

# **Integrated Farm Financial Statements (IFFS): A Farm Business Planning Tool**

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Integrated Farm Financial Statements (IFFS) software was developed as an M.S. thesis project in the mid-1980s and was immediately put to use as a tool for business planning in one-on-one work with Oklahoma producers through the Intensive Financial Management and Planning Support project. An updated IFFS continues to be used with producers to project financial statements for 1–3 years. Strengths and weaknesses in the software and extension program are noted, along with components that might serve as a model for other programs. Links with research are discussed, as are prospects for future farm financial management programs.

*Key Words:* business planning, farm management extension, financial statements

**JEL Classifications:** Q12, Q14, Q16

In the 1980s, many farms were financially vulnerable due to high leverage positions and tenuous cash flow. The farm financial crisis precipitated development of new educational efforts and analysis tools to help producers and lenders evaluate the feasibility of alternative farm financial plans. At the same time, personal computers were becoming more prevalent and software was becoming more affordable and easy to use. In an informal survey at the Oklahoma Bankers Association Ag Conference in October 1983, approximately half of the participants indicated that banks had computer equipment and personnel to operate them. Ninety-five percent of the bankers responded that they would use computerized financial statements in their credit programs if they were made available (Love, Bonnett, and Hyer).

This article describes the development and application of a farm business planning tool,

Oklahoma State University's (OSU) Integrated Farm Financial Statements (IFFS) software. In addition, features of the extension program, Intensive Financial Management and Planning Support (IFMAPS), which utilized the software, and the evolution of the extension program are described. Table 1 provides a timeline for significant events associated with the projects. Strengths and weaknesses in the software and extension program are noted, along with components that might serve as a model for other programs. Links with research are discussed, as are prospects for future farm financial management programs.

## **Software Development and Evolution**

In an M.S. thesis project, Ruth Egbert set out to develop an integrated financial program on a microcomputer and use it to illustrate how financial management on farms could be improved (1984). The resulting software (based on VisiCalc) consisted of crop and livestock enterprise budgets, a cash-flow statement, net-worth statement and supporting schedules, in-

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**Table 1.** IFFS and IFMAPS Milestones

Year	IFFS milestones	IFMAPS milestones
1984	M.S. thesis, initial software in VisiCalc	IFMAPS plans begin
1985	Public version of IFFS released	Initial training of staff, including paraprofessionals. Individual assistance begins. First grant from Oklahoma legislature.
1986	Information packet developed to assist producers in utilizing and interpreting statements without IFMAPS assistance	Statewide in-service for county educators and administrators. Numerous producer workshops plus workshops and seminars for ag industry. Seventeen trained IFMAPS specialists. Ross Love wins WAEA Distinguished Extension Program Award.
1987	Spanish version of IFFS begun	Oklahoma Ag Mediation Program (OAMP) piloted. Oklahoma Agricultural Linked Deposit Program (OALDP) authorized. Federal Agricultural Credit Act of 1987.
1988	Lotus version of IFFS released, Spanish version of IFFS completed	OALDP enacted, requires farm plan by IFMAPS or vo-tech farm business management instructors. OAMP goes statewide. Two national videoconferences: Alternatives in Financing Agriculture (February) and Applying for FmHA Loan Servicing (December)
1989		Assistance to FmHA borrowers receiving loan-restructure option. OALDP criterion modified to 60% of gross family income, consolidated business/family debt-to-asset ratio lowered to 40%.
1990	M.S. thesis develops IFFS Risk Analyzer	
1992	Polish version of IFFS developed	
1993	Farm Financial Standards Task Force compliant version of IFFS released (v. 4)	
1996		Ross Love moves to Extension Administration; Damona Doye inherits the program.
1997	Noble Foundation 3-year grant to help fund development of compatible software in Excel	
1998	Extension assistant sent to programming school	
1999	Graphical summary added to reports	IFMAPS personnel trained on use of IFFS 2000.
2000	IFFS 2000 Excel version released to public	Newsletters to clientele initiated.
2001	IFFS-Quicken link template developed; enterprise budget software creates IFFS cash budgets	IFMAPS personnel trained on use of enterprise budget software.
2004	IFFS FFSC-compliant to allow both cost and market-value balance sheet	Ag Communications class takes IFMAPS on as class project to identify potential new marketing strategies.

come statement, financial ratios, and a monitor worksheet to compare actual to projected cash flow. Egbert used IFFS to analyze financial conditions of five Oklahoma farm situations with varying levels of equity, cash flow, and debt, illustrating how these variables impacted credit allocation and showing how variations in the financial structure within a year could affect credit allocation.

The application of IFFS from the beginning was on planning features and what-if analyses. Projected statements provided insights into anticipated credit needs, cash flow, income levels, and changes in the balance sheet and financial ratios, all of which are important information for producers seeking to build financially sustainable operations. Because enterprise budgets served as building blocks for whole-farm financial statements, projecting financial repercussions associated with altering the size of enterprises and even adding or removing enterprises from plans was easy. Analysts—producers, lenders, and educators—gained a keen awareness of the cash flow associated with components of the business. The financial statements were created through a combination of direct keyboard entry and automatic movement of data between statements. Although structured for use with enterprise budgets, initially there were no direct links with OSU enterprise budget software.

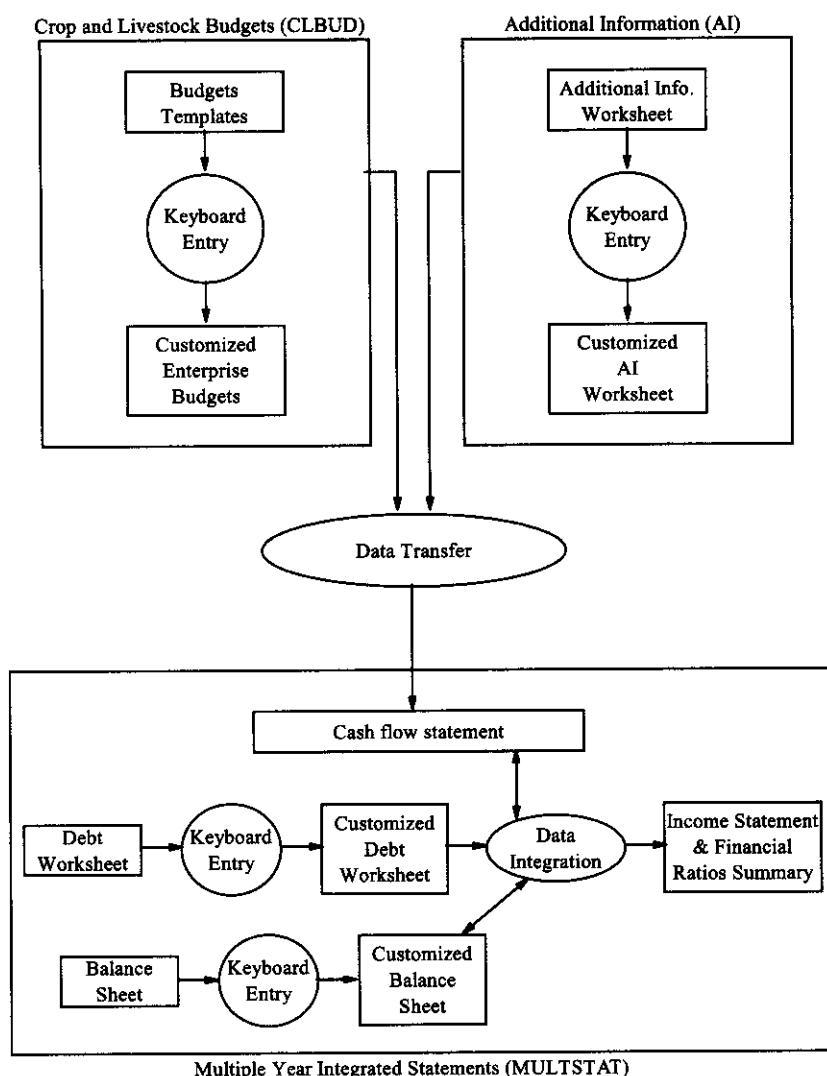
In 1988, a new version of IFFS was released that used three independent Lotus 1-2-3 worksheet files to build integrated financial statements: Crop and Livestock Budget Management (CLBUD), Additional Information (AI) Worksheet, and Multiple Year Integrated Statements (MULTSTAT) (Figure 1). Features were added to facilitate development of multiyear business financial plans, and CLBUD facilitated development of enterprise budgets. The budgets showed expected per-acre or per-head monthly receipts based on average yields and prices, along with monthly expenses required to produce crops or livestock. Budget templates for crops, forages, vegetables, fruits, nuts, and livestock used representative Oklahoma production systems and data, but templates could easily be customized to match an individual producer's situation.

The AI Worksheet supplemented the CLBUD files to list farm receipts and expenses not directly attributed to a particular crop or livestock enterprise; for instance, insurance, utilities, and real-estate taxes. Capital sales and purchases were entered in AI along with outflows such as family living and income taxes in consolidated statements for farm and family. CLBUD and AI data were combined in the Monthly Cash Flow Statement in MULTSTAT.

MULTSTAT combined the appropriate customized budgets (up to 40) with detailed asset and liability information to generate financial statements and ratios. Through MULTSTAT, the initial-year plan could be rolled forward 1 or more years with the same or altered budgets, additional information, and capital sales and purchases.

In 1990, an M.S. thesis project developed an IFFS risk analyzer incorporating stochastic and nonstochastic budgets, stochastic correlated multivariate probability distributions, and a deterministic simulation module (Spears). CLBUD was modified to allow different budgets of the same enterprise to be processed as one common-risk enterprise. Four stochastic enterprises could be correlated for use in a single whole-farm plan. Users specified marginal cumulative distribution functions underlying stochastic enterprises and furnished input on the correlation between each pair of stochastic yields and prices. Expected values were used to generate the standard financial statements and ratios. Sample outcome distributions for three key economic indicators (net farm income, cash available for debt service, and net cash flow) were displayed numerically and graphically. Because of the complexity of the model's computer and data requirements, and computer limitations at the time, the model was never widely used.

In 1992, a Polish version of IFFS was developed (Doye, Nitychoruk, and Kuligowska). Business planning for small farms transitioning to a market economy was a primary focus of the Polish/American extension project. As cash flow was a critical concern in an environment with high financial stress and very high interest rates, the tool was well-suited for



**Figure 1. Relationship Among the Components of IFFS**

assisting producers. Adaptation of the software was relatively easy, with most of the effort focused on teaching translators economic and agricultural terms, then translating labels in the software. Many of the crop and livestock enterprises were similar (though much smaller in scale, with less mechanization and more operator labor), so default parameters in budgets were revised.

In 1993, IFFS IV was released to facilitate development of financial statements conforming to Farm Financial Standards Council (FFSC) recommendations. Recording both cost and market value of assets was incorporated, along with a worksheet to estimate de-

ferred taxes for the balance sheet. Statements of cash flow and owner equity were added.

An effort to update OSU's software tools for research, teaching, and extension uses was launched in 1997. Plans included development of compatible Excel-based tools for both whole-farm financial planning and enterprise budgeting, with the enterprise budget software generating cash budgets for use in IFFS. Though IFFS had been continually improved, a major overhaul was necessary to take advantage of Windows' software features. This ambitious undertaking required several years of effort by the principals involved, with outside funding and assorted programmers. The

product, IFFS 2000, was a set of interdependent Excel-based workbooks and budget files with the same components as the earlier Lotus versions (Petermann and Doye). It maintained the keyboard commands of previous versions while facilitating data entry through point and click options, drop-down lists, and on-screen help. New features were introduced, such as a graphic stress test showing ratios and the green/yellow/red light spectrum for low to high stress.

To offer users a means of importing data from farm financial record-keeping software into IFFS for use in financial planning, an add-on Excel template (QLink) was developed (Doye and Petermann). Transferring information from record-keeping programs, such as Quicken or QuickBooks®, to IFFS requires users to map the producer's category list or chart of accounts to the appropriate rows in IFFS budgets and financial statements. Cash-flow reports by enterprise can be printed to files for use as cash budgets; otherwise, a whole-farm cash flow is printed to a file for use in the IFFS cash-flow statement.

The ability to build current, research-based budgets for use in IFFS was enhanced with the development of new OSU Enterprise Budget software in the fall of 2001. Crop budgets incorporate details such as default yields based on county averages and a fertilizer calculator to match fertilizer use and costs with plant requirements. Machinery costs are based on machinery complements appropriate to and scaled to different sizes of farms in different geographic regions. Livestock budgets include seasonal price indices that can be adjusted based on current information. The Enterprise Budget software includes a feature to export data to IFFS cash budget files. As the enterprise budgets are updated at least annually, templates for use in IFFS can easily be created that are current and research based.

Most recently, the ability to record additional balance sheet data has been added to make the Excel version of IFFS more readily FFSC compliant, building on the features of IFFS IV. Forms for recording asset purchase price, expected life of the asset, and salvage value are included and are used to calculate

economic depreciation, eliminating the need for separate calculations outside the software.

### Other IFFS Applications

IFFS users have included farm-management consultants, agricultural lenders, educators, and a limited number of computer-savvy producers. With the software, users can evaluate alternative management plans and study potential repercussions on business financial performance and position before investments or changes are made. For financially stressed businesses during the farm crisis, restructuring and rescheduling debt were common strategies to improve the cash-flow situation and avoid displacing farm families. IFFS statements allowed lenders and producers to gauge the viability of alternative plans and view potential changes in cash flow. While the software could also be used to develop historical financial statements and provide benchmarks to document financial progress, its primary use has been in financial planning. Other tools, such as FINPACK, provide more robust analysis by requiring more extensive production and financial historical data and generating statistics based on combined production and financial information (<http://www.cffm.umn.edu/Software/FINPACK/>).

Educators use the IFFS software to develop case studies for classes in agricultural finance, farm management, capstone courses, and workshops. Teams can be assigned to review a case and return with recommendations to improve the farm's financial situation. The farm plan can be revised to incorporate suggestions for changes, and 1 or more years of financial statements can be projected for review and further discussion.

Because of its flexibility and adaptability, IFFS software has been used in at least 36 other states and adapted for use in 9 foreign countries. For Spanish and Polish versions, no programming changes were made—labels in menus and reports were simply changed to local languages.

### **IFFS Use in Oklahoma IFMAPS Extension Program**

Egbert's thesis project contributed a valuable software tool at a critical time in the agricultural industry and became an important component of an enduring extension program, IFMAPS. The IFMAPS program was conceived in late 1984 by Dr. Ross Love as a means for the Oklahoma Cooperative Extension Service to take an active and broad role in assisting and educating farm families facing financial stress. Key objectives of the IFMAPS program were to help farm families accurately evaluate the financial health of their businesses, identify and assess options available to improve their financial future, and deal with financial stress by using the information to make sound management decisions (Love).

As is the norm for extension programs expected to be leveraged through other staff, the initial focus was on training. The IFMAPS project team—9 area specialists, 14 paraprofessionals, 9 county agricultural agents, and 4 other professionals—first met in March 1985. Paraprofessionals were part-time, temporary staff with training in agricultural economics, accounting, business, or similar fields and with backgrounds in production agriculture or agricultural lending. Training focused on preparing for producer workshops and one-on-one assistance and use of IFFS software and its application in individual assistance. Additional training to emphasize strategies for dealing with family stress, provide lender policy updates, and introduce IFFS improvements was also provided. Individual financial planning assistance to producers began in July 1985.

Most workshops and individual assistance were led by IFMAPS staff. A statewide in-service was held in May 1986 to enhance county educators' skills in financial problem identification, lender policies, stress management, and financial management materials, plus improve understanding of IFMAPS. Most county staff felt that local producers did not want them to know details of their financial situation, or even that assistance was being sought. However, it was important that they be

able to knowledgeably discuss the features of the IFMAPS program.

Workshops were held for agricultural bankers, lawyers, staff of the Colorado Extension Service and Vo-Ag Department, OSU home economists, and clergy. Less-intensive training was also provided through conferences for farm organizations, county commissioners, farm managers, rural appraisers, chemical dealers, and others. Training experience, materials, and video and computer programs were shared with 19 other states in the first year of the program.

For producers, IFMAPS offered two primary methods of education: family workshops and individual financial planning assistance. Farmers and ranchers received training through day-long workshops entitled *Troubleshooting Your Own Farm or Ranch Business*. Referrals for individual assistance came through these workshops, as well as through county extension offices, an IFMAPS toll-free number, a state agricultural hotline, and area specialists. While the time spent per case varied with the complexity and seriousness of the financial problems, an average of 35 hours were spent in developing and analyzing the whole-farm plan (not counting farm family and lender input) (Love, Bonnett, and Hyer). Options for dealing with stress that were analyzed included debt and asset restructuring, increasing off-farm income, changes in management to control costs or improve marketing, adding alternative enterprises, using unimproved resources, and partial or complete liquidation.

In November 1986, IFMAPS reported that approximately 40% of the farm families continued farming at the current level or expanded their operation (Love, Bonnett, and Hyer). Another 27% continued farming but reduced the size of their operation. Approximately 14% partially exited farming and began working off-farm. Six percent of families exited farming altogether.

In 1987, the Oklahoma Department of Agriculture piloted the Oklahoma Agricultural Mediation Program (OAMP) to provide trained mediators to help farmers and lenders reach out-of-court agreements when possible.

OAMP often referred producers to IFMAPS for assistance in developing business plans. Similarly, the courts looked to IFMAPS specialists to assist producers who were filing for bankruptcy with reorganization plans.

Also in 1987, the Oklahoma Agricultural Linked Deposit Program (OALDP) was authorized by the state legislature to support agriculture and encourage its diversification. Enacted in March 1988, the OALDP targeted two segments of agriculture for interest-rate savings: 1) at-risk farmers and ranchers as determined by the debt-to-asset ratio, and 2) individuals or businesses initiating or expanding production, processing, or marketing of approved alternative agricultural products within Oklahoma. Applicants are required to have a farm management plan and qualifications worksheet developed by either IFMAPS personnel or an instructor in the Farm Business Management program of the state's vocational-technical schools. Although the OALDP program has been suspended when funds are not available or interest rates are so low as to make the program infeasible, the OALDP provides continued incentives for producers to avail themselves of IFMAPS assistance.

In 1992, a descriptive study of the OALDP participants assisted by IFMAPS personnel noted that most program users were distressed businesses, with the at-risk linked deposit volume 20 times that of the alternative product volume (Love and Aycock). OALDP participants were highly leveraged, relatively efficient, full-time commercial farmers with large interest payments and low net farm incomes. An average loan size of \$176,000 with 3% interest reduction meant approximately \$5,280 lower interest payments annually. Although used in most counties in the state, the bulk of IFMAPS cases were concentrated in cropland areas in north central and western Oklahoma.

In 2003, an undergraduate student analyzed files to find producers for whom a time series of records from 1994 to 2002 were available to see whether the business financial position and performance improved over the time that they utilized IFMAPS services (Herren). All were OALDP recipients. Data showed that three quarters of the participants significantly

improved in terms of liquidity and solvency; however, profitability was not significantly changed. This result is perhaps not surprising, as participant information summaries in recent years indicate that the majority of producers receiving assistance plan no changes in their operations.

Despite continued excellent evaluations of assistance received and increased marketing efforts, the number of individuals availing themselves of IFMAPS assistance has decreased significantly in recent years. Thanks to relatively high cattle prices, relatively good crop years, historically low interest rates, and greater contributions of off-farm incomes to farm household income, farm financial stress, on average, is low. Interest in farm business planning seems to be correlated. Suspension of the OALDP due to low interest rates lessened demand for services. Marketing initiatives have been targeted to extension educators, agricultural cooperatives, agricultural lenders, and producers to emphasize that assistance is not limited to financially stressed borrowers but rather any producer interested in having an objective third party help develop and analyze a forward-looking plan. More recently, marketing efforts have stressed business planning rather than financial planning so as to more clearly focus on the farm rather than personal finances.

### **Strengths and Weaknesses in the IFFS/IFMAPS Model: People, Money, Other**

#### *People*

The development of a successful IFMAPS program and IFFS software can largely be attributed to an ambitious, energetic faculty member (Dr. Ross Love) with a personal commitment to service and excellence responding to a huge need. A large, well-trained area extension staff, supplemented with part-time paraprofessionals, assisted him. Departmental and extension administration were highly supportive. Numerous faculty had farm-management interests and contributed to in-service training, publications, case-study development, and other program components, ensur-

ing that educational programs and software benefited from input and review by a variety of people. Research and extension applications were shared back and forth. Synergy resulted in continual and significant improvements.

The paraprofessional model has worked well in Oklahoma in maintaining an infrastructure of preparedness with the flexibility to respond in times of greater need without the large fixed cost associated with full-time personnel. The downside is that part-time personnel sometimes have little work and must live with uncertain income from the project. When income needs rise, many have taken full-time jobs, resulting in a loss of institutional experience. During low-demand times, lack of opportunity to use financial analysis and computer skills in a variety of settings means that some skills become rusty. In-service training sessions at least annually are used to keep staff up-to-date on software, lender policies, state programs, such as OALDP and OAMP, policy issues, and farm-management research.

### *Money*

The urgent and widespread initial need to assist farm families provided an incentive for a comprehensive and well-planned program and helped garner financial support from both federal and state sources. In its first 2 years of existence, almost \$400,000 was raised to fund the IFMAPS program and related efforts. During a period of severe state budget shortfalls in the 1980s, the state legislature increased funding for IFMAPS. Continued state funding has ensured that the program infrastructure is maintained and has allowed OSU to provide taxpayer-supported business planning assistance to Oklahoma producers since its inception in 1985.

Software development is costly in funding or faculty time, and quite often both. Faculty members with programming skills may develop tools to complement an educational program or fill a need for a decision-making tool. However, lacking programming skills, a faculty member must seek out assistance, which means hiring help that must be trained, directed, supervised, and financially supported.

Most programmers lack agricultural backgrounds, so require detailed instructions on what is needed, how parts are interrelated or should flow, the production systems on which decisions will be made, etc. Thus, software development is often painfully slow.

Because IFMAPS is soft-money funded and the case load is variable and unknown in advance, it is difficult to plan to allocate significant funding to software maintenance. Although IFFS software is sold, sales have never generated the income needed to maintain and update software. Software sales are logistically difficult; for instance, taking credit-card orders on-line remains difficult. While some competitive funding is currently available for development of tools and educational programs in risk management, it is not known how long or in what amounts these funds will be available. Selling software implies a commitment to service and support. One hesitates to launch a national marketing campaign for fear that, if a tool were widely used, it might become a monster to feed and care for. Hence, funding has been piecemeal, with a tag team of programmers, which leads to inefficiencies in product development.

Institutions often lack the infrastructure to provide for support and maintenance of software tools. If a faculty member who has been responsible for a tool's development retires or leaves, remaining faculty and staff receive little or no reward or recognition for maintaining a tool. In fact, it could be argued that disincentives are likely in that she/he must displace time and energy from projects of personal interest to maintain someone else's program. Hence, an orphan tool is likely to languish, meaning huge investment costs may not be recouped.

### *Other*

Although materials were shared widely, little time or funding was devoted to marketing IFFS nationally early on; therefore, IFFS use was largely concentrated in Oklahoma. FINPACK, a financial software package developed at the University of Minnesota in 1972,



was promoted nationally by its creators and USDA leaders and adopted more widely.

Increasing the awareness of IFMAPS in the state has been problematic. Over time, the IFMAPS label has proven to be clunky. It does not convey a clear image of the program without an elaboration of the name (Intensive Financial Management and Planning Support), and even then it is not particularly friendly or clear regarding what is provided. The similarity between the acronyms for the software and business planning educational program have made it difficult for educators and producers to distinguish between the two. Shedding the IFMAPS label does not appear to be an option, as the legislation for the OALDP specifically names IFMAPS as a service provider for certifying farm plans.

Many who are familiar with IFMAPS associate it only with assisting financially stressed farms, which was initially the case. For those vaguely familiar with IFMAPS, changing the image is difficult. At the same time, turnover in extension staff means that many new educators do not understand IFMAPS's legacy of service. Programs that are not delivered through county staff are difficult to promote through traditional extension channels. Educators may not see the value in promoting something for which they receive no local recognition, and state specialists are not in the habit of cross-promoting each other's programs. Because in-service training for county secretarial staff does not include material on programs, the extension "front door" is not always familiar with IFMAPS work.

Although a service is provided through IFMAPS, the program's emphasis has always been on producer education. However, it often seems that producers view participation primarily as a means to an end, primarily lower interest rates. We sometimes question whether people value a program that is free.

Where farm-management associations in other states have endured, they disappeared in Oklahoma in the early 1980s. Not having farm-management associations limits the amount of farm-level data for research and analysis. When IFMAPS was initiated, no plan was made to collect or summarize farm plans

in an electronic form for future analysis; thus, an opportunity was missed. At the same time, as financial statements represented plans and not documents of actual financial performance or position, only the data on beginning financial position might have been useful.

OSU's Enterprise Budget software and IFFS software were initially developed independently. Though it might have initially slowed development of both tools, an opportunity for an even more powerful tool was missed early on.

### **Challenges of Adapting Research for Use with Individual Farm/Ranch Operations**

The links between research and IFFS and IFMAPS have been mostly indirect. It is difficult to identify many agricultural economics research articles in regional or national journals that have contributed directly to changes in IFFS or the IFMAPS program. However, *Journal of Extension* articles often provide food for thought and interesting insights on successful programs. The specialists developing financial plans need an awareness of changes in market conditions, lender policies, and government programs, plus reasonable production and financial benchmarks. Applied economic projects and the products derived from them—publications, enterprise budget templates, training sessions—are valuable and certainly inform the specialists helping producers develop plans.

Much research that is published in academic journals uses research methodologies that are often not well understood by or of great interest to most producers. While extension educators and business planning specialists want the research from which they draw to be scientifically valid and professionally credible, because of the variety of demands on their time and expertise, they also want simple, direct solutions to problems. This point was driven home at a training session for extension educators to introduce new enterprise budget software. The templates offer extensive built-in references to research-based guidelines for everything from planting date to stocking rate plus features such as fertilizer calculators and

seasonal price indices. Thus, budget software use provides many opportunities for education and introduction of research results. Although the templates open to a one-page summary and added features can be ignored, educators still asked if it would generate a simple Excel spreadsheet in which they could manipulate a few numbers, indicating a preference for a very simple spreadsheet (even if it is less precise) to the comprehensive budget template.

In the budget software case, we thought we were enabling users to better analyze decisions themselves; however, they often prefer to rely on specialists to generate budgets and interpret the results. This has been the case with IFMAPS and IFFS as well. While the level of financial literacy is not high, few people are inclined to raise their personal financial management skills or record-keeping practices substantially unless required by a lender or government agency.

The more experienced a person becomes in working with individual producers, the less comfortable one is in suggesting that a particular practice is appropriate for all or even most producers. There are very few one-size-fits-all solutions. To suggest that a research finding is applicable to an individual's operation requires that you know a great deal of very specific information about that farm or ranch. Otherwise, the suggestion may be counterproductive or the answer proffered may treat a symptom of a problem rather than the problem itself. For instance, when a producer asks what to spray to control a specific weed, providing the name of a chemical and an application rate may be what he/she wants. But if the weed is a symptom of overgrazing, spraying will add to production costs and not solve the underlying problem. Weeds will persist. While it is often expedient to provide a quick answer to a question, service at the expense of education may not serve the producer well in the long run.

Still, producers seeking advice from extension often want an answer to a specific question or a solution to a specific problem, not an education. And the solution should ideally be quick, easy, and inexpensive. With regards to business planning, our experience has been

that producers want confirmation that they are likely to survive financially, even if they do nothing differently. A literature search provides little evidence of research documenting a positive relationship between time spent on financial management (or record keeping) and profitability, so perhaps this is not surprising. I have often thought that I should study psychology, decision making, and individual choice and behavior research to gain insights on why producers spend so little time on business management. Perhaps classes in salesmanship and motivation would be helpful for educators in promoting the benefits of business planning.

In a national assessment of extension farm and ranch financial management programs following the farm financial crisis, agricultural producers, extension specialists, and local educators all rated individual assistance as the most effective delivery method for financial management programs (Klair). Not surprisingly, overall usefulness of financial management assistance was related to the producer's financial stress level. In tight budget times for land-grant universities and periods of relatively low financial stress, the temptation might be to deemphasize financial management programs. However, maintaining the institutional capacity to assist producers through an infrastructure like the IFMAPS model is relatively inexpensive. Alternatively, emphasis could be switched to developing farm business management associations that are largely paid for by participating producers.

Benchmarks for financial position and performance of farms of different types, sizes, and life-cycle stages are of interest to producers and can be used for education. It is unfortunate that there was no plan from the beginning to collect IFMAPS data for research purposes. Other institutions have successfully mined data aggregated from individual farm records for research purposes as well as to provide benchmarks for producers. IFMAPS was different in that the focus was on planning and there were no requirements to compare actual performance to the plan. Although opportunities have not been fully explored, future use of the data would likely require pro-

ducer consent to satisfy institutional review board requirements associated with the use of human subjects. A massive programming effort would be required to modify software to capture full financial plans and aggregate financial plans for summary and analysis. A more appropriate strategy would seemingly be to evaluate alternatives and adopt an existing package. However, a review of alternatives several years ago suggested that we would be giving up much in the way of flexibility and ease of use in developing alternative financial plans.

A close extension/research interface and connection is certainly beneficial for the land-grant institution. Even if research and extension faculty are in the same building physically (which not all are), extension and departmental administration influence what faculty and staff do through annual evaluations, promotion and tenure processes, and policies. Expecting an extension publication or presentation to result from a research project, requiring extension faculty review and input into research projects, having researchers regularly present findings to extension staff, and having group meetings that encourage interaction of faculty with potentially overlapping interests regardless of appointments are all policies that send clear messages that a journal article is not the only desired outcome of research work. When the researcher is also the extension specialist, a direct link to the public is highly likely. For faculty with teaching/research appointments, the onus is on them to ensure that practical applications are clear and to fashion extension output. In some institutions, it is not clear whether this is encouraged and/or whether incentives to do so exist. Extension leaders or interested department heads can make some of these things happen.

### **The Dilemma for Future Farm Management Extension Programs**

It is doubtful that the early success enjoyed by IFMAPS could be repeated today in Oklahoma. The institutional capacity to develop and implement a program of this size and scope does not exist. In the event of a

farm financial crisis, a lack of production economics faculty, area agricultural economics specialists, and county staff with agricultural economics training, together with fewer paraprofessionals, would require training a new cadre of staff.

Beyond Oklahoma, the capacity for development of new and innovative farm-management outreach programs may also be limited by the number of faculty with production economics interests and expertise associated with the land-grant universities. It is not clear that core groups of farm-management/production economists exist beyond a handful of universities today, and few universities are training many production economists. In an informal survey conducted through extension economists in the southern region in spring 2003, states had 3,500–11,500 farms per agricultural economics extension full-time employee (policy, marketing, and farm management combined; excludes rural-development specialists). Little individual assistance can be provided with this level of staffing.

Regional extension committees provide the opportunity for sharing of ideas and development of personal relationships that make collaboration possible. However, lack of funding to support regional projects, and meetings only once per year, make it difficult to garner commitments to significant projects that have public-good attributes. Working cooperatively requires giving up some control as to the form of the final product and adds uncertainty regarding the ability to suggest needed maintenance and modifications. Future access to tools or files might be constrained without formal agreements.

At the same time that production economics has shrunk dramatically at the university level, the U.S. Department of Agriculture has also suffered personnel losses. Where subdisciplines within agricultural economics used to benefit from individual national program leaders, we now share those leaders with a variety of other interests and program areas. Field experience in extension is not required. While new leaders bring many strengths with them, the need to manage grants and partnership agreements, plus other new responsibilities,

means national program leaders cannot do all the things that program leaders did in the past. Traditional roles, such as fostering communication across agencies, regions, and the nation within the discipline, may suffer.

Increasing emphasis on competitive external funding to supplement traditional sources of land-grant funding does little to encourage a better research/extension interface. Emphasis is on either research or education, with incentives to collaborate across disciplines, institutions, and state lines, rather than mission (IFAFS was perhaps an exception).

E-Extension is definitely or definitely not in the land-grant future, depending on your source. However, concepts raised in discussing the form it should take are valuable in thinking about how future outreach programs can address timely concerns, be accessible 24/7, meet needs beyond state lines while also maintaining visibility for the local institution, etc. As resources become increasingly scarce, it is important that we not re-create the wheel (or even similar wheels). A frequently cited example in e-Extension discussion is how many roach-control fact sheets are needed across the country. The farm-management equivalent might be how many fact sheets explaining cash-flow planning are needed. The faculty reward system, and certainly the promotion and tenure process, are designed to encourage new program and publication development, not adoption and delivery of someone else's program.

With fewer extension full-time employees and resources, it becomes increasingly important to leverage the remaining individuals, and one way to do that is by providing on-line resources. In the area of financial planning, this is less than desirable given people's tendency to procrastinate until a financial crisis exists. And, the best input for financial plans is derived from local sources. Benchmarks are of limited value unless a database is well populated so that comparisons are to similar types and sizes of farms in similar geographic areas. Developing Web-based instruction requires a large investment on a faculty member's part in learning to do it, and the rural audience often lacks the technology needed to view video, for instance, over the Internet.

Certainly, the farm financial environment has changed. With most farms earning more household income off-farm than from the farm and with a significant portion of farm income coming from government payments, the potential for severe farm financial stress is tempered. If the successful models of the past cannot be repeated or are unsustainable, perhaps farm-management extension needs to morph into something entirely different. What remains the same is that people, money, and leadership will all be needed to continue to meet producer's future educational needs.

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