

# **FINANCIAL RECORD KEEPING SYSTEMS**



## **TAKING FINANCIAL MANAGEMENT TO THE NEXT LEVEL**

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# **HISTORICAL BASIS FOR FINANCIAL RECORDS**

- **Required by IRS**
- **Required by regulations**
- **Required by lenders**

**Question: For what purpose were these requirements developed?**

# ACCOUNTING SYSTEMS

## **CASH**

- **Used by majority of farms and small businesses**
- **Easy**
- **Allows tax management**
- **Not an accurate picture of income or costs for periods of time**
- **Adjustments necessary to develop information for management**

## **ACCRUAL**

- **Double entry system**
- **Time consuming and detail oriented**
- **Accurate picture at any time of income and expenses**
- **Very few farms do accrual accounting**

# CASH ADJUSTED INFORMATION

- **Within accounting programs the following are recorded**
  - Account payables
  - Account receivables
  - Inventories
- **If the above is entered, then the system can generate an accrual report**
- **A cash adjusted report – not an accrual report**
- **If not everything is entered, report may still say accrual but won't be accurate**
- **This systems are what farms are moving towards**

# RECORD KEEPING METHODS



- **Shoe box**
- **Brown paper bags**
- **Account book**
- **Personal finance software**
  - Quicken
  - Money
- **Computerized shoe box**
- **Business accounting software**
  - Quickbooks
  - Center Point
  - Peachtree
  - Farmworks
  - Others?

# TA-DA RECORDS

Keys for the accounting system:

- Timely
- Accurate
- Detailed
- Available

**How the records are used is more important than  
how they are kept**

# **RECORD KEEPING APPROACHES**

# WHOLE FARM

- **Records for the whole business**
- **Initial chart of accounts set up for IRS purposes**
- **Additional detail added for management purposes**
  - Ex: chart of accounts for DFBS
- **How did the whole business do?**
- **What are key income and cost categories doing?**
- **Generalized cost accounting system**



# SPECIALIZED COST ACCOUNTING

- **Keep cost detail for areas of interest**
- **Provide information for management purposes**
- **Still have to remember accrual**
  - Is account payables or inventories assigned to the sub categories?
- **Easy with computers**
  - Create additional sub-categories

# SPECIALIZED COST ACCOUNTING

- **Examples**
  - Machinery parts/repairs by class of machinery/equipment
  - Machinery parts/repairs by piece of machinery/equipment
  - Crop input costs by crop produced
  - Vet and medicine breakdown
    - Mastitis
    - Fresh Cow
    - Heifers
    - Etc.
- **Not looking at any income**
- **No internal transfers**

# **MANAGERIAL ACCOUNTING**

- **Business – responsibility centers (profit and cost centers) has been an accepted methodology for managerial accounting (activity accounting)**
- **Agriculture – enterprise accounting has been used.**
- **Activity accounting and enterprise accounting do not provide the same decision information**

# MANAGERIAL ACCOUNTING

- **Especially useful to those operations which:**
  - Have employees managing certain activities or functions in the business
  - Have multiple crops or livestock centers
  - Manage by segments

# **ENTERPRISE ACCOUNTING**

- **Break the whole farm down into different segments**
- **Internal transfers to move income and expenses between segments**
- **Production information needed for internal transfer purposes**
- **Determine performance of each area**
- **How are some costs going to be allocated?**

# **ENTERPRISE ACCOUNTING**

- **When do you record internal transfers?**
- **What should the internal transfer values be?**
- **When do you determine performance?**
- **Who uses information?**
- **Is accrual adjustments handled properly?**
- **Can't ignore whole farm**

# ENTERPRISE ACCOUNTING

- **Three areas on most farms:**
  - Dairy
  - Replacements
  - Crops
- **Important to lay out and talk through before starting to keep everything consistent.**
- **Does this fit the management personnel/structure of the farm?**

# ENTERPRISE ACCOUNTING



- **Not as useful if keeping some expenses vs all for the different segments**
- **Allocation challenges:**
  - Overhead
  - Shop
  - Labor
  - Feed center
- **What about balance sheet?**
  - Debt
  - Investment



# **ACTIVITY BASED ACCOUNTING**

- **Look at specific areas of the business**
  - Profit Centers
  - Cost Centers
- **What are the costs associated and what income can be generated?**
- **Looks at costs by different business activities**
- **Allocation of cost centers to profit centers**

# **ACTIVITY BASED ACCOUNTING**

- **Can fit in with whole farm or enterprise accounting**
- **Can be stand alone**
- **May not be additive**
- **Designed to look at specific activities**
- **Goal of cost activity management:**
  - Provide the highest quality effort at the lowest possible cost
- **Not measuring profitability of cost centers**
- **Internal transfers are “at cost”**

# **ACTIVITY BASED ACCOUNTING**

- **Cost of a DA and survival rates**
- **Cost of the fresh cow barn or pen**
- **All costs to run shop**
- **Repair costs of different equipment**
- **Costs to run milking center**
- **Costs of treating a calf – or total costs of calf program**
- **Harvesting operations**
- **Manure spreading, etc.**

# ACTIVITY BASED ACCOUNTING

- **Fits with computers**
- **Keeps additional financial detail and production detail**
- **Providing information for management purposes**
- **Progressive farms starting to do this in some manner**
- **Some adoption by farms with multiple sites, multiple businesses, multiple management personnel**
- **More could be done with this:**
  - Software
  - Charts of accounts
  - Allocations
  - Standardization

# OVERALL INCOME STATEMENT



## Income Statement Whole Farm

	Annual	Per Cow	Per Cwt.	Direct Expenses			
<b>Revenue</b>		1,100	292,500	Feed	3,143,830	2,858.0	10.75
Breeding Dairy Sales	13,211	12.0	0.05	Prod. Enhancer	110,603	100.5	0.38
Insurance Claim	31,968	29.1	0.11	Animal Health	275,854	250.8	0.94
Dairy Beef Sale	66,382	60.3	0.23	Breeding	120,170	109.2	0.41
Dairy Cull Sale	302,073	274.6	1.03	Cheese Expense	44,393	40.4	0.15
Dividends	5,044	4.6	0.02	Chemicals	63,359	57.6	0.22
Feed	1,208	1.1	0.00	Contract Prod.	60	0.1	0.00
Gov't Payments	18,900	17.2	0.06	Custom Hire	333,242	302.9	1.14
Crop Sales	196,056	178.2	0.67	Fuel	61,153	55.6	0.21
Milk Sales	6,839,299	6,217.5	23.38	Insurance	29,103	26.5	0.10
Other Sales	40,945	37.2	0.14	Interest	107,253	97.5	0.37
Produce Sales	25,061	22.8	0.09	Labor	1,506,247	1,369.3	5.15
Profit	966	0.9	0.00	Lease Equipment	6,865	6.2	0.02
Rent Income	109,294	99.4	0.37	Misc. Expenses	20,443	18.6	0.07
Research Income	90,918	82.7	0.31	Prof. Services	154,599	140.5	0.53
Walnut Sales	9,043	8.2	0.03	Rent	192,662	175.1	0.66
Gross Revenue	7,750,368	7,045.8	26.50	Repairs	427,023	388.2	1.46
				Seed	25,578	23.3	0.09
				Supplies	394,882	359.0	1.35
				Taxes	74,223	67.5	0.25
				Utilities	204,703	186.1	0.70
				Total Direct Expenses	7,296,245	6,633.0	24.94
				Net Direct Production Expenses	454,123	412.8	1.55

**Profit Cent Report**  
**Profit Center: Milk Sales**



	Annual	Per Cow	Per Cwt.
Revenue		1,100	292,500
Gov't Payments	18,900	17.2	0.06
Milk Sales	6,839,299	6,217.5	23.38
<b>Gross Revenue</b>	<b>6,858,199</b>	<b>6,234.7</b>	<b>23.45</b>
<b>Direct Production Expenses</b>			
Custom Hire	85,452	77.7	0.29
Professional Services	59,010	53.6	0.20
<b>Total Direct Expenses</b>	<b>144,462</b>	<b>131.3</b>	<b>0.49</b>
<b>Net Direct Production Expense</b>	<b>6,713,737</b>	<b>6,103.4</b>	<b>22.95</b>
<b>Indirect Expenses(Support Operations)</b>			
Herd Management	3,865,754	3,514.3	13.22
Milk Harvest	1,300,053	1,181.9	4.44
Replacement	393,109	357.4	1.34
Equipment	189,506	172.3	0.65
<b>Total Indirect Expenses</b>	<b>5,748,422</b>	<b>5,225.8</b>	<b>19.65</b>
<b>Production Margin</b>	<b>965,315</b>	<b>877.6</b>	<b>3.30</b>
<b>Sales, General and Administrative</b>			
Overhead	378,806	344.4	1.30
<b>Total Sales, G&amp;A Expense</b>	<b>378,806</b>	<b>344.4</b>	<b>1.30</b>
<b>Operating Margin</b>	<b>586,509</b>	<b>533.2</b>	<b>2.01</b>
<b>Financing</b>			
Financing	67,242	61.1	0.23
<b>Total Financing Expense</b>	<b>67,242</b>	<b>61.1</b>	<b>0.23</b>
<b>Net Marge before Taxes</b>	<b>519,267</b>	<b>472.1</b>	<b>1.78</b>



Cost Center Report			
Cost Center: Herd			
	Annual	Per Cow	Per Cwt.
Revenue		1,100	292,500
Claim	31,968	29.1	0.11
Dairy Beef Sale	41,716	37.9	0.14
Gross Revenue	<b>73,684</b>	<b>67.0</b>	<b>0.25</b>
Direct Production Expenses			
Feed	2,833,063	2,575.5	9.69
Production Enhancer	110,603	100.5	0.38
Animal Health	108,565	98.7	0.37
Breeding	108,843	98.9	0.37
Labor	212,960	193.6	0.73
Prof. Service	5,405	4.9	0.02
Supplies	3,419	3.1	0.01
Total Direct Expenses	3,382,858	3,075.3	11.57
Net Direct Production Expense	<b>-3,309,174</b>	<b>-3,008.3</b>	<b>-11.31</b>
Indirect Expenses(Support Operations)			
Overhead	552,650	502.4	1.89
Feed	3,932	3.6	0.01
Total Indirect Expenses	<b>556,582</b>	<b>506.0</b>	<b>1.90</b>
<b>Net Production Expense</b>	<b>-3,865,756</b>	<b>-3,514.3</b>	<b>-13.22</b>
Costs			
Total Production Costs	3,939,440	3,581.3	13.47
Allocation of Expenses for Cost Center: Herd			
CENTER NAME	Percent		
Milk Sales	100%		



Cost Center Report			
Cost Center: Parlor			
	Annual	Per Cow Milking	Per Cwt.
Revenue		1,204,500	292,500
Gross Revenue	<b>0</b>	<b>0.000</b>	<b>0.00</b>
Direct Production Expenses			
Labor	405,106	0.336	1.38
Rent	6,865	0.006	0.02
Repairs	146,649	0.122	0.50
Supplies	294,398	0.244	1.01
Utilities	95,349	0.079	0.33
Total Direct Expenses	948,367	0.787	3.24
Net Direct Production Expense	<b>-948,367</b>	<b>-0.787</b>	<b>-3.24</b>
Indirect Expenses(Support Operations)			
Overhead	351,686	0.292	1.20
	0	0.000	0.00
Total Indirect Expenses	<b>351,686</b>	<b>0.292</b>	<b>1.20</b>
<b>Net Production Expense</b>	<b>-1,300,053</b>	<b>-1.079</b>	<b>-4.44</b>
Costs			
Total Production Costs	1,300,053	1.079	4.44
Allocation of Expenses for Cost Center: Herd			
CENTER NAME	Percent		
Milk Sales	100%		





Cost Center Report			
Cost Center: Dairy Overhead			
	Annual	Per Cow	Per Cwt.
Revenue		1,100	292,500
Brd Dairy Sales	4,309	3.9	0.01
Feed	1,208	1.1	0.00
Other	38,130	34.7	0.13
<b>Gross Revenue</b>	<b>43,647</b>	<b>39.7</b>	<b>0.15</b>
Direct Production Expenses			
Animal Health	167289	152.1	0.57
Contract Production	120	0.1	0.00
Custom Hire	42563	38.7	0.15
Fuel	28	0.0	0.00
Insurance	463	0.4	0.00
Labor	414,864	377.1	1.42
Lease Equipment	6,865	6.2	0.02
Misc. Expense	17,698	16.1	0.06
Prof. Service	77,317	70.3	0.26
Rent	82,364	74.9	0.28
Repairs	105,511	95.9	0.36
Supplies	61,945	56.3	0.21
Taxes	7,903	7.2	0.03
Utilities	63,566	57.8	0.22
<b>Total Direct Expenses</b>	<b>1,048,496</b>	<b>953.2</b>	<b>3.58</b>
<b>Net Direct Production Expense</b>	<b>-1,004,849</b>	<b>-913.5</b>	<b>-3.44</b>
Indirect Expenses(Support Operations)			
<b>Total Indirect Expenses</b>	<b>0</b>	<b>0.0</b>	<b>0.00</b>

<b>Net Production Expense</b>	<b>-1,004,849</b>	<b>-913.5</b>	<b>-3.44</b>
Costs			
Total Production Costs	1,048,496	953.2	3.58
Allocation of Expenses for Cost Center: Herd			
CENTER NAME	Percent		
Herd	55%		
Parlor	35%		
Dairy Replacement	10%		

# MANAGEMENT STRUCTURE/INTENT

- **Management structure**
  - Key management personnel
  - What is their management intent?
  - What information do they need to better fulfil management intent?
- **Design record keeping to meet management intent**

# DAIRY PROFIT & COST CENTERS

## Profit Centers

- Milk Sales
- Beef Sales
- Crop Sales
- Other?

## Cost Centers

- Milking Center
- Replacements
- Shop
- Crops
- Feed Center
- Other?

# BOOKKEEPER CHALLENGES

- **Challenges for bookkeepers:**
  - What was the expense for?
  - Who is telling bookkeeper where to put things?
  - Who is verifying invoices/items?
- **As we move towards higher level of managerial accounting:**
  - Better communications
  - More formal process
  - More automation
  - Is a Comptroller needed?
  - Is a CFO needed?

# SUMMARY

- **Opportunity to continue improving financial records for management purposes**
- **No universal system**
- **Increase detail as needed/desired by the management team**

# CREDITS

**“Managerial Data: Industry Financial & Production Standards”, E. Allen Lash, President, Agrisolutions, Presentation to Cornell Dairy Executive Program, December 2003**

**“Cost Accounting Applied to Farming in Southwest Michigan”**

**Toni Fisher, *Western Michigan University***