

**Paul Bunyan II - A Matter of Principles
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The Historical Background:

In the early days of computerized analysis of farm records both the analysis procedures and the electronic hardware were primitive. The first computer analysis, completed in 1964 was a simple attempt to replicate what had been done rather effectively by hand for more than two decades. It was an arduous process, that first attempt at computerized records, that hovered many times on the brink of failure. But with perseverance and the blind faith that it could be done successfully, it was.

Given the new tool for analysis, there was a growing hunger for new and better analysis information. To satisfy that need, about forty teachers and coordinators from Minnesota met in the Paul Bunyan Motel in 1967 for a week of intense work to remodel the business analysis. Out of that meeting came the first uniform analysis procedure for crops and livestock enterprises. While the format for analysis changed as a result of Paul Bunyan I, the principles of analysis and the basic tenants upon which the analysis was based did not.

Over the nineteen year span between PBI and PBII (1986), dozens of changes originated in the national invitational farm management conferences that were started in Minnesota in 1972 in Faribault. Notable among the changes were the expansion of livestock and crop enterprise choices, the allocation of some "overhead" costs such as power and machinery, buildings and livestock equipment and the introduction of cost allocation factors.

But all requests for change had not been met. There was a growing demand that the analysis be reviewed from start to finish to make it more responsive to the needs of the modern day farmer. Yet there was recognition that there were many features of the analysis in use that should be retained because they were features important to the management of the farm business and important to the continuity of the program.

Through the auspices of John Murray and the State Board for Vocational and Technical Education in Minnesota, it was possible to assemble another group of teachers and coordinators to remake the basic business analysis. Out of this effort PBII was born. It was a collection of professionals from Minnesota, North Dakota, South Dakota, Nebraska and Washington who devoted a full week of heavy duty work to revising the analysis process. The result is the analysis used for the 1988 records of over 4000 farms.

The purpose of my paper is supposed to be to summarize PBII. In a sense I will do that, but the printed analysis can do it more effectively. I propose to summarize the things that don't show - the principles upon which the analysis process is based, and the

principles that should guide the farm management education program.

The Basic Assumptions:

Any complex activity of the magnitude of the farm business analysis has to be guided by some set of basic assumptions or definitions to establish the parameters within which the activity can take place. It's the process of building a fence to confine the activity and give it definition.

Our first assumption was to define the audience or target that an analysis is supposed to serve and the conditions under which the service is to be provided.

The target for the farm business analysis is the farm family enrolled in the farm management education program. It is the use the farm family can make of the business analysis that is the important consideration. It is important to differentiate farm family use from the use others might make. For example there is a difference between the use a farm family may make of their farm family oriented analysis with their creditor as compared to the use a creditor may make of a lender oriented business analysis with a farm family. We work for farm families. That must be the focus of our business analysis.

The conditions under which an analysis is provided are in the context of an educational program. The purpose is to provide information in a way that will contribute to the education of the farm family so they may learn to be more effective and efficient farm managers.

Another important assumption is the definition we use of management. It helps focus our attention on the important aspects of the tasks of managing. By practice rather than by design we have adopted the definition of management as proposed by J.H. Herbst: "Farm management concerns the making of decisions that tend to maximize net income, consistent with the operator's or family's objectives. These objectives likely relate to such items as health, recreation, music, sports, travel, education, community activities and conservation." (Herbst, 1989)

This definition helps us zero in again on our intended audience for a business analysis. Objectives are personal. The business analysis must relate to the objectives of the farm family. It is not our objectives, or the creditors objectives, or Extensions objectives or anyone else that is of primary concern - it is the individual farm family.

Some Basic Analysis Principles:

Farm analysis only makes sense if it is done using an accrual system of accounts. It must take inventory change into consideration and it must accommodate both expenditures and incomes that have not been converted to cash. Without these accrual adjustments, a one year picture of the farm business is more apt to be erroneous than it is to be correct. The basic assumption for an analysis of any business, farm or otherwise, is that the record is accurate and that it is an accrual account that represents the true costs and returns from the business enterprise. (Penson, Klinefelter & Lins, 1982)

Given the assumption that the rules for data origin are carefully followed - there is a complete and accurate farm record - there are three cardinal principles that a good business analysis must meet.

1. **Validity:** The business analysis must measure what it intends to measure. If it is supposed to measure returns over feed costs per cow, then it should measure return over feed costs per cow and not something else. Validity in farm record analysis is obtained by careful attention to detail and to definition. Validity is an important concept when one considers the allocation of overhead costs. Analysis systems that use unsubstantiated dollar values as the assigned overhead costs or allow the assignment of costs without some logical basis for determining how costs get assigned have questionable validity. They do not measure what they claim to be measuring.
2. **Reliability:** To be reliable, a business analysis must measure the same things, the same way each time. Computed today, I should get the same answers I will get tomorrow, if I used the same data. The formula for analysis must be fixed and unchanging. To be reliable, the analysis should also be non- manipulative.
3. **Non-Manipulative:** The farm family should not be able to manipulate the results of the analysis so that some more favorite enterprises are more profitable than others less favored. While adjustments in some costs are necessary to reflect reality (power costs, for example, when an enterprise is organized to utilize little power and machine expense), these adjustments need to be reality based and limited to those instances where logic and practice suggest that adjustments are necessary.

Some Operational Principles:

Having the best, most complete, most accurate analysis in the world is of little value if it fails to meet the operation tests farmers apply to the things they buy.

We have become a society that needs and expects instant gratification. The evidence is all around us. We dine on fast food, fuel with self service so we don't have to wait, expect "overnight delivery", send our letters by "fax" since the mail is too slow - you can name a dozen examples from your own experience. Even when there is no compelling reason to have instant information or service, we demand it. Is there any logic to the demand by farmers that they have an instant analysis of a record it took a year to accumulate, several weeks of low priority procrastination to close appropriately and will take 2-6 months before the decisions they will make are implemented? But logic does not always rule the day.

A major outgrowth of PBII was to consider the ways in which the analysis of the farm business could be made more rapidly so that farmers could have instant results from their efforts at record keeping and analysis. At this conference you will hear discussion of "mini-analysis," AnaKey II, On-line processing, etc.- all products of the attempt to modify the time frame in which an analysis can be completed.

In summary, we now have the "fast foods" of farm business analysis. In my office at home, I have an ordinary P.C. attached to my telephone via modem. I am not a speed typist, but in 20 minutes I can enter a complete farm business on Anakey II from the prepared data sheets. When that task is finished I have several opportunities to check my data for errors and when I am convinced the data is error free, I can get a mini-analysis of the farm business immediately. If I wander downstairs for a cup of coffee, it will be finished before I get back to my office. This opportunity is available for all instructors. It is part of the data entry process using Anakey.

Access to the on-line process is restricted to a select group of coordinators and others who connect directly with SDS for analysis processing. If you were one of those, you already have been constantly amazed at the speed and consistency with which the process worked. I was one of the "others" hooked directly to SDS by modem, but with less sophisticated equipment. Even with my low speed modem (1200 baud) and conventional dot matrix printer, it was only a few minutes (less than 4) of telephone time to transmit data using the Anakey II data disk, wait for SDS to process the analysis and receive the completed print image back on my computer. Coordinators with better equipment reduced that time to less than 2 minutes.

We have become the "fast food" of the farm business analysis crowd, using a sophisticated analysis system that assures validity, reliability and non-manipulation. The only thing we look forward to are improvements. What they are we don't yet know, but surely each year of experience will suggest some improvement that can be made in performance and practice that will better serve the farm operator for whom the system is designed. As we look forward to improving an already excellent system there are some considerations we should keep in mind. We certainly do not want to lose sight of:

1. The common threads that tie new information to our existing data base so there is opportunity to establish a solid perspective of what each new piece of information might mean and how we will interpret it for the improvement and education of the farm family.
2. The usefulness of an aggregate data base in informing us of what the state of the art is for farm businesses of various kinds in various locations. A set of "averages" is a valuable reference by which farm families can gauge the adequacy of their progress.
3. The need for uniformity within a state. Farm record analysis must mean the same thing from school to school if we are to maintain a program of farm management education. It is not possible to convince decision makers that we have a system of farm management education if we ourselves do not have a system we strongly support for uniformly summarizing and analyzing farm business records. This is not to suggest that all states have to have the same system, but if it is possible to use the analysis system designed especially for farm management instruction, then it gives strength to your management plan. Within a state there is no room for devisiveness in a program that rests on the fragile good will and support of legislative bodies.

4. Compliance With The Accepted Principles of Farm Management: We need to be careful not to discard some essential features of our analysis just because they may not be always understood by teachers or our clients. It is our job to learn and to teach, not to ignore and discard. For example, the rules of analysis suggest we consider all resources regardless of ownership. That means that the whole business is the entity we are responsible for managing, not just the piece we happen to own. It is a basic rule that is related to our use of resources. Good managers maximize the returns to their scarcest resource. All of these kinds of "rules of thumb" or adages about management are based upon the premise that all resources are considered - not just those you own. There are other less global measures that include only the parts you own, but to examine a whole business on the basis of operator ownership is like putting together a jigsaw puzzle with essential pieces missing: you never do get the true picture of the managers capabilities or progress.

Summary:

Paul Bunyan II is summarized best in the business analysis and the Anakey II system that supports it. What is less evident are the assumptions of target audience, program context and management definition that "built the fence" within which the analysis system was devised.

The analysis system was devised after carefully considered the elements of validity, reliability and non-manipulation as principles that should be carefully guarded.

There was recognition that operational guidelines had to insure almost instant gratification of the farmers demand for information about the business. Here is where the expanded version of Anakey with it's built in mini-analysis and the capability of on-line processing fit into the system.

There are still improvements and modifications to be made. When they occur, the analysis system will be even better provided that certain concepts and principles that have brought us to this point are not ignored.

It is likely that sometime in the future there will be need for a Paul Bunyan III. Let's hope that in the meantime we can continue to provide programs of quality so that farmers can continue "the making of farm business decisions that tend to maximize net income consistent with the operator's or family's objectives."

Herbst, J.H. & Erickson, D.E. (1989). Farm management principles, budgets, plans. Champaign, Illinois: Stipes Publishing Co.

Penson, J.B., Klinefelter, D.A., & Lins, D.A. (1982) Farm investment and financial analysis. New Jersey: Prentice Hall.