



Government of Samoa

2004 FOOD SECURITY ASSESSMENT SURVEY



MINISTRY OF AGRICULTURE, FORESTRY,
FISHERIES AND METEOROLOGY
AND
MINISTRY OF FINANCE

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I would like to record my appreciation to Heads of households who willingly answered questions put forward to them without their assistance, this exercise would not have completed successfully. To our colleagues at the Ministry of Agriculture, Forestry, Fisheries and Meteorology, we look forward to our continuous partnership in these undertakings in the future.



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INTRODUCTION

The 2004 Agricultural Survey was scheduled to be conducted in March 2004 as a follow up of the 2002 Survey, monitoring any changes in the Agricultural Sector in the country.

However, Samoa was hit by Cyclone Heta early January and the priority shifted to providing information of damages caused by the Cyclone. Thus, the main objective of the 2004 survey were:

to assess the short and medium term impact of Cyclone Heta on food security through estimates of crops grown before, and damages caused by Cyclone Heta.

This exercise, as with the previous agricultural surveys, was conducted jointly by the Ministry of Agriculture, Forestry, Fisheries and Meteorology (MAAF) and the Statistical Division of the Ministry of Finance.

SURVEY METHODOLOGY

The sample selection utilized the Household Sampling Framework developed by the Statistical Division with assistance from the Secretariat of the South Pacific Commission (SPC).

A five percent (5%) sample of households was selected from each of the four regions and enumeration was completed in four weeks.

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SUMMARY OF RESULTS

AGRICULTURAL ACTIVITY

<i>Total Number of Households</i>	<i>23261</i>
Apia Urban Area	5499
North West Upolu	7247
Rest of Upolu	5132

Savaii	5383
<i>Number of Non-Agricultural Households</i>	<i>4799</i>
Apia Urban Area	2875
North West Upolu	1601
Rest of Upolu	220
Savaii	104
<i>Number of Agriculturally-Active Households</i>	<i>18462</i>
Apia Urban Area	2624
North West Upolu	5646
Rest of Upolu	4913
Savaii	5279

GROWING AND SELLING OF MAJOR CROPS

Percentage of Agriculturally Active Households Growing Major Crops for Consumption before Cyclone Heta

Coconut	79
Cocoa	62
Taro	51
Taro Palagi	68
Taamu	58
Banana	71
Breadfruit	91
Cucumber	42
Tomato	39

Percentage of Agriculturally Active Households Growing Major Crops for Sale before Cyclone Heta

Coconut	2
Cocoa	5
Taro	3
Taro Palagi	3
Taamu	3
Banana	2
Breadfruit	0.2
Cucumber	10

Tomato	12
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Percentage of Agriculturally Active Households Growing Major Crops for Sale and Consumption before Cyclone Heta

Coconut	18
Cocoa	30
Taro	45
Taro Palagi	26
Taamu	38
Banana	25
Breadfruit	5
Cucumber	48
Tomato	48

ESTIMATED DAMAGE TO MAJOR CROPS (PERCENTAGE) BY CYCLONE HETA

Coconut	57
Cocoa	40
Taro	32
Taamu	31
Banana	13
Breadfruit	21

ANALYSIS OF RESULTS

(i) LEVEL OF AGRICULTURAL ACTIVITY

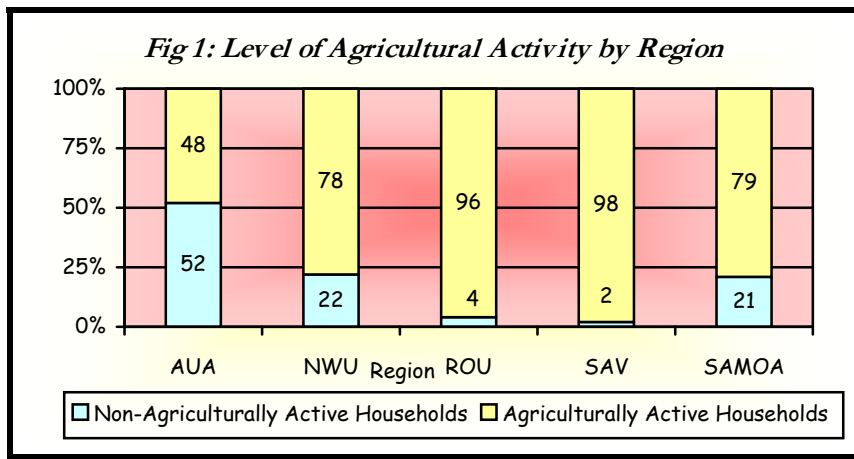
The first section of the results provides information on the level of household agricultural activity and these are categorized into two levels. The first level is made up of households with no agricultural activity, referred to as 'Non-Agriculturally Active'. The second level comprised of households that grow crops for home consumption and for sale, which are referred to as 'Agriculturally Active'.

Survey results indicate that twenty one percent (21%) of households were non-agriculturally active, as oppose to seventy nine percent (79%) that were found to be agriculturally active.

In a break down by region, the survey found the Savaii region as the most agriculturally active region with ninety eight percent (98%) of total households engaged in some form of agricultural activity. This is followed by the Rest of Upolu with ninety six percent (96%) percent and North West Upolu with seventy

eight percent (78%) of total households involved in agriculture. In comparison, the Apia Urban Area was the least agriculturally active region with only forty eight percent (48%) percent of households.

Figure 1 below shows the percentage distribution of the Level of Agricultural Activity for Samoa by region.



Based on the results, a couple of assumptions can be drawn with reference to food security. Overall these assumptions include:

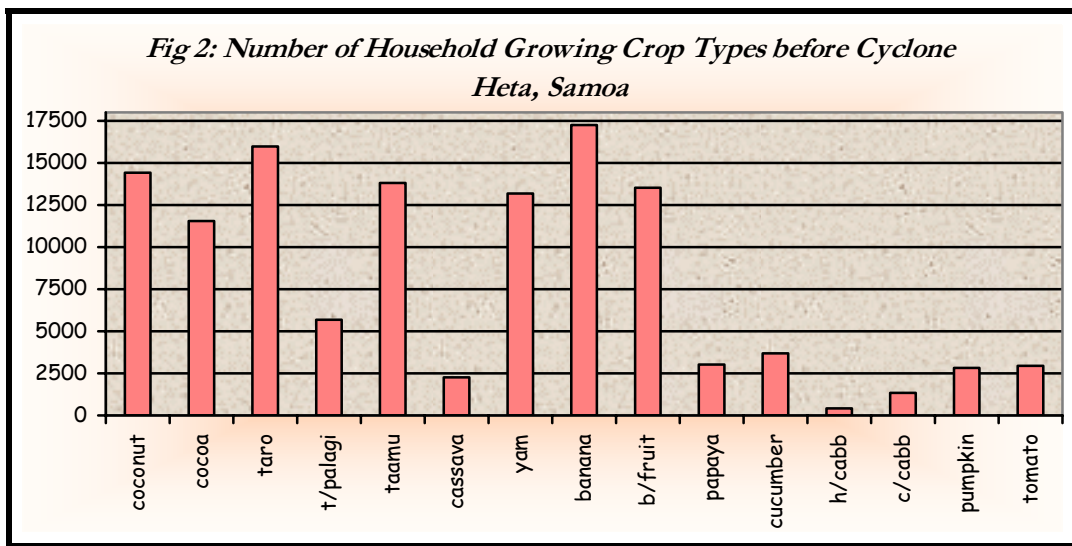
- The majority of households in Samoa (79% or 18,460 households) depend on agriculture for consumption and sale.
- Savaii, Rest of Upolu and North West of Upolu regions are heavily depended on agriculture for consumption and sale. Although not on the same level as the regions mentioned before, Apia Urban Area does have households that are depended on agriculture for their livelihood.

(ii) CROPS GROWN

The second section of the results looks at major crops grown by households before Cyclone Heta. This includes selected staple and vegetable crops. Information collected on crops grown were categorized into three categories – crops grown for consumption, crops grown for sale, and crops grown for consumption and sale.

The survey showed banana as the main crop grown through out the country before Cyclone Heta. A total of 17,250 households grew banana, followed by taro with 15,980 households, coconut with 14,420 households, taamu with 13,810 households, breadfruit with 13,520 households and Cocoa with 11540 households. In terms of vegetable crops, cucumber was the most grown with 3690 households followed by tomato with 2940 households and pumpkin with 2820 households, and Chinese cabbage with 1340 households.

Figure 2 shows the number of households growing major crops by type before Cyclone Heta



(a) Crops Grown for Home Consumption

Survey results indicate breadfruit as one of the top three crops grown primarily for home consumption, a total of 12,280 households grew breadfruit for this reason. The second main crop grown for home consumption is banana with 12,210 households. The third main crop is coconut where a total of 11,370 households were reported as growing it mainly for home consumption. The most common vegetable grown by households for home consumption as reported by the survey was cucumber with 1,530 households. The least grown vegetable is head cabbage with 120 households.

(b) Crops Grown for Sale

A few households grew crops mainly for sale. This is evident with 610 households reported in the survey as growing cocoa for this purpose. The majority of these households (310) are located in the Savaii region. Taro and banana are the other main crops grown with 470 and 420 households respectively. Tomato on the other hand is the main vegetable that was grown for commercial purposes with 360 households.

(c) Crops Grown for Home Consumption and Sale

According to survey results taro is the main crop grown for both home consumption and sale with some 7,250 households. The Rest of Upolu region reported the most households that accounted for forty four percent (44%), Savaii with thirty six percent (36%), North West Upolu region with seventeen percent (17%) and the remaining three percent (3%) in the Apia Urban Area.

Table 4, 5 and 6 in the appendix provides a comprehensive analysis of crops grown for home consumption, sale and for both sale and home consumption before Cyclone Heta.

(iii) DAMAGED TO CROP BY CYCLONE HETA

The survey also provides data to estimate damaged caused by Cyclone Heta to major crops (Coconut, Banana, Taro, Taamu, Breadfruit and Cocoa). From the results, estimated damage for these crops are tabulated below:

CROP	ESTIMATED DAMAGE (%)
Coconut	57
Banana	13
Taro	32
Taamu	31
Breadfruit	21
Cocoa	40

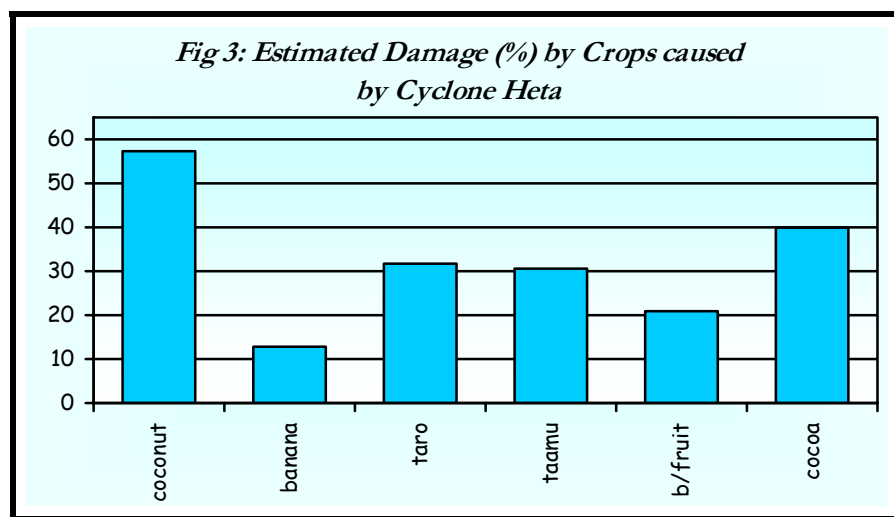
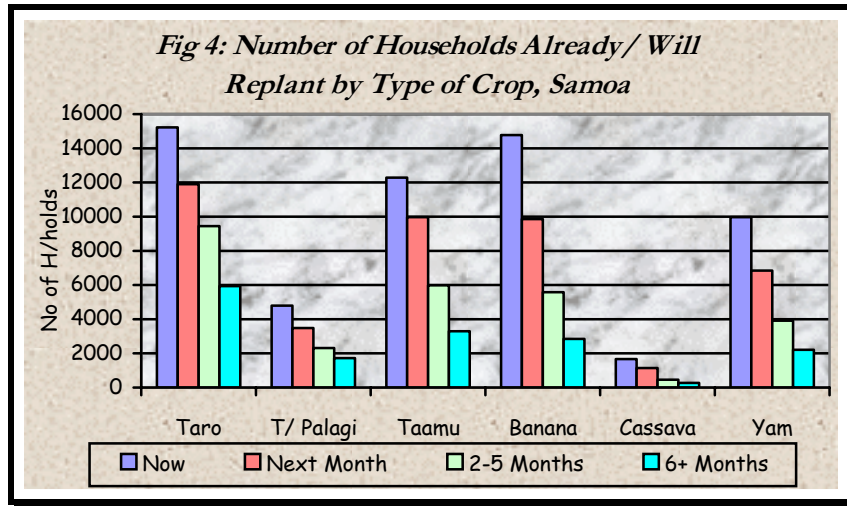


Table 8.3 in the appendix provides the reader with a tabulated analysis of crop areas that was affected by Cyclone Heta for each region and for the whole country.

(iv) HOUSEHOLDS ALREADY/ WILL REPLANT



Replanting of major crops provides us with information on the future availability of stable food crops. Some 80% of Agriculturally active households have already started replanting Taro, Banana and Taamu at the time of the survey.

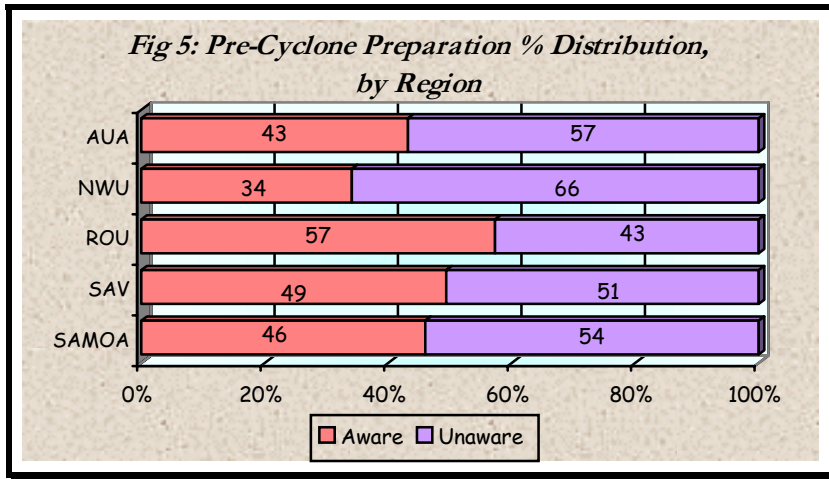
This suggests that these major stable food crops will continue to be available in the next twelve months. Furthermore, the information collected from the survey suggests that these crops will continue to be available in the short term.

Table 9 in the appendix provides a detailed presentation of the number of household's already/ will replant by type of crop and by region.

(v) PRE-CYCLONE AND POST-CYCLONE PREPARATIONS

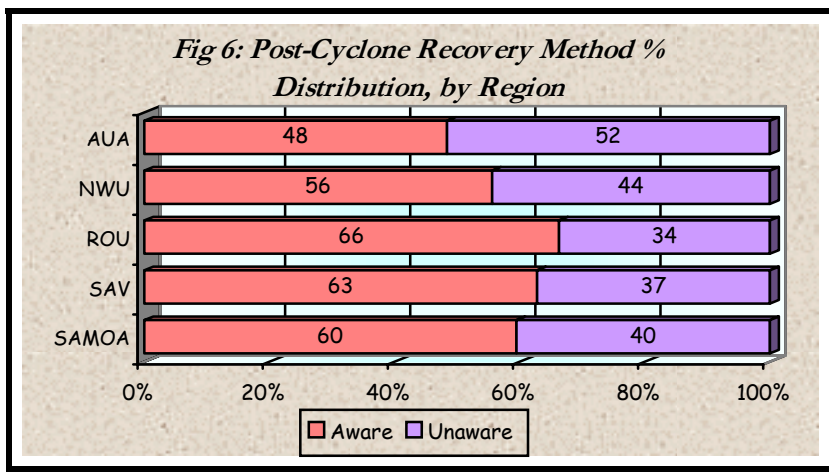
Agriculturally Active households were also asked whether they are aware of any Pre-Cyclone preparation to minimize crop loss and Post-Cyclone methods to recover or maximize the use of damaged crops.

(a) Pre-Cyclone Preparations



From a total of 18460 agriculturally active households, forty six percent (46%) or 8480 households were aware of pre-cyclone preparations to minimize crop damage as a result of a cyclone.

(b) Post-Cyclone Preparation

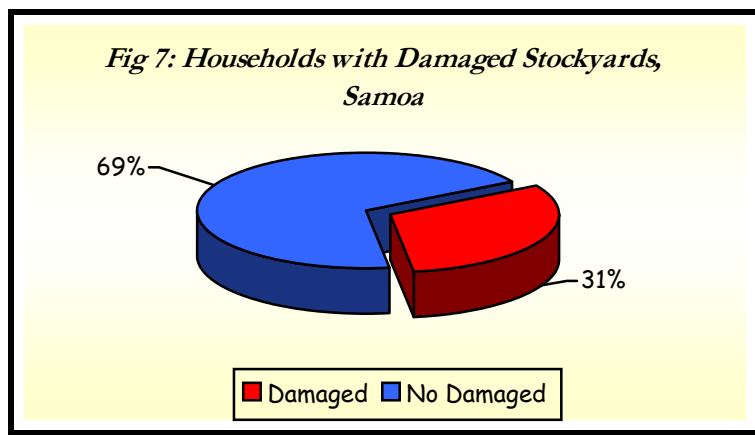


The survey also recorded some sixty percent (60%) households from a total of 18460 agriculturally active households who are aware of post-cyclone recovery methods to maximize the use of damaged crops resulting from a cyclone

(vi) DAMAGED STOCKYARD AND FENCE

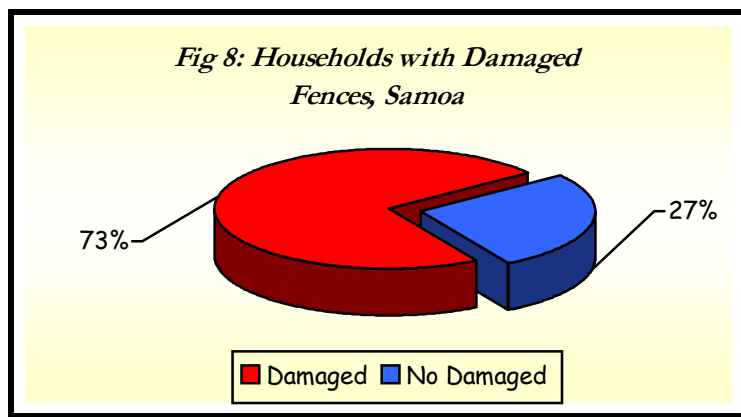
A total of 5010 households were reported from the survey as having livestock. The majority of this total was recorded from Savaii with 2260 households followed by 1880 households in the Rest of Upolu region, 500 households in the North West of Upolu region and 380 households in the Apia Urban Area.

(a) Stockyard



Some five hundred households reported damaged stockyard as a result of the cyclone, representing about thirty one percent (31%) of households with stockyard.

(b) Fence

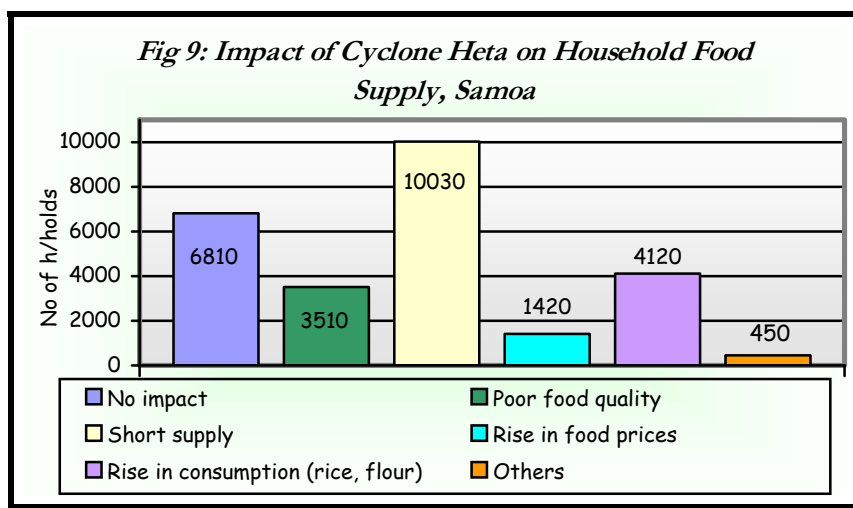


From a total of 3230 households that have fences to protect their livestock, about 2360 or seventy three percent (73%) of these households around the country reported as having damaged fences due to the cyclone.

(vii) IMPACT OF CYCLONE HETA

All surveyed households were finally asked to assess the impact of Cyclone Heta on the following three main factors:

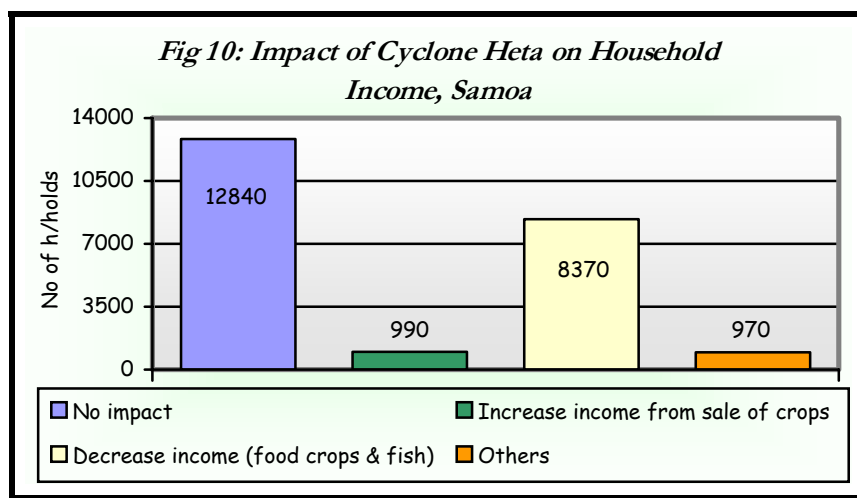
(a) Household Food Supply



Some 10030 households reported that Cyclone Heta has resulted in the short supply of food, and this is evident in the North West of Upolu region whereby more than a third (3630 households) of this total experienced a shortage in food supply. The Apia Urban Area region reported only seventeen percent (17%) or 1720 households experiencing a shortage in food supply.

Furthermore, about 6810 households stated that Cyclone Heta had no impact on their food supply and of this total, thirty two percent (32%) or 2190 households were recorded from the North West of Upolu region.

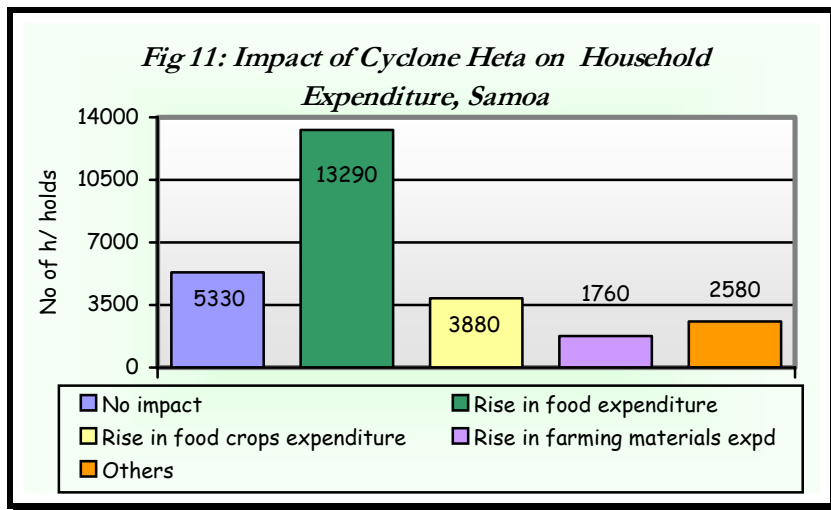
(b) Household Income



As reported by some 12840 households, Cyclone Heta had no impact on their Income. Approximately seventy percent (70%) or 8970 households from both the Apia Urban Area and the North West of Upolu region constitute to this total.

Moreover, a total of 8370 households reported that cyclone Heta had resulted in the reduction in their income caused by the short supply of food crops and fish. Of this total, twenty nine percent (29%) of households came from the North West of Upolu region, thirty four percent (34%) from the Rest of Upolu and thirty one percent (31%) from the Savaii region, indicating the reliance of these regions on the agricultural sector as a source of income. The Apia Urban Area represents the remaining six percent (6%) of households.

(c) Household Expenditure



As reported from the survey, a combine total of 13290 households reported that their expenditure on food such as rice, flour and tinned fish, has increased as a result of the cyclone. A distribution of this total indicates that twenty two percent (22%) of households came from the Apia Urban Area, twenty nine percent (29%) of households from the North West Upolu region, twenty five percent (25%) of households from the Rest of Upolu region and the remaining twenty four percent (24%) of households came from the Savaii region.

Additionally, some 5330 households through out the country reported that the cyclone did not have any impact on their expenditure patterns, and the north West of Upolu region contribute the most with 1880 households.

APPENDIX

Table 1. Number of households by level of agricultural activity by region

Region	Level of Agricultural Activity			
	Total	Non Agricultural	Mainly for Home Consumption	Mainly for Sale
<i>Total</i>	23,261	4,799	17,573	889
Apia Urban Area	5,499	2,875	2,519	105
North West Upolu	7,247	1,601	5,473	173
Rest of Upolu	5,132	220	4,633	280
Savaii	5,383	104	4,948	331

Table 2. Number of households growing crops by type of crops grown before Cyclone Heta (Jan, 2004) by Region

Type of Crops Grown	Region				
	Total	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
Coconut	14,418	1,322	3,807	4,154	5,135
Cocoa	11,543	1,007	3,613	2,596	4,327
Taro	15,977	1,847	4,327	4,773	5,031
Taro Palagi	5,682	693	2,012	1,218	1,760
Taamu	13,811	1,112	4,218	3,614	4,865
Cassava	2,264	210	433	379	1,242
Yam	13,177	1,259	3,916	3,654	4,348
Banana	17,246	2,435	5,473	4,473	4,865
Breadfruit	13,521	1,742	4,024	3,614	4,141
Papaya	3,023	273	887	1,118	745
Cucumber	3,687	168	1,298	978	1,242
Head Cabbage	416	63	130	120	104
Chinese Cabbage	1,344	210	606	260	269
Pumpkin	2,821	231	1,082	639	870
Tomato	2,944	399	1,233	339	973

**Table 3. Number of households growing crops by Type Crop Status before Cyclone Heta,
(Jan, 2004) - Apia Urban Area**

Type of Crop	Crop Status					
	Total Hoseholds Reporting	Less than 3 months	more than 3 months & less than 5 months	more than 6 months & less than 8 months	more than 8 months	Not Stated
<i>Total</i>	8,626	1,091	2,561	1,427	3,316	231
Taro	1,847	147	798	504	357	42
Taro Palagi	693	147	294	105	126	21
Taamu	1,112	105	315	210	462	21
Cassava	210	0	63	63	63	21
Yam	1,259	21	273	189	756	21
Banana	2,435	0	525	336	1,490	84
Cucumber	168	126	21	0	21	0
Head Cabbage	63	42	0	0	21	0
Chinese Cabbage	210	189	21	0	0	0
Pumpkin	231	63	126	0	21	21
Tomato	399	252	126	21	0	0

**Table 3. Number of households growing crops by Type Crop Status before Cyclone Heta,
(Jan, 2004) - North West Upolu**

Type of Crop	Crop Status					
	Total Hoseholds Reporting	Less than 3 months	more than 3 months & less than 5 months	more than 6 months & less than 8 months	more than 8 months	Not Stated
<i>Total</i>	<i>24,705</i>	<i>3,353</i>	<i>6,576</i>	<i>4,154</i>	<i>10,059</i>	<i>562</i>
Taro	4,327	541	1,860	1,038	757	130
Taro Palagi	2,012	281	606	498	606	22
Taamu	4,218	151	1,320	757	1,882	108
Cassava	433	22	173	65	173	0
Yam	3,894	151	498	519	2,682	43
Banana	5,473	130	692	736	3,699	216
Cucumber	1,298	692	411	130	43	22
Head Cabbage	130	65	43	0	22	0
Chinese Cabbage	606	411	130	65	0	0

Pumpkin	1,082	260	454	195	173	0
Tomato	1,233	649	389	151	22	22

Table 3. Number of households growing crops by Type Crop Status before Cyclone Heta, (Jan, 2004) - Rest of Upolu

Type of Crop	Crop Status					
	Total Households Reporting	Less than 3 months	more than 3 months & less than 5 months	more than 6 months & less than 8 months	more than 8 months	Not Stated
<i>Total</i>	<i>20,448</i>	<i>1,937</i>	<i>2,576</i>	<i>5,332</i>	<i>10,124</i>	<i>479</i>
Taro	4,773	280	879	2,915	599	100
Taro Palagi	1,218	120	120	339	619	20
Taamu	3,614	240	399	759	2,137	80
Cassava	379	100	0	100	180	0
Yam	3,654	60	220	499	2,816	60
Banana	4,473	20	220	559	3,594	80
Cucumber	978	419	399	80	40	40
Head Cabbage	120	60	40	0	0	20
Chinese Cabbage	260	140	80	0	0	40
Pumpkin	639	320	120	60	140	0
Tomato	339	180	100	20	0	40

Table 3. Number of households growing crops by Type Crop Status before Cyclone Heta, (Jan, 2004) - Savaii

Type of Crop	Crop Status					
	Total Households Reporting	Less than 3 months	more than 3 months & less than 5 months	more than 6 months & less than 8 months	more than 8 months	Not Stated
<i>Total</i>	<i>25,569</i>	<i>1,946</i>	<i>3,830</i>	<i>5,714</i>	<i>13,437</i>	<i>642</i>
Taro	5,031	269	1,346	2,484	807	124
Taro Palagi	1,760	186	290	621	642	21
Taamu	4,865	124	352	870	3,416	104
Cassava	1,242	104	228	207	683	21
Yam	4,348	166	352	559	3,168	104
Banana	4,865	21	145	311	4,244	145
Cucumber	1,242	497	435	248	21	41

Head Cabbage	104	41	41	0	0	21
Chinese Cabbage	269	145	124	0	0	0
Pumpkin	870	62	104	228	435	41
Tomato	973	331	414	186	21	21

Table 3. Number of households growing crops by Type Crop Status before Cyclone Heta, (Jan, 2004) - Samoa

Type of Crop	Crop Status					
	Total Hoseholds Reporting	Less than 3 months	more than 3 months & less than 5 months	more than 6 months & less than 8 months	more than 8 months	Not Stated
<i>Total</i>	<i>79,348</i>	<i>8,328</i>	<i>15,543</i>	<i>16,627</i>	<i>36,936</i>	<i>1,914</i>
Taro	15,977	1,236	4,882	6,942	2,520	396
Taro Palagi	5,682	734	1,309	1,563	1,993	83
Taamu	13,811	620	2,386	2,595	7,897	313
Cassava	2,264	225	464	435	1,099	42
Yam	13,155	398	1,342	1,766	9,421	228
Banana	17,246	170	1,582	1,941	13,028	525
Cucumber	3,687	1,734	1,266	458	125	103
Head Cabbage	416	208	125	0	43	41
Chinese Cabbage	1,344	885	355	65	0	40
Pumpkin	2,821	704	804	482	769	62
Tomato	2,944	1,412	1,029	379	42	82

Table 4. Number of Households growing crops before Cyclone Heta Mainly for Home Consumption by Type of Crops grown, by Region

Type of Crop	Region				
	Total Hoseholds Reporting	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
Coconut	11,369	1,175	2,899	3,195	4,099
Cocoa	7,163	861	1,774	1,837	2,691
Taro	8,066	1,490	2,985	1,458	2,132
Taro Palagi	3,889	567	1,298	699	1,325
Taamu	7,954	965	3,093	1,617	2,277
Cassava	2,077	168	411	359	1,139
Yam	9,235	986	2,812	1,937	3,499
Banana	12,206	1,910	3,721	3,055	3,520
Breadfruit	12,273	1,574	3,613	3,235	3,851
Papaya	2,563	252	671	978	663
Cucumber	1,531	126	324	459	621
Head Cabbage	124	21	22	40	41
Chinese Cabbage	314	84	108	60	62
Pumpkin	1,261	168	303	459	331
Tomato	1,139	294	454	80	311

Table 5. Number of Households growing crops before Cyclone Heta Mainly for Sale by Type of Crops Grown, by Region

Type of Crop	Region				
	Total Hoseholds Reporting	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
Coconut	233	0	130	0	104
Cocoa	609	21	238	40	311
Taro	474	42	65	160	207
Taro Palagi	168	0	87	40	41
Taamu	394	21	65	60	248
Yam	186	21	65	80	21
Banana	420	105	151	60	104

Breadfruit	21	21	0	0	0
Papaya	62	0	22	20	21
Cucumber	358	0	216	80	62
Head Cabbage	106	21	65	20	0
Chinese Cabbage	315	84	151	80	0
Pumpkin	342	21	238	0	83
Tomato	359	63	173	40	83

Table 6. Number of households growing crops before cyclone Heta partly for sale and partly for home consumption by type of crops grown by region

Type of Crop	Region				
	Total Households reporting	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
Coconut	2,567	105	736	899	828
Cocoa	3,497	105	1,493	699	1,201
Taro	7,247	294	1,190	3,155	2,609
Taro Palagi	1,457	105	541	459	352
Taamu	5,210	84	952	1,897	2,277
Cassava	144	21	0	20	104
Yam	3,479	189	887	1,637	766
Banana	4,263	399	1,449	1,318	1,097
Breadfruit	729	105	281	260	83
Papaya	376	21	173	120	62
Cucumber	1,755	42	736	439	538
Head Cabbage	186	21	43	60	62
Chinese Cabbage	693	42	324	120	207
Pumpkin	1,135	21	519	160	435
Tomato	1,405	42	584	220	559

**Table 7. Number of households growing crops by types of crops grown
by crop use before Cyclone Heta**

Type of Crop	Total households reporting	Mainly for home consumption	Mainly for sale	Partly for home consumption & partly for sale	Not Stated
Coconut	14,418	11,369	233	2,567	250
Cocoa	11,543	7,163	609	3,497	273
Taro	15,977	8,066	474	7,247	190
Taro Palagi	5,682	3,889	168	1,457	169
Taamu	13,811	7,954	394	5,210	252
Cassava	2,264	2,077	0	144	43
Yam	13,177	9,235	186	3,479	277
Banana	17,246	12,206	420	4,263	357
Breadfruit	13,521	12,273	21	729	499
Papaya	3,023	2,563	62	376	22
Cucumber	3,687	1,531	358	1,755	42
Head Cabbage	416	124	106	186	0
Chinese Cabbage	1,344	314	315	693	22
Pumpkin	2,821	1,261	342	1,135	83
Tomato	2,944	1,139	359	1,405	42

Table 8.1 Estimated single crop equivalent area (acres) grown before Cyclone Heta by type of crop by region

Type of Crop	Region				
	Total households reporting	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
Coconut	45,166	898	4,342	13,280	26,646
Cocoa	10,665	642	2,745	937	6,341
Taro	13,680	1,023	2,281	1,534	8,841
Taro Palagi	4,516	216	1,405	187	2,708
Taamu	11,783	494	2,246	594	8,449
Cassava	1,389	63	223	72	1,031
Yam	10,309	757	2,384	231	6,938
Banana	15,178	1,329	5,030	984	7,836
Breadfruit	11,752	803	2,330	910	7,709
Papaya	2,200	5	546	92	1,557
Cucumber	3,367	131	1,323	120	1,793
Head Cabbage	1,059	43	953	21	42
Chinese Cabbage	1,250	111	532	146	462
Pumpkin	2,234	86	995	3	1,150
Tomato	2,801	148	954	71	1,628

Table 8.2 Estimated damage of single crop equivalent area(acres) grown before Cyclone Heta by type of crop by region

Type of Crop	Region				
	Total households reporting	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
Coconut	25,866	665	1,319	8,975	14,907
Cocoa	4,260	254	1,004	572	2,430
Taro	4,341	564	536	478	2,763
Taro Palagi	1,073	102	368	82	521
Taamu	3,603	351	507	157	2,588
Cassava	600	0	43	1	556

Yam	2,422	409	796	114	1,103
Banana	1,949	494	820	21	614
Breadfruit	2,455	378	535	88	1,454
Papaya	289	0	124	0	165
Cucumber	798	0	510	65	223
Head Cabbage	650	21	629	0	0
Chinese Cabbage	182	0	182	0	0
Pumpkin	528	12	359	2	155
Tomato	713	22	379	10	302

Table 8.3 Estimated single crop equivalent area (acres) damaged after cyclone Heta by type of crop by region

Type of Crop	Region														
	Samoa			Apia Urban Area			North West Upolu			Rest of Upolu			Savaii		
	Total Grown	Total Damaged	% Damaged	Total Grown	Total Damaged	% Damaged	Total Grown	Total Damaged	% Damaged	Total Grown	Total Damaged	% Damaged	Total Grown	Total Damaged	% Damaged
Coconut	45,166	25,866	57.3	898	665	74.0	4,342	1,319	30.4	13,280	8,975	67.6	26,646	14,907	55.9
Cocoa	10,665	4,260	39.9	642	254	39.6	2,745	1,004	36.6	937	572	61.1	6,341	2,430	38.3
Taro	13,680	4,341	31.7	1,023	564	55.1	2,281	536	23.5	1,534	478	31.2	8,841	2,763	31.3
Taro Palagi	4,516	1,073	23.8	216	102	47.4	1,405	368	26.2	187	82	43.9	2,708	521	19.2
Taamu	11,783	3,603	30.6	494	351	71.1	2,246	507	22.6	594	157	26.5	8,449	2,588	30.6
Cassava	1,389	600	43.2	63	0	0.0	223	43	19.4	72	1	1.1	1,031	556	54.0
Yam	10,309	2,422	23.5	757	409	54.1	2,384	796	33.4	231	114	49.2	6,938	1,103	15.9
Banana	15,178	1,949	12.8	1,329	494	37.2	5,030	820	16.3	984	21	2.2	7,836	614	7.8
Breadfruit	11,752	2,455	20.9	803	378	47.1	2,330	535	23.0	910	88	9.7	7,709	1,454	18.9
Papaya	2,200	289	13.1	5	0	0.0	546	124	22.8	92	0	0.0	1,557	165	10.6
Cucumber	3,367	798	23.7	131	0	0.0	1,323	510	38.5	120	65	54.2	1,793	223	12.5
Head Cabbage	1,059	650	61.4	43	21	49.8	953	629	65.9	21	0	0.0	42	0	0.0
Chinese Cabbage	1,250	182	14.6	111	0	0.2	532	182	34.2	146	0	0.0	462	0	0.0
Pumpkin	2,234	528	23.6	86	12	13.7	995	359	36.1	3	2	66.7	1,150	155	13.5
Tomato	2,801	713	25.4	148	22	14.6	954	379	39.8	71	10	14.0	1,628	302	18.5

Table 9. Number of households already/will replant at time of visit by type of crop, by region

Type of Crop	Region							
	Apia Urban Area				North West Upolu			
	Now	Next Month	2 to 5 months	6 months or more	Now	Next Month	2 to 5 months	6 months or more
Taro	1,616	882	420	420	4,089	2,791	1,774	1,385
Taro Palagi	693	378	252	252	1,644	1,017	736	584
Taamu	882	378	273	210	3,613	2,834	1,622	1,125
Banana	2,330	1,259	693	588	4,478	2,747	1,493	1,276
Cassava	147	42	21	0	411	238	87	87
Yam	923	525	336	252	2,488	1,731	1,060	844

Table 9. Number of households already/will replant at time of visit by type of crop, by region (cont)

Type of Crop	Region							
	Rest of Upolu				Savaii			
	Now	Next Month	2 to 5 months	6 months or more	Now	Next Month	2 to 5 months	6 months or more
Taro	4,633	3,614	3,335	839	4,886	4,617	3,913	3,292
Taro Palagi	839	719	519	100	1,615	1,366	807	621
Taamu	3,175	2,516	1,558	240	4,617	4,244	2,526	1,677
Banana	3,534	2,516	1,637	300	4,431	3,333	1,760	1,056
Cassava	280	280	120	0	828	580	228	186
Yam	2,816	1,917	1,238	140	3,747	2,671	1,284	1,222

Table 9. Number of households already/will replant at time of visit by type of crop, Samoa (cont)

Type of Crop	Time of replanting			
	Now	Next Month	2 to 5 months	6 months or more
Taro	15,224	11,904	9,442	5,936
Taro Palagi	4,791	3,480	2,314	1,725
Taamu	12,287	9,972	5,979	3,252
Banana	14,773	9,855	5,583	2,842

Cassava	1,666	1,140	456	273
Yam	9,974	6,844	3,918	2,206

Table 10. Number of households that are aware of pre-cyclone

crop preparation by region

Region	Total	Yes	No
Total	18,462	8,483	9,979
Apia Urban Area	2,623	1,133	1,490
North West Upolu	5,646	1,925	3,721
Rest of Upolu	4,913	2,816	2,097
Savaii	5,280	2,609	2,671

Table 11. Number of households that are aware of post-cyclone

method to recover by region

Region	Total	Yes	No
Total	18,462	10,964	7,498
Apia Urban Area	2,624	1,259	1,365
North West Upolu	5,646	3,137	2,509
Rest of Upolu	4,912	3,255	1,657
Savaii	5,280	3,313	1,967

Table 12. Number of households with damaged stockyard and fences

Region	Total Households Reporting	Stockyard			Fences		
		Damage	No Damage	No Stockyard	Damage	No damage	No Fence
Total	5,011	496	1,094	3,419	2,362	870	1,777
Apia Urban Area	378	84	84	210	210	105	63
North West Upolu	497	87	22	389	195	65	238
Rest of Upolu	1,880	160	140	1,578	1,378	100	399
Savaii	2,256	166	849	1,242	580	600	1,077

Table 13. Number of households and impact of cyclone Heta on food supply by region.

Impact on food supply	Region				
	Total	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
No Impact	6,812	1,574	2,185	1,438	1,615
Poor quality of food (susu talo etc.)	3,509	861	498	639	1,511
Short supply	10,026	1,721	3,634	2,476	2,194
Buy more tinned food	44	0	44	0	0
Can't keep perishable food	22	0	22	0	0
Increased prices of food	1,415	1,028	325	20	41
Increase consumption of rice and flour	4,116	1,491	996	1,238	393
Too much stealing results to less food available for consumption	383	0	238	0	145

Table 14. Number of households and impact of cyclone Heta on household income by region.

Impact on household income	Region				
	Total	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
No impact	12,836	4,576	4,391	1,777	2,091
Increase income from sale of crops	986	42	108	339	496
Decrease income - short supply of food crops and fish	8,370	462	2,466	2,876	2,567
Decrease income from business e.g shops	166	21	43	60	41
Decrease income from business e.g shops and restaurants	314	105	87	40	83
Decrease income because of job influence from cyclone	295	126	87	20	62
Decrease income because expenditure on food is increasing	191	126	65	0	0

Table 15. Number of households and impact of cyclone Heta on household expenditure by region.

Impact on household expenditure	Region				
	Total	Apia Urban Area	North West Upolu	Rest of Upolu	Savaii
No Impact	5,328	1,133	1,882	739	1,573
Increase expenditure on food e.g rice, flour, tinned food	13,292	2,855	3,808	3,255	3,375
Increase expenditure on food crops	3,876	1,784	1,623	180	290
Increase expenditure on farming materials	1,764	336	585	699	145
Increase expenditure on fuel and water supply	354	63	87	80	124
Increase expenditure on family and church events eg, church and village donation	1,087	105	216	579	186
Increase expenditure on housing repairing	786	315	152	320	0
Decrease expenditure due to the effect of income from farming	355	42	173	140	0