JULY 1994 E. B. 94-17

FINANCIAL CONSIDERATIONS WHEN EXPANDING YOUR DAIRY FARMING OPERATION

A STUDY BY

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I. Introduction and Objectives

There is clearly a trend towards fewer but larger dairy farms throughout the United States and in New York State. In New York State, average herd size increased from 53 cows in 1984 to 66 cows in 1993. Changes in herd size were even more pronounced in the New York State Dairy Farm Business Summary (DFBS), a record keeping project at Cornell University. In that project, the average herd size increased from 104 cows in 1989 to 123 cows in 1992. This trend in larger herd size is primarily the result of the higher profitability and efficiency that is associated with larger herd sizes. For example, note the labor and management income in the DFBS for 1992. Herds with less than 40 cows averaged labor and management income of -$8,245, while herds in the 200 to 300 cow range averaged $13,844, and farms with herd size over 300 cows averaged $167,301 of labor and management income per farm.

In order to capitalize on the efficiency and profitability that larger herd sizes tend to offer, many dairymen are considering expansion. Hence, providing the results of recent experiences of expanding farmers should be of interest and of use to farmers considering future expansion. This study provides information on the implications of an expansion from both a farmer and a lender perspective.

The specific objectives of this study are as follows:

1. To learn which lenders were utilized by farmers to obtain expansion credit.
2. To describe the lending process followed in expansion situations and the criteria used by lenders.
3. To learn what types of financial problems farmers encountered when expanding.
4. To suggest means by which expanding farmers might minimize financial problems.

II. Procedure

Since the plan of the study was to learn directly from farmers and lenders who had recent experience with farm business expansions, we developed a survey for both farmers and lenders. Survey questions were designed to learn what decision processes farmers go through in expanding a dairy farm business. We also wanted to describe the process lenders use in deciding whether to finance the expansion of a dairy farm business. We asked each group about problems that they had encountered in that process, and we asked those surveyed what advice they would give to improve the chances for a successful expansion or to reduce problems. The separate survey design for farmers and lenders made it possible for us to focus questions so that each type of respondent would be commenting on his or her own experience with the dairy farm business, either as a farmer or as a lender.

The sample respondents for the farmer part of the survey came from lists of dairy farmers who had recently completed expansions. Names were provided by Cornell Cooperative Extension farm management specialists . The lender list came from the same source, supplemented with additional names from authors of this report. Due to the selection process, neither the farmers nor lenders included in this survey are representative of all expanding dairy farmers nor of farm lenders. Nevertheless, given the study purpose, the authors believe both farmer and lender responses have information to offer farmers considering expansion.

The specific farmers and lenders included in this study were selected depending on: (1) whether they had been involved with an expansion of a dairy farm business within the last five years, (2) their proximity to Cornell University (for easy access by students), and (3) their willingness to take part in the survey. In general, all farmers on the list were within one hour's drive of Cornell University. Most lenders were also within an hour, but three respondents were outside that distance due to special working relationships with class members. The lenders included in the survey were farm loan officers from Agricultural Credit Associations of the Farm Credit System and commercial banks.

The interviewers were members of the Agricultural Economics 407 class (Farm Financial Management) with interests in agriculture, in general, and dairy farm business management, in particular. The students were majoring primarily in Agricultural Economics, Animal Science, and General Studies. Each student selected two survey participants, either farmers or lenders, to interview for this study. The interviews took place in November and early December of 1993. While the survey procedure was discussed in the 407 class, no additional training was provided students in preparation for undertaking the survey.

III. Farmer Description of their Expansion and Credit Use

The initial list of farmer contacts numbered 17. Ten students divided the responsibility for contacting the 17 farmers, but only nine interviews were actually completed.

The nine expanding farmers started with 75 to 300 cows. The average number of cows per farm before expansion was about 194 while the average number following the expansion was about 411. Five of the nine operations started at under 200 cows. While three of the expanding operations had 300 cows as their target, five were shooting for 500 cows. Two of the expansions were completed within 13 months, but the average length of time taken to complete the expansion was two and one quarter years. The time ranged from one year to five years due to the fact that not all of the subject farms wished to complete their expansions immediately. Half of respondents chose to expand one step at a time so that improvements on ideas could be made as the expansion proceeded.

Many reasons were given for expansion. Most respondents shared several reasons, while others only had one or two reasons for expanding. The most common reason for expansion was to increase efficiency or profitability of the business. Almost half expanded due to additional family members coming into the business, and about one-third of respondents said they had the required land base and management capabilities to make it happen. One respondent replied that he simply needed to be challenged by something new.

One item of particular interest concerns where expanding farmers get their information. Subject farmers gathered information for their expansions from a variety of sources depending on the type of information. Most all went to their individual creditors for financial information and analysis. Many also used individual faculty members from Cornell University and local extension specialists. For information on buildings and layout, expanding operators tended to use individual faculty from Cornell University and other farmers who had recently expanded. Note that this survey was conducted in an area near Cornell University, so many farmers relied heavily on support from the university and extension staff.

Sources of credit used by those surveyed came primarily from the Farm Credit System lenders, although in one case Farm Credit had refused the initial request but changed its mind after a commercial bank approved the loan request. There was only one borrower in the sample whose credit came from a commercial bank. One respondent used credit from both a commercial bank and Farm Credit. Reasons given by respondents for using the credit source they did were that they had a history of getting credit from that source. Several who used Farm Credit also commented that they believed rates offered were very competitive and that Farm Credit had a good reputation.

Several questions probed for information on the owner's equity prior to expansion and the proportion of expansion funded by credit. While two of the expanding operators had equity as low as 60% at the start of their expansions, over half had equity of 90 - 100%. In five of the nine cases, the lender provided 100% of the funding for the expansion, although the farmers often contributed labor or time. In only one instance did the farmer provide over half of the dollars used for the expansion.

The survey also asked farmers what factors they thought the lender had relied upon in approving their credit request and whether the lender had actually discussed the criteria with them. Seven of nine respondents thought the lender had used balance sheet or equity information in deciding on the loan request. Four also listed cash flow and family or credit history as key loan criteria. Three thought their production level had been important in the decision. Other factors mentioned were thorough planning of the expansion and debt repayment capacity (which, of course, depends on cash flow). Of the nine respondents, two indicated the lender had not discussed loan criteria with them while their applications were being considered. The other seven had discussed loan criteria with their lender.

IV. Farmer Evaluation of Their Expansion

The survey asked a number of questions about the expansion experience to learn of financial or other problems and the degree of satisfaction with the expansion. Several farmers reported financial problems during their expansion. These included the length of time to get the mortgage approved, going over budget due to cost overruns, relying too much on dealer credit, need for more improvements sooner than expected, and a barn fire during the expansion. In only one case, however, did the problems cause any change in the overall plan for the expansion, and in that instance the size of the overall loan was increased slightly.

The farms that had financial problems during their expansion were able to work out accommodations with their lender. In one case, principal payments were skipped for several months. In another case, the farmer tried to pay too much of the cost from cash flow and had to roll over the line of credit into a scheduled payment plan. A third went over budget and had to go back to get the credit commitment increased. Another respondent had to increase the loan to cover an unexpected event, and yet another avoided having to do so by applying for a larger loan than needed right at the start.

All of the respondents said they were generally satisfied with the expansion, although several said it was still too early to tell. Perhaps that thought was best represented by one farmer who said, "There are still little things that need to come together".

There was general satisfaction as well with the financial results of expansion. One operator was especially pleased that the total cost was within 5% of budget. Another had experienced substantial growth in net worth since the expansion. Still, a couple of farms felt it was too early to tell. One respondent noted that production was lower than planned, in part due to some herd health problems.

If they had the expansion to do over again, four said they would do nothing different or would make only minor changes in their plans. Five respondents did note changes they would make. One questioned the accuracy and cost effectiveness of computerized milk recording. One thought he might have constructed a different type parlor. Another questioned the facility layout he ended up with and said he would have planned further ahead. Still another thought he should have checked his purchased animals more closely for mastitis and other health problems. And one respondent admitted he had made mistakes by acting as his own general contractor. While it had saved money, it also allowed the possibility of mistakes from lack of experience and expertise.

Considering their own experiences, we asked whether respondents had any advice for other farmers thinking of expanding. Many had "food for thought". For example, as one said, "Don't be afraid to spend money on quality, but don't confuse quality with 'show boating.' The first consideration is, will this add to the profitability of this operation?"

Several respondents underlined the importance of careful planning, setting goals realistically, knowing one's own limitations, and being able to survive under a worst case scenario. Other thoughts were to get a handle on interest rates and to carefully consider milk prices over the next five years. One person noted the importance of building in such a way that further expansion could occur later. And, consistent with many other studies, one respondent pointed out that one should be prepared for a poor first year. He said it was harder to adjust the cows than anticipated, it took a year to get satisfactory cow traffic, and replacements were a problem. Perhaps the advice was best put by one who said, "Hang on to your hat! Many challenges arise unexpectedly --building a management team, cattle health problems, price drops, difficulty in getting the desired production per cow".

Finally, we wondered if the expansions had put these farms in the size category they wanted or whether they planned further expansion in the future. Half were clearly thinking ahead to possible future expansion. Several designed their expansion with future additional expansion in mind. Others have additional family members who may join the business; and if they do, further expansion will be needed. A couple pointed to a time frame five to seven years from now for further expansion, and one plans to expand about 10% per year. Why continue to expand? Most often it was from the force of competition or the desire to stay on the leading edge of change.

V. Lender's Description of the Farm Expansion Loan Approval Process

Seven lenders completed questionnaires. A number of questions probed their experience with farm expansion loans, the criteria used in making the loan decisions and their overall perspective on dairy farm expansion loans. The loan process starts when the borrower goes to the lending institution to ask for a loan. The lender begins by sitting down with the party to discuss the reasons for the proposed expansion and the specific expansion being considered.

Typically, the lender will require a substantial amount of information. For example, all the lender respondents indicated they require a balance sheet, operating statement, cash flow statement and projected cash flow statement. Several, but not all, also require a pro forma operating statement and/or a pro forma balance sheet. (Pro forma operating statements and balance sheets are projections for the next year.)

Lenders were asked how much down payment or equity they require of farmers planning an expansion. In general, the lender would expect the farmer to have at least 40%, preferably 50% or more, equity in the present operation before undertaking an expansion. However, lenders also looked ahead to see what the percentage of equity would likely be after the expansion. Their expectations ranged from 25% to 40% after expansion with most preferring to see debt no more than 60-70% (that is, equity at least 30-40%) once the expansion was completed.

The lenders were also asked what other information they require when they receive an application for an expansion loan. Typically, historical operating and balance sheet data are required for more than just the most recent year. Several mentioned the need for complete project costs, including building contract costs. One lender specifically mentioned discussion of the management structure and another said he would want to see the succession plan or estate transfer plan. Another lender said he would want to discuss both a contingency plan and a sensitivity analysis. In short, that lender wanted the prospective borrower to be thinking about what would happen if things didn't go as planned.

Did lenders expect farmers to use outside consultants for their expansion planning? Most did not require outside consultation although two or three did. Yet, even those who didn't require use of outside consultants thought it would be beneficial if the expanding operator talked to farm credit consultants, Cornell staff or Cornell Cooperative Extension agents. For buildings and facilities plans, the lenders generally did require that the operator consult appropriate experts--production consultants, builders, Cornell Agricultural Engineering Department and farmers who had recently gone through an expansion.

Once this analysis is completed, the lender decides whether to proceed further. If the answer is positive, then the next steps usually are to do an environmental analysis of the expansion site and also have an engineer judge the plans for adequate workmanship. The lender tries to avoid getting caught in the situation where the site does not remain viable over the length of the loan.

VI. Monitoring the Loan and Progress

When lenders were asked how they monitor expanding farms to spot developing credit or financial problems, the most frequent response was by visiting the farm. Contacting the farmer and talking face to face while looking over the farm premises allow assessment of performance of the farm. The next most popular monitoring tool is inspection of financial reports, whether they be monthly, quarterly, semiannual, or annual in term. Often, as hints of financial distress become more prevalent, frequency of analysis is increased to better monitor and evaluate areas of concern. Other monitoring practices used by lenders include watching checkbook balances, staying informed of payment delinquencies to fellow creditors, and keeping tabs on feed bills and other dealer credit account balances.

VII. What Makes an Expansion Proposal Convincing to a Lender?

As a means of helping expanding farmers understand what makes a good expansion proposal, the lenders were asked both to describe the "most convincing" expansion proposal they recalled seeing and to explain why it was convincing. One lender described a proposal in which the physical resources, labor, management and history of success, were already in place. The proposal was convincing because the amount of additional capital investment needed was small compared to the potential increase in cash flow. Another lender described a case of a father and several sons who worked well together, were management oriented, divided duties, made group decisions and had shown great commitment to the farm.

A third lender described a proposal to expand from 290 cows to 600. The proposal was convincing because of the extensive planning and preparation that had gone into it before the lender had even been contacted. The business had already achieved very good efficiency and performance at its existing level. It had key labor components in place, had matched expected investment in buildings and equipment to optimum herd size, had a manure management plan, and requested terms that would hedge against interest rate risk. In short, the plan demonstrated thorough consideration of all the major issues.

Another lender was impressed by an expansion proposal in which excessive cows and youngstock numbers were already in place. That meant the unknown cost of replacements was eliminated, thus avoiding additional debt to buy livestock at a time when capital was being spent for barn and parlor construction. Two other lenders did not give details on expansion proposals, but one commented that a "complete and realistic" loan packet impresses him. The other pointed out the importance of "homework" being done and having a plan based on conservative, not optimistic, figures.

VIII. Expansion Problems Noted by Lenders

Lenders were asked for examples of financial problems that they encountered with expanding operations, what the causes of the problems were and what was done to remedy them. The various lender responses had many points in common. Some of the major points and causes were as follows:

1. Failure to recognize and plan for an adequate number of replacements. Often, there were not enough replacements for the herd at start up and for meeting the requirements of a higher cull rate that was experienced by many farms. Poor planning was listed as the main cause of this problem. Farmers didn't plan on the increase in the cull rate or the two year lag of low replacement numbers present in the current system. One loan officer stated that this was aggravated by businesses that bought heifers that were bred to "nondairy" breeds for calving ease. This added another year of low replacement numbers. Another loan officer said that a farmer didn't plan on the increased cull rate from switching a tie-stall herd to freestalls.

2. Cost overruns on the construction projects. Underestimated costs of construction and of the transition plan were common problems. Some projects were reported to be underestimated by 35 to 40%. As one loan officer put it, "Things like site work, plumbing, electricity, and manure storage are considered small but can be significant". These problems were also attributed to poor planning and not listening to the advice of experts. Also, there is a lag between costs and increased income, and financing terms should recognize the delay in reaching a higher income level.

3. Another common problem involved decreases in milk production and herd health problems. These problems were commonly caused by management not being prepared to handle a larger herd. Health problems were caused by new animals bringing diseases into the herd. Managers did not exert sufficient care in purchase decisions and did not take the necessary means to treat new animals before bringing them in contact with existing cows.

4. Management of labor was also a problem for some managers. Not having the right people in key positions was seen as critical by some loan officers. Other management problems observed were inability of managers to delegate the

work. They were used to doing most of the work themselves and couldn't let go to become a "manager".

These problems were most commonly addressed by the lender extending additional credit and/or changing or extending the terms of the loan. Some repayment schedules were adjusted to let the operation get "up to speed"; and in some, the first payment date was set back. One loan officer reported instituting a nonessential-asset reduction plan and capitalizing replacement purchases. Also, the ability to adjust loan terms depends on the equity of the expanding operator. Higher equity permits more possibilities in adjusting terms. Some loan officers also stated that sometimes there is no remedy available for the farm.

In summary, lenders were asked to describe the most common mistakes farmers make when undergoing expansion. Their responses were as follows:
1. Inadequate planning, lack of planning, or unwillingness to pay a consultant.
2. Underestimating project costs for expansion.
3. Not considering replacement needs or underestimating cull rate.
4. Buying too many "bells and whistles".
5. Not recognizing that some of the investment will be "lost capital".
6. Not recognizing the changes in management required by expansion.
7. Not considering long term or strategic planning implications of expansion--how will operation be passed on, sold or liquidated in the future.
8. Underestimating increased and concurrent demands that will be made of them for managing a bigger operation, buying livestock, delegating responsibility, overseeing construction and living with debt.

IX. Some Advice from Lenders for Farmers Undertaking Expansions

Based on experience with previous expansions, lenders offered a number of steps farmers could take during the planning, positioning, and expansion of the business to help avoid financial problems during and after the expansion.

First, one should expand for the right reason. Do the best possible job with the present operation before considering a larger operation. If one is struggling with the current situation, getting bigger will only compound problems. Second, allow plenty of time (one year or more is not unusual) to develop thorough and realistic plans. Specifically consider the short and long term goals of the business. Understand the risks and have a contingency plan to fall back on if things don't work out. An important consideration in the plan should be how to get out of, or pass on, the operation. As dairy farms become more complex, planners should seek advice from professional sources in designing the facilities and organizing the business.

Also, those considering expansion should visit the facilities and talk to managers or operators of farms that have recently expanded to learn from their experiences. In all cases, one should be sure the project will work on paper first; because if it doesn't work on paper, it's not likely to work in reality. It's important to be realistic, perhaps even conservative, with projections. Also, it's useful to do a sensitivity analysis, increasing estimated costs and decreasing estimated revenues to see how the outcome is changed. The plan developed is very important as it will be the only measuring stick or basis for comparison as the expanding operation goes through the expansion process.

Dairy farmers should also be proactive in positioning their businesses for expansion. One step should be to optimize productivity under the present conditions. This will help in proving management skills to lenders and will help build a financial cushion which can help absorb setbacks that may occur during the expansion. Another piece of advice is not to borrow the maximum possible for the expansion. Keep some credit in reserve. Try to build up herd replacement numbers before the expansion to offset some of the costs.

In implementing the expansion plan, it is of utmost importance to control costs. Be thrifty in capital decisions by spending money on things that will earn money, not on all the "bells and whistles". Monitor the results of each phase of the expansion against the plan to determine if budgets are being met. Also, spend some time to do comparative shopping; it's a buyer's market when it comes to dairy equipment.

X. Is Expansion a Good Strategy for the Future?

When asked if expansion today is a good choice for farmers who can manage and afford it, lenders had a multitude of responses. One response was that there should be a good reason for expanding such as for other family members entering the business, for increased efficiencies, or to more fully utilize available resources. But, it's important that the decision makes sound economic sense as well. Don't get bigger to take on more owner-operators if the business won't be able to support them.

Lenders stated that one cannot know whether it is a "good time" or "bad time" to expand since market conditions fluctuate over time. A good manager with a solid plan should be able to deal with conditions as they arise. Each farmer must assess his or her own resources such as land, location, and management, and each must determine what his or her competitive position is in a downsizing industry. Along with resources, each farm should carefully examine any environmental issues they may face such as manure management or proximity to a watershed. The farmer should also consider personal goals such as retirement or succession of the business. One danger in expansion is concentrating all of one's net worth in assets that are only good for one thing, dairy farming. One lender believed that expansion was an excellent opportunity for the right individuals. They must have above average management ability, be forward thinkers, and be able to manage people. Farmers with low production levels or high debt should resolve these issues first before considering expansion.

XI. Summary

This study was a project of a Cornell University class in farm financial management. The class discussed changes taking place in dairy farming, decided on a topic of importance, then specified objectives, and helped develop the questionnaire. The purpose of the study was to obtain information on the process of obtaining credit, on financial problems and considerations when expanding the dairy farm business. During late fall of 1993, students interviewed nine farmers who had recently expanded and seven lenders who had financed dairy farm business expansions. While the relatively small number of respondents means the surveys are not representative of expanding farmers, in general, their responses still provide insight and suggestions for other dairy farmers considering expansion.

The nine farmers in the survey began their expansion process with herd sizes between 75 and 300 cows, and their expansions increased cow numbers by over two times. The many reasons these farmers expanded included increasing efficiency and profitability, bringing additional family members into the business, and better utilizing the resource base and management capabilities. All but one of the study respondents obtained their expansion credit from Farm Credit System lenders.

The farmers in the survey were generally satisfied with how their expansions turned out though in several instances it was still too early to have final results. Many did experience financial problems of one sort or another including cost overruns, length of time to get a mortgage approved, relying too much on dealer credit and the need for more improvements than anticipated. In general, when such problems arose, the lenders accommodated the expanding operators by allowing skipped principal payments, increasing the loan commitment or rolling the line of credit into a scheduled repayment plan.

Based on their experiences, surveyed farmers offered several pieces of advice to others considering expansion. One suggestion was to focus on quality in improvements and to evaluate each investment in terms of its profitability. Other respondents mentioned the importance of careful planning, setting realistic goals, knowing one's own limitations and planning so as to survive in a "worst case scenario." Still other thoughts were specifically to consider interest rate variability, to project milk prices over the planning horizon and to be prepared for a poor first year when expanding.

In considering whether to approve an expansion loan, lenders require a balance sheet, operating statement, cash flow statement and a projected cash flow statement. In fact, the lender typically wants to see the balance sheets and operating statements for several years. Lenders are also interested in estimates of the complete project costs for facilities, cows and other expenses of expansion. Several lenders commented that they would also like information on the management structure, the succession plan and a sensitivity analysis of the projected results.

Once the loan was made and the expansion underway, lenders monitor the progress. This involves visits to the farm, discussions with the operator and inspections of financial reports such as loan delinquencies, dealer credit and checkbook balances. Similar to experiences of farmers, lenders reported a number of financial problems they had seen with expanding operations. These included failure to plan for sufficient replacements, cost overruns on construction, decreases in milk production, herd health problems, and inability of the operator to manage a larger sized labor force.

Lenders were also asked for advice they'd give to dairy operators thinking of expanding. Suggestions included getting better before getting larger, allowing plenty of time to do the necessary planning, setting specific goals before expanding, understanding the risks, thinking about how to get out of or pass on the operation, talking to farmers who have been through expansion, and being realistic with plans and projections. In short, be sure it works on paper first and have a contingency plan.

XII. References

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