7	63.7	-	20.5	100.0	849	5.8
Cow Peas	6,977	25.8	66.7	-	7.5	100.0	2,556	36.6

Cost of Hired Animal Draught Power Used on Planting

A total of K242.9 million was spent on hiring animal draught power on planting various crops. Hire of oxen cost K227.8 million (93.8% of the total cost of hiring animal draught power for planting). Hiring of combinations of oxen and female cattle cost K14.1 million (5.8% of the total cost of hiring animal draught power).

Planting of maize used most of the total amount spent on hired animal draught power (80.2%), followed by planting of groundnuts (13.0%) and seed cotton (4.8%).

TABLE 6d: COSTS OF HIRED ANIMAL DRAUGHT POWER USED ON PLANTING FOR THE 1997/98 AGRICULTURAL SEASON

CROP	FEMALE CATTLE (K'MIL)	OXEN (K'MIL)	DONKEYS (K'MIL)	OXEN AND FEMALE CATTLE (K'MIL)	TOTAL COSTS (K'MIL)
Maize	1.0	183.3	-	10.5	194.8
Sorghum	-	1.6	-	-	1.6
Rice (Paddy)	-	3.4	-	-	3.4
Groundnuts	-	29.7	-	-1.8	31.5
Seed Cotton	-	9.8	-	1.8	11.6

Use of Animal Draught Power During Weeding

A similar situation prevailed during weeding as during land preparation and planting of various crops. Over 70% of the households growing various crops reported having used oxen during weeding, except for sunflower growers where 65.7% of households were recorded. Use of donkeys was reported by 0.5% of households growing sorghum. Female cattle were used by 24.7% of households growing mixed beans. Combinations of oxen/female cattle were used by all virginia tobacco grower, 27.9% sunflower growers, 19.0% maize growers, and 15.9% of millet growing households.

The largest number of households reporting use of draught power during weeding was from maize growers (97.946 – representing 15.8% of total households growing maize), followed by seed cotton growers, 25,573 (29.8%).

TABLE 6e: USE OF ANIMAL DRAUGHT POWER BY HOUSEHOLDS ON WEEDING DURING THE 1997/98 AGRICULTURAL SEASON

CROP	HOUSEHOLDS GROING CROP	PER CENT HOUSEHOLDS USING ……					TOTAL HOUSEHOLDS USING ANIMAL POWER	
		FEMALE CATTLE	OXEN	DONKEYS	OXEN AND FEMALE CATTLE	TOTAL	NUMBER	AS % OF GROWERS
Maize	615,905	6.4	74.5	0.1	19.0	100.0	96,946	15.8
Sorghum	-	-	87.1	0.5	12.5	100.0	4,752	6.0
Rice (Paddy)	23,579	-	100.0	-	-	100.0	171	0.7
Millet	162,309	-	84.1	-	15.9	100.0	2,116	1.3
Sunflower	15,653	6.0	65.7	0.3	27.9	100.0	7,222	46.1
Groundnuts	340,326	2.6	89.0	-	8.4	100.0	10,230	3.0
Soyabeans	9,196	-	100.0	-	-	100.0	165	1.8
Seed Cotton	85,735	6.2	81.7	-	12.1	100.0	25,573	29.8
Tobacco (Virginia)	3,268	-	-	-	100.0	100.0	163	5.0
Mixed Beans	79,585	24.7	70.7	-	4.6	100.0	587	0.7
Ground Beans	14,687	-	100.0	-	-	100.0	85	0.6
Cow Peas	6,977	-	87.6	-	12.4	100.0	1,035	14.8

Costs of Hired Animal Draught Power Used on Weeding

A total of K103.7 million was spent on hiring animal draught power for weeding various crops. Hire of oxen cost K88.3 million (85.1% of the total cost of hired animal draught power for weeding). The hire expenses on female cattle was K2.2 million (2.1%) and on oxen/female cattle combinations – K13.2 million (12.7% of the total hired expenses).

TABLE 6f. COSTS OF HIRED ANIMAL DRAUGHT POWER USED ON WEEDING DURING THE 1997/98 AGRICULTURAL SEASON

CROP	FEMALE CATTLE (K'MIL)	OXEN (K'MIL)	DONKEYS (K'MIL)	OXEN AND FEMALE CATTLE (K'MIL)	TOTAL COSTS (K'MIL)
Maize	2.2	68.4	-	13.2	83.8
Groundnuts	-	0.7	-	-	0.7
Seed Cotton	-	19.2	-	-	19.2

Marketing of Agricultural Produce

Food crops – maize, sorghum , ground beans, and cow peas recorded rather lower levels of marketed produce from the previous season, ranging from 9.1% of produce for sorghum to 29.9% for ground beans. Marketed maize was 21.2% of the total produced. Less than 20% of the households that grew these crops reported selling some produce. Cassava, rice, millet and mixed beans recorded some increase in marketed proportions of produce, 9.8%, 49.1%, 12.9% and 56.0% respectively. Groundnuts and soyabeans maintained more or less the same levels of sales.

For cash crops like sunflower, seed cotton, virginia tobacco and burley tobacco over 70% of the households that grew each of these crops marketed some or all the produce. Over 85% of the quantities produced of these crops were sold.

A total of K110,156.4 million was realized by households from marketing of crops. Maize sales accounted for 31.5% of this agricultural income, seed cotton 35.9% and groundnuts 9.7%. Processing produce for the market cost, K337.4 million, out of which 31.0% was spent on processing maize, 19.0% on groundnuts, 12.2% on burley tobacco and 9.4% on cassava.

Transport costs of crops for marketing amounted to K1,244.6 million. Transporting of maize sales accounted for groundnuts 9.7%. Transporting of maize cost K346.5 million (27.8% of the total crop produce transport cost), groundnuts K204.3 million (16.4%), cassava K168.2 million (13.5%) and mixed beans K131.7 million (10.6).

TABLE 7a: HOUSEHOLDS REPORTING SALES OF CROP PRODUCE, QUANTITY SOLD, VALUE OF SALES, PROCESSING COSTS AND TRANSPORTATION COSTS

CROP	HOUSEHOLDS GROWING CROP	HOUSEHOLD REPORTING SALES		QUANTITY SOLD (METRIC TONS)		VALUE OF SALES	COSTS OF PROCESING	TRANSPORT COSTS
		NUMBER	%	QUANTITY	%	(K'MILLION)	(K'MILLION	(K'MILLION)
Maize	615,905	119,945	19.5	132,482	21.2	34,734.6	104.5	346.5
Sorghum	79,568	14,301	14.2	2,157	9.1	557.2	0.8	3.0
Rice (Paddy)	23,579	10,694	45.4	3,703	49.1	1,174.3	11.6	79.5
Millet	162,309	37,018	22.8	5,763	12.9	1,808.0	6.9	42.3
Sunflower	15,653	11,108	71.0	5,258	85.8	1,479.8	17.0	48.6
Groundnuts	340,326	155,027	45.6	15,040	34.4	10,640.1	64.2	204.3
Soyabeans	9,196	5,636	61.3	2,061	86.8	551.4	-	0.9
Seed Cotton	85,735	84,810	98.9	70,727	97.5	39,557.6	16.3	59.8
Irish Potatoes	4,804	4,632	96.4	1,751	80.8	624.8	-	17.1
Tobacco (Virginia)	3,268	3,090	94.6	1,175	100.0	1,247.2	28.6	7.0
Tobacco (Burley)	4,393	4,393	100.0	3,431	98.2	5,582.8	41.1	55.4
Mixed Beans	79,585	45,120	56.7	5,547	56.0	5,395.3	6.7	131.7
Ground Beans	14,687	5,390	36.7	335	29.9	167.3	1.6	9.0
Cow peas	6,977	686	9.8	104	21.4	35.6	-	0.3
Sweet potatoes	92,724	43,580	47.0	15,384	40.7	2,510.0	6.7	71.0
Cassava	351,103	66,910	19.1	22,765	9.8.	4,090.4	31.4	168.2

Sales of Crop Produce by Selling Points

For crop marketing, several selling points were identified as possible market outlets. The most commonly reported selling points for most crops was “Private Traders”. More than 50% of the households that grew each crop sold their produce to private traders. Exceptions were sorghum, seed

cotton, virginia tobacco, ground beans, cow peas, sweet potatoes and cassava. For sorghum, 47.4% of the households sold the produce to other households, cotton 71.6% of the households sold to out-grower facilitators, virginia tobacco 71.1% sold to out-grower facilitators, ground beans 45.6% to private traders and 40.9% to other households, sweet potatoes 42.1% sold at the market and 40.3% to private traders.

TABLE 7b: HOUSEHOLDS REPORTING SALES OF CROP PRODUCE BY SELLING POINT

CROP	H/holds Reporting	PERCENT HOUSEHOLDS BY SELLING POINT								
		Co-op Society	Private Trader	Agric. Processor	Other H/holds	NGO	Credit Co-ordinator	Out-Grower Facilitator	Market	Other
Maize	119,945	1.8	62.5	1.9	21.8	-	0.3	0.6	10.4	0.
Sorghum	11,301	-	31.6	-	47.4	-	-	1.9	18.4	0.7
Rice	10,694	-	75.0	-	14.1	-	-	-	9.9	0.9
Millet	37,018	2.1	60.6	-	23.4	-	-	-	13.9	-
Sunflower	11,108	5.0	71.1	13.6	5.4	-	-	4.7	-	0.2
Groundnuts	155,027	1.6	65.2	0.3	19.5	0.1	0.1	0.2	12.9	0.3
Soyabeans	5,636	1.8	78.9	4.5	8.7	-	-	3.9	2.3	-
Seed Cotton	84,819	1.4	12.8	6.5	-	1.3	0.3	71.6	0.7	5.4
Irish potatoes	4,632	0.3	85.3	-	-	-	-	-	12.3	2.2
Tobacco (V)	3,090	-	25.4	0.6	-	-	-	71.1	2.8	-
Tobacco (B)	4,393	-	50.0	0.3	-	-	-	49.2	-	0.5
Mixed Beans	45,120	4.5	68.1	0.4	10.2	0.5	-	-	14.5	1.8
Ground Beans	5,390	-	45.6	-	40.9	-	-	-	13.1	0.5
Cow Peas	686	-	43.3	-	28.1	-	-	-	28.6	-
Sweet Potatoes	43,580	0.8	40.3	0.3	15.7	0.2	-	-	42.1	0.6
Cassava	66,910	1.4	44.8	-	31.0	-	-	-	21.9	0.8

Households Reporting Crop Stock Levels

At the end of 1997/98 agricultural season, less than 10% of the households that grow food crops had sufficient stocks to last till the next harvest, another few (10%) households reported having some food stocks which would last only for a short period of time. The majority, 83% - 96%, reported having run out of their food stocks by the close of the agricultural season.

TABLE 7c: HOUSEHOLDS REPORTING CROP STOCK LEVELS AT THE END OF THE 1997/98 AGRICULTURAL SEASON

CROP	HOUSEHOLDS HARVESTING CROP		HOUSEHOLDS WITH STOCKS UP TO NEXT HARVVEST %	HOUSEHOLDS WITH INSUFFICIENT STOCKS %	HOUSEHOLDS WITHOUT STOCKS %
	NUMBER	**%**			
Maize	577,140	100	6.0	10.8	83.0
Sorghum	74,351	100	2,6	11.4	85.9
Rice	19.599	100	1.1	5.0	93.9
Millet	158,693	100	3.8	8.8	87.4
Sunflower	14,374	100	8.7	3.7	87.6
Groundnuts	333,034	100	3.0	4.4	92.6
Soyabeans	7,262	100	8.1	1.8	90.1
Irish Potatoes	4.804	100	0.4	15.9	83.7
Mixed Beans	76,053	100	1.4	5.9	92.8
Ground Beans	13,213	100	-	3.8	96.2
Cow Peas	6,017	100	5.7	2.5	91.8
Sweet potatoes	91,623	100	1.7	3.4	95.0
Cassava	-	-	-		

Production of Vegetables for Sale

The most popular vegetable grown for sale was rape, which was reported by 41,477 households, followed by tomatoes and cabbages, reported by 29,442 and 27,940 households respectively.

A total of K8,207.5 million was realized from vegetable sales during the 1997/98 agricultural season. The largest income from sales of vegetables was recorded for cabbages (31.8% of the total value of vegetable sales), followed by tomatoes (27.7%), and rape (25.0%).

Nation-wide, input expenses on vegetable amounted to K1,466.0 million of which 35.6% was on purchase of seeds, 25.7 on insecticides/pesticides, 7.6% of hired casual labour and 31.1% on transport to the market.

TABLE 7d: HOUSEHOLDS GROWING VEGETABLES FOR SALE BY TYPE OF VEGETABLE GROW, AND AMOUNT REALIZED FROM SALES DURING THE 1997/98 AGRICULTURAL SEASON.

VEGETABLE TYPE	HOUSEHOLDS REPORTING	VALUE OF SALES (K'MILLION)	VALUE OF SALES
Cabbage	27,940	2,611.6	31.8
Rape	41,477	2,054.3	25.0
Spinach	2,612	80.7	1.0
Tomatoes	29,442	2,275.0	27.7
Onions	6,562	343.9	4.2
Okra	1.600	145.2	1.8
Egg Plant	2,333	85.8	1.0
Pumpkins	1,510	28.4	0.3
Chilies	887	80.5	1.0
Chomolia	240	0.8	*
Cauliflower	448	6.8	0.1
Carrots	1,193	75.7	0.9
Green Beans	1,954	69.1	0.8
Green Maize	6,969	322.7	3.9
Other Vegetables	1,064	27.0	0.3
T O T A L		8,207.5	

Use of Irrigation

The number of households that reported having used irrigation for crop production was 68,149 which accounted for 7.8% of the total crop growing households. Southern Province recorded the largest number of 24,361 (21.4% of crop-growing households in the province). Eastern Province recorded 12,698 (6.6%), Copperbelt Province 7,409 (19.2), Central Province 6,805 (8.5%) and Northern Province 8,002 (4.5% of the crop-growing households in the province.

The most widely use method of irrigation was by use of watering cans. This is the only method that all the households which reported using irrigation in Eastern, Luapula and western Provinces applied. All the other provinces recorded proportions of over 70% of households using watering cans, except North-Western Province where 68.9% of households used watering cans, 37.3% steel/hose pipes, and 18.6% sprinklers.

TABLE 8: HOUSEHOLDS USING IRRIGATION BY METHOD USED

GEOGRAPHIC AREA	HOUSEHOLDS REPORTING	% HOUSEHOLDS REPORTING USING …….				
		ENGINE PUMP	HAND PUMP	SPRINKLER	STEEL/HOSE PIPE	WATERING CAN
ZAMBIA	68,149	1.3	0.4	0.4	4.4	94.5
Central	6,805	8.8	3.1	-	0.2	89.8
Copperbelt	7,409	-	-	0.2	7.1	93.5
Eastern	12,698	-	-	-	-	100.0
Luapula	3,906	-	-	-	-	100.0
Lusaka	483	17.4	-	-	11.2	70.6
Northern	8,002	-	-	-	1.3	98.7
North-Western	1,497	-	6.2	18.6	37.3	68.9
Southern	24,361	8.9	-	-	7.1	92.3
Western	2,988	-	-	-	-	100.0

Soil Conservation

A total of 345,290 households reported practicing soil conservation, accounting for 39.3% of households that grew crops during the 1997/98 agricultural season. The highest proportions of households practicing soil conservation were recorded in Luapula Province (64.7%), North-Western Province (58.4%) and Northern Province (48.9%). The lowest proportions were recorded in Western, Lusaka and Provinces, 11.4%, 12.8% and 20.2% respectively.

The most commonly used method of soil conservation was contour ridging with 48.0% of households that reported practicing soil conservation recorded, followed by bunding (41.5% of households reporting practicing soil conservation). Contour ridging was the common practice in the Copperbelt Province used by 73.6%, in Eastern Province by 85.6%, in Lusaka Province by 57.0%, in Northern Province by 56.9%, and in Southern Province by 46.1% of the households that reported practicing soil conservation. Bunding was mostly practiced in North-western Province, with 85.4% of the households reporting using this method. This was followed by Luapula Province (67.1%), Northern Province49.4%, and Central Province 45.9% of the households practicing soil conservation. Fallowing was practiced by 47.9%, 47.2%, 38.1% and 30.5% of the households in Western Provinces, respectively. The other methods of soil conservation recorded smaller proportions of households practicing them.

TABLE 9: HOUSEHOLDS PRACTICING SOIL CONSERVATION BY METHOD USED

GEOGRAPHIC AREA	CROP GROWING H/HOLDS	HOUSEHOLDS PRACTICING SOIL CONSERVATION		% HOUSEHOLDS PRACTICING ……..					
		No.	%	MUNCHING	CONTOUR RIDGING	FALLOWING	TERRACING	BUNDING	OTHER
Zambia	877.804	345,290	39.3	6.4	48.0	20.8	4.3	41.5	4.2
Central	80,240	31,892	30.7	5.7	18.5	47.2	1.1	45.9	14.1
Copperbelt	38,603	16,751	43.4	13.8	73.6	9.8	5.7	5.1	1.0
Eastern	192,676	91,322	37.0	4.8	85.6	4.4	2.7	4.7	4.4
Luapula	120.300	77,841	64.7	6.5	26.8	14.1	7.5	67.1	1.2
Lusaka	16,114	2,066	12.8	22.0	57.0	8.0	-	-	10.4
Northern	161.386	78,913	48.9	0.5	56.9	30.5	3.4	49.4	3.4
North-western	55,846	32,635	58.4	5.1	23.2	8.0	1.6	85.4	3.5
Southern	109,994	22,213	20.2	17.7	46.1	38.1	9.2	13.4	3.3
Western	102,645	11,657	11.4	25.8	13.9	47.9	3.1	22.1	10.7

On-Farm Storage of Produce

An estimated 445,086 households reported having on-farm storage facilities, representing 50.7% of households that grew crops during the 1997/98 agricultural season. Of these, 73,104 households (16.4%) reported storing some produce, mostly using traditional storage facilities which accounted for 61.5% of the households. Only 1.3% of the households reporting storing produce used improved storage facilities, and 39.5% used bags/containers in house for storage of produce.

The produces that reported considerable proportions of households with storage facilities were Eastern (88.3%), Southern (71.9%), Central (55.3%), and Northern (50.5%). The lowest proportion was recorded in North-Western Province (8.3%). Copperbelt, Luapula, and Western Provinces recorded just over 20% households with storage facilities.

All provinces reported over 60% of households storing some produce, using traditional storage facilities, with exception of Copperbelt, Luapula and Northern Provinces. Luapula Province recorded 77.0% and Northern Province 66.5% of households storing produce in bags/containers in houses. Lusaka Province recorded (10.2%), the highest proportion of households using improved storage facilities, followed by Copperbelt Province (9.7%), North-Western Province (7.9%), and Eastern Province (6.4%).

TABLE 10a: HOUSEHOLDS WITH ON-FARM STORAGE FACILITIES, HOUSEHOLDS STORING PRODUCE BY TYPE OF STORAGE FACILITY DURING THE 1997/98 AGRICULTURAL SEASON

Geographic Area	Total Crop-Growing H/holds	Households with Storage Facilities		Households Storing Produce		% Households Using …….		
		Number	As % Of Crop Growers	Number	As % Of Households With Storage	Traditional Storage	Improved Storage	Bags In House
ZAMBIA	877,804	445,086	50.7	73,104	16.4	**61.5**	1.3	39.5
Central	80,240	44,412	55.3	8,780	19.8	67.5	0.8	33.5
Copperbelt	38,603	7,853	20.3	465	5.9	49.2	9.7	41.1
Eastern	192,676	170,071	88.3	23,178	13.6	77.8	6.4	24.1
Luapula	120,300	27,412	22.8	8,933	32.6	24.0	-	77.0
Lusaka	16,114	4,933	30.6	3,448	69.9	87.1	10.2	3.2
Northern	161,386	81,538	50.5	16,421	20.1	35.5	-	66.5
North-western	55,846	4,644	8.3	1,652	35.6	85.2	7.9	6.9
Southern	109,994	79,036	71.9	9,314	11.8	80.3	1.9	22.6
Western	102,645	25,187	24.5	913	3.6	100.0	-	-

Households Storing Crop Produce

All provinces recorded over 50% of the households that stored crop produce having storage maize, except Luapula Province (8.6%) and Northern Province I12.7%). Western Province recorded 100%, Lusaka 98.3%, Eastern 89.7%, Southern 84.8% and Central 73.6% of the households that grew maize as having stored maize. Sorghum was stored by 33.1% of the households that grew the crop in the Copperbelt Province, and by 28.0% of the households in North-Western Province. Considerable proportions of households storing millet were recorded in Luapula (19.3), and in Northern Province (45.5%).

TABLE 10 b: HOUSEHOLDS STORING PRODUCE BY TYPE OF PRODUCE

GEOGRAPHIC AREA	HOUSEHOLDS STORAGE PRODUCE	% HOUSEHOLDS STORING …….							
		MAIZE	SORGHUM	RICE	MILLET	GROUNDNUTS	SOYABEANS	MIXED BEANS	OTHER
ZAMBIA	73,104	59.4	2.5	1.3	14.0	7.7	0.5	1.8	12.8
CENTRAL	8,780	73.6	6.8	3.7	5.9	10.0	-	-	-
COPPERBELT	465	53.3	33.1	-	-	13.5	-	-	-
EASSTERN	23,178	89.7	1.0	-	0.1	9.2	-	-	-
LUAPULA	8,933	8.6	-	-	19.3	6.1	2.7	-	63.3
LUSAKA	3,448	98.3	-	-	-	1.7	-	-	-
NORTHERN	16,421	12.7	2.3	3.9	45.5	5.6	0.8	7.8	21.5
N/WESTERN	1,652	50.7	28.0	-	9.8	-	-	-	11.4
SOUTHERN	9,314	84.8	-	-	3.6	11.6	-	-	-
WESTERN	9,13	100.0	-	-	-	-	-	-	-

Households Raising Livestock and Changes in Numbers Held Over the Season

A total of 115,927 households (44.0% of livestock – raising households) raised cattle during the 1997/98 agricultural season. The total cattle population at the end of the season was estimated at 1.0 million herds. This cattle population was 20.3% smaller than the number reported to have been held at the start of the agricultural season. There were an average of 9 cattle per household that raised cattle during the season.

Pigs were raised by 93,482 households (35.5% of livestock – raising households). There were 363,144 raised at the end of the season, 11.9% less than the number raised at the beginning of the season. The average number of pigs raised per household was 4.

Goats are the most widely reared livestock in the country. A total of 156,891 households (59.6% of livestock – raising households) reported to have 861,775 goats at the end of the agricultural season. The goat population declined by 14.8% during the season. An average of 5 goats per household was raised.

Rearing of sheep is sparse and the number of households raising sheep is very small at 4,151 or 1.6% of the total livestock – raising households. At the end of the season, there were 16,546 sheep reported. The population of sheep has reduced by 5.0% over the season. On the average, 4 sheep were raised per household.

Donkeys are rare animals in the country, and only 193 households (0.1% of livestock – raising households) reported raising 459 donkeys at the end of agricultural season. The number of donkeys increased by 19.2% over the season. The average number of donkeys raised per household was 2.

TABLE 11 a: NUMBER OF HOUSEHOLDS RAISING LIVESTOCK, CHANGE IN NUMBER OF LIVESTOCK HELD OVER THE PERIOD, AND AVERAGE NUMBER HELD PER HOUSEHOLD

LIVESTOCK TYPE	HOUSEHOLDS REPORTING	AS % OF LIVESTOCK RAISING HOUSEHOLDS	NUMBER HELD ON 30TH SEPTEMBER, 1998	% CHANGE IN NUMBER HELD	NUMBER HELD PER HOUSEHOLD
CATTLE	115,927	44.0	1,015,649	- 20.3	9
PIGS	93,482	35.5	363,144	-11.9	4
GOATS	156,891	59.6	861,775	-14.8	5
SHEEP	4,151	1.6	16,546	-5.0	4
DONKEYS	193	0.1	459	19.2	2

Number of Households Raising Cattle by Type and Change in Numbers Held over the Season

About 83.4% of the households that raised cattle during the season reported to have 370,705 cows at the end of the agricultural season. A 28.4% declined in population of cows occurred over the season due to various reasons. The average number of cows per household was estimated at 4. The next popularly raised type of cattle was trained-oxen which were reported by 76.4% of cattle raising households. Trained-oxen numbered 214,613 (23.4% fewer than the beginning of the season) and were reported at an average of 2 animals per household. Calves, numbering 182,097, were reported to have been raised by 51.1% of the households. The number of calves had risen by 38.2% compared to the number raised

at the beginning of the agricultural season. There were 3 calves per household that reported raising them.

A small proportion of 29.8% of the cattle-raising households reported to have 34,603 bulls among their herds of cattle. This number of bulls was 26.8% less than what was held at the beginning of agricultural season. Households reporting bulls had an average of 1 bull per household.

Except for calves which recorded an increase in number, there was a decline of more than 20% among all the other types of cattle, the largest being of untrained oxen (39.3%), followed by the cows (28.4%), bulls (26.8%) and tollies/steers (25.8%).

TABLE 11 b: NUMBER OF HOUSEHOLDS RAISING CATTLE BY TYPE, CHANGE IN NUMBER HELD OVER THE SEASON, AND AVERAGE NUMBER HELD PER HOUSEHOLD

TYPE OF CATTLE	HOUSEHOLDS REPORTING	AS % OF CATTLE RAISING HOUSEHOLDS	NUMBER HELD ON 30TH SEPTEMBER, 1998	% CHANGE IN NUMBER HELD	NUMBER HELD PER HOUSEHOLD
COWS	96,697	83.4	370,705	- 28.4	4
HEIFERS	43,258	37.3	107,102	- 23.4	2
BULLS	34,603	29.8	39,072	- 26.8	1
OXEN (UNTRAINED)	18,387	15.9	40,624	- 39.3	2
OXEN (TRAINED)	88,597	76.4	214,613	- 23.8	2
TOLLIES/STEERS	29,260	25.2	60,815	- 25.8	2
CALVES	59,246	51.1	182,097	- 38.2	3

Households Raising Poultry

A total of 592,768 households (98.2% of poultry-raising households) reported to have raised 4.3 million chicken at the end of the 1997/98 agricultural season, with an average of 7 chicken per household.

Only 3.9% of the poultry-raising households reported to have raised guinea-fowls. There were 102,253 guinea-fowls reported at the end of the agricultural season. Each household raised 4 guinea-fowls on the average.

Ducks and geese were raised by 6.4% of the poultry-raised households. The total number of ducks and geese reported was 196,469 and an average of 5 such birds were raised per household.

Very few households, 2,342 (0.4% of poultry-raising households) reported to have raised rabbits during the agricultural season, with an average of 4 rabbits per household.

TABLE 12 : NUMBER OF HOUSEHOLDS RAISING POULTRY, NUMBER HELD, AND AVERAGE NUMBER PER HOUSEHOLD

POULTRY TYPE	HOUSEHOLDS REPORTING	AS % OF POULTRY RAISING HOUSEHOLDS	NUMBER HELD ON 30TH SEPTEMBER, 1998	AVERAGE NUMBER PER HOUSEHOLD
CHICKENS	592,768	98.2	4,305,230	7
GUINEA Fowls	23,388	3.9	102,253	4
Ducks and geese	39,001	6.5	196,469	5
Rabbits	2,342	0.4	8,423	4

Households Engaged in Fish Farming

Fish farming is not very common among the rural households. The activity requires abundance of water which occurs naturally for ponds to be set up. Seeing that this is a pre-requisite for fish farm to be undertaken, fish farmers tend to be far apart within the districts. This situation renders it difficult for the current post-harvest survey sampling frame to adequately capture data on fish farming activities.

During the 1997/98 agricultural season, an estimated 3,00 households reported to have been involved in fish farming, representing 0.3% of the total agricultural households. The Northern Province accounted for about 60% of the fish farming households in the country followed by Luapula Province (26.3%), North-Western Province (6.4%) and Eastern Province (4.8%) of the fish farming households.

A total of 5,587 ponds were operated during the season, out of which 86.5% were still operational at the end of the agricultural season. In Central, Copperbelt and Eastern Province, all the fish ponds operated during the season were still operational at the end of the season. In the North-Western Province (94.4%) and Northern Province (92.9%) of the fish ponds were still operational at the end of the season. Luapula Province recorded 66% operational ponds.

TABLE 13 : HOUSEHOLDS ENGAGED IN FISH FARMING, FISH PONDS OPERATED, AND INCOME FROM FISH SALES

GEOGRAPHIC AREA	HOUSEHOLDS REPORTING		TOTAL PONDS		PONDS OPERATIONAL	H/HOLDS RECEIVING INCOME FROM FISH SALES		INCOME RECEIVED K'000
	No.	AS % OF TOTAL NUMBER	No.	AS % OF TOTAL PONDS		No.	%	
ZAMBIA	3,000	100.0	5,587	100.0	86.5	306	10.2	25,020
CENTRAL	10	0.3	10	0.2	100.0	-	-	-
COPPERBELT	45	1.5	135	2.4	100.0	45	100.0	18,000
EASTERN	271	9.0	271	4.8	100.0	148	54.6	296
LUAPULA	783	26.1	1,467	26.3	66.0	21	2.7	5.040
NORTHERN	1,711	57.0	3,344	59.9	92.9	92	5.4	1,684
N/WESTERN	180	6.0	360	6.4	94.4	-	-	-

Households Engaging Permanent Employees During the 1997/98 Agricultural Season

An estimated 4,204 households, representing 0.5% of agricultural households, had permanent employees on their holdings during the 1997/98 agricultural season. Out of this number, Eastern Province had 42.6%, followed by Western Province (17.2%) and Northern Province (14.9%).

There were 6,895 permanent agricultural employees working for the small and medium scale agricultural households. Of this number, only 1.2% were females. The largest number of permanent employees was recorded in Eastern Province (29.4%) followed by Northern Province (18.3%), Luapula Province (17.0%), Western Province (10.9%) and Central Province (10.6%). Lusaka was the only province that recorded female permanent agricultural employees, 32.2% of the total permanent workers engaged in the province.

TABLE 14 a : HOUSEHOLDS EMPLOYING PERMANENT AGRICULTURAL WORKERS, AND NUMBER OF WORKERS BY SEX DURING THE 1997/98 AGRICULTURAL SEASON

GEOGRAPHIC AREA	HOUSEHOLDS REPORTING		TOTAL EMPLOYEES	% MALES	% FEMALES
	NUMBER	%			
ZAMBIA	4,204	100.0	6,895	98.8	1.2-
CENTRAL	341	8.1	734	100.0	-
COPPERBELT	137	3.3	202	100.0	-
EASTERN	1,791	42.6	2,026	100.0	-
LUAPULA	130	3.1	1,170	100.0	-
LUSAKA	159	3.8	260	67.7	32.3
NORTHERN	626	14.9	1,264	100.0	-
SOUTHERN	296	7.0	485	100.0	-
WESTERN	724	17.2	754	100.0	-

Average Salaries/Wages Paid to Permanent Agricultural Employees by Sex

Permanent agricultural employees earned a total of K922.7 million in cash salaries during the 1997/98 agricultural season. A further K44.7 million cash equipment was paid to the workers in kind.

At national level, male employees earned on average of K135,500 per person in cash. In the Southern Province a male employee received K337,500 during the season and in the Copperbelt K310,500. The lowest paid employee was in Lusaka Province who received K90,700 during the season. There were no payments in cash to female employees. The few female employees in Lusaka Province received payments in kind equipment to K7,000 per person. The disparities in the salaries paid may be due to the length of time an employee remained in agricultural employment during the season. A worker was regarded as a permanent employee if he/she worked on the holding continuously for at least four months.

TABLE 14(b) : AVERAGE SALARIES/WAGES PAID TO AGRICULTURAL PERMANENT WORKERS BY SEX DURING THE 1997/98 AGRICULTURAL SEASON

GEOGRAPHIC AREA	AVERAGE PAYMENTS IN CASH (K)		AVERAGE PAYMENTS IN KIND (K)	
	MALE	FEMALE	MALE	FEMALE
ZAMBIA	135,500	-	6,500	7,000
CENTRAL	128,700	-	11,000	-
COPPERBELT	310,500	-	-	-
EASTERN	131,500	-	5,900	-
LUAPULA	-	-	11,000	-
LUSAKA	90,700	-	3,300	7,000
NORTHERN	170,400	-	-	-
SOUTHERN	337,500	-	9,300	-
WESTERN	138,000	-	8,000	-

Households Owning Farm Assets

An estimated 113,550 households (12.7% of agricultural households) owned 165,273 ploughs as at the end of the agricultural season, valued at K19,243.4 million. Transport equipment other than lorries and vans, numbering 257,225 and valued at K36,583.0 million, were owned by 213,073 households, representing 23.8% of agricultural households.

Draught animals numbered 234,804 and were valued at K61,947.9 million. Households reporting owning transport equipment were 89,764 representing 10.0% of agricultural households.

TABLE 15 : OWNERSHIP OF FARM ASSETS BY HOUSEHOLDS AS ON 30TH SEPTEMBER 1998

FARM ASSETS	HOUSEHOLDS REPORTING	% HOUSEHOLDS REPORTING OF TOTAL AGRIC. HOUSEHOLDS	NUMBER HELD	VALUE (K'MILLION)
PLOUGHS	113,729	12.7	165,741	19,247.8
HARROWS	25,211	2.8	30,058	2,970.3
TRACTORS	1,540	0.2	1,570	18,129.4
OTHER	116,971	13.0	357,308	7,471.1
TRANSPORT EQUIPMENT	213,252	23.8	257,404	36,609.9
LORRIES AND VANS	3,527	0.4	4,326	26,364.4
DRAUGHT ANIMALS	89,943	10.0	235,878	62,055.3

Access to Agricultural Credit From the Formal Sector, 1997/98 Agricultural Season

Only 11.5 of the 897,197 agricultural households applied for loans from the formal sector. Across the provinces, Eastern Province recorded the highest percentage of agricultural households applying for loans at 27.1%. The second highest percentage was recorded in the Central Province (15.4%), followed by Southern Province (12.7%).

A total of 103,155 households applied for agricultural loans, and 67% of these received loans, and out of 118,186 loans applied for, 65.1% were received. Eastern Province, recorded the highest percentage of households that received loans (93.1% of the households that had applied for loans) followed by Central Province (59.6%). No loan applicant in Luapula and North-Western Provinces received any loans.

At national level, 81.6% of the households that received loans obtained them from out-grower facilitators, mostly organizations that promote the growing of seed-cotton and tobacco. Western Province had the highest percentage of households getting loans from this source(100%), followed by Central, Eastern, Southern and Copperbelt Provinces which recorded 92.3%, 85.3%, 71.7%, and 60.8% respectively. Private credit agents were the major source of financing in Lusaka Province amounting for 47.4% of the households that received loans. For Western Province the major source was NGO's accounting for 60.2% of the households.

TABLE 16 a : HOUSEHOLDS APPLYING FOR LOANS FROM THE FORMAL SECTOR, MBER OF LOANS APPLIED FOR, HOUSEHOLDS THAT RECEIVED LOANS, LOANS RECEIVED, AND SOURCE OF LOANS RECEIVED

ographic ea	Agric H/holds	% H/holds Applied	No. Of Loans Applied For	% H/holds Received Loans	% Loans Received	% Households Receiving Loans From ……						
						Agric Financial Institution	Co-operative Society	Commercial Banks	Private Credit Agents	NGO	Out-Growers Facilitator	Other
mbia	897,197	11.5	118,186	67.0	65.1	2.1	0.4	-	9.2	5.0	81.6	3
ntral	83,690	15.4	13,590	59.6	59.1	2.4	-	-	4.0	1.7	92.3	1
pperbelt	38,603	2.8	1,258	29.2	25.4	-	-	-	14.1	-	60.8	25
stern	194,105	27.1	61,317	93.1	90.8	2.0	-	-	8.5	1.4	85.3	4
apula	124,311	5.2	8,752	-	-	-	-	-	-	-	-	
saka	16,540	3.0	490	87.3	87.3	-	29.0	-	47.4	-	3.7	19
rthern	166,307	7.1	12,629	17.8	19.4	-	5.5	-	18.4	60.2	15.9	
rth western	56,419	3.2	2,530	-	-	-	-	-	-	-	-	
uthern	113,691	12.7	15,560	65.5	62.9	3.3	0.5	-	12.9	14.5	71.7	0
stern	103,531	1.6	2,060	13.8	11.2	-	-	-	-	-	100.0	

Households That Did Not Apply For Agricultural Loans

All together 794,042 rural agricultural households did not apply for agricultural loans from the formal sector for the 1997/98 agricultural season. The majority of these households (30.3%) cited inability to pay back loans as the reason for not having applied for agricultural loans. Luapula, Lusaka and Western Provinces cited lack of knowledge about credit facilities, recording, respectively 26.6%, 26.0% and 26.1% of agricultural households. Northern Province recorded 29.8% of agricultural households that did not apply for loans because credit facilities were too far from them.

High interest rates were of concern to 17.4% of the households in the Copperbelt Province.

All provinces recorded over 10% of households reporting that they no need for agricultural loans, except Central Province, which recorded 5.1%.

Central, Copperbelt, Lusaka and Southern Provinces recorded just over 10% of households that reported not to have applied for loans because they had no collateral.

TABLE 16 b : HOUSEHOLDS NOT APPLYING FOR AGRICULTURAL LOANS FROM THE FORMAL SECTOR BY REASON FOR NOT APPLYING.

Geographic Area	H/holds Reporting	% Households Giving Reasons as ……..							
		Inability To Pay Back	Credit Facility Too Far	Interest Rates Too High	Unaware	Defaulted On Earlier Loans	No Collateral	No Need	Other
Zambia	794,042	30.3	14.9	7.7	14.0	1.2	9.0	16.2	6.7
Central	70,827	37.3	17.0	10.5	7.2	0.7	12.7	5.1	9.4
Copperbelt	37,509	21.7	7.5	17.4	20.0	2.1	11.1	11.8	8.3
Eastern	141,549	35.0	10.7	10.6	7.0	2.4	7.7	19.3	7.4
Luapula	117,893	23.6	11.9	5.4	26.6	0.3	9.4	16.0	6.8
Lusaka	16,050	26.8	8.3	7.7	26.0	0.8	10.9	17.9	1.6
Northern	154,510	22.6	29.8	5.9	8.1	0.7	7.3	19.2	6.4
North-western	54,627	28.3	14.1	12.9	14.1	1.4	2.9	18.1	8.2
Southern	99,216	36.2	8.5	6.5	6.6	1.4	14.3	19.6	6.8
Western	101,861	37.3	10.6	1.7	26.1	1.1	7.4	12.3	3.5

Households Obtaining Agricultural Loans From the Informal Sector

About 0.6% of the rural agricultural households obtained agricultural loans from the informal sector, i.e., from private individuals. Copperbelt Province recorded 3.3% of households, the highest proportion. A total of K318.2 million was received by various households throughout the country. Eastern Province has the largest share of this amount receiving K97.2 million, followed by Copperbelt, Central and Northern Provinces getting K60 million, K52.4 million and K50.2 million respectively.

TABLE 16 C : HOUSEHOLDS RECEIVING AGRICULTURAL LOANS FROM THE INFORMAL SECTOR AND AMOUNTS OF LOANS RECEIVED.

GROGRAPHIC AREA	AGRICULTURAL HOUSEHOLDS	% HOUSEHOLDS RECEIVING LOANS FROM INFORMAL SECTOR	AMOUNT OF LOANS RECEIVED (K'MILLION)
ZAMBIA	897,197	0.6	318.2
CENTRAL	83,690	0.5	52.4
COPPERBELT	38,603	3.3	60.0
EASTERN	194,105	0.4	97.2
LUAPULA	124,311	0.5	31.9
LUSAKA	16,540	1.9	5.7
NORTHERN	166,307	0.4	50.2
NORTH-WESTERN	56,419	0.2	2.6
SOUTHERN	113,691	0.5	14.3
WESTERN	103,531	0.3	3.9

Households Receiving Agricultural Extension Advice During the 1997/98 Agricultural Season

There are several aspects of agricultural activities on which the farming community needs information and advice. The purpose of agricultural extension services is to keep this community abreast with technological advances in the agricultural sector through regular provision of information and advice on agricultural operations.

During the 1997/98 agricultural season, between 10% and 24% of the rural agricultural households received advice on crop husbandry, marketing, agricultural credit, household food security and storage of farm produce. Among these aspects of agriculture, 23.5% of the households received advice on crop husbandry, 18.2% of crop diversification, 17.9% on marketing, 12% on credit, 11.6% on household food security, 10.3% on storage of farm produce and 10% on animal husbandry.

Western Province recorded the lowest percentage of extension services outreach, recording less than 10% of households receiving extension services advice on all aspects of agricultural activities, except on crop husbandry where 10.6% of the households reported to have received advice.

In Central Province, about 21% of households received advice on crop husbandry, and on marketing of agricultural produce.

In Luapula Province, over 25% of the rural agricultural households received advice on crop husbandry, crop diversification, marketing, and household food security.

Lusaka Province recorded 21% of the households having been advised on marketing, 17.1% on crop husbandry, and 15.7% on storage of farm produce.

In Northern Province, 21.7% of the households received information on crop husbandry, 19.2% on crop diversification and 18.2% on marketing.

North-Western Province recorded 19.6% of the households receiving advice on crop husbandry and 11.7% on crop diversification.

In Southern Province, over 15% of the households reported to have received advice on crop husbandry, crop diversification, animal husbandry, marketing and credit.

TABLE 17 A : PERCENT HOUSEHOLDS RECEIVING AGRICULTURAL EXTENSION ADVICE BY TYPE OF ADVICE DURING THE 1997/98 AGRICULTURAL SEASON.

	Zambia	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	N/western	Southern	Western
Total Households	921,061	87,379	39,691	195,191	127,701	22,579	168,966	56,930	115,893	106,731
Type Of Advice										
Crop Husbandry	23.5	21.1	10.4	25.0	34.7	17.1	21.7	19.6	32.5	10.6
Crop Diversification	18.2	20.9	9.4	17.2	28.0	14.2	19.2	11.7	25.0	4.4
Animal Husbandry	10.0	9.2	5.3	11.1	14.0	9.8	7.9	7.5	15.5	4.1
Marketing	17.9	13.6	14.0	25.2	27.5	21.0	18.2	9.3	16.8	2.9
Credit	12.0	13.5	4.6	16.7	15.2	5.1	11.1	7.5	16.3	1.7
Conservation Farming	7.6	10.2	3.7	12.5	12.2	3.5	6.0	5.6	3.2	2.1
Fruits And Vegetables	5.7	8.1	4.4	5.8	7.8	3.2	4.6	3.3	10.1	0.4
Irrigation	4.7	7.2	6.0	4.1	7.5	4.0	4.3	3.5	5.9	0.2
Fish Farming	4.1	5.1	0.3	7.2	7.5	1.5	3.8	3.0	1.5	0.1
H/hold Food Security	11.6	8.2	13.0	11.3	25.1	4.3	14.2	7.9	7.0	2.2
Farm Management	6.2	6.4	1.3	7.8	10.7	4.7	7.4	4.0	3.6	1.7
Farm Power	3.1	4.5	1.0	2.9	4.6	2.6	3.4	3.6	3.2	0.6
Post Harvest Processing	6.2	6.8	6.2	6.4	12.8	3.7	6.8	8.0	2.1	0.7
Storage Of Farm Produce	10.3	7.2	12.3	11.0	15.7	15.8	12.6	6.7	10.1	1.6

Households Receiving Agricultural Extension Advice By Source

The most common source of agricultural extension advice was the Agricultural Extension Officer. On most aspects of agricultural activity, 40% and over of the households reported to have received advice

through individual contact with agricultural extension officers, except for advice on marketing, credit, household food security and storage of farm produce.

"Fellow farmer", was next in importance as source of agricultural extension advice, recording high proportions of households that received advice on marketing (46.9%), household food security (45%), storage of farm produce (38.6%) and credit (38.5%).

The radio was third in importance as source of agricultural extension advice. Between 16% and 30% of the households reported to have received advice through the radio on all aspects, except on agricultural credit (13.4%) and storage of farm produce (12.8%)

Farmer groups as source of agricultural extension advice were cited by about 3% of the households, NGO's and Publications about 1%. Marketing Agents were reported as source of advice on credit by 9.8% and on marketing by 7.3% by the households.

TABLE 17 b : HOUSEHOLDS RECEIVING AGRICULTURAL EXTENSION ADVICE BY TYPE OF ADVICE, AND BY SOURCE DURING THE 1997/98 AGRICULTURAL SEASON.

Type Of Advice	H/holds Receiving Advice	Extension Officer	Farmer Group	Field Days	Radio	Publications	Marketing Agents	NGO	Fellow Farmers	Others
Crop Husbandry	216,315	49.8	2.0	2.4	18.3	0.6	1.7	1.2	22.5	1.5
Crop Diversification	167,342	45.8	3.1	3.3	18.5	0.9	0.5	1.3	25.3	1.4
Animal Husbandry	91,781	44.6	3.0	1.2	26.5	1.6	0.1	0.5	20.1	2.5
Marketing	165,064	21.1	2.0	0.6	18.9	0.6	7.3	0.8	46.9	1.8
Credit	110,718	28.6	2.0	0.8	13.4	1.0	9.8	3.5	38..5	2.4
Conservation Farming	70,446	54.1	3.3	1.8	17.7	1.1	1.0	0.6	17.9	2.6
Fruits And Vegetables	52,701	41.7	3.4	0.6	19.9	1.2	1.0	1.9	26.7	3.6
Irrigation	43,572	44.5	3.3	0.7	21.6	1.5	1.3	3.1	21.5	2.5
Fish Farming	38,573	55.1	3.0	0.5	26.6	1.2	0.6	1.6	7.8	3.6
H/hold Food Security	106,386	29.8	3.6	1.2	15.7	1.2	0.4	0.5	45.0	2.5
Farm Management	56,760	53.8	3.4	1.3	19.4	0.9	0.5	0.1	18.0	2.6
Farm Power	28,537	46.5	4.7	0.6	30.2	1.2	-	0.3	12.9	3.5
Post Harvest Processing	57,378	40.0	3.4	1.0	18.5	1.1	2.4	0.4	29.8	3.5
Storage Of Produce	94,594	37.7	3.8	1.2	12.8	1.2	0.5	2.0	38.6	2.2

LIVESTOCK SERVICES

Households Vaccinating Cattle and Practicing Tick Control

Of the 115,927 households that raised cattle during the 1997/98 agricultural season, 44.2% reported to have vaccinated their cattle against disease and 46% reported to have practiced tick control.

In Copperbelt, Luapula, Central and Western Provinces, 89.9%,61.3%, 55.2% and 54% respectively, of the cattle raising households reported to have vaccinated their cattle.

Copperbelt, Central, Lusaka and Southern Provinces, 97.7%, 72.4%, 65.4 and 60.5% respectively, of the cattle raising households reported to have practiced tick control measures during the agricultural season.

TABLE 18 A : HOUSEHOLDS VACCINATING CATTLE AND PRACTICING TICK CONTROL

GEOGRAPHIC AREA	HOUSEHOLDS RAISING CATTLE	% HOUSEHOLDS VACCINATING CATTLE	% HOUSEHOLDS PRACTICING TICK CONTROL
ZAMBIA	115,927	44.2	46.0
CENTRAL	12,132	55.2	72.4
COPPERBELT	789	89.9	97.7
EASTERN	34,230	41.7	29.3
LUAPULA	610	61.3	30.8
LUSAKA	1,437	36.0	65.4
NORTHERN	8,953	34.6	22.5
NORTH-WESTERN	1,103	35.4	37.4
SOUTHERN	38,701	40.0	60.5
WESTERN	17,972	54.0	37.8

Households Practicing Tick Control

Of the 53,353 households that reported to have practiced tick control 67.2% sprayed their animals, 24.5% dipped the cattle and 8.3% used other forms of tick control. Dipping was most practiced by cattle-raising households in North-Western Province (63.0% of the households) and Central Province (40.4%). In Southern and Eastern Provinces, 28.9% and 19.5%, respectively of the households practiced dipping of cattle.

Spraying of cattle as a tick control measure was the most popular among the cattle-raising households in all the provinces, except in Luapula and North-Western Provinces. In Lusaka Province (97%), Copperbelt Province (96%), Eastern Province (68.2%), Central Province (59.2%) and Western Province (54.1%) of the households sprayed their animals. Luapula Province, all the households used ‘other’ measures of tick control.

TABLE 18 b : HOUSEHOLDS PRACTICING TICK CONTROL

GEOGRAPHIC AREA	HOUSEHOLDS PRACTISING TICK CONTROL	PERCENT HOUSEHOLDS USING ……..		
		DIPPING	SPRAYING	OTHER
ZAMBIA	53,543	24.5	67.2	8.3
CENTRAL	8,786	40.4	59.2	0.4
COPPERBELT	771	4.0	96.0	-
EASTERN	10,235	19.5	77.0	3.5
LUAPULA	188	-	-	100.0
LUSAKA	940	3.0	97.0	-
NORTHERN	2,012	-	73.9	26.1
NORTH-WESTERN	413	63.0	37.0	-
SOUTHERN	23,412	28.9	68.2	3.0
WESTERN	6,786	7.4	54.1	38.6

Cattle Infection, Treatment and Deaths Due to Diseases

Of the 115,927 households that reported to have raised cattle during the 1997/98 agricultural season, 64.8% reported disease infections among their animals. In Lusaka Province, 95.6% of the cattle raising households reported diseases among their herds of cattle. In Southern, Central and Copperbelt Province 73.1%, 72.9%, 70.8%, respectively of the households reported the same problem, and in Eastern Province (64.9%), Luapula (61.3%). Western Province recorded 52.3% of the households reporting cattle disease. The lowest proportion of households reporting cattle disease was recorded in North-Western Province with 28.4%.

A total of 430,917 of cattle (33.8% of the number held at the beginning of the agricultural season) were infected by diseases during the season. The highest percentage of infected cattle was recorded in Luapula Province (60.5%), followed by Copperbelt Province (43.0%), Central Province (42.2%), Lusaka Province (40.3%) and Southern Province (38.5%). The lowest percentage of infected cattle was recorded in North-Western Province (5.3%). Western and Eastern Provinces recorded 28.6% and 27.6%, respectively.

Throughout the country, of the households that reported cattle infected with disease, 50.2% reported to have used modern medicine to treat the sick animals. In Eastern Province, 54.4% of the households were recorded, followed by Southern Province (54.2%), Central Province (53.7%). Lusaka Province (46.8%) and Western Province (42.0%). Luapula and North-Western Provinces did not record use of modern medicine to treat sick animals.

Treatment with modern medicine was recorded at 53.5% of the infected cattle in the country. In Western Province 74.6% of the infected cattle were treated with modern medicine, followed by Eastern Province (54.8%), Southern (52.5%), Central Province (45.1%), Lusaka Province (27.9%) and Northern Province

(27.4%). Only 1.3% of the cattle infected with disease were reported to have received treatment with modern medicine in Copperbelt Province.

A total of 165,772 cattle, representing 38.5% of the total number infected, and 13.0% of the number held at the beginning of the agricultural season, died from diseases during the season. Southern Province reported the highest percentage of cattle deaths due to disease, recording 51.5% of the cattle infected with disease to have died, followed by Central Province (44.1%). Lusaka, Eastern, Western, and Northern Provinces recorded 27.2%, 24.7%, 15.2%, and 12.0%, respectively, of cattle deaths due to disease. In Copperbelt Province, only 0.3% of infected cattle were reported to have died, while in Luapula and North-Western Provinces, no cattle were reported to have died from disease.

TABLE 18 C : HOUSEHOLDS REPORTING CATTLE DISEASES, NUMBER OF CATTLE INFECTED, USE OF MODERN MEDICINE, AND PERCENT CATTLE DEATHS DUE TO DISEASE DURING THE 1997/98

GEOGRAPHIC AREA	H/HS RAISING CATTLE	H/HS REPORTING CATTLE DISEASES		CATTLE RAISED ON 1ST OCTOBER 1997	CATTLE INFECTED WITH DISEASE		% H/HS USING MODERN MEDICINE	% CATTLE TREATED	% CATTLE DEATHS DUE TO DISEASE
		NUMBER	%		NUMBER	%			
ZAMBIA	115,927	75,165	64.8	1,274,458	430,917	33.8	50.2	53.4	38.5
CENTRAL	12,132	8,843	72.9	142,840	60,340	42.2	53.7	45.1	44.1
COPPERBELT	789	559	70.8	4,615	1,984	43.0	0.9	1.3	0.3
EASTERN	34,230	22,231	64.9	220,895	60,998	27.6	54.5	54.8	24.7
LUAPULA	610	374	61.3	3,698	2,236	60.5	-	-	-
LUSAKA	1,437	1,374	95.6	42,910	17,307	40.3	46.8	27.9	27.2
NORTHERN	8,953	3,793	42.4	60,816	7,926	13.0	23.8	27.4	12.0
N/WESTERN	1,103	313	28.4	8,404	443	5.3	-	-	-
SOUTHERN	38,701	28,286	73.1	545,186	209,657	38.5	54.2	52.5	51.5
WESTERN	17.972	9,392	52.3	245,094	70,026	28.6	42.0	74.6	15.2

Households Treating Cattle with Modern Medicine by Source of Medicine

Out of 37,705 households that reported to have treated their infected cattle with modern medicine, 41.7% obtained the medicine from Veterinary Extension Offices, 37.7% bought the medicine from town, 14.6% obtained from neighbours or friends, 3.9% bought from local traders, and 2.2% from other sources.

In the Copperbelt Province, all the households that had used modern medicine to treat their sick cattle, obtained the medicine from Veterinary Extension Officers. In Eastern Province 60.9% of the households reported their main source of cattle medicine as the Veterinary Extension Officers, while in Western Province (53.1%), Lusaka Province (44.6%), and Northern Province (44.3%) of the households, also reported the same source. In Southern and Central Provinces, 27.8% and 27.1% respectively reported to have made used of this source.

Obtaining modern medicine from neighbours or friends was rather significant in Eastern, Southern and Western Provinces, where proportions of 18.7%, 15.6% and 14.6%, respectively, of households were recorded.

Buying of medicine from town was also quite common in most of the provinces. In Southern Province, 52.7% of the households reported this as their main source of modern medicine, followed by Northern Province (15.3%), Central Province (50.2%), Western Province (27.6%)

TABLE 18 d : HOUSEHOLDS TREATING CATTLE WITH MODERN MEDICINE BY SOURCE OF MEDICICIEN

GEOGRAPHIC AREA	HOUSEHOLDS TREATING CATTLE	% HOUSEHOLDS REPORTING MAIN SOURCE				
		NEIGHBOUR FRIEND	VETERINARY OFFICER	BOUGHT IN TOWN	BOUGHT FROM LOCAL TRADER	OTHER
ZAMBIA	37,705	14.6	41.7	37.7	3.9	2.2
CENTRAL	4,747	4.7	27.1	50.2	11.3	6.7
COPPERBELT	5	-	100.0	-	-	-
EASTERN	12,121	18.7	60.9	17.2	3.1	-
LUSAKA	643	-	44.6	14.8	9.0	31.6
NORTHERN	902	4.3	44.3	51.3	-	-
SOUTHERN	15,344	15.6	27.8	52.7	3.2	0.8
WESTERN	3,943	14.6	53.1	27.6	-	4.7

Households Receiving Market Prices Information

Information on market prices of agricultural commodities was received by 283,035 households (about 30% of agricultural households) during the 1997/98 agricultural season. The majority of the households (41.1%) received market price information from fellow farmers, while 22.1% received it through the radio, 12.9% through traders, and 11.7% through Agricultural Extension Officers. The newspaper (0.9%) and AMIC (0.6%) recorded the lowest percentages of households obtaining market prices through them.

Between 35% and 51% of the households in all the provinces reported fellow farmers as their source of market prices information, with the exception of Lusaka Province (6.3%). The highest percentages of households citing this source were recorded in Copperbelt Province (51.4%), and Luapula Province (50.5%).

The radio source of market prices information was recorded by 75.5% of the households that received the information in Lusaka Province and by over 25% of the households in Central, Copperbelt, North-Western and Western Provinces. Agricultural Extension Officers appear to have been more effective in disseminating market price information in Eastern Province and North-Western Province where 23.0% and 18.6% of the households, respectively were advised on market prices by the Officers.

TABLE 19 a : HOUSEHOLDS RECEIVING MARKET PRICES INFORMATION BY MAIN SOURCE

GEOGRAPHIC AREA	H/HOLDS RECEIVING INFORMATION	% HOUSEHOLDS REPORTING SOURCE OF INFORMATION AS ……..							
		RADIO	NEWS-PAPER	AMIC	TRADERS AT MARKET	TRADERS AT FARM	FELLOW FARMERS	EXTENSION OFFICERS	OTHER
ZAMBIA	283,035	22.1	0.9	0.6	9.1	12.9	41.1	11.7	1.5
CENTRAL	24,894	28.0	-	1.3	2.1	9.4	38.6	15.5	5.2
COPPERBELT	14,543	25.7	0.7	1.4	11.9	4.0	51.4	2.0	3.0
EASTERN	74,674	18.3	1.5	1.4	7.4	11.5	35.8	23.0	1.1
LUAPULA	62,349	16.3	0.2	-	10.6	15.2	50.5	5.3	1.8
LUSAKA	5,045	75.5	4.0	3.3	4.0	1.7	6.3	2.0	3.3
NORTHERN	58,095	22.6	-	0.3	14.8	17.5	38.0	6.4	0.4
N/WESTERN	7,018	32.7	2.7	-	4.2	2.0	39.8	18.6	-
SOUTHERN	28,971	20.1	2.2	-	6.8	17.6	43.4	9.0	0.9
WESTERN	7,446	39.0	-	-	4.1	-	45.2	11.7	-

Households Not Satisfied With Market Prices Information

Of the total 283,035 households that reported to have received market prices information, 29.0% were unsatisfied with the information for various reasons. The majority of the households (48.1% overall) expressed dissatisfaction stating inaccuracy of information as the main reason, followed by 26.8% of the households who gave non-coverage of interest as the reason of dissatisfaction about the information. Infrequency of information was cited by 14.3% of the households as the reason for dissatisfaction.

In Western Province, 79.7% of the households that had received market prices information were unsatisfied with the information because of the inaccuracy of the information, and for the same reason, 60.1% of the households in Northern Province, and 52% in Lusaka Province expressed dissatisfaction with market prices information.

Infrequency of information as reason for dissatisfaction was expressed by 28.5% of the households in Copperbelt Province, 26.6% in Luapula and 223.6% in Central Provinces.

Lack of coverage of interest in the market prices information as reason for not being satisfied with the information was expressed by 49.6% of the households in Southern Province, 38.8% Luapula Province, 38.6% in Lusaka Province and 34.2% in North-Western Province.

TABLE 19 b : HOUSEHOLDS REPORTING MARKET PRICES INFORMATION AS UNSATISFACTORY AND REASONS

GEOGRAPHIC AREA	H/HOLDS NOT SATISFIED	% HOUSEHOLDS REPORTING REASON AS ……				
		INFORMATION INFREQUENT	INFORMATION INACCURATE	DOES NOT COVER INTEREST	DOES NOT COVER LIVESTOCK	TOO COMPLEX
ZAMBIA	82,187	14.3	48.1	26.8	1.2	9.7
CENTRAL	5,676	23.6	40.6	17.2	0.4	18.1
COPPERBELT	3,457	28.5	37.5	16.5	5.4	12.1
EASTERN	23,529	15.7	48.9	28.8	-	6.6
LUAPULA	11,448	26.6	30.3	38.8	3.3	1.0
LUSAKA	2,140	9.4	52.0	38.6	-	-
NORTHERN	21,927	7.7	60.1	16.2	0.1	16.0
NORTH-WESTERN	2,286	18.8	23.4	34.2	-	23.6
SOUTHERN	7,802	1.5	38.4	49.6	1.4	9.2
WESTERN	3,922	5.9	79.7	4.8	6.1	3.5

Households Reporting Method of Acquiring Seed/Seedlings

At national level, 77.1% of the rural households reported using seed/seedlings from own retentions. In all the provinces, over 70% of the households used own retentions of seed/seedlings with the exception of Southern Province which recorded 56.8% and Lusaka (20.6%) of the households.

Southern Provinces recorded a significant percentage of households that bought seed/seedlings from the input market, with 57.5% of the households reporting, followed by Central Province (23.9%), Copperbelt Province (16.6%) and Lusaka Province (15.6%).

Out-grower facilitators provided another source of seed/seedlings for crop-growing households. In Eastern Province, 10.6% of the households obtained their seed/seedlings through out-grower arrangement, followed by Central Province (9.6%) and Southern Province (7.9%).

Gifts as a source of seed/seedlings was significant in North-Western Province where 24.3% of the households reported this as their means of obtaining seed/seedlings followed by Western Province (16.7%) and Southern Province (15.7%).

TABLE 20 a : HOUSEHOLDS BY METHOD OF OBTAINING SEED/SEEDLINGS

GEOGRAPHIC AREA	TOTAL H/HOLDS	% HOUSEHOLDS REPORTING …….						
		DO NOT USE ANY	BUY FROM INPUT MARKET	BUY FROM TRADER AT FARM	OUT-GROWER ARRANGEMENT	OWN RETENTION	GIFTS	OTHER
ZAMBIA	921,061	6.5	12.7	4.8	5.3	77.1	11.1	2.6
CENTRAL	87,379	7.7	23.9	6.8	9.6	71.7	6.8	3.5
COPPERBELT	39,691	8.2	16.1	1.5	3.6	79.7	3.8	0.5
EASTERN	195,191	2.1	4.8	3.0	10.6	86.4	5.9	0.5
LUAPULA	127,701	11.1	4.3	4.9	0.2	79.1	9.4	4.5
LUSAKA	22,579	45.0	15.6	9.6	2.9	20.6	3.5	5.2
NORTHERN	168,966	4.9	8.1	1.9	3.0	87.7	12.4	2.6
NORTH-WESTERN	56,930	4.6	3.2	4.7	1.6	82.9	24.3	2.4
SOUTHERN	115,893	5.2	37.5	9.7	7.9	56.8	15.7	2.4
WESTERN	106,731	4.1	11.5	5.5	2.0	75.0	16.7	4.3

Households Reporting Methods of Acquiring Basal Dressing Fertilizers

At national level, 85.8% of the households reported not to have used basal dressing fertilizers on their crops. In all the provinces more than 70% of the households reported not using these fertilizers during 1997/98 agricultural season. In Copperbelt Province 18.8%, Central Province 17.9%, Eastern Province 11.4%, Northern and Southern Provinces 10.0% of the households reported to have purchased basal dressing fertilizers from the input market. The rest of the sources of agricultural inputs contributed to very few households, generally to much less than 5% of the households.

TABLE 20 b : HOUSEHOLDS BY METHOD OF OBTAINING BASAL FERTILIZER

GEOGRAPHIC AREA	TOTAL H/HOLDS	% HOUSEHOLDS REPORTING SOURCE OF BASAL FERTILIZER AS …….						
		DO NOT USE ANY	BUY FROM INPUT MARKET	BUY FROM TRADER AT FARM	OUT-GROWER ARRANGEMENT	LEFT FROM LAST SEASON	GIFTS	OTHER
ZAMBIA	921,061	85.8	9.5	2.1	1.1	0.3	0.4	0.9
CENTRAL	87,379	74.5	17.9	4.5	0.3	0.3	1.2	1.2
COPPERBELT	39,691	79.1	18.8	1.2	0.5	0.1	-	0.2
EASTERN	195,191	83.2	11.4	2.3	2.3	0.1	0.2	0.5
LUAPULA	127,701	92.8	4.5	1.0	0.2	0.1	0.5	0.9
LUSAKA	22,579	77.1	9.8	7.0	-	1.2	0.3	4.7
NORTHERN	168,966	86.0	10.0	0.8	1.1	0.1	0.1	1.9
NORTH-WESTERN	56,930	93.1	4.6	0.2	0.3	1.4	-	0.4
SOUTHERN	115,893	81.1	10.0	5.1	1.7	0.3	1.0	0.8
WESTERN	106,731	96.1	2.7	0.4	0.7	0.2	-	-

Households Reporting Methods of Acquiring Top Dressing Fertilizers

The same picture, as of obtaining basal dressing fertilizers prevailed with the way households obtain top dressing fertilizers. The majority, over 70% of the households, did not use top dressing fertilizers. The households that reported to have used top dressing fertilizers mostly obtained it by buying from the input market. Central, Copperbelt, Eastern and Southern Provinces recorded 20%, 22.9%, 14.4% and 12.1% respectively, of the households reported to have purchased top dressing fertilizers from the input market. Very few households reported obtaining the fertilizers through other channels.

TABLE 20 c : HOUSEHOLDS BY METHOD OF OBTAINING TOP FERTILIZER

GEOGRAPHIC AREA	HOUSEHOLDS	% HOUSEHOLDS REPORTING SOURCE OF TOP FERTILIZER AS …….						
		DO NOT USE ANY	BUY FROM INPUT MARKET	BUY FROM TRADER AT FARM	OUT-GROWER ARRANGEMENT	LEFT FROM LAST SEASON	GIFTS	OTHER
ZAMBIA	921,061	85.0	10.6	2.1	0.9	0.1	0.3	0.9
CENTRAL	87,379	73.4	20.0	4.2	0.1	-	1.1	1.3
COPPERBELT	39,691	74.8	22.9	1.8	0.2	0.1	0.2	*
EASTERN	195,191	81.3	14.4	2.4	1.6	*	0.1	0.3
LUAPULA	127,701	92.3	4.8	1.1	0.3	-	0.5	1.1
LUSAKA	22,579	77.1	9.4	6.3	2.5	0.7	0.3	3.7
NORTHERN	168,966	87.0	9.5	0.8	0.9	0.1	-	1.7
N/WESTERN	56,930	94.7	3.2	0.6	0.3	0.5	-	0.6
SOUTHERN	115,893	78.9	12.1	4.9	1.8	0.3	1.0	1.1
WESTERN	106,731	95.9	2.8	0.4	0.6	0.3	-	-

Households That are Members of Formal Groups Preparing Projects for Financing By the Rural Investment Fund (RIF)

Nation-wide, 13,655 rural households (1.5% of the total households), reported being members of formal groups that were preparing projects for financing by RIF. Eastern Province recorded the largest number (3,666) of households, followed by Luapula Province (2,103). But as proportion of the households in the province, North-Western Province leads with 2.6% as members of formal groups.

Of the 13,655 rural households that reported to be members of formal groups, 1,336 (9.8%) benefited from Rural Investment Fund by virtue of their membership. The highest proportion of RIF beneficiaries was recorded in Luapula Province (24.4%), followed by North-Western Province (14.0%), Southern Province (12.9%), Northern Province (9.7%) and lastly, Eastern Province (6.0%).

TABLE 21 a : HOUSEHOLDS THAT ARE MEMBERS OF FORMAL GROUPS PREPARING PROJECTS OF FINANCING BY RIF BY TYPE OF PROJECT.

GEOGRAPHIC AREA	H/HOLDS REPORTING	% HOUSEHOLDS REPORTING PROJECT ……..						
		FEEDER ROADS	SMALL IRRIGATION	DIP-TANKS	MARKETING CENTRE	STORAGE SHED/DEPOT	TRANSPORT	OTHER
ZAMBIA	13,655	12.9	10.1	4.6	9.5	9.9	3.0	50.0
CENTRAL	1,191	-	-	-	13.1	19.3	-	67.6
COPPERBELT	687	-	-	-	-	-	-	100.0
EASTERN	3,666	0.6	7.8	4.3	4.1	11.8	-	71.4
LUAPULA	2,103	41.1	5.6	-	9.0	-	-	44.3
NORTHERN	1,523	19.5	-	1.2	19.2	24.9	-	35.2
N/WESTERN	1,500	22.0	26.9	8.7	21.7	7.8	-	13.0
SOUTHERN	1,909	3.4	24.9	15.9	9.5	2.0	14.0	30.4
WESTERN	1,076	17.3	8.7	2.2	-	14.3	12.8	44.6

Households That Are Not Members of Formal Groups

Of the 128,410 rural households that reported not being members of formal groups, 69.5% expressed ignorance of procedures of how to become members. All provinces recorded high percentages (57.3% to 86.5%) of households that gave this reason for not being members of formal groups.

Northern, Lusaka and Copperbelt recorded rather high percentages of households that were not members of formal groups because of lack of interest in the scheme. Northern Province recorded 32.2%, followed by Lusaka (30.0%) and Copperbelt (25.6%).

TABLE 21 b : HOUSEHOLDS THAT ARE MEMBERS OF FORMAL GROUPS REPORTING NOT RECEIVING FUNDS AS A GROUP FROM RIF BY REASONS FOR NOT RECEIVING FUNDS

GEOGRAPHIC AREA	HOUSEHOLDS REPORT	% HOUSEHOLDS REPORTING REASONS FOR NOT RECEIVING RIF FUNDING		
		PROJECT PROPOSAL NOT READY	CONDITIONS UNFULFILLED	OTHER
ZAMBIA	12,319	36.2	42.5	21.3
CENTRAL	1,191	9.3	36.9	53.8
COPPERBELT	687	24.9	29.3	45.9
EASTERN	3,447	28.6	44.2	27.2
LUAPULA	1,590	62.0	27.2	10.8
NORTHERN	1,375	34.0	49.0	17.0
NORTH-WESTERN	1,290	34.4	40.0	25.2
SOUTHERN	1,663	53.2	46.8	-
WESTERN	1,076	38.1	61	-

Households Reporting Investment Most Interested n As Individuals

At the national level, the majority of households (45.6% of the total rural households) preferred to invest in livestock, as individuals. The next most desired investment by individual households was in farm implements, reported by 20.3% of the total households.

In Central, Eastern, Lusaka and Southern provinces, 50% and more of the households expressed desire to interest in livestock, with Southern Province topping with 67.3% of the households reporting. Luapula Province recorded the lowest percentage (22.6%) of households desiring to invest in livestock.

Investment in farm implements was mostly preferred by 47.3% of the households in Western Province, 37.0% of the households in Copperbelt Province and 25.4% of the households in Central Province.

The highest percentages of households wishing to invest in additional land were recorded in Luapula (22.0%), Northern (15.4%), and Lusaka (12.2%) provinces.

The least desired investment by households was in improved storage facilities. Most provinces recorded proportions of less than 1% of households wishing to invest in this.

TABLE 22a : HOUSEHOLDS REPORTING MOST IMPORTANT INVESTMENT RESTED IN AS INDIVIDUALS

Geographic Area	Total Households	% HOUSEHOLDS EXPRESSING INTEREST TO INVEST IN ……								
		Fish Ponds	Small Irrigation	Orchard Plantation	Livestock	Farm Implements	Vehicles For Produce	Improved Storage Facility	Additional Land	Other
Zambia	921,061	5.3	3.8	1.8	45.6	20.3	4.5	1.0	9.5	8.2
Central	87,379	3.0	5.1	1.0	51.9	25.4	2.0	0.9	6.2	4.6
Copperbelt	39,691	1.6	5.4	1.5	38.4	37.0	4.2	0.4	7.4	4.0
Eastern	195,191	9.9	3.3	2.3	51.5	15.7	2.9	1.3	4.7	8.4
Luapula	127,701	6.8	4.1	4.4	22.6	19.3	9.7	1.2	22.0	9.8
Lusaka	22,579	6.5	7.2	1.4	50.0	15.0	5.0	-	12.1	2.9
Northern	168,966	5.2	3.3	1.8	41.7	9.4	6.5	1.8	15.4	14.7
North-western	56,930	5.0	1.8	2.8	48.9	13.4	3.4	-	7.9	16.8
Southern	115,893	2.2	4.3	0.2	67.3	14.7	2.0	0.2	4.9	4.4
Western	106,731	2.2	3.3	-	39.9	47.3	3.5	0.4	2.3	1.2

Households Reporting Preferred Investment for Their Communities

The most sought after community investment was marketing centre, which was reported by 30.8% of the total households. All the provinces recorded more than 30% of the households desiring their communities to invest in the marketing centres, with the exception of Southern and North-Western provinces, where 14.2% and 24.6 %, respectively of households opted for this investment.

Investment in feeder roads was recommended by 30.4% of the households in Luapula Province, followed by 18.8% of the households in North-Western province, and 16.6% of the households in Northern Province.

Southern, Central, Eastern and Lusaka provinces recorded 16.5%, 15.8%, 15.2% and 14.4% respectively, of households wishing their communities to invest in dams.

Interest for communities to invest in small irrigation schemes was reported by 15.0% and 12.5% of the 0households in Lusaka and Copperbelt Provinces, respectively.

A significant proportion of households in Lusaka Province (12.4%), and Eastern Province (11.1%) expressed desire for their communities to invest in fish ponds. The desire for communities to invest in dip-tank was expressed by 28.4% of the households in Southern Province, followed by 14.6% of the households in Western Province, 12.5% of the households in Central Province , 10.8% of the households in Lusaka Province and 10.4% of the households in Northern Province.

Interest for communities to invest in storage sheds/depots was reported by 12.0% and 10.3% of the households in Central and Copperbelt Provinces, respectively.

TABLE 22B : HOUSEHOLDS REPORTING MOST IMPORTANT COMMUNITY INVESTMENT INTERESTED IN

GEOGRAPHIC AREA	TOTAL H/HOLDS	% HOUSEHOLDS WISHING COMMUNITY TO INVEST IN ……							
		FEEDER ROADS	DAM	SMALL IRRIGATION	FISH PONDS	DIP-TANKS	MARKETING CENTER	STORAGE SHED/DEPOT	OTHER
ZAMBIA	921,061	13.8	8.7	6.9	5.6	10.4	30.8	6.8	17.1
CENTRAL	87,379	6.6	15.8	9.7	2.1	12.5	32.2	12.0	8.9
COPPERBELT	39,691	13.1	1.2	12.5	1.4	1.4	45.9	10.3	14.3
EASTERN	195,191	10.6	15.2	7.0	11.1	4.8	30.3	4.0	16.9
LUAPULA	127,701	30.4	3.1	4.5	4.0	1.9	37.2	6.3	12.6
LUSAKA	22,579	0.5	14.4	15.0	12.4	10.8	37.2	6.0	3.7
NORTHERN	168,966	16.6	1.8	5.2	6.0	10.4	31.2	9.3	19.4
NORTH-WESTERN	56,930	18.8	2.3	3.2	9.2	7.4	24.6	5.4	29.2
SOUTHERN	115,893	7.7	16.5	7.5	1.8	28.4	14.2	2.7	21.1
WESTERN	106,731	7.8	4.8	7.5	2.1	14.6	36.3	8.3	18.6