

ANNEX A.

TABLES AND FIGURES FOR SECTIONS 2 THROUGH 6

TABLE 2.1

STUDY HOUSEHOLDS AS PERCENTAGE OF ALL HOUSEHOLDS RECORDING DURING VILLAGE LISTINGS

	TOTAL NUMBER OF HHS LISTED	TOTAL NUMBER OF HHS WITH CHILDREN <28 MONTHS OF AGE	NUMBER OF HHS COMPLETING BASELINE STUDY (JULY 2003)	NUMBER OF HHS COMPLETING STUDY (MARCH 2005)	TOTAL NUMBER OF ALDEIAS	FINAL SAMPLE % OF HHS WITH CHILDREN <28 MONTHS	PERCENT ALL LISTED HHS WITH CHILDREN <28 MONTHS OF AGE	FINAL SAMPLE AS % OF ALL HHS
DISTRICT								
MOPEIA (INTERVENTION)	1733	666	285	252	22	37.8	38.4	14.5
NAMACURRA (INTERVENTION)	2556	634	275	246	18	38.8	24.8	9.6
NICOADALA (CONTROL)	1468	380	267	243	10	64.0	25.9	16.6
STUDY AREA								
INTERVENTION	4289	1300	560	498	40	38.3	30.3	11.6
CONTROL	1468	380	267	243	10	64.0	25.9	16.6
ENTIRE DOMAIN	5757	1680	827	741	50	44.1	29.2	12.9

TABLE 3.1 ORANGE-FLESHED SWEETPOTATO (OFSP) PRODUCTION IN 53 PROJECT FARMERS' GROUPS IN 2003 AND 2004

	YEAR OF PRODUCTION	
	2003	2004
No. Receiving or Retaining Vines	548	993
No. Producing BCRSP	419	815
% Producing BCRSP	76%	88%
Total Area Under Production (ha)	1.4	30.1
Average Plot Size (Sq. meters)	33	369
% Growing 500 square meters or greater	0	35%

Note: farmers' groups consist of the 498 intervention households enrolled in the study, plus other households who do not necessarily have young children.

TABLE 3.2 PRODUCTION OF SWEETPOTATO OF ANY TYPE AND PERCENT OF TOTAL PRODUCTION FROM PURE ORANGE-FLESHED PLOTS IN 2004 BY AREA

	Count	Mean	Std Deviation	Percentile 25	Median	Percentile 75
INTERVENTION						
QUANTITY (KGS) PRODUCED OF ALL TYPES OF SWEETPOTATO IN 2004	457	187.0	183.5	50.9	127.1	261.0
PERCENT OF SWEETPOTATO PRODUCED THAT WAS ORANGE-FLESHED	457	68	26	50	71	90
CONTROL						
QUANTITY (KGS) PRODUCED OF ALL TYPES OF SWEETPOTATO IN 2004	134	113.7	160.2	20.3	63.5	126.1
PERCENT OF SWEETPOTATO PRODUCED THAT WAS ORANGE-FLESHED	134	12	25	0	0	12

TABLE 3.3 REASONS WHY INTERVENTION HOUSEHOLDS WHO USED TO GROW WHITE-FLESHED SWEETPOTATOES ARE NO LONGER GROWING THEM BY DISTRICT

	AREA		DISTRICT			
	INTERVENTION		MOPEIA		NAMACURRA	
	N	%	N	%	N	%
WANTED TO PRODUCE OFSP TO HAVE A LARGER MARKET - BETTER	6	6.5	4	12.9	2	3.3
BECAUSE THE NEW VARIETY IS VERY TASTY	11	12.0	2	6.5	9	14.8
DIDN'T HAVE TIME TO CULTIVATE ANOTHER TYPE	12	13.0	4	12.9	8	13.1
IT'S EASY TO GROW BECAUSE PRODUCES A LOT	5	5.4			5	8.2
PREFERRED TO PRODUCE OFSP BECAUSE CONTAINS VIT. A	16	17.4	6	19.4	10	16.4
LACK OF VINES	35	38.0	9	29.0	26	42.6
ONLY WANTED TO PLANT THE NEW VARIETY	7	7.6	6	19.4	1	1.6
TOTAL	92	100.0	31	100.0	61	100.0

WFSP: WHITE-FLESHED SWEETPOTATO; OFSP: ORANGE-FLESHED SWEETPOTATO

TABLE 3.4 ESTIMATED YIELD (TONS/HA) OF SWEETPOTATO IN 2004 IN INTERVENTION HOUSEHOLDS BY DISTRICT

		N	MEAN	STD DEV	MEDIAN	25TH PERCENTILE	75TH PERCENTILE
ALL HOUSEHOLDS		400	6.8	6.4	4.9	2.2	8.4
DISTRICT	MOPEIA	226	7.1	6.4	5.3	2.6	8.7
	NAMACURRA	174	6.5	6.5	4.5	1.6	8.3

NOTE: ESTIMATED FROM RECALL PRODUCTION DATA AND AREAS MEASURED BY EXTENSIONISTS.

TABLE 3.5 TYPE OF SWEETPOTATO THAT PRODUCED THE MOST IN 2004 BY DISTRICT

	AREA		DISTRICT			
	INTERVENTION		MOPEIA		NAMACURRA	
	N	%	N	%	N	%
DIDN'T PLANT AN INDIVIDUAL PLOT THAT SEASON	18	4.5	6	2.7	12	6.7
ORANGE-FLESH SWEET POTATO	331	83.4	189	86.3	142	79.8
LOCAL SWEET POTATO	37	9.3	14	6.4	23	12.9
PRODUCTION WAS THE SAME	11	2.8	10	4.6	1	.6

NOTE: ONLY INCLUDED INTERVENTION HOUSEHOLDS THAT PRODUCED BOTH ORANGE & WHITE-FLESHED SWEETPOTATO IN 2004.

TABLE 3.6 ROOT AND FOLIAGE YIELDS FROM CROP CUTS FROM FARMER'S PLOTS OF ORANGE & WHITE-FLESHED SWEETPOTATO VARIETIES DURING THE SECOND GROWING SEASON IN 2004

VARIETY	# PLOTS WEIGHED	ROOT YIELD (TONS/HA)	% ROOTS 1ST QUALITY	FOLIAGE YIELD (TONS/HA)
ORANGE-FLESHED				
JAPON	6	8.7 ± 6.8	57	10.3 ± 4.6
RESISTO	19	7.9 ± 3.3	52	8.9 ± 7.3
CN-1448-49	16	7.2 ± 2.9	58	8.0 ± 4.6
CORDNER	4	7.1 ± 2.1	55	5.2 ± 5.0
LO-323	2	5.5 ± 0.8	27	15.2 ± 3.7
JONATHAN	5	4.7 ± 2.4	34	13.5 ± 7.5
OVERALL	52	7.3 ± 3.6	52	9.2 ± 6.2
WHITE-FLESHED				
NIMELEMEDE	4	10.2 ± 3.8	47	2.8 ± 0.8
CUMPARULE	7	9.6 ± 3.7	44	4.9 ± 2.3
CANASSUMANA	5	9.2 ± 1.5	57	6.1 ± 1.3
MWANAGA MALA	5	7.6 ± 0.7	52	8.0 ± 2.4
COCORA	11	6.7 ± 2.6	44	7.3 ± 5.0
OVERALL	32	8.3 ± 2.9	47	6.1 ± 3.6

Note: 1st quality roots are defined as being whole roots (no cuts) at least 200 gms in size, with no signs of weevil attack.

TABLE 3.7 PREFERENCE AMONG DISTRIBUTED ORANGE-FLESH SWEETPOTATO VARIETIES BY DISTRICT

	AREA		DISTRICT			
	INTERVENTION		MOPEIA		NAMACURRA	
	N	%	N	%	N	%
NO PREFERENCE	74	17.3	35	15.2	39	19.7
KANDEE	21	4.9	2	.9	19	9.6
JAPON	15	3.5	7	3.0	8	4.0
LO	8	1.9	5	2.2	3	1.5
TAIMUNG 64	3	.7	2	.9	1	.5
JONATHAN	28	6.5	12	5.2	16	8.1
CN-1448	2	.5			2	1.0
RESISTO	273	63.8	165	71.7	108	54.5
CAROMEX	1	.2	1	.4		
CORDER	1	.2			1	.5
OTHER, SPECIFY	2	.5	1	.4	1	.5

ONLY INCLUDED INTERVENTION HOUSEHOLDS PRODUCING SWEETPOTATO IN 2004.

TABLE 3.8 REASONS FOR PREFERENCE FOR EACH ORANGE-FLESH SWEETPOTATO VARIETY

	JAPON		LO		JONATHAN		RESISTO	
	Count	Col %	Count	Col %	Count	Col %	Count	Col %
FOR BEING VERY TASTY	9	60.0%	4	50.0%	10	35.7%	110	40.4%
PRODUCES WELL AND QUICKLY	1	6.7%			1	3.6%	5	1.8%
IS FLOURY	1	6.7%					5	1.8%
IS VERY SWEET	1	6.7%	2	25.0%	5	17.9%	21	7.7%
PRODUCES A LOT AND IS VERY TASTY	1	6.7%			6	21.4%	41	15.1%
PRODUCES A LOT	1	6.7%	2	25.0%	4	14.3%	41	15.1%
HAS VITAMINS AND IS TASTY	1	6.7%					29	10.7%
RESISTANT TO THE SUN					1	3.6%	7	2.6%
IS RESISTANT AND HAS GOOD FLAVOUR							1	.4%
IS VERY GOOD AND GIVES STRENGTH							2	.7%
NOT DIFFICULT TO PLANT								
BECAUSE IT HAS VITAMINS FOR THE CHILDREN							5	1.8%
IT'S GOOD					1	3.6%	5	1.8%

NOTE: ONLY INTERVENTION HOUSEHOLDS PRODUCING SWEETPOTATO IN 2004.

TABLE 3.9 STAPLE FOOD CROPS WITH HIGHEST LEVEL OF PRODUCTION IN 2004 AS REPORTED BY STUDY HOUSEHOLDS BY AREA AND BY DISTRICT

		ALL HOUSEHOLDS	AREA		DISTRICT		
			INTERVENTION	CONTROL	MOPEIA	NAMACURRA	NICOADALA
		%	%	%	%	%	%
CROP WITH GREATEST QUANTITY PRODUCED IN 2004	MAIZE	5.3	5.4	5.0	10.3	.4	5.0
	RICE	25.4	22.3	32.0	1.6	43.5	32.0
	SORGHUM	.1		.4			.4
	GROUNDNUTS	.1	.2			.4	
	BEANS	.3		.8			.8
	CASSAVA	63.9	67.1	57.3	80.6	53.3	57.3
	SWEETPOTATO	4.9	5.0	4.6	7.5	2.4	4.6
CROP WITH SECOND GREATEST QUANTITY PRODUCED IN 2004	MAIZE	13.0	14.4	9.8	23.0	5.4	9.8
	RICE	30.4	24.3	44.4	23.0	25.6	44.4
	SORGHUM	.1		.5			.5
	GROUNDNUTS	1.7	2.2	.5		4.5	.5
	BEANS	6.2	5.7	7.5	3.2	8.3	7.5
	CASSAVA	23.4	26.5	16.4	13.1	40.5	16.4
	SWEETPOTATO	25.1	26.9	21.0	37.7	15.7	21.0

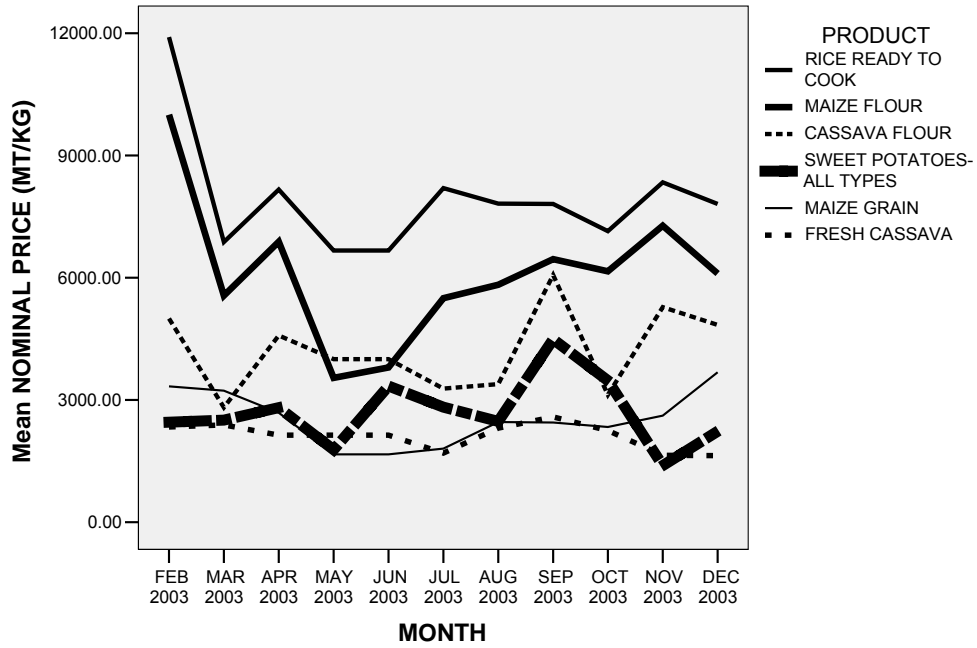
741 HOUSEHOLDS. 498 INTERVENTION, 243 CONTROL. DISTRICTS: MOPEIA 252 CASES, NAMACURRA 246 CASES AND NICOADALA 243 CASES

TABLE 3.10 PRODUCTION OF FOUR MAJOR STAPLE CROPS (KILOGRAMS) IN STUDY AREA IN 2004

		Count	Mean	Std Deviation	Median	Percentile 25	Percentile 75	
ALL HOUSEHOLDS	QUANTITY PRODUCED (KG) OF FRESH CASSAVA	741	1358	1482	975	512	1652	
	EQUIVALENT QUANTITY (KG) OF DRIED CASSAVA	741	339	370	244	128	413	
	QUANTITY (KGS) OF ALL TYPES OF SWEETPOTATO	741	136	175	73	13	191	
	QUANTITY (KGS) MAIZE PRODUCED	741	52	121	0	0	58	
	QUANTITY (KGS) RICE PRODUCED	741	153	180	87	39	193	
AREA	INTERVENTION	QUANTITY PRODUCED (KG) OF FRESH CASSAVA	498	1634	1561	1157	729	1935
		EQUIVALENT QUANTITY (KG) OF DRIED CASSAVA	498	409	390	289	182	484
		QUANTITY (KGS) OF ALL TYPES OF SWEETPOTATO	498	172	183	109	40	244
		QUANTITY (KGS) MAIZE PRODUCED	498	65	136	11	0	72
		QUANTITY (KGS) RICE PRODUCED	498	151	173	96	39	193
	CONTROL	QUANTITY PRODUCED (KG) OF FRESH CASSAVA	243	792	1109	620	75	1024
		EQUIVALENT QUANTITY (KG) OF DRIED CASSAVA	243	198	277	155	19	256
		QUANTITY (KGS) OF ALL TYPES OF SWEETPOTATO	243	63	132	9	0	65
		QUANTITY (KGS) MAIZE PRODUCED	243	26	73	0	0	29
		QUANTITY (KGS) RICE PRODUCED	243	159	195	77	39	197

FIGURE 3.1

MONTHLY AVERAGE PRICES IN QUELIMANE IN 2003



MONTHLY AVERAGE PRICES IN QUELIMANE IN 2004

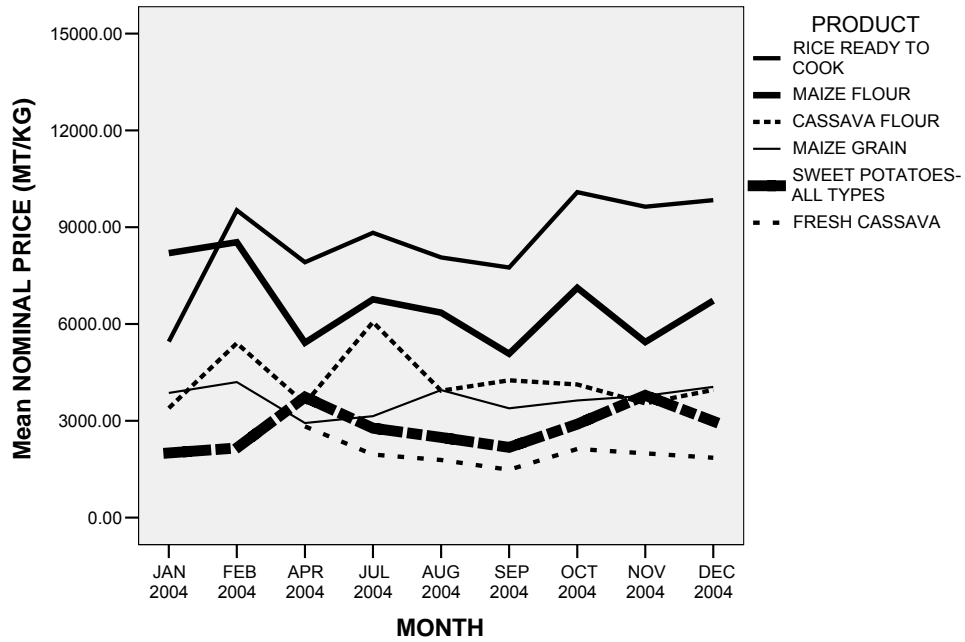


TABLE 3.11

PRICE OF FOOD, ENERGY, AND RETINOL ACTIVITY EQUIVALENT ACROSS ALL MARKETS (METICAIS)

		YEAR							
		2003				2004			
		Count	Mean	Minimum	Maximum	Count	Mean	Minimum	Maximum
YELLOW FLESH SWEETPOTATO	PRICE PER 100 GRAMS OF PRODUCT	22	315	124	625	18	208	107	391
	PRICE PER 100 KCAL OF ENERGY	22	286	113	568	18	189	97	355
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	22	210	83	417	18	138	71	260
ORANGE FLESH SWEETPOTATO	PRICE PER 100 GRAMS OF PRODUCT	8	434	263	625	13	245	125	433
	PRICE PER 100 KCAL OF ENERGY	8	395	239	568	13	223	114	394
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	8	60	36	86	13	34	17	60
CASSAVA LEAVES	PRICE PER 100 GRAMS OF PRODUCT	11	530	179	1000	12	1211	125	2783
	PRICE PER 100 KCAL OF ENERGY	11	589	198	1111	12	1345	139	3092
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	11	459	155	867	12	1049	108	2412
PUMPKIN LEAVES	PRICE PER 100 GRAMS OF PRODUCT	13	775	167	2500	10	1393	308	2689
	PRICE PER 100 KCAL OF ENERGY	13	4077	878	13158	10	7330	1619	14154
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	13	799	172	2577	10	1436	317	2772
KALE	PRICE PER 100 GRAMS OF PRODUCT	19	1196	455	2679	12	905	200	2686
	PRICE PER 100 KCAL OF ENERGY	19	9199	3504	20604	12	6959	1538	20662
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	19	536	204	1201	12	406	90	1205
PAPAYAS	PRICE PER 100 GRAMS OF PRODUCT	15	393	100	704	21	433	45	1206
	PRICE PER 100 KCAL OF ENERGY	15	1007	256	1806	21	1110	117	3093
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	15	714	182	1281	21	787	83	2193
PUMPKIN	PRICE PER 100 GRAMS OF PRODUCT	20	350	61	741	24	277	48	931
	PRICE PER 100 KCAL OF ENERGY	20	1346	235	2849	24	1067	183	3582
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	20	95	17	201	24	75	13	252
CARROTS	PRICE PER 100 GRAMS OF PRODUCT	11	3665	1852	8712	14	4206	417	8750
	PRICE PER 100 KCAL OF ENERGY	11	8938	4518	21249	14	10259	1016	21341
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	11	609	308	1447	14	699	69	1453
CHICKEN	PRICE PER 100 GRAMS OF PRODUCT	38	3501	1453	5694	41	4306	2778	8333
	PRICE PER 100 KCAL OF ENERGY	38	1357	563	2207	41	1669	1077	3230
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	38	6733	2795	10951	41	8281	5342	16026
LIVER (ANY ANIMAL)	PRICE PER 100 GRAMS OF PRODUCT	7	2714	2500	3000	10	3882	806	6250
	PRICE PER 100 KCAL OF ENERGY	7	1953	1799	2158	10	2793	580	4496
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	7	37	34	41	10	53	11	85
EGGS	PRICE PER 100 GRAMS OF PRODUCT	22	4634	2000	7500	20	6611	4013	10000
	PRICE PER 100 KCAL OF ENERGY	22	3153	1361	5102	20	4497	2730	6803
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	22	3310	1429	5357	20	4722	2867	7143
DRY MILK	PRICE PER 100 GRAMS OF PRODUCT	28	19788	10000	25000	20	23215	18000	26667
	PRICE PER 100 KCAL OF ENERGY	28	3990	2016	5040	20	4680	3629	5376
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	28	7700	3891	9728	20	9033	7004	10376
CONDENSED MILK	PRICE PER 100 GRAMS OF PRODUCT	39	5295	4408	7357	58	5817	5038	7692
	PRICE PER 100 KCAL OF ENERGY	39	1650	1373	2292	58	1812	1569	2396
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	39	7155	5957	9942	58	7860	6808	10395
MARGARINE	PRICE PER 100 GRAMS OF PRODUCT	31	4511	3000	6000	31	5377	4000	8000
	PRICE PER 100 KCAL OF ENERGY	31	614	408	816	31	732	544	1088
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	31	451	300	600	31	538	400	800
LACTOGEN	PRICE PER 100 GRAMS OF PRODUCT	32	18416	10000	20000	32	22613	18000	26000
	PRICE PER 100 KCAL OF ENERGY	32	4039	2193	4386	32	4959	3947	5702
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	32	3410	1852	3704	32	4188	3333	4815
CERELAC	PRICE PER 100 GRAMS OF PRODUCT	22	17153	14000	20000	20	20675	17000	32500
	PRICE PER 100 KCAL OF ENERGY	22	4127	3369	4812	20	4975	4090	7820
	PRICE PER 100 UNITS OF RETINOL ACTIVITY EQUIVALENT	22	6126	5000	7143	20	7384	6071	11607

TABLE 3.12 PERCENTAGE OF HOUSEHOLDS THAT CULTIVATED AND SOLD STAPLE FOOD CROPS IN 2004

CROP			ALL HOUSEHOLDS		AREA			
			Count	%	INTERVENTION		CONTROL	
					Count	%	Count	%
MAIZE	CULTIVATED	YES	366	49.4	275	55.2	91	37.4
	SOLD	NO	293	80.3	210	76.6	83	91.2
		YES	72	19.7	64	23.4	8	8.8
RICE	CULTIVATED	YES	705	95.1	473	95.0	232	95.5
	SOLD	NO	609	86.5	406	85.8	203	87.9
		YES	95	13.5	67	14.2	28	12.1
SORGHUM	CULTIVATED	YES	25	3.4	22	4.4	3	1.2
	SOLD	NO	24	96.0	21	95.5	3	100.0
		YES	1	4.0	1	4.5		
MANIOC	CULTIVATED	YES	680	91.8	492	98.8	188	77.4
	SOLD	NO	552	81.2	384	78.2	168	88.9
		YES	128	18.8	107	21.8	21	11.1
SWEETPOTATO	CULTIVATED	YES	602	81.2	467	93.8	135	55.6
	SOLD	NO	419	69.7	316	67.8	103	76.3
		YES	182	30.3	150	32.2	32	23.7
BEANS	CULTIVATED	YES	300	40.5	230	46.2	70	28.8
	SOLD	NO	257	85.4	196	84.8	61	87.1
		YES	44	14.6	35	15.2	9	12.9
GROUNDNUT	CULTIVATED	YES	181	24.4	168	33.7	13	5.3
	SOLD	NO	150	83.3	141	84.4	9	69.2
		YES	30	16.7	26	15.6	4	30.8

N=741 HOUSEHOLDS. 498 INTERVENTION, 243 CONTROL. DISTRICTS: MOPEIA 252 CASES, NAMACURRA 246 CASES AND NICOADALA 243 CASES. PERCENTAGE SOLD IS CALCULATED BASED ON THE NUMBER OF HOUSEHOLDS CULTIVATING SWEETPOTATO.

TABLE 3.13 TOTAL AMOUNT OF ANY TYPE OF SWEETPOTATO SOLD (KGS) AND THE PERCENT CONTRIBUTION OF ORANGE-FLESH SWEETPOTATO IN 2004 BY AREA

		N	MEAN	STD DEV	25TH PERCENTILE	MEDIAN	75TH PERCENTILE
ALL HOUSEHOLDS							
	TOTAL QUANTITY (KGS) OF ANY TYPE OF SWEETPOTATO SOLD	181	59.8	75.0	12.6	37.8	76.4
	PERCENT OF SWEETPOTATO SOLD THAT WAS ORANGE-FLESHED	181	71.0	42.1	36.7	100.0	100.0
	RECEIPTS (CONTOS) FROM SALE OF ANY TYPE OF SWEETPOTATO	181	77.3	75.8	25.0	50.0	100.0
	PERCENT OF SWEETPOTATO SALES (CONTOS) FROM ORANGE-FLESHED SWEETPOTATO	181	71.6	41.6	41.7	100.0	100.0
AREA	INTERVENTION						
	TOTAL QUANTITY (KGS) OF ANY TYPE OF SWEETPOTATO SOLD	149	54.9	57.4	12.6	37.8	71.8
	PERCENT OF SWEETPOTATO SOLD THAT WAS ORANGE-FLESHED	149	83.4	32.8	91.4	100.0	100.0
	RECEIPTS (CONTOS) FROM SALE OF ANY TYPE OF SWEETPOTATO	149	75.5	70.4	26.0	50.0	100.0
	PERCENT OF SWEETPOTATO SALES (CONTOS) FROM ORANGE-FLESHED SWEETPOTATO	149	84.1	31.9	90.0	100.0	100.0
	CONTROL						
	TOTAL QUANTITY (KGS) OF ANY TYPE OF SWEETPOTATO SOLD	32	82.6	127.6	7.1	25.2	101.9
	PERCENT OF SWEETPOTATO SOLD THAT WAS ORANGE-FLESHED	32	13.1	31.0	.0	.0	.0
	RECEIPTS (CONTOS) FROM SALE OF ANY TYPE OF SWEETPOTATO	32	85.5	98.1	20.0	42.5	137.5
	PERCENT OF SWEETPOTATO SALES (CONTOS) FROM ORANGE-FLESHED SWEETPOTATO	32	13.5	31.2	.0	.0	.0

NOTE: ONLY HOUSEHOLDS SELLING SWEETPOTATO ARE INCLUDED

TABLE 3.14 AVERAGE PRICE PAID (CONTOS) PER KILOGRAM FOR PURE ORANGE-FLESHED AND WHITE-FLESHED SWEETPOTATOES IN 2004

	N	MEAN	STD DEV	MEDIAN	MINIMUM	MAXIMUM
ORANGE-FLESHED VARIETIES						
ALL HOUSEHOLDS	139	1.91	1.14	1.59	0.59	8.00
AREA						
INTERVENTION	135	1.92	1.15	1.59	0.59	8.00
CONTROL	4	1.84	0.92	1.65	0.98	3.07
WHITE-FLESHED VARIETIES						
ALL HOUSEHOLDS	64	1.52	0.87	1.19	0.29	4.76
AREA						
INTERVENTION	37	1.38	0.69	1.19	0.29	3.17
CONTROL	27	1.71	1.05	1.19	0.59	4.76

NOTE: PRICE PER KILOGRAM CALCULATED FROM TOTAL VALUE OF SALES DIVIDED BY TOTAL QUANTITY SOLD FROM RECALL PRODUCTION DATA.

TABLE 3.15 AVERAGE VALUES PER HOUSEHOLD OF TOTAL SALES (IN CONTOS) FOR EACH STAPLE FOOD CROP EXCEPT SWEETPOTATO SOLD IN 2004 BY AREA

CROP				ALL HOUSEHOLDS	AREA	
					INTERVENTION	CONTROL
MAIZE	TOTAL VALUE OF SALES (IN CONTOS)	MEAN		172.2	178.4	122.5
		STD DEV		174.9	178.3	143.9
		MEDIAN		102.5	112.5	72.5
		N		72	64	8
RICE	TOTAL VALUE OF SALES (IN CONTOS)	MEAN		326.5	259.4	487.1
		STD DEV		365.9	246.1	529.2
		MEDIAN		200.0	200.0	400.0
		N		95	67	28
MANIOC	TOTAL VALUE OF SALES (IN CONTOS)	MEAN		167.1	181.9	91.4
		STD DEV		220.7	236.6	74.5
		MEDIAN		100.0	100.0	80.0
		N		128	107	21
BEANS	TOTAL VALUE OF SALES (IN CONTOS)	MEAN		73.2	61.6	118.6
		STD DEV		123.0	42.2	266.1
		MEDIAN		50.0	50.0	25.0
		N		44	35	9
GROUNDNUT	TOTAL VALUE OF SALES (IN CONTOS)	MEAN		58.1	58.3	56.3
		STD DEV		47.4	47.8	51.5
		MEDIAN		50.0	50.0	62.5
		N		30	26	4

TOTAL MEAN AND MEDIAN VALUES CALCULATED ONLY FOR HOUSEHOLDS SELLING THE CROP

TABLE 3.16 WHO IS RESPONSIBLE FOR THE DECISION TO SELL SWEETPOTATO IN 2004 BY AREA

	ALL HOUSEHOLDS		AREA				DISTRICT					
			INTERVENTION		CONTROL		MOPEIA		NAMACURRA		NICOADALA	
	N	%	N	%	N	%	N	%	N	%	N	%
MAN	78	43.1	66	44.3	12	37.5	45	50.6	21	35.0	12	37.5
WOMAN	77	42.5	61	40.9	16	50.0	32	36.0	29	48.3	16	50.0
BOTH	26	14.4	22	14.8	4	12.5	12	13.5	10	16.7	4	12.5

NOTE: ONLY INCLUDED HOUSEHOLDS THAT SOLD SWEETPOTATO IN 2004

TABLE 3.17

DESCRIPTION OF SAMPLE FOR RAPID ASSESSMENT OF PURCHASE AND CONSUMPTION OF ORANGE-FLESHED SWEETPOTATO ROOTS (OFSP)

		ENTIRE SAMPLE (N=49)		MARKET			
				LUALUA (N=31)		LICUAR (N=18)	
		Count	Col %	Count	Col %	Count	Col %
SEX OF INTERVIEWEE	MEN	33	67.3%	22	71.0%	11	61.1%
	WOMEN	16	32.7%	9	29.0%	7	38.9%
AGE IN YRS BY CATEGORY	14-20 YRS	15	30.6%	11	35.5%	4	22.2%
	21-30 YRS	20	40.8%	14	45.2%	6	33.3%
	31-59 YRS	13	26.5%	6	19.4%	7	38.9%
	DO NOT KNOW	1	2.0%	0	.0%	1	5.6%
LEVEL OF FORMAL EDUCATION BY CATEGORY	NO FORMAL EDUCATION	1	2.0%	0	.0%	1	5.6%
	1-4 YRS	20	40.8%	12	38.7%	8	44.4%
	5-10 YRS	28	57.1%	19	61.3%	9	50.0%
PRINCIPAL ACTIVITY	PEASANT/FARMER/FISHERMAN	14	28.6%	13	41.9%	1	5.6%
	SELLER OF FOOD PRODUCTS	7	14.3%	2	6.5%	5	27.8%
	TRADER	12	24.5%	6	19.4%	6	33.3%
	STUDENT	10	20.4%	7	22.6%	3	16.7%
	TEACHER	2	4.1%	1	3.2%	1	5.6%
	MASON	1	2.0%	1	3.2%	0	.0%
	DOMESTIC WORK	1	2.0%	1	3.2%	0	.0%
	ASSISTANT DRIVER	1	2.0%	0	.0%	1	5.6%
	DRIVER	1	2.0%	0	.0%	1	5.6%

Rapid Purchasing & Consumption Assessment conducted in February 2005. Of 114 persons approached in market for survey, 29 (25%) had never bought BDPA; 49 (43%) had bought and agreed to participate in survey.

TABLE 3.18

KNOWLEDGE ABOUT ORANGE FLESHED SWEET POTATO AND PREFERENCES REGARDING PURCHASING IN MARKET SAMPLE

		ENTIRE SAMPLE (N=49)		MARKET				SEX OF INTERVIEWEE			
		Count	Col %	LUALUA (N=31)		LICUAR (N=18)		MEN (N=33)		WOMEN (N=16)	
				Count	Col %	Count	Col %	Count	Col %	Count	Col %
WHAT DO YOU KNOW ABOUT ORANGE FLESH SWEET POTATO?	GIVES VITAMINS & HEALTH	8	16.3%	6	19.4%	2	11.1%	5	15.2%	3	18.8%
	IT IS GOOD/TASTY & RICH IN VITAMIN A	4	8.2%	4	12.9%	0	.0%	3	9.1%	1	6.3%
	HAS GOOD AROMA & IS NUTRITIOUS	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	GIVES STRENGTH & HEALTH	3	6.1%	3	9.7%	0	.0%	2	6.1%	1	6.3%
	IS GOOD/TASTY	4	8.2%	2	6.5%	2	11.1%	4	12.1%	0	.0%
	GIVES VITAMIN A, PROTECTS AGAINST ILLNESSES & PROTECTS SIGHT	4	8.2%	2	6.5%	2	11.1%	3	9.1%	1	6.3%
	GIVES HEALTH AND HELPS GROWTH	4	8.2%	3	9.7%	1	5.6%	2	6.1%	2	12.5%
	GIVES HEALTH & PROTECTS SIGHT	2	4.1%	2	6.5%	0	.0%	2	6.1%	0	.0%
	PROVIDES VITAMINS	2	4.1%	2	6.5%	0	.0%	1	3.0%	1	6.3%
	GIVES HEALTH	10	20.4%	5	16.1%	5	27.8%	4	12.1%	6	37.5%
	GIVES BLOOD & HEALTH	3	6.1%	1	3.2%	2	11.1%	3	9.1%	0	.0%
	GIVES VITAMIN A, INCREASES BLOOD & MAKES CHILD GROW	2	4.1%	0	.0%	2	11.1%	1	3.0%	1	6.3%
	IS TASTY & CAN BE USED TO MAKE BREAD & CAKES	2	4.1%	0	.0%	2	11.1%	2	6.1%	0	.0%
	SPECIFIC NAME OF ORANGE FLESH SWEET POTATO YOU LIKE THE MOST	RESISTO	7	14.3%	4	12.9%	3	16.7%	2	6.1%	5
DO NOT KNOW		40	81.6%	27	87.1%	13	72.2%	30	90.9%	10	62.5%
MISSING/NOT APPLICABLE		2	4.1%	0	.0%	2	11.1%	1	3.0%	1	6.3%
WHERE DO YOU PREFER TO PURCHASE SWEET POTATO?	WEIGHING SCALE	28	57.1%	27	87.1%	1	5.6%	21	63.6%	7	43.8%
	UNWEIGHED PILES	14	28.6%	3	9.7%	11	61.1%	8	24.2%	6	37.5%
	HAS NO PREFERENCE	7	14.3%	1	3.2%	6	33.3%	4	12.1%	3	18.8%
WHO DECIDES TO BUY OFSP IN YOUR HOUSEHOLD	HEAD OF HOUSEHOLD	39	79.6%	27	87.1%	12	66.7%	33	100.0%	6	37.5%
	MOTHER	8	16.3%	4	12.9%	4	22.2%	0	.0%	8	50.0%
	DAUGHTER	2	4.1%	0	.0%	2	11.1%	0	.0%	2	12.5%
ORANGE FLESH SWEET POTATO CULTIVATED BY THIS HOUSEHOLD	YES	24	49.0%	17	54.8%	7	38.9%	13	39.4%	11	68.8%

Rapid Purchasing & Consumption Assessment conducted in February 2005. Of 114 persons approached in market for survey, 29 (25%) had never bought OFSP; 49 (43%) had bought and agreed to participate in survey.

TABLE 3.19

FREQUENCY OF PURCHASE OF ORANGE FLESHED SWEET POTATO (OFSP) IN 2004 & DESIRED FREQUENCY OF PURCHASE IF AVAILABLE

		ENTIRE SAMPLE (N=49)		MARKET				SEX OF INTERVIEWEE			
				LUALUA (N=31)		LICUAR (N=18)		MEN (N=33)		WOMEN (N=16)	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %
FREQUENCY OF PURCHASE WHEN OFSP AVAILABLE IN ABUNDANCE IN 2004	1 TIME PER WEEK	7	14.3%	6	19.4%	1	5.6%	6	18.2%	1	6.3%
	2 TIMES PER WEEK	19	38.8%	15	48.4%	4	22.2%	14	42.4%	5	31.3%
	ONCE A MONTH	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
	2 TIMES PER YEAR	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	ONCE A DAY	2	4.1%	1	3.2%	1	5.6%	1	3.0%	1	6.3%
	4 TIMES PER WEEK	5	10.2%	3	9.7%	2	11.1%	4	12.1%	1	6.3%
	DID NOT BUY IN 2004, JUST 2005	4	8.2%	1	3.2%	3	16.7%	1	3.0%	3	18.8%
	3 TIMES PER WEEK	7	14.3%	3	9.7%	4	22.2%	4	12.1%	3	18.8%
6 TIMES PER WEEK	3	6.1%	0	.0%	3	16.7%	2	6.1%	1	6.3%	
FREQUENCY OF PURCHASE WHEN OFSP MORE SCARCE IN MARKET IN 2004	1 TIME PER WEEK	15	30.6%	14	45.2%	1	5.6%	11	33.3%	4	25.0%
	DID NOT BUY	22	44.9%	10	32.3%	12	66.7%	14	42.4%	8	50.0%
	2 TIMES PER MONTH	3	6.1%	2	6.5%	1	5.6%	2	6.1%	1	6.3%
	2 TIMES PER WEEK	8	16.3%	5	16.1%	3	16.7%	5	15.2%	3	18.8%
DESIRED FREQUENCY OF PURCHASE IN HUNGER SEASON IF OFSP WOULD BE AVAILABLE DAILY	5 TIMES PER WEEK	7	14.3%	6	19.4%	1	5.6%	6	18.2%	1	6.3%
	EVERY DAY	9	18.4%	6	19.4%	3	16.7%	7	21.2%	2	12.5%
	2 TIMES PER WEEK	5	10.2%	2	6.5%	3	16.7%	3	9.1%	2	12.5%
	3 TIMES PER WEEK	12	24.5%	6	19.4%	6	33.3%	8	24.2%	4	25.0%
	4 TIMES PER WEEK	15	30.6%	11	35.5%	4	22.2%	9	27.3%	6	37.5%
WHEN MONEY IS AVAILABLE	1	2.0%	0	.0%	1	5.6%	0	.0%	1	6.3%	
DESIRED FREQUENCY OF PURCHASE IN JUNE & JULY IF OFSP WOULD BE AVAILABLE DAILY	3 TIMES PER WEEK	8	16.3%	7	22.6%	1	5.6%	7	21.2%	1	6.3%
	1 TIME PER WEEK	3	6.1%	2	6.5%	1	5.6%	3	9.1%	0	.0%
	2 TIMES PER WEEK	18	36.7%	16	51.6%	2	11.1%	15	45.5%	3	18.8%
	6 TIMES PER WEEK	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
	WOULD NOT BUY	10	20.4%	5	16.1%	5	27.8%	3	9.1%	7	43.8%
	EVERY DAY	6	12.2%	0	.0%	6	33.3%	4	12.1%	2	12.5%
4 TIMES PER WEEK	2	4.1%	0	.0%	2	11.1%	0	.0%	2	12.5%	

Rapid Purchasing & Consumption Assessment conducted in February 2005. Of 114 persons approached in market for survey, 29 (25%) had never bought OFSP; 49 (43%) had bought and agreed to participate in survey.

TABLE 3.20

WHO NEEDS TO EAT ORANGE-FLESHED SWEET POTATO THE MOST?

		ENTIRE SAMPLE (N=49)	MARKET		SEX OF INTERVIEWEE		
			LUALUA (N=31)	LICUARI (N=18)	MEN (N=33)	WOMEN (N=16)	
WHO NEEDS TO EAT ORANGE-FLESH SWEET POTATO MOST	MEN	Count	9	5	4	7	2
		Column %	18.4%	16.1%	22.2%	21.2%	12.5%
	WOMEN	Count	20	7	13	13	7
		Column %	40.8%	22.6%	72.2%	39.4%	43.8%
SCHOOL AGE CHILDREN		Count	24	15	9	16	8
		Column %	49.0%	48.4%	50.0%	48.5%	50.0%
SMALL CHILDREN		Count	20	14	6	14	6
		Column %	40.8%	45.2%	33.3%	42.4%	37.5%
ELDERLY		Count	2	1	1	1	1
		Column %	4.1%	3.2%	5.6%	3.0%	6.3%
DO NOT KNOW		Count	23	20	3	15	8
		Column %	46.9%	64.5%	16.7%	45.5%	50.0%

Rapid Purchasing & Consumption Assessment conducted in February 2005. Of 114 persons approached in market for survey, 29 (25%) had never bought OFSP; 49 (43%) had bought and agreed to participate in survey.

TABLE 3.21

PREFERENCE BETWEEN ORANGE-FLESHED AND WHITE-FLESHED SWEET POTATO & HOW IT IS PREPARED IN THE HOME

		ENTIRE SAMPLE (N=49)		MARKET				SEX OF INTERVIEWEE			
				LUALUA (N=31)		LICUAR (N=18)		MEN (N=33)		WOMEN (N=16)	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %
PREFER ORANGE-FLESH (OFSP) OR WHITE-FLESH SWEET POTATO?	ORANGE-FLESH SWEET POTATO	37	75.5%	28	90.3%	9	50.0%	24	72.7%	13	81.3%
	WHITE SWEET POTATO	3	6.1%	0	.0%	3	16.7%	3	9.1%	0	.0%
	DO NOT HAVE PREFERENCE	9	18.4%	3	9.7%	6	33.3%	6	18.2%	3	18.8%
HOW DO YOU PREPARE OFSP AT HOME?	PEEL, MIX WITH COCONUT, WASH & COOK WITH A LITTLE WATER	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	PEEL, MIX WITH BEANS (MUCAPATA)	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	PEEL, COOK WT A LITTLE H2O/UNPEELED, COOK WITH A LITTLE H2O	12	24.5%	12	38.7%	0	.0%	10	30.3%	2	12.5%
	BOILED WITH SUFFICIENT WATER & SALT; ALSO ROAST	3	6.1%	2	6.5%	1	5.6%	3	9.1%	0	.0%
	COOK WITH NORMAL AMOUNT OF WATER; ALSO FRY	6	12.2%	3	9.7%	3	16.7%	4	12.1%	2	12.5%
	PEEL & COOK WITH A LOT OF WATER	3	6.1%	3	9.7%	0	.0%	2	6.1%	1	6.3%
	STEAM	2	4.1%	2	6.5%	0	.0%	1	3.0%	1	6.3%
	COOK WT NORMAL AMT H2O; ROAST, MIX WT DARK GREEN LEAVES	2	4.1%	2	6.5%	0	.0%	0	.0%	2	12.5%
	UNPEELED, COOKED WITH A LITTLE WATER	7	14.3%	4	12.9%	3	16.7%	3	9.1%	4	25.0%
	PEEL, CUT IN PIECES, & COOK WITH A LITTLE WATER	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	WASH & COOK UNPEELED AS NORMAL; SOMETIMES FRY OR ROAST	4	8.2%	0	.0%	4	22.2%	2	6.1%	2	12.5%
	COOK UNPEELED, WITH A LITTLE WATER & ALSO ROASTED	2	4.1%	0	.0%	2	11.1%	2	6.1%	0	.0%
	COOK WITH COCONUT	1	2.0%	0	.0%	1	5.6%	0	.0%	1	6.3%
	COOK UNPEELED WITH A LITTLE WATER; COOK WITH COCONUT	3	6.1%	0	.0%	3	16.7%	2	6.1%	1	6.3%
	DO YOU PREPARE OFSP DIFFERENTLY FOR THE CHILD?	NO	39	79.6%	24	77.4%	15	83.3%	28	84.8%	11
YES		9	18.4%	7	22.6%	2	11.1%	4	12.1%	5	31.3%

Rapid Purchasing & Consumption Assessment conducted in February 2005. Of 114 persons approached in market for survey, 29 (25%) had never bought BDPA; 49 (43%) had bought and agreed to participate in survey.

TABLE 3.22

SOURCE OF INFORMATION ABOUT VITAMIN A RICH FOODS AND THE IMPORTANCE OF CONSUMING FOODS RICH IN VITAMIN A

		ENTIRE SAMPLE (N=49)		MARKET				SEX OF INTERVIEWEE			
		Count	Col %	LUALUA (N=31)		LICUAR (N=18)		MEN (N=33)		WOMEN (N=16)	
				Count	Col %	Count	Col %	Count	Col %	Count	Col %
WHERE DID YOU LEARN ABOUT VITAMIN A RICH FOODS?	THROUGH FRIENDS, NEWSPAPERS, & BOOKS	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	FROM SCHOOL & BOOKS	6	12.2%	5	16.1%	1	5.6%	5	15.2%	1	6.3%
	FROM RADIO AND TV	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	THROUGH FRIENDS/RELATIVES	3	6.1%	3	9.7%	0	.0%	2	6.1%	1	6.3%
	AT THE HOSPITAL	8	16.3%	5	16.1%	3	16.7%	3	9.1%	5	31%
	FROM SCHOOL, HEALTH CENTER	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
	FROM THE RADIO	5	10.2%	2	6.5%	3	16.7%	5	15.2%	0	.0%
	FROM THE RADIO & HOSPITAL, SCHOOL BOOKS	9	18.4%	8	25.8%	1	5.6%	6	18.2%	3	19%
	EXTENSIONIST & ON THE RADIO	2	4.1%	1	3.2%	1	5.6%	1	3.0%	1	6.3%
	FROM SCHOOL	7	14.3%	3	9.7%	4	22.2%	6	18.2%	1	6.3%
	IN THE HOSPITAL AND THROUGH FRIENDS	3	6.1%	1	3.2%	2	11.1%	1	3.0%	2	13%
	FROM BOOKS & ON THE RADIO	1	2.0%	0	.0%	1	5.6%	1	3.0%	0	.0%
	AT THE HOSPITAL AND THROUGH WORLD VISION	1	2.0%	0	.0%	1	5.6%	0	.0%	1	6.3%
FROM THE RADIO AND IN SCHOOL	1	2.0%	0	.0%	1	5.6%	1	3.0%	0	.0%	
WHAT IS THE IMPORTANCE OF EATING FOODS RICH IN VITAMIN A	HELPS WITH GROWTH & GIVES STRENGTH	4	8.2%	4	12.9%	0	.0%	4	12.1%	0	.0%
	PROTECTS AGAINST DISEASE & GIVES HEALTH	7	14.3%	7	22.6%	0	.0%	5	15.2%	2	13%
	GIVES STRENGTH & HEALTH	15	30.6%	8	25.8%	7	38.9%	9	27.3%	6	38%
	GIVES VITAMINS & HEALTH	2	4.1%	1	3.2%	1	5.6%	2	6.1%	0	.0%
	GIVES HEALTH & INCREASES BLOOD	3	6.1%	2	6.5%	1	5.6%	2	6.1%	1	6.3%
	GIVES HEALTH	14	28.6%	8	25.8%	6	33.3%	9	27.3%	5	31%
	HELPS GROWTH, GIVES HEALTH & GOOD SIGHT	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
	GIVES HEALTH & MAKES CHILD GROW	2	4.1%	0	.0%	2	11.1%	1	3.0%	1	6.3%
	GIVES HEALTH & PROTECTS AGAINST DISEASE	1	2.0%	0	.0%	1	5.6%	0	.0%	1	6.3%

Rapid Purchasing & Consumption Assessment conducted in February 2005. Of 114 persons approached in market for survey, 29 (25%) had never bought BDPA; 49 (43%) had bought and agreed to participate in survey.

TABLE 3.23

AMOUNT SPENT ON ORANGE-FLESHED SWEET POTATO AT EACH PURCHASE WHEN ABUNDANT AND SCARCE IN MARKET

		ENTIRE SAMPLE (N=49)		MARKET				SEX OF INTERVIEWEE			
				LUALUA (N=31)		LICUAR (N=18)		MEN (N=33)		WOMEN (N=16)	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %
AMOUNT	2.0	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
(CONTOS)	2.5	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
SPENT EACH	3.0	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
TIME ON BDPA	5.0	3	6.1%	2	6.5%	1	5.6%	1	3.0%	2	12.5%
PURCHASE	6.0	11	22.4%	11	35.5%	0	.0%	10	30.3%	1	6.3%
WHEN	7.5	1	2.0%	1	3.2%	0	.0%	1	3.0%	0	.0%
ABUNDANT	8.0	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
	9.0	8	16.3%	8	25.8%	0	.0%	6	18.2%	2	12.5%
	10.0	9	18.4%	1	3.2%	8	44.4%	8	24.2%	1	6.3%
	12.0	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
	15.0	4	8.2%	2	6.5%	2	11.1%	4	12.1%	0	.0%
	20.0	2	4.1%	0	.0%	2	11.1%	1	3.0%	1	6.3%
	25.0	1	2.0%	0	.0%	1	5.6%	0	.0%	1	6.3%
	DO NOT REMEMBER	5	10.2%	1	3.2%	4	22.2%	1	3.0%	4	25.0%
AMOUNT	2.5	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
(CONTOS)	3.0	10	20.4%	10	32.3%	0	.0%	8	24.2%	2	12.5%
SPENT EACH	4.0	1	2.0%	1	3.2%	0	.0%	0	.0%	1	6.3%
TIME ON BDPA	5.0	1	2.0%	0	.0%	1	5.6%	1	3.0%	0	.0%
PURCHASE	6.0	8	16.3%	8	25.8%	0	.0%	6	18.2%	2	12.5%
WHEN SCARCE	10.0	1	2.0%	0	.0%	1	5.6%	1	3.0%	0	.0%
	20.0	1	2.0%	0	.0%	1	5.6%	0	.0%	1	6.3%
	30.0	1	2.0%	0	.0%	1	5.6%	1	3.0%	0	.0%
	DID NOT PURCHASE	25	51.0%	11	35.5%	14	77.8%	16	48.5%	9	56.3%

Rapid Purchasing & Consumption Assessment conducted in February 2005. Of 114 persons approached in market for survey, 29 (25%) had never bought BDPA; 49 (43%) had bought and agreed to participate in survey.

TABLE 3.24 DIFFERENT USES OF SWEETPOTATO BY THE HOUSEHOLD IN 2004

		ALL HOUSEHOLDS		AREA			
				INTERVENTION		CONTROL	
		N	%	N	%	N	%
DID YOU DRY PART OF (ANY KIND) SWEET POTATO YIELD IN 2004	NO	402	66.8	283	60.6	119	88.1
	YES	200	33.2	184	39.4	16	11.9
THIS YEAR DID YOUR HH - EAT SWEET POTATO LEAVES	NO	164	27.2	92	19.7	72	53.3
	YES	438	72.8	375	80.3	63	46.7
THIS YEAR DID YOUR HH - MAKE SWEET POTATO PORRIDGE	NO	254	42.2	123	26.3	131	97.0
	YES	348	57.8	344	73.7	4	3.0
THIS YEAR DID YOUR HH - MAKE SWEET POTATO FLOUR	NO	574	95.3	440	94.2	134	99.3
	YES	28	4.7	27	5.8	1	.7
THIS YEAR DID YOUR HH - FEED AN ANIMAL WITH SWEET POTATO	NO	462	76.7	355	76.0	107	79.3
	YES	140	23.3	112	24.0	28	20.7
THIS YEAR DID YOUR HH - FEED AN ANIMAL WITH SP LEAVES	NO	546	90.7	425	91.0	121	89.6
	YES	56	9.3	42	9.0	14	10.4
THIS YEAR DID YOUR HH - STORE FRESH SWEET POTATO	NO	573	95.2	439	94.0	134	99.3
	YES	29	4.8	28	6.0	1	.7

ONLY INCLUDED HOUSEHOLDS THAT PRODUCED SWEETPOTATO IN 2004

TABLE 3.25 COMPARISON OF COSTS AND PROFITS OF 100% WHEAT FLOUR AND GOLDEN BREAD IN LUALUA (2004)

**A. WHEAT FLOUR
BREAD PRODUCES 250
UNITS**

EACH UNIT SELLS
AT

1000 MT

**TOTAL
RECEIPTS
(MT): 250000**

INGREDIENT	QUANTITY	UNIT OF MEASURE	GRAMS PER UNIT OF MEASURE	TOTAL GRAMS	VALUE PER UNIT OF MEASURE	TOTAL VALUE IN METICAIS
WHEAT FLOUR	20	PLASTIC WATER JUGS	785	15,700	8164	163,280
YEAST	2	LEVEL MATCH BOXES	15.12	30	1512	3,024
IMPROVER (SOLD TO BREAD MAKERS)	1	LEVEL MATCH BOX	16.7	17	1670	1,670
SALT	1	TABLESPOON				1,000
DAILY MARKET FEE	1	DAY			2000	2,000
WOOD	1	STACK			5000	5,000
CHARCOAL	0.25	SACK			15000	3,750
PERSONAL TRANSPORT TO QUELIMANE	0.25	RETURN TRIP: LUALUA-QUELIMANE			60000	15,000
TRANSPORT OF WHEAT FLOUR SACK	0.25	TRIP FROM QUELIMANE TO LUALUA			20000	5,000
				TOTAL COSTS		199,724
<i>NOTE: WHEAT FLOUR CAN ONLY BE PURCHASED IN THE PROVINCIAL CAPITAL</i>						
<i>QUELIMANE. ONE SACK LASTS FOR 4 DAYS.</i>						
					PROFIT	50,276

TABLE 3.25, CONT.

B. GOLDEN SWEET POTATO BREAD PRODUCES 264 UNITS EACH UNIT SELLS AT 1000 MT **TOTAL RECEIPTS (MT): 264,000**

INGREDIENT	QUANTITY	UNIT OF MEASURE	GRAMS PER UNIT OF MEASURE	TOTAL GRAMS	VALUE PER UNIT OF MEASURE	TOTAL VALUE IN METICAIS
WHEAT FLOUR	12	PLASTIC WATER JUGS	785	9,420	8164	97,968
YEAST	12	LEVEL MATCH BOXES	15.12	181	1512	18,144
IMPROVER (SOLD TO BREAD MAKERS)	6	LEVEL MATCH BOX	4.16	25	416	2,496
SALT	2	TABLESPOON				1,486
BOILED AND MASHED ORANGE FLESH SWEET POTATO (FROM 30 MEDIUM SIZE ROOTS (EACH 225 gms)	18	300 ML PLASTIC CUPS	319	5742	1167.54	21,016
DAILY MARKET FEE	1	DAY			2000	2,000
WOOD	1	STACK			5000	5,000
CHARCOAL	0.2	SACK			15000	3,000
PERSONAL TRANSPORT TO QUELIMANE	0.2	RETURN TRIP: LUALUA-QUELIMANE			60000	12,000
TRANSPORT OF WHEAT FLOUR SACK	0.2	TRIP FROM QUELIMANE TO LUALUA			20000	<u>4,000</u>
<i>NOTE: A SACK OF WHEAT FLOUR NOW LASTS 5 DAYS INSTEAD OF FOUR, REDUCING OVERALL TRANSPORT COST.</i>				TOTAL COSTS		167,110
					PROFIT	96,890

TABLE 3.26 RESULTS FROM LABORATORY ANALYSIS OF BETA-CAROTENE CONTENT OF GOLDEN BREAD SAMPLES MADE FROM 5 ORANGE-FLESHED SWEETPOTATO (OFSP) VARIETIES

BREAD SAMPLE USING OFSP VARIETY (FRESH OR DRIED):	TOTAL β -CAROTENE $\mu\text{g}/\text{gm}$			TRANS- β -CAROTENE $\mu\text{g}/\text{gm}$			PER 60 GRAM BUN:		PER 110 GM BUN:	
	MEAN	STD DEV	CV	MEAN	STD DEV	CV	TRANS- β -CAROTENE	RAE	TRANS- β -CAROTENE	RAE
							μg	μg	μg	μg
RESISTO - fresh	19.1	0.3	1.7	15.0	0.2	1.5	899	75	1,648	137
RESISTO - chips	18.8	0.5	2.6	14.5	0.4	2.6	872	73	1,598	133
MGCL01 - fresh	20.4	0.2	1.0	14.7	0.05	0.33	881	73	1,616	135
MGCL01 - chips	17.6	0.3	1.8	13.4	0.1	1	802	67	1,471	123
GABAGABA (440215) - fresh	20.7	0.1	0.7	16.0	0.2	1.2	961	80	1,762	147
GABAGABA (440215) - chips	17.4	0.4	2.1	12.7	0.3	2.4	761	63	1,396	116
TIB4 – fresh	13.1	0.4	3.2	9.3	0.2	2.6	559	47	1,025	85
TIB4 – chips	9.5	0.1	0.5	6.8	0.1	0.9	411	34	753	63
LO-323 - fresh	11.5	0.3	3.0	8.8	0.2	2.7	529	44	971	81
LO-323 - chips	10.1	0.1	1.0	7.3	0.1	1.6	439	37	804	67

NOTES: Analysis done by Paul van Jaarsveld, Medical Research Council, 2005. Results are for duplicate determinations. Fresh = boiled and mashed; chips = re-hydrated, boiled and mashed. Total Beta-Carotene = trans + 9-cis + 13-cis beta-Carotene. Trans Beta-Carotene = without 9-cis and 13-cis beta-Carotene. RAE= Retinol Activity Equivalent Unit: 12 units beta-carotene per 1 Unit Retinol.

TABLE 3.27 BETA-CAROTENE (TOTAL AND ALL-TRANS) CONTENT OF SMALL AND MEDIUM SIZE GOLDEN BREAD ROLLS MADE FROM RESISTO (DARK ORANGE-FLESH) AND THEIR CONTRIBUTION TO VITAMIN A INTAKE BY AGE AND SEX GROUP

	SIZE OF BUN	
	60 gms	110 gms
Total Beta-Carotene Content	1146	2101
Total all-trans Beta-Carotene Content	899	1650
Vitamin A value (μg RAE) (12:1 conversion)	75	137
% Contribution to Dietary Reference Intake		
Children 1-3 years old	25	46
Children 4-8 years old	19	34
Children 9-13 years old	13	23
Non-pregnant women 14 years & above	11	20
Pregnant Women	10	18
Lactating Women	6	11
Men 14 years old & above	8	15

Note: Small buns (60 gms) more often purchased by children than adults; medium-sized (110 gms) more by adults than children. Foods contributing 10% of DRI per serving are considered good sources of vitamin A; those contributing 20% of DRI per serving excellent sources of vitamin A.

TABLE 3.28

COMPARISON OF GOLDEN BREAD WITH WHITE BREAD: PREFERENCES OF INTERVIEWEES HAVING PURCHASED GOLDEN BREAD

		ENTIRE SAMPLE (N=55)		MARKET				SEX OF INTERVIEWEE			
		Count	Col %	LUALUA (N=30)		LICUAR (N=25)		MAN		WOMAN	
				Count	Col %	Count	Col %	Count	Col %	Count	Col %
IS GOLDEN BREAD FOR 1000 MT THE SAME SIZE AS WHITE BREAD FOR 1000 MT?	SAME	5	10.6%	4	16.7%	1	4.3%	3	9.4%	2	13.3%
	SMALLER	34	72.3%	13	54.2%	21	91.3%	23	71.9%	11	73.3%
	LARGER	8	17.0%	7	29.2%	1	4.3%	6	18.8%	2	13.3%
GOLDEN BREAD HAS THE SAME, LESS, OR MORE WEIGHT THAN WHITE?	SAME	3	6.4%	0	.0%	3	13.0%	0	.0%	3	20.0%
	LESS	2	4.3%	2	8.3%	0	.0%	1	3.1%	1	6.7%
	MORE	42	89.4%	22	91.7%	20	87.0%	31	96.9%	11	73.3%
WHICH DO YOU PREFER: A HEAVY OR LIGHT BREAD?	HEAVY	37	78.7%	21	87.5%	16	69.6%	28	87.5%	9	60.0%
	LIGHT	6	12.8%	2	8.3%	4	17.4%	2	6.3%	4	26.7%
	THERE IS NO PREFERENCE	4	8.5%	1	4.2%	3	13.0%	2	6.3%	2	13.3%
DO YOU PREFER THE COLOR OF GOLDEN BREAD OR WHITE BREAD?	GOLDEN BREAD	46	97.9%	24	100.0%	22	95.7%	32	100.0%	14	93.3%
	THERE IS NO DIFFERENCE	1	2.1%	0	.0%	1	4.3%	0	.0%	1	6.7%
DO YOU PREFER THE TASTE OF GOLDEN BREAD OR WHITE BREAD?	GOLDEN BREAD	40	85.1%	24	100.0%	16	69.6%	29	90.6%	11	73.3%
	WHITE BREAD	6	12.8%	0	.0%	6	26.1%	3	9.4%	3	20.0%
	THERE IS NO DIFFERENCE	1	2.1%	0	.0%	1	4.3%	0	.0%	1	6.7%
OVERALL, DO YOU PREFER GOLDEN BREAD OR WHITE BREAD?	GOLDEN BREAD	43	91.5%	24	100.0%	19	82.6%	31	96.9%	12	80.0%
	WHITE BREAD	3	6.4%	0	.0%	3	13.0%	1	3.1%	2	13.3%
	THERE IS NO DIFFERENCE	1	2.1%	0	.0%	1	4.3%	0	.0%	1	6.7%

Rapid Assessment of Consumer Attitudes towards Golden Bread conducted in February 2005. Of 112 approached for interview, 48 (42%) had never heard of golden bread. 55 persons (37 men, 18 women) heard of golden bread and agreed to be interviewed. 47 had purchased golden bread.

TABLE 3.29

EXPECTED FREQUENCY OF PURCHASE OF GOLDEN BREAD COMPARED TO CURRENT PURCHASE OF WHITE BREAD

		ENTIRE SAMPLE (N=55)		MARKET				SEX OF INTERVIEWEE			
				LUALUA (N=30)		LICUAR (N=25)		MAN		WOMAN	
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %
IF GOLDEN BREAD WAS AVAILABLE DAILY, FREQUENCY OF PURCHASE:	EVERY DAY	24	51.1%	15	62.5%	9	39.1%	19	59%	5	33.3%
	5 DAYS PER WEEK	2	4.3%	1	4.2%	1	4.3%	2	6.3%	0	.0%
	3 DAYS PER WEEK	11	23.4%	8	33.3%	3	13.0%	7	22%	4	26.7%
	ALWAYS AS NECESSARY	4	8.5%	0	.0%	4	17.4%	2	6.3%	2	13.3%
	WHENEVER HAS FUNDS TO DO SO	4	8.5%	0	.0%	4	17.4%	2	6.3%	2	13.3%
	LACK OF MONEY/DO NOT KNOW	2	4.2%	0	.0%	2	8.6%	0	.0%	2	13.4%
FREQUENCY OF PURCHASE OF WHITE BREAD AT PRESENT TIME	EVERY DAY	11	23.4%	6	25.0%	5	21.7%	8	25%	3	20.0%
	5 DAYS PER WEEK	2	4.3%	1	4.2%	1	4.3%	1	3.1%	1	6.7%
	3 DAYS PER WEEK	4	8.5%	2	8.3%	2	8.7%	3	9.4%	1	6.7%
	2 DAYS PER WEEK	10	21.3%	9	37.5%	1	4.3%	6	19%	4	26.7%
	4 DAYS PER WEEK	4	8.5%	3	12.5%	1	4.3%	4	13%	0	.0%
	DO NOT BUY WHITE BREAD	1	2.1%	1	4.2%	0	.0%	1	3.1%	0	.0%
	WHENEVER GOLDEN BREAD IS NOT AVAILABLE	3	6.4%	2	8.3%	1	4.3%	3	9.4%	0	.0%
	WHENEVER I HAVE MONEY	5	10.6%	0	.0%	5	21.7%	3	9.4%	2	13.3%
	AMOST ALWAYS	1	2.1%	0	.0%	1	4.3%	1	3.1%	0	.0%
	IT IS REDUCED	4	8.5%	0	.0%	4	17.4%	2	6.3%	2	13.3%
	LACK OF MONEY	1	2.1%	0	.0%	1	4.3%	0	.0%	1	6.7%

Rapid Assessment of Consumer Attitudes towards Golden Bread conducted in February 2005. Of 112 approached for interview, 48 (42%) had never heard of golden bread. 55 persons (37 men, 18 women) heard of golden bread and agreed to be interviewed.

**TABLE 4.1
SOURCES OF ADVICE CONCERNING DIETARY PRACTICES AND HEALTH
PROBLEMS FOR PRINCIPLE WOMEN AND MEN IN THE STUDY AREAS AT BASELINE:
PERCENT REPORTING RECEIVING ADVICE FROM SOURCE**

	STUDY AREA			
	PRINCIPLE WOMEN		PRINCIPLE MEN	
	INTERVENTION	CONTROL	INTERVENTION	CONTROL
	N=584	N=290	N=493	N=235
ADVICE ON DIETARY PRACTICES FROM:				
ONE'S OWN SELF	33.0%	36.6%	34.1%	36.8%
SPOUSE	11.3%	16.2%	16.6%	17.9%
ONE'S OWN MOTHER	53.8%	60.7%	53.8%	53.8%
GRANDPARENT	11.5%	10.7%	7.9%	8.5%
AUNT	7.4%	8.3%	3.7%	7.7%
ONE'S MOTHER-IN-LAW	26.9%	23.1%	24.1%	18.4%
SISTER OR SISTER-IN-LAW	6.8%	5.5%	6.3%	5.1%
FATHER OR UNCLE	6.5%	7.2%	9.5%	9.4%
HEALTH FACILITY	16.8%	10.0%	13.0%	9.4%
FRIEND	5.8%	3.4%	5.1%	6.4%
TRADITIONAL HEALER	2.6%	1.4%	2.8%	0.9%
HEALTH VOLUNTEER	2.9%	1.0%	2.6%	1.3%
OTHER SOURCE	0.7%	0.3%	0.8%	0.4%
ADVICE ON HEALTH PROBLEMS FROM:				
ONE'S OWN SELF	45.9%	52.4%	56.2%	65.4%
SPOUSE	47.4%	45.2%	39.8%	39.7%
ONE'S OWN MOTHER	37.8%	48.6%	35.1%	41.9%
GRANDPARENT	8.0%	9.3%	6.5%	6.0%
AUNT	3.9%	5.9%	2.6%	4.7%
ONE'S MOTHER-IN-LAW	17.3%	14.8%	11.2%	11.5%
SISTER OR SISTER-IN-LAW	2.7%	2.8%	4.3%	4.3%
FATHER OR UNCLE	9.6%	5.2%	9.3%	10.3%
HEALTH FACILITY	33.2%	29.3%	36.9%	29.9%
FRIEND	5.3%	2.8%	5.3%	5.6%
TRADITIONAL HEALER	12.2%	7.6%	14.6%	12.8%
HEALTH VOLUNTEER	0.7%	0.3%	0.8%	0.4%
OTHER SOURCE	0.2%	0.7%	0.4%	0.0%

Note: Respondents could cite more than one category of person from whom advice is sought.

TABLE 4.2
PARTICIPATION OF PRINCIPLE MEN IN TSNi SURVEY AT BASELINE (BS) AND AT ROUND 4 (R4)

		STUDY AREA				ENTIRE SAMPLE	
		.INTERVENTION		CONTROL		Count	Col %
		Count	Col %	Count	Col %		
PRESENCE OF NUTRITIONAL KNOWLEDGE INTERVIEW FOR PRINCIPLE MALE	1 SAME MAN IN BASELINE & FINAL ROUND	394	79.1%	172	70.8%	566	76.4%
	2 PRINCIPAL MALE EXISTS BUT DIFFERS IN BS & R4	4	.8%			4	.5%
	3 PRINCIPAL MAN APPEARS ONLY IN BASELINE	33	6.6%	24	9.9%	57	7.7%
	4 PRINCIPAL MAN APPEARS ONLY IN ROUND 4	16	3.2%	12	4.9%	28	3.8%
	5 THERE WAS NEVER A PRINCIPLE MAN	49	9.8%	33	13.6%	82	11.1%
	6 PRINCIPLE MAN EXISTS ONLY IN R4 BUT REFUSED	2	.4%	1	.4%	3	.4%
	7 PRINCIPAL MAN EXISTS ONLY IN BASELINE BUT REFUSED			1	.4%	1	.1%
ENTIRE SAMPLE		498	100.0%	243	100.0%	741	100.0%

TABLE 4.3 ASSESSMENT OF CHANGE IN NUTRITIONAL KNOWLEDGE AMONG PRINCIPLE CAREGIVERS OF THE REFERENCE CHILD BETWEEN BASELINE AND THE END OF THE STUDY

Percent of respondents Reporting that:	PRINCIPLE FEMALE CAREGIVER N= 740						PRINCIPLE MALE CAREGIVER N=566					
	BASELINE			END OF STUDY			BASELINE			END OF STUDY		
	INTERV.	CONTROL	p-value	INTERV.	CONTROL	p-value	INTERV.	CONTROL	p-value	INTERV.	CONTROL	p-value
VITAMIN A:												
Have heard of Vitamin A	87.9	91.4	0.160	99.8	95.5	0.000	91.4	91.3	0.972	100.0	97.1	0.001
<i>Of those who have heard of Vitamin A, percent mentioning that:</i>												
Vitamin A protects body against disease	12.4	9.0	0.268	58.7	13.4	0.000	16.9	15.9	0.773	36.3	18.0	0.000
Vitamin A protects the eyes	0.5	0.5	0.985	33.5	2.2	0.000	2.8	1.3	0.296	17.8	1.2	0.000
Another correct fact about vitamin A	57.7	62.6	0.107	83.5	75.4	0.000	72.2	75.2	0.544	85.8	88.0	0.920
BREASTFEEDING:												
Colostrum is good for the new baby	42.5	39.1	0.383	90.3	40.3	0.000	41.9	29.7	0.006	78.7	47.7	0.002
Non-breast milk liquids not good for infants under 4 months old	10.1	5.3	0.031	48.1	14.8	0.000	8.4	11.0	0.312	35.0	19.8	0.000
Good for ill mother to continue breastfeeding	17.1	23.0	0.053	69.2	32.1	0.000	9.9	7.6	0.375	31.0	22.1	0.031
Good for pregnant mother to continue breastfeeding	1.8	1.6	0.873	71.2	2.9	0.000	2.5	3.5	0.530	43.4	5.8	0.000
Good to feed breast milk that has been in the breast some time	4	4.9	0.566	51.7	10.3	0.000	3.0	7.0	0.033	29.2	14.0	0.000
FEEDING PRACTICES:												
Child starts eating other foods at four months or more of age	73.2	73.6	0.860	86.3	78.3	0.013	65.5	65.1	0.933	69.5	80.8	0.005
Crawling children should eat 3 or more meals daily	15.3	16.8	0.580	64.4	27.5	0.000	70.8	63.4	0.503	51.8	33.7	0.000
Children 2 years of age should eat 4 or more meals or snacks daily	8.8	11.2	0.327	59.0	39.1	0.000	12.4	9.9	0.384	49.5	44.2	0.245
Mean Nutritional Knowledge Index (12 points highest score possible)*	3.2	3.3	0.315	8.1	4.3	0.000	3.4	3.3	0.293	6.3	4.7	0.000

Note: *No significant difference in means (t-test) existed between nutritional knowledge index for intervention and control women at baseline (p=.315) or between intervention and control men at baseline (p=0.293). Difference between areas significant among men and women at end of study (p=0.000). Paired t-tests indicate significant differences (p=0.000) between intervention women at baseline and at the end of the study, between control women at baseline and at the end of the study, between intervention men at baseline and at the end of the study, and between control men at baseline and at the end of the study. P-values for individual components making up index are derived from Pearson's Chi-squared (2-sided) test.

Sample of 740 female caregivers consists of 497 women from intervention areas and 243 women from control areas. Sample of 566 principle males represents those men present both at baseline and at the end of the study (round 4), of which 394 are from intervention households and 172 from control households.

FIGURE 4.1 PERCENT OF WOMEN AND MEN CORRECTLY NAMING THREE VITAMIN A RICH FOODS AND THREE GOOD SOURCES OF FAT AT THE END OF THE SURVEY (ROUND 4) BY AREA

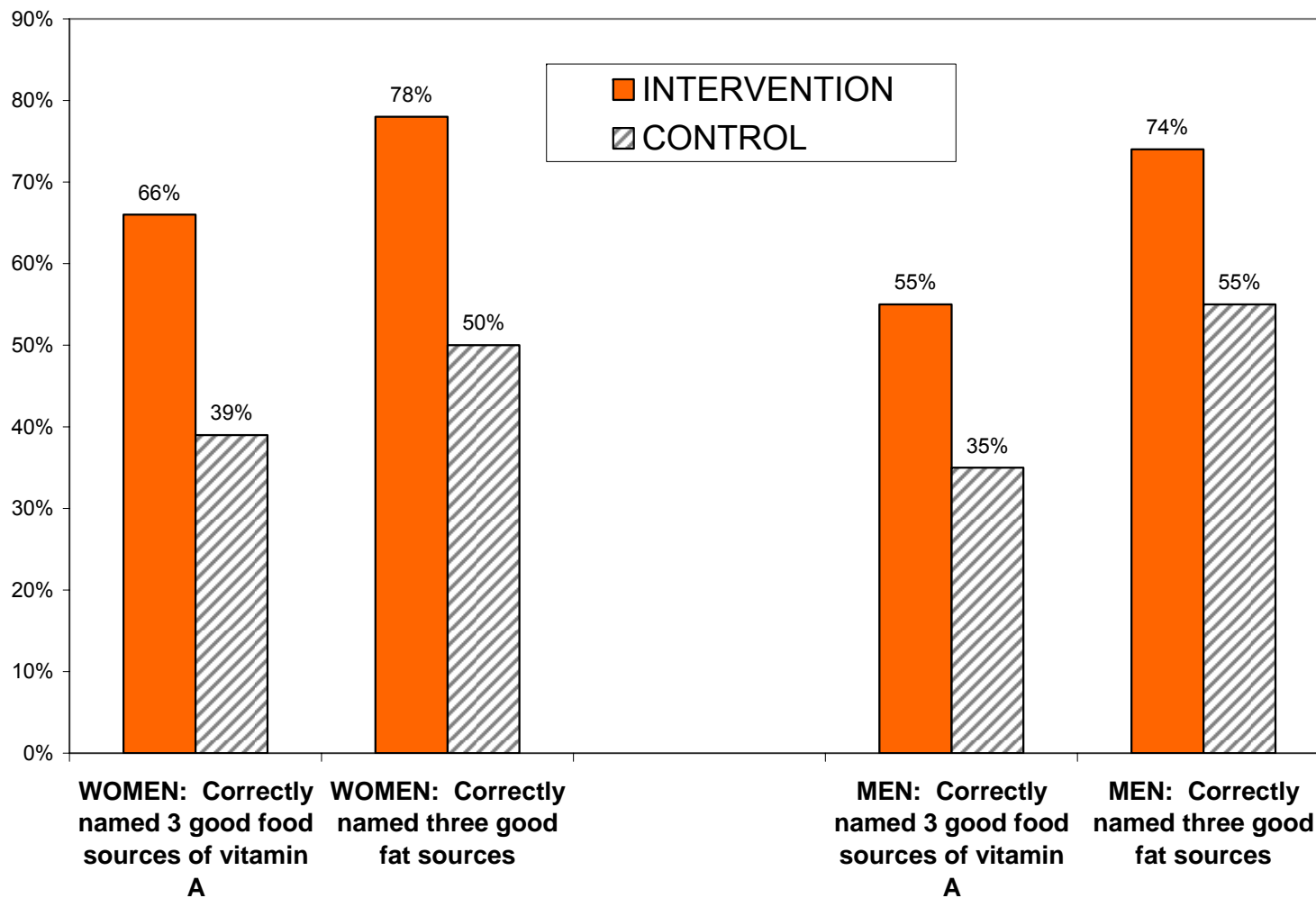


FIGURE 4.2 NUTRITIONAL KNOWLEDGE SCORES OF PRINCIPAL MEN AND WOMEN AT THE BEGINNING AND END OF THE STUDY: MEANS AND STANDARD DEVIATIONS (12 MAXIMUM POSSIBLE VALUE)

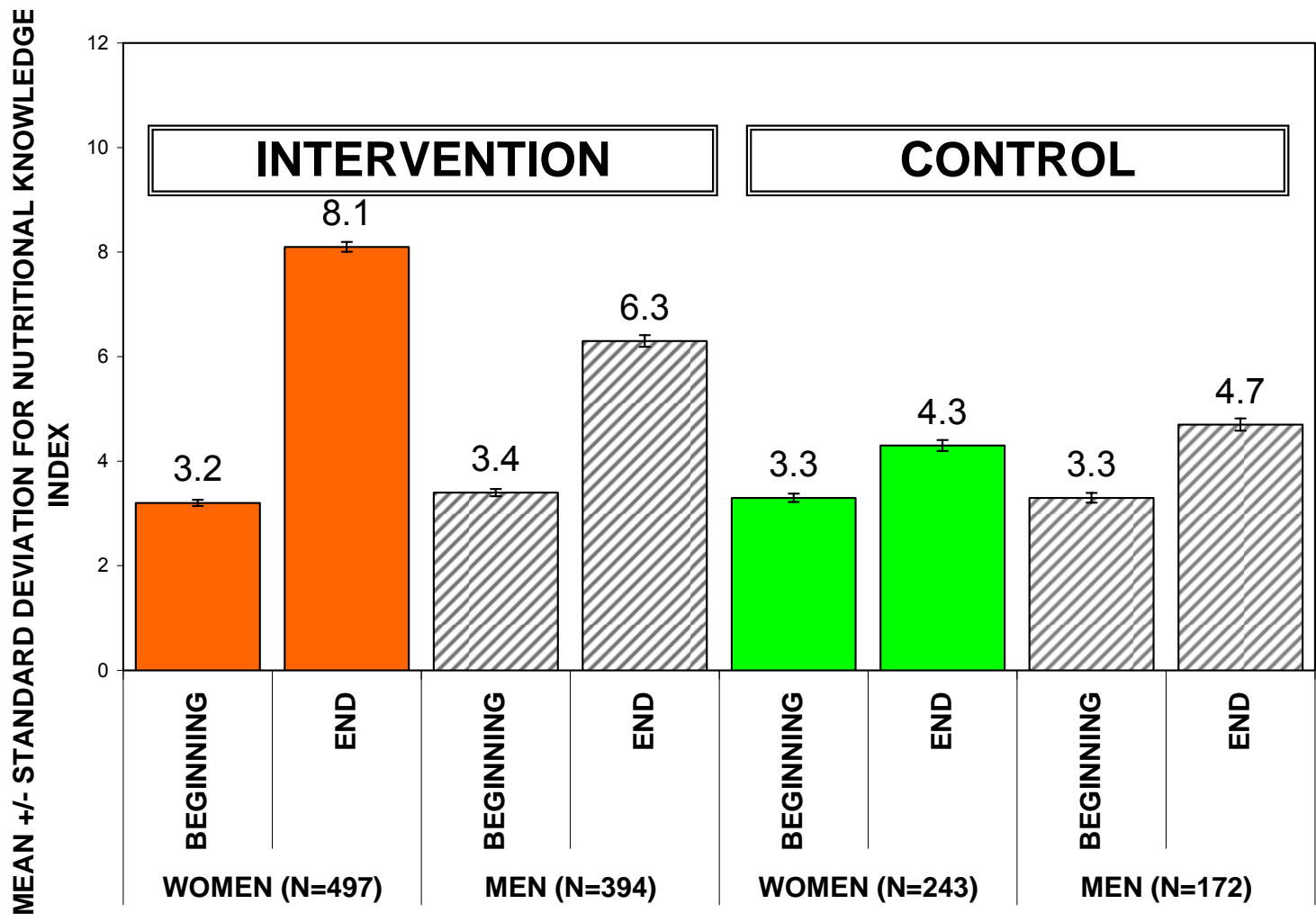


TABLE 4.4 DESCRIPTION OF VARIABLES INCLUDE IN CHANGE IN NUTRITIONAL KNOWLEDGE MODEL FOR WOMEN IN INTERVENTION AREAS

Descriptive Statistics

	MEAN	STD DEVIATION	N
CHANGE IN NUTRITIONAL KNOWLEDGE SCORE BETWEEN RD1 & RD4	4.92	2.21	497
RECEIVED HOME VISITS IN ADDITION TO GROUP SESSIONS	.51	.50	497
NUMBER OF NUTRITION SESSIONS FEMALE CAREGIVER ATTENDED	7.81	2.74	497
FORMAL EDUCATION: WOMAN WT 1-4 YRS PRIMARY	.32	.47	497
FORMAL EDUCATION: WOMAN WT 5-7 YRS FORMAL SCHOOLING	.07	.25	497
AT BASELINE NO RESIDENT PRINCIPLE MALE	.14	.34	497
AT BASELINE, HH HAS AT LEAST 1 RADIO	.32	.47	497
BS: WOMAN 25 YEARS OF AGE OR OLDER	.62	.49	497
BS: WOMAN WITH LOW BODY MASS INDEX (<18.5 KGS PER SQ METER)	.18	.38	497
WOMAN BORN IN VILLAGE WHERE RESIDES	.67	.47	497
WOMAN OLDEST AMONG OWN SIBLINGS	.26	.44	497
BS: WOMAN ACTIVE IN RELIGIOUS ACTIVITIES	.74	.44	497
BS: WOMAN SOLD AGRICULTURAL/LIVESTOCK PRODUCTS IN 2002	.39	.49	497
BS: WOMAN ENGAGED IN CASUAL LABOR IN 2002	.27	.45	497
BS: WOMAN ENGAGED IN PETTY TRADE IN 2002	.04	.21	497
BS: NUTRITIONAL KNOWLEDGE INDEX FOR PRINCIPLE WOMEN	3.22	1.34	497

TABLE 4.5 SUMMARY OF FIT STATISTICS FOR CHANGE IN NUTRITIONAL KNOWLEDGE MODEL

Model Summary ^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.537 ^a	.288	.266	1.89021	.288	12.975	15	481	.000	1.818

^a. Predictors: (Constant), BS: NUTRITIONAL KNOWLEDGE INDEX FOR PRINCIPLE WOMEN, WOMAN BORN IN VILLAGE WHERE RESIDES, WOMAN OLDEST AMONG OWN SIBLINGS, BS: WOMAN ENGAGED IN CASUAL LABOR IN 2002, BS: WOMAN ENGAGED IN PETTY TRADE IN 2002, BS: WOMAN 25 YEARS OF AGE OR OLDER, TYPE OF NUTRITION INTERVENTION GROUP, BS: WOMAN WITH LOW BODY MASS INDEX (<18.5 KGS PER SQ METER), FORMAL EDUCATION: WOMAN WT 1-4 YRS PRIMARY, NUMBER OF NUTRITION SESSIONS FEMALE CAREGIVER ATTENDED, BS: WOMAN SOLD AGRICULTURAL/LIVESTOCK PRODUCTS IN 2002, AT BASELINE, HH HAS AT LEAST 1 RADIO, BS: WOMAN ACTIVE IN RELIGIOUS ACTIVITIES, FORMAL EDUCATION: WOMAN WT 5-7 YRS FORMAL SCHOOLING, AT BASELINE NO RESIDENT PRINCIPLE MALE

^b. Dependent Variable: CHANGE IN NUTRITIONAL KNOWLEDGE SCORE BETWEEN RD1 & RD4

TABLE 4.6 RESULTS FROM REGRESSION MODEL FOR CHANGE IN NUTRITIONAL KNOWLEDGE SCORE IN INTERVENTION AREAS

Coefficients ^a

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.535	.398		11.400	.000
RECEIVED HOME VISITS IN ADDITION TO GROUP SESSIONS	-.140	.173	-.032	-.808	.420
NUMBER OF NUTRITION SESSIONS FEMALE CAREGIVER ATTENDED	.304	.032	.377	9.484	.000
FORMAL EDUCATION: WOMAN WT 1-4 YRS PRIMARY	.118	.189	.025	.622	.534
FORMAL EDUCATION: WOMAN WT 5-7 YRS FORMAL SCHOOLING	-.156	.362	-.018	-.432	.666
AT BASELINE NO RESIDENT PRINCIPLE MALE	-.280	.267	-.044	-1.047	.296
AT BASELINE, HH HAS AT LEAST 1 RADIO	-.043	.190	-.009	-.227	.820
BS: WOMAN 25 YEARS OF AGE OR OLDER	.195	.180	.043	1.084	.279
BS: WOMAN WITH LOW BODY MASS INDEX (<18.5 KGS PER SQ METER)	.062	.225	.011	.274	.784
WOMAN BORN IN VILLAGE WHERE RESIDES	-.189	.185	-.040	-1.024	.306
WOMAN OLDEST AMONG OWN SIBLINGS	.041	.196	.008	.209	.834
BS: WOMAN ACTIVE IN RELIGIOUS ACTIVITIES	.070	.202	.014	.344	.731
BS: WOMAN SOLD AGRICULTURAL/LIVESTOCK PRODUCTS IN 2002	.087	.179	.019	.486	.627
BS: WOMAN ENGAGED IN CASUAL LABOR IN 2002	.079	.202	.016	.394	.694
BS: WOMAN ENGAGED IN PETTY TRADE IN 2002	.052	.421	.005	.124	.901
BS: NUTRITIONAL KNOWLEDGE INDEX FOR PRINCIPLE WOMEN	-.625	.066	-.381	-9.404	.000

^a. Dependent Variable: CHANGE IN NUTRITIONAL KNOWLEDGE SCORE BETWEEN RD1 & RD4

TABLE 4.7 PRINCIPLE TWO REASONS CITED AS TO WHY GROUP SESSIONS GIVEN BY NUTRITION EXTENSION AGENTS WERE MISSED

REASON	N	%
WOMAN HERSELF WAS ILL	195	56.7
TAKE CARE OF AN ILL PERSON	90	29.9
WAS NOT IN THE VILLAGE	80	23.3
WAS NOT INFORMED	45	13.1
WAS AT THE DEATH	31	9.0
LACK OF TIME/OTHER THINGS TO DO	28	8.1
WAS IN THE FIELD	12	3.5
LACK OF INTEREST	9	2.6
HAD A FAMILY VISIT	5	1.5
SESSIONS AT AN INCONVENIENT TIME	3	0.9
MEETING PLACE IS VERY FAR FROM MY HOUSE	3	0.9
GONE TO VISIT RELATIVES	3	0.9
BECAUSE OF THE NEW PREGNANCY	3	0.9
WAS IN CHURCH	3	0.9
LAZINESS	1	0.3
THE HOUSE HAD BURNT	1	0.3
CHANGED ZONE	1	0.3

NOTE: 344 INTERVENTION WOMEN RESPONDING WHO MISSED TWO OR MORE SESSIONS

TABLE 4.8

PERCENT OF HOUSEHOLDS PURCHASING VARIOUS FOODS AT LEAST ONCE DURING THE MAIN HARVEST SEASON (APRIL-SEPTEMBER) BY SURVEY ROUND AND AREA

FOOD TYPE	ROUND 1 (2003)				ROUND 2 (2004)			
	All %	Intervention %	Control %	P-value*	All %	Intervention %	Control %	P-value*
MAIZE FLOUR	58.8	50.4	73.7	0.001	60.2	55.6	68.4	0.079
WHEAT FLOUR	6.2	4.4	9.2	0.232	1.9 [†]	1.5	2.6	0.062
DRY MAIZE IN GRAIN	10.0	6.7	15.8	0.053	7.6	8.9	5.3	0.424
DRY RICE	20.4	15.6	28.9	0.032	32.7 ^{**}	25.9 [†]	44.7 [†]	0.006
DRY SORGHUM	0.5	0.7	0.0	-	0.0	0.0	0.0	-
MAIZE ON THE COB	29.4	25.9	35.5	0.158	25.1	24.4	26.3	0.869
DRY CASSAVA	5.2	2.2	10.5	0.019	1.4	2.2	0.0 [†]	0.555
CASSAVA FLOUR	8.5	2.2	19.7	0.000	6.2	1.5	14.5	0.000
FRESH CASSAVA	7.1	3.0	14.5	0.004	3.8	0.0	10.5	0.000
WHITE-FLESH SWEET POTATO	13.3	8.1	22.4	0.005	6.6 [†]	1.5 [†]	15.8	0.000
YELLOW-FLESH SWEET POTATO	1.9	1.5	2.6	0.620	0.5	0.0	1.3	0.360
ORANGE-FLESH SWEET POTATO	4.7	3.0	7.9	0.173	2.8	2.2	3.9	0.669
IRISH POTATO	3.3	2.2	5.3	0.255	2.8	3.7	1.3	0.422
DRY COWPEA	30.3	21.5	46.1	0.000	22.7	16.3	34.2	0.004
DRY SUGAR BEAN	53.1	47.4	63.2	0.032	53.6	43.0	72.4	0.000
DRY PIGEON PEA	27.5	19.3	42.1	0.001	14.7 ^{**}	9.6 [†]	23.7 [†]	0.008
OTHER DRY BEAN	0.9	0.7	1.3	1.000	0.0	0.0	0.0	-
FRESH COWPEA	1.4	2.2	0.0	0.555	0.5	0.0	1.3	0.360
FRESH SUGAR BEAN	0.5	0.7	0.0	1.000	0.9	0.0	2.6	0.129
FRESH PIGEON PEA	3.3	3.7	2.6	1.000	2.8	1.5	5.3	0.191
OTHER FRESH BEAN	0.9	1.5	0.0	0.537	0.0	0.0	0.0	-
DRY PEANUT	41.7	36.3	51.3	0.042	44.5	35.6	60.5	0.001
FRESH PEANUT	7.1	8.1	5.3	0.580	6.6	7.4	5.3	0.774
SESAME	7.1	5.9	9.2	0.409	3.8	5.2	1.3	0.263
SUNFLOWER	0.0	0.0	0.0	-	0.5	0.7	0.0	1.000
CASHEW NUT	2.8	1.5	5.3	0.191	0.9	0.7	1.3	1.000
DRY FISH	94.3	93.3	96.1	0.543	95.3	94.1	97.4	0.336
FRESH FISH	89.1	87.4	92.1	0.362	91.5	91.9	90.8	0.801
FRESH PRAWN	37.9	33.3	46.1	0.077	36.5	31.9	44.7	0.074
DRY PRAWN	67.6	54.5	90.8	0.000	67.8	58.5	84.2	0.000
CRAB	12.4	8.1	19.7	0.017	10.4	8.9	13.2	0.354
CHICKEN	28.4	27.4	30.3	0.751	13.3 ^{***}	11.1 ^{**}	17.1	0.290
BEEF	5.7	4.4	7.9	0.357	3.8	4.4	2.6	0.714
PORK	23.7	28.9	14.5	0.019	15.2 [†]	17.0 [†]	11.8	0.424
GOAT MEAT	16.1	11.9	23.7	0.032	16.6	11.9	25.0	0.020
GAME MEAT	23.7	29.6	13.2	0.007	25.1	31.1	14.5	0.008
LIVER	0.5	0.7	0.0	1.000	0.9	1.5	0.0	0.537
RAT/FIELD RAT	19.9	24.4	11.8	0.031	15.2	21.5	3.9	0.001
MONKEY	0.9	1.5	0.0	0.537	2.8	4.4	0.0	0.090
RABBIT	0.5	0.7	0.0	1.000	0.5	0.7	0.0	1.000
KALE	16.6	11.9	25.0	0.020	20.4	17.8	25.0	0.218
CABBAGE	13.3	10.4	18.4	0.138	8.5	8.9	7.9	1.000
PUMPKIN	14.2	11.1	19.7	0.101	6.6 [†]	7.4	5.3 ^{**}	0.774
CUCUMBER	0.0	0.0	0.0	-	0.9	0.0	2.6	0.129
CHILLIES	37.4	28.1	53.9	0.000	28.4 [†]	22.2	39.5	0.011
CARROT	0.9	0.7	1.3	1.000	0.9	0.7	1.3	1.000
TOMATO	70.6	60.7	88.2	0.000	56.9 ^{**}	52.6	64.5 ^{**}	0.112
ONION	85.3	79.3	96.1	0.001	79.1	75.6	85.5	0.112
OKRA	12.8	8.9	19.7	0.031	2.8 ^{***}	2.2 [†]	3.9 ^{**}	0.669
BANANA	56.9	54.1	61.8	0.312	41.7 ^{**}	42.2 [†]	40.8 ^{**}	0.885
PAPAYA	6.6	1.5	15.8	0.000	2.4 [†]	0.7	5.3	0.058
MANGO	0.0	0.0	0.0	-	0.5	0.0	1.3	0.360
ORANGE	23.2	20.0	28.9	0.174	21.3	27.4	10.5 ^{**}	0.005
TANGERINE	5.7	5.9	5.3	1.000	3.8	5.2	1.3	0.263
LEMON	5.2	3.7	7.9	0.209	3.3	3.0	3.9	0.704
PINEAPPLE	6.2	3.7	10.5	0.071	0.0 ^{***}	0.0	0.0 ^{**}	-
COCONUT/COCONUT MILK	74.4	69.6	82.9	0.048	71.6	68.9	76.3	0.270
BEER - BOTTLE/CAN	5.7	5.9	5.3	1.000	8.5	6.7	11.8	0.208
WINE - BOTTLED	0.9	0.7	1.3	1.000	1.4	0.0	3.9	0.046
GRAIN ALCOHOL	1.4	0.0	3.9	0.046	0.5	0.7	0.0	1.000
ALCOHOL MADE FROM MAIZE WASTE	2.8	3.7	1.3	0.422	1.4	1.5	1.3	1.000
ALCOHOL FROM COCONUT TREE	24.6	25.2	23.7	0.869	10.0 ^{***}	9.6 ^{**}	10.5 [†]	0.815
OTHER TRADITIONAL ALCOHOLIC DRINK	0.5	0.0	1.3	0.360	0.5	0.0	1.3	0.360
CANE GRAIN ALCOHOL - KACHASU	24.6	20.7	31.6	0.096	27.0	26.7	27.6	0.873

SAMPLE SIZE: INTERVENTION=135 CONTROL=76

Except for Round 1 in the Intervention area, Fresh Pigeon Pea = 134. This questionnaire could not be located during analysis

*Comparing intervention area to control area within each round (Chi-square test; Fisher's exact two tailed)

[†]p<0.05; ^{**}p<0.01; ^{***}p<0.001; Comparing Round 1 to Round 2 for specific columns (McNemar's Test for two related paired samples; two tailed)

TABLE 4.9

**PERCENT OF HOUSEHOLDS PURCHASING VARIOUS FOODS AT LEAST ONCE DURING THE MONTH PRIOR TO SURVEY
BY SURVEY ROUND AND AREA**

FOOD TYPE	ROUND 1 (2003)				ROUND 2 (2004)			
	All %	Intervention %	Control %	P-value	All %	Intervention %	Control %	P-value
BREAD	62.6	62.2	63.2	1.000	50.2 [*]	45.2 [*]	59.2	0.062
EGGS	5.2	3.7	7.9	0.209	3.3	3.0	3.9	0.704
POWDERED MILK	0.9	1.5	0.0	-	0.0	0.0	0.0	-
CONDENSED MILK	3.8	3.7	3.9	1.000	3.8	3.0	5.3	0.462
YOUNG COCONUT (WATER)	12.3	8.9	18.4	0.051	3.3 ^{***}	3.0	3.9 [†]	0.704
SUGAR	64.9	67.9	60.5	0.367	71.1	71.9	69.7	0.753
CANDY	8.1	7.4	9.2	0.793	7.6	8.1	6.6	0.791
HONEY	0.5	0.7	0.0	-	0.0	0.0	0.0	-
BISCUIT	51.7	54.1	47.4	0.390	58.3	64.4	47.4	0.019
OIL	55.0	57.0	51.3	0.472	65.9 [†]	63.7	69.7 [†]	0.450
SOFT DRINK-BOTTLED	7.1	7.4	6.6	1.000	8.1	7.4	9.2	0.793
TEA	1.4	1.5	1.3	1.000	0.9	1.5	0.0	-
JUICE-SPECIFY	19.4	22.2	14.5	0.206	1.9 ^{***}	0.0 ^{***}	5.3	-
SALT	94.3	94.1	94.7	1.000	97.6	97.0	98.7	0.656

Sample Size: Intervention=135, Control=76

*Comparing intervention area to control area within each round (Chi-square test; Fisher's exact two tailed)

[†]p<0.05; ^{***}p<0.001; Comparing Round 1 to Round 2 for specific columns (McNemar's Test for two related paired samples; two tailed)

TABLE 4.10

**AVERAGE AMOUNT OF MONEY SPENT PER HOUSHOLD PER MONTH ON ALL PURCHASED FOODS SINCE THE BEGINNING
OF THE MAJOR HARVEST SEASON BY SURVEY ROUND AND AREA (IN CONTOS (THOUSANDS OF METICALS))**

	ROUND 1 (2003)				ROUND 2 (2004)			
	All (n=211)	Intervention (n=135)	Control (n=76)	P-value*	All (n=211)	Intervention (n=135)	Control (n=76)	P-value*
MEAN	254.9	225.8	306.6	0.464	292.1 ^{***}	270.9 [†]	329.8 [†]	0.103
STANDARD DEVIATION	321.8	184.9	474.0		226.4	203.4	259.5	
MEDIAN	193.0	186.8	198.4	0.464	236.6 ^{***}	223.5 [†]	256.9 [†]	0.103
PERCENTILE								
25	114.3	114.5	113.9		142.4	139.8	149.3	
75	301.9	289.5	316.1		356.4	321.2	429.3	

*Comparing intervention area to control area within each round (Mann-Whitney U-Test; two tailed)

[†]p<0.05, ^{***}p<0.001; Comparing Round 1 to Round 2 for specific columns (Wilcoxon's Rank Test; two tailed)

TABLE 4.11

**AVERAGE AMOUNT OF MONEY SPENT PER HOUSHOLD PER MONTH ON VITAMIN A RICH FOODS DURING THE MAJOR
HARVEST SEASON (APRIL-SEPTEMBER) BY SURVEY ROUND AND AREA (IN THOUSANDS OF METICALS)**

	ROUND 1 (2003)				ROUND 2 (2003)			
	All (n=211)	Intervention (n=135)	Control (n=76)	P-value*	All (n=211)	Intervention (n=135)	Control (n=76)	P-value*
MEAN	43.5	46.0	39.1	0.168	52.8	56.4 [†]	46.5	0.103
STANDARD DEVIATION	40.4	42.0	37.2		50.4	51.7	47.7	
MEDIAN	36.0	38.0	33.2	0.168	40.0	42.4 [†]	32.3	0.103
PERCENTILE								
25	18.3	20.0	14.3		20.0	20.0	16.4	
75	55.0	60.0	47.6		72.0	80.5	63.4	

*Comparing intervention area to control area within each round (Mann-Whitney U-Test; two tailed)

[†]p<0.05; Comparing Round 1 to Round 2 for specific columns (Wilcoxon's Rank Test; two tailed)

Identified Vitamin A Rich Foods Included:

Papaya, Mango, Carrot, Pumpkin, Yellow Flesh Sweet Potato, Orange Flesh Sweet Potato, Pumpkin Leaves, Cassava Leaves, Bean Leaves, Amaranthus Leaves, Sweet Potato leaves, Chill, Guava, Liver, Beef, Pork, Monkey, Kale, Eggs, Fresh Fish, Fresh Prawn, Crab, Fresh Milk, Powdered milk, Condensed Milk

TABLE 4.12
PERCENT OF HOUSEHOLDS PRODUCING VARIOUS FOODS AT LEAST ONCE DURING THE MAIN HARVEST
SEASON (APRIL-SEP) BY SURVEY ROUND AND AREA

FOOD PRODUCT		ROUND 1 (2003)			ROUND 2 (2004)		
		ALL	INTERVENTION	CONTROL	ALL	INTERVENTION	CONTROL
		%	%	%	%	%	%
MAIZE FLOUR	PRODUCED	38.4%	47.4%	22.4%	37.9%	43.7%	27.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.8%	3.0%	2.6%	3.8%	3.0%	5.3%
WHEAT FLOUR	PRODUCE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RICE FLOUR	PRODUCED	28.0%	30.4%	23.7%	26.1%	26.7%	25.0%
DRY MAIZE IN GRAIN	PRODUCED	1.4%	0.7%	2.6%	1.4%	2.2%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%	0.7%		0.9%		2.6%
DRY RICE	PRODUCED	95.7%	95.6%	96.1%	93.4%	93.3%	93.4%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	1.5%		0.5%	0.7%	
DRY SORGHUM	PRODUCED	2.4%	3.0%	1.3%	1.9%	1.5%	2.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%	0.7%				
MAIZE ON THE COB	PRODUCED	53.1%	57.0%	46.1%	62.1%	66.7%	53.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	6.6%	5.2%	9.2%	5.7%	3.0%	10.5%
DRY CASSAVA	PRODUCED	60.7%	68.9%	46.1%	49.3%	58.5%	32.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE				0.9%		2.6%
CASSAVA FLOUR	PRODUCED	93.4%	97.8%	85.5%	90.0%	98.5%	75.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE				0.9%		2.6%
FRESH CASSAVA	PRODUCED	88.6%	94.8%	77.6%	91.9%	99.3%	78.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	1.5%	2.6%	0.5%		1.3%
WHITE-FLESH SWEET POTATO	PRODUCED	80.6%	85.2%	72.4%	79.1%	83.0%	72.4%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.4%	1.5%	3.9%	4.7%	4.4%	5.3%
YELLOW-FLESH SWEET POTATO	PRODUCED	21.3%	31.1%	3.9%	17.1%	21.5%	9.2%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	3.3%	3.7%	2.6%	1.9%	2.2%	1.3%
ORANGE-FLESH SWEET POTATO	PRODUCED	34.6%	48.9%	9.2%	60.2%	85.2%	15.8%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	9.5%	13.3%	2.6%	4.3%	3.7%	5.3%
IRISH POTATO	PRODUCED	0.5%	0.7%		2.8%	3.0%	2.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	1.5%		0.9%		2.6%

		ROUND 1 (2003)			ROUND 2 (2004)		
		ALL	INTERVENTION	CONTROL	ALL	INTERVENTION	CONTROL
FOOD PRODUCT		%	%	%	%	%	%
DRY COWPEA	PRODUCED	36.0%	42.2%	25.0%	37.0%	29.6%	50.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	5.2%	4.4%	6.6%	2.8%	2.2%	3.9%
DRY SUGAR BEAN	PRODUCED	5.7%	7.4%	2.6%	5.7%	7.4%	2.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	1.5%		0.9%	0.7%	1.3%
DRY PIGEON PEA	PRODUCED	43.1%	54.1%	23.7%	31.3%	23.0%	46.1%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	4.3%	3.7%	5.3%	0.9%	0.7%	1.3%
OTHER DRY BEAN	PRODUCED	2.8%	4.4%		1.4%	2.2%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	1.5%				
FRESH COWPEA	PRODUCED	41.2%	48.1%	28.9%	44.1%	42.2%	47.4%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	1.5%	2.6%	1.4%	2.2%	
FRESH SUGAR BEAN	PRODUCED	2.4%	3.7%		0.9%	1.5%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE				0.5%	0.7%	
FRESH PIGEON PEA	PRODUCED	44.8%	56.7%	23.7%	56.9%	67.4%	38.2%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	2.2%	1.3%	0.9%	1.5%	
OTHER FRESH BEAN	PRODUCED	3.3%	5.2%		1.4%	2.2%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	0.7%	1.3%			
DRY PEANUT	PRODUCED	18.5%	26.7%	3.9%	27.0%	38.5%	6.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.8%	3.7%	1.3%	4.7%	5.9%	2.6%
FRESH PEANUT	PRODUCED	18.5%	25.9%	5.3%	22.7%	32.6%	5.3%
SESAME	PRODUCED	3.8%	3.7%	3.9%	7.1%	11.1%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	2.2%	1.3%	1.4%	2.2%	
SUNFLOWER	PRODUCED	1.4%	2.2%		0.0%	0.0%	0.0%
CASHEW NUT	PRODUCED	17.1%	8.9%	31.6%	2.4%	2.2%	2.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	1.5%				
	FISHED, HUNTED OR GATHERED WILD	10.9%	5.2%	21.1%	0.5%		1.3%
PUMPKIN SEED	PRODUCED	5.7%	5.9%	5.3%	8.1%	11.1%	2.6%
CUCUMBER SEED	PRODUCED	1.4%	2.2%		4.3%	5.9%	1.3%
DRY FISH	PRODUCED	5.2%	6.7%	2.6%	3.3%	5.2%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	2.2%		0.9%	1.5%	
	FISHED, HUNTED OR GATHERED WILD	10.4%	14.1%	3.9%	7.6%	10.4%	2.6%
FRESH FISH	GIVEN AS GIFT OR PAYMENT FOR SERVICE	4.7%	6.7%	1.3%	3.7%	4.5%	2.6%
	FISHED, HUNTED OR GATHERED WILD	38.9%	40.7%	35.5%	29.9%	31.9%	26.3%

		ROUND 1 (2003)			ROUND 2 (2004)		
		ALL	INTERVENTION	CONTROL	ALL	INTERVENTION	CONTROL
FOOD PRODUCT		%	%	%	%	%	%
FRESH PRAWN	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	0.7%	1.3%	0.5%		1.3%
	FISHED, HUNTED OR GATHERED WILD	7.6%	7.4%	7.9%	7.1%	5.9%	9.2%
DRY PRAWN	PRODUCED	1.4%	1.5%	1.3%	0.5%	0.7%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	2.2%		0.5%	0.7%	
	FISHED, HUNTED OR GATHERED WILD	0.5%		1.3%	0.5%		1.3%
CRAB	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	1.5%	1.3%	1.9%	1.5%	2.6%
	FISHED, HUNTED OR GATHERED WILD	3.3%	3.0%	3.9%	3.3%	4.4%	1.3%
CHICKEN	PRODUCED	79.6%	83.0%	73.7%	71.1%	77.0%	60.5%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.8%	1.5%	5.3%	3.3%	2.2%	5.3%
LITTLE BIRD	FISHED, HUNTED OR GATHERED WILD	7.1%	8.9%	3.9%	5.7%	5.2%	6.6%
BEEF	PRODUCED				0.0%	0.0%	0.0%
PORK	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%		2.6%			
	PRODUCED	4.7%	6.7%	1.3%	2.8%	4.4%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	2.2%		1.4%	1.5%	1.3%
	FISHED, HUNTED OR GATHERED WILD	0.9%	1.5%		0.5%	0.7%	
GOAT MEAT	PRODUCED	3.8%	4.4%	2.6%	3.8%	4.4%	2.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	7.6%	7.4%	7.9%	1.4%		3.9%
GAME MEAT	PRODUCED				0.5%	0.7%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	3.0%		3.8%	5.2%	1.3%
	FISHED, HUNTED OR GATHERED WILD	10.0%	14.1%	2.6%	11.4%	13.3%	7.9%
LIVER	PRODUCED	5.7%	8.1%	1.3%	3.3%	4.4%	1.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%		1.3%			
	FISHED, HUNTED OR GATHERED WILD	3.3%	4.4%	1.3%	5.2%	8.1%	
RAT/FIELD RAT	GIVEN AS GIFT OR PAYMENT FOR SERVICE	4.7%	5.2%	3.9%	2.8%	3.7%	1.3%
	FISHED, HUNTED OR GATHERED WILD	25.1%	32.6%	11.8%	25.1%	34.8%	7.9%
MONKEY	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	2.2%		4.7%	6.7%	1.3%
	FISHED, HUNTED OR GATHERED WILD	3.3%	5.2%				
RABBIT	PRODUCED	0.9%		2.6%	0.9%	0.7%	1.3%
	FISHED, HUNTED OR GATHERED WILD	0.5%		1.3%	0.9%	0.7%	1.3%
KALE	PRODUCED	10.0%	11.9%	6.6%	14.7%	14.1%	15.8%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	4.3%	5.2%	2.6%	0.9%	0.7%	1.3%

		ROUND 1 (2003)			ROUND 2 (2004)		
		ALL	INTERVENTION	CONTROL	ALL	INTERVENTION	CONTROL
FOOD PRODUCT		%	%	%	%	%	%
CABBAGE	PRODUCED	6.6%	9.6%	1.3%	1.9%	2.2%	1.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	3.8%	4.4%	2.6%	1.9%	1.5%	2.6%
PUMPKIN LEAVES	PRODUCED	80.1%	85.9%	69.7%	82.9%	91.1%	68.4%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	6.6%	4.4%	10.5%	4.3%	3.0%	6.6%
CASSAVA LEAVES	PRODUCED	93.4%	93.3%	93.4%	91.5%	92.6%	89.5%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	0.7%	1.3%			
BEAN LEAVES	PRODUCED	44.5%	45.9%	42.1%	43.6%	43.7%	43.4%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.8%	3.7%	1.3%	4.3%	3.7%	5.3%
SWEET POTATO LEAVES	PRODUCED	32.2%	36.3%	25.0%	36.0%	41.5%	26.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	0.7%	1.3%			
AMARANTHUS LEAVES	PRODUCED	18.5%	16.3%	22.4%	13.7%	17.0%	7.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.4%	1.5%	3.9%			
	FISHED, HUNTED OR GATHERED WILD	0.9%	0.7%	1.3%	4.7%	3.7%	6.6%
PUMPKIN	PRODUCED	65.4%	80.0%	39.5%	74.4%	83.7%	57.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	7.6%	4.4%	13.2%	5.7%	3.0%	10.5%
CUCUMBER	PRODUCED	7.1%	9.6%	2.6%	7.1%	8.9%	3.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.8%	3.0%	2.6%			
	FISHED, HUNTED OR GATHERED WILD	0.5%		1.3%	0.9%	1.5%	
CHILLIES	PRODUCED	43.6%	56.3%	21.1%	48.8%	54.1%	39.5%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	6.2%	8.1%	2.6%	3.8%	3.0%	5.3%
CARROT	PRODUCED	1.4%	2.2%		1.4%	1.5%	1.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%	0.7%				
TOMATO	PRODUCED	46.0%	57.8%	25.0%	64.5%	68.9%	56.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	10.0%	12.6%	5.3%	4.7%	4.4%	5.3%
ONION	PRODUCED	2.8%	4.4%		3.3%	4.4%	1.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	5.7%	6.7%	3.9%	4.7%	4.4%	5.3%
OKRA	PRODUCED	21.8%	19.3%	26.3%	23.2%	25.2%	19.7%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	1.5%	1.3%	1.4%	2.2%	
BANANA	PRODUCED	58.3%	63.7%	48.7%	63.0%	65.9%	57.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	6.2%	5.9%	6.6%	4.7%	5.2%	3.9%
PAPAYA	PRODUCED	73.5%	86.7%	50.0%	83.9%	91.1%	71.1%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	13.7%	8.9%	22.4%	6.6%	2.2%	14.5%

		ROUND 1 (2003)			ROUND 2 (2004)		
		ALL	INTERVENTION	CONTROL	ALL	INTERVENTION	CONTROL
FOOD PRODUCT		%	%	%	%	%	%
MANGO	PRODUCED	4.3%	3.0%	6.6%			
	GIVEN AS GIFT OR PAYMENT FOR SERVICE				0.5%		1.3%
ORANGE	PRODUCED	9.0%	12.6%	2.6%	10.9%	11.9%	9.2%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.8%	3.0%	2.6%			
	FISHED, HUNTED OR GATHERED WILD	0.5%	0.7%		10.0%	11.9%	6.6%
TANGERINE	PRODUCED	1.4%	2.2%		4.3%	6.7%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%		2.6%	1.4%	1.5%	1.3%
LEMON	PRODUCED	20.4%	21.5%	18.4%	9.5%	12.6%	3.9%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	12.3%	15.6%	6.6%			
	FISHED, HUNTED OR GATHERED WILD	0.5%	0.7%		7.1%	8.9%	3.9%
PINEAPPLE	PRODUCED	11.4%	10.4%	13.2%	0.5%	0.7%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	0.7%	3.9%			
AVOCADO	PRODUCED	0.5%	0.7%		0.5%	0.7%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%		1.3%			
GUAVA	PRODUCED	5.7%	6.7%	3.9%	3.3%	3.7%	2.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	3.0%		0.5%	0.7%	
	FISHED, HUNTED OR GATHERED WILD	0.5%	0.7%		0.5%	0.7%	
COCONUT/COCONUT MILK	PRODUCED	33.2%	38.5%	23.7%	39.8%	44.4%	31.6%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	3.8%	5.2%	1.3%	5.2%	5.2%	5.3%
BEER - BOTTLE/CAN	PRODUCED				0.5%	0.7%	
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	1.5%	2.6%	1.9%	0.7%	3.9%
WINE - BOTTLED	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.4%	2.2%	2.6%	0.0%	0.0%	0.0%
GRAIN ALCOHOL	PRODUCED	0.9%	0.7%	1.3%	0.0%	0.0%	0.0%
ALCOHOL MADE FROM MAIZE WASTE	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%		1.3%	0.9%	0.7%	1.3%
ALCOHOL FROM COCONUT TREE	PRODUCED	1.9%	3.0%		0.9%	0.7%	1.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	3.3%	3.7%	2.6%			
	FISHED, HUNTED OR GATHERED WILD	0.9%	1.5%		3.8%	2.2%	6.6%
CANE GRAIN ALCOHOL - KACHASU	PRODUCED	8.5%	11.1%	3.9%	6.2%	8.9%	1.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.9%	1.5%	2.6%	10.9%	11.1%	10.5%

SAMPLE SIZE: 211 HOUSEHOLDS: INTERVENTION=135; CONTROL=76.

TABLE 4.13

PERCENT OF HOUSEHOLDS PRODUCING VARIOUS FOODS AT LEAST ONCE SINCE THE BEGINNING OF THE MONTH PRIOR TO THE SURVEY

		ROUND 1 (2003)			ROUND 2 (2004)		
		ALL	INTERVENTION	CONTROL	ALL	INTERVENTION	CONTROL
BREAD	PRODUCED	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	0.7%	1.3%	1.9%	2.2%	1.3%
EGGS	PRODUCED	55.9%	66.7%	36.8%	53.8%	60.0%	42.7%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	2.4%	3.0%	1.3%	0.5%	0.7%	0.0%
FRESH MILK	PRODUCED	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
POWDERED MILK	PRODUCED	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CONDENSED MILK	PRODUCED	0.0%	0.0%	0.0%	0.9%	1.5%	0.0%
YOUNG COCONUT WATER	PRODUCED	34.6%	40.7%	23.7%	23.7%	25.9%	19.7%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	4.7%	6.7%	1.3%	0.9%	1.5%	0.0%
SUGAR	PRODUCED	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	2.2%	0.0%	0.9%	1.5%	0.0%
CANDY	PRODUCED	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%
HONEY	PRODUCED	0.9%	1.5%	0.0%	0.9%	1.5%	0.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%
HONEY	FISHED, HUNTED OR GATHERED WILD	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%
BISCUIT	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	0.7%	1.3%	1.4%	2.2%	0.0%
OIL	PRODUCED	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	1.4%	1.5%	1.3%	3.3%	3.7%	2.6%
SOFT DRINK BOTTLED	PRODUCED	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.9%	1.5%	0.0%	0.0%	0.0%	0.0%
TEA	PRODUCED	0.5%	0.7%	0.0%	0.0%	0.0%	0.0%
JUICE-SPECIFY	PRODUCED	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	0.5%	0.7%	0.0%	0.5%	0.7%	0.0%
SALT	PRODUCED	0.5%	0.7%	0.0%	4.7%	4.4%	5.3%
	GIVEN AS GIFT OR PAYMENT FOR SERVICE	8.5%	5.2%	14.5%	20.4%	18.5%	23.7%

TABLE 5.1

HOUSEHOLD LEVEL CONSUMPTION OF KEY MACRO- AND MICRO-NUTRIENTS AND PHYTATE PER ADULT EQUIVALENT UNIT (BASED ON PRESENCE AT MEAL, INCLUDING VISITORS) IN FINAL ROUND BY AREA

	AREA OF STUDY									
	INTERVENTION					CONTROL				
	Mean	Std Deviation	Median	Percentile 25	Percentile 75	Mean	Std Deviation	Median	Percentile 25	Percentile 75
ENERGY (KCAL)	3110.26	1021.49	2997.80	2357.38	3782.05	2784.54	866.21	2680.99	2147.20	3226.34
PROTEIN (GMS)	71.78	39.12	63.48	44.57	91.37	65.94	35.29	60.65	40.67	83.84
LIPIDS (GMS)	38.38	28.20	33.36	16.73	54.25	36.58	29.17	31.88	11.71	53.89
VITAMIN A (MCG RAE)	1792.56	2369.86	613.83	113.08	2945.09	286.94	543.56	86.12	47.16	319.23
RETINOL (MCG)	19.83	31.92	1.73	.00	31.67	18.90	27.68	1.89	.00	31.31
BETA-CAROTENE (MCG)	18241.20	27987.46	2864.34	286.00	32568.38	1877.86	5842.43	114.58	.11	1767.25
VITAMIN C (MG)	440.11	438.79	235.94	93.77	692.87	213.21	306.99	75.01	45.49	213.26
VITAMIN E (MCG)	7.20	5.99	6.20	2.24	10.63	3.69	4.29	1.77	.38	6.08
VITAMIN K (MCG)	40.26	49.92	25.45	9.13	52.66	17.07	25.48	6.65	.33	25.26
IRON (MG)	20.37	8.72	19.04	13.65	25.41	19.22	9.56	16.91	11.87	25.32
ZINC (MG)	10.68	4.68	9.96	7.33	13.16	9.87	4.36	8.99	6.89	12.04
PHYTATE (MG)	2121.74	1362.76	1785.10	1128.09	2800.98	2079.77	1530.94	1730.12	1063.98	2503.91
CALCIUM (MG)	1155.10	1009.92	777.46	483.52	1524.29	1009.75	844.64	731.09	386.62	1427.84
SELENIUM (MCG)	68.94	52.22	62.43	22.99	103.73	75.19	65.66	62.37	17.34	116.55
PHOSPHORUS (MG)	1761.19	894.51	1577.59	1118.24	2197.22	1652.76	787.40	1487.58	1055.31	2070.92
MAGNESIUM (MG)	384.99	214.16	354.51	220.06	502.97	329.48	218.05	298.99	173.51	430.23
FOLATE (MCG DIETARY FOLATE EQ)	766.91	566.14	686.71	294.46	1139.59	719.62	659.48	644.97	94.89	1148.48
THIAMIN (B1) (MG)	1.60	.95	1.46	.82	2.28	1.45	1.12	1.30	.47	2.16
RIBOFLAVIN (B2) (MG)	.82	.49	.74	.46	1.06	.55	.32	.48	.33	.71
NIACIN (MG)	22.73	10.99	20.58	14.57	28.91	20.73	10.58	18.80	12.21	27.03
VITAMIN B6 (MG)	1.62	.86	1.48	1.00	2.17	1.32	.80	1.23	.70	1.70
VITAMIN B12 (MCG)	4.57	7.04	.95	.12	7.27	4.61	5.96	1.55	.27	7.50

SAMPLE SIZE: 741 TOTAL HOUSEHOLDS: 498 IN INTERVENTION AREAS, 243 IN CONTROL AREAS. DATA COLLECTED IN POST-HARVEST SEASON (AUG-OCT) 2004.

TABLE 5.2

COMPARISON OF MEDIAN NUTRIENT INTAKE VALUES WITH RECOMMENDED DAILY ALLOWANCES (RDAs) FOR KEY MACRO- AND MICRONUTRIENTS AND MEDIAN INTAKE VALUES BY AREA

	RDA FOR ADULT EQUIVALENT MALE	AREA		TEST FOR SIGNIFICANT DIFFERENCE IN DISTRIBUTION (P-VALUES)	INTERVENTION/CONTROL VALUE	PERCENT DIFFERENCE BETWEEN INTERVENTION & CONTROL AREAS
		INTERVENTION	CONTROL			
		MEDIAN	MEDIAN			
ENERGY (KCAL)	2928	2,997.80	2,680.99	0.000	1.1	11.8
PROTEIN (GMS)	63	63.48	60.65	0.081	1.0	4.7
LIPIDS (GMS)		33.36	31.88	0.265	1.0	4.6
VITAMIN A (MCG RAE)	900	613.83	86.12	0.000	7.1	612.8
RETINOL (MCG)		1.73	1.89	0.691	0.9	-8.5
BETA-CAROTENE (MCG)		2,864.34	114.580	0.000	25.0	2399.9
VITAMIN C (MG)	90	235.94	75.01	0.000	3.1	214.5
VITAMIN E (MCG)	15	6.20	1.77	0.000	3.5	250.0
VITAMIN K (MCG)	120	25.45	6.65	0.000	3.8	282.9
IRON (MG)	8	19.04	16.91	0.029	1.1	12.6
ZINC (MG)	11	9.96	8.99	0.014	1.1	10.9
PHYTATE (MG)		1,785.10	1,730.12	0.317	1.0	3.2
CALCIUM (MG)	1000	777.46	731.09	0.046	1.1	6.3
SELENIUM (MCG)	55	62.43	62.37	0.881	1.0	0.1
PHOSPHORUS (MG)	700	1,577.59	1,487.58	0.172	1.1	6.1
MAGNESIUM (MG)	420	354.51	298.99	0.000	1.2	18.6
FOLATE (MCG DIETARY FOLATE EQ)	400	686.71	644.97	0.036	1.1	6.5
THIAMIN (B1) (MG)	1.2	1.46	1.30	0.004	1.1	12.1
RIBOFLAVIN (B2) (MG)	1.3	0.74	0.48	0.000	1.5	54.9
NIACIN (MG)	16	20.58	18.80	0.010	1.1	9.5
VITAMIN B6 (MG)	1.3	1.48	1.23	0.000	1.2	20.2
VITAMIN B12 (MCG)	2.4	0.95	1.55	0.068	0.6	-38.3

Note: The adult male selected as the base for the adult equivalent unit based on calories is between 30 and 59 years old. Mann-Whitney U non-parametric tests indicate that the distributions of nutrient intakes are significantly different between intervention and control areas when p-values<0.05, as highlighted by bold type.

TABLE 5.3

PERCENT OF HOUSEHOLDS USING INGREDIENT DURING PREVIOUS 24 HOURS IN FINAL ROUND CONSUMPTION
SURVEY BY AREA

	AREA OF STUDY			AREA OF STUDY	
	INTERVENTION	CONTROL		INTERVENTION	CONTROL
MAIZE FLOUR	22.5	27.6	CHICKEN	3.6	4.5
RICE FLOUR	0.4	1.2	DUCK	0.2	0.4
SORGHUM FLOUR	0.4	0.0	OTHER FOWL	1.0	1.2
DRY RICE	47.8	50.6	PORK	1.2	0.0
MAIZE ON THE COB	9.0	0.4	GOAT MEAT	0.4	0.4
MAIZE BRAN	0.0	0.4	GAME MEAT	4.0	1.2
BREAD	0.2	4.1	RAT	7.0	1.6
PASTA	0.2	0.0	CANE RAT	3.4	0.8
DRY CASSAVA	0.8	1.6	MONKEY	1.4	0.0
CASSAVA FLOUR	85.9	70.8	RABBIT	0.2	0.4
FRESH CASSAVA	17.5	2.1	OTHER BUSH ANIMALS	0.8	0.4
WHITE-FLESH SWEET POTATO	16.9	27.6	EGGS	2.6	0.4
YELLOW-FLESH SWEET POTATO	1.2	2.5	KALE	0.8	0.8
ORANGE-FLESH SWEET POTATO	34.5	2.9	LETTUCE	0.2	0.0
IRISH POTATO	0.0	0.4	CABBAGE	0.0	0.8
TARO (INHAME)	0.4	0.0	PUMPKIN LEAVES	10.2	4.9
OTHER TUBERS	7.0	2.1	CASSAVA LEAVES	9.0	7.0
DRY COWPEA	4.8	7.8	BEAN LEAVES	1.0	2.5
DRY SUGAR BEAN	3.0	6.2	SWEET POTATO LEAVES	2.0	3.3
DRY PIGEON PEA	5.8	4.5	AMARANTHUS LEAVES	0.4	0.4
FRESH COWPEA	3.4	0.4	PUMPKIN	4.0	1.6
FRESH SUGAR BEAN	0.2	0.0	CHILLIES	4.4	2.9
FRESH PIGEON PEA	14.3	2.1	TOMATO	87.3	88.1
DRY PEAS	0.6	0.0	ONION	26.5	28.0
DRY PEANUT	4.8	0.4	EGG PLANT	0.0	0.4
SESAME	0.6	0.0	OTHER VEGETABLE	0.6	0.8
CASHEW NUT	0.2	0.0	BANANA	9.2	5.3
PUMPKIN SEED	0.2	0.0	PAPAYA	50.2	23.9
MELON SEED	0.2	0.0	MANGO	0.4	0.0
OTHER NUTS OR SEEDS	1.0	0.0	LEMON	0.4	0.0
DRY FISH	41.6	51.4	GUAVA	0.2	0.0
FRESH FISH	28.7	37.9	COCONUT/COCONUT MILK	58.2	60.9
FRESH PRAWN	9.2	14.0	YOUNG COCONUT (WATER)	2.4	2.5
DRY PRAWN	9.6	6.2	SUGAR	2.0	4.5
CRAB	0.8	0.0	SUGAR CANE	16.1	4.5
OTHER SEAFOOD	2.2	0.8	BISCUIT	1.4	2.1
			OIL	17.1	13.6
			BEER - BOTTLE/CAN	0.2	0.0
			SUGAR CANE ALCOHOL DRINK	0.6	1.2
			TEA	0.4	0.8
			SALT	99.6	99.2

SAMPLE SIZE: 741 STUDY HOUSEHOLDS: 498 IN INTERVENTION AREAS; 243 IN CONTROL AREAS.
DATA COLLECTED IN POST-HARVEST SEASON (AUG-OCT 2005).

TABLE 5.4

PERCENT CONTRIBUTION OF EACH INGREDIENT TO TOTAL HOUSEHOLD ENERGY INTAKE (KCAL) WHEN INGREDIENT IS CONSUMED BY AREA

	AREA OF STUDY									
	INTERVENTION					CONTROL				
	Count	Mean	Median	Minimum	Maximum	Count	Mean	Median	Minimum	Maximum
MAIZE FLOUR	112	30.3	30.1	1.7	72.8	67	31.1	29.8	4.9	85.6
DRY RICE	238	33.3	28.9	3.3	94.6	123	44.5	39.9	3.8	91.1
MAIZE ON THE COB	45	9.1	8.2	1.0	24.8	1	15.2	15.2	15.2	15.2
CASSAVA FLOUR	428	46.8	43.5	2.7	97.2	172	59.1	63.3	2.9	96.8
FRESH CASSAVA	87	15.2	13.1	.6	47.1	5	12.1	13.6	6.5	16.1
WHITE-FLESH SWEET POTATO	84	14.0	13.3	.8	54.6	67	13.4	13.6	1.1	54.8
YELLOW-FLESH SWEET POTATO	6	6.8	4.0	2.5	16.8	6	10.6	8.5	1.2	20.5
ORANGE-FLESH SWEET POTATO	172	13.4	11.9	.8	47.3	7	11.8	10.8	3.0	19.0
OTHER TUBERS	35	8.6	7.3	1.5	25.3	5	5.6	5.1	4.0	8.4
DRY COWPEA	24	6.8	6.2	1.2	19.9	19	11.3	8.0	2.4	28.9
DRY SUGAR BEAN	15	9.1	8.9	5.1	15.0	15	7.6	7.2	1.4	14.3
DRY PIGEON PEA	29	15.0	13.0	3.8	35.2	11	15.1	12.5	7.8	43.4
FRESH COWPEA	17	10.4	4.8	1.6	45.2	1	2.0	2.0	2.0	2.0
FRESH PIGEON PEA	71	10.3	5.5	.3	34.7	5	3.7	3.2	2.7	4.9
DRY PEANUT	24	7.6	5.1	1.0	26.7	1	2.1	2.1	2.1	2.1
DRY FISH	207	8.3	6.6	.1	34.2	125	7.9	7.2	.9	24.5
FRESH FISH	143	3.7	3.2	.2	13.9	92	3.5	3.0	.6	9.7
FRESH PRAWN	46	.5	.4	.1	1.2	34	.5	.4	.1	1.8
DRY PRAWN	48	1.8	1.4	.3	6.7	15	2.1	1.8	1.0	3.1
OTHER SEAFOOD	11	.6	.4	.2	2.4	2	1.3	1.3	.2	2.3
CHICKEN	18	7.4	6.1	3.9	17.6	11	7.8	6.5	4.4	18.9
RAT	35	4.6	3.8	1.2	16.7	4	5.4	5.0	3.8	7.8
CANE RAT	17	13.8	12.6	2.4	25.9	2	10.0	10.0	5.7	14.4
PUMPKIN	20	9.0	4.3	.6	27.8	4	1.9	1.4	.9	3.9
PAPAYA	250	12.0	11.4	.6	32.9	58	12.3	11.9	1.3	36.8
COCONUT/COCONUT MILK	290	9.9	8.9	1.4	29.6	148	12.3	10.5	.1	55.9
SUGAR	10	4.5	1.2	.2	25.1	11	1.6	.9	.1	4.8
SUGAR CANE	80	5.3	4.3	.6	19.4	11	4.0	3.1	.8	9.4
BISCUIT	7	2.0	1.1	.4	5.6	5	2.2	2.2	.7	3.3
OIL	85	3.5	2.9	.4	14.0	33	3.8	3.3	.3	14.9

SAMPLE SIZE: 741 TOTAL HOUSEHOLDS: 498 IN INTERVENTION AREAS; 243 IN CONTROL AREAS. DATA COLLECTED IN POST-HARVEST SE (AUG-OCT) 2005.

TABLE 5.5

**PERCENTAGE CONTRIBUTION OF EACH INGREDIENT TO VITAMIN A CONTENT OF HOUSEHOLD DIET
WHEN INGREDIENT IS CONSUMED BY AREA**

	AREA OF STUDY									
	INTERVENTION					CONTROL				
	Count	Mean	Median	Minimum	Maximum	Count	Mean	Median	Minimum	Maximum
YELLOW-FLESH SWEET POTATO	6	39.1	31.5	3.4	94.9	6	79.4	80.1	67.3	90.9
ORANGE-FLESH SWEET POTATO	172	89.1	93.2	32.5	100.0	7	94.5	96.4	87.4	98.2
FRESH COWPEA	17	23.1	7.8	.6	87.4	1	14.9	14.9	14.9	14.9
FRESH FISH	143	19.2	7.9	.1	100.0	92	36.5	35.0	.3	100.0
FRESH PRAWN	46	1.9	1.1	.0	12.7	34	3.9	2.0	.1	33.7
CRAB	4	3.8	3.8	.1	7.7	
OTHER SEAFOOD	11	17.6	17.6	.9	64.3	2	8.7	8.7	1.5	15.9
CHICKEN	18	14.9	4.3	.4	61.6	11	26.1	21.0	5.7	64.4
RAT	35	10.2	1.5	.1	100.0	4	22.9	27.1	4.3	33.2
EGGS	13	10.4	4.3	.3	65.9	1	3.2	3.2	3.2	3.2
KALE	4	18.7	18.9	7.5	29.6	2	54.2	54.2	18.9	89.4
PUMPKIN LEAVES	51	10.9	4.2	.2	99.4	12	28.4	22.1	.9	78.0
CASSAVA LEAVES	45	24.5	7.7	.5	100.0	17	42.7	43.0	1.3	91.9
BEAN LEAVES	5	2.8	.3	.1	11.7	6	31.3	20.9	7.6	100.0
SWEET POTATO LEAVES	10	29.8	35.0	.3	50.6	8	29.3	19.2	2.1	61.4
PUMPKIN	20	59.6	58.2	9.6	99.0	4	70.4	83.5	21.2	93.5
TOMATO	435	22.3	5.6	.0	100.0	214	48.9	46.8	.4	100.0
PAPAYA	250	57.1	75.2	.0	99.8	58	80.4	88.9	.0	99.7
MANGO	2	80.8	80.8	61.5	100.0	

SAMPLE SIZE: 741 HOUSEHOLDS: 498 IN INTERVENTION AREAS; 243 IN CONTROL AREAS. DATA COLLECTED IN POST-HARVEST SEASON (AUG-OCT) 2005.

TABLE 5.6**TOTAL MEAN AND MEDIAN NUMBER OF DIFFERENT FOODS CONSUMED
BY THE HOUSEHOLD BY AREA DURING FINAL ROUND**

	Mean	Median	Minimum	Maximum	Mode	Percentile 25	Percentile 75
ALL STUDY HOUSEHOLDS	7	7	2	13	6	5	8
AREA OF STUDY INTERVENTION	7	7	2	13	7	6	8
CONTROL	6	6	2	12	5	5	7

SAMPLE SIZE: 741 HOUSEHOLDS: 498 IN INTERVENTION AREAS; 243 IN CONTROL AREAS. DATA COLLECTED IN POST-HARVEST SEASON (AUG-OCT) 2005. MEANS SIGNIFICANTLY DIFFERENT AT 0.000 LEVEL BASED ON T-TEST.

TABLE 5.7

REFERENCE CHILD CONSUMPTION OF KEY MACRO- AND MICRO-NUTRIENTS AND PHYTATE IN FINAL ROUND: MEAN, MEDIANS AND PERCENTILES BY AREA

	AREA OF STUDY									
	INTERVENTION					CONTROL				
	Mean	Std Deviation	Median	Percentile 25	Percentile 75	Mean	Std Deviation	Median	Percentile 25	Percentile 75
ENERGY (KCAL)	1455	566.18	1399.3	1020.18	1846.79	1268.48	459.08	1224.91	911.06	1591.65
PROTEIN (GMS)	38.71	25.28	33.56	20.87	48.99	34.52	20.73	29.67	20.00	48.09
LIPIDS (GMS)	21.58	18.86	17.30	7.57	29.06	19.26	17.54	14.88	5.38	26.87
VITAMIN A (MCG RAE)	1074	1412.93	468.03	65.00	1900.98	180.50	399.52	56.09	23.40	140.31
RETINOL (MCG)	11.65	19.80	.79	.00	17.49	10.23	16.56	.43	.00	16.97
BETA-CAROTENE (MCG)	10909	16572.3	2224.1	143.58	22264.0	1247.85	4472.42	77.19	.05	664.13
VITAMIN C (MG)	260.22	281.94	117.00	51.93	426.49	122.51	192.03	44.39	23.92	110.85
VITAMIN E (MCG)	4.28	3.78	3.19	1.13	6.46	2.11	2.56	1.02	.19	3.24
VITAMIN K (MCG)	20.75	22.46	12.97	4.98	29.80	9.17	13.83	3.84	.24	11.09
IRON (MG)	10.30	5.15	9.72	6.07	13.44	9.36	4.90	8.41	5.69	12.21
ZINC (MG)	5.26	2.88	4.67	3.14	6.70	4.77	2.41	4.13	2.95	6.35
PHYTATE (MG)	1004	760.42	824.82	421.60	1323.58	965.68	725.40	765.10	454.57	1332.29
CALCIUM (MG)	596.96	621.10	373.79	212.58	716.68	531.26	507.37	354.28	171.58	735.72
SELENIUM (MCG)	38.26	31.60	33.04	11.67	54.45	38.30	32.19	34.63	9.74	54.68
PHOSPHORUS (MG)	865.12	559.55	703.37	498.12	1077.45	805.91	460.05	678.85	494.72	1061.33
MAGNESIUM (MG)	213.78	125.93	197.10	118.55	283.31	174.46	107.25	154.60	91.83	225.68
FOLATE (MCG DIETARY FOLATE EQ)	421.49	312.68	388.42	134.03	638.62	363.59	330.18	320.83	60.59	514.98
THIAMIN (B1) (MG)	.86	.52	.81	.43	1.21	.74	.54	.65	.28	1.02
RIBOFLAVIN (B2) (MG)	.46	.27	.40	.25	.61	.31	.20	.27	.17	.41
NIACIN (MG)	11.75	6.33	10.38	6.93	15.49	10.35	5.71	9.20	6.07	13.61
VITAMIN B6 (MG)	.92	.54	.84	.53	1.22	.71	.40	.67	.39	.92
VITAMIN B12 (MCG)	2.65	4.38	.48	.06	3.89	2.64	3.67	.73	.09	4.18

SAMPLE SIZE: 741 REFERENCE CHILDREN: 498 IN INTERVENTION AREAS, 243 IN CONTROL AREAS. DATA COLLECTED IN POST-HARVEST SEASON (AUG-OCT) 2005.

TABLE 5.8

COMPARISON OF MEDIAN NUTRIENT INTAKE VALUES FOR KEY MACRO- AND MICRONUTRIENTS AND MEDIAN INTAKE VALUES BY AREA AND REFERENCE INFORMATION ON RECOMMENDED DAILY ALLOWANCES (RDAs) AND NUTRIENT CONTENT OF ORANGE-FLESHED SWEETPOTATO (OFSP)

	RDAs FOR 1-3 YR OLD	NUTRIENT CONTENT OF 100 GMS OFSP	AREA		TEST FOR SIGNIFICANT DIFFERENCE IN DISTRIBUTION (P-VALUES)	INTERVENTION/CONTROL VALUE	PERCENT DIFFERENCE BETWEEN INTERVENTION & CONTROL AREAS
			INTERVENTION	CONTROL			
			MEDIAN	MEDIAN			
ENERGY (KCAL)	1107-1397	76.0	1,399.31	1,224.91	0.000	1.1	14.2
PROTEIN (GMS)	13	1.6	33.56	29.67	0.063	1.1	13.1
LIPIDS (GMS)		0.05	17.30	14.88	0.119	1.2	16.2
VITAMIN A (MCG RAE)	300	727	468.03	56.09	0.000	8.3	734.5
RETINOL (MCG)		0	0.79	0.43	0.637	1.8	83.5
BETA-CAROTENE (MCG)		8727	2,224.06	77.189	0.000	28.8	2781.3
VITAMIN C (MG)	15	22.7	117.00	44.39	0.000	2.6	163.6
VITAMIN E (MCG)	6	0.26	3.19	1.02	0.000	3.1	213.4
VITAMIN K (MCG)	30	1.8	12.97	3.84	0.000	3.4	238.1
IRON (MG)	7	0.61	9.72	8.41	0.020	1.2	15.7
ZINC (MG)	3	0.30	4.67	4.13	0.065	1.1	13.2
PHYTATE (MG)			824.82	765.10	0.686	1.1	7.8
CALCIUM (MG)	500	30.0	373.79	354.28	0.120	1.1	5.5
SELENIUM (MCG)	20	0.60	33.04	34.63	0.789	1.0	-4.6
PHOSPHORUS (MG)	460	47.0	703.37	678.85	0.439	1.0	3.6
MAGNESIUM (MG)	80	25.0	197.10	154.60	0.000	1.3	27.5
FOLATE (MCG DIETARY FOLATE EQ)	150	14.0	388.42	320.83	0.001	1.2	21.1
THIAMIN (B1) (MG)	0.5	0.08	0.81	0.65	0.001	1.2	24.3
RIBOFLAVIN (B2) (MG)	0.5	0.06	0.40	0.27	0.000	1.5	48.0
NIACIN (MG)	6	0.56	10.38	9.20	0.004	1.1	12.9
VITAMIN B6 (MG)	0.5	0.21	0.84	0.67	0.000	1.3	25.3
VITAMIN B12 (MCG)	0.9	0	0.48	0.73	0.172	0.7	-34.6

Note: Mann-Whitney U non-parametric tests indicate that the distributions of nutrient intakes are significantly different between intervention and control areas when p-values<0.05, as highlighted by bold type. Vitamin A content of beta-carotene rich sweetpotato based on orange-fleshed root of medium intensity.

TABLE 5.9

PARTICIPATION IN THREE MAIN MEALS OF DAY IN THE FINAL ROUND BY AREA

		ALL STUDY HOUSEHOLDS		AREA OF STUDY			
				INTERVENTION		CONTROL	
		Count	Col %	Count	Col %	Count	Col %
ATE BREAKFAST OR LATER IN THE MORNING?	YES	3326	75.7%	2358	79.5%	968	67.7%
ATE LUNCH OR LATER IN THE AFTERNOON?	YES	3934	89.5%	2648	89.3%	1286	90.0%
ATE DINNER OR LATER IN THE EVENING?	YES	3770	85.8%	2557	86.2%	1213	84.9%
MEMBER ATE AT ALL THREE MAJOR TIMES OF DAY	YES	3109	70.6%	2228	74.9%	881	61.6%

SAMPLE SIZE: 4888 MEMBERS OF 741 TOTAL HOUSEHOLDS: 498 HOUSEHOLDS IN INTERVENTION AREAS; 243 HOUSEHOLDS IN CONTROL AREAS. PARTICIPATION IN ALL MEALS SIGNIFICANTLY HIGHER IN INTERVENTION THAN CONTROL AREAS AT 0.1 LEVEL DUE TO HIGHER PARTICIPATION IN MORNING MEALS.

FIGURE 5.1

PERCENTAGE OF HOUSEHOLD MEMBERS CONSUMING ALL THREE MAIN MEALS BY AGE GROUP AND AREA

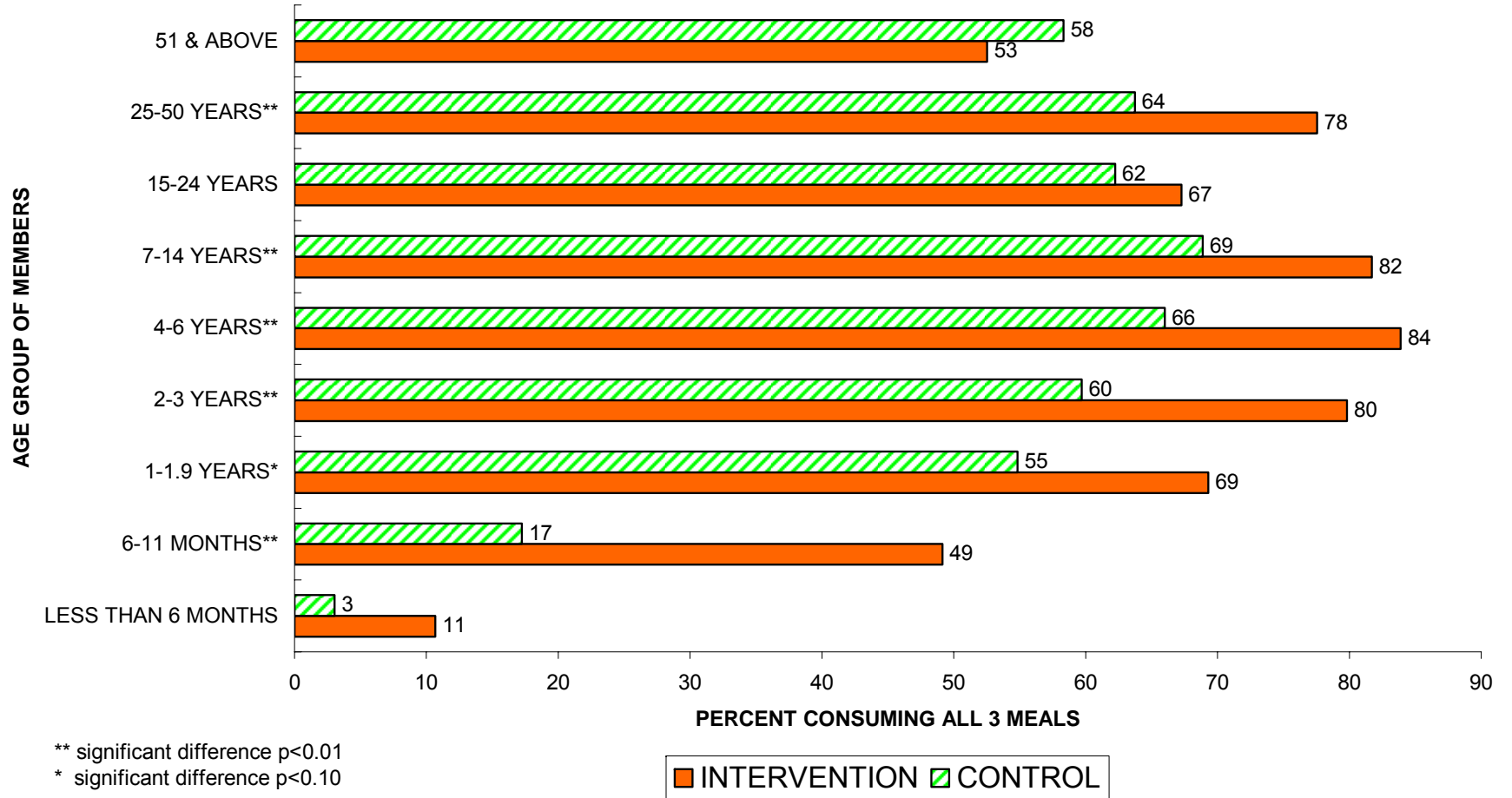


TABLE 5.10

ASSESSMENT OF DIVERSITY OF FOOD GROUP CONSUMPTION USING 10 GRAM CUT-OFF POINT AMONG REFERENCE CHILDREN IN FINAL ROUND BY AREA

		ALL HOUSEHOLDS		STUDY AREA			
				INTERVENTION		CONTROL	
		Count	Col %	Count	Col %	Count	Col %
10 GMS OR MORE OF FLESH FOODS CONSUMED	YES	550	74.2%	365	73.3%	185	76.1%
10 GMS OR MORE OF EGGS CONSUMED	YES	11	1.5%	10	2.0%	1	.4%
10 GMS OR MORE OF DAIRY PRODUCTS CONSUMED	NO	741	100.0%	498	100.0%	243	100.0%
10 GMS OR MORE OF GRAIN PRODUCTS & NON-VITAMIN A-RICH ROOTS & TUBERS	YES	740	99.9%	497	99.8%	243	100.0%
10 GMS OR MORE OF VITAMIN A-RICH ROOTS & TUBERS CONSUMED	YES	188	25.4%	175	35.1%	13	5.3%
10 GMS OR MORE OF LEGUMES & NUTS CONSUMED	YES	211	28.5%	163	32.7%	48	19.8%
10 GMS OR MORE OF VITAMIN A-RICH FRUITS & VEGETABLES & JUICES	YES	355	47.9%	279	56.0%	76	31.3%
10 GMS OR MORE OF OTHER FRUITS & VEGETABLES CONSUMED	YES	658	88.8%	444	89.2%	214	88.1%
5 GMS OR MORE OF OILS & FATS CONSUMED	YES	445	60.1%	297	59.6%	148	60.9%
SUM OF FOOD GROUPS WHERE 10 GMS OF EACH GROUP WAS CONSUMED BY CHILD	1	5	.7%	2	.4%	3	1.2%
	2	52	7.0%	28	5.6%	24	9.9%
	3	240	32.4%	118	23.7%	122	50.2%
	4	264	35.6%	193	38.8%	71	29.2%
	5	139	18.8%	119	23.9%	20	8.2%
	6	37	5.0%	34	6.8%	3	1.2%
	7	4	.5%	4	.8%		

SAMPLE SIZE: 741 REFERENCE CHILDREN: 498 INTERVENTION, 243 CONTROL. DATA COLLECTED IN POST-HARVEST SEASON (AUG-OCT 2004). NOTE: CUT-OFF POINT WAS 5 GMS FOR OILS AND FATS.

TABLE 5.11

FOOD FREQUENCY RESULTS FOR REFERENCE CHILD CONSUMPTION OF ORANGE-FLESHED SWEETPOTATO DURING THE PREVIOUS WEEK BY ROUND AND INTERVENTION AREA

	STUDY AREA						COMPARE MEDIANS: p-value ^a	COMPARE PERCENTS: p-value ^b
	INTERVENTION (n = 498)			CONTROL (n = 243)				
	Mean number of days	Median number of days	Percent having 3+ days	Mean number of days	Median number of days	Percent having 3+ days		
BASELINE (rains/planting/group plots)	0.10	0	1.2	0.02	0	0.4	0.002	0.437 ^d
ROUND 1 (late rains/early OFSP harvest)	0.09	0	1.4	0.01	0	0.0	0.014	0.103 ^d
ROUND 2 (early rains/secondary OFSP harvest)	1.09	0	16.8	0.20	0	2.1	0.000	0.000
MID-TERM SURVEY (rains/planting) ^c	0.51	0	7.5	---	---	---	---	---
ROUND 3 (late rains/early OFSP harvest) ^c	0.98	0	15.2	---	---	---	---	---
HH CONSUMPTION: ROUND 2 (main OFSP harvest)	3.03	3	54.4	0.35	0	3.7	0.000	0.000
ROUND 4 (early rains/secondary OFSP harvest)	3.08	3	55.2	0.53	0	8.2	0.000	0.000

a Mann Whitney U test

b chi-square

c no measure in control community.

d Fisher's exact (small expected values in 2 cells)

TABLE 5.12

PERCENT CONTRIBUTION OF SOURCES OF VITAMIN A TO TOTAL VITAMIN A INTAKE WHEN THE INGREDIENT IS CONSUMED BY THE CHILD BY AREA

	AREA OF											
	INTERVENTIO						CONTRO					
	Coun	Mea	St Deviatio	Media	Minimu	Maximu	Coun	Mea	St Deviatio	Media	Minimu	Maximu
Yellow fleshed sweetpotato	6	48.	42.	42.	9.	96.	6	82.	15.	85.	60.	98.
Orange fleshed sweetpotato	17	90.	11.	96.	38.	100.	7	93.	6.	93.	79.	99.
Fresh cowpea	1	16.	27.	4.	.	79.	1	13.	.	13.	13.	13.
Fresh fish	14	18.	23.	7.	.	100.	8	36.	28.	31.	.	100.
Chicken	1	15.	19.	4.	.	65.	9	26.	19.	26.	5.	71.
Rat	3	12.	22.	1.	.	100.	4	18.	16.	15.	2.	39.
Eggs	1	12.	19.	4.	.	67.	1	5.	.	5.	5.	5.
Pumpkin leaves	4	12.	18.	4.	.	99.	1	25.	21.	20.	1.	68.
Cassava leaves	4	27.	31.	12.	.	100.	1	43.	24.	40.	3.	91.
Sweetpotato leaves	9	31.	18.	36.	.	52.	8	29.	25.	20.	2.	75.
Pumpkin	2	58.	33.	57.	10.	99.	4	71.	33.	86.	22.	92.
Tomato	43	22.	30.	5.	.	100.	20	49.	36.	47.	.	100.
Papaya	24	56.	35.	72.	.	99.	5	82.	17.	87.	19.	99.
Mango	2	76.	33.	76.	53.	100.						

SAMPLE SIZE: 741 REFERENCE CHILDREN: 498 IN INTERVENTION AREAS; 243 IN CONTROL AREAS. DATA COLLECTED IN POST-HARVEST SEASON (AUG-

TABLE 5.13

CONTRIBUTION OF BETA-CAROTENE-RICH SWEETPOTATO TO THE DIET OF THE YOUNG CHILD: PERCENT OF TOTAL NUTRIENT INTAKE

	AREA OF STUDY									
	INTERVENTION					CONTROL				
	Count	Mean	Std Deviation	Minimum	Maximum	Count	Mean	Std Deviation	Minimum	Maximum
% OF TOTAL ENERGY (KCAL) OF CHILD	498	6.03	10.50	.00	90.31	243	.51	3.18	.00	28.31
% OF TOTAL VITAMIN A (MG RAE) OF CHILD	498	31.10	43.38	.00	100.00	243	2.69	15.66	.00	99.27
% OF TOTAL VITAMIN E (MCG) OF CHILD	498	21.09	33.98	.00	100.00	243	2.25	13.73	.00	100.00
% OF TOTAL VITAMIN B6 (MG) OF CHILD	498	16.79	25.67	.00	99.30	243	1.78	11.02	.00	86.16
% OF TOTAL VITAMIN K (MCG) OF CHILD	498	17.24	31.65	.00	100.00	243	2.33	14.39	.00	100.00
% OF TOTAL VITAMIN C (MG) OF CHILD	498	11.46	22.69	.00	99.23	243	1.04	7.54	.00	76.52
% OF TOTAL RIBOFLAVIN (B2) (MG) OF CHILD	498	11.65	19.62	.00	100.00	243	1.35	8.66	.00	74.72
% OF TOTAL THIAMIN (B1) (MG) OF CHILD	498	9.28	17.28	.00	98.38	243	1.17	8.21	.00	74.14
% OF TOTAL NIACIN (MG) OF CHILD	498	6.23	11.69	.00	95.23	243	.57	3.73	.00	39.68
% OF TOTAL PHYTATE (MG) OF CHILD	498	2.14	5.70	.00	74.41	243	.16	1.10	.00	12.11

SAMPLE SIZE: 741 HOUSEHOLDS: 498 INTERVENTION AND 243 CONTROL REFERENCE CHILDREN IN 24 HOUR RECALL SURVEY (AUG-OUT 2004)

TABLE 5.14

SUMMARY OF KEY CHARACTERISTICS OF REFERENCE CHILD NUTRIENT INTAKE IN FINAL ROUND

	INTERVENTION (N=498)	CONTROL (N=243)	P-VALUE
MEAN ± SD OFSP INTAKE** (days/week)	2.8 ± 2.7	n.a.	
MEAN ± SD OFSP INTAKE* (gm/day)	104 ± 174	7.1 ± 46	0.000
VITAMIN A INTAKE (ug RAE/day)*			
--MEAN ± SD	1074 ± 1413	180 ± 400	0.000
--MEDIAN	468	56	0.000
% MEAN VITAMIN A FROM OFSP*	31%	3%	0.000
ENERGY INTAKE: MEAN ± SD kcal/day*	1455 ± 566	1268 ± 459	0.000
FAT INTAKE: MEAN ± SD gm fat/day*	21.6 ± 18.9	19.3 ± 17.5	0.119

Note: SD = Standard deviation OFSP = Beta-carotene-rich Orange-fleshed Sweetpotato

* Intake levels based on 24 hour recall survey from August-October 2004 that does not include estimates of breast milk consumption for the 9.6% of reference children still breast feeding at that time. Mann-Whitney U non-parametric tests show significant differences between study areas when p-value <0.05.

**Recall information on frequency of intake per month from June-November 2004 collected during final survey round (November 2004-January 2006).

TABLE 5.15

INTERVENTION REFERENCE CHILD CONSUMPTION OF KEY MACRO- AND MICRO-NUTRIENTS AND PHYTATE IN FINAL ROUND: MEAN, MEDIANS AND PERCENTILES BY TYPE OF INTERVENTION GROUP

	TYPE OF INTERVENTION GROUP										P-VALUES
	GROUP SESSIONS ONLY					HOUSEHOLD VISITS & GROUP SESSIONS					
	Mean	Std Deviation	Median	Percentile 25	Percentile 75	Mean	Std Deviation	Median	Percentile 25	Percentile 75	
ENERGY (KCAL)	1,356.4	558.0	1,258.5	907.4	1,741.9	1,551.4	558.5	1,501.4	1,161.0	1,860.3	0.000
PROTEIN (GMS)	36.5	25.7	31.4	18.5	45.7	40.9	24.8	35.1	21.9	51.1	0.013
LIPIDS (GMS)	17.0	14.6	13.7	4.9	25.0	26.0	21.3	20.4	9.4	37.4	0.000
VITAMIN A (MCG RAE)	1,155.7	1,486.4	488.2	64.4	2,106.6	994.9	1,335.5	400.3	65.5	1,775.7	0.494
RETINOL (MCG)	11.9	21.3	0.0	0.0	17.1	11.4	18.2	1.7	0.0	17.6	0.216
BETA-CAROTENE (MCG)	11,931.9	17,387.2	2,246.5	211.2	22,366.4	9,910.0	15,706.5	1,745.8	121.8	16,262.2	0.475
VITAMIN C (MG)	266.4	283.2	119.7	50.1	532.4	254.2	281.1	111.7	53.7	412.0	0.833
VITAMIN E (MCG)	4.3	4.0	3.1	1.1	6.7	4.2	3.6	3.3	1.2	6.2	0.798
VITAMIN K (MCG)	19.9	22.5	11.8	4.6	30.5	21.6	22.4	15.6	5.3	29.4	0.166
IRON (MG)	9.3	4.9	8.6	5.2	12.3	11.3	5.2	10.6	7.5	14.4	0.000
ZINC (MG)	4.8	2.8	4.2	2.8	6.0	5.7	2.9	5.1	3.5	7.2	0.001
PHYTATE (MG)	872.2	663.9	692.0	351.5	1,155.8	1,132.6	825.3	937.4	524.2	1,501.0	0.000
CALCIUM (MG)	597.9	652.5	380.6	206.5	698.0	596.1	590.1	368.4	215.3	762.5	0.849
SELENIUM (MCG)	34.2	32.2	26.6	7.2	51.5	42.2	30.5	36.5	18.1	57.7	0.000
PHOSPHORUS (MG)	815.0	557.7	661.8	435.8	1,044.1	914.0	558.2	733.2	525.9	1,122.5	0.014
MAGNESIUM (MG)	193.5	119.0	168.5	109.6	256.2	233.6	129.6	217.1	137.5	295.4	0.000
FOLATE (MCG DIETARY FOLATE EQ)	388.7	296.4	361.5	98.3	596.0	453.5	325.2	417.4	153.8	671.5	0.023
THIAMIN (B1) (MG)	0.8	0.5	0.7	0.3	1.1	0.9	0.5	0.9	0.5	1.3	0.000
RIBOFLAVIN (B2) (MG)	0.4	0.3	0.4	0.2	0.6	0.5	0.3	0.4	0.3	0.6	0.021
NIACIN (MG)	11.0	6.3	9.8	6.2	14.3	12.5	6.3	11.8	7.9	16.2	0.003
VITAMIN B6 (MG)	0.8	0.5	0.7	0.5	1.2	1.0	0.5	0.9	0.6	1.3	0.001
VITAMIN B12 (MCG)	2.5	4.5	0.5	0.0	3.6	2.7	4.3	0.5	0.1	4.4	0.646

SAMPLE SIZE: 498 INTERVENTION REFERENCE CHILDREN: 246 IN IN GROUP SESSIONS ONLY, 252 ALSO RECEIVING HOME VISITS. DATA COLLECTED IN POST-HARVEST SEASON (AUG-OCT) 2005. MANN WHITNEY U TEST INDICATES SIGNIFICANT DIFFERENCES WHEN P-VALUES (<0.05).

FIGURE 6.1

DISTRIBUTION OF SERUM RETINOL ($\mu\text{mol/L}$) IN ALL CHILDREN
COMPLETING ROUND 4

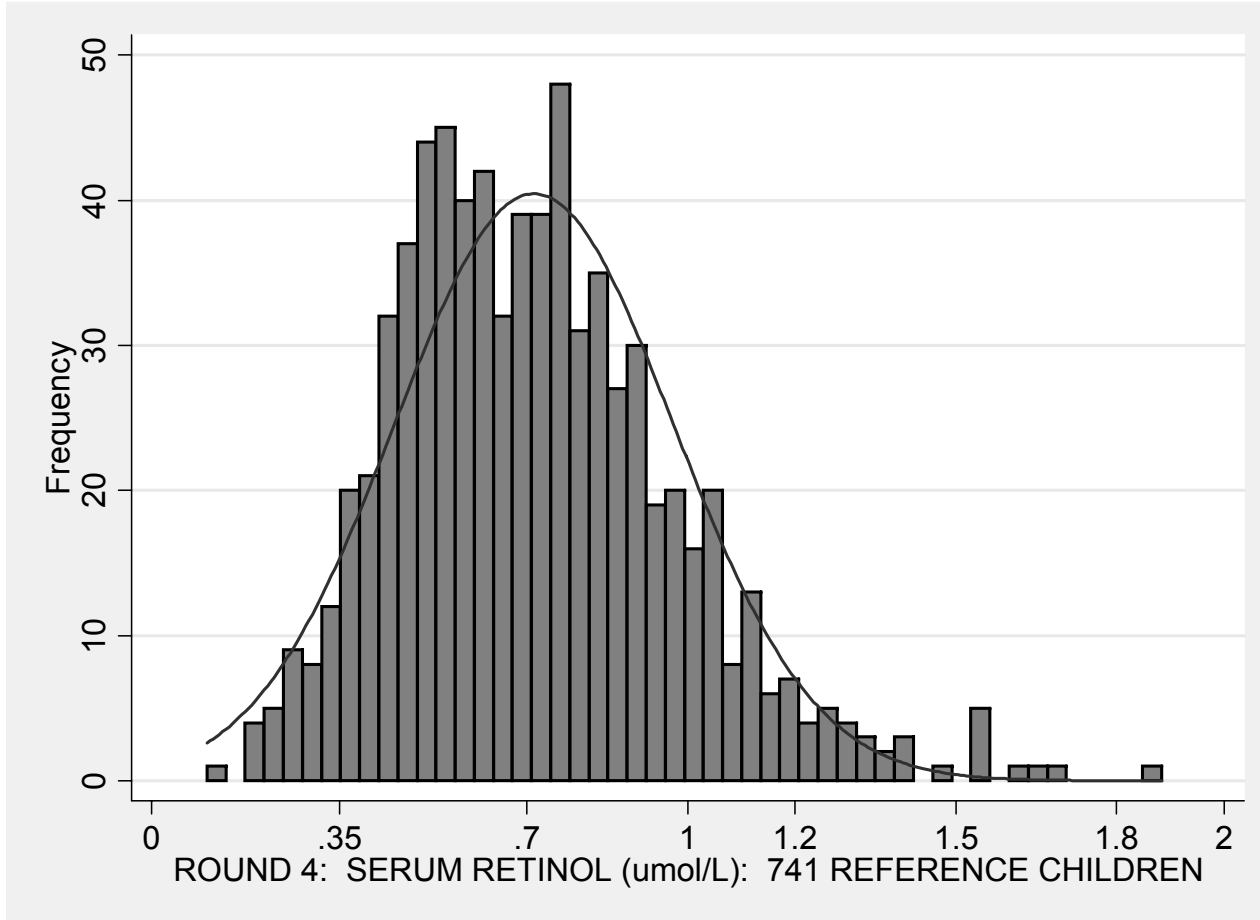


TABLE 6.1

SAMPLE CHARACTERISTICS AND SERUM RETINOL AND HEMOGLOBIN FOR REFERENCE CHILD AT BASELINE & AT ROUND 4 BY AREA

		Count	Mean	Std Deviation	Median	Minimum	Maximum	Percentile 25	Percentile 75	
ALL CASES	AGE OF REFERENCE CHILD IN MONTHS: BASELINE	733	17	8	16	4	38	11	24	
	AGE IN MONTHS OF REFERENCE CHILD (ROUND 4)	733	35	8	34	21	55	28	41	
	PROPORTION OF SAMPLE THAT IS MALE	733	.45	.50	.00	.00	1.00	.00	1.00	
	BASELINE: PROPORTION OF SAMPLE BREASTFEEDING	733	.62	.49	1.00	.00	1.00	.00	1.00	
	ROUND 4: PROPORTION OF SAMPLE BREASTFEEDING	733	.06	.23	.00	.00	1.00	.00	.00	
	ROUND 1: SERUM RETINOL (umol/L)	733	.605	.229	.583	.090	1.933	.434	.732	
	ROUND 4: SERUM RETINOL (umol/L)	733	.714	.261	.690	.103	1.885	.523	.869	
	ROUND 1: HEMOGLOBIN (g/L): REFERENCE CHILD	733	8.3	1.7	8.2	3.7	13.3	7.0	9.5	
	ROUND 4: HEMOGLOBIN (g/L): REFERENCE CHILD	733	9.7	1.6	9.8	4.8	17.6	8.7	10.8	
AREA	INTERVENTION	AGE OF REFERENCE CHILD IN MONTHS: BASELINE	490	18	8	17	4	38	11	24
		AGE IN MONTHS OF REFERENCE CHILD (ROUND 4)	490	35	8	34	21	55	28	42
		PROPORTION OF SAMPLE THAT IS MALE	490	.44	.50	.00	.00	1.00	.00	1.00
		BASELINE: PROPORTION OF SAMPLE BREASTFEEDING	490	.61	.49	1.00	.00	1.00	.00	1.00
		ROUND 4: PROPORTION OF SAMPLE BREASTFEEDING	490	.07	.25	.00	.00	1.00	.00	.00
		ROUND 1: SERUM RETINOL (umol/L)	490	.611	.223	.595	.090	1.521	.446	.748
		ROUND 4: SERUM RETINOL (umol/L)	490	.735	.267	.711	.180	1.885	.535	.893
		ROUND 1: HEMOGLOBIN (g/L): REFERENCE CHILD	490	8.4	1.7	8.4	3.7	13.3	7.1	9.6
	ROUND 4: HEMOGLOBIN (g/L): REFERENCE CHILD	490	9.8	1.6	9.8	5.5	17.6	8.8	10.8	
	CONTROL	AGE OF REFERENCE CHILD IN MONTHS: BASELINE	243	17	8	16	4	33	11	23
		AGE IN MONTHS OF REFERENCE CHILD (ROUND 4)	243	34	7	33	22	50	29	41
		PROPORTION OF SAMPLE THAT IS MALE	243	.48	.50	.00	.00	1.00	.00	1.00
		BASELINE: PROPORTION OF SAMPLE BREASTFEEDING	243	.65	.48	1.00	.00	1.00	.00	1.00
		ROUND 4: PROPORTION OF SAMPLE BREASTFEEDING	243	.04	.19	.00	.00	1.00	.00	.00
		ROUND 1: SERUM RETINOL (umol/L)	243	.593	.240	.552	.115	1.933	.423	.710
		ROUND 4: SERUM RETINOL (umol/L)	243	.671	.245	.640	.103	1.649	.506	.778
ROUND 1: HEMOGLOBIN (g/L): REFERENCE CHILD		243	8.0	1.7	7.9	4.0	13.1	6.9	9.0	
ROUND 4: HEMOGLOBIN (g/L): REFERENCE CHILD	243	9.6	1.5	9.7	4.8	13.6	8.7	10.7		

SAMPLE SIZE: 733 CHILDREN, EXCLUDING 8 INTERVENTION CHILDREN WHO RECEIVED CAPSULES BETWEEN ROUND 2 AND ROUND 4: 490 INTERVENTION, 243 CONTROL.

FIGURE 6.2

CUMULATIVE DENSITY FUNCTIONS FOR SERUM RETINOL IN REFERENCE CHILDREN
AT BASELINE AND AT ROUND 4 (SAMPLE 1)

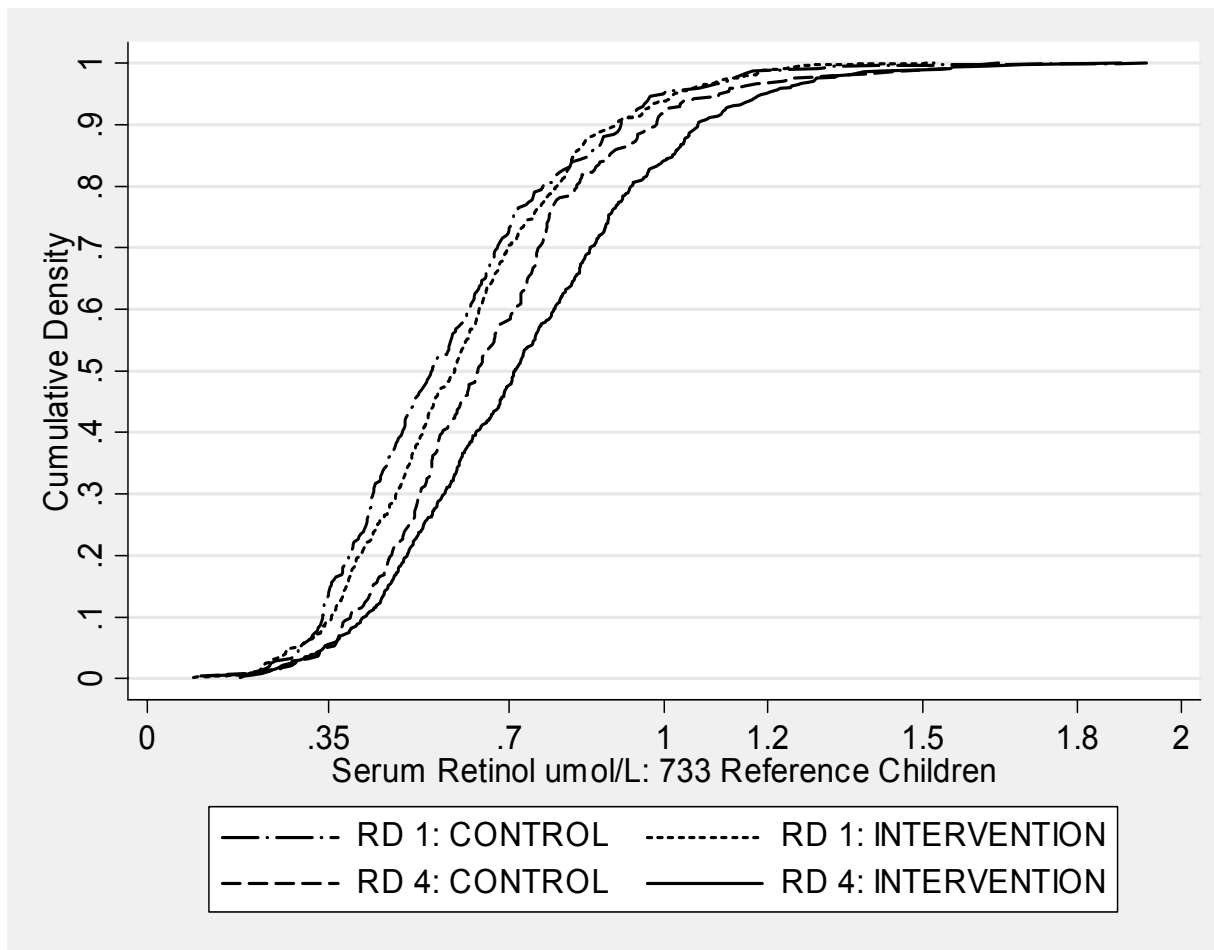


TABLE 6.2

SAMPLE CHARACTERISTICS, SERUM RETINOL, HEMOGLOBIN, AND ACUTE ILLNESS STATUS FOR REFERENCE CHILDREN AT BASELINE BY ARE

		ALL CASES		AREA			
				INTERVENTION		CONTROL	
		Count	Col %	Count	Col %	Count	Col %
AGE (IN MONTHS) BY CATEGORY OF REFERENCE CHILD: ROUND 1	LESS THAN 6 MONTHS	44	6.0%	30	6.1%	14	5.8%
	6-11.9 MONTHS	172	23.5%	117	23.9%	55	22.6%
	12-17.9 MONTHS	183	25.0%	119	24.3%	64	26.3%
	18-23.4 MONTHS	157	21.4%	99	20.2%	58	23.9%
	24-38 MONTHS	177	24.1%	125	25.5%	52	21.4%
SEX	FEMALE	400	54.6%	273	55.7%	127	52.3%
	MALE	333	45.4%	217	44.3%	116	47.7%
STILL BREASTFEEDING	YES	455	62.2%	299	61.0%	156	64.7%
ROUND 1: LOW HEMOGLOBIN STATUS	AT LEAST 7.0 g/L	563	76.8%	383	78.2%	180	74.1%
	BELOW 7.0 g/L	170	23.2%	107	21.8%	63	25.9%
PLASMA RETINOL < 0.70 umol/L: BASELINE	NOT DEFICIENT: AT LEAST 0.70 umol/L	211	28.8%	145	29.6%	66	27.2%
	DEFICIENT: BELOW 0.70 umol/L	522	71.2%	345	70.4%	177	72.8%
SERUM RETINOL <0.35 umol/L: BASELINE	NOT SEVERELY DEFICIENT: AT LEAST 0.35 umol/L	655	89.4%	444	90.6%	211	86.8%
	SEVERELY DEFICIENT: <0.35 umol/L	78	10.6%	46	9.4%	32	13.2%
INFECTION EXISTS:	CRP ≤5 mg/L: ROUND 1	264	36.0%	200	40.8%	64	26.3%
	CRP>5 mg/L: BASELINE	469	64.0%	290	59.2%	179	73.7%

SAMPLE SIZE: 733 CHILDREN, EXCLUDING 8 INTERVENTION CHILDREN WHO RECEIVED VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4: 490 INTERVENTION 243 CONTROL

TABLE 6.3

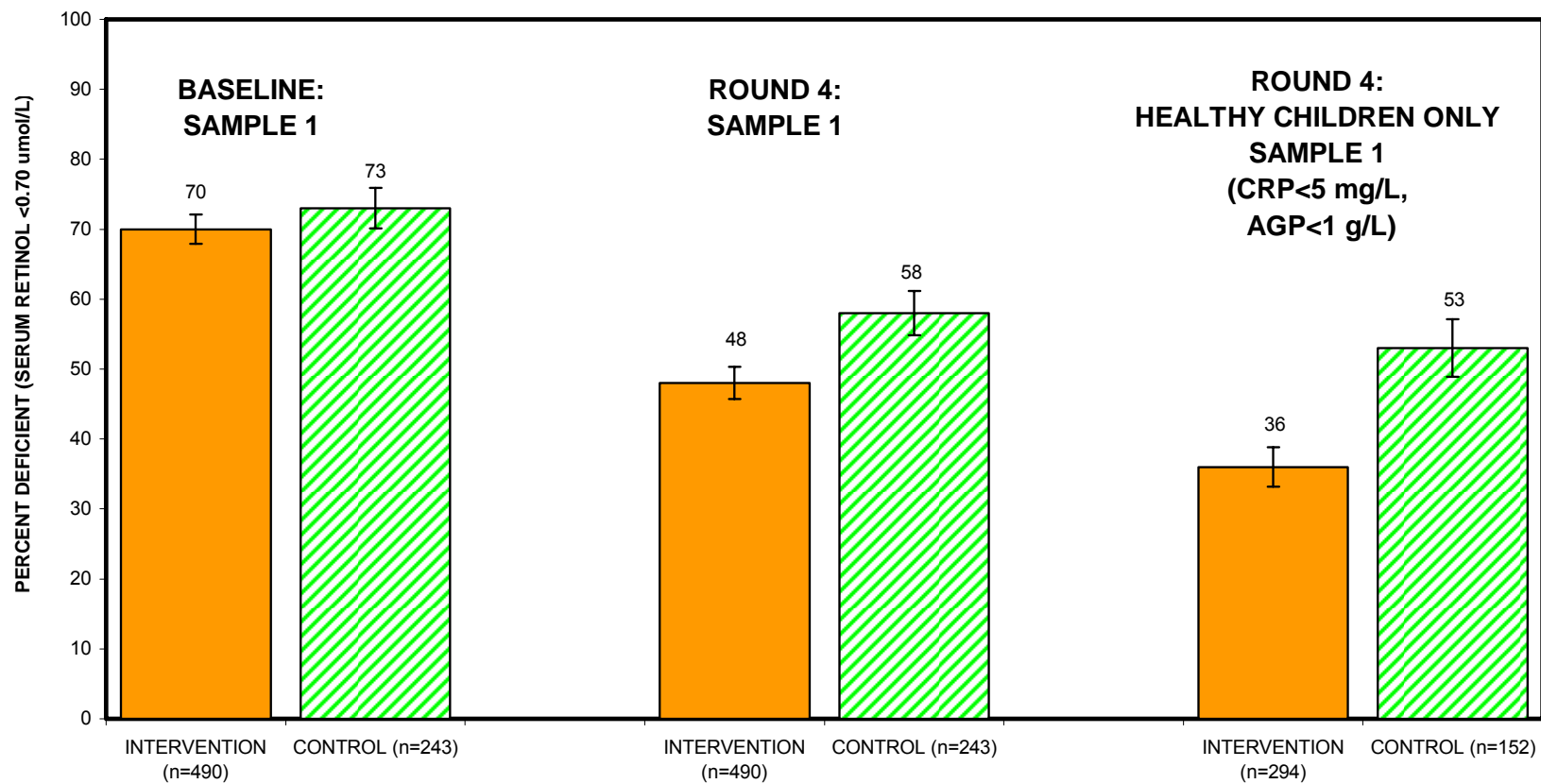
SAMPLE CHARACTERISTICS, SERUM RETINOL, HEMOGLOBIN, AND ILLNESS STATUS FOR REFERENCE CHILDREN AT ROUND 4 BY AREA

		ALL CASES		AREA			
		Count	Col %	INTERVENTION		CONTROL	
				Count	Col %	Count	Col %
ROUND 4: AGE IN MONTHS BY CATEGORY: REFERENCE CHILD	21-23 MONTHS	63	8.6%	44	9.0%	19	7.8%
	24-35 MONTHS	353	48.2%	230	46.9%	123	50.6%
	36-55 MONTHS	317	43.2%	216	44.1%	101	41.6%
SEX	FEMALE	400	54.6%	273	55.7%	127	52.3%
	MALE	333	45.4%	217	44.3%	116	47.7%
ROUND 4: STILL BREASTFEEDING	YES	42	5.7%	33	6.7%	9	3.7%
ROUND 4: LOW HEMOGLOBIN STATUS	AT LEAST 7.0 g/L	711	97.0%	475	96.9%	236	97.1%
	BELOW 7.0 g/L	22	3.0%	15	3.1%	7	2.9%
PLASMA RETINOL < 0.70 umol/L: ROUND 4	NOT DEFICIENT: AT LEAST 0.70 umol/L	359	49.0%	257	52.4%	102	42.0%
	DEFICIENT: BELOW 0.70 umol/L	374	51.0%	233	47.6%	141	58.0%
PLASMA RETINOL LESS THAN .35 umol/L	NOT SEVERELY DEFICIENT: AT LEAST 0.35 umol/L	695	94.8%	464	94.7%	231	95.1%
	SEVERELY DEFICIENT: BELOW 0.35 umol/L	38	5.2%	26	5.3%	12	4.9%
INFECTION EXISTS (CRP>5): ROUND 4	CRP ABOVE 5 mg/L	260	35.5%	180	36.7%	80	32.9%
ELEVATED AGP EXISTS (AGP>1.0): ROUND 4	AGP ABOVE 1.0 g/L	92	12.6%	65	13.3%	27	11.1%
NO ELEVATED CRP OR AGP: ROUND 4	APPARENTLY HEALTHLY: ROUND 4	446	60.8%	294	60.0%	152	62.6%

SAMPLE SIZE: 733 CHILDREN, EXCLUDING 8 INTERVENTION CHILDREN WHO RECEIVED VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4: 490 INTERVENTION
243 CONTROL

FIGURE 6.3

PERCENTAGE OF SAMPLE 1 CHILDREN DEFICIENT IN SERUM RETINOL AT
BASELINE AND FOR ROUND 4



NOTE: SAMPLE 1 CONSISTS OF ALL CHILDREN EXCLUDING 8 INTERVENTION CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4. HEALTHY CHILDREN SAMPLE (n=446) EXCLUDES ILL CHILDREN & 8 INTERVENTION CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4.

TABLE 6.4

**SAMPLE DESCRIPTION AND SERUM RETINOL STATUS IN APPARENTLY HEALTHY CHILDREN IN ROUND 4:
PERCENTAGE IN EACH CATEGORY BY AREA**

		ALL CASES		AREA			
				INTERVENTION		CONTROL	
		Count	Col %	Count	Col %	Count	Col %
AGE CATEGORY IN MONTHS OF REFERENCE CHILD	21-23 MONTHS	33	7.4%	21	7.1%	12	7.9%
	24-35 MONTHS	210	47.1%	136	46.3%	74	48.7%
	36-55 MONTHS	203	45.5%	137	46.6%	66	43.4%
SEX OF CHILD	FEMALE	257	57.6%	174	59.2%	83	54.6%
	MALE	189	42.4%	120	40.8%	69	45.4%
STILL BREASTFEEDING IN ROUND 4	NO	427	95.7%	279	94.9%	148	97.4%
	YES	19	4.3%	15	5.1%	4	2.6%
PLASMA RETINOL LESS THAN .70 umol/L	NOT DEFICIENT: AT LEAST 0.70 umol/L	259	58.1%	187	63.6%	72	47.4%
	DEFICIENT: BELOW 0.70 umol/L	187	41.9%	107	36.4%	80	52.6%
PLASMA RETINOL LESS THAN .35 umol/L	NOT SEVERELY DEFICIENT: AT LEAST 0.35 umol/L	438	98.2%	292	99.3%	146	96.1%
	SEVERELY DEFICIENT: BELOW 0.35 umol/L	8	1.8%	2	.7%	6	3.9%

SAMPLE SIZE: 446 SAMPLE OF HEALTHY CHILDREN EXCLUDES 8 INTERVENTION CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4. 294 INTERVENTION CHILDREN; 152 CONTROL CHILDREN INCLUDE 24 RECEIVING CAPSULES BETWEEN ROUND 2 & ROUND 4.

TABLE 6.5

SAMPLE CHARACTERISTICS AND SERUM RETINOL STATUS FOR APPARENTLY HEALTHY CHILDREN AT ROUND 4 BY AREA: MEANS, MEDIANS, AND PERCENTILES

		Count	Mean	Std Deviation	Median	Minimum	Maximum	Percentile 25	Percentile 75	
ALL CASES	AGE IN MONTHS OF REFERENCE CHILD (ROUND 4)	446	35	8	35	21	53	29	42	
	PROPORTION OF SAMPLE THAT IS MALE	446	.42	.49	.00	.00	1.00	.00	1.00	
	ROUND 4: PROPORTION OF SAMPLE BREASTFEEDING	446	.04	.20	.00	.00	1.00	.00	.00	
	ROUND 4: SERUM RETINOL (umol/L)	446	.777	.267	.753	.217	1.885	.584	.927	
AREA	INTERVENTION	AGE IN MONTHS OF REFERENCE CHILD (ROUND 4)	294	36	8	35	21	53	29	43
		PROPORTION OF SAMPLE THAT IS MALE	294	.41	.49	.00	.00	1.00	.00	1.00
		ROUND 4: PROPORTION OF SAMPLE BREASTFEEDING	294	.05	.22	.00	.00	1.00	.00	.00
		ROUND 4: SERUM RETINOL (umol/L)	294	.811	.262	.802	.232	1.885	.609	.968
	CONTROL	AGE IN MONTHS OF REFERENCE CHILD (ROUND 4)	152	35	7	33	22	50	29	41
		PROPORTION OF SAMPLE THAT IS MALE	152	.45	.50	.00	.00	1.00	.00	1.00
		ROUND 4: PROPORTION OF SAMPLE BREASTFEEDING	152	.03	.16	.00	.00	1.00	.00	.00
		ROUND 4: SERUM RETINOL (umol/L)	152	.712	.266	.661	.217	1.649	.524	.841

SAMPLE SIZE: 446 APPARENTLY HEALTHY CHILDREN IN SAMPLE 1, WHICH EXCLUDES 8 INTERVENTION CHILDREN WHO RECEIVED VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUN 4: 294 INTERVENTION, 152 CONTROL.

TABLE 6.6

MEAN AND MEDIUM SERUM RETINOL VALUES IN ROUND 4 BY STAGE OF INFECTION AND BY AREA

	AREA							
	INTERVENTION				CONTROL			
	Count	Mean	Std Deviation	Median	Count	Mean	Std Deviation	Median
NOT SUFFERING FROM CHRONIC OR ACUTE ILLNESS: ROUND 4	294	.811	.262	.802	152	.712	.266	.661
INCUBATION OR BEGINNING STAGE OF INFECTION	131	.638	.224	.597	64	.595	.201	.550
MIDDLE OF INFECTION OR EARLY CONVALESCENCE	49	.580	.262	.551	16	.592	.177	.609
CONVALESCENCE STAGE	16	.601	.187	.599	11	.659	.123	.676

SAMPLE SIZE: 733 TOTAL SAMPLE EXCLUDES 8 INTERVENTION CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4. 490 INTERVENTION CHILDREN; 243 CONTROL CHILDREN INCLUDE 24 RECEIVING CAPSULES FROM HEALTH FACILITIES BETWEEN ROUND 2 & ROUND 4.

TABLE 6.7

DISTRIBUTION OF REFERENCE CHILDREN BETWEEN DIFFERENT STAGES OF INFECTION: PERCENTAGES BY AREA

	ALL CASES		AREA			
	Count	Col %	INTERVENTION		CONTROL	
			Count	Col %	Count	Col %
APPARENTLY HEALTHLY: ROUND 4	446	60.8%	294	60.0%	152	62.6%
INCUBATION STAGE: AGP<1.0 g/L; CRP>5.0 mg/L	195	26.6%	131	26.7%	64	26.3%
INFECTION PRESENT: AGP>1.0 g/L; CRP>5.0 mg/L	65	8.9%	49	10.0%	16	6.6%
CONVALESCENCE: AGP>1.0 g/L; CRP<5.0 mg/L	27	3.7%	16	3.3%	11	4.5%

SAMPLE SIZE: 733 TOTAL SAMPLE EXCLUDES 8 INTERVENTION CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4. 490 INTERVENTION CHILDREN; 243 CONTROL CHILDREN INCLUDE 24 RECEIVING CAPSULES FROM HEALTH FACILITIES BETWEEN ROUND 2 & ROUND 4.

FIGURE 6.4

PERCENT OF CHILDREN APPARENTLY HEALTHY IN SAMPLE 1 BY ROUND AND BY AREA

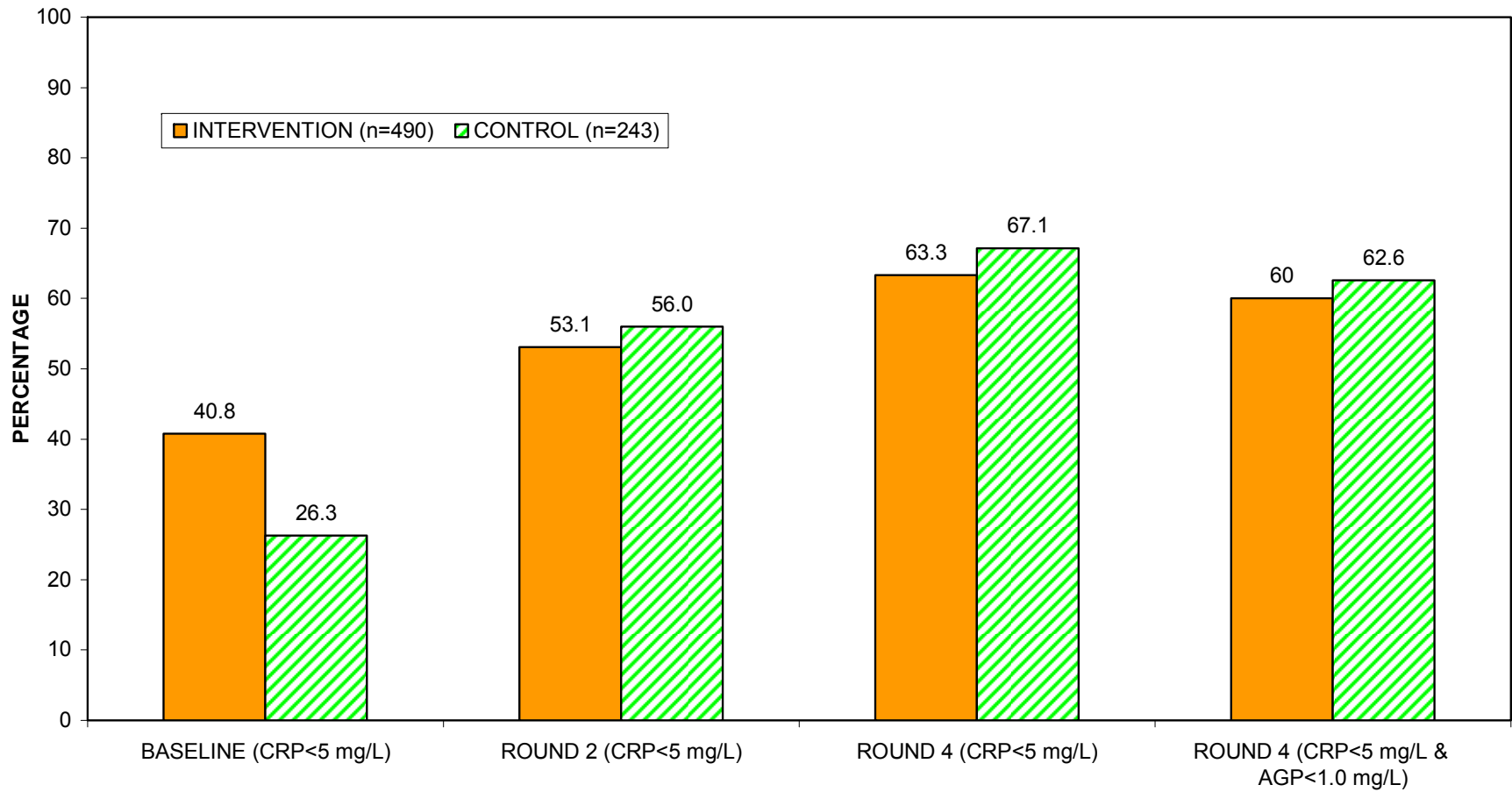


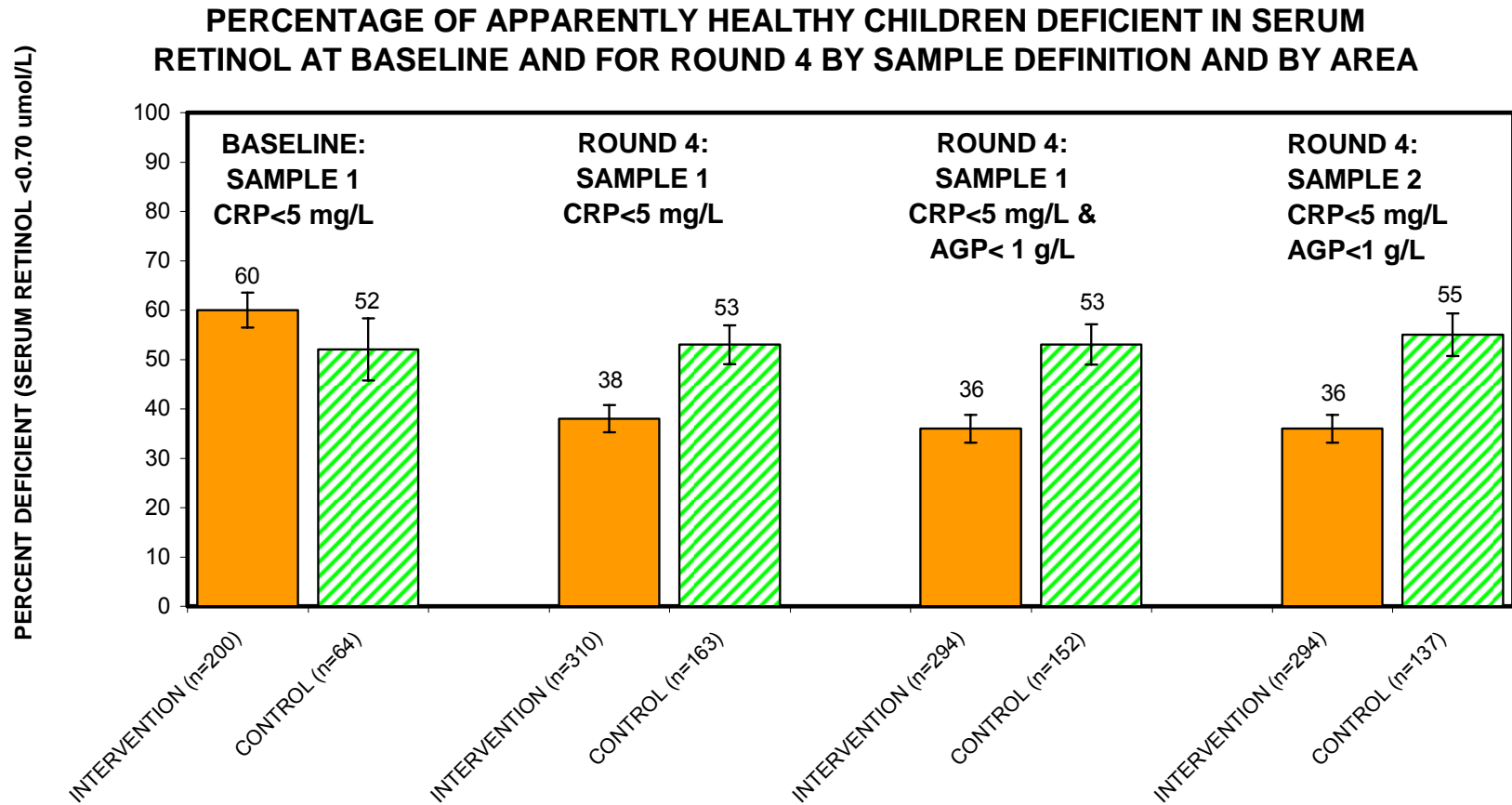
TABLE 6.8

SAMPLE DESCRIPTION AND SERUM RETINOL STATUS IN APPARENTLY HEALTHY CHILDREN AT BASELINE: PERCENTAGE IN EACH CATEGORY BY AREA

		ALL CASES		AREA			
				INTERVENTION		CONTROL	
		Count	Col %	Count	Col %	Count	Col %
AGE (IN MONTHS) BY CATEGORY OF REFERENCE CHILD: ROUND 1	LESS THAN 6 MONTHS	22	8.3%	15	7.5%	7	10.9%
	6-11.9 MONTHS	68	25.8%	50	25.0%	18	28.1%
	12-17.9 MONTHS	51	19.3%	38	19.0%	13	20.3%
	18-23.4 MONTHS	57	21.6%	42	21.0%	15	23.4%
	24-38 MONTHS	66	25.0%	55	27.5%	11	17.2%
SEX	FEMALE	141	53.4%	111	55.5%	30	46.9%
	MALE	123	46.6%	89	44.5%	34	53.1%
STILL BREASTFEEDING	NO	106	40.3%	86	43.0%	20	31.7%
	YES	157	59.7%	114	57.0%	43	68.3%
PLASMA RETINOL < 0.70 umol/L: BASELINE	NOT DEFICIENT: AT LEAST 0.70 umol/L	112	42.4%	81	40.5%	31	48.4%
	DEFICIENT: BELOW 0.70 umol/L	152	57.6%	119	59.5%	33	51.6%
SERUM RETINOL <0.35 umol/L: BASELINE	NOT SEVERELY DEFICIENT: AT LEAST 0.35 umol/L	254	96.2%	192	96.0%	62	96.9%
	SEVERELY DEFICIENT: <0.35 umol/L	10	3.8%	8	4.0%	2	3.1%

SAMPLE SIZE: 264 SAMPLE OF HEALTHY CHILDREN EXCLUDES 8 INTERVENTION CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4. 200 INTERVENTION CHILDREN; 64 CONTROL CHILDREN. APPARENTLY HEALTHY AT BASELINE DEFINED AS CRP VALUES<5 mg/L.

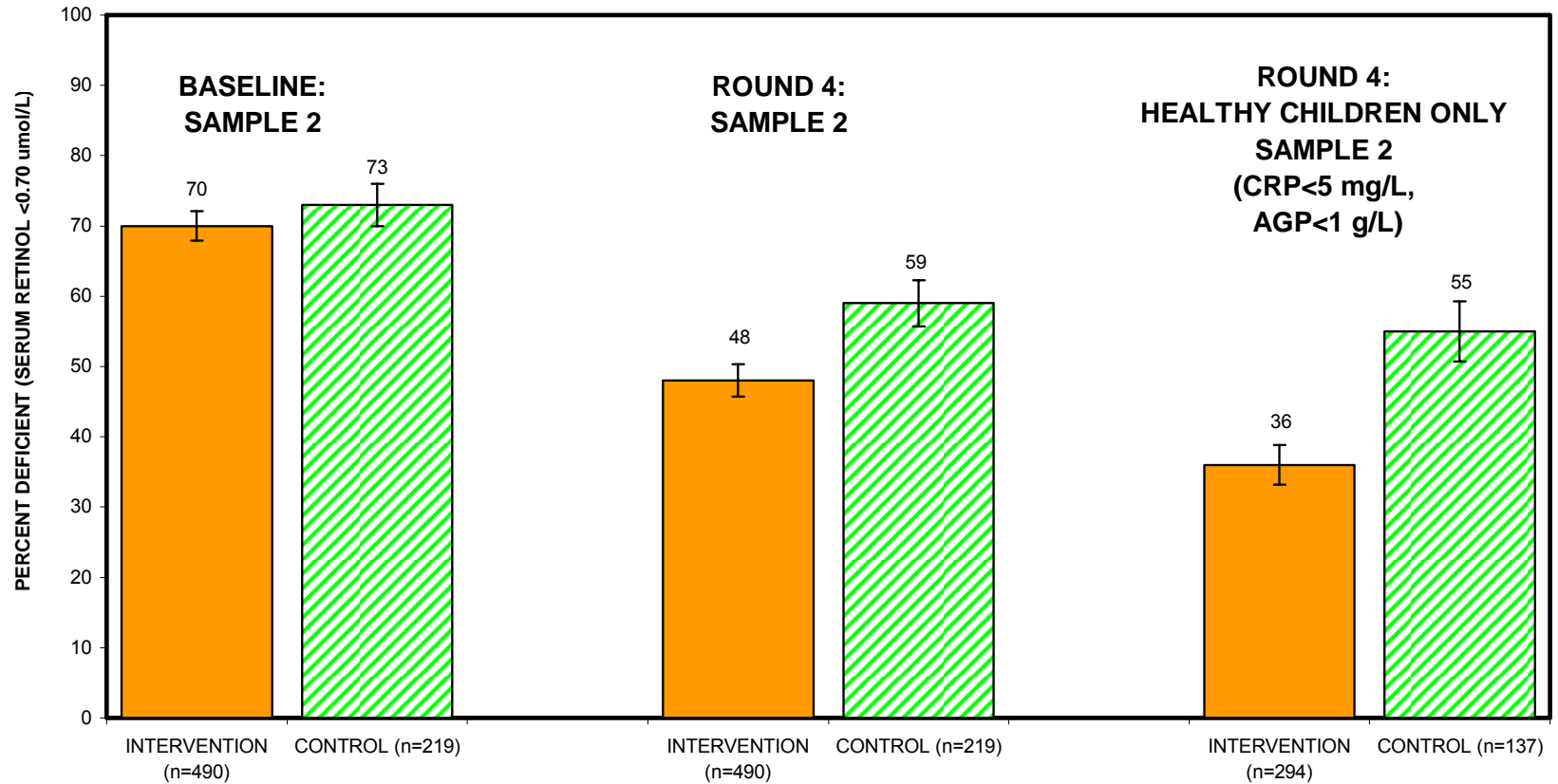
FIGURE 6.5



NOTE: Definition of apparently healthy child based on absence of elevated acute proteins measured in particular round. Sample 1 consists of all children completing study except 8 intervention children receiving capsules between round 2 & round 4. Sample 2 consists of all children excluding 8 intervention and 24 control children receiving capsules between round 2 & round 4. No statistically significant difference exists between intervention & control at baseline. All round 4 samples are significantly different between groups at $p=0.005$.

FIGURE 6.6

PERCENTAGE OF SAMPLE 2 CHILDREN DEFICIENT IN SERUM RETINOL AT
BASELINE AND FOR ROUND 4



NOTE: SAMPLE 2 CONSISTS OF ALL CHILDREN EXCLUDING 8 INTERVENTION AND 24 CONTROL CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4.
HEALTHY CHILDREN SAMPLE (n=433) EXCLUDES ILL CHILDREN & 8 INTERVENTION CHILDREN & 24 CONTROL CHILDREN RECEIVING VITAMIN A CAPSULES BETWEEN ROUND 2 & ROUND 4.

FIGURE 6.7

CUMULATIVE DENSITY FUNCTIONS FOR SERUM RETINOL IN APPARENTLY HEALTHY REFERENCE CHILDREN AT BASELINE AND AT ROUND 4 (SAMPLE 1)

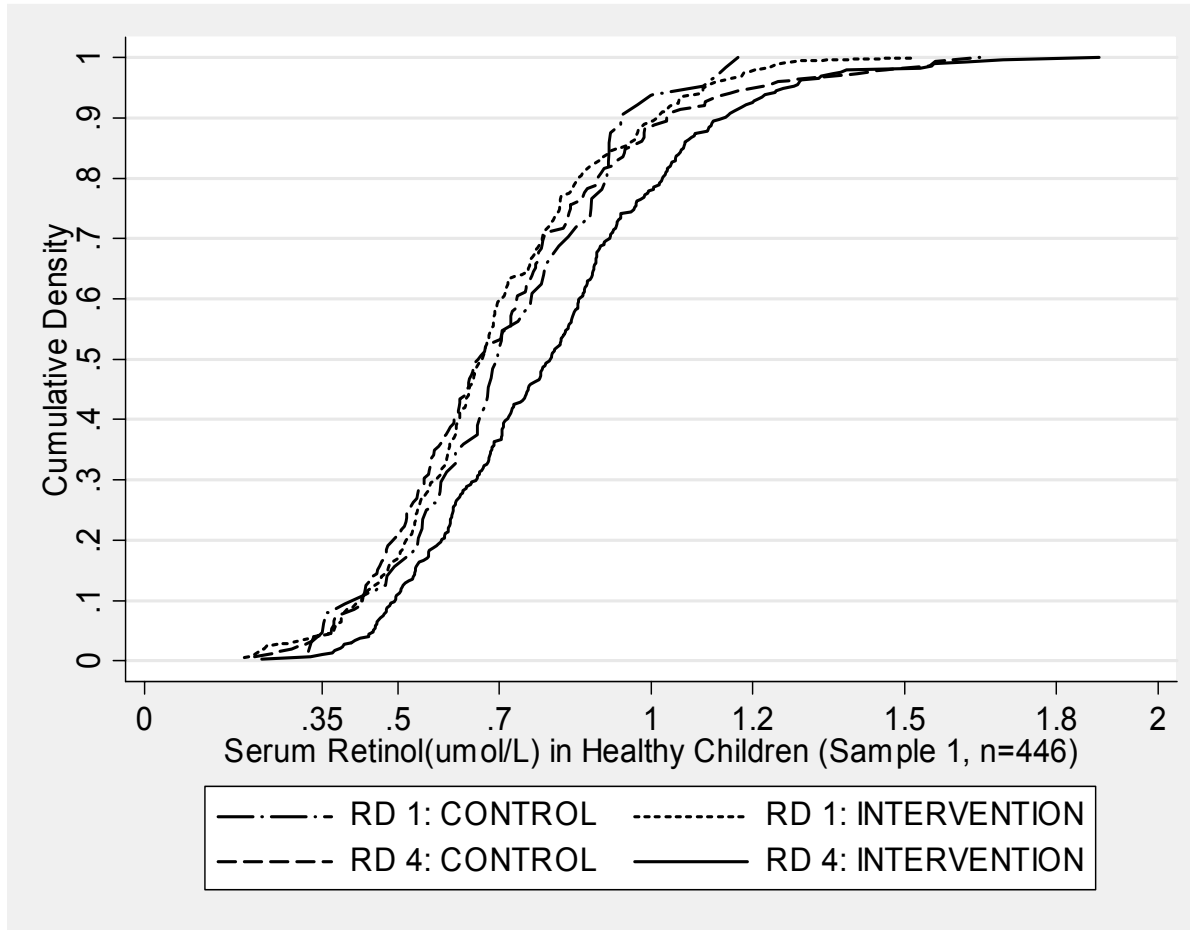


TABLE 6.9

ROUND 1: PREVALENCE OF HIGH SERUM C-REACTIVE PROTEIN (CRP) AND REPORTED MORBIDITY IN THE REFERENCE CHILD BY AREA (MAY-JUNE 2003)

Variable	All	Intervention	Control	P-Value
	%	%	%	
Acute Infection (CRP>5.0 mg/L)	63.7	58.8	73.7	0.000
<i>Past two-weeks morbidity recall</i>				
Diarrhea	40.4	39.6	42.1	0.523
Acute Respiratory Infection (ARI)	22.8	23.5	21.5	0.576
Fever	62.3	64.7	57.4	0.063
Other Disease	12.2	11.8	12.8	0.720
Any form of illness	80.8	82.1	78.2	0.233
<i>Morbidity Recall Over long Period</i>				
Since birth has child been hospitalized overnight at lease once because of illness	6.5	5.4	8.7	0.111

Sample Size: Intervention =498; Control=242 except CRP=243. Morbidity was based on recall by the principal female caregiver of reference child.

P-value from Chi-Square test using two tailed Fisher's exact test of significance. Among other disease during the past 2 weeks, there were 2 cases of measles. Any form of illness in past 2 weeks was computed from whether the child had any one of diarrhea, ARI, fever or other disease.

TABLE 6.10

ROUND 2: PREVALENCE OF HIGH SERUM C-REACTIVE PROTEIN (CRP) AND REPORTED MORBIDITY IN THE REFERENCE CHILD BY AREA (NOVEMBER 2003-JANUARY 2004)

Variable	All	Intervention	Control	P-Value
	%	%	%	
Acute Infection (CRP>5.0 mg/L)	45.7	46.6	44.0	0.530
<i>Past two-weeks morbidity recall</i>				
Diarrhea	23.9	26.1	19.4	0.053
Acute Respiratory Infection (ARI)	6.6	7.7	4.5	0.118
Fever	41.4	42.8	38.4	0.266
Other Disease	10.7	11.7	8.7	0.254
Any form of illness	61.1	65.5	52.3	0.001
<i>Morbidity Recall Over long Period</i>				
Measles (since January 2003)	9.8	9.3	10.7	0.597
Serious Disease Besides Measles (Since January 2003)	10.6	10.5	10.7	0.899

Sample Size: Intervention =495; Control=242, except CRP=243. P-value derived Chi-Square test using two tailed Fisher's exact test of significance.

Morbidity was based on recall by the principal female caregiver of reference child.

Any form of illness in past 2 weeks was computed from whether the child had any one of diarrhea, ARI, fever or other disease.

TABLE 6.11

ROUND 4: PREVALENCE OF HIGH SERUM C-REACTIVE PROTEIN (CRP) AND ALPHA-1-GLYCOPROTEIN (AGP) AND REPORTED MORBIDITY BY AREA (NOVEMBER 2004-JANUARY 2005)

Variable	All	Intervention	Control	P-Value
	%	%	%	
Acute Infection (CRP>5.0 mg/L)	35.5	36.7	32.9	0.327
Acute Infection (AGP>1.0 mg/L)	12.8	13.7	11.1	0.352
<i>Past two-weeks morbidity recall</i>				
Diarrhea	9.3	8.8	10.3	0.504
Acute Respiratory Infection (ARI)	2.7	3.2	1.6	0.333
Fever	25.1	24.9	25.5	0.857
Other Disease	6.4	4.4	10.4	0.003
Any form of illness	36.8	35.5	39.5	0.293
<i>Morbidity Recall Over long Period</i>				
Measles (Since January 2004)	0.8	0.8	0.8	1.000
Serious Disease Besides Measles (Since January 2004)	7.4	8.2	5.8	0.296

Sample Size: Intervention =498; Control=243. Morbidity was based on recall by the principal female caregiver of reference child.

P-value derived from Chi-Square test using two tailed Fisher's exact test of significance

Any form of illness in past 2 weeks was computed from whether the child had any one of diarrhea, ARI, fever or other disease.

TABLE 6.12

**Relationship Between Serum Acute Phase Proteins and Morbidity
(recall for past 2 weeks) In Reference Child By Survey Round**

Variable	Correlation Coefficient (r)			
	CRP			AGP
	Baseline	Round 2	Round 4	Only Round 4
Diarrhea	0.006	0.029	-0.010	0.019
Acute Respiratory Infection	0.003	0.001	0.020	0.031
Fever	0.077*	0.113**	0.112**	0.076*
Other Disease	0.070	0.003	-0.016	-0.019
Any illness in last 2 weeks	0.059	0.063	0.08*	0.061

* Spearman's correlation significant (2-tailed test) for $p < 0.05$.

**Spearman's correlation significant (2-tailed test) for $p < 0.01$.

TABLE 6.13

ROUND 1: PROPORTIONS OF PRIMARY CONSULTATIONS FOR TREATMENT OF REFERENCE CHILD FOR VARIOUS INFECTIONS BY AREA

Type of Consultation	Intervention				Control			
	Diarrhea % n=197	ARI % n=117	Fever % n=332	Other % n=60	Diarrhea % n=102	ARI % n=52	Fever % n=139	Other % n=32
Principal Female Caregiver	23.4	31.6	31.0	30.0	36.3	34.6	42.4	28.1
Health Post	51.3	45.3	44.4	28.3	25.5	34.6	25.9	40.6
Health Center	15.7	14.5	18.0	25.0	22.5	11.5	20.9	25.0
Hospital					2.0	5.8	1.4	
Pharmacy							0.7	
Traditional Midwife								
Witchdoctor/Traditional Healer	6.6	5.1	3.1	10.0	7.8	7.7	5.8	3.1
Treatment by Private Person	1.5	1.7	1.9	1.7	3.9	5.8	0.7	
Private Clinic								
Husband/Wife		0.9						
Father/Mother	1.0		0.6	1.7	2.0		0.7	3.1
Grand Parent	0.5							
Other Family Member		0.9	0.6	1.7				
Friend			0.3					
At Market							1.4	
Health Volunteer or Extensionist								
Neighbor				1.7				

TABLE 6.14

ROUND 2: PROPORTIONS OF PRIMARY CONSULTATIONS FOR TREATMENT OF REFERENCE CHILD FOR VARIOUS INFECTIONS BY AREA

Type of Consultation	Intervention				Control			
	Diarrhea	ARI	Fever	Other	Diarrhea	ARI	Fever	Other
	%	%	%	%	%	%	%	%
	n=129	n=38	n=212	n=59	n=47	n=11	n=93	n=22
Principal Female Caregiver	26.3	31.6	31.6	25.4	29.8	72.7	39.8	50
Health Post	37.2	28.9	33.5	23.7	19.4	18.2	25.8	9.1
Health Center	26.4	34.2	25.9	33.9	34	9.1	21.5	13.6
Hospital							1.1	
Pharmacy								
Traditional Midwife		2.6						
Witchdoctor/Traditional Healer	3.1	2.6	4.2	5.1	10.6		1.1	18.2
Treatment by Private Person	3.1		1.9	6.8	6.4		6.5	4.5
Private Clinic								
Father/Mother	2.3		1.9	1.7			4.3	4.5
Grand Parent	1.6		0.5					
Other Family Member				1.7				
Friend								
At Market								
Health Volunteer or Extensionist			0.5					
Neighbor				1.7				

TABLE 6.15

ROUND 4: PROPORTIONS OF PRIMARY CONSULTATIONS FOR TREATMENT OF REFERENCE CHILD FOR VARIOUS INFECTIONS BY AREA

Type of Consultation	Intervention				Control			
	Diarrhea % n=44	ARI % n=16	Fever % n=125	Other % n=23	Diarrhea % n=25	ARI % n=4	Fever % n=62	Other % n=26
Principal Female Caregiver	15.9	31.8	18.4	21.7	20		22.6	15.3
Health Post	61.4	43.8	65.6	39.1	48		38.7	19.2
Health Center	11.4	6.3	9.6	13	20	100	24.2	19.2
Hospital								
Pharmacy								
Traditional Midwife								
Witchdoctor/Traditional Healer	6.8	18.8	4	8.7			1.6	26.9
Treatment by Private Person				8.7	12		9.7	7.7
Private Clinic							1.6	3.8
Husband/Wife			0.8					
Father/Mother	2.3		0.8	4.3				
Grand Parent							1.6	
Other Family Member	2.3		0.8					3.8
Friend				4.3				3.8
At Market								
Health Volunteer or Extensionist								
Neighbor								

TABLE 6.16

ROUND 1: AVERAGE COST OF CONSULTATION FOR TREATMENT OF REFERENCE CHILD (METICAIS) BY TYPE OF ILLNESS AND AREA

Type of Consultation	Intervention								Control							
	Diarrhea		ARI		Fever		Other		Diarrhea		ARI		Fever		Other	
	Mean	n	Mean	n	Mean	n	Mean	n	Mean	Mean	Mean	n	Mean	n	Mean	n
Principal Female Caregiver	0.6	8.0	0.4	7.0	0.7	13.0	2.0	5.0	0.2	6.0	0.3	3.0	0.5	6.0		
Health Post	0.9	101.0	1.3	53.0	1.0	143.0	0.9	17.0	1.9	26.0	1.1	18.0	1.3	36.0	2.9	13.0
Health Center	3.6	31.0	3.4	17.0	1.7	58.0	1.9	15.0	5.9	23.0	2.0	6.0	5.1	29.0	3.1	8.0
Hospital									8.5	2.0	11.8	3.0	6.5	2.0		
Pharmacy													5.0	1.0		
Traditional Midwife																
Witchdoctor/Traditional Healer	5.6	13.0	5.0	6.0	8.5	10.0	17.5	6.0	17.5	8.0	7.5	4.0	6.9	8.0	40.0	1.0
Treatment by Private Person	9.7	3.0	4.3	2.0	2.6	6.0	5.0	1.0	2.4	4.0	1.5	3.0	2.5	1.0		
Private Clinic																
Husband/Wife																
Father/Mother	1.0	2.0			2.5	2.0	10.0	1.0	2.0	2.0			0.5	1.0	2.0	1.0
Grand Parent																
Other Family Member					1.0	2.0	10.0	1.0								
Friend	10.0	1.0														
At Market													3.0	2.0		
Health Volunteer or Extensionist																
Neighbor																

TABLE 6.17

ROUND 2: AVERAGE COST OF CONSULTATION FOR TREATMENT OF REFERENCE CHILD (METICAIS) BY TYPE OF ILLNESS AND AREA

Type of Consultation	Intervention								Control							
	Diarrhea		ARI		Fever		Other		Diarrhea		ARI		Fever		Other	
	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n
Principal Female Caregiver	0.1	7.0	0.3	2.0	0.9	9.0			0.2	3.0			0.3	6.0		
Health Post	0.8	48.0	3.6	11.0	1.2	71.0	0.8	14.0	1.1	9.0	1.3	2.0	1.2	24.0	1.3	2.0
Health Center	1.2	34.0	4.7	13.0	1.1	55.0	2.3	23.0	4.1	16.0	1.0	1.0	1.7	20.0	2.7	3.0
Hospital													4.0	1.0		
Pharmacy																
Traditional Midwife																
Witchdoctor/Traditional Healer	7.6	4.0	10.0	1.0	6.7	9.0	8.3	3.0	10.0	5.0					17.9	4.0
Treatment by Private Person	3.8	4.0			2.0	4.0	3.9	4.0	2.2	3.0			4.9	6.0	10.0	1.0
Private Clinic																
Husband/Wife																
Father/Mother	0.7	3.0			0.3	4.0	5.0	1.0					0.3	4.0	0.5	1.0
Grand Parent	5.0	2.0			1.0	1.0										
Other Family Member																
Friend																
At Market																
Health Volunteer or Extensionist																
Neighbor																

TABLE 6.18

ROUND 4: AVERAGE COST OF CONSULTATION FOR TREATMENT OF REFERENCE CHILD (METICAIS) BY TYPE OF ILLNESS AND AREA

Type of Consultation	Intervention								Control							
	Diarrhea		ARI		Fever		Other		Diarrhea		ARI		Fever		Other	
	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n
Principal Female Caregiver	0.4	5.0			0.7	5.0							1.0	2.0	12.5	1.0
Health Post	1.4	27.0	2.3	7.0	1.3	82.0	0.9	9.0	1.9	12.0			2.0	24.0	1.7	5.0
Health Center	6.2	5.0	0.5	1.0	1.4	12.0	2.8	3.0	2.1	5.0	6.4	4.0	6.6	15.0	13.1	5.0
Hospital																
Pharmacy																
Traditional Midwife																
Witchdoctor/Traditional Healer	10.0	3.0	23.3	3.0	9.3	5.0	5.0	2.0					40.0	1.0	47.9	7.0
Treatment by Private Person							5.5	2.0	3.5	3.0			3.3	6.0	5.5	2.0
Private Clinic													5.0	1.0	5.0	1.0
Husband/Wife																
Father/Mother							1.0	1.0								
Grand Parent																
Other Family Member																
Friend																
At Market																
Health Volunteer or Extensionist																
Neighbor																

TABLE 6.19

MEAN Z-SCORES AND MID-UPPER ARM CIRCUMFERENCE AND MEAN CHANGES IN INDICATORS, BY ROUND AND BY STUDY AREA

	Area of study				
	Intervention (n = 498)		Control (n = 243)		p-value ^a
	Mean	Std dev.	Mean	Std dev.	
Baseline HAZ	-2.06	1.17	-2.30	1.08	0.007
Round 4 HAZ	-1.98	1.09	-2.19	1.03	0.014
Change in HAZ	0.08	0.81	0.12	0.76	0.521
Baseline WAZ	-1.89	1.07	-2.11	1.00	0.007
Round 4 WAZ	-1.58	0.91	-1.83	0.94	0.001
Change in WAZ	0.30	0.85	0.27	0.73	0.613
Baseline WHZ	-0.72	0.89	-0.84	0.88	0.076
Round 4 WHZ	-0.48	0.84	-0.66	0.84	0.005
Change in WHZ	0.24	0.90	0.18	0.86	0.342
Baseline MUAC (cm)	13.76	1.41	13.61	1.32	0.190
Round 4 MUAC (cm)	15.08	1.26	14.93	1.26	0.123
Change in MUAC (cm)	1.33	1.26	1.32	1.12	0.908

^aP-value for t-test of equality of means. Independent samples, two-tailed test, equal variances assumed and Levene's test for difference between variance not significant.

TABLE 6.20

CHILD AGE AND PREVALENCE OF STUNTING, LOW WEIGHT-FOR-AGE AND WASTING, BY STUDY AREA, AND ROUND AND AMONG SUB-GROUPS WITH GREATEST POTENTIAL TO BENEFIT

	Area of study		p-value ^a
	Intervention	Control	
All reference children (n = 741)			
Mean age at baseline (months)	18	17	0.65
Mean age at round 4 (months)	35	35	0.49
Baseline % stunted (HAZ < -2.00)	54	56	0.54
Round 4 % stunted (HAZ < -2.00)	46	54	0.05
Baseline % low WAZ (< -2.00)	48	53	0.19
Round 4 % low WAZ (< -2.00)	33	42	0.02
Baseline % wasted (WHZ < -2.00)	6	11	0.03
Round 4 % wasted (WHZ < -2.00)	3	7	0.01
Children < 12 mo old at baseline (n=222)			
Mean age at baseline (months)	8	8	0.85
Mean age at round 4 (months)	26	26	0.99
Baseline % stunted (HAZ < -2.00)	48	38	0.14
Round 4 % stunted (HAZ < -2.00)	54	54	0.93
Baseline % low WAZ (< -2.00)	47	41	0.37
Round 4 % low WAZ (< -2.00)	49	54	0.53
Baseline % wasted (WHZ < -2.00)	5	7	0.55
Round 4 % wasted (WHZ < -2.00)	7	13	0.11
Children with baseline serum Retinol < 0.35 µmol/L (n=78)			
Mean age at baseline (months)	18	17	0.63
Mean age at round 4 (months)	35	34	0.56
Baseline % stunted (HAZ < -2.00)	59	56	1.00
Round 4 % stunted (HAZ < -2.00)	52	59	0.65
Baseline % low WAZ (< -2.00)	57	63	0.65
Round 4 % low WAZ (< -2.00)	39	63	0.07
Baseline % wasted (WHZ < -2.00)	15	19	0.76
Round 4 % wasted (WHZ < -2.00)	0	9	0.07

^a Mean age: p-value for t-test of equality of means. Independent samples, two-tailed test, equal variances assumed and Levene's test for difference between variance not significant. Differences in prevalence: p-value for Pearson's Chi-square test (two-sided test) of intervention vs control.

TABLE 6.21

**CHANGE IN PREVALENCE OF STUNTING, LOW WEIGHT-FOR-AGE,
AND WASTING, BY STUDY AREA AND AMONG SUB-GROUPS WITH
GREATEST POTENTIAL TO BENEFIT**

	Area of study		p-value ^a
	Intervention	Control	
	Percentage point change		
All reference children (n = 741)			
Change in prevalence of stunting	-8	-2	0.08
Change in prevalence of low WAZ	-15	-11	0.03
Change in prevalence of wasting	-4	-4	0.24
Children < 12 mo old at baseline (n=222)			
Change in prevalence of stunting	+6	+16	0.28
Change in prevalence of low WAZ	+2	+13	0.19
Change in prevalence of wasting	+1	+6	0.37
Children with baseline serum retinol < 0.35 µmol/L (n=78)			
Change in prevalence of stunting	-7	+3	0.28
Change in prevalence of low WAZ	-17	0	0.13
Change in prevalence of wasting	-15	-9	0.26

^a Z-test based on the chi-square statistics from McNemar's tests of within group changes in prevalence.