

COST OF PRODUCTION PER LITRE OF MILK IN JAMAICA IN YEAR 2004



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INTRODUCTION

- Liberalization of the trade in dairy product since 1992
- Current international price US \$2450.00/metric tonne (fluid milk equivalent J\$15.20/litre)
- Farm gate prices of J\$24.50/litre and average retail price of appr. J\$76.00/litre



STATEMENT OF THE PROBLEM

- Importation of milk solids continue to put pressure on locally produced milk
- Limited fresh milk supplies force stiff competition among processors
- Cattle numbers now at 17,500



PURPOSE AND OBJECTIVE

- Comparison of production cost data for selected farm sizes
- Compare variable cost component that affects the production cost for a litre of milk in Jamaica
- Milk price not competitive



HYPOTHESIS

- There are no significant differences in cost of production among the various groups

SCOPE AND LIMITATION

- This study was designed to compute the cost of production of a litre of milk and to compare the variable cost components.
- Originally 36 farmers agreed to participate in the survey; 29 responded but only 25 were eligible for the survey.
- Major components of the variable cost were concentrate and other feeds, vet. and med., utilities, labour, transportation, supervision, fertilizer and rental fees.



THEORETICAL FRAMEWORK

- MILK PRODUCTION PEAKED AT 38.8 M LITRES IN 1992.
- MILK PRODUCTION DECLINE 60% TO 15.4 M LITRES IN 2004.

METHODOLOGY

- PRIMARY DATA SOURCE (PRO-FORMA SENT TO SELECTED FARMERS)
- PRODUCTION COST GROUPED IN THE FOLLOWING CATEGORIES:
 - REVENUE
 - OPERATING COST
 - COST PER LITRE
 - GROSS MARGIN
 - FIXED COST



FARM SIZES

- SMALL - 1-10 COWS
- MEDIUM - 11-99 COWS
- LARGE - 100 AND OVER



ENTERPRISE DESIGNATION

- SNI - Small Non-irrigated (4)
- MI - Medium Irrigated (2)
- MNI - Medium Non-Irrigated (11)
- LNI - Large Non-Irrigated (4)
- LI - Large Irrigated (4)



RESULTS AND DISCUSSION

- COMPARE RELATIVE PRODUCTION COSTS FOR MILK IN ALL CATEGORIES.
- COMPARE MAJOR COMPONENT OF VARIABLE COST AS A PROPORTION OF TOTAL VARIABLE COST.

TABLE 1: COMPARISON OF VARIABLE COST PER LITRE AMONG FARM SIZES

Category (N)	Direct Cost/litre
SNI (4)	7.69
MNI (11)	19.43
MI (2)	32.25
LNI (4)	20.19
LI (4)	22.24
Weighted Average	19.13

TABLE 2: COMPARISON OF MEAN STOCKING RATES AND PRODUCTION/HA AMONG FARM SIZES

Category	Average Stocking (cows/ha)	Production Litres/ha
SNI	1.70	1277.5
MNI	2.5	3213.7
MI	5.6	4196.6
LNI	1.7	3254.3
LI	2.9	6904.4
Overall Mean	2.21	4330.9

TABLE 3: COMPARISON OF LOCAL AND INTERNATIONAL COSTS OF PRODUCING MILK

Category	2000	2001	2002	2003	2004
Mean Variable Local Cost (J\$)	15.91	17.41	17.02	15.76	19.13
(US\$)	0.34	0.36	0.35	0.26	0.31
Farm Gate (US\$)	0.30	0.30	0.30	0.45	0.45
Cost of Production NZ (US\$)	0.12- 0.15	0.12- 0.15	0.12- 0.15	0.15- 0.18	0.15- 0.18

TABLE 4: COMPARISON OF AVERAGE DIRECT COSTS OVER THE PAST 5 YEARS

Items	2000	2001	2002	2003	2004
Av. Vc./(J\$)	15.91	17.41	17.02	16.05	19.13
Av.Vc/ (US\$)	0.34	0.36	0.35	0.26	0.31
Irrigated farms	15.36	21.31	18.33	17.42	25.51
SNI	8.00	12.34	12.21	16.81	7.69
Non-Irr.	18.30	18.83	17.23	16.04	19.63
Org. Margin	28%	21%	6%	11%	4.5%

TABLE 5: COMPARISON OF MAIN COMPONENTS OF VARIABLE COST

Category & Farm Size	Feed %	Utilities	Labour %	V/Me d %	Past & Fert. %
SNI	34	0	26	4.5	10.5
MNI	37	5	27	4	3
MI	35	13	25	3	4
LNI	47	8	14	3	3
LI	36	7	11	3	3

TABLE 6: CHANGES IN PROPORTION (%) OF VARIABLE COST DUE TO THE VARIOUS INPUT CATEGORIES

Category	2000	2001	2002	2003	2004
Feed	31.53	39.3	32.	38	39
Utilities	6.42	5.	4.7	7	7
Labour	17.8	21.7	26.3	21	13
Vet & Med	5.5	3.4	2.8	4	3
Past. Maint. & Fert.	4.6	5.7	5.2	5	4

TABLE 7: COMPARISON OF AVERAGE GROSS MARGIN/LITRE AMONG FARM SIZES

Category	Stocking Rate (au/ha)	Av. GM./litre
SNI	1.7	13.20
MNI	2.5	5.42
MI	5.6	-11.44
LNI	1.7	2.77
LI	2.9	0.97



SUMMARY & CONCLUSIONS

1. Average variable cost was \$19.13
2. Non-irrigated farms av. \$19.63
3. Irrigated farms av. \$25.51