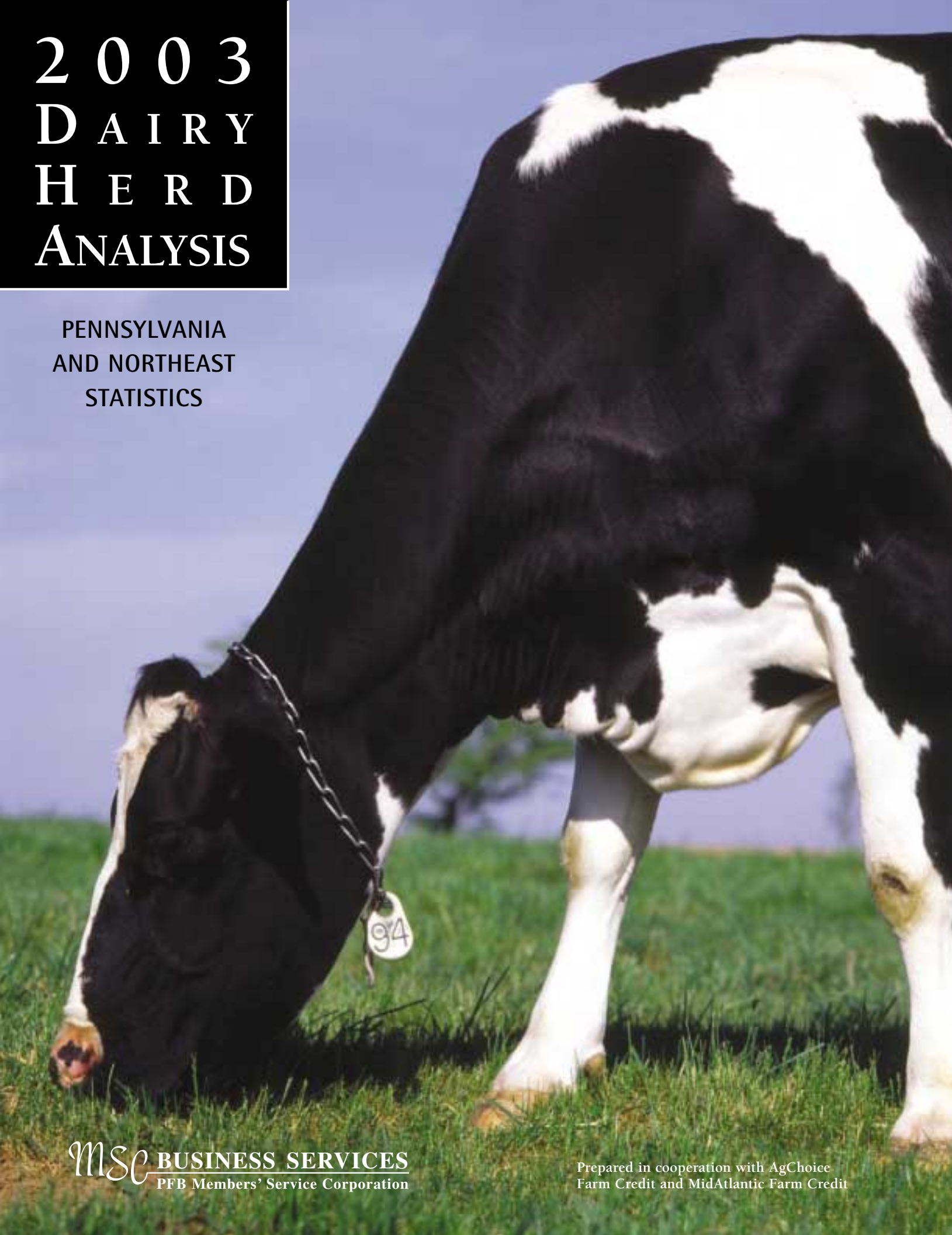
2003 Dairy Herd Analysis

PENNSYLVANIA AND NORTHEAST STATISTICS



MSC BUSINESS SERVICES
PFB Members' Service Corporation

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Nothing Like a Great Pair of Genes

SUPERIOR GENETICS CAN HELP CASH FLOW, EVEN IN TOUGH TIMES

By Marlin Hoff
Coldsprings Farms

When I started milking cows in 1963, a hundredweight of milk could buy you almost four hours of labor. Today, you can buy about 40 minutes with those same hundred pounds. That paints a tough picture for farmers starting today.

The good news—if there is any—is that dairy cows are more productive and more efficient than ever before. The flip side of this coin is that overproduction has gotten us into much of the mess we're in, but productive cows do not have to equate to overproduction. Thankfully, I haven't been asked to write about a solution to our pricing crisis; I've been asked to comment on improvements in genetics, and how a strong breeding program can help farmers maintain profitability, even in very difficult times.

I should say up front that I'm not convinced that improved genetics can take credit for all the improvements in the breed today. I honestly believe that the largest part of the increases in production can be attributed to better management and nutrition. But I also believe that great genetics can help you maximize those increases.

Geneticists will tell you that breeding can improve yearly milk production by about 200 pounds. This is perhaps overstated, but I'm sure it has remained positive. I fully expect production to continue to rise in the future. But I also know that the best way to improve your herd, and your long-term profitability, is to breed for the entire cow. The "entire" cow is one that gives more milk and milk solids, lasts more years and breeds back consistently.

As much as nutrition helps production, breeding for the whole cow helps to create an animal that stands up to the stress of production. It's true, you can breed just for production for short-term profitability, but you will not have a cow with longevity.

Our emphasis on genetics has helped us succeed in two ways: of course, I think we have better cows, and that has allowed us to maximize our milk, fat and protein production. Because we have bred for the whole cow, we have a low cull rate, and that's also helped productivity. Our low cull rate and reputation for strong genetics has allowed us to greatly supplement our income with cow sales.

Over the past 20 years we have averaged more than $200,000 a year selling genetics, which has been a huge part of our success.

I suggest that any dairyman interested in farming profitability pay close attention to genetics. My sons are young farmers, and I give them the following advice:

Know your cows. If you want to breed for the best possible cow, you need to know each cow personally. Up until last fall, I milked the entire herd once a day so that I knew the cows myself. If you can't milk yourself, include your herdsman and milkers in your genetic decisions. Try your best to show them the importance of cow care and knowledge. Cow care is a learning experience—the more you know, the more you realize there is to know.

Be aware of in-breeding. Some research shows that for every one percent of in-breeding, there's a 100 pound drop in milk per lactation. And there are a lot of animals with six to eight percent of in-breeding. This is an even bigger problem in grade herds, where past generations aren't identified and tracked. There are lots of good bulls out there—make an effort to use a variety of them, and look closely at their pedigrees.

Bigger isn't always better. Huge cows may win the ribbons in the show ring, but they're not always practical in the herd: they're too large for the parlor, they don't fit in the stalls. Adequate (not huge) size is very important and very much a part of the complete cow. Breed cows with strong udders and good feet and legs—they'll have the best longevity in your herd.

Classify your cows. It's important to have an outside barometer of your genetic achievements, and classifying is the best way to do that. I've been lucky enough to breed eight generations of excellent cows—if I hadn't classified and kept records, there's no way I could have verified this. You start to forget cows after a few years—classifying gives you a permanent record of their strengths and weaknesses.

Don't look for quick fixes. Good production comes from good management, nutrition and genetics. A few years ago, I tested the effects of BST on 100 cows in my herd, treating every other cow with the hormone. I found that the cows on BST milked about five pounds more a day, but they also had much higher somatic cell counts. And they milked less than their counterparts the following lactation (when they weren't treated). All these weights were verified by computer every single milking.

Ultimately, we'll all have to wait and see what happens with milk supply and the resulting prices. In the meantime, I think the best bet is to focus on the basics, and continue to employ sound practices, both in management, nutrition and genetics. ■

Marlin Hoff of Coldsprings Farms milks 650 cows in New Windsor, Maryland. He and his wife, Kathleen, have two sons: Ian, 34 and Matthew, 32. Coldsprings Farms averages over 24,000 pounds of milk, 900 pounds of fat and 770 pounds of protein; his herd is 94 percent homebred.

2003 Key Dair

	PA Top 10%			PA Under 100 Cows			PA 101-250 Cows			PA Over
	Dollars	**Per Cow**	**Per Cwt**	**Dollars**	**Per Cow**	**Per Cwt**	**Dollars**	**Per Cow**	**Per Cwt**	**Dollars**	**Pe**
Income											
Milk	509,264	3,013	14.27	149,537	2,492	13.32	379,480	2,672	13.38	926,404	
Calves/Cows	29,361	174	0.82	10,916	182	0.97	23,091	163	0.81	39,024	
Crop Sales & Insurance	22,681	134	0.64	7,866	131	0.70	23,550	166	0.83	55,557	
Government Payments	32,301	191	0.91	14,182	236	1.26	32,891	232	1.16	51,986	
Other	21,541	127	0.60	8,751	146	0.78	21,674	153	0.76	28,994	
Total Income	**615,148**	**3,640**	**17.24**	**191,252**	**3,188**	**17.04**	**480,686**	**3,385**	**16.95**	**1,101,965**	
Expenses											
Management Labor*	54,754	324	1.53	33,738	562	3.01	60,921	429	2.15	97,259	
Feed	154,477	914	4.33	43,062	718	3.84	107,428	757	3.79	289,657	
Labor	61,748	365	1.73	10,282	171	0.92	38,905	274	1.37	131,667	
Interest	16,993	101	0.48	8,802	147	0.78	23,464	165	0.83	58,054	
Rent	26,394	156	0.74	7,039	117	0.63	25,545	180	0.90	52,847	
Milk Marketing	33,316	197	0.93	9,749	162	0.87	22,653	160	0.80	58,606	
Dairy Expenses	45,175	267	1.27	14,689	245	1.31	35,612	251	1.26	108,988	
Crops (seed, fert, chem, fuel)	50,775	300	1.42	19,135	319	1.70	47,323	333	1.67	108,419	
Depreciation**	28,397	168	0.80	17,530	292	1.56	32,516	229	1.15	59,901	
Other	70,565	418	1.98	36,242	604	3.23	83,015	585	2.93	151,007	
Total Expenses	**542,594**	**3,211**	**15.21**	**200,268**	**3,338**	**17.84**	**477,382**	**3,362**	**16.83**	**1,116,405**	
Net Income	72,554	429	2.03	-9,016	-150	-0.80	3,304	23	0.12	-14,440	
Assets											
Current Assets	203,321			42,246			104,283			166,369	
Non-Current Assets	1,321,517			597,978			1,114,913			2,182,699	
Total Assets	**1,524,838**			**640,224**			**1,219,196**			**2,349,068**	
Liabilities & Equity											
Current Liabilities	74,592			35,668			67,862			216,485	
Non-Current Liabilities	285,155			114,074			286,924			734,149	
Equity	1,165,091			490,482			864,410			1,398,434	
Total Liabilities & Equity	**1,524,838**			**640,224**			**1,219,196**			**2,349,068**	
Current Ratio	2.73:1			1.81:1			1.54:1			0.77:1	
Cash Flow Coverage Ratio	1.07:1			0.64:1			0.57:1			0.30:1	
Debt to Asset Ratio	0.24:1			0.23:1			0.29:1			0.40:1	
Return on Assets	6.44%			0.13%			2.66%			1.57%	
Return on Equity	6.73%			-1.58%			0.92%			-1.61%	
Expenses as % of Income	80.83%			90.95%			87.67%			90.61%	
Fixed Expenses % of Income	14.45%			23.98%			21.41%			19.03%	
Interest as % of Income	2.76%			4.60%			4.88%			5.27%	
Asset Turnover Ratio	0.44:1			0.29:1			0.41:1			0.48:1	
Average No. Cows	169			60			142			335	
Milk Sold per Cow	21,113			18,711			19,972			19,991	
Milk Sold per Worker	1,028,273			637,877			841,559			960,848	
Debt per Cow	2,129			2,496			2,498			2,838	
Cows per Worker	49			34			42			48	

* Management Labor for all groups other than "Under 100 Cows" (where the base number is $25,000) is based on $30,000 per operator plus 3% of Total Income.

** Depreciation is based on "Economic Depreciation" calculated at 10% of Machinery Fair Market Value plus 5% of Building Fair Market Value.

Key Dairy Benchmark Averages are taken from the records of dairy farms using the recordkeeping systems of Pennsylvania Farm Bureau's MSC Business Services and the recordkeeping services of First Pioneer Farm Credit and Farm Credit of Western New York. The data does not represent a statistical sample, but does represent data from more progressive operations (those that hire professional advisors).

y Benchmark Averages

PENNSYLVANIA (PA) BENCHMARK
NORTHEAST (NE) BENCHMARK

250 Cows		NE Top 10%			NE Under 100 Cows			NE 101-250 Cows			NE Over 250 Cows		
r Cow	Per Cwt	Dollars	Per Cow	Per Cwt	Dollars	Per Cow	Per Cwt	Dollars	Per Cow	Per Cwt	Dollars	Per Cow	Per Cwt
2,765	13.83	429,814	2,791	12.90	174,092	2,452	12.83	416,364	2,652	12.89	1,316,472	2,887	12.93
116	0.58	24,024	156	0.72	13,064	184	0.96	23,550	150	0.73	68,400	150	0.67
166	0.83	5,390	35	0.16	4,828	68	0.36	6,594	42	0.20	35,568	78	0.35
155	0.78	32,725	213	0.98	18,105	255	1.33	18,105	115	0.56	69,768	153	0.69
87	0.43	20,867	136	0.63	8,236	116	0.61	17,113	109	0.53	40,128	88	0.39
3,289	**16.45**	**512,820**	**3,330**	**15.40**	**218,325**	**3,075**	**16.09**	**481,726**	**3,068**	**14.91**	**1,530,336**	**3,356**	**15.03**
290	1.45	51,385	334	1.54	31,550	444	2.33	68,452	436	2.12	108,910	239	1.07
865	4.33	120,418	782	3.62	49,345	695	3.64	119,791	763	3.71	371,184	814	3.65
393	1.97	58,356	379	1.75	17,111	241	1.26	55,494	353	1.72	237,212	520	2.33
173	0.87	21,252	138	0.64	8,520	120	0.63	17,741	113	0.55	53,352	117	0.52
158	0.79	6,622	43	0.20	3,195	45	0.24	9,891	63	0.31	39,672	87	0.39
175	0.88	22,330	145	0.67	10,721	151	0.79	24,649	157	0.76	65,664	144	0.64
325	1.63	47,586	309	1.43	19,809	279	1.46	48,827	311	1.51	165,984	364	1.63
324	1.62	40,810	265	1.23	20,022	282	1.48	47,257	301	1.46	144,096	316	1.42
179	0.89	36,657	238	1.10	21,651	305	1.60	37,776	241	1.17	86,326	189	0.85
451	2.25	65,450	425	1.96	37,914	534	2.79	74,267	473	2.30	195,168	428	1.92
3,333	**16.67**	**470,866**	**3,058**	**14.14**	**219,838**	**3,096**	**16.21**	**504,145**	**3,211**	**15.61**	**1,467,568**	**3,218**	**14.41**
-43	-0.22	41,954	272	1.26	-1,513	-21	-0.11	-22,419	-143	-0.69	62,768	138	0.62
		172,967			73,432			164,673			465,553		
		1,206,409			663,661			1,204,195			2,727,754		
		1,379,376			**737,093**			**1,368,868**			**3,193,307**		
		81,173			33,224			87,657			248,494		
		348,265			134,048			315,734			952,696		
		949,938			569,821			965,477			1,992,117		
		1,379,376			**737,093**			**1,368,868**			**3,193,307**		
		2.13:1			2.21:1			1.88:1			1.87:1		
		1.58:1			1.33:1			0.75:1			1.19:1		
		0.31:1			0.23:1			0.29:1			0.38:1		
		5.13%			1.59%			0.51%			4.43%		
		5.23%			0.59%			-1.15%			4.32%		
		80.53%			86.87%			93.13%			86.77%		
		20.06%			25.23%			22.02%			17.65%		
		4.14%			3.90%			3.68%			3.49%		
		0.38:1			0.29:1			0.36:1			0.49:1		
		154			71			157			456		
		21,629			19,106			20,574			22,327		
		1,110,300			678,250			807,525			1,131,256		
		2,789			2,356			2,569			2,089		
		51			36			39			51		

2003 Dairy Benchmark Summary
When comparing any benchmark summary it is important that the data be collected and results be calculated in the same manner. The Northeast and Pennsylvania data was collected by the local Farm Credit and MSC Business Services staffs. The Northeast data is part of the annual Northeast Dairy Farm Summary Project and the MSC Business Services data is part of the annual Business Analysis provided all FMS clients. Each farm's data was converted to accrual earnings to provide a more accurate measure of farm profitability and then entered into the MSC Business Services Analysis software where final calculations took place.

Getting By with Some Help From Your Friends

FIVE FARMERS CREATE A POSITIVE GROUP FOR NEGOTIATING AND BRAINSTORMING

By Dale Hoffman
Kar-Dale Acres

Thrive, not survive. That's the motto we decided to use when forming The Potter County Milk Producers Association in January 2001.

I had thought about forming a small group of farmers for about a year and discussed this idea many times with my feed consultant, Ken Brubaker of Purina Feed Company. We discussed the benefits that could be realized by sharing the ups and downs of the business with farms similar in size, with similar interests, and in the same geographic area. I finally decided to call a few of my neighbors and form a group.

Initially, we formed the group to share ideas, discuss problems, and find solutions to help us thrive in the dairy industry. Living in an isolated location in northern Pennsylvania gave us added motivation. Most farmers in this area travel about three hours to State College, where many dairy meetings are held. I decided to develop a small group within a 20-mile radius to encourage more one-on-one input from all members. We finally formed a group consisting of the Hoffmans (Kar-Dale Acres), the Torreys (Tor-View Farm), the Eastons (Mundy Brook Farm), the VanEttens (Four Winds Farm), and the Rissers (Riss-Dale Farm). Ken Brubaker, our feed nutritionist, acted as an outside consultant to the group to help its formation.

PESSIMISTS NEED NOT APPLY

We developed a rule at the initial meeting of this group. In order to be a part of the group, you need to have a positive attitude about dairy farming. Initially, the group formed because we had respect for one another, but it took time to develop trust within the group. If there's one story to tell about group formation and effectiveness, it's that you need to promote ways to learn to trust each other. With trust, you share sensitive information and learn. We share numbers within the group, but we're confident the information shared about each farm remains confidential.

As we gained each other's trust, we compared milk checks and saw a wide variation in net milk price. The group saw the benefits of marketing our milk as one group with the same anniversary date on our contracts. We agreed that each farm would sign out of their current milk contracts and market the milk from all farms as a group.

Currently, our "group" contract is with Land O'Lakes, but we plan to negotiate with interested milk companies every year. The milk contract issue was a big positive for each farm in our association.

As the group became more comfortable with one another, we began sharing expense costs, herd health information, breeding information, employee issues, and calf sickness data to find solutions or ideas. The group meets monthly and deals with a different issue at each meeting. Occasionally, we invite an outside resource like Cargill, American Vet, Ken Bailey or Brad Hilty from Penn State to share information or an idea. In spite of current milk prices, our original rule remains: we try to keep a positive attitude about dairy farming, and work to find the best practices in our association.

The group is maturing after two years and we continue our monthly meetings. Each farm takes their turn to manage the meeting and our agenda is always looking for ways to improve and thrive in the dairy industry. Any part of our business is eligible for investigation. Each farm's family members have developed new friendships as the meetings are open to all family members. The business focus has expanded to include some fun things—such as purchasing a Holstein raffle calf at the local fair then donating it back to the fair to help our farm youth in the community.

GETTING STARTED YOURSELF

What makes a problem-solving group like this work? Start with honesty. Continue with trust. Add the fact that if you're in the group, you have to share. You have to believe that when you share information, share data, share ideas and share issues, the other parties will keep it confidential. You have to believe that by hearing someone else talking about how they handled a problem or an issue, it helps you form a solution you can implement. You also can't complain all the time. There's nothing worse than listening to somebody complain. We all have the same issues to deal with in the industry. If you get together, you simply don't have time to grumble. You have to be about problem solving and learning more.

I'd encourage other farms to form a group, regardless of farm size, for the knowledge you can gain through sharing information with other similar neighbors. The financial and personal gains realized will be well worth the effort. ■

Dale Hoffman is the owner of Kar-Dale Acres in Shinglehouse, Pennsylvania. He and his wife, Carolyn, and family milk 550 cows and farm over 700 acres.

Behold the Power of Cheese Contracts

FORWARD ORDER CONTRACTS CAN HELP YOU INCREASE YOUR BOTTOM LINE

By John Hess
Jo-Bo Holsteins

No one has to tell a dairy farmer that money is tight. At $11 per hundredweight (cwt), milk prices are at twenty-five year lows.

Dairy farmers have to take individual responsibility for managing milk price volatility. One way to survive in volatile marketing conditions is to manage risk by hedging, using forward contracts or futures contracts. These techniques simply shift the risk of price changes in the cash market to the buyer (or the futures markets), as many grain farmers have done over the years.

My first experience with milk contracts came in 1999. That year, we tried forward contracting on Class 3 milk through the Chicago Mercantile Exchange (CME). Unfortunately, we lost money on the contracts, eventually selling out of them before they expired.

I still thought the idea was intriguing, however, and jumped back into contracting in 2000, with a customer-based cheese contract with Land O'Lakes (LOL). I liked several things about the LOL contracts: first, the contract was between me and the end-user so there were no broker fees, as there had been with the Chicago board, because the contract is between the producer and the end user. In the case of monthly Class 3 and Class 4 contracts, LOL builds approximately a 10¢/cwt fee into them, because they are ultimately sold on the Chicago board. All settlements—positive or negative—are shown on the final check for each individual month. This is sometimes referred to as the "mailbox price." Cheese contracts are usually for a calendar year, for 12 month terms, and they're offered three to nine months before the date the contract begins. Monthly milk contracts are available at any time; pricing for these can be found on LOL's website. I have had more luck with the long-term contracts than I have had with short-term, monthly contracts.

Prices were low in 2000 and we ended having a very profitable contract, adding $1.29 to our total milk price. In 2001, prices went up in the general market and we lost 88¢ cwt. In 2002, we made $1.62, which gives us a three-year average increase of 68¢/cwt. *(See tables on back page).*

If you want to contract your milk, consider these issues:

Actual price. It's important to track the prices on your contract, and compare them to the prices you would have gotten without the contract. To do this, take your mailbox price less the contract advantage, and then subtract the price of Class 3 milk. This gives you your Class 3 basis. This price gives you the real price of your contract and allows you to better track how the market is moving. You can do the same thing with Class 4 milk: take your mailbox price and subtract the current price of Class 4 milk for your Class 4 basis. This determines the real price of the contract.

Additional fees. Our first try at contracting was not positive because there were a lot of additional fees—broker fees, transaction fees, margin calls. By using a customer contract, I'm dealing directly with the end-user. This has helped us contain our costs.

Track by the year. If you look at prices from month to month, it can be misleading. I track the price of my contract monthly, but I compare results on a yearly basis. That helps me get a better overview of the effectiveness of our contract. We also keep track of regular milk prices on a 12-month rolling average, to give us a better picture of what prices are doing now and how they compare to a future contract being offered.

Don't get out too early. The best time to get into a contract is when prices are good—not when they're bad, because the likelihood when they're bad is that they're going to get better, and you won't make as much on a contract. I know a lot of people who tried contracting one year, lost a little money, and got out. If you look at my numbers over three years, you can see we've had two good years and one bad year. It's important to look at the final averages to make an informed decision.

No one is too small. When I contracted with the Chicago board, the smallest increment was 200,000 lbs. of milk per month. That will keep a lot of people out of it because of their size. But the contract I currently have is done in 10,000 lbs. increments—and most dairies would fall into that limitation.

Keep costs consistent. Controlling the ups and downs of milk prices is just one part of the equation—a successful manager knows his total cost of production, and he'll work to control input costs as well as output prices. If you can lock in costs of feed and fertilizer, do so. It will help keep your entire budget more consistent.

In my herd, milk contracting has proven to be a good way to reduce some of the financial stress of volatile milk prices throughout the year. I've included graphs of the numbers I chart each month, comparing today's milk prices to the prices I've received with contracts. These results were received with approximately 75 percent of our milk under contract. When comparing the charts, I think the proof is in the numbers.

(continued onto back page)

John Hess owns Jo-Bo Holsteins in Gettysburg, Pennsylvania operating it with his wife, Bonnie, his son-in-law Dale Brown, daughter Josie Riser and son John R. Hess. The farm consists of 500 cows and 1000 acres. Jo-Bo Holsteins has been contracting milk since 1999.

Enough is Enough

MIXED SIGNALS FOR THE ECONOMY AND AGRICULTURE

H. Louis Moore, Professor of Agricultural Economics
The Pennsylvania State University

It's a difficult time to look into the future, because there are many conflicting signals regarding the health of the nation's economy and the agricultural sector. On the down side: the greatest concern is the retraction of the manufacturing sector of the economy. Manufacturing has cut jobs 33 consecutive months, including a loss of 95,000 jobs nationwide in April. The unemployment rate has risen from 5.8 percent to 6.0 percent. The work week has gotten smaller too, indicating that many workers are not fully employed at this time. There is great concern that many U.S. jobs have been permanently exported to Asia.

Despite that pessimism, there is a positive side to cut jobs, and that's a continued increase in worker productivity. While this costs jobs in the short run, it makes the U.S. more competitive in world markets in the long run. The decline in the value of the dollar will also make us more competitive in the world market, although the increase in exports has just begun. In March, consumer spending grew by 0.4 percent, exceeding expectations. Consumer confidence was at a low of 61 percent in March and soared to 81 percent in April, exceeding all expectations. One factor that has to be fueling this optimism are interest rates, which are expected to continue at 41-year lows in the months ahead.

GOOD NEWS AHEAD

While it appears that the economy is stalled, there are positive signs of growth. In the first quarter of 2003, the gross domestic product (GDP) grew at an annualized rate of 1.6 percent, up slightly from the 1.4 percent reported for the fourth quarter of last year. It now appears that GDP will grow about 2.2 percent in 2003 and 3.3 percent in 2004. This growth is not large enough to put lots of people back to work, but it's a start, and it is certainly better than the prospects for France and Germany. GDP is expected to grow only 1.2 percent in France and 0.4 percent in Germany this year.

Increased worker productivity, the weaker dollar, low interest rates, the end of the war in Iraq, and sharply higher consumer confidence will combine to keep the economy growing in the months ahead and through 2004.

FEEDING THE MASSES

The key to the agricultural sector, as in the general economy, is consumer demand. Consumer purchases of food increase about 1.0 percent per year, the same as population growth. When producers increase production more than one percent per year, they create problems. Production increases exceeding 1.0 percent must be exported or it causes a decline in the domestic price. Productivity in agriculture has been so great since WWII that surpluses have been a constant problem.

Milk is an excellent example of surplus problems. Milk production is increasing at about two percent per year. There is just too much milk on the market. Most of the increase in milk production has been in the West. Although Eastern producers have been more restrained in production increases, they have suffered the price declines as it is a national market. The supplemental $1.82 paid to smaller producers under the government MILC program has kept some smaller producers from failing. Some improvement is expected in the milk price this fall but overproduction will be a continuing problem.

As Terry Barr recently indicated at the Penn State agricultural credit conference, "The dairy industry shows no discipline whatsoever in matching milk production with demand." Low prices cannot be blamed on imports, as imports of dairy products are just about balanced with exports. It appears that volatility in the markets will continue.

While dairy farmers are overwhelmed at the rapid changes taking place in production, they must recognize that the changes in processing and distribution are equally shocking. Wal-Mart has become the nation's largest food retailer with 14.0 percent of the food market, including milk. Weekly, about 100 million people shop at Wal-Mart. The entire food system is rapidly changing.

Good dairy managers will have to study these changes, and make strategic decisions in their own herds if they want to survive during these difficult times. The next few months will be strong indicators of long-term outlooks—both for the national and the agricultural economy. ■

Lou Moore is a professor of agricultural economics at The Penn State University. His areas of specialization include agricultural marketing, agricultural policy, farm management and international agricultural economics. As PSU's coordinator of extension programs, Moore supports county agents with programs in marketing and farm policy to assist farmers with financial outlook and business analysis to improve their incomes.

FORWARD ORDER CONTRACTS *continued*

The charts below show monthly milk prices, both with forward order contract and without.
Note: the 1999 numbers do not include the negative broker-based contract results.

No Contracts				
YEAR	1999	2000	2001	2002
JAN	17.21	13.26	14.57	14.13
FEB	18.74	13.03	14.02	13.76
MAR	17.72	12.92	14.34	13.26
APRIL	12.26	13.04	15.09	13.16
MAY	13.41	13.43	16.26	12.73
JUNE	13.78	13.69	16.93	12.45
JULY	13.30	14.50	17.29	13.37
AUG	13.77	14.62	17.55	13.28
SEPT	15.66	14.76	17.82	13.23
OCT	17.46	14.62	16.62	13.63
NOV	17.97	15.17	16.76	13.85
DEC	14.04	15.09	14.40	13.70
AVG	**15.44**	**14.01**	**15.97**	**13.38**

Contracts				
YEAR	1999	2000	2001	2002
JAN	17.21	14.58	15.73	14.50
FEB	18.74	14.65	14.32	15.13
MAR	17.72	14.37	14.00	14.60
APRIL	12.26	14.73	14.09	14.24
MAY	13.41	15.09	14.22	14.09
JUNE	13.78	14.65	14.31	14.74
JULY	13.30	15.26	15.16	15.88
AUG	13.77	15.31	14.96	14.99
SEPT	15.66	15.03	15.19	14.73
OCT	17.46	16.90	16.72	15.11
NOV	17.97	17.41	17.35	16.31
DEC	14.04	16.66	15.10	15.62
AVG	**15.44**	**15.39**	**15.10**	**15.00**

Charts provided by John Hess.