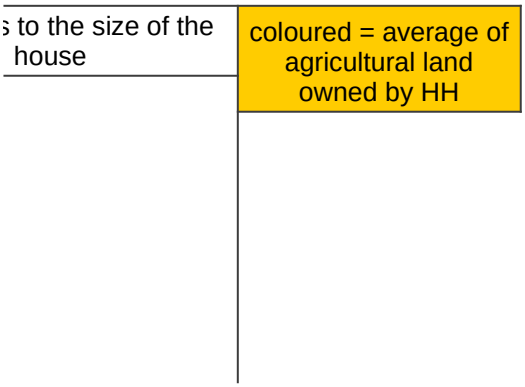
	Coordinates		Family		Occupation			
HOUSEHOLD	X	Y	Adults	Children	Female	Male	Others	Iron sheet roof
1A	389412	9838500	2		pastor	pastor		1
2A	388940	9838418	2	3	home	shop		2
3A	388791	9838617	4	5	housewife	retired	5	
4A	388742	9838371	2	10	home	retired teacher	1	1
5A	388511	9838428	2	6	housewife	none		1 (big)
6A	388829	9838216	3	1	housewife	mason	1	
7A	388674	9838023	2	3	housewife	farmer,mason		1
8A	388518	9839010	2	3	housewife	casual labour		
9A	388440	9838916	4	4	housewife	farmer	2	2
10A	388282	9839010	2	4	housewife	driver		1
11A	388320	9839086	5	3	business woman	retired	3	3 (1 big)
12A	388034	9839303	4	3	none		1	2
13A	388636	9839274	4	5	housewife		3	1
14A	388296	9838514	3	3	farmer		2	1
15A	389463	9838198	3	5	housewife	teacher		2 (big)
16A	389627	9838203	4	5	housewife	watchman	2	3 (big)
17A	388697	9837161	4	2	housewife	local vet	2	2
18A	388797	9836657	4	2	farmer	farmer	2	1
19A	388305	9837747	4	3	farmer	none	2	3 (2 big)
			3	4				
1B	384730	9834267	7	4	tailor	tailor	3	5
2B	384961	9833600	7	9	farmer	farmer	3	4
3B	384886	9832974	2	3	housewife	woodcarver		1 (big)
4B	384325	9833020	2	2	farmer		1	
5B	383419	9834846	6	11		farmer		6
6B	383636	9834763	5	8	housewife	retired		4
7B	383780	9834643	4	7	housewife	farmer		3
8B	383998	9834614	6	3	housewife	businessman		4
9B	383621	9834413	3	2	farmer	farmer	1	6 (1 big)
10B	383461	9834432	8	13	housewife	businessman		4
11B	383133	9834696	2	8	housewife	retired		5
12B	383364	9834550	1	7	business woman			3
13B	383429	9834118	2	6	farmer	farmer		1
14B	383309	9833993	2	8	housewife	mason		2
15B	383656	9833943	2	4	small business woman	hotel		3
16B	383925	9833668	2	2	housewife	farmer		2
17B	384102	3833614	4	3	housewife	small business	2	3
18B	384047	9833392	4	1	housewife	fireman	2	1
			4	6				

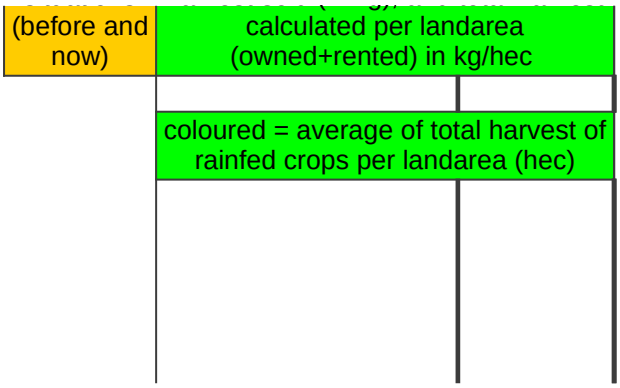
	Coordinates of households (HH)	Number of adults and children within HH	Occupation of female and male of the HH and the number of other members of the HH with occupation


coloured = average no. of adults and children per HH
big' refers

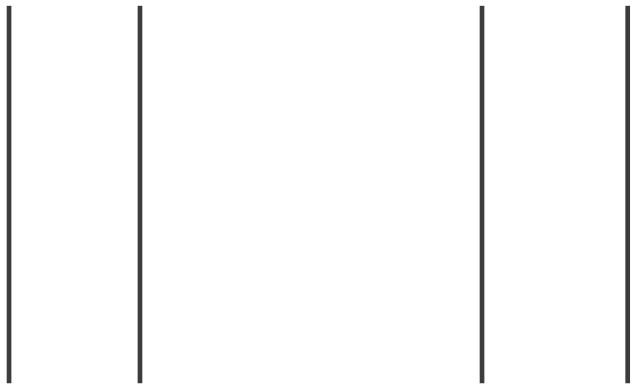
Housing		Land							
Thatch roof	Windows	Dom_land (hec)	Agri_land (hec)	Rent_land (hec)	Land_now	Maize (kg)	M_use	M_sell	M_kg/hec
	1	0.0	0.2		more	90	90	0	450.0
		0.1	0.6	0.4	same	60	60	0	60.0
3		0.1	1.2		same	50	50	0	41.3
		0.1	4.1		same	900	900	0	219.5
	1	0.1	0.8	0.8	same	180	180	0	112.5
1		0.1	0.6	1.2	more	270	270	0	150.0
3		0.1	1.2		same	270	270	0	225.0
1		0.1	0.2		same	25	25	0	125.0
1		0.1	2.0		same	720	680	40	360.0
1		0.1	0.8	1.2	more	90	90	0	45.0
		0.1	4.9	2.0	more	360	360	0	52.2
1		0.1	0.8		same	720	630	90	900.0
		0.1	1.2	0.2	same	900	900	0	642.9
3		0.1	0.4		same	40	40	0	100.0
	2	0.1	2.2	1.2	more	3690	3150	540	1085.3
1		0.1	2.8	1.6	more	1260	1080	180	286.4
1		0.1	0.8		same	360	360	0	450.0
3		0.1	0.4		same	360	360	0	900.0
	1	0.1	2.4		same	450	450	0	187.5
			1.5						336.4
		0.1	1.2		same	90	90	0	75.0
2		0.1	0.8		same	180	180	0	222.2
2	1	0.1	0.6		same	450	450	0	750.0
4		0.1	4.1		same	270	270	0	65.9
4	1	0.2	1.4	0.8	same	360	360	0	163.6
1		0.1	2.0		same	2700	2700	0	1350.0
5		0.1	0.2	0.4	same	270	270	0	450.0
1		0.1	0.6	0.8	same	90	90	0	64.3
3		0.1	1.2		same	270	270	0	221.3
3	2	0.1	2.0	1.0	more	0	0	0	0.0
3		0.1	2.0		same	720	720	0	356.4
3		0.1	1.2	0.1	same	90	90	0	68.7
2		0.1	1.0	1.2	same	720	720	0	324.3
1		0.1	0.8		same	360	360	0	444.4
	2	0.1	0.8		same	270	270	0	333.3
1		0.1	0.8		same	360	360	0	450.0
		0.1	1.2		same	360	360	0	300.0
1		0.1	0.8		same	450	450	0	562.5
			1.3						344.6

ses with iron sheet ed roof and no. of s with windows	HH for domestic and agricultural use (in hec)	No. of hectares rented	Difference in land size between 2 situations	Types of rainfed crop with total harvest in kg, part of harvest used for own consumption (in kg), part of harvest sold (in kg), and total harvest

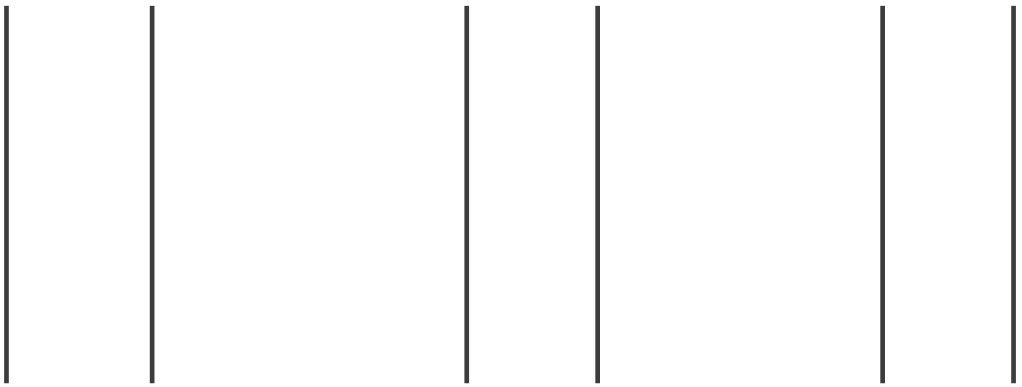

s to the size of the house
coloured = average of agricultural land owned by HH


(before and now)
calculated per landarea (owned+rented) in kg/hec
coloured = average of total harvest of rainfed crops per landarea (hec)

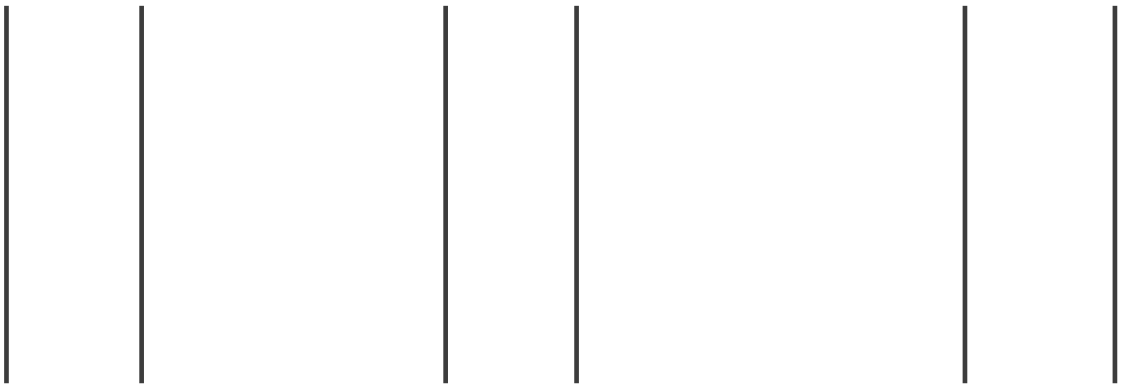
Beans (kg)	B_use	B_sell	B_kg/hec	Cowpeas (kg)	Cp_use	Cp_sell	Cp_kg/hec	Pigeonpeas (kg)	Pp_use	Pp_sell
10	10	0	50.0	0	0	0	0.0	0	0	0
10	10	0	10.0	0	0	0	0.0	0	0	0
4	4	0	3.3	0	0	0	0.0	0	0	0
450	450	0	109.8	180	180	0	43.9	450	450	0
20	20	0	12.5							
90	90	0	50.0	90	90	0	50.0	135	135	0
5	5	0	4.2	1	1	0	0.8			
8	8	0	40.0	20	20	0	100.0	0	0	0
45	45	0	22.5	60	60	0	30.0	360	330	30
0	0	0	0.0	0	0	0	0.0	0	0	0
90	90	0	13.0	45	45	0	6.5	45	45	0
180	180	0	225.0	40	40	0	50.0	180	160	20
180	180	0	128.6	100	100	0	71.4	0	0	0
3	3	0	7.5	0	0	0	0.0	0	0	0
990	450	540	291.2	60	0	60	17.6	360	0	360
315	0	315	71.6	180	0	180	40.9	90	0	90
90	90	0	112.5	180	180	0	225.0	0	0	0
15	15	0	37.5	20	20	0	50.0	0	0	0
180	180	0	75.0	45	45	0	18.8	90	90	0
			66.5				39.2			
40	40	0	33.3	10	10	0	8.3			
90	90	0	111.1	30	30	0	37.0	0	0	0
40	40	0	66.7	0	0	0	0.0	0	0	0
90	90	0	22.0	90	90	0	22.0	0	0	0
180	180	0	81.8	360	360	0	163.6	0	0	0
450	450	0	225.0	180	180	0	90.0	0	0	0
5	5	0	8.3	270	270	0	450.0	0	0	0
5	5	0	3.6	20	20	0	14.3	0	0	0
10	10	0	8.2	40	40	0	32.8	0	0	0
0	0	0	0.0	0	0	0	0.0	0	0	0
				60	60	0	29.7	0	0	0
20	20	0	15.3	50	50	0	38.2	0	0	0
90	90	0	40.5	90	90	0	40.5	0	0	0
40	40	0	49.4	180	180	0	222.2	0	0	0
90	90	0	111.1	50	50	0	61.7	0	0	0
5	5	0	6.3	8	8	0	10.0	0	0	0
80	80	0	66.7	40	40	0	33.3	0	0	0
				90	90	0	112.5	0	0	0
			53.1				75.9			



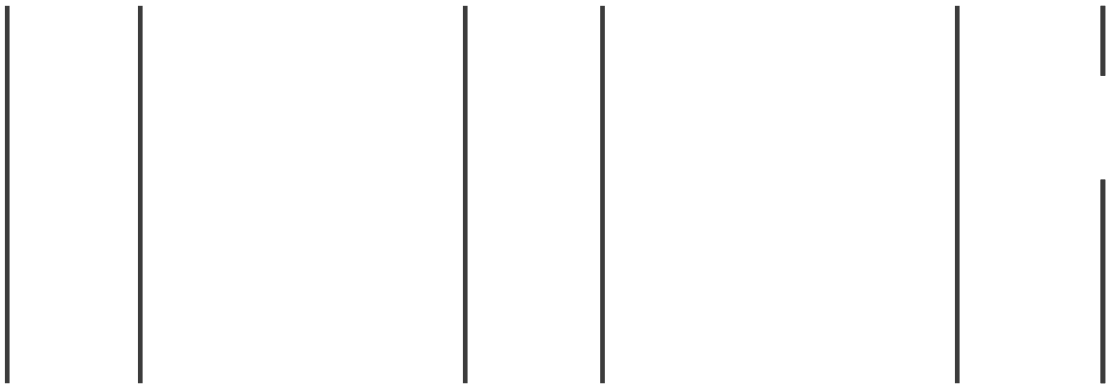
Crops											
Pp_kg/hec	Pumpkins (kg)	P_use	P_sell	P_kg/hec	Casava (kg)	C_use	C_sell	C_kg/hec	Millet (kg)	Mi_use	Mi_sell
0.0											
0.0											
0.0	4	4	0	3.3	0	0	0	0.0	10	10	0
109.8	500	500	0	122.0	270	270	0	65.9	180	180	0
75.0					0	0	0	0.0	90	90	0
					30	30	0	25.0			
0.0					10	10	0	50.0	0	0	0
180.0					0	0	0	0.0			
0.0					0	0	0	0.0			
6.5					270	0	270	39.1			
225.0	250	250	0	312.5	0	0	0	0.0			
0.0					0	0	0	0.0			
0.0	7	7	0	17.5							
105.9											
20.5	500	250	250	113.6	0	0	0	0.0	450	430	20
0.0	10	10	0	12.5	0	0	0	0.0	10	0	0
0.0									5	5	0
37.5									130	130	0
44.7				96.9				15.0			
0.0											
0.0											
0.0									90	90	0
0.0									20	20	0
0.0									360	360	0
0.0									20	20	0
0.0									0	0	0
0.0											
0.0											
0.0					60	60	0	29.7			
0.0											
0.0											
0.0									270	270	0
0.0											
0.0											
0.0											
0.0											
0.0								29.7			



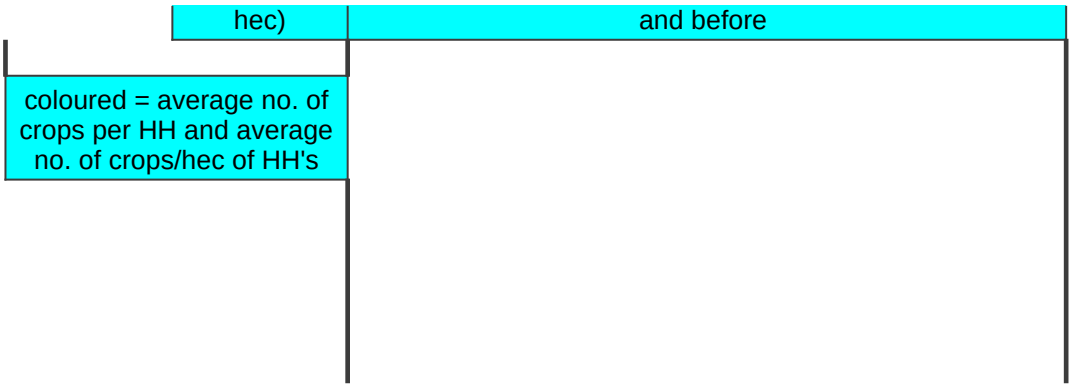
M_kg/hec	Sorghum (kg)	S_use	S_sell	S_kg/hec	Sw.potatoes (kg)	Sw_use	Sw_sell	Sw_kg/hec	Greengramms (kg)
8.3					0	0	0	0.0	
43.9	0	0	0	0.0	270	270	0	65.9	
50.0					100	50	50	55.6	
					50	50	0	41.7	
0.0									
									20
					270	0	270	39.1	0
					100	100	0	125.0	
					50	50	0	125.0	
					100	0	100	29.4	
102.3					0	0	0	0.0	10
12.5									
12.5									1
54.2									
35.5				0.0				53.5	
									40
22.0									
9.1									
180.0									
33.3									20
0.0									
									0
	20	20	0	9.0					
333.3									40
96.3				9.0					



G_use	G_sell	G_kg/hec	Sunflower (kg)	Sf_use	Sf_sell	Sf_kg/hec	Sojabeans (kg)	Sb_use	Sb_sell	Sb_kg/hec
			80	25	55	50.0				
20	0	10.0	0	0	0	0.0				
0	0	0.0	300	120	180	43.5				
			90	60	30	64.3				
10	0	2.3					10	10	0	2.3
1	0	2.5	7	7	0	17.5				
		3.7				35.1				2.3
40	0	66.7								
20	0	33.3								
0	0	0.0								
40	0	49.4					2	2	0	2.5
		37.3								2.5



Harvest				
No. of rainfed crops	No. of rainfed crops/hec	No. of total crops/hec_now	No. of total crops/hec_before	New crops
4.0	20.0	20.0	20.0	
4.0	4.0	5.0	4.0	
8.0	6.6	6.6	6.6	
9.0	2.2	2.7	2.4	
3.0	1.9	3.8	1.3	sunflower
7.0	3.9	5.6	5.6	
5.0	4.2	6.7	4.2	
6.0	30.0	30.0	30.0	
5.0	2.5	2.5	2.5	
7.0	3.5	5.5	3.0	sunflower
8.0	1.2	1.7	1.0	sunflower
7.0	8.8	8.8	8.8	
6.0	4.3	5.7	3.6	sunflower
6.0	15.0	15.0	15.0	
5.0	1.5	2.4	2.4	
10.0	2.3	3.4	3.4	
7.0	8.8	11.3	11.3	
7.0	17.5	22.5	22.5	
5.0	2.1	3.3	3.3	
6.3	7.4	8.5	7.9	
3.0	2.5	2.5	4.2	
4.0	4.9	4.9	6.2	
5.0	8.3	8.3	6.7	green gramms
5.0	1.2	1.2	0.7	beans, millet
5.0	2.3	3.2	3.2	
5.0	2.5	3.0	3.0	
6.0	10.0	11.7	8.3	green gramms
5.0	3.6	4.3	3.6	
4.0	3.3	4.9	4.9	
5.0	1.7	2.7	2.7	
4.0	2.0	2.0	2.0	
4.0	3.1	3.1	3.1	
5.0	2.3	2.3	2.3	
7.0	8.6	8.6	8.6	
4.0	4.9	6.2	6.2	
4.0	5.0	5.0	5.0	
4.0	3.3	3.3	3.3	
3.0	3.8	3.8	3.8	
4.6	4.1	4.5	4.3	
No. of rainfed crops per HH	No. of rainfed crops per landarea (no. of crops/	No. of total crops (rainfed+irrigated) calculated per hectare of land, with the situation now and before		New types of rainfed crops introduced during the past 5 years
		coloured = average no. of total crops/hectare per HH, now		


hec)
and before
coloured = average no. of crops per HH and average no. of crops/hec of HH's

Harvest_now	Reason change	Good/bad year	Increased land
more	increased land	bad	1
more	water related	bad	1
less	inadequate rain	bad	
more	water related	good	
same	learned from CBO	bad	
more	water related	normal	1
same		normal	
more	water related	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	1
more	increased land	good	1
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
more	increased land	bad	1
more	water related	bad	1
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	

less	inadequate rain, decreased fertility	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	1
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	
less	inadequate rain	bad	

Difference in rainfed harvest between 2 situations	Reason for the change in harvest of rainfed crops	Overall impression of this year, concerning	increased their agricultural land

(before and now)	
rain, production and harvest	increased their land

Trees	
Planted trees	Reason planting
mangoes, pawpaw, oranges	1,4,5
mangoes, banana, oranges, lemons	1,4
mangoes, pawpaw, banana, oranges	1,4
mangoes, pawpaw, passion fruit, nonfruit	1,5,6
mangoes, pawpaw, oranges	1,2
mangoes, banana, oranges, lemons, custard apple	1,2
pawpaw, custard apple	1
mangoes, pawpaw, banana, nonfruit	1,2,5,6
mangoes, pawpaw, nonfruit	1,5,6
mangoes, pawpaw, banana, oranges, lemons, nonfruit	1,2,4,6
mangoes, pawpaw, banana, nonfruit	1,6
nonfruit	1,4,6
pawpaw, oranges, lemons, guave	1,4
banana, oranges	1,2
mangoes, pawpaw	1
mangoes, pawpaw, oranges	1
84.2	

mangoes, guave (dried up)	1
mangoes, oranges, guave (dried up)	1
oranges, lemons, guave	1
pawpaw, oranges	1
pawpaw, oranges, guava (dried up)	1
mangoes, guava	1
mangoes	1
mangoes, pawpaw, guava, avocado	1
mangoes, banana, oranges	1
mangoes	1
mangoes, pawpaw (dried up)	1
avocado (dried up)	1
38.9	

Fruit trees planted during last 5 years	Reason for the HH to plant trees:
coloured = percentage of HH that have planted new trees succesfully the last 5 years	1) own consumption 2) sale

dried up' refers fruit trees that where planted unsuccesful

3) agriculture
4) availability of wate
5) ornamental
6) fuel

Fruits sold (KSH)	Tomatoes_now	Tomatoes_before	Onion_now
	0	0	0
	0	0	0
	0	0	0
	1	0	0
	1	0	1
2400	1	1	1
3200	1	0	0
	0	0	0
2000	0	0	0
	1	0	1
mangoes 2000,pawpaw 2000,banana 500,oranges 9	1	0	1
	0	0	0
	0	0	1
	0	0	0
	1	1	1
	1	1	1
	1	1	0
	1	1	0
	1	1	0
	57.9	31.6	36.8

	0	1	0
	0	0	0
	0	0	0
	0	0	0
	1	1	0
	0	0	0
	0	0	0
	0	0	0
	1	1	0
	1	1	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	16.7	22.2	0.0

ncome generated by the sale of different fruits (in KSH	Different types of irrigated crops grown by the HH now and before
	coloured = percentage of HH

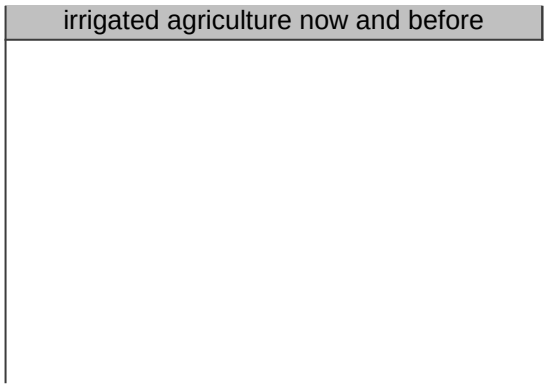
growing the specific irrigated crop
1' refers to HH that irrigate the specific crop

Onion_before	Kale_now	Kale_before	Spinach_now	Spinach_before	Cabbage_now	Cabbage_before
0	0	0	0	0	0	0
0	1	0	0	0	0	0
0	0	0	0	0	0	0
0	1	1	0	0	0	0
0	1	0	0	0	0	0
1	1	1	0	0	0	0
0	1	0	1	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	1	0	0	0	0	0
0	1	0	0	0	0	0
0	0	0	0	0	0	0
0	1	0	0	0	0	0
0	0	0	0	0	0	0
1	1	1	0	0	0	0
1	1	1	1	1	1	1
0	1	1	0	0	0	0
0	1	1	0	0	0	0
0	1	1	1	1	0	0
15.8	68.4	36.8	15.8	10.5	5.3	5.3
0	0	1	0	0	0	0
0	0	1	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	1	1	0	0	0	0
0	1	1	0	0	0	0
0	1	0	0	0	0	0
0	1	0	0	0	0	0
0	1	1	0	0	0	0
0	1	1	0	0	1	1
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	1	1	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0	38.9	38.9	0.0	0.0	5.6	5.6

Irrigated crops			
Tree seedlings_now	Tree seedlings_before	Irrigated crops_now	Irrigated crops_before
0	0	0	0
0	0	1	0
0	0	0	0
0	0	1	1
0	0	1	0
0	0	1	1
0	0	1	0
0	0	0	0
0	0	0	0
1	0	1	0
1	0	1	0
0	0	0	0
0	0	1	0
0	0	0	0
0	0	1	1
0	0	1	1
0	0	1	1
0	0	1	1
0	0	1	1
10.5	0.0	68.4	36.8
0	0	0	1
0	0	0	1
0	0	0	0
0	0	0	0
0	0	1	1
0	0	1	1
0	0	1	0
0	0	1	0
0	0	1	1
0	0	1	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	1
0	0	0	0
0	0	0	0
0	0	0	0
0.0	0.0	38.9	38.9

HH active in growing any irrigated crop now and before

coloured = percentage of HH active in


irrigated agriculture now and before

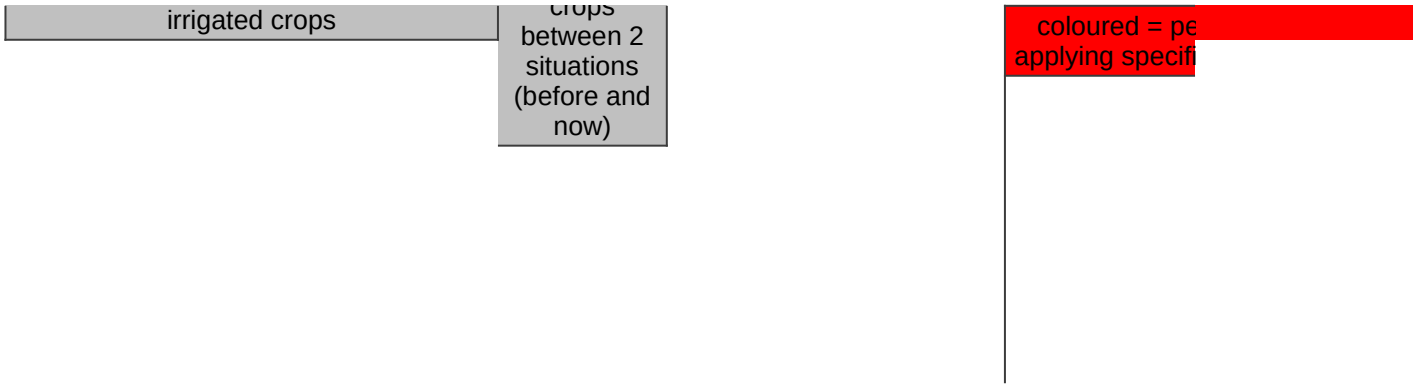
No. of irrigated crops_now	No.of irrigated crops_before	Reason planting
1	0	1
2	1	1
3	0	1,2
3	3	1,2
3	0	2
4	0	1
4	0	1,2
2	0	1,2
3	3	1,2
5	5	1,2
2	2	1
2	2	1,2
3	3	1,2
2.8	1.5	
0	2	1
0	1	
2	2	1
1	1	1
1	0	1
1	0	1
2	2	1,2
3	3	1
1	1	1
1.2	1.3	

No. of irrigated crops grown by HH, now and before	Reason for HH to become active in irrigated agriculture:
coloured = average no. of irrigated crops per HH	1) own consumption

2) sale

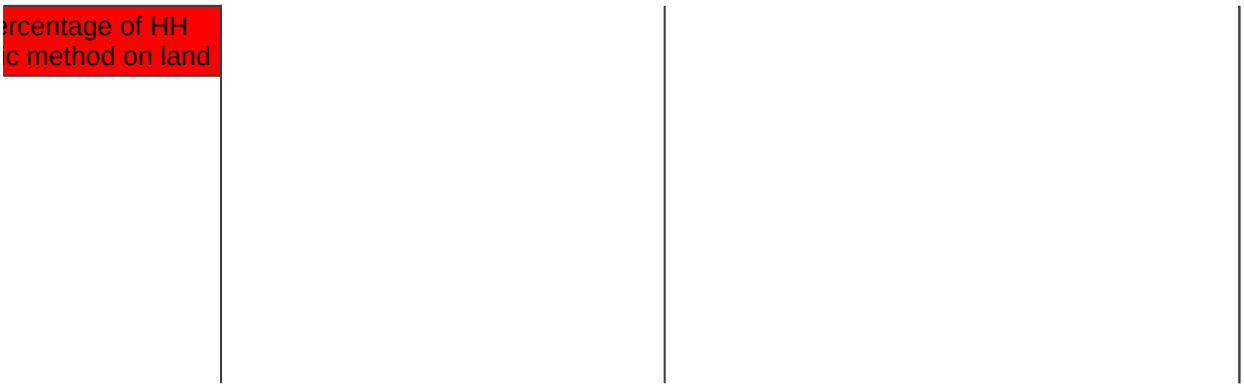
Crop sold (KSH)	Harvest_now	Reason change	Terracing_now
			1
		water related	1
			0
	more	water related, imp. farm me	1
kale 720		water related	1
	more	water related	1
tomatoes 3600	more	water related	1
			1
			1
		water related	1
tomatoes 4000, onion 1050, kale 4000	more	availability of water	1
			1
		water related	1
			0
tomatoes 4800, onion 6000, kale 3000	more	water related	1
	more	water longer available	1
	less	inadequate rain	1
	less	inadequate rain	1
	less	inadequate rain	1
6792.5			89.5
	less	water related	1
		inadequate rain	1
			1
			0
	same		1
	same		1
	same		1
			1
	less	inadequate rain	1
	less	water related	1
			1
			1
			1
			1
	less	water related	0
			0
			1
			0
			77.8

Income generated by the sale of different crops (in KSH)	Difference in harvest from irrigated	no. or in the type of irrigated crops grown by HH	Types of new f applied on the now ar
coloured = average income from selling	crops		

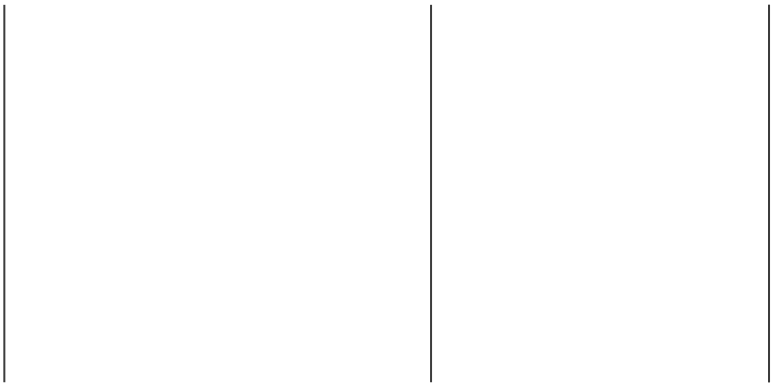

irrigated crops
crops
between 2
situations
(before and
now)
coloured = pe
applying specifi

Terracing_before	New crops_now	New crops_before	New/more trees_now	New/more trees_before
0	0	0	0	0
1	1	0	1	0
0	0	0	1	0
0	0	0	1	0
1	1	0	1	0
0	0	0	1	0
1	1	0	1	0
1	0	0	1	0
1	0	0	1	1
0	1	0	1	1
1	1	0	1	0
0	0	0	1	1
1	1	0	1	0
0	0	0	1	0
1	0	0	0	0
1	0	0	1	0
1	0	0	0	0
0	0	0	1	0
1	0	0	1	0
57.9	31.6	0.0	84.2	15.8
1	0	0	0	0
1	0	0	0	1
0	1	0	0	0
0	1	0	0	1
1	0	0	1	1
1	0	0	0	0
0	1	0	1	0
0	1	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	1	1
1	0	0	1	1
1	0	0	1	1
1	0	0	1	1
0	0	0	1	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	1
50.0	22.2	0.0	38.9	55.6

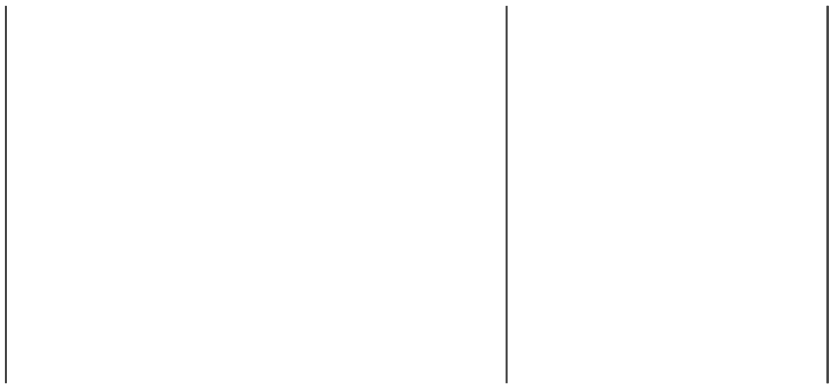
farming methods land by the HH, nd before


ercentage of HH
c method on land

New farming methods					
Grasslines_now	Grasslines_before	Fertilizers_now	Fertilizers_before	Bunds_now	Bunds_before
0	0	1	1	0	0
0	0	1	0	0	0
0	0	1	1	0	0
1	0	1	0	1	0
0	0	1	0	0	0
1	0	1	0	0	0
0	0	1	1	0	0
0	0	1	1	0	0
1	1	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
1	1	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
1	1	1	1	0	0
0	0	1	1	0	0
0	0	1	0	0	0
0	0	1	1	0	0
26.3	15.8	100.0	73.7	5.3	0.0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	0	0	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	1	1	0	0
0	0	0	0	0	0
0	0	1	1	0	0
0	0	1	0	0	0
0.0	0.0	66.7	61.1	0.0	0.0



Mulching_now	Mulching_before	Row planting_now	Row planting_before	Holes_now	Holes_before
0	0	1	0	0	0
0	0	1	0	0	0
0	0	0	0	0	0
0	0	0	0	1	1
1	0	1	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
5.3	0.0	15.8	0.0	5.3	5.3
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0.0	0.0	0.0	0.0	0.0	0.0

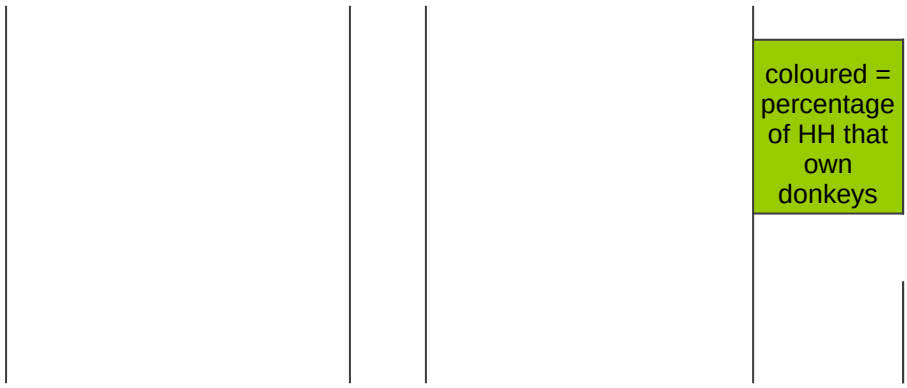


Methods learned	Chickens	Ate	Sold	More/less	Goats	Ate	Sold	More/less
Education,extension officers	1	10	3	less	3			more
Ministry of agriculture	0	3	2	less	8		2	more
Ministry of agriculture	4	5		less	1			more
Ministry of agriculture	50	20	10	less	8			same
SASOL	3	14	21	less	4			more
Ministry of agriculture	0	10	10	less	10		5	less
Education,ministry of argriculture	3	10	10	less	20	5	10	less
Ministry of agriculture	0			less	0			
Ministry of agriculture,seen on other farms	0	8	26	less	4		26	more
Ministry of agriculture	5			less	2		7	more
Ministry of agriculture	18		180	less	10		20	less
Ministry of agriculture	14	3	1	less	10		2	less
Ministry of agriculture	15	5		less	4		4	less
Ministry of agriculture	5	15	8	less	1		2	less
Training in school on agricultural methods	15	6	2	less	16	3		same
Ministry of agriculture	7	10	35	less	6		4	less
Ministry of agriculture	10			less	7			more
Ministry of agriculture	0	7	3	less	2			more
Ministry of agriculture	4			less	9		6	less
	8	126	311		7	8	88	
Observation	4		6	less	0			
Ministry of agriculture	8			less	16		1	less
Observation	10	2		less	15		3	more
Ministry of agriculture	1			less	0			
Ministry of agriculture	10	10	10	less	10			more
Ministry of agriculture	15	30	0	less	30		10	less
FFS	1		10	less	4			same
Education	2		5	less	3		2	less
FFS	5	6	3	less	4		2	less
FFS	30		30	less	20		5	less
FFS	15	30		less	20		15	less
Own initiative	0	7		less	4		3	same
FFS, Ministry of agriculture	15	5	5	less	4		6	less
Education	5	8		less	3		6	less
Ministry of agriculture	8	10		less	6			less
	3	2	5	less	0		2	less
FFS	0	10	5	less	10		6	less
Kitui agriculture project	0			less	0			
	7	120	79		8	0	61	

The way the HH learned about these new farming methods	No. of animals owned by the HH; no. of animals eaten by the family during	Difference in no. of animals between 2
FFS' stands for Farmers Field School		

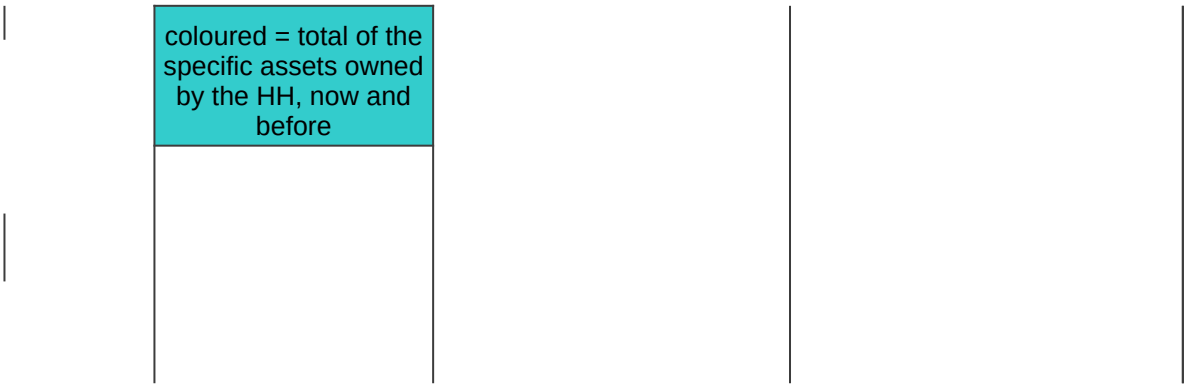
by the family during the last season; and no. of animals sold the last season	between 2 situations, compared to the before_ situation
no. of animals owned, ate and sold per HH	

Livestock											
Sheep	Sold	More/less	Cows	Ate	Sold	More/less	Bulls	Donkeys	Sold	More/less	HH owning donkeys
			2			more		0			0
			0					0			0
			0					1		more	1
			1			less		2		less	1
			1		2	more		1	3	same	1
			8			same		2		same	1
			6	1		less		1		same	1
			0					0			0
			0					0			0
			0					0			0
			4		4	less		1		less	1
			0					0			0
			2		1	less		1		more	1
			0					0			0
			6			more	2	1		same	1
			4		2	less		2		same	1
			3			more		1		more	1
			0					0			0
			5		4	less		1		same	1
			2	1	13		2	1	3		57.9
0			0					1		less	1
0			3			more		1		less	1
0			0					1		same	1
0			0					0			0
0			0					1		same	1
5		less	20		1	less		2		less	1
0			2			same		2		same	1
0			0					1		same	1
0			0				2	3		same	1
0			5		6	less		1		less	1
0			0				2	1		same	1
0			0					1		same	1
0			0					1		less	1
0			0		3	less		1		less	1
0			5		1	less		1		same	1
0			0		1	less		1		same	1
6	4	less	2			less	2	1		same	1
0			0					0			0
1	4		2	0	12		6	1	0		88.9
											No. of HH owning one or more donkeys


coloured = percentage of HH that own donkeys

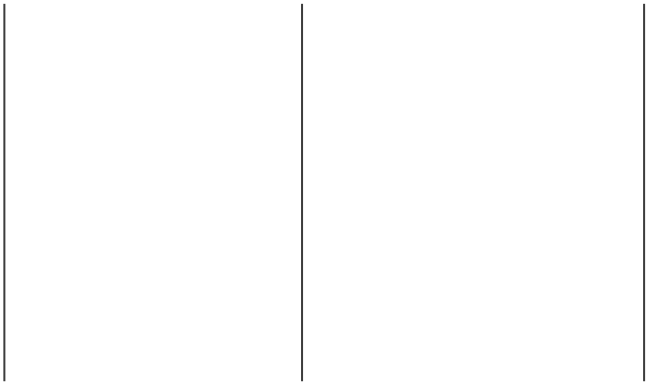
Water	Bed_now	Bed_before	Couch_now	Couch_before	Bicycle_now	Bicycle_before
river	2	2	3	3	1	0
home	5	2				
home	4	3			1	0
river	6	5			6	2
river	4	4	6	3		
river	2	2				
river	3	3				
	2	2				
home	4	4				
home	2	2				
river	2	2			3	1
home	3	3	3	3		
home	2	2			1	1
home	2	3				
home	5	3	3	3	1	0
river	6	6				
river	7	7			2	0
home	3	3			1	0
river	8	8	9	9	1	1
	72	66	1.3	1.1	0.9	0.3
home	4	4			2	2
home	5	4				
home	2	2			1	1
home	1	1				
home	11	11	3	3		
river	8	8	3	3	2	0
river	12	12			1	1
home	4	4			1	1
river	2	2			2	2
river	9	9			2	2
home	10	10	3	3	2	2
home	8	8			2	2
home	3	3			1	1
home	4	4			2	2
river	7	7	3	3	2	2
home	3	3				
river	3	3			2	2
home	1	1				
	97	96	0.7	0.7	1.2	1.1

the animals are watered	No. of different assets owned by the HH, now and before	Practical assets (sum of spade, jembe and plough)
		Kiindu
		Koma

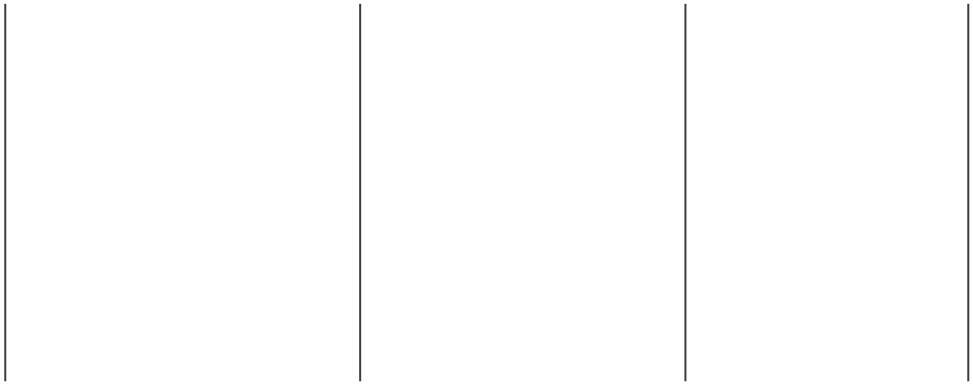

coloured = total of the specific assets owned by the HH, now and before

Assets						
Wheelbarrow_now	Wheelbarrow_before	Cart_now	Cart_before	Spade_now	Spade_before	Jembe_now
1	0			1	1	3
				1	1	2
2	2			6	3	6
				1	1	4
						2
				5	5	6
						2
				1	1	7
				1	1	3
3	0			6	3	11
						5
				1	1	2
				1	0	3
1	1	1	0	2	2	9
				2	2	5
1	0					4
1	0			1	1	6
2	2			1	1	4
0.6	0.3	0.1	0.0	1.6	1.2	4.4
1	1					3
						3
1	1			2	2	2
						4
1	1			4	4	14
2	2			3	3	15
				1	1	8
						5
1	1			2	2	5
1	1					5
				2	2	3
						4
				1	1	5
				2	2	7
1	1	1	1			7
				1	1	3
				2	2	4
				0	0	2
0.4	0.4	0.1	0.1	1.1	1.1	5.5

Now	Before
6.5	5.6
7.3	7.0



Jembe_before	Plough_now	Plough_before	Radio_now	Radio_before	TV_now	TV_before	Grinder_now
			1	0			
3			3	1			
2							
5			6	2	1	0	
4	1	1	1	1	1	0	
2	1	1					
6							
2							
4	1	1	1	1			
3			1	1			
6	1	1	5	2			
5							
2			1	1			1
5			1	0			
9	1	0	3	1	1	0	
5	1	1	1	1			
2	1	1					
6	1	1	3	1			
4	1	1	2	2			
3.9	0.5	0.4	1.5	0.7	0.2	0.0	0.1
3	1	1	1	1			
3	1	1					
2	1	1	1	1			
4							
14	1	1	2	2			
15	2	2	4	0			
8	1	1	2	2			
5			1	1			
5							
	1	1	2	2			
3	1	1	2	1			
4	2	2	3	3			
5			1	1			
7			3	3			
7					1	1	
3			1	1			
4	1	1	1	1			
2							
5.2	0.7	0.7	1.3	1.1	0.1	0.1	0.0



			Sources of energy		
Grinder_before	Kiosk_now	Kiosk_before	Energy	Energy_second	Kerosene
			firewood	charcoal	1
			firewood		1
			firewood	charcoal	1
			firewood		1
			firewood	charcoal	1
			firewood		1
			firewood	charcoal	1
			firewood		1
	1	0	firewood		1
			firewood	charcoal	1
			firewood	charcoal	1
			firewood		1
1			firewood		1
			firewood		1
			firewood	charcoal	1
			firewood	charcoal	1
			firewood	charcoal	1
	1	0	firewood		1
	1	1	firewood	charcoal	1
0.1	0.2	0.1	100.0	52.6	100.0
			firewood		1
			firewood	charcoal	1
			firewood	charcoal	
			firewood		
			firewood	charcoal	
			firewood	charcoal	
			firewood		
			firewood		
			firewood		
			firewood		
			firewood		
			firewood		
			firewood	charcoal	
			firewood		
	1	1	firewood	charcoal	1
			firewood		
			firewood		
			firewood		
0.0	0.1	0.1	100.0	33.3	16.7

Main and secondary sources of energy	HH using keroses for cooking
coloured = percentage of HH that use the specific type of energy as main	coloured = percentage of HH

		source and as secondary source	using kerosene for cooking

Activities_now
brick making, regular employment
regular employment, rope making
bee keeping, basket weaving
brick making, tree nursery, casual labour
brick making, tree nursery, bee keeping, basket weaving, casual labour
casual labour, making necklaces
basket weaving, regular employment
casual labour
goat keeping, brick making, basket weaving, casual labour, kiosk, sell trees/charcoal, rope making
goat keeping, brick making, tree nursery, bee keeping, basket weaving, regular employment
goat keeping, cattle keeping, brick making ,tree nursery, bee keeping, basket weaving, small busi
casual labour, sell charcoal
tree nursery, bee keeping, basket weaving
goat keeping, basket weaving, regular employment, casual labour
regular employment
goat keeping, cattle keeping, basket weaving, casual labour
basket weaving, regular employment
brick making, casual labour, kiosk
goat keeping, cattle keeping, regular employment
tailoring
goat keeping, soap making, casual labour, sell tealeaves
goat keeping, regular employment
regular employment
sell food
goat keeping, cattle keeping, regular employment, bee keeping
casual labour
regular employment
sell milk, sell tea
goat keeping, cattle keeping
goat keeping
casual labour, small vegestable stall
goat keeping, casual labour
goat keeping, cattle keeping, regular employment
regular employment, small business (kanteen)
regular employment, casual labour
goat keeping, sheep keeping, cattle keeping, casual labour, small business
casual labour
Types of non-agricultural activities HH are acti

Non-agricultural activities
Activities_before
regular employment
regular employment
brick making, casual labour
casual labour
basket weaving, regular employment
casual labour
basket weaving
goat keeping, brick making, regular employment
small business
casual labour, sell charcoal
goat keeping, basket weaving, regular employment, casual labour
regular employment
goat keeping, cattle keeping, basket weaving, casual labour
regular employment
casual labour
goat keeping, cattle keeping, regular employment
water selling
goat keeping, casual labour
goat keeping, regular employment
regular employment
sell food
goat keeping, cattle keeping, regular employment, bee keeping
casual labour
regular employment
sell milk,sell tea
goat keeping, cattle keeping
goat keeping
casual labour
goat keeping, casual labour
goat keeping, cattle keeping, regular employment
regular employment, small business (kanteen)
regular employment, casual labour
goat keeping, sheep keeping, cattle keeping, casual labour, small busine
casual labour
ve in, now and before

Cooperation

basket weaving

tree nursery, basket weaving, merry go round

merry go round
grade goat keeping ('farm africa'), basket weaving
tree nursery, basket weaving, merry go round
tree nursery, basket weaving, merry go round
merry go round
tree nursery, bee keeping, basket weaving, merry go round
merry go round
merry go round
grade goat keeping, merry go round
merry go round
farming

70.0

FFS, soap making group
merry go round

farming group
farming group

FFS
farming group
farming group, soap making group

FFS
FFS

50

Types of non-agricultural activities that are in cooperation

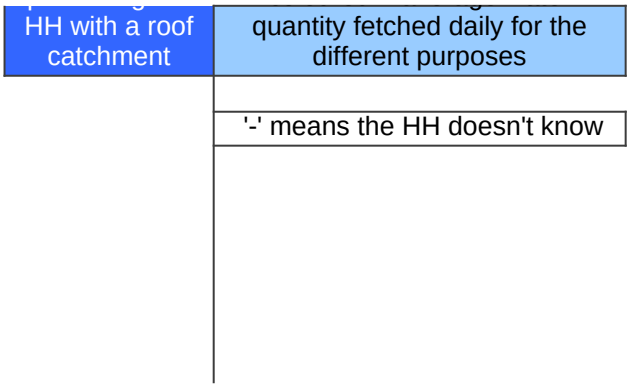
coloured = percentage of HH that are active in a cooperation

FFS' stands for Farmers Field School

Reason change	Total income	SourceDry_now
more time & water	increased	scoophole,open well
	increased	scoophole
retirement	decreased	scoophole
water availability	increased	scoophole,open well
water availability	increased	scoophole
	increased	scoophole
	increased	scoophole
	increased	scoophole
retirement	increased	buys 20L for 10KSH
water availability	increased	scoophole
availability of water	increased	scoophole
	stayed the same	scoophole
realisation benefits are more if work is cooperative	increased	scoophole
	increased	scoophole
	increased	scoophole
	increased	scoophole
increase income	increased	scoophole
increase income	decreased	scoophole
	decreased	scoophole
donkeys died	decreased	scoophole other catchment
increase income	decreased	scoophole other catchment
	stayed the same	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
needed to increase income	decreased	scoophole other catchment
	decreased	scoophole other catchment
children work now	increased	scoophole other catchment
poor business	decreased	scoophole other catchment
	decreased	scoophole other catchment
	decreased	scoophole other catchment
	stayed the same	scoophole other catchment
Reason for the change in non-agricultural activities	Difference in total income of HH compared to the before_situation	Sources of water in the dr

Sources of water				
SourceDry_before	Roof catchment	Dom_now (L)	Dom_before (L)	Agri_now (L)
scoophole	1	40	-	
scoophole	0	80	-	-
scoophole	0	80	-	
scoophole	1	80	-	600
scoophole other catchment	1	80	40	320
scoophole other catchment	1	80	40	240
scoophole	0	40	40	400
scoophole other catchment	0	80	20	
scoophole other catchment	0	80	160	
scoophole other catchment	0	60	20	320
scoophole other catchment	1	160	40	-
scoophole other catchment	0	80	40	
scoophole other catchment	0	80	40	1000
scoophole other catchment	0	40	20	
scoophole other catchment	1	100	80	500
scoophole	1	200	200	120
scoophole	1	160	40	-
scoophole	1	50	60	-
scoophole	1	160	80	-
	52.6	91.1	61.3	437.5
scoophole other catchment	0	80	80	
scoophole other catchment	0	160	-	
scoophole other catchment	1	80	80	
scoophole other catchment	0	40	-	
scoophole other catchment	0	240	240	-
scoophole other catchment	1	160	160	40
scoophole other catchment	1	160	160	-
scoophole other catchment	0	80	80	-
scoophole other catchment	1	80	-	-
scoophole other catchment	1	160	160	240
scoophole other catchment	0	160	160	
scoophole other catchment	0	160	160	
scoophole other catchment	0	120	120	
scoophole other catchment	1	80	80	
scoophole other catchment	1	160	160	40
scoophole other catchment	0	80	-	
scoophole other catchment	0	80	-	
scoophole other catchment	0	40	-	
	38.9	117.8	136.7	106.7

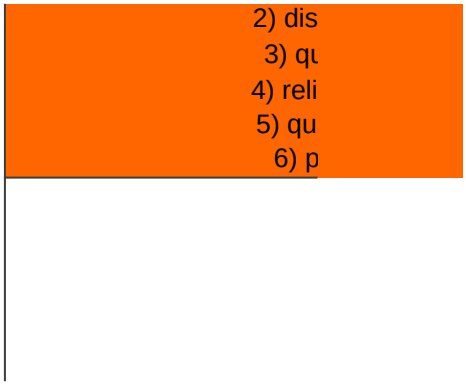
y season, now and before	HH with a roof catchment	Water quantity fetched daily per HH in liters; for different purposes now and before
	percentage of	


HH with a roof catchment
quantity fetched daily for the different purposes
'-' means the HH doesn't know

Water quantity					Factors c	
Agri_before (L)	Live_now (L)	Live_before (L)	Other_now (L)	Other_before (L)	Factor_dom	Factor_agri
	60		160	50	1	
	10	-			2	2
	20	-			1	
-	80	40	-	-	1	1
	-	-	5400		2	1
240	-	-			2	2
	-	-			1	1
					2	
	40	-	4000		2	
	20	10	1600		2	2
	-	-	1900		2	5
	20	-			4	
	60	-			1	1
	20	-			2	
300	320	-			2	2
120	-	-			2	2
-	-	-			2	1
-	5	0		1600	1	1
-	-	-			1	1
220.0	59.5	16.7	2612.0	825.0		
-	10	10			3	
360	40	-			1	
	30	30			1,2	
	-	-			1	
-	40	40			1	
40	-	-			1	1
	-	-			1	
	10	10			1	1
-	20	-			1	
240	-	-			1	1
	80	80			1	
	40	40			1	
	20	20			1	
	5	5			1	
40	20	20			1	1
	20	-			1	
	-	-			1	
	-	-			1	
170.0	27.9	28.3				

'other' includes brick making

Factors considered with c
during the dry season, fc
Factor
1) avai


2) dis
3) qu
4) reli
5) qu
6) p

onsidered		Means of transport				
Factor_live	Factor_other	Transport	TimeDom_now (min)	TimeDom_before (min)	TimesDom_now	
2	2	borrowed donkey, bicycle	60	-	1	
2		human labour	30	-	2	
2		donkey	120	-	2	
1	2	donkey	30	-	1	
2	1	donkey	30	180	1	
2		human labour, donkey	30	120	1	
1		donkey	120	30	1	
		human labour	20	60	2	
2	5	buys water	0	180	1	
2	5	human labour	30	120	2	
1	5	human labour, donkey	30	120	4	
1		human labour	120	180	2	
2		human labour, donkey	60	240	2	
1		human labour	30	240	2	
2		cart, bulls	20	40	0.14	
2		human labour, donkey	30	60	3	
1		donkey	60	20	2	
1	2	human labour	50	30	2	
1		donkey	120	30	2	
			52.1	110.0		
3		human labour, donkey	90	90	1	
1		human labour, donkey	180	120	2	
1		human labour, donkey	150	150	1	
		human labour	240	240	1	
1		human labour, donkey	60	60	3	
		donkey	120	120	2	
		human labour, donkey	120	120	2	
1		donkey	60	60	2	
1		human labour,donkey	90	90	2	
1		donkey	120	120	3	
1		donkey	60	60	2	
1		donkey	45	45	2	
1		donkey	120	120	2	
1		human labour,donkey	60	60	1	
1		donkey	30	30	2	
1		donkey	180	180	1	
1		donkey	120	120	1	
-		human labour	180	180	2	
			112.5	109.2		
hoosing the water source r the different purposes. s are: ilability		Most important means of transporting the fetched water	Time spent by HH on getting water for the different purposes during the dry season (in minutes per day), now and before		No. of times pe water for the di	

coloured = average time spent by HH on fetching water for the different purposes

'-' means the HH doesn't know

Time for fetching water					
TimesDom_before	TimeAgri_now (min)	TimeAgri_before (min)	TimesAgri_now	TimesAgri_before	TimeLive_now (min)
-					10
-	60		2		30
-					120
-	240	-	2	-	30
1	60		2		180
1	-	-	3	3	-
1	120		2		-
1					
2					0
1	180		-		30
2	-		-		-
2					120
1	180		2		60
1					30
1	60		1		30
2	180	180	-	-	30
2	120	120	2	2	10
2	90	30	2	2	5
2	300	300	2	2	30
	144.5	157.5			47.7
1					90
2		120		3	180
1					60
1					-
3					60
2	120	120	1	1	120
2					120
2					60
2	-	-	-	-	90
3	120	120	3	3	120
2					60
2					45
2					120
1					60
2	30	30	2	2	30
1					180
1					120
2					-
	90.0	97.5			94.7

r day the HH gets
ifferent purposes

TimeLive_before (min)	TimesLive_now	TimesLive_before	TimeOther_now (min)	TimeOther_before (min)	TimesOther_now
	1		10		1
-	1	-			
-	-	-			
-	1	-	20	-	-
30	1	1	-		-
-	1	1			
-	-	-			
180	0	2	60		-
120	2	1	-		-
-	-	-	180		daily for a month
180	1	1			
240	2	1			
240	2	1			
-	1	-			
60	-	-			
30	1	1			
0	1	0	-		-
30	1	1			
111.0					
90	1	1			
120	1	1			
60	1	1			
-	-	-			
60	1	1			
120	1	1			
120	1	1			
60	1	1			
90	1	1			
120	1	1			
60	2	2			
45	2	2			
120	2	2			
60	1	1			
30	2	2			
180	1	1			
120	1	1			
-	-	-			
90.9					

TimesOther_before	Time saved
	agriculture
	agriculture
	agriculture
-	agriculture,domestic,income generating
	agriculture,domestic,income generating,cooperative
	agriculture,income generating
	domestic
	domestic
	domestic,income generating
	domestic,leisure
	income generating
	income generating
	income generating
	income generating
	income generating,cooperative
	no time saved
	no time saved
	no time saved
	Other activities
	The way the HH spents the time saved from fetching water

Drought coping r
Mechanisms_now
off-farm income, borrow food
reduce consumption, off-farm income, borrow money
sell livestock, reduce consumption, casual labour, borrow money
sell trees, reduce consumption, off-farm income, borrow money/food
buy cheap food, off-farm income, bee-keeping, casual labour
sell livestock, borrow money, casual labour
sell livestock, buy cheap food, off-farm income
off-farm income
sell livestock, sell trees, off-farm income
sell livestock, off-farm income
sell livestock, off-farm income
buy cheap food, off-farm income
sell livestock, off-farm income
off-farm income, borrow money, relief food
buy cheap food, off-farm income
sell livestock, off-farm income
off-farm income
casual labour
off-farm income, relief food
rely on off-farm income, casual labour
sell livestock, off-farm income, sell tea leaves
rely on off-farm income, borrow food
off-farm income
rely on off-farm income, small business
selling livestock, rely on off-farm income, casual labour
selling livestock, casual labour
selling livestock, regular employment
sell livestock,off-farm income
selling livestock
selling livestock
selling livestock, casual labour
selling livestock, casual labour
sell livestock, off-farm income
rely on off-farm income, small business
casual labour
sell livestock, casual labour
borrow money, off-farm income
Types of drought coping mechanisms a

mechanisms				
Mechanisms_before	Malaria	Cholera	Typhoid	Amoebic dysentry
off-farm income, borrow food	same			
reduce consumption, off-farm income, borrow money	more			
sell livestock, reduce consumption, casual labour, borrow money	more	more		
reduce consumption, off-farm income, borrow money/food	more			
casual labour			less	less
sell livestock, borrow money, casual labour			more	more
sell livestock, buy cheap food, off-farm income	more		more	more
off-farm income				less
off-farm income	more			less
sell livestock, off-farm income, casual labour	more			less
sell livestock, off-farm income	more	less		less
buy cheap food, off-farm income	more	less		less
sell livestock	more			less
off-farm income, borrow money, relief food	more			less
buy cheap food, off-farm income	more	less	less	
sell livestock, off-farm income	more	less		
casual labour	more			more
casual labour	more			more
off-farm income, relief food	more			
rely on off-farm income, casual labour	less			less
sell livestock, off-farm income, sell food	more			more
rely on off-farm income, borrow food				more
off-farm income	same			
rely on off-farm income, small business	more			more
selling livestock, rely on off-farm income, casual labour	more		more	
selling livestock, casual labour				more
selling livestock, regular employment	same			
sell livestock, off-farm income				
selling livestock	more			
selling livestock	same			less
selling livestock, casual labour	more			more
selling livestock, casual labour				
sell livestock, off-farm income	same			
rely on off-farm income, small business	more			
casual labour	same			
sell livestock, casual labour	same			
borrow money, off-farm income				
applied by the HH, now and before	Types of common diseases HH s			
	Kwashiorkor, Marasmus and Malnutrition a			
	Cholera, Typhoid and Amoebic dysentry ar			

Common diseases_now							
Skin diseases	Kwashiorkor	Marasmus	Coughs&Colds	Pneumonia	Bilhardzia	AIDS	Malnutrition
	less						
	less	less					
				same			
					less		
				more	less		
	less		more				
			more				less
less						more	
			more		less		
less	less		same				

				more			
more			more				
			same				
			less				
			more				
			more				
			same				
			same				
			more				
			same				
same							

suffer from and the difference between the 2 situations, compared to the before_situation

are diet-related diseases
e water-related diseases

Reason	Owner
	community members
water related, more food	community members
	SASOL
water related	community members
better diet	community members
water related	don't know
climate change	community members
cleaner water (use of latrines)	community members
more musquitoes, boiling water, less open water	community members
climate change, better water quality, more food	community members
climate change, better water quality, better diet	community members
climate change, better diet	community members
availability of water	community members
more wind, better water, more food	community members
better water quality	community members
improved hygiene (latrines)	community members
climate change	community members
-	community members
climate change	community members

boiling water now
decreases water quality
water-quality is bad
climate change
poor diet
poor diet
better medication
boiling+chlorinating water now
dirty water
climate change

Reason for the change in the common diseases	Owner of sand dams according to HH
'-' means the HH doesn't know	

Participation	Way of involvement
break rocks,mix gravel+sand	announced by village elder
mix gravel	village elder held meeting
collect stones,fetch water	village elder told to form group
collect stones,fetch water	chief
carry sand and stones	chief and village elder
carry stones	informed by group
mix cement,building	SASOL
break stones	don't know
supervisor	visit of SASOL
carry sand,mix cement	SASOL
chairlady in construction,mix gravel,cut stones	subchief
collect stones,babysitting	chief
carry stones	village elder
babysitting	village elder
carry stones	SASOL visited school
provide food for builders	village elder
collect stones	village elder and subchief
collect stones,mix gravel	village elder
collect stones,babysitting	village elder

Participation of HH in construction of sand dam	The way HH got involved in sand dam project

Dams
Maintenance
owner of riverbanks:plant napier grass,community:no destruction
owner of riverbanks:plant napier grass
no
no
community:no scoopholes near dam
no
community:no destruction
community:no scoopholes near dam
village elder:no destruction, no scoopholesnear dam
community:no scoophole near dam
chairlady:no scoopholes near dam,no destruction
community:plant napier grass on riverbanks
community:no scoopholes near dam
community:no destruction
community:no destruction
community:fenced sand dam
no
no
community:no destruction

Type of care/maintenance carried out on sand dam and by whom, according to HH

	Benefits	
Siting	Main	Second
community:good bedrock,SASOL:helped constructing	incr.water availability	shorter distance
organisation + community	incr.water availability	shorter distance
SASOL + some community members	incr.water availability	incr.cash crop production
distance to other dams	incr.domestic food	incr.water availability
good bedrock	incr.water availability	incr.domestic food
experts	incr.livestock	incr.cash crop production
experts	incr.water availability	shorter distance
don't know	incr.water availability	shorter distance
good bedrock	shorter distance	better health
community + SASOL	incr.water availability	incr.domestic food
community + technicians	incr.income	incr.cash crop production
don't know	incr.water availability	incr.domestic food
technicians	incr.water availability	incr.domestic food
don't know	incr.water availability	cheaper vegetables
good bedrock	incr.time for activities	incr.water availability
experts	incr.water availability	incr.domestic food
SASOL	none	incr.water availability
good bedrock	none	
don't know	incr.water availability	incr.livestock

Procedure during site-selection of sand dam (how and by whom), according to HH	Most important benefits fr

Third	Fourth
incr.livestock	incr.income
incr.domestic food	incr.livestock
incr.income	incr.sand for construction
more trees planted	
incr.domestic food	shorter distance
incr.domestic food	
incr.income	
incr.cash crop production	incr.income
incr.domestic food	
easier to construct house	
better health	
incr.cash crop production	incr.livestock
incr.livestock	

om sand dam, according to HH