

Vol 3, No 3

1998

Keeping Your Swine Business in Perspective With Low Hog Prices

By: Roger Betz, SW Michigan District Extension Farm Management Agent

The current situation in the hog industry is not a pretty picture. Current and projected prices indicate significant losses in owner equity or net worth for most producers. Market hog sale prices are lower than past years, but so are input cost for purchased feed items.

We need to fully understand the financial impacts this will have on our business. What impact will these changes have on my farm's projected profitability in 1998, 1999 and beyond? How competitive is my business in terms of "break even cost of production"? Considering my Balance Sheet, how financially risky is my business? If I lock in purchased corn and soybean meal inputs at current prices, for the next 24 months, what will be my needed hog price to break even on Net Operating Profit, Net Farm Income and to cover family living needs? This is a critical time to understand our Net Worth Statements and our Cost of Production break even values from a whole farm perspective.

Financial records that are easy to understand and provide "easy to use", flexible information are an important tool when times are rough. These records need to be able to provide the information necessary to determine and monitor business strengths and weaknesses, including Accrual Net Farm Income, Balance Sheets, Net Worth Change, and provide quantities of purchased inputs such as tons of soybean bean meal and bushels of corn. The records should also provide quantities of outputs including number of head and pounds of pork sold. With this information readily available, we can easily evaluate changes to determine the impact to the business as a whole. One of the problems during good prices is that we often become lazy in keeping the information and we end up not having it available when we need it the most. The MSU Telfarm record system is designed to provide useable information for income tax preparation and business analysis.

An analysis of swine farm businesses participating in the MSU

What's inside ...

Telfarm record system provides insight into the impact of these changes to the hog industry for Michigan producers. The 1997 Business Analysis Summary for Swine Farms (Ag Econ. staff Paper #98-23, 36 pages, Sherrill B. Nott) reveals major profitability differences between farms for the 1997 year.

The analysis summary (Table 1) indicates the 1997 business year was profitable on average for Michigan Swine producers. However, the analysis also indicates that the 34% lower profit

...net profit analysis shows a \$320,000 difference for 1997 between low profit and high profit farms.

of farms lost \$35,262 before family living considerations. The 34% upper profit farms show a Net Farm Income of \$284,848, which is a \$320,000 difference between the averages of these two groups. The financial performance of

these farms was markedly different. The most striking difference is in the operating expense ratio. Higher profit farms get more income with less input.

A separate analysis (Table 2) was performed with southwest Michigan farms taking out market valuation price changes for beginning and end of year inventories of livestock and feed. This new "stable inventory price income statement" analysis had increased profit (lower cost of production) because of declining corn and swine prices between the beginning and end of the 1997 year. (Some business managers set a standard value on these inventories by using the same value each year to determine profitability without the market fluctuation. This more accurately helps determine long term profitability and cost of production.)

With the "stable inventory price income statement", it is relatively easy

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And the second design of the second design of the second se	A	A	Auguage of	Auguage of	Auguago
	Average of All Farms	Average of Low 34%	Average of High 34%	Average of 140-240 Sows	Average o 375-2500 Sow
Average Number of Sows	565.5	354.2	700.6	170.1	933.
Pigs Born per litter	10.00	9.74	10.41	10.38	9.9
Pigs Weaned per litter	8.89	8.60	9.22	8.93	8.8
Pigs Weaned per Sow	14.76	13.55	17.78	10.16	15.4
Avg wgt/Raised Hog sold	254	236	265	227	25
Avg. Price/cwt	\$57.64	\$57.20	\$55.17	\$57.24	\$57.7
Gross Cash Farm Income	1,099,423	555,219	1,907,248	351,395	1,875,78
Cash Farm Expense	945,263	516,371	1,568,156	286,782	1,627,70
Net Cash Farm Income	154,160	38,848	339,092	64,613	248,80
Inventory Changes*	31,457	(19,329)	90,249	13,804	51,02
Net Operating Profit	185,617	19,519	429,341	78,417	299,10
Deprec. & Capitol	(87,660)	(54,781)	(144,493)	(33,516)	(143,664
Net Farm Income	97,957	(35,262)	284,848	44,901	155,44
(Return to Unpaid Family Living and equity)	Land Ingeneration	huga na	oz ast strastis	and horizon base	ann an stàite
Net Family Living from Business	(41,964)	(28,241)	(67,554)	(35,107)	(49,765
Return to Equity	55,993	(63,503)	217,294	9,794	105,67
Debt to Asset Ratio	44	58	40	36	4
Rate of Return on Assets	13.0	2.1	20.9	6.0	15.
Term Debt Coverage Ratio	212	20	382	187	21
Operating Expense Ratio	78.3	89.8	74.1	72.6	79.
Depreciation Expense Ratio	7.7	10.2	7.2	9.3	7.
Interest Expense Ratio	5.4	6.6	4.4	5.6	5.
Net Farm Income Ratio	8.6	(6.6)	14.3	12.5	8.
*Market valuation changes (market hogs, feed crops)			Control Interest in		
Table 2 Average of Eleven SW MI Swine I	arms	My Farm			
1 Number of Hogs Sold	11,074			From Records From Records - Sched F	
2 Market Hog Sales	\$1,486,135				
3 Average Weight	247		From Re		
4 Total pounds sold	2,730,132			imes (line 3)	
5 Cwt pounds sold	27,301			livided by (100)	
6 Average Price	\$54.43		(line 2)	divided by (line 5)	
7 Net Farm Income	\$202,938		Sow Sal	From Records - (Sched F) plus (Schedule D Sow Sales) plus (inventory Changes)	
8 "Profit" per Cwt*	\$7.43		(line 7 d	ivided by (line 5)	
9 "Profit" Break Even*	\$47.00		(line 6)	ninus (line 8)	
10 Family Living & Income Taxes	\$48,621			From Records	
11 Fam. Liv. & Inc. Tax. per Cwt	\$1.78			divided by (line 5)	
12 "Cash Flow" Break Even**	\$48.78		(line 9)	plus (line 11)	
13 1997 Purchased Feed	\$769,899.73	1001-00-0	the second se	ecords - Schedule F	
14 25% Lower Purch. Feed Cost	\$192,474.93			times (0.25) - use y eased purch. feed co	
15 Per Cwt Lower Feed Cost	\$7.05			divided by (line 5) minus (line 15)	
16 Proj. "Cash Flow" Break Even**	\$41.73		(fine 12)	minus (inte 15)	

17 Expected Average Hog Price18 Proj. "Cash Flow" per CWT** 19 Proj. "Cash Flow" for Farm**

* The "Profit" is before family living and income taxes ** "The Cash Flow" value assumes that scheduled principal payments (net debt reduction) are equal to the depreciation used in the calculation of the Net Farm Income. If the depreciation is equal to the net debt reduction then the "Cash Flow" value calculated can be considered equal to the projected change in Net

My Estimate

(line 17) minus (line 16) (line 18) times (line 5)

\$40.00

(\$1.73)

(\$47,290.35)

("Keeping Your Swine... "Continued from page1)

to analyze projected changes to the business. This "net farm income" was divided by the hundred weight pounds of pork sold to determine the profit or loss for the farms on a per cwt basis. This profit or loss per cwt was combined with the average price received during the year to determine the breakeven hog price that the farm, as a whole, would need in order to have a zero net farm income.

For the 1997 business year, the analysis indicates that these southwest Michigan farms had a \$202,938 of Net Farm Income with 11,074 market hogs sold at an average weight of 247. (Table 2) The average price received was \$54.43 per Cwt. This calculates out to be a \$7.43 per cwt profit for the farm as a whole. Subtracting this profit from the average price received indicates a \$47.00 break even before family living and income taxes. Family living and income taxes added \$1.78 per cwt. to make a \$48.78 needed hog price for Cash Flow and break even Net Worth change. (Assumes depreciation is equal to scheduled principal reduction)

The 1997 values are of course with 1997 soybean meal and purchased corn prices. A 25 percent reduction in purchased feed cost is a change of 240 to 180 soybean meal and from 2.60 to 1.95 corn. A 25% decrease in all purchased feed cost lowers the "Profit" and "Cash Flow" breakeven values by \$7.05 per cwt. Assuming a \$40 average market hog price indicates that these farms on average will be short \$1.73 per cwt or \$47,290 for cash flow purposes and for maintaining Net Worth.

In using this analysis approach, one is assuming that future productivity, all other non-purchased feed cost, crop yields, and family living and income tax will be the same. Some adjustments can easily be made but others are very complex to evaluate. Also, this analysis process is not necessarily determining the Cost of Production for Swine. For example, if the farm business has two enterprises, corn and swine, the profit or loss of the corn production enterprise is buried in the whole farm profit. If the corn enterprise were profitable, then the true cost of swine production would be higher because there is less profit for the swine. On the other hand, if the business loses money growing corn, then the cost of swine production would be lower. The whole farm profit has to be allocated between the two enterprises. The process gives the manager a good perspective on where the business is at and what its competitive position is.

The current hog price and projection affects will be very different among individual farms. The lower feed cost will help some producers more than others depending on what percentage of their corn is grown versus purchased. A producer who grows his corn will not see as much benefit (lower cost of production) as one who purchases a high percentage of the corn. The inputs for corn production will stay about the same. A swine business that has a very strong Net Worth position will be able to ride the storm a lot longer than a farm business that is relatively highly leveraged. The other major factor is the business's overall production financial efficiency. The operating expense ratio indicates the business cost relationships to income. How much does it take in feed, labor, utilities, and other non-interest and non-depreciation expenses to generate income. Notice the large operating expense ratio difference between low profit farms and high profit farms. (table 1, 89.8 versus 74.1) This is more significant than interest or depreciation expense ratios. The operating expense ratio is largely driven in farrow to finish swine operations by feed efficiency, sow herd productivity, market values, and labor efficiency.

Table 2 is designed for you to add your own numbers to see both how your business may have compared in 1997 and to help determine how your business may perform with lower hog prices and lower feed cost. It is a relatively simple approach but yields concrete insight into the internal financial working of the business. You can see "How bad it is or isn't". With lower feed cost, the situation may be as bad as you think. You can also use the projected change in Net worth and compare to your current Net Worth to give an indication of how long the business can absorb the low hog prices. (Most lenders don't like your debt to asset ratio above 60%)

Perhaps most important is an objective financial look at your business to help determine its position and probability for future financial success. We can look at the magnitude of changes needed with various price assumptions to maintain cash flow and net worth. Some farms will need to restructure their debts to put cash flow shortcomings into longer-term debt. Unfortunately some farms businesses will not have the financial depth to absorb the losses and will need to seek other alternatives.

The MSU Extension Swine AOE agents, District Extension Farm Management Agents and campus specialist are prepared to assist producers in evaluating their business. The MSU Telfarm system is designed to help you monitor your business and have the necessary information to make critical strategic decisions with your business.



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The On-Farm Odor/Environmental Assistance Program

By: Joe Kelpinski, East Central Swine Extension Agent

Recently, you may have heard about the On-Farm Odor/ Environmental Assistance Program (OFO/EAP), either through information received from the National Pork Producers Council (NPPC), or the Michigan Pork Producers Association (MPPA). Many of you may have wondered what this program was about, or what it involved. Some of you may have even thought, "not ANOTHER environmental program." Hopefully, I will be able to give you a few more details about the necessity of this program and what is involved when an OFO/EAP is conducted on your operation.

Many producers have heard at least sketchy details of the National Environmental Dialogue on Pork Production held between NPPC, the Environmental Protection Agency (EPA), and various state regulatory agencies. This dialogue was initiated by NPPC to try to develop a framework that would allow America's pork producers to continue to operate and expand their operations without excessive and debilitating regulations from state and federal agencies. The dialogue took place last year over approximately a twelve month period, with the various representatives meeting frequently to arrive at a consensus on how to limit potential environmental problems while still allowing producers freedom to manage their operations in a profitable manner. One of the biggest obstacles to this process was finding a way to educate producers about environmental concerns while avoiding a "cookie cutter" approach. Knowing that each operation was unique and had its own peculiarities, NPPC staff, along with other Environmental Dialogue participants, developed the OFO/EAP program. Also, realizing that as an industry we were under both regulatory and public scrutiny, participants at the dialogue knew this program MUST provide several basic items. Those items include:

- An UNBIASED, third party evaluation of pork production operations.
- A format that provided concise, useable information to producers.
- A format flexible enough to be utilized on ALL types of operations.
- A program that was rigorous and thorough to satisfy our regulatory partners.
- A program that could provide some "peace of mind" to participants in the event of litigation.
- A program that the public would be able to view as more than "fluff."

With these considerations in mind, the OFO/EAP was born. Over the last year, it was developed and tested in four pilot states. During the testing process, modifications were made to the program to arrive at the final product. As it stands now, the OFO/EAP program is setting the standard for ALL of the livestock industries to follow to guarantee environmen tal safety and improve the public perception of livestock production, while at the same time accomplishing this in a manner which limits regulatory burdens on producers. Producers participating in this program will be able to show neighbors, local officials, and other interested parties that they are committed to environmental safety and community well-being.

What is involved in the On-Farm Odor/Environmental Assistance Program? Many of you went through the Environmental Assurance Program (EAP) last winter or spring. During the EAP programs we talked a great deal about the necessity of having a third party evaluation done to examine your operation and point out potential problems. The OFO/EAP program consists of having a team of two evaluators come to your farm. Generally the lead evaluator will be an agricultural engineer, with the second evaluator being either another engineer or a trained technician familiar with swine operations. As an example, most of the swine agents in Michigan will be trained evaluators. This team will do a complete walk through of your facilities looking thoroughly in each building, top to bottom and side to side, at manure management/ handling protocols, grain systems, landscaping, site selection, land mass of the operations, and all of the other variables in-

On Farm Odor Assistance Program will provide documentation of responsible environmental stewardship.

volved in your production system. This visual appraisal will take between 4-8 hours. You

will be asked to go along to provide additional information on an as-needed basis. The evaluators will be looking at the strengths and weaknesses of the entire system, and what weak areas require attention. Within a week to ten days after the evaluation, you will receive a document which will categorize the good points and the bad points of your operation. The bad points will be further subdivided into categories based on their potential for odors/environmental damage (i.e. critical, urgent, serious concern, etc.). With this document in hand, you will be able to begin to address the most significant of these problems, be it a weak lagoon berm, runoff into groundwater, slight odor problem, or something similar. In the report, the evaluators will also write up suggestions to address each of these problems, simplifying the process for you to begin making corrections. Upon correction of the operation's deficiencies, you will be able to substantiate the fact that you have addressed problems found in the OFO/EAP and your operation is environmentally secure.

You might be wondering what is in it for you as a producer. First of all, the OFO/EAP will provide you with practical information (Continued page 6)

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Packers Within the Region

By: Ronald O. Bates, State Swine Specialist, Michigan State University

W ith the closing of Thorn Apple Valley's slaughter facility, Michigan pork producers will become more familiar with other packers within the eastern cornbelt region. Michigan is fortunate that there are packers within one-half day's truck drive for many of the pork producing areas of the state. This narrative is a partial list of packers who will figure more prominently within the marketing system of Michigan pork producers. This is a partial listing of packers within the eastern cornbelt. Future Pork Quarterly articles will feature other packers within the region.

The objective is to provide a description of packers within the eastern cornbelt and will develop closer ties to the Michigan industry. Each packer will be listed along with its location. The buying program will be described along with a contact name and telephone number given.

The Packers

IBP

The location of the IBP plant in this region is Logansport, IN. This plant was remodeled a few years ago and has a two-shift capacity of 13,000 per day.

The buying program was changed recently with the new program beginning June 29. The optimum weight window is 172 to 209 lb carcass weight (231 to 280 lb live weight). Below is a table that lists carcass weight discounts for both under weight and over weight carcasses.

Live Weight (Approx.)	Carcass Weight lbs	Discount \$	
200 - 209	147-155	(\$8.05)	
210-220	156-163	(\$2.01)	
221-230	164-171	(\$0.67)	
281-290	210-218	(\$0.67)	
291-300	219-225	(\$1.34)	
301-310	226-233	(\$2.68)	

Carcass merit is determined by The AUS ultrasound system. Backfat and loin muscle depth are measured at several locations between the last rib and the tenth rib, 2 inches off the midline. Percent lean is estimated from the ultrasound measurements. Within the target carcass weight range the base percent lean is 50-52%. Carcass merit premiums begin at 52% and increase until 55% lean. Below is a listing of carcass weight ranges and carcass premiums per cwt of carcass weight.

Carcass WGT	50-52	Percent 52-53	Lean 53-54	54-55	55+
172-178	\$0.00	\$2.50	\$4.00	\$5.00	\$5.50
178-194	\$0.00	\$2.50	\$4.00	\$5.50	\$6.50
195-202	\$0.00	\$2.50	\$5.00	\$6.50	\$7.50
202-209	\$0.00	\$3.50	\$5.50	\$7.50	\$7.50

Even though carcasses that weigh above 209 lbs are weight discounted, lean premiums continue to increase for lean, heavy weight carcasses. For instance the premium for a 55% lean 341 lb carcass is \$10.00/cwt. For more information about IBP's buying program contact Steve Ehman at 517-724-2827.

Indiana Packers Corporation (IPC)

IPC is located in Delphi, Indiana. This plant has a two-shift slaughter capacity of 12,000 head per day. The optimum carcass weight for this plant is 170 to 214 lb which corresponds to a 228 to 287 lb live weight basis. Below is a summary of the discounts of under weight and over weight carcasses.

Live Weight (Approx.)	Carcass Weight, lbs	Discount,\$	
Less than 200	less than 149	(\$12.00)	
201-214	150-159	(\$8.00)	
215-227	160-169	(\$2.00)	
288-294	215-219	(\$2.00)	
295-307	220-229	(\$3.00)	
308-321	230-239	(\$5.00)	

Carcass merit is determined by backfat and loin depth readings taken 2 inches off the midline at 3^{rd} to 4^{th} last rib using the Fat-o-Meter. The plant base for percent lean is 49-50%. For each percentage point above 50% the carcass premium is 1.1% of the base carcass price. Carcasses that are below 49% lean are discounted 1.5% of base carcass price for each percentage point below.

Lean premiums do not top out a set percent lean value. The leaner the pig the greater the lean premium/ cwt. The same is true for lean deductions. For more information regarding IPC call Dave Murray at 1-800-472-7201.



Farmland Foods

The Farmland plants within the region are located in Monmouth, IL and Dubuque, IA. The optimum carcass weight range is 170 to 207 lbs or approximately 230 to 280 lbs live weight. Carcasses that are under or over this weight range will be discounted as follows:

Live Weight, lb (approx.)	Carcass Weight, lbs	Discount, \$/cwt
201-210	149-155	(\$9.46)
211-220	156-163	(\$4.05)
221-229	164-169	(\$1.45)
281-290	208-214	(\$0.68)
291-300	215-222	(\$2.03)
301-310	223-229	(\$3.38)

Carcass merit is determined from estimated percent lean. Per-
cent lean is calculated from backfat and loin depth measured
2 inches from the midline at the 3-4 th last rib using a Fat-o-
Meter. The base percent lean is 47 to 48.9%.

("The On-Farm Odor..." continued from page 4)

AND solutions to odor abatement and environmental management. It will do this by bringing unbiased parties to your farm to do the evaluation. Secondly, it will provide you with peace of mind in the event of potential litigation. In the event of a lawsuit against your operation, you can bring your evaluation to court. As long as you have already corrected deficiencies, or are/were in the process of correcting them, you stand a VERY good chance of winning the suit. Finally, you demonstrate to your neighbors and communities that pork producers are concerned about the effects of their actions and are responsible environmental stewards. Many of you who went through the EAP program have taken the first step in that direction. The OFO/EAP program will ultimately be replacing EAP in the state of Michigan. I encourage EVERY producer reading this to strongly consider

Percent Lean, %	Premium/cwt	Percent Lean	Premium/cwt
49-50.9	Base	47-48.9	(\$1.25)
51-52.9	\$2.25	47-48.9	(\$3.00)
53-54.9	\$3.50	45-46.9	(\$5.00)
55-56.9	\$4.50	43-44.9	(\$10.00)
57-58.9	\$5.00	41-42.9	uro) si urgido:
More than 59	\$5.00	dial parameter	nistotomi ely

This program was recently updated in April. For those interested in Farmland Foods, contact them at the Dubuque plant at 319-588-5466.

Armour Swift Eckridge, Inc.

Typically known as Swift, Inc. this plant is located in Louisville, KY. At the time of this article, Swift was within a couple of weeks of releasing a new updated buying program. Pre-release information was not available.

Percent lean is estimated with a Fat-o-Meter and backfat, loin depth and percent lean are reported. For more information regarding this Packing firm call their procurement office at 502-582-0396.

scheduling an FO/EAP assessment as soon as possible. We will be training the evaluators in October and should be launching the program by the beginning of 1999. For further information, contact your local swine agent or the Michigan Pork Producers Association Office. Because this program is so thorough and significant, it is not inexpensive. The assessments are estimated to cost between \$500 and \$1000 dollars per operation. However, realizing the importance of this program, NPPC and National Pork Board have allocated checkoff dollars to pay for the assessments and NPPC has been actively pursuing the appropriation of new government funding, as well as funding from existing federal programs, to support this effort. The important thing to remember is that, at the present time, either checkoff dollars or public money can be utilized to pay for the assessment.

Reminder... Get PQA Level III certified early. Don't wait until the last minute... the delay may cost you money.



Are You in Compliance with Federal Feed Labeling Laws?

By: Tim Johnson, West Central Swine Extension Agent Dr. Dale Rozeboom, Extension Swine Specialist, MSU

n recent weeks I have had the opportunity to get to several farms to discuss the Pork Quality Assurance (PQA) Program and certify several producers so that they could continue to market their hogs. While the PQA program is worthwhile in it's own right, the opportunity to discuss and interact with producers about the use of drugs and various ways that medication is utilized on the farm has been enlightening. But like most things, one thing leads to another and before long we can always find an issue that the individual producer

...complete labeling shall accompany the shipment and be supplied to the consignee at the time of delivery. could use some further information on, would like some additional help with, or would just like a return visit to continue the discussion when he or she has more time.

During these visits there was an issue that I, myself had a question about concerning the proper use and documentation of medicated feed on the farm. I inquired with several producers about how did they know when medicated feed was delivered on the farm? Some said they just knew because they had ordered it that way, several others stated that they were simply told about the feed being medicated. But when asked about receiving a specific tag or label on the feed delivery receipt that indicated that a medicated feed product was delivered, many could not recall ever seeing such a tag or slip on the delivery sheet. While this may or may not be true, this answer caught my interest since in my own personal experience I received medication labels on delivery slips and utilized them to document the usage of medicated feed.

After some investigation, I have found out that tags or labels describing the medication included should accompany the feed delivery slips. The rules are simply not state rules, but federal regulations that dictate the requirements for labeling of feed products. Under Title 21 of the code of federal regulations, volume 4, part 225, section 225.80 there a specific requirements for the labeling of medicated feeds. The regulations as written are as follows:

Part 225 – Current Good Manufacturing Practice for Medicated Feeds

Subpart D - Packaging and Labeling

Section 225.80 Labeling

(a) Appropriate labeling identifies the medicated feed, and provides the user with directions for use which, if adhered to, will assure that the article is safe and effective for its intended purposes.

(b) (1) Labels and labeling, including placards, shall be received, handled, and stored in a manner that pre vents labeling mix-ups and assures that correct label ing is employed for the medicated feed.

(2) Labels and labeling, including placards, upon receipt from the printer shall be proofread against the Master Record File to verify their suitability and accuracy. The proofread label shall be dated, initialed by the responsible individual, and kept for 1 year after all the labels from that batch have been used.

(3) In those instances where medicated feeds are distributed in bulk, complete labeling shall accompany the shipment and be supplied to the consignee at the time of delivery. Such la beling may consist of a placard



or other labels attached to the invoice or delivery ticket, or manufacturer's invoice that identifies the medicated feed and includes adequate information for the safe and effective use of the medicated feed.

(4) Label stock shall be reviewed periodically and discontinued labels shall be discarded.

While the purpose here is not to point any fingers, this is information that you may need to know about if you are mixing and delivering medicated feed to another person. When I discussed this issue with a producer, they indicated that the highway patrol also knows about the feed labeling requirement and may ask to see the proper documentation, since the regu-

lations state that complete documentation shall accompany shipment. What I would encourage you to do if you transport medicated feed or supply medicated feed to others, is to evaluate your labeling procedures and make sure that your current practices meet the regulations. While we have only discussed the need



for labeling, there are also regulations as to what is required on a label and how it is to be arranged on the label. If you need some assistance or questions about this issue, please contact your regional swine extension agent. All comments and suggestions should be directed to:



- 1. Marty Ropp, North Central Swine Agent Genetics (517) 875-5233
- 2. Joe Kelpinski, Northeast Swine Agent Environmental Mgt., Finishing Mgt. (810) 732-1470
- 3. Brian Hines, South Central Swine Agent Genetic Evaluation, AI, Facilities (517) 279-4311
- 4. Roger Betz, Southwest District Farm Mgt. Finance, Cash Flow, Business Analysis (616) 781-0784
- 5. Tim Johnson, West Central Swine Agent Production Records, Software, Confinement (616) 846-8250
- 6. Mike Cowley, South West Swine Agent Farm Business Mgt. (616) 657-7745

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(4) A Data in the data wind presenting interview best find, and pressors include an order direction of the which, it is there is no work in some that the article is safe and effective for the include of the rest.