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

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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

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNI</td>
</tr>
<tr>
<td>MNI</td>
</tr>
<tr>
<td>MI</td>
</tr>
<tr>
<td>LNI</td>
</tr>
<tr>
<td>LI</td>
</tr>
<tr>
<td>AVERAGE</td>
</tr>
</tbody>
</table>
TABLE 2: COMPARISON OF AVERAGE DIRECT COST PER LITRE AMONG FARM SIZES

<table>
<thead>
<tr>
<th>Category</th>
<th>Average Stocking Rate/ha</th>
<th>Average Direct Cost/litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNI</td>
<td>2.26</td>
<td>16.81</td>
</tr>
<tr>
<td>MNI</td>
<td>1.89</td>
<td>14.15</td>
</tr>
<tr>
<td>MI</td>
<td>2.67</td>
<td>18.15</td>
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<tr>
<td>LNI</td>
<td>1.83</td>
<td>17.93</td>
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<tr>
<td>LI</td>
<td>3.13</td>
<td>16.68</td>
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</tbody>
</table>
### TABLE 3: COMPARISON OF AVERAGE DIRECT COST 2000-2003

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Av. Vc. / / J$</td>
<td>15.91</td>
<td>17.41</td>
<td>17.02</td>
<td>16.05</td>
</tr>
<tr>
<td>Av. Vc / / US$</td>
<td>0.34</td>
<td>0.36</td>
<td>0.35</td>
<td>0.26</td>
</tr>
<tr>
<td>Irrigated farms</td>
<td>15.36</td>
<td>21.31</td>
<td>18.33</td>
<td>17.42</td>
</tr>
<tr>
<td>SNI</td>
<td>8.00</td>
<td>12.34</td>
<td>12.21</td>
<td>16.81</td>
</tr>
<tr>
<td>Non-Irr. (org.)</td>
<td>18.30</td>
<td>18.83</td>
<td>17.23</td>
<td>16.04</td>
</tr>
<tr>
<td>ROI</td>
<td>28%</td>
<td>21%</td>
<td>6%</td>
<td>11%</td>
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</table>
### TABLE 4: COMPARATIVE ANALYSIS OF VARIABLE COST COMPONENTS OF FARMS

<table>
<thead>
<tr>
<th>Category &amp; Farm Size</th>
<th>Feed %</th>
<th>Utilities %</th>
<th>Labour %</th>
<th>V/Med %</th>
<th>Past. &amp; Fert. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNI</td>
<td>34</td>
<td>0</td>
<td>26</td>
<td>4.5</td>
<td>10.5</td>
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<tr>
<td>MNI</td>
<td>37</td>
<td>5</td>
<td>27</td>
<td>4</td>
<td>3</td>
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<tr>
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<tr>
<td>LNI</td>
<td>47</td>
<td>8</td>
<td>14</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>LI</td>
<td>36</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
TABLE 5: COMPARISON OF AVERAGE GROSS MARGIN/LITRE AMONG FARM SIZES

<table>
<thead>
<tr>
<th>Category</th>
<th>Av. St. Rate/ha</th>
<th>Av. GM./litre J$</th>
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</thead>
<tbody>
<tr>
<td>SNI</td>
<td>2.26</td>
<td>4.70</td>
</tr>
<tr>
<td>MNI</td>
<td>1.89</td>
<td>6.80</td>
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<tr>
<td>MI</td>
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<td>0.86</td>
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<tr>
<td>LNI</td>
<td>1.83</td>
<td>1.84</td>
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<tr>
<td>LI</td>
<td>3.13</td>
<td>4.77</td>
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</tbody>
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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.