

MBC Farms¹

Mike, the senior family member at MBC Farms, sat at the kitchen table, listening to the farm report and drinking his coffee. The reporter had just finished talking about the excessive rain that spring and how plantings were 80% behind normal. As Mike listened to an advertisement and waited for the next story about the need to be big to survive, he was struck with the thought that, every year, making money farming seemed to be harder. However, in spite of this, more of the family seemed to be interested in farming. Mike knew what the simple answer was. They just had to do more farming – enough farming so that, even with low prices, the family could make a decent living. The complex answer was determining what activities made economic sense.

MBC Farms is a mixed farm located in Jasper county, Indiana. Given its activities and its location, it had several growth alternatives. Betty, Mike's niece, managed the dairy operation, which had 250 cows. She saw the opportunity to sell much more milk to a nearby processing plant. Craig, who had married Betty's sister, Jan, managed the crop activities, which covered 3,000 acres with corn, soybeans, and forage. He wanted to expand crop activities because he saw the opportunity to sell identity-preserved corn under contract to the nearby plant of a major food processor.

Mike felt torn because he simply didn't think that the farm had enough resources to pursue both alternatives, but he knew that the business had to be expanded. Because he felt that the decision about growth alternatives would have long-term effects, it was important to use a reasoned approach. Mike concluded that they would have to pick one of the two alternatives and provide sound reasoning for the choice. Betty and Craig were the ones responsible for making the selected alternative succeed. He was afraid that if they did not agree on the future path of the business, the chance of long-term success would be greatly reduced.

History of MBC Farms

MBC Farms was founded by Fred, Mike's father, in 1945. Fred had focused on the milk production and acquired land as he could afford it so that he would have enough feed to support a larger operation. By the time he died in 1975, he had put together a farm of 400 acres and had 50 milking cows. His two sons, Mike and John, who had joined their father on the farm in the mid 1960s, took over management of the farm when Fred died. They continued to expand the farm, buying more land and equipment, using the

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earnings generated by farming. This conservative approach to financing limited the growth of the farm. Mike explained why they had taken such an approach:

“We were lucky that dad left us in good financial position so that, during tough times, we were actually well-positioned to grow while many of our neighbors struggled and lost their farms.”

The philosophy of the family was that the farm was always open to family members interested in farming. About 10 years ago, two members joined Mike and John on the farm. Both came from John’s side of the family—Mike had never married. The family tree is presented in Exhibit 1. Betty, one of John and his wife Martha’s two daughters, returned to the farm. Betty had been interested in the dairy operation, so she started out managing the milking cows because this would produce enough income to support her. A year later, her brother-in-law Craig joined the farm. He had grown up locally and was interested in crop production. The partnership rented considerable cropland to provide the income to support Craig.

Nine years ago, Mike and John formalized the working relationships of the family members by forming an operating partnership to run MBC Farms. This partnership allowed younger partners access to land and other resources before they had personal wealth. Then, over time, they would be able to take over ownership of the assets in place of earnings.

John died three years ago and Mike, currently 63 years old, became the principal partner of MBC Farms, acting as its chief executive officer. Mike had developed a sizable insurance business in addition to maintaining an interest in the farm. He worked hard on the farm when he was younger and as time permitted. In recent years, he had become the partnership’s visionary. He spent much of his time with those people with whom MBC Farms did business as well as visiting trade shows and reading articles. He was always collecting ideas for improving and expanding the farm.

The farm operation was divided into two units, one focused on crop production and the other focused on milk production. Both units had grown incrementally to their present 250 milking cows and 3,000 acres of cropland. From the beginning, the cropland supplied the dairy’s grain, hay, and silage needs. Twenty-five brood cows were also kept and were a source of irritation to Craig. These cows were a special project started by Mike and John. Mike has continued to work with these cattle since John’s death. However, this herd was located on the farm where Craig and lived. “I usually get stuck minding the cattle: feeding them and chasing after them if the fence breaks. I just don’t see why we bother with cows when cropping is much more straightforward,” Craig complained.

The farm provides the income needs of the family. During the last year \$150,000 was withdrawn from MBC Farms to support Mike, Craig, and Betty. Financial statements for the business appear as Exhibits 2 and 3.

Operations

Dairy Operations

Betty, currently 37 years old, manages the dairy division. She holds a degree in veterinary medicine. Before joining MBC Farms, she worked for two years at one of the largest dairies in the state. She is married to Jason, a veterinarian who holds a job with a large animal health company selling veterinary drugs. They do not have any children.

The operation has a 250-cow Holstein herd and raises its own herd replacements. The bulk of the forage and silage used is produced on the farm. The cows are milked by a staff of five in a double-eight herringbone milking parlor that was built nine years ago. The average production per cow is 21,000 pounds-higher than the average for this size of operation. The herd produces about a half-tanker of milk each day. The milk is delivered to a local dairy cooperative. MBC Farms receives some quality premiums based on the low somatic cell count.

Betty is very proud of the dairy operation and in particular on its focus on milk quality and cow comfort. “We have one of the best operations in the region. Our annual milk production per cow is well above the average, and our costs are as low as anybody’s, but this is not at the expense of quality. We are known for low somatic cell counts and high fat content.”

Betty attributes the quality to good herd management and absolute vigilance with respect to cow comfort. “As we have expanded, we have always focused on quality as more important than quantity, although quantity is important for efficiency. With high quality, we have been able to gain premiums in the marketplace that have more than offset the increased costs of producing it. In the future, we need to market our quality more effectively.”

The reputation of MBC Farms for quality milk has produced an opportunity. The co-owner of a nearby ice cream plant talked to Mike about a month ago at a farm show. Since then, he has been trying to get MBC Farms to sign a contract so that they would deliver milk directly to the plant. The processor was willing to take all of the farm’s production for about \$1.00/cwt. over the current price MBC was receiving. The processor has a condition that caused MBC Farms to pause: they would have to supply a full tanker of milk per day. Attaining this level of output would require a herd of 600 milking cows (at least a doubling of the herd), a larger milking parlor, and more labor.

Betty calculated that the expansion would require an investment of \$1.7 million. Even though the current milking parlor would not require significant renovation, it would need to be doubled in size. The expansion would be likely to take 18 months. Betty promoted pursuit of the opportunity: “Prices in the commodity market for milk are always going to be low. Given our efficiency, we are making a profit now. This opportunity is one of those lucky moments, and we have to take advantage of it because another is not likely to come along soon. With the dairy industry moving in the direction

of fewer and larger dairies, this higher price is going to support an expansion we'll probably need anyway." Exhibit 4 provides more information on the investment.

Craig would have to reduce other crop activities if the crop division were to continue to supply all the dairy herd's forage. When Craig heard this, he said, "Managing the farm and trying to support Jan with her sewing machine business makes it tough to get any family time together. Many improvements can be made on the farm, but I want to have time to spend with my family. The girls are starting to have a lot more activities at school. I want to be a part of their activities. Betty can have her personal goals, but they should not get in the way of family goals. A larger dairy is going to mean a much greater personal commitment of time because more cows will have to be fed and milked. Simply feeding cows will also limit the profitability of cropping because there will be fewer crops to sell."

Mike's view of the expansion is, "I don't disagree that we've got to be bigger in the future, but this is one big bite to chew on."

Crop Operations

Craig, currently 33 years old, manages the crop division. Craig has been with MBC Farms since he graduated from college with a degree in agricultural economics and married Betty's sister Jan nine years ago. Craig and Jan have two daughters, seven and eight years old. Craig is a stickler for detail and is quite proud of the productivity of his operations.

The crop division farms 1,800 acres of owned land and 1,200 acres of rented land. About 375 acres of the cropland is dedicated to hay and silage while the rest is on a 50-50 rotation of corn and soybeans. About one third of the corn acres are contracted, 200 acres producing high oil corn and 200 acres producing food grade corn for a nearby major brand-name food processor. Soybean production uses no-till, while corn production uses minimum tillage. This approach causes some personal stress when hay is being harvested and the corn and soybean fields are being sprayed at the same time. Yields at MBC Farms have been consistently above the county average, in part due to the strong fertility program, which uses manure produced by the dairy herd.

The operation owns all its grain, hay, and silage equipment. Craig said, "We keep our own equipment in good repair and do field work according to our needs and not the availability of contractors. Timely field operations is critical to getting the superior yields we get. But maintenance seems to get tougher every year, especially with the aging hay and silage equipment. For what the dairy pays me, it should buy its feed from someone else." When hay is in surplus, it is sold to horse owners. Craig explained, "Horse owners are careful buyers. They are fussy, but when you provide them with what they want, they are not afraid of paying top dollar. My hay is excellent quality, so I could get more selling it than I am getting from the dairy operation. I would sell more hay to horse owners if I had the equipment and the labor that it would require."

Crops are priced in a variety of ways. Some are sold under forward contracts. Futures and options are also used. Craig bases his marketing decisions on the recommendations of a marketing consultant that he has been working with for a few years. After accounting for the additional marketing costs, the prices MBC Farms received have been consistently above monthly averages reported by the Indiana Agricultural Statistics Service.

The high-oil corn is shipped to a nearby elevator. Two years ago, the 30¢ premium per bushel had been large enough to cover the additional trucking costs and the administrative work associated with a buyers' call contract. However, this year, the premium was a maximum of 15¢, and a further decline is likely in the future. Craig relishes the responsibilities, opportunities, and relationships of that come with being a key supplier - it was a far cry from producing the commodity crops he'd started out with - and is now looking for new value-added crops.

One opportunity he has found is to extend the amount of food-grade corn that MBC Farms ships directly to the nearby food processor. The premiums paid for this corn has been steady over time because of requirements with respect to quality, the methods of production, and the record keeping. This means that this market is less likely to follow the path of the high-oil corn market. Moreover, the processor's representative has assured Craig that the company is interested in only working with a limited number "preferred suppliers." The processor has given MBC Farms the option of producing 400 additional acres of food-grade corn. Craig calculated that this would require additional on-farm storage of 60,000 bushels of corn, at a total cost of \$76,800. Exhibit 5 provides more information on the investment.

When Craig raised this opportunity at a recent meeting of the partners, Mike replied, "I wouldn't be surprised to find that all the effort you put into these contracts doesn't pay off. You're not getting enough money for your effort." Craig responded, "We need to get as much of our crop production under contract as possible. Smart marketing can get you a price better than the market average, but it's a commodity price. Producing a value-added product sold at a contracted price is the best way to earn more."

Betty then interjected, "We need to exploit the synergies in our business. The feed you produce helps the dairy operation, and the manure the herd produces helps your crop operation. This keeps down costs. Because the dairy operation can add more value, this is the one that should be expanded. That is the best way for all of us to make more." Craig responded, "I think that the dairy operation would be better off buying its feed elsewhere—it could be done easily. And I'm not convinced of the synergies between the crops and dairy, especially when activities associated with the forage production compete with the cash crops for my time."

Thinking About the Business

Three years ago, Mike attended a seminar called “Managing the Farm Business.” A theme of the seminar was the need to think about the farm as a whole rather than to be totally preoccupied with the day-to-day operations. Several tools were explained at the seminar to help farm managers think about the business as a whole.

One tool was a vision statement that could be developed to describe the essential features of the business. Mike, Craig, and Betty had worked to develop a vision for the farm. The vision statement that they produced appears as Exhibit 6.

Two other tools that were presented at the seminar were the External Factor Analysis Summary (EFAS) and the Internal Factor Analysis Summary (IFAS). The instructions for completing these tables are found in Exhibit 7. The EFAS table summarizes the strategic opportunities and threats in the business environment. The IFAS table summarizes the strengths the business could use or the weaknesses it needed to overcome. The value of these tables is that they help the manager estimate the general ability of the business to respond to situations. Betty prepared these tables for the dairy division (See Exhibits 8 & 9), and Craig prepared them for the crop division (see Exhibits 10 & 11).

The Decision

As Mike sipped on his coffee waiting for the next report, he knew that he needed to prepare for a meeting with Betty and Craig. They wanted to expand the farm business, but how this would be done was not clear. Mike felt that the choice was either to expand the dairy or to contract more food-grade corn. The long-term vision of the business could be satisfied with either option, though the strategy for pursuing the vision was being tested. Committing to the growth in identity-preserved crops would be a fundamental shift in how they related to the market. The dairy, on the other hand, would be an expansion of something they'd done for a long time. While the dairy would also decrease their flexibility, it might be the best way to maintain create and capture value. Something had to be done, whether it was to ride out the push toward large dairies and then terminate the operation or to grow, they needed to decide. He then thought to himself, “Financially, we're able to pursue whatever opportunity we want. However, with so many possibilities, I am afraid we could be taking on too much. Doing both will expose the business to too much risk.”

The challenge he had created for himself was that, by encouraging Betty and Craig to think more like managers, he also had to think like one as well. This meant that he had to show a well-reasoned choice. In preparing, he planned to use the vision statement and the EFAS and IFAS documents. This would be an ideal opportunity to test how useful they were.

After hearing the news story, Mike got up from the table and went out to the milking parlor. As soon as milking was done, he would pull together his analysis of the

alternatives. Time was getting short, and he wanted to be well prepared for the meeting with Betty and Craig in two days.

Discussion Questions

General Questions

1. Who are the decision makers in this situation?
2. What are the issues to be resolved?
3. What are the goals of the stakeholders? Are there any conflicts?
4. What things can the management team implement to ensure that all the important decision makers are fully informed?
5. If you were to develop a job description for Mike, Betty, and Craig, what would be the primary areas of responsibility and authority assigned to each person?

Financial Questions

1. Did last year result in a profit or loss for MBC Farms?
2. How does the financial performance of MBC Farms compare to that of other farms?
3. What financial measures can be used to assess the performance of MBC Farms?
4. What are MBC Farms' areas of financial strength?
5. What are MBC Farms' areas of financial weakness?
6. What changes can be made to improve the financial performance of MBC Farms? What is the estimated effect of the suggested change on operating and financial performance?
7. How have operating returns and asset valuations contributed to the owner equity of MBC Farms?

Strategy Questions

1. What is the vision for MBC Farms? Does the management team share a common vision?
2. What environmental factors are threats to MBC Farms?
3. What opportunities for MBC farms must be carefully considered?
4. What are the strengths of MBC Farms?
5. What are the weaknesses of MBC Farms? Are there activities that MBC Farms should consider outsourcing?

Exhibit 1. Family Tree

MBC Farms

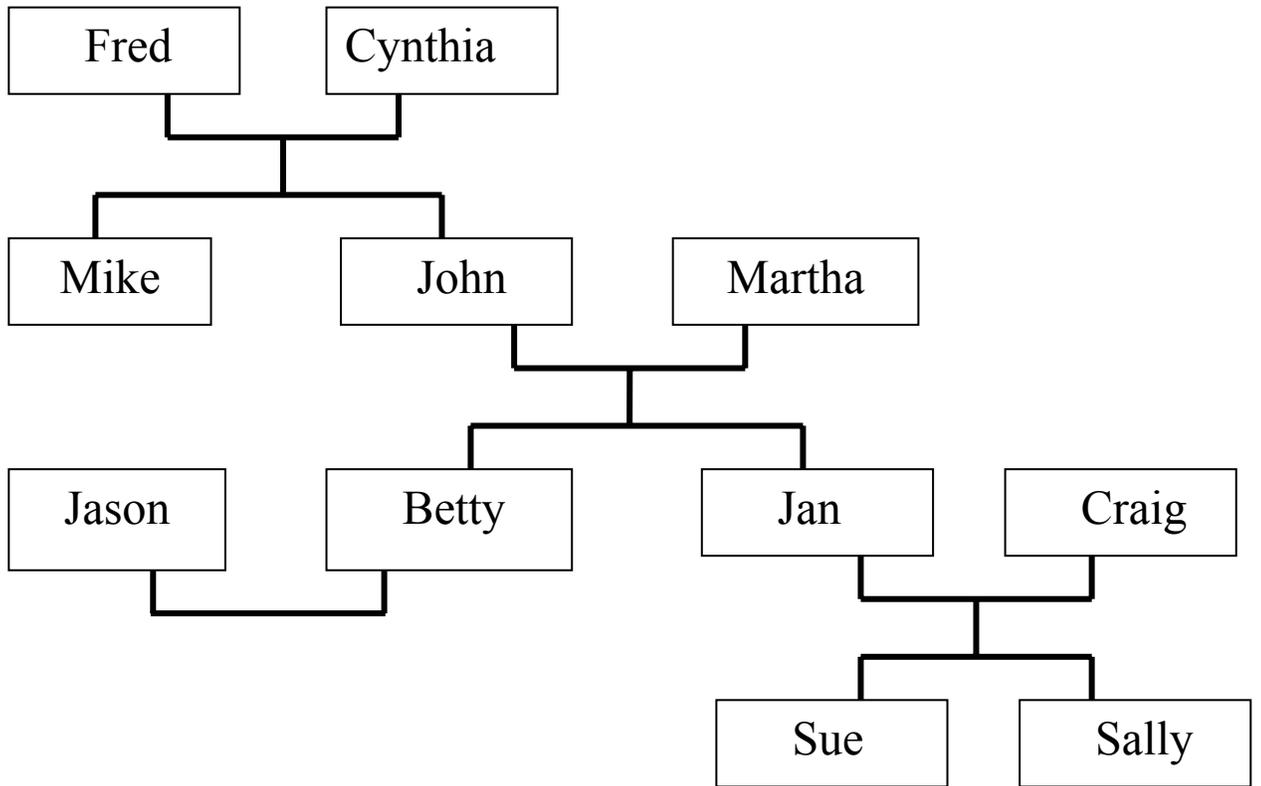


Exhibit 3. MBC Farms Income Information

SCHEDULE F (Form 1040) Department of the Treasury Internal Revenue Service (99)	Profit or Loss From Farming Attach to Form 1040, Form 1041, Form 1065, or Form 1065-B. See Instructions for Schedule F (Form 1040).	OMB No. 1545-0074 20X5 Attachment Sequence No. 14 Social security number (SSN)
Name of proprietor MBC Farms		B Enter code from Part IV
A Principal produce. Describe in one or two words your principal crop or activity for the current tax year corn, soybeans, milk		D Employer ID number (EIN), if any
C Accounting method: (1) Cash <input type="checkbox"/> (2) Accrual <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>
E Did you "materially participate" in the operation of this business during 1997? If "No," see page F-2 for limits on passive losses.		
Part I Farm Income--Cash Method. Complete Parts I and II (Accrual method taxpayers complete Parts II and III, and line 11 of Part I.) Do not include sales of livestock held for draft, breeding, sport, or dairy purposes; report these sales on Form 4797		
1 Sales of livestock and other items you bought for resale	1	
2 Cost or other basis of livestock and other items reported on line 1	2	
3 Subtract line 2 from 1		0
4 Sales of livestock, produce, grains, and other products you raised		1,337,749
5a Total cooperative distributions (Form(s) 1099-PATR)	5a 0	5b Taxable amount
6a Agricultural program payments (see page F-2)	6a 94,800	6b Taxable amount
7 Commodity Credit Corporation (CCC) loans (see page F-3):		
a CCC loans reported under election	7a 0	7c Taxable amount
b CCC loans forfeited	7b 0	7c Taxable amount
8 Crop insurance proceeds and certain disaster payments (see page F-3):		
a Amount received in 1997	8a 0	8b Taxable amount
c If election to defer to 1998 is attached, check here <input type="checkbox"/>		8d Amount deferred from 1998
9 Custom hire (machine work) income		0
10 Other income, including Federal and state gasoline or fuel tax credit or refund (see page F-3)		
11 Gross income. Add amounts in the right column for lines 3 through 10. If accrual method taxpayer, enter the amount from page 2, line 51		1,432,549
Part II Farm Expenses--Cash and Accrual Method. Do not include personal or living expenses such as taxes, insurance, repairs, etc., on your home.		
12 Car and truck expenses (see page F-4--also attach Form 4562)	12	25 Pensions and profit-sharing plans
13 Chemicals	13 72,857	26 Rent or lease (see page F-5):
14 Conservation expenses (see page F-4)	14	a Vehicles, machinery, and equipment
15 Custom hire (machine work)	15 41,077	26b Other (land, animals, etc.)
16 Depreciation and section 179 expense deduction not claimed elsewhere (see page F-4)	16 136,922	27 Repairs and maintenance
17 Employee benefit program other than line 25	17	28 Seeds and plants purchased
18 Feed purchased	18 460,891	29 Storage and warehousing
19 Fertilizers and lime	19 64,300	30 Supplies purchased
20 Freight and Trucking	20	31 Taxes
21 Gasoline, fuel, and oil	21 82,545	32 Utilities
22 Insurance (other than health)	22	33 Veterinary, breeding, and medicine
23 Interest:		34 Other expenses (specify):
a Term debt	23a 89,808	a. Other
b Operating	23b 11,788	b. Overhead
24 Labor hired (less employment credits)	24 97,708	c.
35 Total expenses. Add lines 12 through 34c		1,517,050
36 Net farm profit or (loss). Subtract line 35 from line 11. If a profit, enter on Form 1040, line 18, and ALSO on Schedule SE, line 1. If a loss, you MUST go on to line 37 (estates, trusts, partnerships, see page F-60)		-84,501
37 If you have a loss, you MUST check the box that describes your investment in this activity (see page F-60).		37a <input type="checkbox"/> All investment at risk.
* If you checked 37a, enter the loss on Form 1040, line 18, and ALSO on Schedule SE, line 1.		37b <input type="checkbox"/> Some investment is not at risk.
* If you checked 37b, you MUST attach Form 6198.		
For Paperwork Reduction Act Notice, see Form 1040 instructions.		
Cat. No. 11346H		
Schedule F (Form 1040) 1997		

Form 4797 Department of the Treasury Internal Revenue Service (99)	Sales Of Business Property (Also Involuntary Conversions and Recapture Amounts Under Sections 179 and 280F(b)(2))	OMB No. 1545-0184 20X5 Attachment Sequence No. 27																																
Attach to your tax return.		See separate instructions																																
Name(s) shown on return MBC Farms		Identifying number																																
1 Enter here the gross proceeds from the sale or exchange of real estate reported to you for 1999 on Form(s) 1099-S (or a substitute statement) that you will be including on line 2, 10, or 20		1																																
Part I Sales or Exchanges of Property used in a Trade or Business and Involuntary Conversions From Other Than Casualty or Theft---Property Held More Than 1 Year																																		
(a) Description of Property	(b) Date acquired (mo., day, yr.)	(c) Date sold (mo., day, yr.)	(d) Gross sales price	(e) Depreciation allowed or allowable since acquisition	(f) Cost or other basis, plus improvements and expense of sale	(g) GAIN or (LOSS) Subtract (f) from the sum of (d) and (e)																												
Cull Cows	Various		63,800	0	0	63,800																												
3 Gain, if any, from Form 4684, line 39						3																												
4 Section 1231 gain from installment sales Form 6252, line 26 or 37						4																												
5 Section 1231 gain or (loss) from like-kind exchanges from Form 8824						5																												
6 Gain, if any, from line 32, from other than casualty or theft						6																												
7 Combine lines 2 through 6. Enter the gain or (loss) here and on the appropriate line as follows: Partnerships (except electing large partnerships). Report the gain or (loss) following the instructions for Form 1065, Schedule K, line 6. Skip lines 8, 9, 11, and 12 below. S corporations. Report the gain or (loss) following the instructions for Form 1120S, Schedule K, lines 5 and 6. Skip lines 8, 9, 11, and 12 below, unless line 7 is a gain and the S corporation is subject to the capital gains tax. All others. If line 7 is a zero or a loss, enter the amount from line 7 on line 11 below and skip lines 8 and 9. If line 7 is a gain and you did not have any prior year section 1231 losses, or they were recaptured in an earlier year, enter the gain from line 7 as a long-term capital gain on Schedule D and skip lines 8, 9, and 12 below.						7	63,800																											
8 Nonrecaptured net section 1231 losses from prior years (see instructions)						8																												
9 Subtract line 8 from line 7. If zero or less, enter -0-. Also enter on the appropriate line as follows (see instructions): S corporations. Enter any gain from line 9 on Schedule D (Form 1120S), line 14, and skip lines 11 and 12 below. All others. If line 9 is zero, enter the gain from line 7 on line 12 below. If line 9 is more than zero, enter the amount from line 8 on line 12 below, and enter the gain from line 9 as long-term capital gain on Schedule D.						9																												
Part II Ordinary Gains and Losses			10 Ordinary gains and losses not included on lines 11 through 17 (include property held 1 year or less):																															
<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:25%; height: 20px;"> </td><td style="width:15%;"> </td><td style="width:15%;"> </td><td style="width:15%;"> </td><td style="width:15%;"> </td><td style="width:15%;"> </td><td style="width:15%;"> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																																		
11 Loss, if any, from line 7						11																												
12 Gain, if any, from line 7 or amount from line 8, if applicable						12																												
13 Gain, if any, from line 31						13																												
14 Net gain or (loss) from Form 4686, lines 31 and 38a						14																												
15 Ordinary gain from installment sales Form 6252, line 25 or 36						15																												
16 Ordinary gain or (loss) from like-kind exchanges from Form 8824						16																												
17 Recapture of section 179 expense deduction for partners and S corporation shareholders from property dispositions by partnerships and S corporations (see instructions)						17																												
18 Combine lines 10 through 17. Enter the gain or (loss) here, and on the appropriate line as follows: a For all except individual returns: Enter the gain or (loss) from line 18 on the return being filed. b For individual returns: (1) If the loss on line 11 includes a loss from Form 4684, line 35, column (b)(ii), enter that part of the loss here. Enter the part of the loss from income-producing property on Schedule A (Form 1040), line 27, and the part of the loss from property used as an employee on Schedule A (Form 1040), line 22. Identify as from "Form 4797, line 18b(1)." See instructions (2) Redetermine the gain or (loss) on line 18, excluding the loss, if any, on line 18b(1). Enter here and on Form 1040, line 14						18																												
						18b(1)																												
						18b(2)																												
For Paperwork Reduction Act Notice, see separate instructions.			Cat. No. 13086I		Form 4797 (1999)																													

Exhibit 4. Betty's Dairy Expansion Assumptions

After a meeting of the MBC Farm's planning committee, Betty sat down and put some thoughts on paper about how an expansion of the dairy to produce a tanker of milk a day would work.

Current production of 250 cows at 22,000 pounds of milk each per year amounted to about 15,000 pounds of milk a day. A tanker would carry 50,000 pounds (6,000 gallons). That would mean that the dairy would need another 350 milking cows to fill the tanker.

The site that the current dairy is on would provide enough space for them to expand, so she intended to remain on the current location. However, a couple of construction projects would be needed for the expansion. The existing milking parlor wouldn't be big enough to handle the volume Betty needed. The current parlor, a double eight herringbone parlor, was built seven years ago with technology new for the time. All that would need to be done was to knock out a wall and add more stalls to make it a double 16. Another barn to provide shelter for the cows would also be needed. This would have to be built new. More pens and milk storage would be needed, too. And waste storage for 120 days would be required by law because she would have more than 300 cows. All in all, she thought that the construction could be done for about \$3,000 a cow.

A dairy expansion boom was going on in Indiana at the time, so good milking cows were selling at a premium. She'd like to raise her own heifers for the herd expansion but couldn't produce the herd numbers as quickly as needed. This would also result in severely overcrowded pens until construction on new barns and pens could be finished. This meant she had to buy the new herd. She budgeted \$1,800 a head for a springing heifer.

The number of cattle needed each year would depend on the cull rate. For the first two years, she assumed that the cull rate would be 40 % and that then it would fall and stay at about 30 % (a bit better than average). She felt she could sell cull cows for \$540 a head.

Betty estimated that average production for the expanded herd would be around 190 hundredweights (cwt) per cow for the first year and would increase over time as the operation became more efficient. See Table 1 for the projected increases in milk production.

The additional cows would provide MBC access to a premium of \$1/cwt above the market price. All of the production of the 350 new cows could be sold for this amount. In addition, the production of her original herd would be worth a dollar more.

The market price of milk had been notoriously unpredictable over the last few years. To help project future milk prices, Betty estimated the milk price for the next 10 years

using information from a university research group. The current price was about \$13 per hundredweight. To that she would add the dollar premium.

Table 1. Projected figures for the dairy expansion

Year	Milk Price per Cwt (including premium of \$1)	Milk Production per Cow per Year (cwt)	Depreciation Charge
1	\$14.2	190	\$183,750
2	13.4	200	320,740
3	14.1	220	248,745
4	14.3	220	221,830
5	14.4	230	208,390
6	14.5	230	150,080
7	14.7	240	91,770
8	14.8	240	91,770
9	14.9	250	91,770
10	15.1	250	91,770

About half of the calves born to the herd would be male, and about 5 % of these would die in birth or of disease. She didn't have any need for male calves, so they would be sold. The market for bull calves was about \$85 per head.

While Betty was sure that the dairy enterprise would continue beyond her 10-year planning horizon, to conduct a profitability analysis, she estimated that at the end of 10 years she would sell the cows for about \$269,000.

Managerially, she knew she wouldn't have time to run the milking parlor and raise her own heifers as she now did. Outsourcing heifer replacement was becoming increasingly popular. The person she contracted to raise her heifers would stop by the farm at least weekly to pick up new calves and raise them at another site, then return them to the dairy when they were ready to join the milking herd. She felt she could hire this done at \$1,200 a head. That was a lot of trouble off her mind.

The cash flows that resulted from her assessment are summarized in Table 2.

Table 2. Projected cash flows

Year	Cash Revenue	Cash Expense	Salvage Value	Taxes	Net After tax Cash Flow
1	\$1,083,656	\$851,165		\$20,734	\$211,757
2	\$1,079,139	\$898,468		(\$42,899)	223,571
3	\$1,208,702	\$854,892		\$41,146	312,664
4	\$1,224,939	\$876,264		\$48,477	300,197
5	\$1,286,735	\$932,980		\$54,959	298,796
6	\$1,297,768	\$956,304		\$69,025	272,439
7	\$1,362,627	\$1,016,783		\$88,926	256,918
8	\$1,372,369	\$1,042,202		\$83,439	246,728
9	\$1,437,670	\$1,106,680		\$83,727	247,263
10	\$1,452,431	\$1,134,347	\$269,000	\$173,360	413,724

The fixed expenses amounted to \$0.99 per cwt of milk produced. Variable expenses, apart from the cost of raising replacements, were about \$8 per cwt of milk produced. Half of the \$8 was feed costs paid to the grain operation for hay, corn, and corn silage. Betty assumed inflation would be 2.5%. MBC Farms used 12.3% (8.0% after tax) as the cost of equity capital provided for any project. Their tax rate was 35%.

To finance the project, Betty expected to find loan terms that were along the lines of a 10-year fixed interest rate loan at 8.3%. She expected to put 20% of the loan down at the time she took it out.

Exhibit 5. Craig's Crop Expansion Assumptions

Craig's planned expansion of cropping would require on-farm storage for 60,000 bushels of grain. After contacting several grain storage construction companies, he found that this sort of storage would cost about \$1.28 per bushel to build.

Craig located a contract for 400 acres of food grade corn for a major food company (in addition to the 200 already produced). While this was a one-year contract, the company representative had assured him that if they continued to meet contract specifications, it would be possible to renew this contract for an additional four years.

Craig was uncertain about what the corn varieties required under the contract might yield. The company representative said that their recent experience in the area indicated a long-term average yield of 145 bushels per acre. Over time, the yields of these varieties had been increasing at about the same rate as commodity corn yields (2% per year). With that yield, Craig would have slightly more storage space than required. If Craig should produce extra corn that he couldn't store, it would be sold at the market price, which he estimated to be about \$1.90 per bushel.

While the premium for the food grade corn was 40 cents a bushel, Craig knew it would cost more to manage and store the crop. Looking at his costs, he figured that he would receive a net 18 cents a bushel for the food grade corn over commodity corn, plus about another 22 cents for storing the product for sale later in the year.

The cash flows that Craig developed for his five-year planning horizon are shown in Table 3.

Table 3. Crop Assessment Cash Flows

Year	Cash Revenue	Cash Expense	Salvage Value	Taxes	Net After Tax Cash Flow
1	\$42,032	\$20,301		\$5,590	\$16,141
2	42,360	20,910		3,777	17,673
3	42,122	21,242		4,139	16,741
4	41,887	21,583		4,413	15,891
5	41,654	21,932	30,000	15,054	34,669

Exhibit 6. Vision/Mission Statement

MBC Farms

Vision

MBC Farms will be an agribusiness focused on the profitable, progressive, and sustainable production of premium quality identity-preserved grains, oilseeds, and dairy products. MBC Farms will be a respected, responsible neighbor and an asset to our community. We prefer a rural lifestyle and are willing to embrace change as a means to that end. MBC Farms provides the opportunity for our children and employees to participate in production agriculture either as owners and/or managers of the business.

Mission

MBC Farms is a producer of grains, oilseeds, specialty crops, and milk. Our mission is to be recognized by our business associates and competitors as one of the top producers in our area and to make sure that productivity translates into prosperity and growth for everyone involved with our farm. There are three dimensions to this mission:

Product

- To produce high-quality dairy and grain products with the most cost-effective technology
- To identify innovative ways to enhance the value of products by contributing to our customers' profit margins.

Financial

- To produce a competitive return to contributed labor, management, and capital resources
- To expand the business with minimal financial risk
- To create value above the costs of all resources

Social

- To manage the business with a focus on environmental and resource-conserving management practices
- To provide a safe and stimulating work environment and career opportunities for family and non-family employees

Exhibit 7. Instructions for Completing IFAS and EFAS Forms

1. List the five to 10 most important strengths and weaknesses in the External or Internal Factors column.
2. Weight each factor from 1.0 (Most Important) to 0.0 (Not Important) in the Weight column based on that factor's probable effect on the company's strategic position. The total weight must sum to 1.00.
3. Rate each factor from 5 (Outstanding) to 1 (Poor) in the Rating column based on the company's response to that factor.
4. Multiply each factor's weight times its rating to obtain each factor's weighted score in the Weighted Score column.
5. Use the Comments column for rationale used for each factor.
6. Add the weighted scores to obtain the total weighted score for the company in the Weighted Score column. This tells how well the company is responding to the factors in its external or internal environment as a whole on a range from 1 to 5. A business that rated a 3 would be doing average. A business with an overall rating of 5 would be responding better than average to the respective environment. A business with an overall rating below 3 would be responding worse than average to the respective environment.

Exhibit 8. External Factor Analysis Summary (EFAS) – Dairy

Internal Factors	Weight	Rating	Weighted Score	Comments
Opportunities				
Emerging marketing opportunities for direct delivery of milk to processors	0.30	5	1.50	Opportunity with local processor.
Increasing availability of contract heifer replacement growers	0.15	5	0.75	Could be useful to help with managing time and labor if we grow.
Technological advance in dairy industry	0.05	4	0.20	Constantly evaluating new technology and updating when necessary.
Threats				
Availability of labor	0.15	4	0.60	Labor is usually tight.
Downturn of the commodity milk industry	0.15	2	0.30	Must find ways to market quality better.
Entry of larger dairies to capture emerging markets	0.20	2	0.40	Their size threatens to exclude us from some of the better markets.
Total	<u>1.0</u>		<u>3.75</u>	

Exhibit 9. Internal Factor Analysis Summary (IFAS) – Dairy

Internal Factors	Weight	Rating	Weighted Score	Comments
Strengths				
Experienced management	0.15	5	0.75	Cow and production management is top notch.
Synergy with crops	0.15	3	0.45	Producing own feed convenient to quality control
Quality production	0.15	5	0.60	Produce top quality milk
Financial position	0.10	3	0.30	Profitable, positive cash flow, low debt.
Facilities	0.05	4	0.20	10 yrs. old but is regularly updated with latest technology.
Weaknesses				
Ability to capture added value of quality product	0.10	2	0.20	Sell everything to milk cooperative.
Size	0.20	1	0.20	Processors want larger volumes for direct delivery.
Employee relations	0.10	5	0.50	Revamped employee policies. Relations are improving but need to continue progress.
Total	<u>1.0</u>		<u>3.20</u>	

Exhibit 10. External Factor Analysis Summary (EFAS) – Crop

Internal Factors	Weight	Rating	Weighted Score	Comments
Opportunities				
Contract production for value-added grains	0.20	3	0.60	Moving this direction but maybe not fast enough.
Hay production	0.05	4	0.20	Horse people are willing-to-pay.
Demand increasing for identity preserved (IP) grains	0.15	4	0.60	Expanding procedures for IP grains through production of food-grade corn.
Improve varieties	0.10	3	0.30	Potential to reduce costs and improve value.
Threats				
Reduction of government payments	0.20	3	0.60	Cash flowing commodity grains will be difficult without government payments.
Rapid decline in premium for specialty grain	0.15	2	0.30	Too easy for others to enter market but searching for alternatives.
Non-acceptance of genetically engineered crops	0.10	5	0.50	Very uncertain. IP capabilities help to reduce uncertainties.
Total	<u>1.0</u>		<u>3.10</u>	

Exhibit 11. Internal Factor Analysis Summary (IFAS) – Crop

Internal Factors	Weight	Rating	Weighted Score	Comments
Strengths				
Good management	0.15	5	0.75	Use Craig and Mike’s abilities very well.
Soil fertility	0.10	4	0.40	Key to productivity. Manure from dairy helps keep fertilizer costs low.
Equipment	0.05	3	0.15	Generally in good shape but aging.
Financial position	0.10	3	0.30	Profitable, low debt, too many assets.
Information management	0.15	3	0.30	Well maintained crop production data by field. Record system, capacity, etc. well designed.
Weaknesses				
Spread too thin, several different crops	0.25	2	0.50	Craig seems to have too many things to do.
Hay and silage equipment	0.10	2	0.20	Out dated and in constant need of repair.
Commodity pricing	0.10	4	0.40	Trying to improve by using marketing consultant.
Total	<u>1.0</u>		<u>3.00</u>	