N E W S L E T T E R

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ANALYZING FARM BUSINESS FINANCIAL STATEMENTS, A CAUTION

by Russ Morgan

Numerous articles in popular farm magazines have been devoted to the financial measures commonly known as the "Sweet Sixteen" recommended by the Farm Financial Standards Council. Before blindly applying any set of financial measures, ag lenders and producers should be cautioned to keep in mind several guidelines. First, a financial measure or set of measures do not in and of themselves provide answers to questions regarding the farm business. They are intended to direct attention to certain areas of the farm business and perhaps pose further questions and deeper inquiry. Second, they should be analyzed both independently and in relation to other financial measures/ratios. Quite often, analysis of the interrelationships will provide more complete understanding of the financial health of the farm business. Third, choose the measures used for primary financial analysis wisely and carefully. Not all financial measures are useful in analyzing every type of farm business. Fourth, it is useful and perhaps necessary to compare the farm business' current financial measures not only with past measures (trend analysis), but with those of similar farm businesses during the same time period. This is often called comparing to industry "standards" or averages. The University of Kentucky Farm Business Management Program (UKFBM) is one such source of comparison. It allows the farm business to ensure it is comparing "apples to apples". Fifth, be very aware that any decisions made based on the analysis of financial measures can be no better than the information used to generate the measures. In the early days of computer software development, a term called "garbage in-garbage out" or GIGO was used to express the notion that bad data results in erroneous output which leads to poor and improper decisions. Financial measures derived from incomplete or inaccurate data are inherently misleading and can lead to improper business decisions by farm managers and ag lenders. Lastly, the farm business does not operate in a vacuum. Be cognizant of other factors affecting the farm business in the current and past periods. Past and present financial information must be used in the context of the

"total picture" of factors affecting farm business performance.

It should be realized that time and experience is needed to develop a "feel" for analyzing financial measures. The reviewer should be able to digest the financial data so that it communicates more than merely numbers on a page. Rather, it should provide insight into the internal workings of the farm business and "what makes it tick". An analogy would be learning a different language. Much study and practice will provide a mechanical or rote usability. However, it will not be mastered until one begins to "think in it".

If financial measures are compared to others in a "standards grouping", be wary to ascertain the comparison is appropriate. Are apples truly being compared to apples? Are or were the financial measures of all farm businesses included in the group prepared on the same basis? For example, was the income statement prepared on a cash or accrual basis; does it represent only the farm business or is non-farm income included?

Are the business structures (sole proprietorship, partnership, LLC,or corporation) different? How are withdrawals for family living accounted for?

Similarly, the methodology in preparing balance sheets for farm businesses in the standards grouping should be determined. Were they prepared on a cost-basis, estimated market value or a hybrid of the two? Were the statements prepared on a cash or accrual basis? Were deferred taxes included or excluded? Were personal or non-farm assets and liabilities included? When were the balance sheets prepared (year-end, mid-year or some other time)?

Seasonality exists in operating periods for most farm businesses. Therefore, it is very important to know whether the financial statements giving rise to the measures being compared represent the same operating period. With regard to balance sheets, do they represent the same point in time?

For accurate comparative analysis, it is imperative that a balance sheet be prepared as of the last day of the operating period. Be aware that often, a balance sheet is prepared as of some other date such as "when the banker asks for it." Accurate comparative analysis is impossible if balance sheets are not prepared for the beginning and ending of the business' operating period. It is also important to know whether the other farm businesses compared to are truly "similar". For example a farm growing 80 acres of burley tobacco may earn approximately the same gross revenue as a 1000 acre corn/wheat/soybean farm; however, their cost structures will be significantly different. Comparisons made would be of limited, if any, value. Questions should be asked about the group creating the "standard" or average used for comparison.

Adhering to these guidelines/cautions (and given time to attain experience) should enable the farm manager or ag lender to gain valuable insight into the financial core of the farm business. Management decisions to improve profitability or stave off potential financial downfalls should result.

KFBM SUMMER MEETING

The Annual Board of Directors and Annual Delegates Meeting will be July 19 in Hopkinsville. The Pennyroyal Association will be hosting with a field day the afternoon before the evening board meeting. Members will be touring Garnett Farms, Seimer Milling, and Ag Spray Equipment. For more information contact the Pennyroyal specialist office at 270-886-5281.

COMPARISON OF DIFFERENT SIZE FARMS

by D. Bart Peters

One of the most common questions we receive as farm analysis specialists is "How many acres should I be farming?". It's also one of the most difficult questions to answer. My usual answer is that I have several smaller producers that are just as efficient as larger producers and that management ability is the key, not size.

The 1999 KFBM summary data shows that larger farms made more money than smaller farms (Table 1). But the question is why? Did they produce better yields, were their costs lower, did they do a better job of marketing? Are they really that

much more efficient or just make it up on acres?

Let's start with the first question. Did they produce better yields? (Table 2).

Table 2. Yields by Size in Bushels per Acre

Grain Farm Size (Acres)	Corn	Beans	Wheat	D.C. Beans
0 - 999	116	29	65	14
1000 - 1999	117	24	70	11
2000 +	124	28	78	11

The large size farms produced just slightly higher yields than the other two groups. The year 1999 was very non-typical in terms of weather. Western Kentucky, where the larger farms are located, did not suffer as early in the year from drought as did central Kentucky. One year of data should not lead to conclusions about farm size and yields. What about costs? Total costs are analyzed in the KFBM program, including unpaid labor for the operator and equity interest (Table 3).

It does appear from the data that larger farms do enjoy some economies of scale. The main one is in unpaid labor per acre. Obviously, a person's time spread over more acres lead to a lower per unit cost. Large farms are a little more efficient in crop inputs, machinery and buildings. This could be a result of large scale buying. However they are not more efficient in terms of paid labor. One would think that larger machines would lead to lower per acre labor cost, but not true.

Table 3. Costs for Grain Farms

	0 - 999 Acres	1000 - 1999 Acres	2000 + Acres
Fert, Seed, & Chem	103	104	99
Power & Equip	73	66	64
Bldg Rent & Rep	15	10	11
Labor - Paid	22	33	31
Labor - Unpaid	40	20	13
Other Costs	54	53	55
Land Costs	94	92	94
Total Farm Expense	401	379	368

Overall total costs are lower for larger farms. The majority of that is due to value of unpaid labor. Mostly, large producers enjoy only small advantages in actual cash cost, but these differences do add up over several thousand acres and definitely help the bottom line.

The third question was "Are they doing a better job of marketing?" To answer that, look at crop returns per acre. Keep in mind that these returns also include government payments and crop insurance (Table 4).

The largest group did have a higher crop return average and a higher total returns average. Why? At hypothetical prices of 2.00 for corn, 2.50 for wheat, and 4.65 for soybeans, the yield (Table 2) accounts for about $30 per acre, leaving the remaining $15 to result either from marketing, crop insurance, or FSA payments. The majority of this, more than likely, came from marketing.

Obviously, the large size operations have to be more focused on marketing. A dime per bushel over many bushels can have a big impact on the bottom line.

So, do large farms have an advantage? In the areas examined today in this article, yields, costs, and returns, large farms fared well in all three categories, so the answer is yes. But, on average these individual parts are not very large. It's when they are added together over that many acres that leads us back to higher overall profits for

Table 4. Gross Returns per Acre

	0 - 999 Acres	1000 - 1999 Acres	2000 + Acres
Crop Returns	264	268	319
Tobacco Returns	32	55	17
L'stock Returns above Feed	19	8	17
Other Income	20	19	12
Total Returns	335	350	365

Table 1. Net Income by Size

Grain Farm Size (Acres)	1999 Tillable Acres	1999 Net Farm Income
0 - 999 Acres	643	18,872
1000 - 1999 Acres	1,443	50,948
2000+ Acres	3,232	143,903

larger size farms.

Large farms give the potential for very large profits (and losses). On *average*, large farms have some returns and cost advantages. Perhaps they have come to be this size and have these advantages because they understand one key thing: management, management, management.

So what's the best size farm? A producer's ability, resources, and comfort level will dictate that. Only the best managers will survive into the future, at any size. Excellent managers (and poor ones) can be found throughout all sizes of farms.

KFBM PERSONNEL ANNOUNCEMENTS

Dr. Will Snell has assumed the role of KFBM Coordinator and the Extension Coordinator for the Agricultural Economics Department upon Craig Infanger's departure. Craig has accepted the position of Project Coordinator for American agricultural technical assistance in Armenia. He will be on leave from UK for two years beginning this summer. Given Will's other Extension responsibilities in tobacco and ag policy, Darwin Foley, Area Farm Business Management Specialist in the Louisville Area, has agreed to serve as the Assistant Coordinator for KFBM.

In addition, the Ohio Valley Farm Business Management Association is excited to announce that Ms. Suzanne Martin will be their new Area Farm Management Specialist, replacing Waylon Ramming. Suzy is currently completing her Masters degree at Purdue University in Agricultural Economics. Her undergraduate degree in Animal Science and Agricultural Economics is from Texas A & M University. Suzy grew up in Colfax, Indiana.

NATIONAL MEETING ATTENDED

Six Kentucky Area Farm Business Management Specialists attended their national professional meeting the last week of June. The meeting was held in beautiful Steamboat Springs, Colorado. Specialists participated in educational seminars, association business, and agriculture tours, and shared with other specialists from participating states. Examples of seminar topics included: Thriving in a Time of Unprecedented Change, The Future is Now, Current Issues for Agriculture Estate Planning, and Effective Use of Financial Ratios.

D. Bart Peters and Craig D. Gibson received recognition by receiving first place honors in the professional papers awards program. Bart received first place in the category for association newsletter, while Craig was recognized in the professional paper category.

The 2001 national meeting will be hosted by Kentucky. Planning is currently underway by specialist committees. Bowling Green will be the site for the meeting.

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