Production Costs in 2012 on Selected Wisconsin Organic Dairy Farms

By: Tom Kriegl

Introduction (Pages two and three contain the actual cost of production report.)
Effective June 17th, 2010, the USDA made the pasture rule for organic certification more rigorous to require a minimum of 120 days of grazing a year and that at least 30% of dry matter intake comes from pasture during the grazing season. Consequently, all summarized herds in the 2010 summary and later meet that grazing definition. However, based on communication with participants, about two of the organic herds were less rigorous in their grazing than the typical farm in the non-organic grazing summary in 2012.

Data Source
Eleven Wisconsin organic dairy farms were summarized by AgFA in the following cost of production report for 2012.2,3 These farms ranged in size from 30-135 cows with an average herd size of 82.0 cows averaging 14,205 lbs of milk sold at an average price of $29.57/CWT sold in 2012. The same six Wisconsin organic dairy farms provided useable data from 1999-2006. Two of the original six farms dropped out after 2006, but fortunately data from additional farms was added after 1999. Because eleven farms is a very small group to make conclusions from, this data was not released in the single year format until several years of data was judged to be reasonably consistent from year to year.

Selected Financial Measures of Studied Farms
In 2012, income per cow averaged $5,093 with milk sales being $4,201 of that total. The average income per cow on the 365 Wisconsin dairy farms in AgFA that were NEITHER grazing nor organic was $5,779 with milk sales accounting for $4,589 of that total. However, their allocated costs4 per cow were $5,167 versus only $4,051 for the organic farms in this study. This leaves this group of organic farms with a NFIFO/cow of $1,041 versus a NFIFO/cow of $612 for the other 365 dairy farms, although they had more cows - averaging 192 per farm. For organic farms these values compare with $3,309 in allocated costs and $811 in NFIFO in 2011.

NFIFO is not economic profit. Economic profit requires farm income to exceed all costs, including the opportunity costs of unpaid labor, management, and equity. Economic profit was $410/cow for the Wisconsin organic dairy herds in 2012. On the 365 Wisconsin dairy farms in AgFA that were NEITHER grazing nor organic it was $159 per cow.

In 2012 the organic farm’s average cost per cow was $44 for breeding fees, $79 for insurance, $878 for purchased feed, $118 for utilities, $248 for supplies, $65 for property taxes, $57 for veterinary fees and medicine, $186 for interest, $38 for livestock depreciation and $708 for other depreciation.

In 2012, for every dollar of income the average organic farm generated: 58.5 cents went to Basic Costs, 21.0 cents went to Non-basic Costs and 8.0 cents went to economic profit. Looking at it another way, 79.5 cents went to Allocated Costs (Basic plus Non-basic Costs) and 20.5 cents went to NFIFO.

Wrapping Up
When comparing the relative performance of dairy systems, recognize that managers of each system tended to have a different focus in their pursuit of profitability. The organic system focuses more on obtaining a higher and more consistent milk price. Graziers focus more on reducing all costs and confinement systems focus more on increasing income via high production levels. Yet, costs (in terms of face value dollars) continue to increase over time for all dairy systems.

When comparing organic financial performance relative to other systems, recognize that it is at its relative best in years in which the organic price premium is highest relative to non-organic prices. This price premium was high in 2000, 2002, 2003, 2006, 2009 and 2012 but low in 2004, 2007, and 2008.

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1 Farm Financial Analyst Emeritus, Center for Dairy Profitability, University of Wisconsin-Madison/Extension. The author thanks coworker Arlin Brannstrom and emeritus coworker Gary Frank for reviewing the document and making helpful suggestions.
2 AgFA @Agriculture Financial Advisor) – http://cdp.wisc.edu
3 The Center for Dairy Profitability uses an active/real time database AgFA@ for collecting and analyzing data. The number of records may increase throughout the year. Casual users of AgFA may not be able to exactly duplicate this report.
4 All costs except the opportunity cost of unpaid labor, management and equity are called "allocated costs." Total income minus "allocated costs" equals Net Farm Income from Operations (NFIFO). "Total costs" are divided into two other categories: basic costs and non-basic and opportunity costs, with it having 3 sub-categories (1. paid interest, 2. all labor and management, and 3. non-livestock depreciation plus equity interest).
## Cost of Production

**Report Basis:** Whole Farm, per Head, per Hundredweight Equivalent

<table>
<thead>
<tr>
<th><strong>Income</strong></th>
<th><strong>2012</strong></th>
<th><strong>2012</strong></th>
<th><strong>2012</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost (tax)</td>
<td>Cost (tax)</td>
<td>Cost (tax)</td>
</tr>
<tr>
<td>Milk Income</td>
<td>344,476.40</td>
<td>4,200.93</td>
<td>15.27</td>
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<tr>
<td>Total Income</td>
<td>417,602.10</td>
<td>5,092.71</td>
<td>18.51</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Expenses</strong></th>
<th><strong>2012</strong></th>
<th><strong>2012</strong></th>
<th><strong>2012</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost (tax)</td>
<td>per Head</td>
<td>per CWT EQ</td>
</tr>
<tr>
<td>Basic Cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of Items for Resale</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Breeding Fees</td>
<td>3,647.05</td>
<td>44.48</td>
<td>0.16</td>
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<tr>
<td>Car and Truck Expenses</td>
<td>1,580.55</td>
<td>19.27</td>
<td>0.07</td>
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<tr>
<td>Chemicals</td>
<td>129.27</td>
<td>1.58</td>
<td>0.01</td>
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<tr>
<td>Conservation Expenses</td>
<td>1,199.61</td>
<td>14.63</td>
<td>0.05</td>
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<tr>
<td>Custom Heifer Raising Expenses</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Custom Hire (Machine Work)</td>
<td>10,989.45</td>
<td>134.02</td>
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<tr>
<td>Feed Purchase</td>
<td>71,991.51</td>
<td>877.95</td>
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<tr>
<td>Fertilizer and Lime</td>
<td>20,868.23</td>
<td>252.27</td>
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<tr>
<td>Freight and Trucking</td>
<td>7,145.57</td>
<td>87.14</td>
<td>0.32</td>
</tr>
<tr>
<td>Gasoline, Fuel, and Oil</td>
<td>16,914.58</td>
<td>206.28</td>
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<tr>
<td>Farm Insurance</td>
<td>6,470.55</td>
<td>78.91</td>
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<tr>
<td>Rent/Lease Equipment</td>
<td>1,361.36</td>
<td>16.60</td>
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<tr>
<td>Rent/Lease Other</td>
<td>14,693.15</td>
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<td>Repairs and Maintenance</td>
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<td>Building and Fence Repairs</td>
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<td>43.81</td>
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<tr>
<td>Machinery Repairs</td>
<td>9,964.09</td>
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<tr>
<td>Seeds and Plants Purchased</td>
<td>13,800.20</td>
<td>168.30</td>
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<td>Storage and Warehousing</td>
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<td>Supplies Purchased</td>
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<td>247.99</td>
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<td>Taxes - Other</td>
<td>5,303.73</td>
<td>64.68</td>
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<tr>
<td>Taxes - Payroll</td>
<td>273.50</td>
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<tr>
<td>Utilities</td>
<td>9,687.83</td>
<td>118.14</td>
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<tr>
<td>Veterinary Fees and Medicine</td>
<td>4,693.02</td>
<td>57.23</td>
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<tr>
<td>Other Farm Expenses</td>
<td>5,769.03</td>
<td>70.35</td>
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<tr>
<td>Marketing &amp; Hedging</td>
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<td>49.64</td>
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<tr>
<td>Other Crop Expenses</td>
<td>4,785.64</td>
<td>58.36</td>
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<tr>
<td>Other Livestock Expenses</td>
<td>1,502.09</td>
<td>18.32</td>
<td>0.07</td>
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<tr>
<td>- Change in Prepaid Expenses</td>
<td>(9,923.72)</td>
<td>(121.02)</td>
<td>(0.44)</td>
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<tr>
<td>Change in Accounts Payable</td>
<td>23.73</td>
<td>0.29</td>
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<tr>
<td>Depreciation on Purchased Breeding Livestock</td>
<td>3,080.01</td>
<td>37.56</td>
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<tr>
<td><strong>Total Basic Cost</strong></td>
<td>244,259.74</td>
<td>2,978.78</td>
<td>10.83</td>
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</table>
### Interest Cost

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage Interest</td>
<td>12,443.91</td>
<td>151.75</td>
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<tr>
<td>Other Interest</td>
<td>2,826.45</td>
<td>34.47</td>
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<tr>
<td><strong>Total Interest Cost</strong></td>
<td><strong>15,270.36</strong></td>
<td><strong>186.22</strong></td>
<td><strong>0.68</strong></td>
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### Labor Cost

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Benefits - Dependents</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Employee Benefits - Non-Dependents</td>
<td>468.18</td>
<td>5.71</td>
<td>0.02</td>
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<tr>
<td>Labor Hired - Dependents</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
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<tr>
<td>Labor Hired - Non-Dependents</td>
<td>14,137.86</td>
<td>172.41</td>
<td>0.63</td>
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<tr>
<td>Pension and Profit-Sharing Plans - Non-Dependents</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Pension and Profit-Sharing Plans - Dependents</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Value of Unpaid Labor &amp; Management</td>
<td>35,949.91</td>
<td>438.41</td>
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<tr>
<td><strong>Total Labor Cost</strong></td>
<td><strong>50,555.95</strong></td>
<td><strong>616.54</strong></td>
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</table>

### Depreciation & Equity Cost

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery, Equipment, Building Depreciation</td>
<td>58,084.96</td>
<td>708.35</td>
<td>2.57</td>
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<tr>
<td>Interest on Equity Capital</td>
<td>15,830.28</td>
<td>193.05</td>
<td>0.70</td>
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<tr>
<td><strong>Total Depreciation &amp; Equity Cost</strong></td>
<td><strong>73,915.24</strong></td>
<td><strong>901.41</strong></td>
<td><strong>3.28</strong></td>
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### Total Non-Basic and Opportunity Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Non-Basic and Opportunity Costs</strong></td>
<td><strong>139,741.55</strong></td>
<td><strong>1,704.17</strong></td>
<td><strong>6.20</strong></td>
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</table>

### Total Expenses

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>384,001.30</strong></td>
<td><strong>4,682.94</strong></td>
<td><strong>17.02</strong></td>
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### Total Income - Total Expenses

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Income - Total Expenses</strong></td>
<td><strong>33,600.81</strong></td>
<td><strong>409.77</strong></td>
<td><strong>1.49</strong></td>
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</table>

### Net Farm Income from Operations (NFIFO) Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Total Allocated Costs</td>
<td>332,221.11</td>
<td>4,051.48</td>
<td>14.73</td>
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<tr>
<td><strong>Net Farm Income From Operations (NFIFO)</strong></td>
<td><strong>85,380.99</strong></td>
<td><strong>1,041.23</strong></td>
<td><strong>3.78</strong></td>
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<tr>
<td>Gain (Loss) on Sale of All Farm Capital Assets</td>
<td>36.18</td>
<td>0.44</td>
<td>0.00</td>
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</tr>
<tr>
<td><strong>Net Farm Income (NFI)</strong></td>
<td><strong>85,417.18</strong></td>
<td><strong>1,041.67</strong></td>
<td><strong>3.79</strong></td>
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### Benchmark Criteria

<table>
<thead>
<tr>
<th>Description</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Cows</td>
<td>82.00</td>
<td>82.00</td>
<td>82.00</td>
</tr>
<tr>
<td>Pounds of Milk Sold per Cow</td>
<td>14,205</td>
<td>14,205</td>
<td>14,205</td>
</tr>
<tr>
<td>Hundredweight Equivalent (CWT EQ) per Cow</td>
<td>275</td>
<td>275</td>
<td>275</td>
</tr>
<tr>
<td>Gross Milk Price</td>
<td>$29.57</td>
<td>$29.57</td>
<td>$29.57</td>
</tr>
<tr>
<td>Total Crop Acres per Cow</td>
<td>4.12</td>
<td>4.12</td>
<td>4.12</td>
</tr>
<tr>
<td>Pasture Acres per Cow</td>
<td>1.59</td>
<td>1.59</td>
<td>1.59</td>
</tr>
<tr>
<td>Owner/Operator/Families</td>
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<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Primary Enterprise:** Dairy

**Report On:** All Data Sets

**2003 Data Sets:** 11

**Confidence Level Range:** 80 to 100

**States:** Wisconsin

**Organic Producer:** Yes