



Cost of Production Per Litre of Milk in Jamaica in Year 2003.

*Ffrench, D. L.; Miller, R.C.;
Jennings, P.G.*

Jamaica Dairy Development Board

Introduction

- ✱ Dairy Sector continues to show declining trend over the last decade
- ✱ Milk production - 18.4 M litres
- ✱ Local industry still under pressure from market liberalization and globalization

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
- ✱ Milk price not competitive
- ✱ Cattle numbers now at 18,000

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

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 33 farmers agreed to participate in the survey; 24 responded but only 17 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 FELL TO 18.4 M LITRES IN 2003

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 (2)
- ★ MI - Medium Irrigated (2)
- ★ MNI - Medium Non-Irrigated (7)
- ★ LNI - Large Non-Irrigated (3)
- ★ LI - Large Irrigated (3)

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	Direct Cost/litre
SNI	16.81
MNI	14.15
MI	18.15
LNI	17.93
LI	16.68
AVERAGE	16.05

TABLE 2: COMPARISON OF AVERAGE DIRECT COST PER LITRE AMONG FARM SIZES

Category	Average Stocking Rate/ha	Average Direct Cost/litre
SNI	2.26	16.81
MNI	1.89	14.15
MI	2.67	18.15
LNI	1.83	17.93
LI	3.13	16.68

TABLE 3: COMPARISON OF AVERAGE DIRECT COST 2000-2003

ITEMS	2000	2001	2002	2003
Av. Vc. / / J\$	15.91	17.41	17.02	16.05
Av.Vc / / US\$	0.34	0.36	0.35	0.26
Irrigated farms	15.36	21.31	18.33	17.42
SNI	8.00	12.34	12.21	16.81
Non-Irr. (org.)	18.30	18.83	17.23	16.04
ROI	28%	21%	6%	11%

TABLE 4: COMPARATIVE ANALYSIS OF VARIABLE COST COMPONENTS OF FARMS

Category & Farm Size	Feed %	Utilities %	Labour %	V/Med %	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 5: COMPARISON OF AVERAGE GROSS MARGIN/LITRE AMONG FARM SIZES

Category	Av. St. Rate/ha	Av. GM./litre J\$
SNI	2.26	4.70
MNI	1.89	6.80
MI	2.67	0.86
LNI	1.83	1.84
LI	3.13	4.77

SUMMARY & CONCLUSION

1. Average variable cost was \$16.05
2. Non-irrigated farms av. \$16.04
3. Irrigated farms av. \$17.42
4. PRIMARY DATA WERE UTILIZED TO GATHER THIS INFORMATION.
5. MOST IMPORTANTLY IS THE COMPETITIVENESS OF THE DAIRY SECTOR AND THE PUBLIC SECTOR GUIDELINES.