

Fiji Cocoa Industry

Brief Industry Profile

2005

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Table of Content

	Introduction	i
1.0	Fiji Cocoa Export	1
1.1	Bureau of Statistics Figures	1
1.2	Quarantine Figures	2
1.3	Anomaly in Data	2
2.0	Fiji Cocoa Import	3
2.1	Bureau of Statistics	3
3.0	Current Status	4
3.1	A Company Experience	4
3.2	Cocoa price per Kg	5
3.3	Gross Margin	5
4.0	Fiji Cocoa Market outlook	6
4.1	Cocoa Export Supply Chain	6
4.2	Farmers Market Share & margin	6
4.3	Cocoa Import Supply Chain	7
5.0	Conclusion	8
	Appendix 1	9
	Appendix 2	10
	Appendix 3	11

1.0 Fiji Cocoa Export

1.1 Bureau of Statistics Data

Fiji currently exports a number of cocoa/cocoa products ranging between HS codes: 18040000 and 18069090, with applied tariff at zero (0%).

Total export in 2004 estimates a value of FJD\$210,940 ("Freight on Board") from a total volume of 55.19 tones. Countries importing Fiji Cocoa include Australia, Japan, USA, A/Samoa, Canada, Samoa, Vanuatu and a few others. (see table below) Tonga contribute the largest value of cocoa export at 16% of total export volume followed by USA (15%), New Zealand at (14%), Australia (12%), Kiribati (11%), and the rest under 10%.

Cocoa and cocoa preparation	
2004 Fob Value (FJD'000) Exports	
Commodity Description	Total
Cocoa beans, whole or broken, raw or roasted	\$66.69
Cocoa wholly or partly defatted	\$2.88
Cocoa butter, fat & oil	\$1.41
Cocoa powder, not containing added sugar or other sweetening matter	\$20.95
Cocoa powder, containing added sugar or other sweetening matter	\$4.83
Chocolate confectionary in blocks, slabs, or bars	\$25.28
Beverage and preparations for making beverage	\$12.28
Other	\$15.48
Chocolate coated products; sugar confectionary containing cocoa	\$34.80
Other	\$26.34
Total (1) Export of Cocoa Beans	\$210.94

Table 1: Fiji Cocoa Export; source Bureau of Statistics - 2004

In terms of volume, Canada imported the most with 21% followed by New Zealand (16%), Australia (15%), and others below 10%. (see Appendix 1) Interestingly to note that USA imported only 6% of Fiji's total tonnage export, while contributing to 15% of Fiji's export earning.

1.2 Quarantine Figures

Export figures received from the Quarantine department of the Ministry of Agriculture shows only four (4) countries that are of interest to Fiji's sun dried cocoa beans. These are New Zealand, Australia, Canada, and USA. (see table below) Briefly, Canada received the lowest average volume over the period (2000 – 2004) with 0.223 tones (223 kg), while New Zealand is receiving the highest at 9.346 tones a year. Australia and USA linger in between at 7.2 and 2.6 tones respectively.

Fiji Fresh Cocoa Export 2000 - 2004 (Kg)						
	2000	2001	2002	2003	2004	Average
NZ	7,458	7,262	12,914	9,496	9,598	9,346
AU	7,020	7,710	6,985	7,860	6,652	7,245
Canada	0	948	-	48	120	223
US	4,534	1,920	3,132	1,840	1,775	2,640
Total	19,012	17,840	23,031	19,244	18,145	19,454

Table 2: Fiji Cocoa Export; Quarantine Figures - 2004

1.3 Anomaly in Data

Variation in data between the (Bureau of Statistics and Quarantine) two institutions should not be troubling, but used merely as indicators of Fiji's cocoa prospects. However, the variation in data indicates the separate areas of data specification the two institutions are working with. For example; the Quarantine Division of the Ministry of Agriculture collect its data from all goods that moves across the border, while the Bureau of Statistics gather data information from the Customs data entry mechanism. The latter include products of various commodity lines that include fresh, processed, and semi-processed goods.

All commodities export identified by the Bureau of Statistics Department fall under the HS code: Cocoa beans, whole or broken, raw or roasted – 1801.000.00, Cocoa shells, husks, skins and other cocoa waste – 1802.000.00, Cocoa paste, whether or not defatted – 1803.000.00, Cocoa butter, fat and oil – 1804.000.00, Cocoa powder, not containing added sugar or other sweetening matter – 1805.000.00, and Chocolate and other food preparations containing cocoa – 1806.000.00. Applied export tariff rate is zero (0%) percent.

2.0 Fiji Cocoa Imports

2.1 Bureau of Statistics

Fiji imports 154 tones of cocoa products, which mainly comprises of processed cocoa. These are chocolates, cocoa butter, decaffeinated, and non-decaffeinated cocoa, cocoa for beverage and the like.

The total value of Fiji cocoa import is estimated at \$5 million, majority of which is a product of Australia that is valued at \$3 ("Cost and Freight"), New Zealand followed with \$602,000, USA (\$215,000), Brazil (\$204,000) Indonesia (\$181,000), and Belgium (\$145,000). Other countries including India, Netherlands, Germany, Colombia, Thailand, and Singapore to name a few receive less than \$100,000. In volume, Australia bag the highest at 384 tones, followed by New Zealand (82 tones), Indonesia (55 tones), USA (52 tones), Brazil (28 tones) and Malaysia (15 tones).The remaining countries exporting cocoa to Fiji less than 10 tones, with the lowest of 0.01 tones, which is Thailand. (see Appendix 2)

Fiji imports commodities under the following HS-coding system: 180.400.00, 180.500.00: and 180.600.00. The latter (Chocolate and other food preparation containing coco) hold the highest volume and value of imported cocoa product line. Countries' exporting cocoa products to Fiji includes the Netherlands, Thailand, Brazil, Australia, etc. The highest applied tariff rate of imported cocoa is 10% and the lowest is 3%. The earlier is being applied on tariff line 180.600.00, whilst the latter is applied at product line between 180.100.00 and 180.500.00. These are chocolates and other products on chocolates for the earlier and cocoa beans and cocoa butter for the latter.

Fiji Cocoa/Cocoa product Import Market Share by Country of Import (2004)

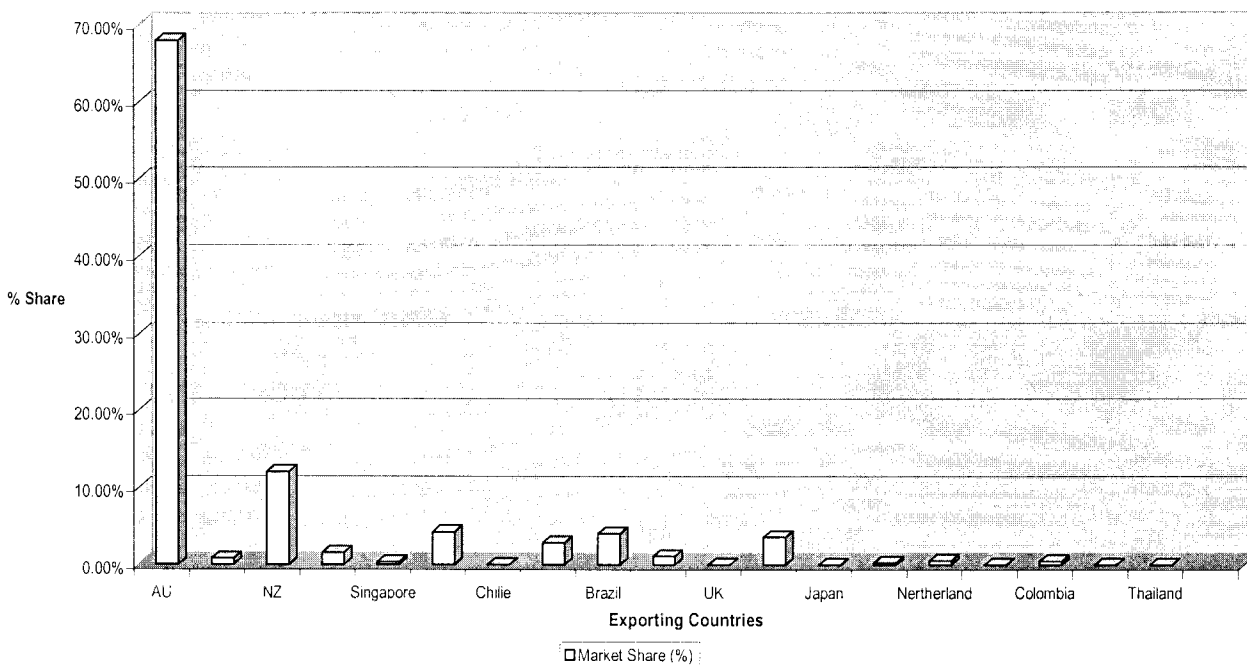


Figure 1: Fiji Cocoa Import; source Bureau of Statistics

3.0 Current Status

3.1 A Company Experience: 2002 - 2004

Current cocoa farmers exist in the Northern Division (Matasawalevu), in the Central Division (Wainibuka and Tailevu), in the Eastern Division (Koro Is.), and a few in the Western Division (Rakiraki).

Quantity production per area vary between locality with Matasawalevu producing the highest of 15 tones (2004 figures) followed by growers of Namau and Ra. Farmers from Koro have increased their production from 0.22 tones in 2002 to 0.24 tones in 2004, showing strong anticipation and acceptance to the commodity. Other parts of Tailevu recorded the company's 2004-purchase table as being the first appearance on record by an estimated 2 tones of dry cocoa.

Cocoa Production from Major Cocoa Producing Areas in Fiji			
Cocoa Production (Kg)	2002	2003	2004
Matasawalevu	11,132	13,351	15,826
Namau	291	2,883	1,741
Ra	458	1,011	1,679
Nalovo	212		
Koro	221	231	246
Other Tailevu			2,331
Other	102	384	217
Total	12,416	17,860	22,040

Table 3: Current Cocoa Production in Fiji: source Koko Siga Fiji [2002 – 2004]

3.2 Cocoa Price per Kg

Farmers receive an estimated average price of \$1.96/kg over the 3-year period ending 2004, with Namau earning the most at \$2.02/kg and Nalovo the least at \$0.54/kg. Below is the distribution table of prices offered to farmers, as supplied by Koko Siga Fiji Ltd. In area of production, Matasawalevu is presumed to have the largest with 60 ha, and Namau 3.5 ha. The remaining area has no clear indication of area utilized for cocoa production.

Estimated Cocoa Price per KG					# of Farmers	Area (Ha)
Cocoa Production Value (\$)	2002	2003	2004	3 yr Average		
Matasawalevu	\$1.93	\$1.95	\$1.99	\$1.96	96	60
Namau	\$2.03	\$2.01	\$2.01	\$2.02	9	3.5
Ra	\$1.46	\$1.76	\$1.79	\$1.67	N/A	N/A
Nalovo	\$0.54			\$0.54	N/A	N/A
Koro	\$1.87	\$2.01	\$1.80	\$1.89	N/A	N/A
Other Tailevu			\$1.70	\$1.70	N/A	N/A
Other Areas	\$1.60	\$1.90	\$1.61	\$1.70	N/A	N/A
Total	\$1.89	\$1.95	\$1.94	\$1.93	N/A	N/A

Table 4: Local Price; source Koko Siga Fiji

In brief, the cost of cocoa to farmers is increasing in 3 areas (Matasawalevu, Ra, Other areas). The latter cannot be identified in this study, but is presumably to have come from areas that once has cocoa plantations, and has been influenced by the exporter. However, the increase in price of cocoa to farmers in these areas attributes to the rising proficiency in the production of sun-dried cocoa by farmers.

3.3 Farm Gross Margin

In Matasawalevu, the estimated gross margin¹ for a hectare of cocoa is \$2,024.00 per hectare in the first year of harvesting², that increases \$5,000/ha in the proceeding year (year 5), which increases to \$12,000/ha in the 10th year at an average \$8,000/ha from first harvest.

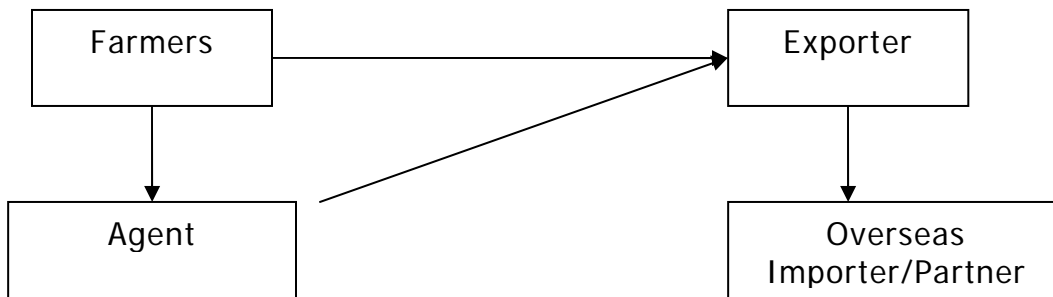
¹ See; Appendix 3.

² Cocoa takes an estimated 4 years between sowing to harvesting.

4.0 Fiji Cocoa Market Outlook

4.1 Cocoa Export Supply Chain

Majority of Fiji Cocoa Farmers are contracted to exporters they deal with. The exporters give farmers advice on establishment of cocoa through to drying of beans, which they collect and ship to partners overseas. However, some exporters have established agents in these cocoa farming localities to take the risk involved in purchasing and dealing directly with farmers.



4.2 Farmers Market Share & Margin

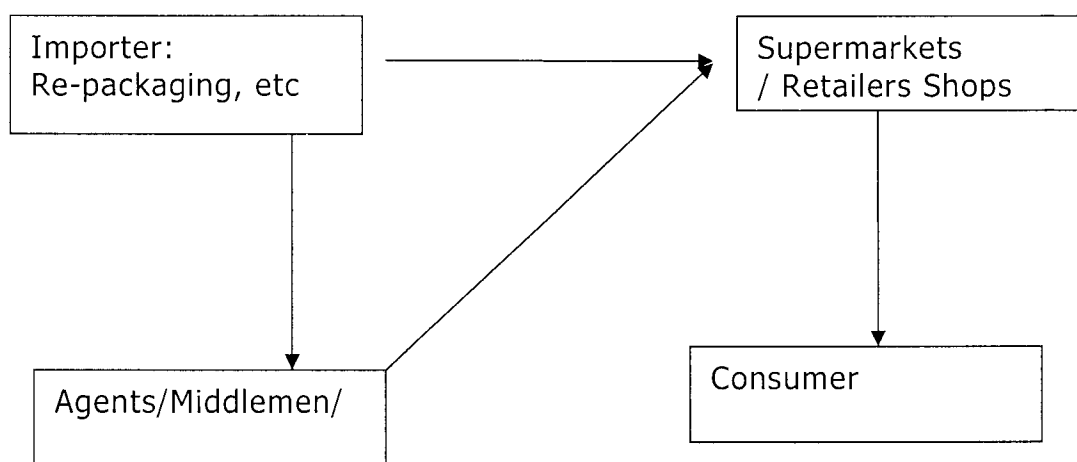
Given the above-mentioned prices (Bureau of Statistics and Exporters Price), an illustrative farmers market margin can be derived. By taking the average export price of fresh cocoa bean for year 2004, BoS (“fob”) price calculate it at \$3.63/kg. This does not include variation in exchange rate. The price of cocoa offered to farmers is (as above) estimated at \$1.93/kg. With these two figures, the marketing-agents share is not seen which may account to a variation of 10% - 15% from the two individual prices.

The Market Margin, using the figures above, is estimated at: farmer; 65%, while the exporter taking the other 35%. The same applies, with the two figures may include a variation of 15% market margin for the marketing-agents.

4.3 Cocoa Import Supply Chain

Fiji imports a good number of cocoa products, most of which are processed and semi-processed goods. These goods enter the country via an importer who may re-pack the coco to his/her company package, or distribute directly to local stores or agencies.

The price distribution is not accounted in this paper, as it was not part of its original intention, whilst companies involved are not often obliged to supply such information.



5.0 Conclusion

The Fiji Cocoa Industry has shown signs of sustainability over the years, though not at the required output, but at being able to supply a niche quantity of sun-dried cocoa.

This in itself is a great step in reviving this once prime industry, not only as a source of income to farmers, but as a crop that can be relied upon by farmers with land areas suitable for tree crop production.

Moreover, existing trees where current production fringes is estimated to have aged around 20 years, surpassing its maximum production potential. Thus, to neatly revive the whole industry, new planting material (Amelonado) has to be introduced to replace the existing old-aged cocoa trees.

To say the least, Fiji cocoa industry has the potential to increase its merit to farmers, stakeholders and the economy as a whole, but may require suitable investment from all parties including Government.

Fiji Cocoa Export (tonnage) 2004

	Cocoa beans, whole or broken, raw or roasted	Cocoa wholly or partly defatted	Cocoa butter, fat & oil	cocoa powder, not sugar or sweetn matter	Cocoa powder, dded suga or sweeten matter	Choc in blocks, slabs, or bars	Bevge preprtn for beverage	other	Choc; sugar cocoa	other	Total (tone)	% Vol of Export
AU	8.5	0	0	0	0.03	0	0	0	0	0	8.54	15.48%
Japan	1.02	0	0	0	0	0	0	0	0	0	1.02	1.85%
NZ	6.9	0	0	0	0	0	0	1.96	0	0	8.96	16.23%
USA	1.5	0	0.24	0.036	0.01	0.37	1.21	0.08	0	0.34	3.82	6.93%
W&Fatuna	0.3	0	0	0.018	1.03	0.004	0.1	0	0.048	0.28	1.79	3.24%
Tuvalu	0	0.24	0	0.34	0	2.35	0	2	0.086	0.05	5.07	9.19%
A/Samoa	0	0	0	0.34	0	2.35	0	0.02	0	3.64	4.14	7.50%
Canada	0	0	0	0.15	0	1.8	0	9.63	0.04	0.35	11.97	21.69%
Kiribati	0	0	0	0.04	0	1.43	0	0.24	1.38	0.07	3.18	5.77%
Nauru	0	0	0	0.07	0	0	0	0	0	0	0.07	0.13%
Tonga	0	0	0	1.18	0.37	0	0.77	0	0.58	0.78	0.79	6.71%
Samoa	0	0	0	0.096	0	1.83	0	0	0.35	0	2.28	4.14%
Cook Is	0	0	0	0	0	0.03	0	0	0	0	0.04	0.07%
Marshals	0	0	0	0	0	0.025	0	0	0	0	0.03	0.05%
Vanuatu	0	0	0	0	0	0.03	0	0	0.072	0	0.10	0.18%
Sol Is	0	0	0	0	0	0	0	0	0.17	0.3	0.47	0.85%
Brazil	0	0	0	0	0	0	0	0.07	0	0	0.08	0.14%
Total	18.36	0.24	0.24	2.29	1.44	8.01	2.08	13.94	2.74	5.84	55.19	
% to Total Export	33.26%	0.43%	0.43%	4.15%	2.62%	14.52%	3.77%	25.26%	4.97%	10.59%		

Fiji Cocoa Imports (tonnage) 2004

	Cocoa butter, fat and oil	Cocoa powder, not sugared or sweetened matter	Cocoa powder, dded sugar or sweeten matter	Choc confec in blocks, slabs or bars	Bevrge and prep for making bevrge	other	Filled	not filled	choc coated products, sugar confec contn cocoa	other	Total Volume Import (tones)	% to Total Cocoa Volume Import
AU	0.10	71.40	29.12	52.39	0.22	10.18	28.68	0.29	44.24	147.96	384.60	59.61%
India	0.00	5.89	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	6.34	0.98%
NZ	0.01	9.43	2.73	15.74	12.40	2.14	0.06	3.49	18.59	17.54	82.12	0.00%
Malaysia	0.00	14.08	0.00	0.00	0.38	0.00	0.00	0.00	0.73	0.11	15.29	2.37%
Singapore	0.00	3.25	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	3.48	0.54%
USA	0.00	0.11	46.72	0.39	0.00	0.18	1.32	1.38	2.00	0.84	52.95	8.21%
Chilie	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01%
Belgium	0.00	0.00	0.00	0.04	0.00	0.00	3.18	0.00	0.00	4.86	8.07	1.25%
Brazil	0.00	0.00	0.00	20.15	0.37	0.37	7.69	0.00	0.00	0.00	28.57	4.43%
Switzerland	0.00	0.00	0.00	0.08	0.00	0.00	1.03	0.53	0.36	0.11	2.11	0.33%
UK	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.03	0.00%
Indonesia	0.00	0.00	0.00	17.44	1.74	1.74	0.05	0.00	17.15	17.81	55.92	8.67%
Japan	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00%
Germany	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.20	0.98	0.15%
Netherlands	0.00	0.00	0.00	0.00	0.00	0.00	1.45	0.00	0.00	0.00	1.45	0.23%
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20	0.03%
Colombia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.92	2.92	0.45%
HK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00%
Thailand	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00%
Total	0.11	104.16	78.64	106.69	15.10	14.85	44.23	5.69	83.29	192.38	645.14	
% to Total Volume Export	0.02%	16.15%	12.19%	16.54%	2.34%	2.30%	6.86%	0.88%	12.91%	29.82%		

Cocoa Gross Margin/Cash Flow over 6 year period:

				Year 1	Year 2	year 3	year 4	year 5	year 6
Cocoa	Units			Amount					
Crop planted	ha			1.00	1.00	1.00	1.00	0.00	0.00
Area Harvested	ha			0.00	0.00	0.00	1.00	2.00	3.00
yield per hectare	ha			0.00	0.00	0.00	0.50	1.00	1.50
total production	t/ha			0.00	0.00	0.00	0.50	2.00	4.50
marketable Production (90%)				0.00	0.00	0.00	0.45	1.80	4.05
Price per tone	\$/t			1,700.00	1,700.00	1,700.00	1,700.00	1,700.00	1,700.00
Value per tone				0.00	0.00	0.00	765.00	3,060.00	6,885.00
Farm Inputs									
Variable Cost	Units	Amount	Rate	Totals					
Seeds	Num	60.00	0.01	\$0.60	\$0.60	\$0.60	\$0.60	\$0.00	\$0.00
Urea	Kg	30.00	0.80	\$24.00	\$48.00	\$120.00	\$144.00	\$144.00	\$144.00
Phosphate	Kg	50.00	0.60	\$30.00	\$90.00	\$180.00	\$180.00	\$180.00	\$180.00
Potash	Kg	40.00	0.60	\$24.00	\$72.00	\$144.00	\$144.00	\$144.00	\$144.00
Gramaxone	ltr	5.00	10.00	\$50.00	\$150.00	\$200.00	\$50.00	\$0.00	\$0.00
Land Clearing	Num	1.00	200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$0.00	\$0.00
Transport	Num	4.00	10.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00
Total Variable Cost		27.14	31.72	\$368.60	\$600.60	\$884.60	\$758.60	\$508.00	\$508.00
Fixed Cost	Units	Amount	Amount						
Labour									
Planting/pegging	mndys	3.00	\$12.00	\$36.00	36.00	36.00	36.00	0.00	0.00
Fertilizer	mndys	2.00	\$12.00	\$24.00	48.00	72.00	96.00	96.00	96.00
Spraying	mndys	2.00	\$12.00	\$24.00	48.00	72.00	96.00	96.00	96.00
Pruning/cutting black pods	mndys	2.00	\$12.00	\$24.00	48.00	72.00	96.00	96.00	96.00
Harvesting	mndys	5.00	\$12.00	\$0.00	0.00	0.00	60.00	120.00	180.00
Drying/Fermenting	mndys	3.00	\$12.00	\$0.00	0.00	0.00	36.00	72.00	108.00
Bagging	mndys	1.00	\$12.00	\$0.00	0.00	0.00	12.00	24.00	36.00
marketing	mndys	2.00	\$12.00	\$0.00	0.00	0.00	24.00	48.00	72.00
Total Fixed Cost		2.50	12.00	\$108.00	\$180.00	\$252.00	\$456.00	\$552.00	\$684.00
Total Cost				476.60	780.60	1,136.60	1,214.60	1,060.00	1,192.00
Gross Margin (MC)				-476.60	-780.60	1,136.60	-449.60	2,000.00	5,693.00