

Recommendations for Future Processing of the State Farm Business Management Database

Introduction

Throughout the history of the Farm Business Management (FBM) program and database, there has been one common factor which set the tone for developing a quality dataset. That factor is a specialized leadership system, whether that be a single individual or a group of individuals, which directed the guidelines for collecting and the activities related to the processing of the raw farm data; and ensured that a comprehensive summary and comparison information would be prepared from a quality dataset. This has been the difference between Minnesota and other states that have attempted to maintain a strong program and database without specialized leadership.

There are other common methods for gathering data regarding agriculture. Those methods may include:

- Surveys mailed to producers requesting summary information where results are completed independently by producers, using general guidelines included in the mailing. Interpretation of those guidelines can vary significantly.
- More comprehensive survey documents, with more detailed requests for financial information, with detailed instructions, are mailed to producers to be completed independently. These can be more difficult for producers to interpret due to the types of data requested.
- One-on-one interviews using standardized questions to request information related to a specific aspect of a farm business (i.e. crop production practices). This method adds a level of consistency in data collection but is not comprehensive in nature.
- On-line survey tools which request specific or general data, completed independently by producers. These are also subject to variations in data collected due to differences in guideline interpretation.

Each of these data collection processes have a valuable place in providing tools for farm business owners and operators. These systems of data collection do not provide comprehensive information and/or do not ensure uniformity in the interpretation of the individual data input guidelines.

The Minnesota Farm Business Management Database is a one-of-a-kind entity when considering both the comprehensive and uniform nature of the dataset. With specialized leadership, a business owner/manager and the stakeholders of Minnesota can be confident in the quality and uniformity of the data entering the FBM database.

This document will provide an overview of the FBM database, methods to ensure a quality dataset, considerations for support funding of the FBM database, a review of management and ownership information, and recommendations for the future.

Overview

Over the 60+ year life of the Farm Business Management (FBM) Database in Minnesota, the quantity and quality of data within the database has grown in value and impact. In the 1950s and 1960s, the data was limited to the ability of the computer to process the information provided; so the emphasis was on the key data that would provide decision points for farm operators. In the 1970s and 1980s, as computer processing power increased, more data was collected and forwarded to a computer company (Specialized Data Systems) for processing and a hard copy was returned to the instructor and student.

In the 1990s to the present, computer power is such that FBM instructors collect and process data at the business site using FINPACK. The report can be printed on site, reviewed, and shared with the student to aid in timely decision making. This on-site processing provides the opportunity to develop standardized data collection processes to ensure that the quality of the data was maintained at the highest level possible.

Over the past decade, the state FBM database has consistently included data from over 2000 farmers/students enrolled in the MnSCU System. The size of the database and the quality control measures used in data collection has set this database apart from all others. Even during recent times of extreme pressure on the operation of the program in the state, FBM program faculty and staff have continued to provide the “extra effort” needed to ensure a quality program and database. Because of their efforts, the Minnesota State Colleges and Universities System, through the 8 host colleges for the FBM program, continues to be the premier higher education entity for farm business management data in the nation.

Ensuring a quality dataset

If the state Farm Business Management database is the only one of this nature, what will ensure that the database is developed at a high level during times of significant change?

1: The dataset must be comprehensive, including actual data in the broad categories of:

- Balance Sheet and inventory data
- Whole farm financial information
- Complete crop and livestock enterprise data, including revenue, costs, and industry approved, calculated management factors
- Personal financial information for a given owner or operator.

For over 20 years, the partnership with the University of Minnesota Center for Farm Financial Management has been beneficial to all parties. This partnership has been critical to improving the quality and consistency found in the FBM database.

2: Best collection practices and uniform guidelines must be used for data collection:

- A process plan is critical to the success of a quality database. Suggested annual calendar would include:

- October – Initial discussions regarding special situations for the current year and timelines scheduled for pre and post closeout season meetings; preferably prepared for/at a fall conference for all FBM instructors.
 - November/December – Leadership discussions with CFFM regarding current year FINPACK changes that impact database collection, meetings with instructors to review process changes and new FINPACK inputs, yearend data finalization begins.
 - January/February – Data collection and finalization of yearend data continues in earnest. Database coordinator(s) must be available to respond to instructor questions and guide special situations. Instructors forward files to database coordinator(s) for initial review for corrections
 - March – First week: College/Regional meetings to first review all data as a group; Second week: State level meeting at CFFM for final review of database; Third & Fourth week: Annual Reports prepared and sent to the printer, initial work begins on special reports, and preparation of area PowerPoint presentations started by coordinator(s).
 - April – Special Reports completed by mid-April, annual meetings for students and other stakeholders hosted by instructors to review general database information, annual reports and database information forwarded to key stakeholders around the state.
 - May through September – Database reports/information used by instructors to guide delivery of the curriculum; including comparative analysis of data from prior years, regional data, enterprise data, and cohort data, .
 - A collection period must be defined, either one calendar year or one business year.
 - A detailed “Closeout Manual” is necessary to support all individuals guiding data collection.
 - Meetings hosted by the leadership, both in-person and online, are necessary to answer process questions and share process revisions.
 - All data must be reviewed on several occasions, checked against approved collection practices, and reviewed by at least two groups of experts in the field to ensure accuracy.
 - Outliers, indicating data input inconsistencies, must be removed from the database
3. The number of farms in the Minnesota FBM database must continue to be at a level that enables FBM students and other stakeholders to identify key financial and enterprise factors necessary for informed decision making.
- Historically, there have been over 2,000 individual records in the Minnesota FBM database, making it the largest comprehensive dataset for national benchmarking.
 - As technology usage in Agriculture expands, and students and stakeholders increase their need for information, a critical mass of data is necessary to enable more specific data queries.
 - Privacy of individual data is critical. The dataset must be of size to both ensure privacy and provide the ability to sort the data into very groups.

4. Agriculture in Minnesota is a diverse industry. It is imperative that regional financial and crop data be provided for stakeholders of Minnesota Agriculture. Statewide livestock data, however, is appropriate.
 - Soil types vary significantly across the state. The Red River Valley consists of soil conditions unlike anywhere in the state, some of the richest farm land in the world. Included in the 400 miles of Minnesota, from north to south, are heavy clay-based soils in the south to lighter, sand based soils to the north. Comparing both financial and crop enterprise data from such diversity is not realistic because the yield potential, crop production practices, and revenue potential can be directly impacted by the quality of the land.
 - Livestock producers exist in regions of the state that provide the best overall environment for a combined crop and livestock operation. The primary cost in all livestock enterprises is feed. Feed quality is relatively consistent across the state, so combining livestock enterprises into one dataset can work well. Even though the overall financial situation of the farm can vary due to location in the state, the livestock enterprise can be compared across the state.
5. The FBM database must be available as a textbook and for curriculum development efforts.
 - The summary information from the dataset is provided annually, so a new textbook is released each year.
 - The individual student data and the comparison data are the basis for FBM program instruction.
 - Course syllabi and outlines include database reports as instructional materials. Specific information in the reports guide course and program objectives.
6. To continue providing a quality dataset in the future, worthy of the current status in national agriculture benchmarking venues, specialized leadership is critical. Specialized leadership sets this database apart from all others because of the guided processes that ensure stakeholder confidence in a consistent product.

Database Support Funding

Until recent years, 6 MnSCU colleges acknowledged targeted funding to support leadership for the development of the Minnesota FBM database. That funding was designed to cover costs related to leadership positions that managed both FBM programs and the FBM Database on a statewide basis. Working with the Center for Farm Financial Management, the group served as a management team for development, evaluation, and promotion of the FBM database. In recent years, that management team has been reduced to a system of hiring part-time, retired individuals, with experience in developing the database; to work with the Center for Farm Financial Management.

Based on the statements regarding a quality dataset, provided above, it is apparent that a quality database requires an investment of financial resources to ensure that quality. This database is integral to the program and the curriculum, in the same manner that other technical programs need

equipment/lab space to deliver a quality curriculum. Historically, funding for this database has come from two sources:

1. FBM students, where a program fee or differential tuition amount is paid by each student to cover the cost of:
 - Processing fee charged by the Center for Farm Financial Management (The fee charged for processing individual records has not changed for over a decade)
 - Costs related to the printing of the regional reports used in the program and shared with the stakeholders of Minnesota Agriculture.

The amount paid by each student is about \$17.50 for the two items listed above.

2. Colleges hosting FBM or the Centers of Agriculture, through MnSCU:
 - Personnel to lead the development of the database, support faculty after the data is collected, ensure uniformity in collection, prepare report and presentation materials.
 - Support of the FBM program and faculty efforts in the development of the database
 - Travel expenses to cover the costs of visiting participating colleges and a state meeting, plus housing for the state database meetings.
 - Supply expenses for communications and limited report printing.

The amount paid by the Centers, for all 8 colleges hosting FBM, is about \$25.00 per student.

Funding is necessary to ensure that this unique database continues to be a quality decision making instrument for FBM students and the industry of Agriculture in Minnesota. The amount of funding needed to develop a quality database is small when considering expenditures required for space and equipment in other technical programs. Due to the current economic factors impacting public education, however, additional support should be pursued. New relationships with current partners would be the best approach for providing new sources of revenue to help ensure the future of this database (i.e. Partner sponsors, pricing of annual reports, fees for research, industry based foundational support, etc.).

Ownership and Management

Ownership of this database may be a valid question and one that could need clarification in the future. Historically, the data in the database has been considered the property of the students who voluntarily provided it. Therefore, extreme care has been given to ensure that private information was not shared in any way and that confidentiality was the number one consideration in the processing effort. It is fair to say that the state FBM database is housed and managed at the Center for Farm Financial Management, University of Minnesota; but decisions related to its use come from the Minnesota State Colleges and Universities through the FBM Deans at the colleges housing Farm Business Management programs.

Ownership truly goes beyond the historical assumptions which resulted from a cohesive management team that managed the state FBM database collection and development. For over 60 years the team ensured that quality information was available to the State of Minnesota Agricultural Industry, through the generosity of the students enrolled in the Farm Business Management program. In recent years, due to significant funding challenges, the team that provided the oversight for the database has been decimated; leaving a crevice in the process that has been extremely difficult to bridge. Ownership

remains with the FBM students and MNSCU, but the ability to effectively manage that ownership is a concern.

Considering items noted previously, the need for quality management and ownership should not be in question.

Recommendations

1. The Minnesota State Colleges and Universities, through the Farm Business Management host colleges, is the premier institution in the nation for providing farm financial and enterprise data. MnSCU should continue its leadership role in US and Minnesota Agriculture by supporting the development of the FBM database.
 - a) The FBM database is a world-class dataset that provides comprehensive data from over 2000 producers. This is not available from another source.
 - b) The FBM database, and the reports prepared from that data, are noted as a key component to understanding the climate of Minnesota Agriculture.
 - c) Because of the size of the database, there is great opportunity for research studies. The key consideration related to the use of this database for research is the critical need to ensure FBM student privacy. (Current processes and personnel work to ensure that confidentiality.)
 - d) The FBM database is the majority source of data in the national benchmarking database. It is critical to maintain that level of commitment and keep that leadership role.
2. The Minnesota State Colleges and Universities, through the two Centers of Excellence in Agriculture, should continue its leadership role in National Agricultural Education by supporting the Farm Business Management programs.
 - a) MnSCU, and Minnesota, are home to the largest Farm Business Management Education program in Higher Education in the nation. It is the go-to organization for the delivery of farm business management education.
 - b) Economic development in Greater Minnesota is more difficult each year as the population moves to metropolitan locations. Informed and educated farmers and farm managers are critical to the future of many small Minnesota communities, as they purchase equipment and supplies from local business (i.e. machinery dealers and crop input supplies), support school systems as farms transition to young families, and serve on community boards. This program provides education to students who are otherwise “anchored” to their business, unable to participate in traditional classroom-based programs.
 - c) The current delivery model requires some modification in order to ensure financial sustainability in the future. Critical mass in the number of faculty in the FBM program is necessary to provide a quality database. A sustainable program design is required for a sustainable database.

3. Coordination and leadership in FBM database development, through the two Centers of Excellence in Agriculture, must continue.
 - a) The FBM database requires a leadership and coordination team in order to maintain the quality of the data included. It is not possible for existing FBM faculty to be assigned to support the process because the pressure for database development comes at the same time the faculty are under load to deliver education on current topics in that small window of opportunity before spring crop preparation begins.
 - b) Historically, the approach used in the development of the database is to “do it right” and NOT to just “get it done”. The database can be developed without guidance beyond the faculty level but the resulting product would be of lower quality. This is not because of the ability of the faculty, rather the result of too many factors to evaluate, in a limited time, by individuals who have the majority of their work assignment in the back of their mind while attempting to focus on critical data decisions.
 - c) Experience is a key factor in providing a quality database. Most of the leadership experience is leaving the organization. It is critical that a mentoring process be incorporated, beginning with the 2016 work on the 2015 calendar year database. Institutional memory of these leadership processes needs to be transferred in the near term.
4. The partnership with the University of Minnesota Center for Farm Financial Management must continue. The two largest higher education institutions in Minnesota have maintained a true partnership for over 20 years; the FBM-CFFM relationship has continued and grown stronger over time. The volume of data provided by MnSCU FBM, when merged with the software needed to process and share the database information as provided by CFFM; has founded a unique team that functions well.
5. A coordinated plan to secure additional funding to support the FBM database should be developed and initiated in 2015.
 - a) The two Centers of Agriculture, with input from FBM faculty, should work together to develop a plan for securing additional funding.
 - b) The plan should include a funding target with specific stakeholders identified.
 - c) Consideration should be given to the current breakdown of costs for the database, so funding supports both entities funding the development. (At a total cost of \$42.50 per student, about 40% is covered by the student and 60% by the Centers.)
 - d) The funding sources to consider may include: agricultural lenders, Minnesota Department of Agriculture, federal agricultural agencies, commodity organizations, farm organizations, granting entities, vendors of farm inputs, and state legislation.

This document was prepared by DelRay Lecy, with input from selected Farm Business Management professionals from across the state.

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