



FAPRI'S ANALYSIS OF THE EPA'S PROPOSED CAFO REGULATIONS

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INTRODUCTION

This study of the Environmental Protection Agency's (EPA) proposed concentrated animal feeding operations (CAFOs) regulations was conducted at the request of the Committee on Agriculture, United States House of Representatives. The FAPRI staff at the University of Missouri worked with other members of the FAPRI consortium in responding to this Congressional request. Included in the consortium is the FAPRI unit at Iowa State University and the Agriculture and Food Policy Center (AFPC) at Texas A&M University.

The bottom line of any new regulation is the cost to the sector it attempts to regulate. The EPA's proposed CAFO regulations are no different. In the end, it will be critical to understand all of the costs to livestock producers. However, this study does not deal with the technical aspects and costs associated with the management of animal effluents. Several others have raised concerns about the technical feasibility and cost estimates associated with the EPA's proposal. The focus here will take the EPA's costs associated with implementation of the proposed regulations as given in arriving at the financial implications of the proposed CAFO regulations. It is strongly recommended that this analysis be repeated as alternative cost estimates are developed.

The purpose of this study is to provide an alternative methodology of calculating the expected impacts of the EPA's proposed CAFO regulations. To that end, industry experts were assembled to help construct models of operations that are reflective of each of the agricultural industries. The work presented in this study could not have been conducted without this base of information. The FAPRI staff wishes to thank all involved for their input and to the Farm Foundation for providing travel resources for the industry experts. In particular, a special word of appreciation is owed to the EPA staff. They remained very informative and responsive throughout the development of these comments. Any errors remaining in this study are the responsibility of the FAPRI staff. After the industry experts provided the base of financial information, FAPRI designed spreadsheets to first construct a financial baseline for each operation and then analyze the impact of the proposed CAFO regulations.

This study also attempts to elucidate the likely aggregate level impacts in each of the livestock sectors in response to implementation of the proposed CAFO regulations. EPA's aggregate level CAFO cost estimates are imposed on the FAPRI livestock sector model to judge the impacts on each segment of the sector.

Other specific comments are made on issues that FAPRI felt were of critical importance to EPA's own economic analysis. These comments generally are focused on the process rather than specific parts of the proposed CAFO regulations that may need to be changed.

POINTS REGARDING EPA'S CAFO ANALYSIS

Enterprise versus Firm Data

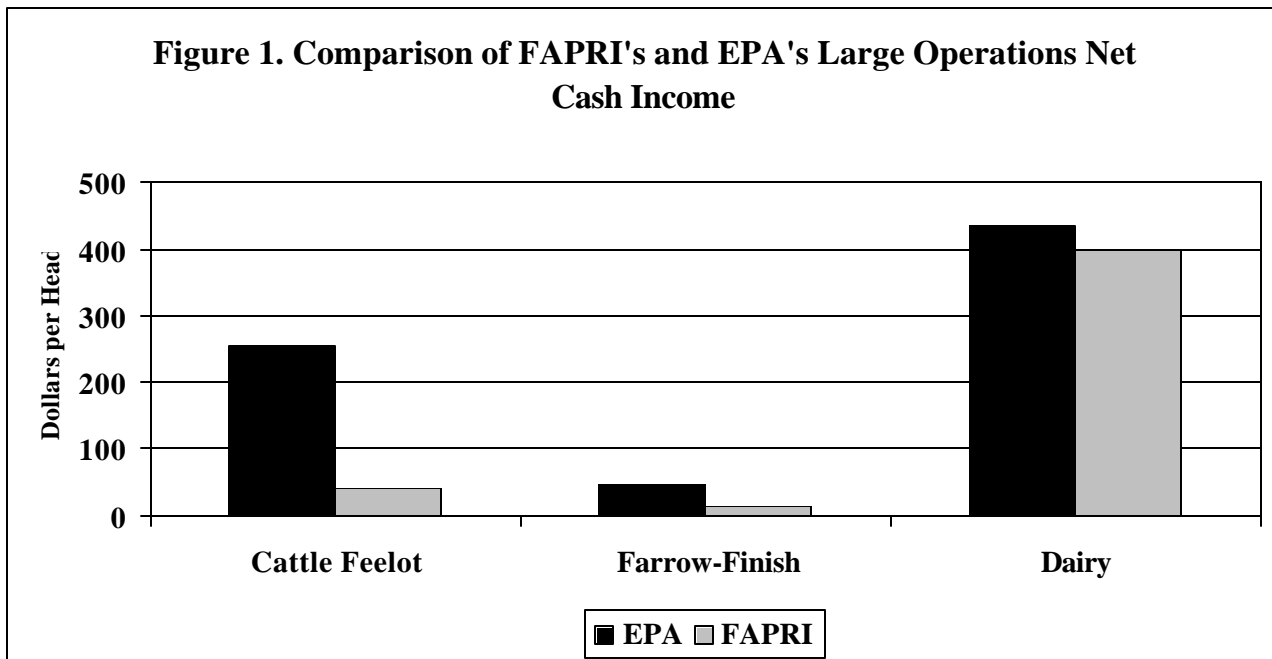
EPA did not conduct a survey of all CAFOs. Instead, they used two major data sources in constructing their economic analysis: USDA's 1997 Census of Agriculture and the 1997 Agriculture Resource Management Study (ARMS). Both of these surveys provide valuable data on the status of U.S. agriculture; however, it is not clear that EPA's use of this data provides a defensible base of economic

information from which to draw conclusions about the effect the proposed CAFO regulations may have on a given operation. In utilizing these data sets, the EPA has likely developed an inaccurate view of the specifics of each livestock enterprise.

One part of the debate is focused on whether one should use enterprise data or firm data as the base from which to analyze these proposed regulations. This debate seems to make the most difference for smaller operations that have likely diversified into producing many different agricultural commodities. The question as to whether a producer would subsidize one enterprise with dollars from his other enterprises remains unanswered. One clear point is that the probability a producer would subsidize an enterprise is lower if the expenditures needed for the deficit enterprise are non-output producing than if the expenditures were expected to provide additional future income. These diversified operations will not cross-subsidize enterprises for long periods, but rather will shift assets towards other, more profitable enterprises in their operation. These producers may not quit farming but would only remove the non-productive enterprise from their farming mix.

In general, large operations are normally enterprise specific. That is, a 10,000 cow dairy is more likely to produce only milk than a 100 cow dairy. As one moves to larger operations, this fact should result in the firm data used by EPA to be somewhat more comparable to the enterprise approach used by FAPRI. As Figure 1 shows, even for the large operations the difference between FAPRI's and EPA's net income per head remains large.

Figure 1 suggests that there are more than just enterprise versus firm-level differences in the different calculations of net income per head. On the cattle feedlot side, the combination of cow-calf, feedlots, and other cattle backgrounding operations in the ARMS data makes it difficult to use the data as it has been applied by EPA. Even the hog and dairy data seems to suggest there is more at play. Further consultation with USDA regarding how the ARMS data is being applied seems necessary before proceeding with the current financial information.



The USDA Long Term Baseline

The use of USDA's annual long term baseline raises issues that should be dealt with as the proposed CAFO regulations are analyzed. The largest issue relates to the lack of cyclical behavior of livestock prices in USDA's baseline forecast. Nearly every commodity forecasted by USDA shows steadily rising returns over the projection period. Although on average these return levels may be correct, one can miss important issues related to where in a livestock cycle these additional regulatory costs are imposed. Any baseline, including FAPRI's, is subject to critical review regarding its "correctness" yet there is no clear-cut "right" answer. However, any analysis that is done must recognize that in many livestock industries price cycles exist.

It appears that the projected cattle feedlot cash streams (Table 4.8 of EPA's Economic Analysis) are based on USDA projections of cow-calf returns. Cow-calf returns will not provide a good indication of feedlot profitability. In fact, feedlot returns sometimes move opposite of cow-calf returns.

EPA Cost Estimates

In this report, the FAPRI analysis uses cost estimates directly computed by EPA in nearly all cases. In the case of farrow-to-finish operations the cost of lagoon covers is included, which appears to be missing from EPA's own cost tables. Again, these comments are limited to the financial side of EPA's analysis and will leave commenting on the cost of these proposed CAFO regulations to others.

It would be useful in future EPA documents on CAFO regulations if a more detailed cost development could be included on a farm-by-farm basis. Detailed farm-level cost tables provide a useful summary of data that is difficult to construct from current documents on the proposed rule. Although all of the pieces (frequency factors, cost estimates for each technology, etc.) are included in the detailed commodity level documents, putting them all together is a challenge and makes understanding exactly what is intended by the proposed regulations difficult.

FAPRI'S AGRICULTURE BASELINE AND RESULTS OF THE CAFO SCENARIO AT THE SECTOR LEVEL

The FAPRI Baseline

Annually, FAPRI produces a long term baseline that is used to analyze policy requests from the U.S. Congress. This baseline is constructed by using a large scale econometric model of both U.S. and world agriculture. The econometric model contains roughly 5,000 behavioral equations and identities. To drive the baseline, assumptions are needed regarding agriculture policies in each country, yield growth rates for each of the agriculture commodities and information regarding the global economic picture. Once these assumptions are made, the model is able to provide a detailed balance sheet on each commodity for each country. In addition, information regarding commodity prices is also provided. The reader is referred to www.fapri.missouri.edu to view the most recent long-term baseline. It should be pointed out that this baseline is also subjected to extensive peer review before being finalized.

The 2001 FAPRI baseline is used in the model farms in this study to help project their financial position over the next ten-year period. Information on livestock prices, feed prices, and general macroeconomic information, e.g., wage rates is used from the aggregate baseline.

A new addition to the FAPRI baseline is the ability to put probability distributions around each of the point estimates of the baseline by creating historical empirical distributions around crop and livestock yields, export equation errors, and domestic demand equation error terms. This stochastic approach to the baseline process provides a fuller treatment of the range of expected outcomes than would be the case with only a point estimate deterministic approach. The stochastic aggregate baseline information is used in the model farms to provide a probability around the key factors in each of the operations, i.e., net farm income, debt/asset ratio, etc.

Aggregate CAFO Scenario

The aggregate FAPRI model is used to provide an analysis of the change in the domestic livestock industries under the proposed CAFO regulations. This is accomplished by taking the aggregate costs of the proposed CAFO regulations from the EPA's Economic Analysis document (Table 5-6 on page 5-9, two-tier structure [500 AU]). For each of the livestock sectors, 1997 costs are converted into per unit costs and rolled forward to provide a cost per unit of output over the 2003 to 2011 period. These per unit costs are then imposed on each of the appropriate supply equations in the model. For example, to introduce the cost to cattle feedlots the derived demand to place cattle in the feedlot is changed, while in the dairy model the costs are imposed on the dairy cow inventory equations. The aggregate model is then solved to provide a new path on production, consumption and prices under these proposed CAFO regulations. Table 1 provides the imposed per unit costs for each of the livestock industries.

Table 1. Changes to US Livestock and Dairy Resulting from Proposed CAFO Regulations

	2000 level	2003	2004	2005	2006	2007	2008	2009	2010	2011	'03-'11 avg.
CAFO Costs											
		(Dollars per Hundredweight of Live Production)									
Beef	0.00	0.37	0.37	0.37	0.37	0.37	0.37	0.38	0.39	0.40	0.38
Pork	0.00	0.86	0.88	0.89	0.89	0.92	0.94	0.93	0.93	0.96	0.91
Broiler	0.00	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Turkey	0.00	0.27	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.31	0.29
		(Dollars per Hundred Dozens of Production)									
Egg	0.00	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16
		(Dollars per Hundredweight of Milk Production)									
Dairy	0.00	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08
Production											
		(Million Pounds)									
Beef	26,888	(5)	(9)	0	0	(4)	(7)	(8)	(9)	(11)	(6)
Pork	18,952	(14)	(63)	(114)	(140)	(151)	(163)	(175)	(182)	(185)	(132)
Broiler	30,199	(17)	(23)	(19)	(13)	(9)	(7)	(5)	(3)	(1)	(11)
Turkey	5,333	(2)	(2)	(2)	(1)	(1)	(2)	(2)	(2)	(2)	(2)
		(Million Dozens)									
Egg	7,035	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(0)	(1)
		(Million Pounds)									
Milk	167,953	(73)	(90)	(102)	(111)	(117)	(122)	(125)	(128)	(131)	(111)
Producer Prices											
		(Dollars per Hundredweight)									
NE Direct Fed Steer	69.65	0.09	0.22	0.24	0.25	0.24	0.24	0.26	0.28	0.30	0.24
OK City Feeder Steer	94.35	-0.32	-0.25	-0.19	-0.15	-0.16	-0.17	-0.16	-0.14	-0.14	-0.19
Barrow and Gilt	44.70	0.14	0.53	0.84	0.87	0.83	0.84	0.90	0.95	0.98	0.77
12-City Broiler	56.20	0.15	0.28	0.32	0.30	0.27	0.27	0.28	0.28	0.28	0.27
East. Region Turkey	70.50	0.17	0.28	0.31	0.29	0.26	0.26	0.28	0.28	0.29	0.27
		(Cents per Dozen)									
NY Grade A Lg. Egg	68.90	0.09	0.06	0.06	0.07	0.07	0.08	0.07	0.08	0.08	0.07
		(Dollars per Hundredweight)									
All Milk	12.33	0.03	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.06
Retail Prices											
		(Dollars per Pound)									
Beef	3.06	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pork	2.58	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01
		(Cents per Pound)									
Broiler	155.30	0.10	0.29	0.40	0.38	0.34	0.32	0.34	0.35	0.34	0.32
Turkey	103.08	0.13	0.28	0.32	0.29	0.26	0.26	0.28	0.28	0.29	0.27
		(Cents per Dozen)									
Shell Egg	91.35	0.10	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08
		(Dollars per Gallon)									
Whole Milk	2.75	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

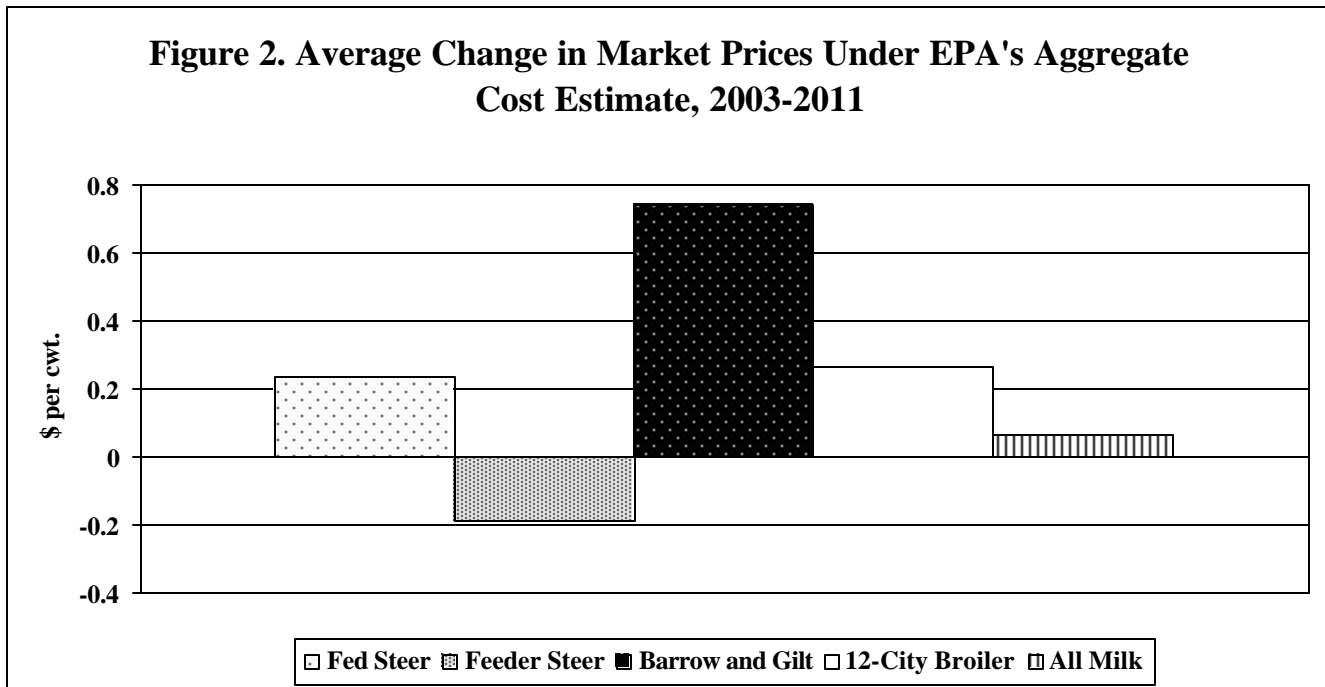
The results of this scenario are also shown in Table 1. They show that as these markets adjust prices rise slightly for all farm products. These results reflect some producers exiting the industry instead of spending additional funds to meet the new CAFO regulations. This increase in farm prices is not related to the ability of anyone to pass costs on to other levels of the sector, but reflects the new equilibrium of reduced supply. Because they face the highest per unit costs to comply with the proposed CAFO regulations, pork prices increase the most under the scenario. It is important to note that the aggregate EPA cost estimates are understated since they do not include lagoon cover costs on some operations.

The exact level of the change in pork costs that would occur with the inclusion of all lagoon cover costs is difficult to determine.

The results shown here are not radically different than the EPA's own market level results. The EPA shows an increase in barrow and gilt price of \$0.59 per hundredweight while the FAPRI results show an increase of \$0.77 per hundredweight. Similar comparisons can be made with the other commodity prices.

One interesting result out of the scenario is that the larger cost being absorbed by the pork industry results in the pork industry pulling demand for other meat products higher as consumers switch to meat products like beef and chicken that have smaller increases in retail prices than is the case for pork. Fed steer prices average \$0.12 per hundredweight higher than would have been the case without the increase in pork prices.

Figure 2 shows the average change in prices for each of the livestock categories. The inclusion of costs at the feedlot level in the cattle sector results in the decline in feeder cattle prices and the rise in fed cattle prices. Through the decline in feeder cattle prices, cow-calf producers do bear some of the burden of these additional CAFO regulations indirectly.



FAPRI'S MODEL FARM APPROACH TO ASSESSING EPA'S PROPOSED CAFO RULES

Industry Expert Panel Process

The comments provided here focus on providing an alternative process by which the cost of the new CAFO regulations can be measured at the enterprise level. The process used in this analysis has both strengths and weaknesses relative to EPA's own farm-level process. Given the short timeline available to develop these comments, only a subset of the enterprise sizes and locations needed to provide a full description of the outcome of imposing the new CAFO regulations are built. For ease, all operations in this study are assumed to be category three operations --- operations that truck all waste off site already.

The approach used by FAPRI in building model farms for this analysis started by bringing together industry experts to provide a snapshot of each enterprise at a given point in time. Although this approach suffers statistically relative to the sample-process used by the USDA ARMS survey, it can sometimes provide information that is in a more useable form. The resulting budgets are heavily dependent on the industry experts' opinions and could vary with a different group of industry experts.

The industry experts provided a stepping off point for these model farms by providing detailed information on the financial picture of each of the operations in 2000. They gave a range of information on these operations including but not limited to: beginning cash reserves, productivity measures, feed efficiency, veterinary expenses, and information on each of the loans needed by the operation. This detailed information was entered into the spreadsheet as a starting point for these operations which were then projected forward until 2011 using the aggregate FAPRI baseline discussed earlier. The resulting financial statements were sent back to the panel of experts as a crosscheck to the process. Once the industry group was in general agreement that the baseline provided a good benchmark of how the operation would likely perform for the next several years, the additional CAFO costs were imposed and this scenario was then compared to the baseline to see how this operation would fare financially.

Spreadsheet Model

A spreadsheet has been developed for each of the commodities covered in this work (swine.xls – farrow to finish hog operations, feedlot.xls – cattle feedlots and dairy.xls – dairy operations). Each of the spreadsheets is attached to these written comments. The spreadsheet organization for each commodity is very similar. Each worksheet within each commodity spreadsheet is one operation. The top group of lines in each sheet gathers the necessary input data to construct the operation. The next section provides a comprehensive financial statement. The remaining lines include intermediate calculations such as taxes and loan payment information. Three additional spreadsheets are attached that include the incorporation of the CAFO costs on these particular operations. These additional spreadsheets have the letters “cafo” added to the end of their names.

The spreadsheets attached are only the deterministic runs of the models. There are corresponding stochastic spreadsheets that look exactly like the deterministic versions, with the exception of the ability to stochastically analyze how the operation would perform under the additional CAFO regulations. These files are quite large so and thus have not been attached. They are available for review by EPA staff. The stochastic analysis subjects the operations to 500 different, but internally consistent, possible outcomes. This provides the ability to make statements regarding the likelihood of financial failure these operations may face with and without the additional CAFO costs. At the bottom of the remaining tables, stochastic outcomes are presented.

Baseline Model Results

Swine

Six baseline farrow-to-finish swine operations were constructed for this study. They are 150, 500, and 2,400 sow operations in both the Midwest and Mid-Atlantic regions. Although other types of operations, like a grow-finish operation, would need to be examined to completely understand the effect of the proposed CAFO regulations, the direction of change would likely be similar across all swine operation types in a particular region.

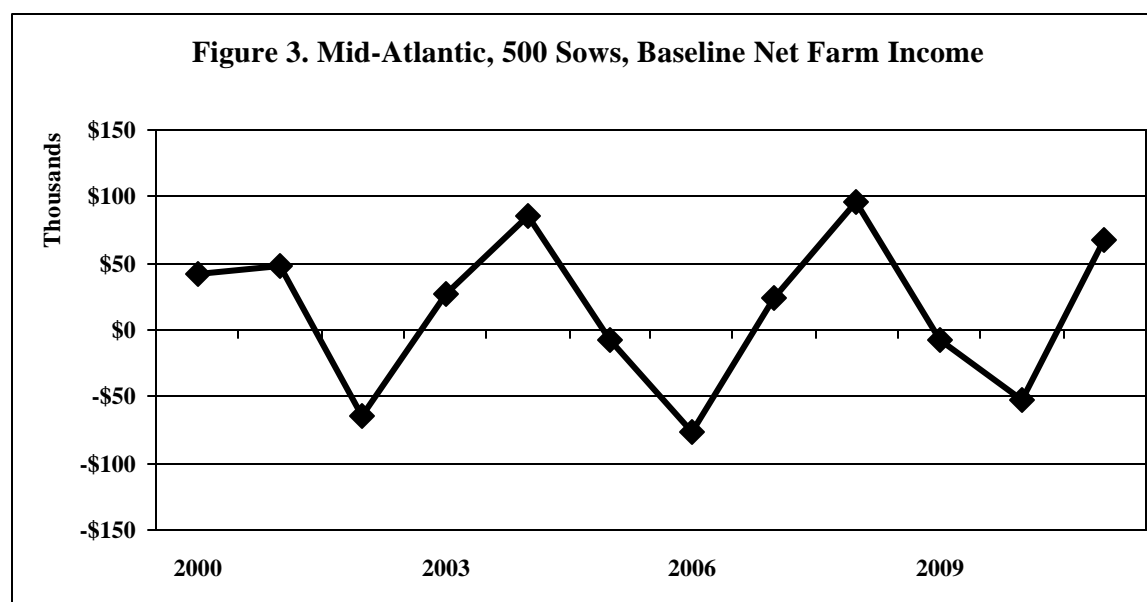
Table 2 provides a summary of the baseline financial condition of each of the six farrow-to-finish operations. Each of the six farms reduces its debt/asset ratio in 2011 relative to 2000 levels. In spite of the reduction in the debt/asset ratio, four of the six operations show a reduction in real net worth over the period. The last measure in Table 2 provides a glimpse into the stochastic work that is also included in this analysis. It shows the probability of net farm income falling below zero in 2001 and 2010. Because of the point of the hog cycle in 2010, the probability of a negative net farm income grows to over 60 percent for all operations.

A point worth making again is that a baseline that shows livestock cycles gives a more realistic outlook of the good and bad years an operation will face. This likely provides for more robust results than using a baseline that lacks the cyclical price behavior inherent in the livestock industry. Figure 3 shows the path of net farm income in the baseline for the 500 sow Mid-Atlantic operation. This particular farm shows net farm income that varies from \$100,000 to \$-80,000 over the baseline period. Detailed information showing the year by year baseline for each of the six operations can be found in Appendix 1.

Table 2. Baseline Values for Sow Operations

	150 Sow Operations		500 Sow Operations		2400 Sow Operations	
	Mid-Atlantic	Midwest	Mid-Atlantic	Midwest	Mid-Atlantic	Midwest
Net Cash Income						
2000	\$ 26,778	\$ 29,678	\$ 128,362	\$ 146,677	\$ 670,828	\$ 732,855
2011	\$ 25,083	\$ 28,742	\$ 152,941	\$ 180,976	\$ 802,945	\$ 895,853
2000-11 avg.	\$ 16,505	\$ 19,884	\$ 101,052	\$ 123,683	\$ 540,726	\$ 615,612
Net Farm Income						
2000	\$ 13,699	\$ 15,456	\$ 42,518	\$ 53,216	\$ 258,779	\$ 284,244
2011	\$ 12,004	\$ 14,520	\$ 67,098	\$ 87,516	\$ 390,896	\$ 447,242
2000-11 avg.	\$ 3,426	\$ 5,663	\$ 15,209	\$ 30,223	\$ 128,677	\$ 167,001
Ending Cash Balance						
2000	\$ 8,350	\$ 9,943	\$ 41,702	\$ 48,749	\$ 210,100	\$ 227,253
2011	\$ 11,847	\$ 18,119	\$ 138,906	\$ 182,030	\$ 718,848	\$ 851,157
2000-11 avg.	\$ 1,355	\$ 5,844	\$ 33,823	\$ 54,762	\$ 197,627	\$ 251,855
Real Net Worth (1982 \$)						
2000	\$ 152,671	\$ 97,053	\$ 412,410	\$ 444,802	\$ 1,557,646	\$ 1,711,719
2011	\$ 105,051	\$ 77,245	\$ 336,599	\$ 450,554	\$ 1,433,947	\$ 1,757,011
2000-11 avg.	\$ 135,752	\$ 92,513	\$ 391,802	\$ 461,982	\$ 1,566,906	\$ 1,801,326
Debt/Asset Ratio						
2000	0.44	0.56	0.60	0.60	0.67	0.66
2011	0.37	0.35	0.31	0.13	0.33	0.24
2000-11 avg.	0.37	0.43	0.44	0.37	0.50	0.45
Rate of Return on Equity						
2000	0.09	0.16	0.10	0.11	0.15	0.15
2011	0.10	0.17	0.15	0.14	0.21	0.19
2000-11 avg.	0.04	0.08	0.05	0.06	0.08	0.09
P(Net Farm Income < 0)						
2001 *	0.22	0.20	0.26	0.22	0.22	0.21
2010 *	0.71	0.68	0.68	0.62	0.65	0.62

* - Different years are shown because there is no stochastic result in 2000 and the stochastic baseline ends in 2010.



Cattle Feedlots

Three cattle feedlots were constructed to analyze the impact of the proposed CAFO rules: two Midwest cattle feedlots of 500 and 5,000 head capacity and a 30,000 head Southern Plains feedlot. Because many of the profits and losses that occur in the cattle feeding industry occur within the year and can be masked in annual observations, cattle feedlots are difficult to model in an annual framework.

The cattle feedlots modeled in this study are assumed to own all of the cattle in the feedlot. The expert panel agreed that while this misses contract cattle feeding known to occur, they felt the contract operator would be affected in a fashion similar to owned-cattle operations.

Table 3 provides a summary of the baseline for the three cattle feedlots. The baseline is extended through 2011 by using feeder cattle prices, feed prices, and fed cattle prices from the FAPRI aggregate baseline discussed earlier in the document. The baseline shows that all operations show a decline in real net worth over the 2000 to 2011 period. All three operations show a debt/asset ratio that remains 0.55 or above. The main factor keeping the debt/asset ratio higher than seen in the hog operations is the continued borrowing against cattle placed in the feedlot. Similar to the swine tables, these three feedlots were examined under a stochastic baseline. The probability of net farm income being negative is greater in 2010 because of the downturn in the cattle cycle the industry is projected to be facing in 2010.

To provide more detail, Figure 4 shows the annual net farm income path for the 500 head Midwest feedlot. Although the level remains below \$30,000 throughout the baseline period, it shows a positive level of net farm income each year. A full detailed year-by-year set of tables on the cattle feedlots can be found in Appendix 2.

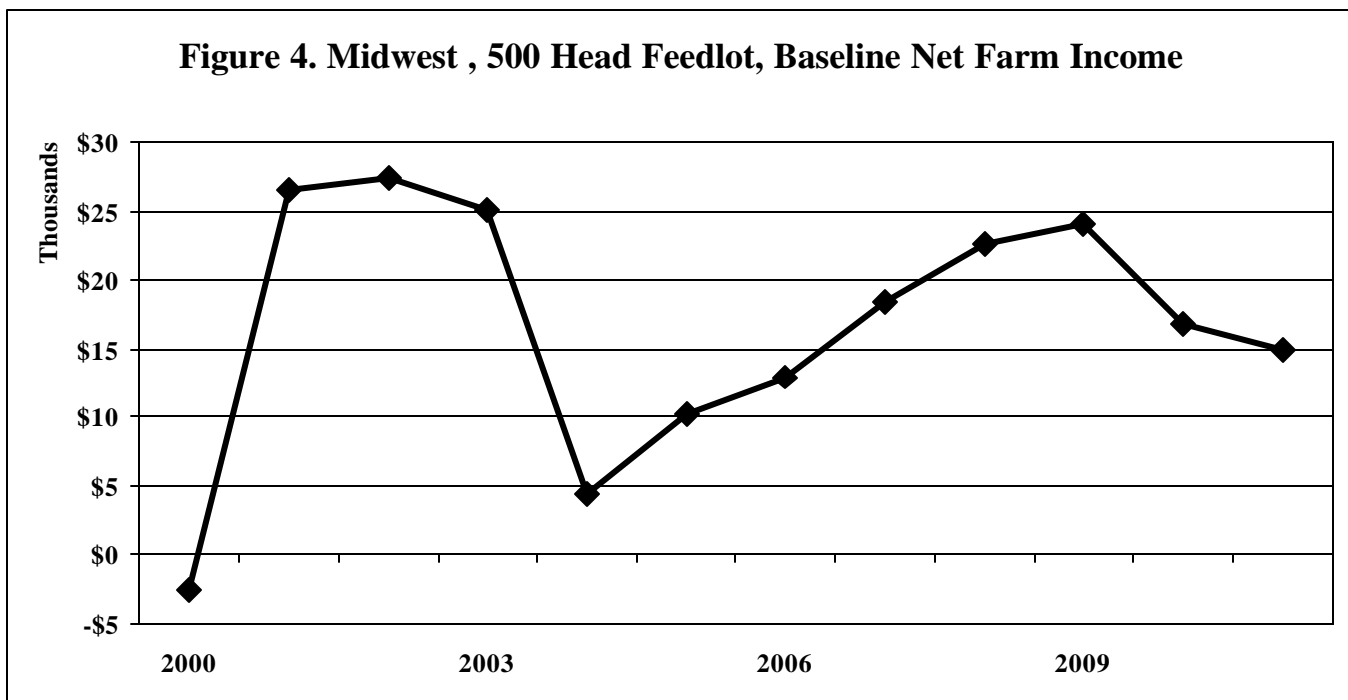


Table 3. Baseline Values for Feedlot Operations

	500 Head Feedlot		5000 Head Feedlot		30,000 Head Feedlot	
		Midwest		Midwest		Southern Plains
Net Cash Income						
2000	\$	1,550	\$	(47,536)	\$	(275,846)
2011	\$	19,135	\$	73,844	\$	676,882
2000-11 avg.	\$	20,894	\$	103,275	\$	728,481
Net Farm Income						
2000	\$	(2,599)	\$	(85,586)	\$	(473,271)
2011	\$	14,986	\$	35,794	\$	479,457
2000-11 avg.	\$	16,745	\$	65,225	\$	531,056
Ending Cash Balance						
2000	\$	(2,791)	\$	(33,689)	\$	(441,637)
2011	\$	10,430	\$	28,507	\$	854,926
2000-11 avg.	\$	7,719	\$	22,604	\$	498,242
Real Net Worth (1982 \$)						
2000	\$	101,266	\$	793,488	\$	4,650,448
2011	\$	95,601	\$	538,842	\$	4,593,006
2000-11 avg.	\$	104,948	\$	728,460	\$	4,838,717
Debt/Asset Ratio						
2000		0.68		0.72		0.73
2011		0.59		0.73		0.63
2000-11 avg.		0.62		0.71		0.68
Rate of Return on Equity						
2000		0.06		-0.03		-0.06
2011		0.18		0.11		0.09
2000-11 avg.		0.19		0.13		0.10
P(Net Farm Income < 0)						
2001 *		0.19		0.25		0.24
2010 *		0.38		0.47		0.43

* - Different years are shown because there is no stochastic result in 2000 and the stochastic baseline ends in 2010.

Dairy

Six dairy operations are used in this study. In the Mid-Atlantic region there are 250 and 500 dairy cow operations. 1,000 cow operations are constructed in the Pacific and Southern regions while there is a 250 cow operation in the Midwest and a 500 cow operation in the Central region.

The dairy portion of this study was the last to be completed and the results had less review by our panel of experts than the other commodities presented.

Table 4 provides a summary of the baseline for the six dairy operations. In general, all six operations build financial strength over the baseline. Real net worth grows on all six operations, and debt/asset ratios fall below 0.3 by 2011 on each operation. The stochastic baseline, represented by the probability of a negative net farm income at the bottom of Table 4, also shows these operations to be in the best financial health of all the commodities presented, --- the probability of negative net farm income remains below 0.3 in 2011. Because of the inelastic nature of both supply and demand, projecting a

dairy baseline is a challenge. The last few years have seen dairy prices at both record highs and record lows. This variability will likely continue for the foreseeable future.

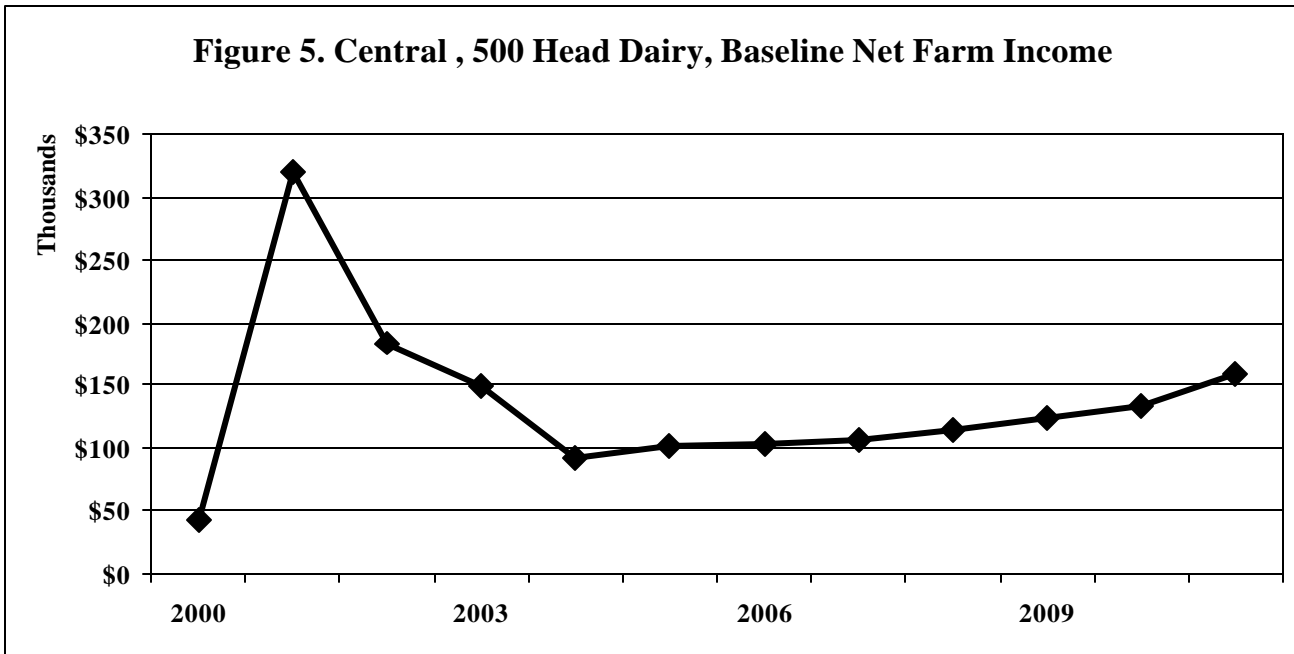
Figure 5 shows the year-by-year path in net farm income for the 2000 to 2011 period. The graph shows a decline in net farm income from \$325,000 in 2001 to less than \$100,000 by 2004. After that, net farm income slowly rises to more than \$150,000 by 2011. Appendix 3 provides detailed baseline information for all of the dairy operations in this study.

Table 4. Baseline Values for Dairy Operations

	250 Cow Operations		500 Cow Operations		1000 Cow Operations	
	Mid-Atlantic	Midwest	Central	Mid-Atlantic	Pacific	Southern
Net Cash Income						
2000	\$ 55,869	\$ 55,863	\$ 137,519	\$ 168,854	\$ 400,420	\$ 346,272
2011	\$ 107,956	\$ 107,800	\$ 252,365	\$ 300,156	\$ 706,173	\$ 600,693
2000-11 avg.	\$ 100,265	\$ 100,190	\$ 229,996	\$ 269,026	\$ 622,109	\$ 541,538
Net Farm Income						
2000	\$ 10,160	\$ 10,154	\$ 43,269	\$ 74,604	\$ 210,753	\$ 156,605
2011	\$ 62,248	\$ 62,092	\$ 158,115	\$ 205,906	\$ 516,506	\$ 411,026
2000-11 avg.	\$ 54,556	\$ 54,481	\$ 135,746	\$ 174,776	\$ 432,442	\$ 351,872
Ending Cash Balance						
2000	\$ 11,299	\$ 11,295	\$ 3,230	\$ 20,505	\$ 25,196	\$ 275
2011	\$ 107,230	\$ 107,054	\$ 219,035	\$ 281,422	\$ 664,171	\$ 531,385
2000-11 avg.	\$ 34,151	\$ 34,075	\$ 53,943	\$ 98,891	\$ 243,094	\$ 151,868
Real Net Worth (1982 \$)						
2000	\$ 406,376	\$ 406,373	\$ 730,437	\$ 743,528	\$ 1,408,818	\$ 1,389,931
2011	\$ 496,229	\$ 495,827	\$ 875,028	\$ 1,059,636	\$ 2,246,348	\$ 1,901,611
2000-11 avg.	\$ 456,419	\$ 456,281	\$ 800,126	\$ 894,843	\$ 1,795,457	\$ 1,619,209
Debt/Asset Ratio						
2000	0.60	0.60	0.63	0.63	0.64	0.65
2011	0.22	0.23	0.29	0.16	0.11	0.22
2000-11 avg.	0.41	0.41	0.46	0.41	0.40	0.45
Rate of Return on Equity						
2000	0.04	0.04	0.09	0.12	0.16	0.13
2011	0.09	0.09	0.15	0.15	0.17	0.17
2000-11 avg.	0.10	0.10	0.16	0.17	0.21	0.19
P(Net Farm Income < 0)						
2001 *	0.01	0.01	0.01	0.01	0.01	0.01
2010 *	0.28	0.28	0.23	0.13	0.06	0.13

* - Different years are shown because there is no stochastic result in 2000 and the stochastic baseline ends in 2010.

Figure 5. Central , 500 Head Dairy, Baseline Net Farm Income



EPA CAFO Cost Scenario

To examine the impact of the proposed CAFO regulations on the model farms, the EPA cost estimates are used directly and there was no attempt to look at alternative cost estimates for the proposed regulations. The costs are applied over the 2003 to 2011 period. This report does modify hog operations costs by the cost of the lagoon cover since it appears to be missing in EPA's development. This analysis uses the best available technology (BAT) option for each of the commodities (option 3 for dairy and feedlots and option 5 for farrow-to-finish operations).

The scenario shown for all of the operations in this study also includes the aggregate level price impacts, that is, the higher market prices for the livestock products from the aggregate scenario are passed through the enterprise-level operations. It is a more appropriate scenario to include these price impacts. Again, it is important to realize that as these new proposed regulations take effect they will drive some operations out of business and that reduction in supply will allow prices to rise. There is some inconsistency on the hog side, since EPA's estimate of industry-wide costs are understated because of the lack of including the cost of the lagoon cover in certain cases. This would result in the estimated barrow and gilt price change shown here to be understated as well.

The capital investment portion of the proposed CAFO rules is handled differently than was done by the EPA. A 40 percent down payment is assumed with the remaining balance financed for 10 years. Conversely, EPA spreads that capital cost evenly over a 10 year period. This difference can result in a much different stepping off point when determining the financial implications of these proposed regulations. The percentage of the capital outlay needed in the form of a down payment was determined after consulting with our group of experts. They felt that most lending institutions would not loan a large percentage of the money on non-producing assets.

The use of EPA's annual costs for the new CAFO regulations leads to an understatement of the annual cost a producer will face since there is no inflation in the costs built in over time. It is clear that most of

these annual costs would be subject to inflation. That would lead to a worse financial outcome on the operations than shown.

Swine

The exact assumptions used in imposing the additional CAFO costs for each of the six swine operations are shown in Table 5. In all cases the first year costs are the highest, as the down payment on the capital items overwhelms the remaining costs. When compared to the equivalent-sized Midwest operation, the Mid-Atlantic proposed CAFO costs are higher in every case. That leads directly to the result that the proposed CAFO regulations will have larger impacts on that region of the country.

Figure 6 shows the additional per hundredweight costs each of the Midwest swine farms will face under the proposed CAFO regulations. The proposed CAFO regulations result in per hundredweight costs that are nearly three times larger for the small operations than for the large operations. These CAFO regulations put much greater stress on the smaller operations than their large counterparts. The growth in costs per hundredweight on the small operations represents the additional operating debt interest payments they must make as they refinance cash flow deficits.

Table 6 provides a summary of the financial impacts of the proposed CAFO regulations on each of the six hog farms. The small farms show the most stress under the proposed regulations. They are quickly nearing a position where creditors would likely suggest other courses of action. Even the large farms are in a more stressful position under the proposed CAFO rule. Their debt/asset ratios increase on average by 0.2 over the entire period. It is informative to note that without the increase in barrow and gilt price included in these model farms, all six would likely cease operation. This is a much different outcome than the EPA’s results in which no increase in barrow and gilt prices occurs yet they show few operations that would come under stress. Appendix 1 provides a year-by-year summary of the CAFO impacts and a comparison to the baseline for each of the six operations.

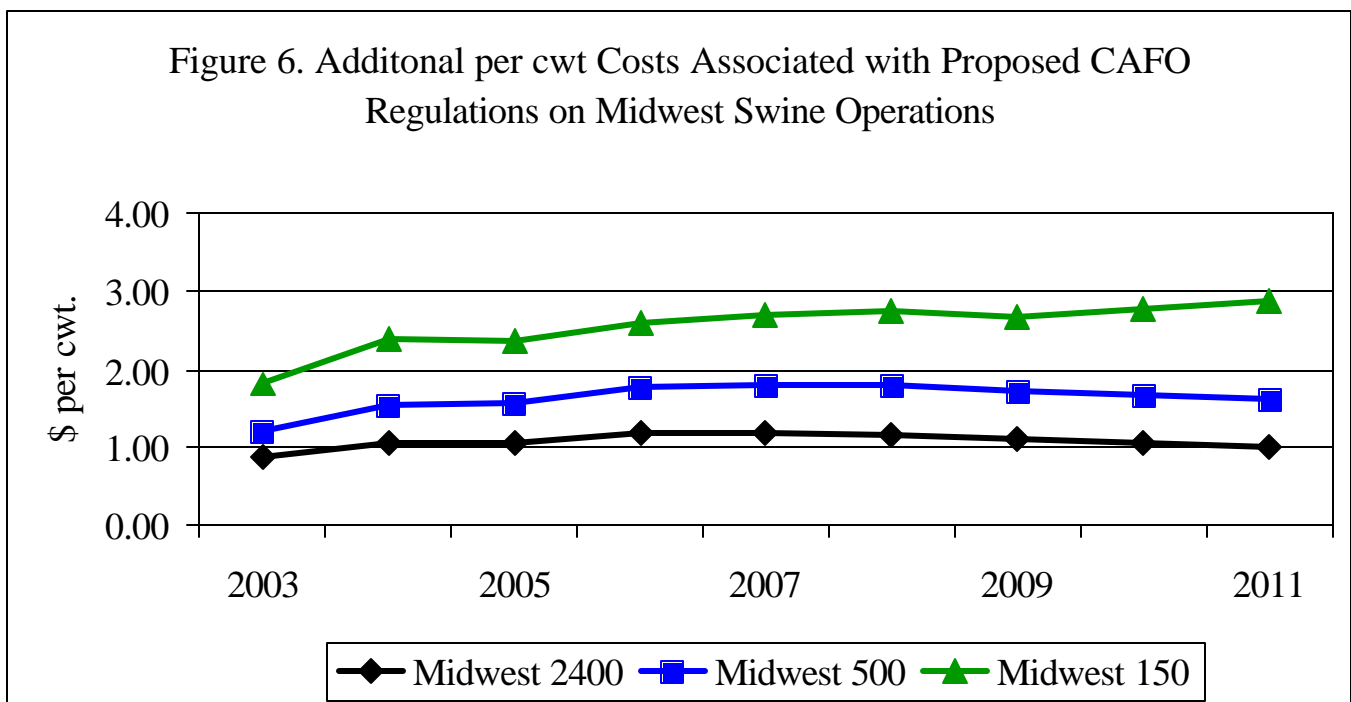


Table 5. CAFO Costs for Sow Operations

	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg.
Mid-Atlantic 150 Sows										
	(Thousand Dollars)									
Annual Costs	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Down payment on Loan	38.1	-	-	-	-	-	-	-	-	4.2
Principal Payment on Loan	3.8	4.1	4.5	4.9	5.3	5.8	6.3	6.9	7.5	5.4
Interest Payment on Loan	5.1	4.8	4.4	4.0	3.6	3.1	2.6	2.0	1.4	3.5
Total	52.1	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.3
Midwest 150 Sows										
Annual Costs	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Down payment on Loan	37.0	-	-	-	-	-	-	-	-	4.1
Principal Payment on Loan	3.6	4.0	4.3	4.7	5.2	5.6	6.1	6.7	7.3	5.3
Interest Payment on Loan	5.0	4.7	4.3	3.9	3.5	3.0	2.5	2.0	1.4	3.4
Total	50.7	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	17.9
Mid-Atlantic 500 Sows										
Annual Costs	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Down payment on Loan	134.9	-	-	-	-	-	-	-	-	15.0
Principal Payment on Loan	13.3	14.5	15.8	17.2	18.8	20.5	22.3	24.3	26.5	19.3
Interest Payment on Loan	18.2	17.0	15.7	14.3	12.7	11.0	9.2	7.2	5.0	12.3
Total	176.6	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	56.7
Midwest 500 Sows										
Annual Costs	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Down payment on Loan	132.7	-	-	-	-	-	-	-	-	14.7
Principal Payment on Loan	13.1	14.3	15.6	17.0	18.5	20.2	22.0	24.0	26.1	19.0
Interest Payment on Loan	17.9	16.7	15.5	14.0	12.5	10.9	9.0	7.1	4.9	12.1
Total	173.7	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	55.8
Mid-Atlantic 2400 Sows										
Annual Costs	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5
Down payment on Loan	576.6	-	-	-	-	-	-	-	-	64.1
Principal Payment on Loan	56.9	62.1	67.6	73.7	80.4	87.6	95.5	104.1	113.4	82.4
Interest Payment on Loan	77.8	72.7	67.1	61.0	54.4	47.2	39.3	30.7	21.3	52.4
Total	753.9	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	241.4
Midwest 2400 Sows										
Annual Costs	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
Down payment on Loan	471.2	-	-	-	-	-	-	-	-	52.4
Principal Payment on Loan	46.5	50.7	55.3	60.2	65.7	71.6	78.0	85.0	92.7	67.3
Interest Payment on Loan	63.6	59.4	54.9	49.9	44.5	38.6	32.1	25.1	17.4	42.8
Total	616.1	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	197.2

Table 6. 2003-2011 Average Values for Sow Operations

	150 Sow Operations		500 Sow Operations		2400 Sow Operations	
	Mid-Atlantic	Midwest	Mid-Atlantic	Midwest	Mid-Atlantic	Midwest
Net Cash Income						
Baseline	\$ 16,003	\$ 19,522	\$ 103,192	\$ 127,339	\$ 552,976	\$ 632,693
CAFO	\$ 5,704	\$ 9,645	\$ 81,217	\$ 107,174	\$ 480,797	\$ 597,697
Change	\$ (10,300)	\$ (9,876)	\$ (21,975)	\$ (20,164)	\$ (72,178)	\$ (34,997)
Net Farm Income						
Baseline	\$ 2,924	\$ 5,300	\$ 17,348	\$ 33,878	\$ 140,927	\$ 184,083
CAFO	\$ (13,091)	\$ (10,121)	\$ (24,863)	\$ (6,192)	\$ (17,744)	\$ 78,406
Change	\$ (16,015)	\$ (15,421)	\$ (42,212)	\$ (40,070)	\$ (158,670)	\$ (105,676)
Ending Cash Balance						
Baseline	\$ (455)	\$ 4,557	\$ 31,193	\$ 55,304	\$ 189,731	\$ 253,143
CAFO	\$ (21,238)	\$ (16,119)	\$ (14,526)	\$ (5,928)	\$ 29,533	\$ 83,603
Change	\$ (20,783)	\$ (20,676)	\$ (45,719)	\$ (61,232)	\$ (160,198)	\$ (169,540)
Real Net Worth (1982 \$)						
Baseline	\$ 131,059	\$ 91,506	\$ 388,405	\$ 469,285	\$ 1,581,589	\$ 1,839,175
CAFO	\$ 89,605	\$ 51,576	\$ 273,761	\$ 362,884	\$ 1,187,100	\$ 1,578,415
Change	\$ (41,453)	\$ (39,929)	\$ (114,645)	\$ (106,401)	\$ (394,488)	\$ (260,760)
Debt/Asset Ratio						
Baseline	0.35	0.39	0.40	0.30	0.45	0.39
CAFO	0.65	0.76	0.67	0.57	0.67	0.56
Change	0.30	0.37	0.28	0.26	0.23	0.17
Rate of Return on Equity						
Baseline	0.04	0.08	0.05	0.07	0.09	0.09
CAFO	-0.08	0.73	-0.04	0.01	0.03	0.06
Change	-0.12	0.65	-0.09	-0.06	-0.06	-0.03
P(2010 Net Farm Income < 0)						
Baseline	0.71	0.68	0.68	0.62	0.65	0.62
CAFO	0.86	0.84	0.79	0.72	0.72	0.67

Cattle Feedlots

Costs used in this study for the proposed CAFO regulations for cattle feedlots were gathered from EPA's cost estimates. Table 7 shows the year by year costs for the proposed new CAFO regulations. These cost estimates did not result in the same level of stress found in the swine results. These costs did cause more adverse effects for small operations than their large counterparts, as they are unable to spread these additional costs across as many units of production.

Table 8 provides a summary of the financial implications on three cattle feedlots. As they pay the additional CAFO costs, the 500 and 5,000 head Midwest feedlots see net farm income fall below baseline levels. However, the opposite occurs for the 30,000 head Southern Plains operation, where net farm income rises on average under the scenario. The rise in fed cattle prices and the decline in feeder cattle prices more than offsets the additional CAFO costs. In addition, while not assumed here, there will be cases in which a particular operation will already be in compliance with the proposed CAFO regulations. In that case, it is clear that profitability will increase for that operation as the reduction in aggregate production will result in a higher output price with no additional costs.

Table 7. CAFO Costs for Feedlots

	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg.
Midwest 500 Head	(Thousand Dollars)									
Annual Costs	4.1	3.5	3.5	4.1	3.5	3.5	4.1	3.5	3.5	3.7
Down payment on Loan	19.9	-	-	-	-	-	-	-	-	2.2
Principal Payment on Loan	2.1	2.2	2.4	2.6	2.8	3.0	3.3	3.5	3.8	2.9
Interest Payment on Loan	2.4	2.2	2.0	1.9	1.6	1.4	1.2	0.9	0.6	1.6
Total	28.5	7.9	7.9	8.5	7.9	7.9	8.5	7.9	7.9	10.4
Midwest 5000 Head										
Annual Costs	15.8	15.2	15.2	15.8	15.2	15.2	15.8	15.2	15.2	15.4
Down payment on Loan	123.8	-	-	-	-	-	-	-	-	13.8
Principal Payment on Loan	12.8	13.8	15.0	16.1	17.4	18.8	20.3	22.0	23.7	17.8
Interest Payment on Loan	14.9	13.8	12.7	11.5	10.2	8.8	7.3	5.7	3.9	9.9
Total	167.3	42.9	42.9	43.5	42.9	42.9	43.5	42.9	42.9	56.8
Southern Plains 30,000 Head										
Annual Costs	16.7	16.1	16.1	16.7	16.1	16.1	16.7	16.1	16.1	16.3
Down payment on Loan	192.8	-	-	-	-	-	-	-	-	21.4
Principal Payment on Loan	20.0	21.6	23.3	25.1	27.2	29.3	31.7	34.2	37.0	27.7
Interest Payment on Loan	23.1	21.5	19.8	18.0	15.9	13.8	11.4	8.9	6.1	15.4
Total	252.6	59.2	59.2	59.8	59.2	59.2	59.8	59.2	59.2	80.8

Table 8. 2003-2011 Average Values for Feedlot Operations

	500 Head Feedlot	5000 Head Feedlot	30,000 Head Feedlot
	Midwest	Midwest	Southern Plains
Net Cash Income			
Baseline	\$ 20,780	\$ 98,279	\$ 721,838
CAFO	\$ 15,736	\$ 82,964	\$ 846,983
Change	\$ (5,044)	\$ (15,315)	\$ 125,145
Net Farm Income			
Baseline	\$ 16,631	\$ 60,229	\$ 524,413
CAFO	\$ 9,471	\$ 31,761	\$ 629,072
Change	\$ (7,160)	\$ (28,468)	\$ 104,660
Ending Cash Balance			
Baseline	\$ 8,175	\$ 18,625	\$ 588,667
CAFO	\$ (4,045)	\$ (34,906)	\$ 644,898
Change	\$ (12,220)	\$ (53,531)	\$ 56,231
Real Net Worth (1982 \$)			
Baseline	\$ 98,637	\$ 642,191	\$ 4,510,930
CAFO	\$ 83,013	\$ 579,643	\$ 4,683,770
Change	\$ (15,624)	\$ (62,547)	\$ 172,840
Debt/Asset Ratio			
Baseline	0.62	0.73	0.69
CAFO	0.72	0.78	0.68
Change	0.09	0.05	-0.01
Rate of Return on Equity			
Baseline	0.20	0.14	0.10
CAFO	0.19	0.13	0.12
Change	-0.01	-0.01	0.01
P(2010 Net Farm Income < 0)			
Baseline	0.38	0.47	0.43
CAFO	0.44	0.50	0.42

Dairy

Table 9 provides the CAFO costs imposed on each of the six dairy operations that are a part of this study. Similar to the previous two commodities, Figure 7 shows that the proposed CAFO regulations have a greater effect on the small dairies in this study. Costs on the small farms increase in 2005 by over \$0.20 per hundredweight, yet milk prices rise by only \$0.05 per hundredweight in 2005.

Table 10 provides a summary of the impact of the proposed CAFO regulations on the six dairy operations. All six operations see a decline in net farm income on average over the period (year-by-year detail on these operations can be found in Appendix 3). Debt/asset ratios rise by 0.03 to 0.07 on average over the 2003 to 2011 period.

Again, the stochastic results affirm that small farms are more adversely affected under the proposed CAFO regulations. The probability of net farm income becoming negative increases by 13 percentage points on the 250 head operation, yet it rises by only 2 to 3 percentage points on the 500 and 1,000 head dairies.

Figure 7. Change in per cwt 2005 Costs for the Model Dairy Operations

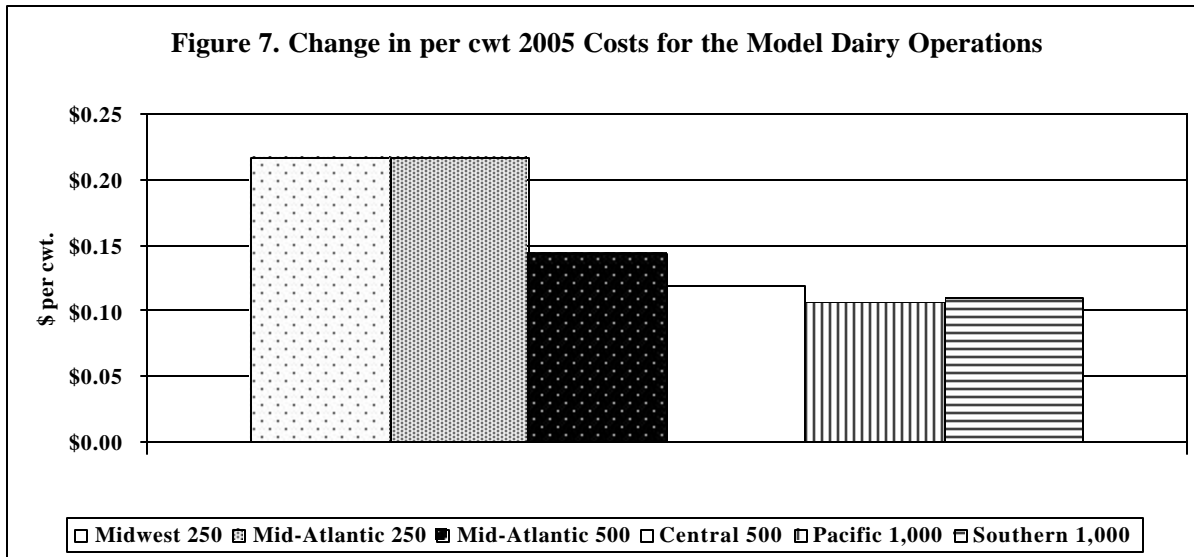


Table 9. CAFO Costs for Dairy Operations

	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg.
(Thousand Dollars)										
Mid-Atlantic 250 Cows										
Annual Costs	5.9	5.3	5.3	5.9	5.3	5.3	5.9	5.3	5.3	5.5
Down payment on Loan	34.0	-	-	-	-	-	-	-	-	3.8
Principal Payment on Loan	3.5	3.8	4.1	4.4	4.8	5.2	5.6	6.0	6.5	4.9
Interest Payment on Loan	4.1	3.8	3.5	3.2	2.8	2.4	2.0	1.6	1.1	2.7
Total	47.5	12.9	12.9	13.5	12.9	12.9	13.5	12.9	12.9	16.9
Midwest 250 Cows										
Annual Costs	5.9	5.3	5.3	5.9	5.3	5.3	5.9	5.3	5.3	5.5
Down payment on Loan	34.0	-	-	-	-	-	-	-	-	3.8
Principal Payment on Loan	3.5	3.8	4.1	4.4	4.8	5.2	5.6	6.0	6.5	4.9
Interest Payment on Loan	4.1	3.8	3.5	3.2	2.8	2.4	2.0	1.6	1.1	2.7
Total	47.5	12.9	12.9	13.5	12.9	12.9	13.5	12.9	12.9	16.9
Central 500 Cows										
Annual Costs	6.0	5.4	5.4	6.0	5.4	5.4	6.0	5.4	5.4	5.6
Down payment on Loan	37.7	-	-	-	-	-	-	-	-	4.2
Principal Payment on Loan	3.9	4.2	4.5	4.9	5.3	5.7	6.2	6.7	7.2	5.4
Interest Payment on Loan	4.5	4.2	3.9	3.5	3.1	2.7	2.2	1.7	1.2	3.0
Total	52.1	13.8	13.8	14.4	13.8	13.8	14.4	13.8	13.8	18.2
Mid-Atlantic 500 Cows										
Annual Costs	7.9	7.3	7.3	7.9	7.3	7.3	7.9	7.3	7.3	7.5
Down payment on Loan	50.3	-	-	-	-	-	-	-	-	5.6
Principal Payment on Loan	5.2	5.6	6.1	6.6	7.1	7.6	8.3	8.9	9.6	7.2
Interest Payment on Loan	6.0	5.6	5.2	4.7	4.2	3.6	3.0	2.3	1.6	4.0
Total	69.4	18.5	18.5	19.1	18.5	18.5	19.1	18.5	18.5	24.3
Pacific 1000 Cows										
Annual Costs	10.7	10.1	10.1	10.7	10.1	10.1	10.7	10.1	10.1	10.3
Down payment on Loan	86.9	-	-	-	-	-	-	-	-	9.7
Principal Payment on Loan	9.0	9.7	10.5	11.3	12.2	13.2	14.3	15.4	16.7	12.5
Interest Payment on Loan	10.4	9.7	8.9	8.1	7.2	6.2	5.1	4.0	2.8	6.9
Total	117.0	29.5	29.5	30.1	29.5	29.5	30.1	29.5	29.5	39.4
Southern 1000 Cows										
Annual Costs	10.7	10.1	10.1	10.7	10.1	10.1	10.7	10.1	10.1	10.3
Down payment on Loan	86.9	-	-	-	-	-	-	-	-	9.7
Principal Payment on Loan	9.0	9.7	10.5	11.3	12.2	13.2	14.3	15.4	16.7	12.5
Interest Payment on Loan	10.4	9.7	8.9	8.1	7.2	6.2	5.1	4.0	2.8	6.9
Total	117.0	29.5	29.5	30.1	29.5	29.5	30.1	29.5	29.5	39.4

Table 10. 2003-2011 Average Values for Dairy Operations

	250 Cow Operations		500 Cow Operations		1000 Cow Operations	
	Mid-Atlantic	Midwest	Central	Mid-Atlantic	Pacific	Southern
Net Cash Income						
Baseline	\$ 91,927	\$ 91,832	\$ 214,390	\$ 255,702	\$ 598,027	\$ 513,579
CAFO	\$ 82,548	\$ 82,452	\$ 207,917	\$ 246,460	\$ 587,648	\$ 501,665
Change	\$ (9,378)	\$ (9,380)	\$ (6,473)	\$ (9,242)	\$ (10,379)	\$ (11,914)
Net Farm Income						
Baseline	\$ 46,218	\$ 46,124	\$ 120,140	\$ 161,452	\$ 408,360	\$ 323,913
CAFO	\$ 33,232	\$ 33,135	\$ 109,665	\$ 146,870	\$ 388,748	\$ 302,765
Change	\$ (12,986)	\$ (12,989)	\$ (10,475)	\$ (14,583)	\$ (19,613)	\$ (21,148)
Ending Cash Balance						
Baseline	\$ 31,653	\$ 31,555	\$ 53,200	\$ 104,441	\$ 270,018	\$ 164,282
CAFO	\$ 12,200	\$ 12,114	\$ 36,679	\$ 72,188	\$ 221,954	\$ 119,461
Change	\$ (19,453)	\$ (19,441)	\$ (16,520)	\$ (32,253)	\$ (48,065)	\$ (44,821)
Real Net Worth (1982 \$)						
Baseline	\$ 464,586	\$ 464,405	\$ 810,565	\$ 928,175	\$ 1,887,841	\$ 1,668,350
CAFO	\$ 437,102	\$ 436,917	\$ 789,142	\$ 899,817	\$ 1,850,610	\$ 1,628,047
Change	\$ (27,484)	\$ (27,488)	\$ (21,424)	\$ (28,358)	\$ (37,230)	\$ (40,303)
Debt/Asset Ratio						
Baseline	0.36	0.36	0.42	0.34	0.33	0.39
CAFO	0.43	0.43	0.45	0.38	0.36	0.43
Change	0.07	0.07	0.03	0.04	0.03	0.03
Rate of Return on Equity						
Baseline	0.08	0.08	0.14	0.15	0.18	0.17
CAFO	0.07	0.07	0.13	0.14	0.18	0.16
Change	-0.02	-0.02	-0.01	-0.01	0.00	-0.01
P(2010 Net Farm Income < 0)						
Baseline	0.28	0.28	0.23	0.13	0.06	0.13
CAFO	0.35	0.35	0.25	0.16	0.08	0.16

SUMMARY

In summary, there are several areas of concern associated with EPA's analysis of the implementation of the proposed regulation. These range from the way in which they tracked the cost components to their basic approach related to the financial viability of the respective operations. Specifics associated with these particular areas are addressed in the paper.

At the sector level, the analysis is largely in agreement with EPA's own analysis. The added costs associated with regulatory compliance will, eventually, be reflected in higher prices in the respective sector. What is important to understand however, is how those higher prices are realized. Higher prices at the retail level only derive from changes in the supply and utilization of the respective commodity and reduced supplies in these sectors come primarily from reduced farm numbers. To put it in one sentence, application of the proposed regulations will lead to a reduction of farm numbers. The farm-level analysis discussed elsewhere suggests, in general, that the smaller producers will be the ones faced with the greatest financial stress.

One of the primary foci of this report however, is to provide the EPA with an alternative methodology for determining the financial impacts of the proposed CAFO regulations on the livestock industry. It is suggested that future analyses recognize that production decisions are typically made on an enterprise and not a whole-farm basis. As such, it is important to understand the economic implications given hog operation revenues, for example, and not those associated with combined crop and livestock receipts. If one portion of the farming operation is not profitable, producers will more than likely abandon that particular enterprise and shift to more profitable activities. In short, if producing hogs costs too much, an operation with a large land base will likely give up hog production and focus on crops.

This enterprise-based approach to examining the financial implication of the additional costs of regulatory compliance has been accepted by many industry experts over the farm-level analysis performed by EPA. Due to time constraints, this report details application of the enterprise approach on a limited number of production systems. However, the same methodology can easily be extended to handle a broader cross-section of operations.

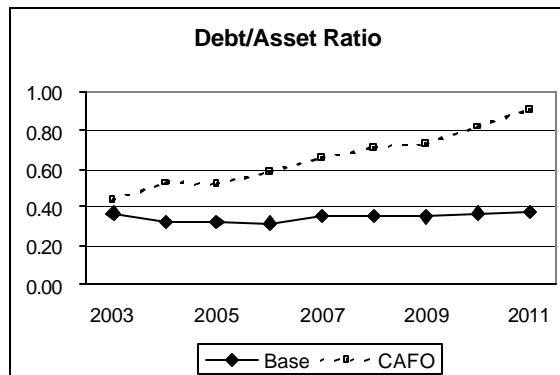
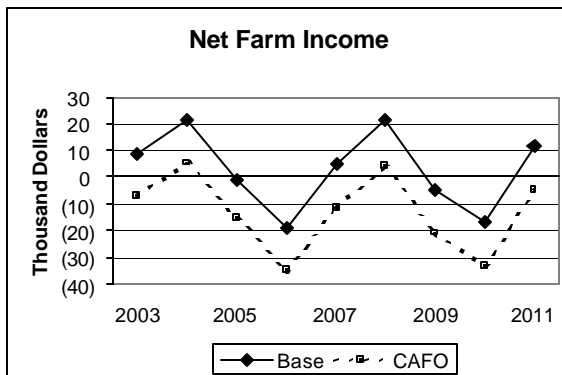
The proposed CAFO regulations are complex. It takes careful examination of the proposed regulations to determine the effect on a particular operation. Therefore, the generalizations reached in this study may not be reflective of the impact any given operation will face. The current environmental practices and financial position of the operation will certainly influence the effect of the proposed regulations.

In closing, the staff at EPA should again be complemented for their work in ensuring that the analysts involved in this study understood the EPA analytical effort. Without their help, this study would have been virtually impossible.

APPENDIX 1. SWINE RESULTS

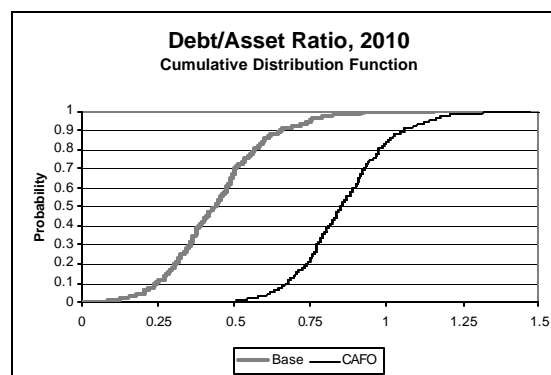
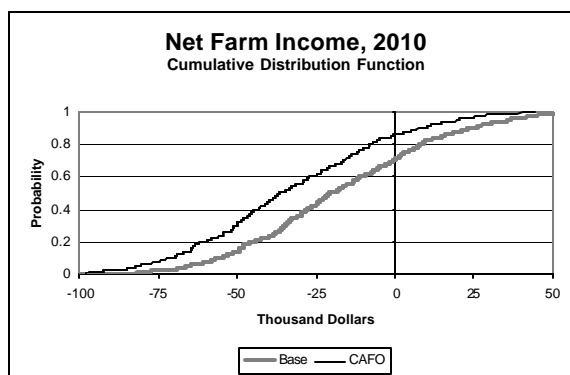
Appendix Table 1.1 Mid-Atlantic 150 Sow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Down payment on Loan	-	38.1	-	-	-	-	-	-	-	-	4.2
Principal Payment on Loan	-	3.8	4.1	4.5	4.9	5.3	5.8	6.3	6.9	7.5	5.4
Interest Payment on Loan	-	5.1	4.8	4.4	4.0	3.6	3.1	2.6	2.0	1.4	3.5
Total	-	52.1	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	18.3
Total Receipts											
Base	229.1	253.9	269.8	248.8	232.1	261.7	281.1	254.7	243.3	277.2	258.1
CAFO	229.1	254.7	272.8	253.6	237.1	266.5	285.9	259.9	248.8	282.8	262.4
Change	-	0.8	3.0	4.8	5.0	4.8	4.8	5.2	5.5	5.5	4.4
Total Expenses											
Base	229.6	232.5	235.0	236.7	238.1	243.9	246.9	246.5	246.9	252.1	242.1
CAFO	229.6	242.7	248.6	250.3	253.0	259.3	262.8	262.0	263.0	268.9	256.7
Change	-	10.3	13.6	13.6	14.9	15.4	15.9	15.5	16.1	16.8	14.7
Net Cash Income											
Base	(0.5)	21.4	34.8	12.1	(6.0)	17.9	34.2	8.2	(3.6)	25.1	16.0
CAFO	(0.5)	11.9	24.2	3.3	(15.9)	7.2	23.1	(2.1)	(14.2)	13.8	5.7
Change	-	(9.5)	(10.6)	(8.8)	(10.0)	(10.7)	(11.1)	(10.3)	(10.6)	(11.3)	(10.3)
Net Farm Income											
Base	(13.6)	8.3	21.7	(1.0)	(19.0)	4.8	21.1	(4.9)	(16.7)	12.0	2.9
CAFO	(13.6)	(6.9)	5.4	(15.5)	(34.7)	(11.6)	4.3	(20.9)	(33.0)	(5.0)	(13.1)
Change	-	(15.2)	(16.3)	(14.5)	(15.7)	(16.4)	(16.8)	(16.0)	(16.3)	(17.0)	(16.0)
Ending Cash Balance											
Base	(2.2)	3.3	12.5	(10.5)	(29.4)	(7.1)	13.6	6.4	(4.7)	11.8	(0.5)
CAFO	(2.2)	(46.7)	1.6	(34.6)	(44.2)	(23.1)	3.4	(17.6)	(28.6)	(1.4)	(21.2)
Change	-	(49.9)	(10.9)	(24.1)	(14.8)	(16.0)	(10.2)	(24.0)	(23.9)	(13.3)	(20.8)
Real Net Worth (1982 \$)											
Base	140.7	142.9	151.3	152.5	142.7	130.1	131.6	118.9	104.4	105.1	131.1
CAFO	140.7	164.1	130.8	135.6	108.4	85.8	70.3	58.4	36.5	16.5	89.6
Change	-	21.2	(20.4)	(17.0)	(34.3)	(44.4)	(61.3)	(60.5)	(67.9)	(88.5)	(41.5)
Debt/Asset Ratio											
Base	0.40	0.37	0.33	0.32	0.32	0.36	0.36	0.35	0.37	0.37	0.35
CAFO	0.40	0.44	0.53	0.52	0.58	0.65	0.71	0.73	0.82	0.91	0.65
Change	0.00	0.06	0.20	0.19	0.26	0.30	0.35	0.38	0.45	0.54	0.30
Rate of Return on Equity											
Base	-0.04	0.07	0.13	0.02	-0.07	0.05	0.14	0.00	-0.07	0.10	0.04
CAFO	-0.04	-0.01	0.05	-0.06	-0.17	-0.05	0.08	-0.16	-0.38	0.00	-0.08
Change	0.00	-0.08	-0.08	-0.07	-0.10	-0.10	-0.05	-0.16	-0.32	-0.10	-0.12



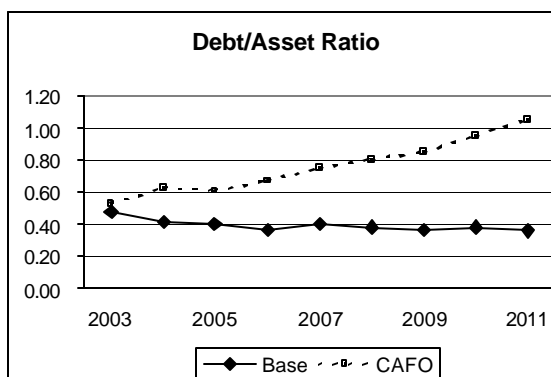
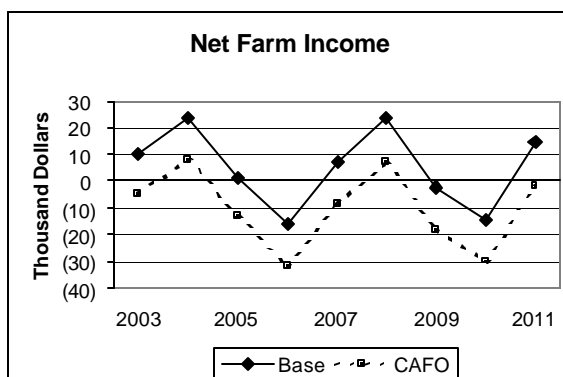
Appendix Table 1.2 Mid-Atlantic 150 Sow Operation, Distributions for 2010

	2010	----- Percentiles -----								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	243.3	207.7	221.7	229.2	236.4	243.9	249.7	256.9	265.5	279.0
CAFO	248.8	213.2	227.2	234.7	241.9	249.4	255.2	262.4	271.1	284.5
Change	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Total Expenses										
Base	246.9	227.6	234.2	238.9	242.3	246.7	250.8	255.3	262.3	270.8
CAFO	263.0	243.5	249.9	254.0	258.0	262.2	266.3	271.1	278.0	286.6
Change	16.1	15.9	15.7	15.1	15.8	15.4	15.6	15.8	15.7	15.9
Net Cash Income										
Base	(3.6)	(43.6)	(32.2)	(22.2)	(15.4)	(8.1)	1.9	12.3	20.9	36.8
CAFO	(14.2)	(53.2)	(41.9)	(32.1)	(25.6)	(17.9)	(8.1)	2.1	11.0	26.3
Change	(10.6)	(9.6)	(9.7)	(9.9)	(10.1)	(9.8)	(10.0)	(10.2)	(10.0)	(10.4)
Net Farm Income										
Base	(16.7)	(56.7)	(45.3)	(35.3)	(28.5)	(21.1)	(11.1)	(0.8)	7.9	23.7
CAFO	(33.0)	(72.0)	(60.7)	(50.9)	(44.4)	(36.7)	(26.9)	(16.7)	(7.8)	7.6
Change	(16.3)	(15.4)	(15.4)	(15.6)	(15.8)	(15.5)	(15.8)	(15.9)	(15.7)	(16.2)
Ending Cash Balance										
Base	(4.7)	(37.3)	(27.1)	(19.6)	(11.5)	(1.8)	4.4	12.6	20.4	28.6
CAFO	(28.6)	(63.2)	(51.1)	(42.6)	(36.4)	(27.1)	(17.1)	(5.1)	2.1	10.9
Change	(23.9)	(26.0)	(24.0)	(23.1)	(24.9)	(25.3)	(21.5)	(17.8)	(18.3)	(17.8)
Real Net Worth (1982 \$)										
Base	104.4	56.9	73.7	83.5	90.2	97.3	104.0	110.8	118.7	131.9
CAFO	36.5	(11.4)	4.9	14.7	21.1	29.7	37.4	44.6	52.3	64.8
Change	(67.9)	(68.3)	(68.7)	(68.8)	(69.1)	(67.6)	(66.5)	(66.2)	(66.4)	(67.1)
Debt/Asset Ratio										
Base	0.37	0.24	0.31	0.35	0.38	0.44	0.47	0.51	0.57	0.65
CAFO	0.82	0.67	0.74	0.77	0.81	0.85	0.90	0.93	0.97	1.06
Change	0.45	0.43	0.43	0.42	0.43	0.42	0.42	0.42	0.41	0.40
Rate of Return on Equity										
Base	-0.07	-0.38	-0.27	-0.19	-0.15	-0.10	-0.04	0.03	0.08	0.18
CAFO	-0.38	-1.55	-0.87	-0.67	-0.53	-0.37	-0.23	-0.10	0.10	0.47
Change	-0.32	-1.17	-0.61	-0.48	-0.38	-0.28	-0.19	-0.13	0.02	0.29



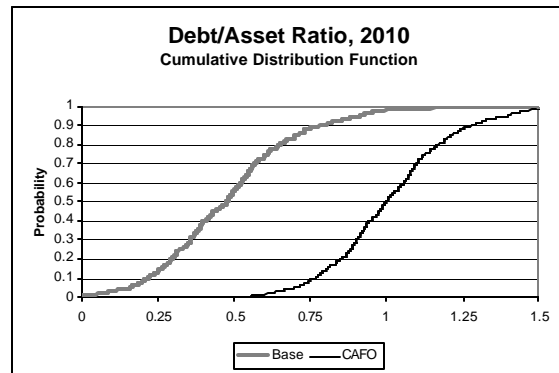
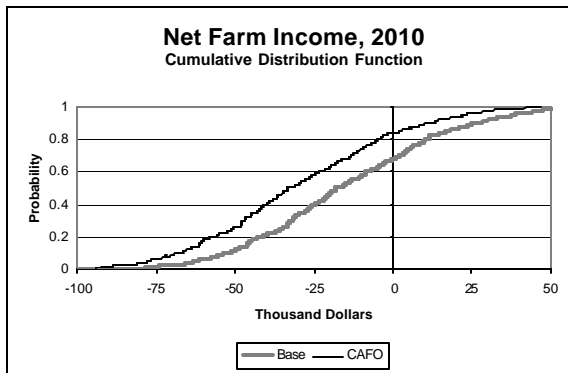
Appendix Table 1.3 Midwest 150 Sow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Down payment on Loan	-	37.0	-	-	-	-	-	-	-	-	4.1
Principal Payment on Loan	-	3.6	4.0	4.3	4.7	5.2	5.6	6.1	6.7	7.3	5.3
Interest Payment on Loan	-	5.0	4.7	4.3	3.9	3.5	3.0	2.5	2.0	1.4	3.4
Total	-	50.7	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	17.9
Total Receipts											
Base	229.4	254.0	269.8	249.0	232.4	261.9	281.1	254.9	243.5	277.3	258.2
CAFO	229.4	254.8	272.8	253.7	237.4	266.6	285.9	260.0	249.0	282.8	262.6
Change	-	0.8	3.0	4.8	4.9	4.7	4.8	5.2	5.5	5.5	4.3
Total Expenses											
Base	226.9	229.5	231.9	233.6	234.6	240.3	243.2	243.0	243.5	248.5	238.7
CAFO	226.9	239.6	245.0	246.7	249.2	255.4	258.8	258.2	258.8	264.6	252.9
Change	-	10.1	13.1	13.1	14.6	15.1	15.6	15.1	15.3	16.1	14.2
Net Cash Income											
Base	2.5	24.5	37.9	15.4	(2.2)	21.6	37.9	11.8	0.1	28.7	19.5
CAFO	2.5	15.2	27.8	7.0	(11.8)	11.2	27.1	1.9	(9.7)	18.2	9.6
Change	-	(9.3)	(10.1)	(8.4)	(9.7)	(10.4)	(10.8)	(10.0)	(9.8)	(10.6)	(9.9)
Net Farm Income											
Base	(11.7)	10.3	23.7	1.1	(16.4)	7.3	23.6	(2.4)	(14.1)	14.5	5.3
CAFO	(11.7)	(4.6)	8.0	(12.7)	(31.6)	(8.6)	7.3	(17.9)	(29.5)	(1.6)	(10.1)
Change	-	(14.9)	(15.6)	(13.9)	(15.2)	(15.9)	(16.3)	(15.5)	(15.4)	(16.1)	(15.4)
Ending Cash Balance											
Base	2.3	6.8	16.6	(3.5)	(26.0)	(3.9)	16.6	12.1	4.2	18.1	4.6
CAFO	2.3	(40.2)	4.0	(28.8)	(40.4)	(19.5)	7.2	(8.3)	(22.5)	3.3	(16.1)
Change	-	(47.0)	(12.6)	(25.3)	(14.4)	(15.5)	(9.5)	(20.4)	(26.7)	(14.8)	(20.7)
Real Net Worth (1982 \$)											
Base	87.4	93.5	104.1	104.1	100.1	90.8	96.3	85.8	71.5	77.2	91.5
CAFO	87.4	111.5	85.3	89.5	67.4	48.3	37.6	23.9	7.6	(6.9)	51.6
Change	-	17.9	(18.8)	(14.6)	(32.8)	(42.5)	(58.7)	(61.9)	(64.0)	(84.1)	(39.9)
Debt/Asset Ratio											
Base	0.53	0.48	0.41	0.40	0.36	0.40	0.38	0.37	0.39	0.35	0.39
CAFO	0.53	0.53	0.62	0.61	0.67	0.75	0.80	0.85	0.95	1.05	0.76
Change	0.00	0.05	0.21	0.21	0.31	0.36	0.42	0.49	0.56	0.70	0.37
Rate of Return on Equity											
Base	-0.05	0.12	0.21	0.04	-0.08	0.09	0.21	0.02	-0.08	0.17	0.08
CAFO	-0.05	0.00	0.10	-0.06	-0.24	-0.04	0.19	-0.28	-1.02	7.88	0.73
Change	0.00	-0.12	-0.11	-0.11	-0.16	-0.13	-0.01	-0.30	-0.94	7.71	0.65



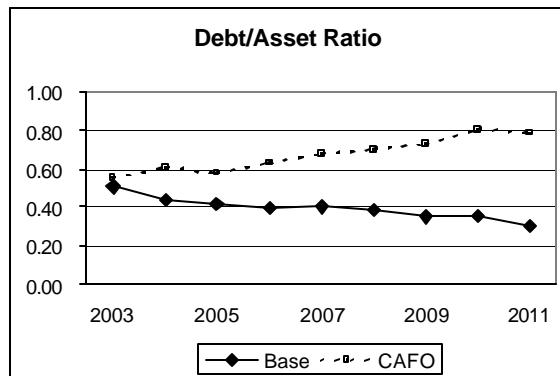
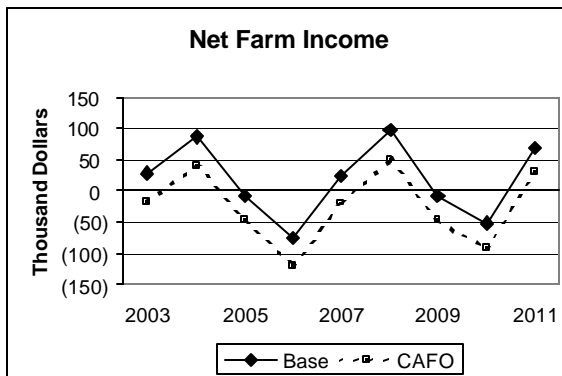
Appendix Table 1.4 Midwest 150 Sow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	243.5	208.3	222.1	229.6	236.7	244.2	249.9	257.1	265.7	279.0
CAFO	249.0	213.7	227.6	235.0	242.1	249.6	255.4	262.5	271.1	284.5
Change	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Total Expenses										
Base	243.5	224.1	230.7	235.3	238.8	243.3	247.3	251.8	258.8	267.1
CAFO	258.8	239.6	246.0	250.3	254.1	258.2	262.2	266.9	273.9	282.4
Change	15.3	15.5	15.3	15.0	15.3	14.9	14.9	15.1	15.1	15.4
Net Cash Income										
Base	0.1	(39.6)	(28.3)	(18.4)	(11.4)	(4.2)	5.8	15.8	24.4	40.4
CAFO	(9.7)	(48.6)	(37.6)	(27.7)	(21.3)	(13.8)	(4.0)	6.3	15.1	30.5
Change	(9.8)	(9.0)	(9.3)	(9.3)	(9.9)	(9.6)	(9.8)	(9.5)	(9.3)	(9.9)
Net Farm Income										
Base	(14.1)	(53.8)	(42.5)	(32.6)	(25.6)	(18.4)	(8.4)	1.6	10.2	26.2
CAFO	(29.5)	(68.4)	(57.3)	(47.5)	(41.1)	(33.5)	(23.8)	(13.4)	(4.7)	10.7
Change	(15.4)	(14.5)	(14.8)	(14.9)	(15.5)	(15.1)	(15.3)	(15.0)	(14.9)	(15.5)
Ending Cash Balance										
Base	4.2	(28.5)	(18.1)	(10.9)	(2.2)	4.7	10.9	18.9	26.6	35.2
CAFO	(22.5)	(55.1)	(42.9)	(35.3)	(29.2)	(19.5)	(9.7)	0.8	8.3	16.8
Change	(26.7)	(26.7)	(24.8)	(24.4)	(26.9)	(24.2)	(20.6)	(18.2)	(18.3)	(18.3)
Real Net Worth (1982 \$)										
Base	71.5	23.8	41.4	51.8	57.3	64.4	71.1	78.1	86.4	99.6
CAFO	7.6	(40.2)	(24.9)	(14.6)	(8.6)	0.1	7.5	14.2	22.0	34.6
Change	(64.0)	(63.9)	(66.3)	(66.4)	(65.9)	(64.3)	(63.7)	(64.0)	(64.4)	(65.1)
Debt/Asset Ratio										
Base	0.39	0.22	0.29	0.35	0.40	0.47	0.52	0.57	0.65	0.79
CAFO	0.95	0.77	0.85	0.90	0.95	1.00	1.06	1.10	1.17	1.28
Change	0.56	0.55	0.56	0.55	0.55	0.53	0.54	0.53	0.52	0.49
Rate of Return on Equity										
Base	-0.08	-0.59	-0.37	-0.26	-0.18	-0.11	-0.02	0.06	0.14	0.30
CAFO	-1.02	-2.82	-1.49	-0.98	-0.52	-0.23	0.03	0.36	1.00	2.65
Change	-0.94	-2.23	-1.12	-0.72	-0.34	-0.11	0.05	0.30	0.86	2.35



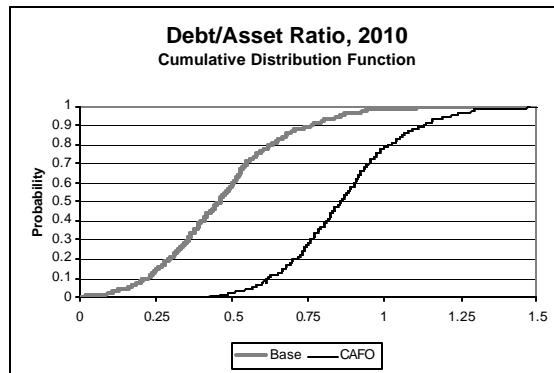
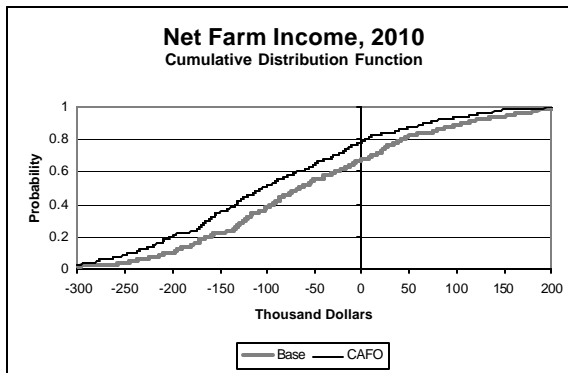
Appendix Table 1.5 Mid-Atlantic 500 Sow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
CAFO Costs (Thousand Dollars)											
Annual Costs	-	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Down payment on Loan	-	134.9	-	-	-	-	-	-	-	-	15.0
Principal Payment on Loan	-	13.3	14.5	15.8	17.2	18.8	20.5	22.3	24.3	26.5	19.3
Interest Payment on Loan	-	18.2	17.0	15.7	14.3	12.7	11.0	9.2	7.2	5.0	12.3
Total	-	176.6	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	56.7
Total Receipts											
Base	917.0	1,015.7	1,079.7	995.9	929.1	1,047.4	1,124.8	1,019.7	974.2	1,109.7	1,032.9
CAFO	917.0	1,018.9	1,091.9	1,015.2	949.2	1,066.5	1,144.3	1,040.6	996.4	1,131.9	1,050.5
Change	-	3.2	12.1	19.3	20.0	19.2	19.5	20.9	22.2	22.3	17.6
Total Expenses											
Base	895.6	902.5	908.4	917.4	920.2	937.3	943.5	941.0	940.5	956.7	929.7
CAFO	895.6	930.9	946.3	955.3	962.4	980.4	987.4	983.2	981.4	996.6	969.3
Change	-	28.3	37.9	37.9	42.3	43.2	43.9	42.2	40.9	39.9	39.6
Net Cash Income											
Base	21.4	113.2	171.3	78.5	9.0	110.1	181.4	78.6	33.7	152.9	103.2
CAFO	21.4	88.0	145.5	59.9	(13.3)	86.1	156.9	57.4	15.0	135.4	81.2
Change	-	(25.2)	(25.8)	(18.6)	(22.2)	(24.0)	(24.4)	(21.2)	(18.7)	(17.6)	(22.0)
Net Farm Income											
Base	(64.5)	27.3	85.5	(7.3)	(76.9)	24.2	95.5	(7.2)	(52.2)	67.1	17.3
CAFO	(64.5)	(18.1)	39.4	(46.2)	(119.3)	(20.0)	50.8	(48.7)	(91.1)	29.3	(24.9)
Change	-	(45.4)	(46.0)	(38.9)	(42.5)	(44.2)	(44.7)	(41.5)	(39.0)	(37.8)	(42.2)
Ending Cash Balance											
Base	12.7	31.3	72.1	(52.0)	(115.3)	(25.1)	82.7	78.9	69.3	138.9	31.2
CAFO	12.7	(127.1)	28.9	(129.7)	0.0	(67.0)	58.1	31.2	5.8	69.1	(14.5)
Change	-	(158.4)	(43.2)	(77.7)	115.3	(41.9)	(24.6)	(47.7)	(63.5)	(69.8)	(45.7)
Real Net Worth (1982 \$)											
Base	366.7	385.7	425.8	456.9	424.1	386.6	401.4	365.7	312.9	336.6	388.4
CAFO	366.7	446.5	371.3	416.4	327.2	262.5	234.3	179.8	108.5	117.5	273.8
Change	-	60.8	(54.5)	(40.5)	(96.9)	(124.1)	(167.2)	(185.9)	(204.4)	(219.1)	(114.6)
Debt/Asset Ratio											
Base	0.56	0.51	0.43	0.42	0.39	0.40	0.39	0.35	0.36	0.31	0.40
CAFO	0.56	0.55	0.60	0.58	0.63	0.68	0.70	0.73	0.81	0.78	0.67
Change	0.00	0.04	0.17	0.16	0.23	0.27	0.31	0.38	0.45	0.47	0.28
Rate of Return on Equity											
Base	-0.10	0.07	0.17	0.00	-0.11	0.06	0.18	0.00	-0.08	0.15	0.05
CAFO	-0.10	-0.01	0.09	-0.07	-0.21	-0.02	0.17	-0.12	-0.37	0.22	-0.04
Change	0.00	-0.09	-0.08	-0.07	-0.10	-0.08	-0.02	-0.13	-0.29	0.07	-0.09



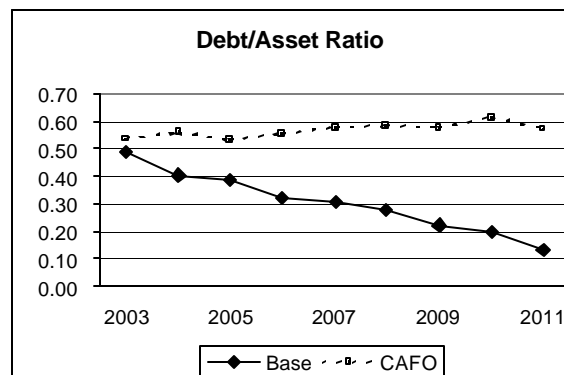
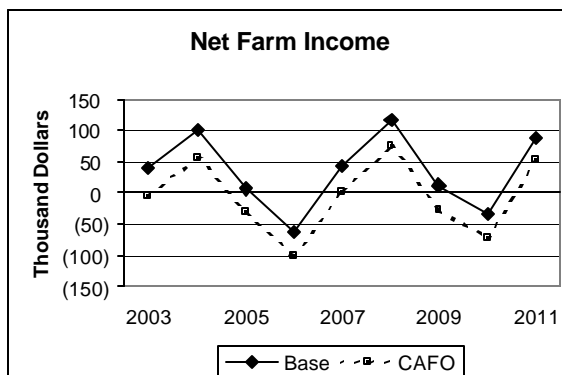
Appendix Table 1.6 Mid-Atlantic 500 Sow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	974.2	832.4	888.6	917.6	947.0	976.2	1,000.5	1,027.8	1,062.5	1,116.2
CAFO	996.4	854.6	910.8	939.7	969.2	998.4	1,022.7	1,050.0	1,084.7	1,138.3
Change	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
Total Expenses										
Base	940.5	870.8	893.9	910.9	923.4	939.6	954.8	971.9	996.3	1,028.0
CAFO	981.4	912.2	935.7	952.1	963.7	980.4	995.5	1,011.4	1,036.2	1,067.4
Change	40.9	41.4	41.8	41.2	40.3	40.8	40.7	39.6	39.9	39.4
Net Cash Income										
Base	33.7	(122.9)	(80.0)	(39.7)	(8.8)	18.9	58.2	96.6	127.6	191.0
CAFO	15.0	(140.3)	(96.9)	(57.8)	(27.3)	(1.0)	40.0	76.5	110.4	172.3
Change	(18.7)	(17.4)	(16.9)	(18.1)	(18.5)	(19.8)	(18.2)	(20.1)	(17.3)	(18.7)
Net Farm Income										
Base	(52.2)	(208.8)	(165.9)	(125.5)	(94.7)	(67.0)	(27.7)	10.8	41.8	105.1
CAFO	(91.1)	(246.4)	(203.0)	(163.9)	(133.4)	(107.0)	(66.1)	(29.6)	4.3	66.2
Change	(39.0)	(37.6)	(37.1)	(38.4)	(38.7)	(40.1)	(38.4)	(40.4)	(37.5)	(38.9)
Ending Cash Balance										
Base	69.3	(53.3)	(14.9)	13.1	35.0	62.2	82.6	113.3	147.1	181.1
CAFO	5.8	(130.1)	(88.5)	(57.8)	(22.7)	9.3	35.2	65.4	94.2	127.6
Change	(63.5)	(76.8)	(73.6)	(70.9)	(57.7)	(53.0)	(47.4)	(47.8)	(52.9)	(53.5)
Real Net Worth (1982 \$)										
Base	312.9	113.3	173.2	210.6	242.4	266.1	286.5	318.9	357.9	405.7
CAFO	108.5	(72.8)	(13.3)	30.4	57.1	83.9	108.2	139.5	174.4	225.2
Change	(204.4)	(186.1)	(186.4)	(180.2)	(185.3)	(182.1)	(178.3)	(179.4)	(183.6)	(180.5)
Debt/Asset Ratio										
Base	0.36	0.22	0.29	0.36	0.40	0.46	0.50	0.55	0.63	0.76
CAFO	0.81	0.62	0.71	0.76	0.81	0.86	0.90	0.95	1.02	1.13
Change	0.45	0.40	0.42	0.40	0.41	0.40	0.40	0.40	0.39	0.37
Rate of Return on Equity										
Base	-0.08	-0.54	-0.37	-0.27	-0.20	-0.12	-0.04	0.04	0.12	0.26
CAFO	-0.37	-1.94	-1.07	-0.71	-0.53	-0.31	-0.12	0.03	0.31	0.90
Change	-0.29	-1.40	-0.70	-0.44	-0.33	-0.18	-0.09	-0.01	0.19	0.64



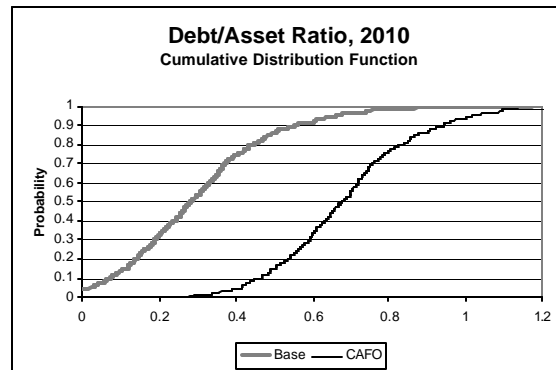
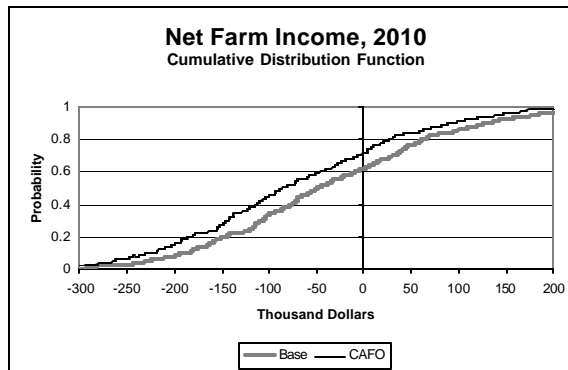
Appendix Table 1.7 Midwest 500 Sow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Down payment on Loan	-	132.7	-	-	-	-	-	-	-	-	14.7
Principal Payment on Loan	-	13.1	14.3	15.6	17.0	18.5	20.2	22.0	24.0	26.1	19.0
Interest Payment on Loan	-	17.9	16.7	15.5	14.0	12.5	10.9	9.0	7.1	4.9	12.1
Total	-	173.7	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	55.8
Total Receipts											
Base	942.8	1,043.3	1,108.5	1,023.0	954.9	1,075.3	1,154.1	1,047.0	1,000.5	1,138.4	1,060.6
CAFO	942.8	1,046.6	1,120.8	1,042.6	975.3	1,094.8	1,173.9	1,068.3	1,023.2	1,161.1	1,078.5
Change	-	3.2	12.3	19.6	20.4	19.5	19.8	21.3	22.6	22.7	18.0
Total Expenses											
Base	904.3	910.4	915.6	923.5	923.7	939.6	944.7	942.4	941.6	957.5	933.2
CAFO	904.3	938.3	951.3	959.6	964.8	981.5	987.0	983.0	980.9	995.7	971.3
Change	-	27.9	35.7	36.1	41.1	41.9	42.3	40.6	39.3	38.2	38.1
Net Cash Income											
Base	38.5	132.9	192.9	99.5	31.2	135.7	209.4	104.6	58.9	181.0	127.3
CAFO	38.5	108.2	169.5	83.0	10.5	113.3	187.0	85.3	42.2	165.5	107.2
Change	-	(24.7)	(23.4)	(16.5)	(20.7)	(22.4)	(22.5)	(19.3)	(16.7)	(15.5)	(20.2)
Net Farm Income											
Base	(54.9)	39.4	99.5	6.0	(62.2)	42.2	116.0	11.1	(34.5)	87.5	33.9
CAFO	(54.9)	(5.2)	56.2	(30.4)	(102.8)	(0.1)	73.6	(28.1)	(71.1)	52.1	(6.2)
Change	-	(44.6)	(43.3)	(36.4)	(40.6)	(42.3)	(42.4)	(39.2)	(36.6)	(35.4)	(40.1)
Ending Cash Balance											
Base	28.0	48.7	91.1	(21.2)	(103.0)	(14.1)	98.6	108.2	107.5	182.0	55.3
CAFO	28.0	(96.9)	37.5	(106.8)	(140.7)	(50.3)	76.0	63.5	47.8	116.5	(5.9)
Change	-	(145.5)	(53.6)	(85.6)	(37.7)	(36.2)	(22.6)	(44.7)	(59.7)	(65.5)	(61.2)
Real Net Worth (1982 \$)											
Base	411.1	435.4	481.9	506.9	497.3	468.8	495.1	466.5	421.0	450.6	469.3
CAFO	411.1	482.2	435.0	478.3	406.5	352.0	340.3	294.0	231.0	246.8	362.9
Change	-	46.8	(46.9)	(28.6)	(90.8)	(116.8)	(154.9)	(172.6)	(190.0)	(203.7)	(106.4)
Debt/Asset Ratio											
Base	0.54	0.49	0.41	0.39	0.32	0.31	0.28	0.22	0.19	0.13	0.30
CAFO	0.54	0.54	0.56	0.53	0.55	0.58	0.58	0.58	0.61	0.57	0.57
Change	0.00	0.05	0.15	0.14	0.23	0.27	0.30	0.35	0.42	0.44	0.26
Rate of Return on Equity											
Base	-0.08	0.09	0.17	0.02	-0.07	0.07	0.18	0.03	-0.04	0.14	0.07
CAFO	-0.08	0.01	0.10	-0.03	-0.15	0.02	0.16	-0.04	-0.15	0.17	0.01
Change	0.00	-0.08	-0.07	-0.05	-0.07	-0.06	-0.01	-0.07	-0.12	0.02	-0.06



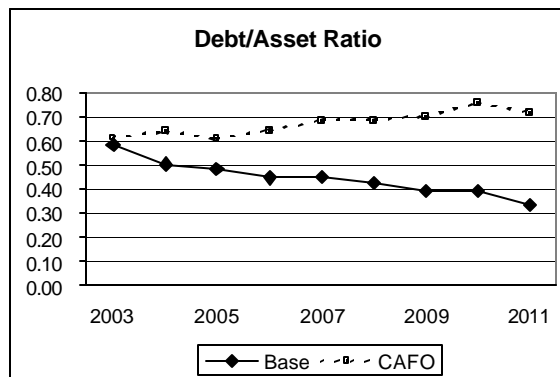
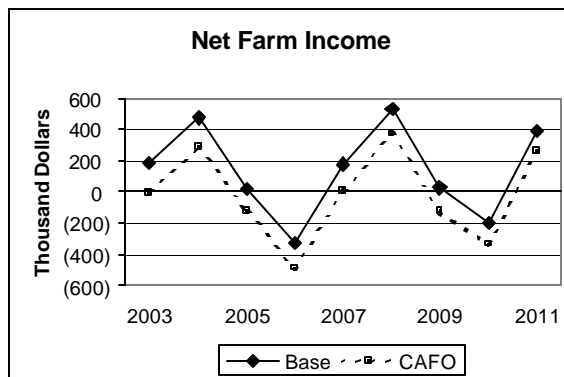
Appendix Table 1.8 Midwest 500 Sow Operation, Distributions for 2010

	2010	----- Percentiles -----								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	1,000.5	856.1	913.4	942.9	972.9	1,002.6	1,027.4	1,055.1	1,090.5	1,145.1
CAFO	1,023.2	878.7	936.0	965.5	995.5	1,025.2	1,050.0	1,077.7	1,113.1	1,167.7
Change	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
Total Expenses										
Base	941.6	870.0	893.7	910.8	923.9	940.1	956.2	973.1	998.0	1,031.6
CAFO	980.9	909.8	932.9	950.5	962.9	979.6	994.7	1,011.9	1,037.4	1,069.6
Change	39.3	39.8	39.3	39.7	39.0	39.5	38.5	38.8	39.4	38.1
Net Cash Income										
Base	58.9	(101.0)	(57.1)	(15.3)	15.4	43.4	83.9	125.1	155.3	220.7
CAFO	42.2	(116.4)	(72.8)	(32.2)	(1.6)	26.4	67.8	107.1	139.3	203.4
Change	(16.7)	(15.4)	(15.6)	(16.8)	(17.0)	(17.0)	(16.1)	(18.0)	(16.1)	(17.3)
Net Farm Income										
Base	(34.5)	(194.5)	(150.6)	(108.8)	(78.1)	(50.0)	(9.6)	31.7	61.9	127.3
CAFO	(71.1)	(229.8)	(186.1)	(145.5)	(115.0)	(87.0)	(45.5)	(6.3)	25.9	90.0
Change	(36.6)	(35.3)	(35.5)	(36.7)	(36.9)	(37.0)	(36.0)	(37.9)	(36.0)	(37.3)
Ending Cash Balance										
Base	107.5	(6.7)	22.1	46.5	69.0	92.0	117.4	146.9	182.4	216.6
CAFO	47.8	(79.2)	(40.1)	(9.5)	16.1	45.1	67.8	98.4	132.1	164.4
Change	(59.7)	(72.6)	(62.2)	(56.0)	(52.9)	(46.9)	(49.5)	(48.5)	(50.3)	(52.2)
Real Net Worth (1982 \$)										
Base	421.0	220.4	276.7	311.2	345.3	370.1	390.2	422.4	460.4	513.3
CAFO	231.0	32.1	94.6	138.8	170.5	192.8	219.8	249.4	288.9	339.9
Change	(190.0)	(188.3)	(182.1)	(172.4)	(174.8)	(177.3)	(170.4)	(173.1)	(171.5)	(173.4)
Debt/Asset Ratio										
Base	0.19	0.07	0.14	0.19	0.24	0.28	0.33	0.37	0.45	0.56
CAFO	0.61	0.46	0.54	0.59	0.63	0.68	0.72	0.76	0.84	0.94
Change	0.42	0.39	0.40	0.40	0.39	0.39	0.39	0.39	0.39	0.39
Rate of Return on Equity										
Base	-0.04	-0.36	-0.25	-0.17	-0.12	-0.06	0.00	0.06	0.12	0.23
CAFO	-0.15	-0.90	-0.54	-0.40	-0.29	-0.20	-0.08	0.02	0.13	0.34
Change	-0.12	-0.53	-0.28	-0.23	-0.17	-0.13	-0.08	-0.04	0.01	0.11



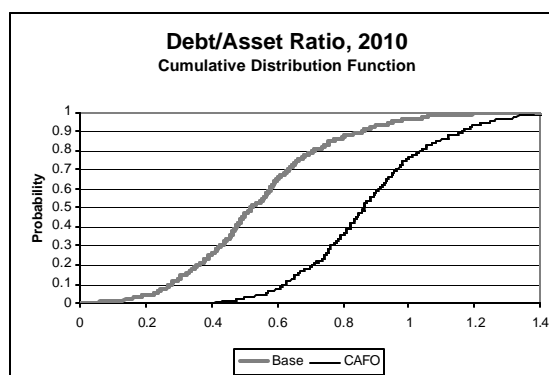
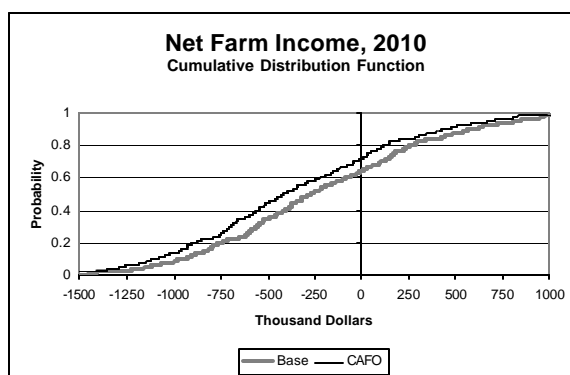
Appendix Table 1.9 Mid-Atlantic 2400 Sow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5
Down payment on Loan	-	576.6	-	-	-	-	-	-	-	-	64.1
Principal Payment on Loan	-	56.9	62.1	67.6	73.7	80.4	87.6	95.5	104.1	113.4	82.4
Interest Payment on Loan	-	77.8	72.7	67.1	61.0	54.4	47.2	39.3	30.7	21.3	52.4
Total	-	753.9	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	241.4
Total Receipts											
Base	4,524.7	5,011.2	5,327.4	4,913.9	4,584.4	5,167.5	5,549.6	5,031.4	4,806.9	5,475.1	5,096.4
CAFO	4,524.7	5,026.9	5,387.1	5,009.0	4,683.3	5,262.2	5,645.8	5,134.8	4,916.5	5,585.1	5,183.4
Change	-	15.7	59.8	95.1	98.8	94.7	96.2	103.4	109.6	110.0	87.0
Total Expenses											
Base	4,383.0	4,415.6	4,444.2	4,487.6	4,497.1	4,577.3	4,606.1	4,596.4	4,594.2	4,672.1	4,543.4
CAFO	4,383.0	4,536.0	4,598.2	4,642.1	4,669.7	4,752.4	4,780.8	4,763.0	4,754.5	4,826.8	4,702.6
Change	-	120.4	154.0	154.5	172.6	175.1	174.7	166.6	160.3	154.7	159.2
Net Cash Income											
Base	141.7	595.6	883.1	426.3	87.3	590.2	943.5	435.0	212.7	802.9	553.0
CAFO	141.7	491.0	788.9	366.9	13.6	509.8	865.0	371.8	162.0	758.2	480.8
Change	-	(104.6)	(94.2)	(59.4)	(73.8)	(80.4)	(78.5)	(63.2)	(50.7)	(44.7)	(72.2)
Net Farm Income											
Base	(270.4)	183.5	471.1	14.3	(324.7)	178.2	531.5	23.0	(199.4)	390.9	140.9
CAFO	(270.4)	(7.6)	290.4	(131.6)	(485.0)	11.3	366.5	(126.8)	(336.6)	259.7	(17.7)
Change	-	(191.1)	(180.7)	(145.9)	(160.3)	(166.9)	(165.0)	(149.7)	(137.2)	(131.2)	(158.7)
Ending Cash Balance											
Base	99.3	193.4	367.4	(177.1)	(507.4)	(88.0)	388.5	415.5	396.4	718.8	189.7
CAFO	99.3	(424.2)	169.9	(501.8)	0.0	(212.9)	318.1	255.1	175.8	485.8	29.5
Change	-	(617.6)	(197.6)	(324.6)	507.4	(124.9)	(70.4)	(160.4)	(220.6)	(233.0)	(160.2)
Real Net Worth (1982 \$)											
Base	1,373.0	1,485.9	1,680.5	1,823.7	1,722.6	1,579.1	1,670.7	1,530.3	1,307.5	1,433.9	1,581.6
CAFO	1,373.0	1,702.2	1,505.3	1,713.2	1,374.7	1,128.3	1,093.8	886.3	598.3	681.7	1,187.1
Change	-	216.3	(175.2)	(110.6)	(347.9)	(450.7)	(576.9)	(644.0)	(709.1)	(752.2)	(394.5)
Debt/Asset Ratio											
Base	0.64	0.58	0.50	0.48	0.45	0.45	0.42	0.39	0.39	0.33	0.45
CAFO	0.64	0.61	0.64	0.61	0.65	0.68	0.69	0.70	0.76	0.72	0.67
Change	0.00	0.03	0.13	0.12	0.20	0.23	0.26	0.31	0.37	0.38	0.23
Rate of Return on Equity											
Base	-0.11	0.12	0.24	0.03	-0.11	0.10	0.24	0.03	-0.07	0.21	0.09
CAFO	-0.11	0.02	0.15	-0.04	-0.20	0.03	0.25	-0.05	-0.25	0.31	0.03
Change	0.00	-0.10	-0.08	-0.06	-0.09	-0.06	0.01	-0.08	-0.18	0.10	-0.06



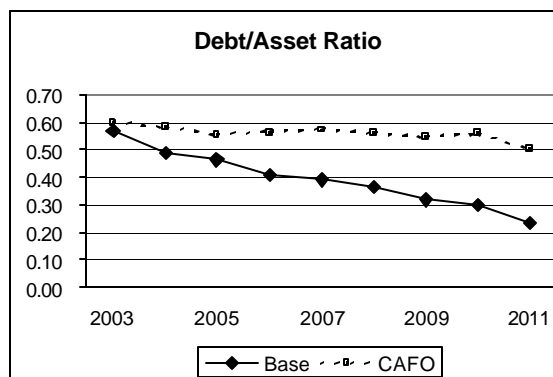
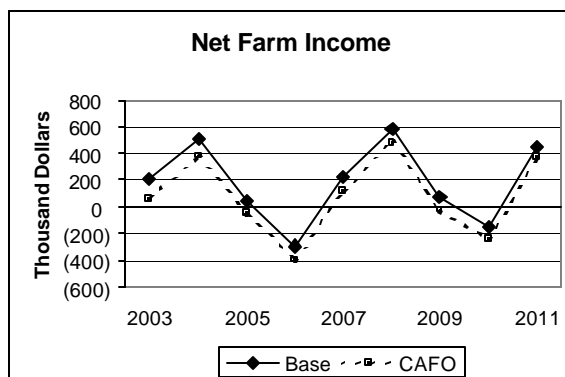
Appendix Table 1.10 Mid-Atlantic 2400 Sow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	4,806.9	4,107.5	4,384.6	4,527.5	4,673.0	4,816.9	4,937.7	5,071.0	5,242.4	5,506.7
CAFO	4,916.5	4,217.0	4,494.2	4,637.0	4,782.5	4,926.5	5,047.3	5,180.5	5,351.9	5,616.2
Change	109.6	109.6	109.6	109.6	109.6	109.6	109.6	109.6	109.6	109.6
Total Expenses										
Base	4,594.2	4,257.3	4,369.1	4,451.5	4,516.4	4,598.3	4,672.2	4,750.6	4,873.9	5,030.3
CAFO	4,754.5	4,420.0	4,532.0	4,618.6	4,677.2	4,759.8	4,829.4	4,913.3	5,033.3	5,192.1
Change	160.3	162.6	162.9	167.1	160.7	161.5	157.2	162.7	159.3	161.7
Net Cash Income										
Base	212.7	(558.9)	(352.1)	(152.5)	(1.4)	134.4	331.5	521.0	668.8	989.2
CAFO	162.0	(613.8)	(402.8)	(205.0)	(53.6)	80.8	278.5	461.1	618.8	932.0
Change	(50.7)	(54.9)	(50.8)	(52.4)	(52.2)	(53.5)	(53.0)	(59.9)	(50.0)	(57.2)
Net Farm Income										
Base	(199.4)	(971.0)	(764.1)	(564.6)	(413.5)	(277.7)	(80.6)	108.9	256.7	577.2
CAFO	(336.6)	(1,112.3)	(901.4)	(703.5)	(552.1)	(417.7)	(220.0)	(37.4)	120.3	433.4
Change	(137.2)	(141.4)	(137.2)	(138.9)	(138.7)	(140.0)	(139.5)	(146.4)	(136.5)	(143.7)
Ending Cash Balance										
Base	396.4	(208.9)	(23.2)	100.9	209.5	324.6	431.4	569.6	725.7	865.7
CAFO	175.8	(496.7)	(290.2)	(103.5)	15.2	141.3	255.7	398.2	543.2	683.3
Change	(220.6)	(287.9)	(267.0)	(204.4)	(194.3)	(183.3)	(175.7)	(171.4)	(182.4)	(182.4)
Real Net Worth (1982 \$)										
Base	1,307.5	281.4	576.6	759.2	884.1	1,008.9	1,106.5	1,236.5	1,412.3	1,637.0
CAFO	598.3	(380.6)	(104.5)	86.2	234.2	347.9	436.2	590.9	759.0	1,013.1
Change	(709.1)	(662.0)	(681.0)	(673.0)	(649.9)	(661.0)	(670.3)	(645.6)	(653.3)	(623.9)
Debt/Asset Ratio										
Base	0.39	0.27	0.36	0.43	0.47	0.52	0.58	0.63	0.71	0.86
CAFO	0.76	0.62	0.71	0.77	0.82	0.86	0.91	0.96	1.04	1.16
Change	0.37	0.35	0.35	0.35	0.35	0.34	0.33	0.33	0.33	0.31
Rate of Return on Equity										
Base	-0.07	-0.69	-0.45	-0.30	-0.21	-0.12	0.00	0.09	0.19	0.39
CAFO	-0.25	-1.97	-1.05	-0.68	-0.43	-0.22	0.01	0.16	0.47	1.34
Change	-0.18	-1.29	-0.60	-0.38	-0.23	-0.10	0.01	0.07	0.28	0.96



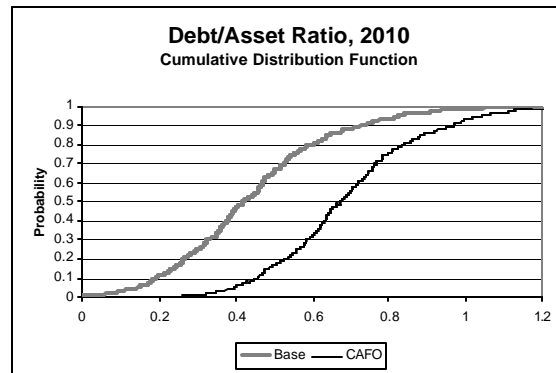
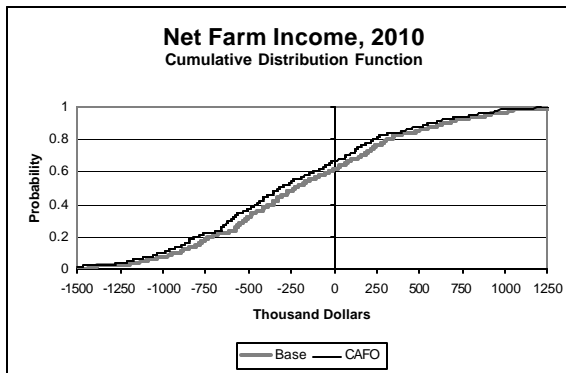
Appendix Table 1.11 Midwest 2400 Sow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
Down payment on Loan	-	471.2	-	-	-	-	-	-	-	-	52.4
Principal Payment on Loan	-	46.5	50.7	55.3	60.2	65.7	71.6	78.0	85.0	92.7	67.3
Interest Payment on Loan	-	63.6	59.4	54.9	49.9	44.5	38.6	32.1	25.1	17.4	42.8
Total	-	616.1	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	197.2
Total Receipts											
Base	4,653.3	5,148.7	5,470.5	5,049.0	4,712.9	5,306.6	5,695.4	5,167.2	4,938.3	5,618.4	5,234.1
CAFO	4,653.3	5,164.8	5,531.5	5,145.8	4,813.6	5,403.0	5,793.4	5,272.6	5,049.9	5,730.5	5,322.8
Change	-	16.0	60.9	96.9	100.7	96.5	98.0	105.4	111.6	112.0	88.7
Total Expenses											
Base	4,456.5	4,486.6	4,512.6	4,552.7	4,555.5	4,632.0	4,657.2	4,648.2	4,645.5	4,722.6	4,601.4
CAFO	4,456.5	4,585.0	4,631.6	4,673.5	4,692.2	4,769.1	4,791.8	4,776.1	4,767.5	4,839.0	4,725.1
Change	-	98.4	119.0	120.8	136.7	137.1	134.6	127.9	122.0	116.4	123.7
Net Cash Income											
Base	196.8	662.1	958.0	496.3	157.4	674.5	1,038.2	519.1	292.8	895.9	632.7
CAFO	196.8	579.8	899.9	472.3	121.4	633.9	1,001.6	496.5	282.4	891.5	597.7
Change	-	(82.3)	(58.1)	(23.9)	(36.0)	(40.6)	(36.6)	(22.6)	(10.4)	(4.4)	(35.0)
Net Farm Income											
Base	(251.8)	213.5	509.4	47.6	(291.2)	225.9	589.6	70.5	(155.8)	447.2	184.1
CAFO	(251.8)	60.5	380.6	(47.0)	(397.9)	114.6	482.3	(22.8)	(236.9)	372.2	78.4
Change	-	(153.0)	(128.8)	(94.6)	(106.7)	(111.3)	(107.3)	(93.2)	(81.0)	(75.1)	(105.7)
Ending Cash Balance											
Base	133.9	231.1	407.3	(112.8)	(485.0)	(71.9)	438.5	504.9	515.1	851.2	253.1
CAFO	133.9	(226.3)	205.4	(392.3)	(581.3)	(142.0)	392.8	406.9	379.8	709.4	83.6
Change	-	(457.4)	(201.9)	(279.5)	(96.3)	(70.2)	(45.7)	(97.9)	(135.3)	(141.8)	(169.5)
Real Net Worth (1982 \$)											
Base	1,549.6	1,674.7	1,884.6	2,017.2	1,967.7	1,848.0	1,957.3	1,827.3	1,618.7	1,757.0	1,839.2
CAFO	1,549.6	1,798.3	1,776.3	1,977.8	1,723.5	1,535.6	1,570.0	1,400.9	1,154.0	1,269.4	1,578.4
Change	-	123.5	(108.3)	(39.4)	(244.2)	(312.4)	(387.3)	(426.4)	(464.8)	(487.6)	(260.8)
Debt/Asset Ratio											
Base	0.62	0.57	0.49	0.46	0.41	0.39	0.36	0.32	0.30	0.24	0.39
CAFO	0.62	0.60	0.58	0.56	0.56	0.57	0.56	0.54	0.56	0.50	0.56
Change	0.00	0.03	0.10	0.09	0.16	0.18	0.19	0.22	0.26	0.27	0.17
Rate of Return on Equity											
Base	-0.09	0.12	0.23	0.04	-0.09	0.10	0.23	0.04	-0.04	0.19	0.09
CAFO	-0.09	0.05	0.17	0.00	-0.13	0.07	0.23	0.01	-0.10	0.22	0.06
Change	0.00	-0.07	-0.05	-0.03	-0.05	-0.03	0.00	-0.03	-0.06	0.03	-0.03



Appendix Table 1.12 Midwest 2400 Sow Operation, Distributions for 2010

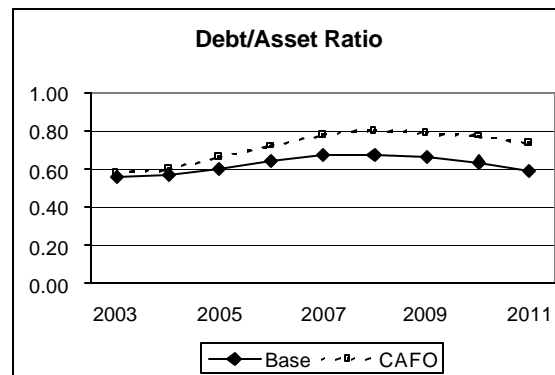
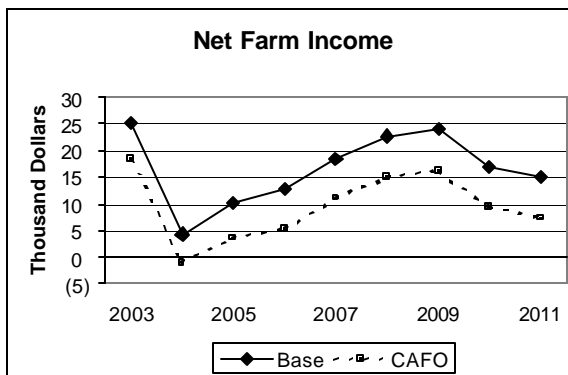
	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	4,938.3	4,225.9	4,508.1	4,653.6	4,801.9	4,948.4	5,071.7	5,207.1	5,381.7	5,650.8
CAFO	5,049.9	4,337.5	4,619.7	4,765.2	4,913.5	5,060.0	5,183.3	5,318.7	5,493.3	5,762.5
Change	111.6	111.6	111.6	111.6	111.6	111.6	111.6	111.6	111.6	111.6
Total Expenses										
Base	4,645.5	4,298.8	4,411.3	4,493.7	4,562.7	4,646.2	4,721.9	4,805.5	4,928.7	5,094.1
CAFO	4,767.5	4,423.7	4,538.2	4,624.1	4,688.6	4,773.1	4,846.3	4,928.6	5,051.3	5,215.7
Change	122.0	124.9	126.8	130.4	125.9	127.0	124.4	123.2	122.6	121.6
Net Cash Income										
Base	292.8	(497.9)	(282.5)	(78.8)	74.4	213.0	414.2	613.8	766.7	1,088.3
CAFO	282.4	(512.4)	(293.8)	(90.0)	63.1	196.8	398.3	597.4	745.8	1,072.8
Change	(10.4)	(14.5)	(11.3)	(11.2)	(11.3)	(16.1)	(15.9)	(16.5)	(20.9)	(15.5)
Net Farm Income										
Base	(155.8)	(946.5)	(731.2)	(527.4)	(374.2)	(235.7)	(34.4)	165.2	318.1	639.7
CAFO	(236.9)	(1,031.7)	(813.1)	(609.3)	(456.2)	(322.5)	(121.0)	78.1	226.6	553.5
Change	(81.0)	(85.2)	(82.0)	(81.9)	(82.0)	(86.8)	(86.5)	(87.2)	(91.5)	(86.2)
Ending Cash Balance										
Base	515.1	(92.0)	87.2	198.7	312.5	424.7	536.6	682.3	827.5	983.2
CAFO	379.8	(257.6)	(57.3)	73.0	183.1	316.8	421.0	558.0	720.0	867.1
Change	(135.3)	(165.7)	(144.5)	(125.8)	(129.4)	(107.8)	(115.6)	(124.3)	(107.5)	(116.0)
Real Net Worth (1982 \$)										
Base	1,618.7	578.1	865.1	1,044.0	1,189.6	1,316.3	1,411.6	1,544.8	1,730.6	1,963.2
CAFO	1,154.0	75.8	396.0	580.5	723.2	854.9	948.6	1,087.0	1,269.4	1,508.1
Change	(464.8)	(502.3)	(469.0)	(463.5)	(466.3)	(461.4)	(463.0)	(457.8)	(461.2)	(455.0)
Debt/Asset Ratio										
Base	0.30	0.19	0.26	0.33	0.38	0.42	0.47	0.52	0.60	0.73
CAFO	0.56	0.45	0.53	0.59	0.63	0.67	0.72	0.77	0.84	0.97
Change	0.26	0.26	0.27	0.26	0.25	0.25	0.25	0.24	0.24	0.24
Rate of Return on Equity										
Base	-0.04	-0.53	-0.35	-0.23	-0.16	-0.07	0.01	0.09	0.17	0.31
CAFO	-0.10	-0.91	-0.56	-0.39	-0.26	-0.15	-0.02	0.08	0.20	0.45
Change	-0.06	-0.39	-0.21	-0.15	-0.10	-0.07	-0.02	0.00	0.03	0.14



APPENDIX 2. FEEDLOT RESULTS

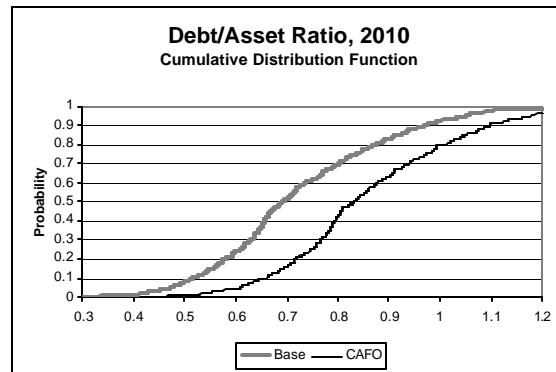
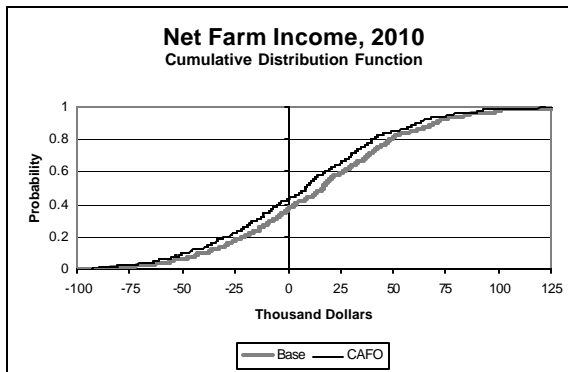
Appendix Table 2.1 Midwest 500 Head Feedlot Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	4.1	3.5	3.5	4.1	3.5	3.5	4.1	3.5	3.5	3.7
Down payment on Loan	-	19.9	-	-	-	-	-	-	-	-	2.2
Principal Payment on Loan	-	2.1	2.2	2.4	2.6	2.8	3.0	3.3	3.5	3.8	2.9
Interest Payment on Loan	-	2.4	2.2	2.0	1.9	1.6	1.4	1.2	0.9	0.6	1.6
Total	-	28.5	7.9	7.9	8.5	7.9	7.9	8.5	7.9	7.9	10.4
Total Receipts											
Base	862.3	870.6	830.3	799.0	766.6	746.1	740.8	747.0	756.6	790.5	783.0
CAFO	862.3	871.5	832.7	801.6	769.3	748.7	743.4	749.8	759.6	793.6	785.6
Change	-	1.0	2.4	2.6	2.7	2.6	2.6	2.8	3.1	3.1	2.5
Total Expenses											
Base	830.7	841.4	821.8	784.7	749.5	723.5	714.0	718.8	735.5	771.4	762.3
CAFO	830.7	847.0	827.5	791.7	757.8	731.4	722.0	727.4	743.9	780.0	769.9
Change	-	5.6	5.8	7.0	8.3	8.0	8.0	8.7	8.4	8.6	7.6
Net Cash Income											
Base	31.5	29.2	8.6	14.3	17.1	22.6	26.8	28.2	21.0	19.1	20.8
CAFO	31.5	24.5	5.2	10.0	11.5	17.3	21.4	22.4	15.7	13.6	15.7
Change	-	(4.7)	(3.4)	(4.4)	(5.6)	(5.3)	(5.4)	(5.8)	(5.3)	(5.5)	(5.0)
Net Farm Income											
Base	27.4	25.0	4.4	10.2	13.0	18.5	22.7	24.1	16.9	15.0	16.6
CAFO	27.4	18.2	(1.1)	3.7	5.3	11.0	15.2	16.1	9.5	7.3	9.5
Change	-	(6.8)	(5.5)	(6.5)	(7.7)	(7.5)	(7.5)	(8.0)	(7.4)	(7.6)	(7.2)
Ending Cash Balance											
Base	13.8	16.3	6.3	2.2	2.5	5.5	9.6	9.8	10.9	10.4	8.2
CAFO	13.8	(1.9)	(12.9)	(8.8)	(5.2)	(1.2)	1.0	(2.0)	(1.6)	(3.7)	(4.0)
Change	-	(18.2)	(19.2)	(11.0)	(7.7)	(6.7)	(8.6)	(11.8)	(12.5)	(14.2)	(12.2)
Real Net Worth (1982 \$)											
Base	143.3	151.1	134.6	111.6	90.6	75.2	70.8	76.2	82.0	95.6	98.6
CAFO	143.3	152.2	136.4	105.3	77.6	56.5	48.4	51.6	53.9	65.3	83.0
Change	-	1.1	1.8	(6.3)	(13.0)	(18.8)	(22.4)	(24.6)	(28.1)	(30.3)	(15.6)
Debt/Asset Ratio											
Base	0.58	0.56	0.57	0.60	0.64	0.67	0.68	0.66	0.64	0.59	0.62
CAFO	0.58	0.58	0.60	0.66	0.72	0.78	0.80	0.79	0.78	0.73	0.72
Change	0.00	0.03	0.03	0.06	0.08	0.10	0.12	0.12	0.14	0.15	0.09
Rate of Return on Equity											
Base	0.21	0.18	0.07	0.12	0.16	0.24	0.30	0.31	0.22	0.18	0.20
CAFO	0.21	0.14	0.04	0.08	0.12	0.22	0.32	0.35	0.24	0.19	0.19
Change	0.00	-0.03	-0.03	-0.04	-0.04	-0.02	0.02	0.04	0.02	0.01	-0.01



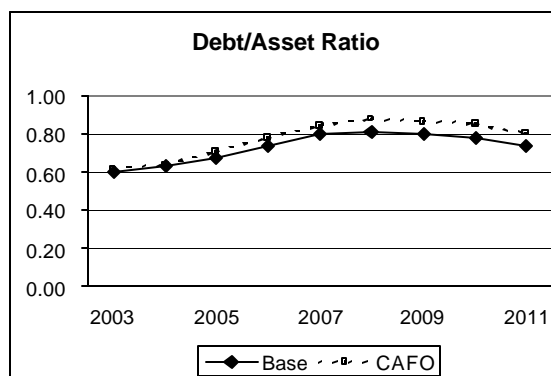
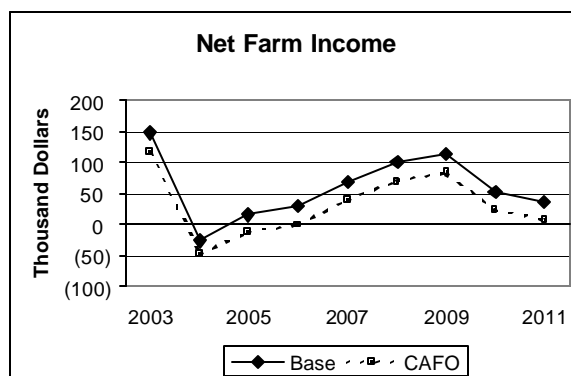
Appendix Table 2.2 Midwest 500 Head Feedlot Operation, Distributions for 2010

	2010	----- Percentiles -----								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
Total Receipts										
		(Thousand Dollars)								
Base	756.6	686.2	706.6	728.7	743.3	752.5	768.6	785.8	805.1	832.1
CAFO	759.6	689.2	709.7	731.8	746.4	755.5	771.7	788.9	808.2	835.1
Change	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Total Expenses										
Base	735.5	679.6	700.3	712.9	723.9	734.3	746.5	760.2	773.9	801.2
CAFO	743.9	688.8	709.5	721.5	732.7	743.3	755.2	768.9	782.6	810.0
Change	8.4	9.2	9.2	8.6	8.8	9.0	8.7	8.7	8.8	8.8
Net Cash Income										
Base	21.0	(37.9)	(17.8)	(3.9)	7.0	20.0	30.1	41.8	52.1	73.3
CAFO	15.7	(44.1)	(23.6)	(10.0)	1.5	14.3	24.3	35.9	45.9	67.0
Change	(5.3)	(6.1)	(5.8)	(6.0)	(5.5)	(5.7)	(5.8)	(5.9)	(6.2)	(6.3)
Net Farm Income										
Base	16.9	(42.1)	(21.9)	(8.1)	2.8	15.8	26.0	37.7	48.0	69.1
CAFO	9.5	(50.3)	(29.8)	(16.2)	(4.7)	8.1	18.0	29.7	39.7	60.7
Change	(7.4)	(8.2)	(7.9)	(8.1)	(7.6)	(7.8)	(8.0)	(8.0)	(8.3)	(8.4)
Ending Cash Balance										
Base	10.9	(34.5)	(14.9)	1.2	9.5	14.8	21.0	27.3	37.1	44.9
CAFO	(1.6)	(12.5)	(1.1)	0.0	0.0	5.0	11.2	15.7	27.0	34.3
Change	(12.5)	22.0	13.9	(1.2)	(9.5)	(9.8)	(9.8)	(11.6)	(10.2)	(10.7)
Real Net Worth (1982 \$)										
Base	82.0	6.5	28.5	43.3	57.2	71.2	79.1	88.9	100.5	117.4
CAFO	53.9	(22.7)	(3.1)	14.3	28.6	41.0	51.5	59.4	70.7	91.0
Change	(28.1)	(29.2)	(31.7)	(28.9)	(28.6)	(30.2)	(27.6)	(29.5)	(29.8)	(26.5)
Debt/Asset Ratio										
Base	0.64	0.52	0.58	0.63	0.66	0.69	0.74	0.80	0.88	0.97
CAFO	0.78	0.66	0.72	0.77	0.79	0.83	0.88	0.94	1.01	1.10
Change	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13
Rate of Return on Equity										
Base	0.22	-0.47	-0.14	0.01	0.13	0.24	0.35	0.48	0.67	1.04
CAFO	0.24	-1.14	-0.41	-0.12	0.02	0.20	0.36	0.56	0.84	1.52
Change	0.02	-0.68	-0.28	-0.13	-0.11	-0.04	0.01	0.08	0.17	0.48



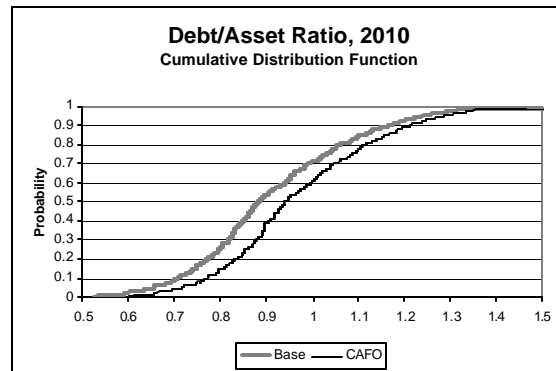
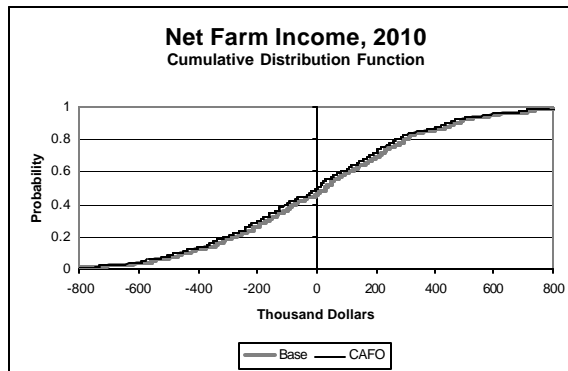
Appendix Table 2.3 Midwest 5000 Head Feedlot Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
CAFO Costs (Thousand Dollars)											
Annual Costs	-	15.8	15.2	15.2	15.8	15.2	15.2	15.8	15.2	15.2	15.4
Down payment on Loan	-	123.8	-	-	-	-	-	-	-	-	13.8
Principal Payment on Loan	-	12.8	13.8	15.0	16.1	17.4	18.8	20.3	22.0	23.7	17.8
Interest Payment on Loan	-	14.9	13.8	12.7	11.5	10.2	8.8	7.3	5.7	3.9	9.9
Total	-	167.3	42.9	42.9	43.5	42.9	42.9	43.5	42.9	42.9	56.8
Total Receipts											
Base	7,144.5	7,213.2	6,879.7	6,620.4	6,352.0	6,182.1	6,137.8	6,189.3	6,268.8	6,549.9	6,488.1
CAFO	7,144.5	7,221.3	6,899.6	6,642.1	6,374.6	6,203.8	6,159.5	6,212.8	6,294.1	6,575.2	6,509.2
Change	-	8.1	19.9	21.7	22.6	21.7	21.7	23.5	25.3	25.3	21.1
Total Expenses											
Base	6,938.8	7,027.6	6,868.6	6,566.4	6,283.3	6,073.1	5,997.4	6,037.5	6,178.7	6,476.0	6,389.8
CAFO	6,938.8	7,051.3	6,895.4	6,602.5	6,322.7	6,112.9	6,037.5	6,078.0	6,219.1	6,516.8	6,426.2
Change	-	23.6	26.8	36.1	39.5	39.8	40.2	40.5	40.4	40.8	36.4
Net Cash Income											
Base	205.7	185.6	11.1	53.9	68.7	109.0	140.4	151.8	90.2	73.8	98.3
CAFO	205.7	170.1	4.2	39.6	51.8	90.8	122.0	134.8	75.0	58.4	83.0
Change	-	(15.5)	(6.9)	(14.4)	(16.9)	(18.1)	(18.5)	(17.0)	(15.1)	(15.5)	(15.3)
Net Farm Income											
Base	167.7	147.5	(26.9)	15.9	30.6	70.9	102.4	113.7	52.1	35.8	60.2
CAFO	167.7	118.9	(47.0)	(11.7)	0.6	39.6	70.8	83.6	23.8	7.2	31.8
Change	-	(28.7)	(20.1)	(27.5)	(30.0)	(31.3)	(31.6)	(30.1)	(28.3)	(28.6)	(28.5)
Ending Cash Balance											
Base	87.2	101.5	9.4	(39.8)	(22.5)	4.3	21.9	29.5	34.7	28.5	18.6
CAFO	87.2	2.6	(108.9)	(78.5)	(53.2)	(22.8)	(2.9)	(9.5)	(11.1)	(29.8)	(34.9)
Change	-	(98.9)	(118.3)	(38.8)	(30.8)	(27.1)	(24.8)	(39.0)	(45.8)	(58.3)	(53.5)
Real Net Worth (1982 \$)											
Base	1,151.2	1,207.9	1,038.5	825.1	590.7	414.3	353.9	386.2	424.3	538.8	642.2
CAFO	1,151.2	1,214.5	1,081.6	794.8	535.1	337.8	253.5	278.4	305.6	415.4	579.6
Change	-	6.6	43.1	(30.4)	(55.6)	(76.4)	(100.3)	(107.8)	(118.7)	(123.4)	(62.5)
Debt/Asset Ratio											
Base	0.63	0.60	0.63	0.67	0.74	0.80	0.81	0.80	0.78	0.73	0.73
CAFO	0.63	0.62	0.64	0.71	0.78	0.85	0.88	0.87	0.85	0.80	0.78
Change	0.00	0.02	0.01	0.03	0.04	0.05	0.06	0.06	0.07	0.07	0.05
Rate of Return on Equity											
Base	0.15	0.12	0.01	0.05	0.08	0.17	0.27	0.29	0.16	0.11	0.14
CAFO	0.15	0.11	0.00	0.03	0.05	0.14	0.28	0.33	0.16	0.10	0.13
Change	0.00	-0.02	-0.01	-0.02	-0.03	-0.02	0.01	0.04	0.00	-0.01	-0.01



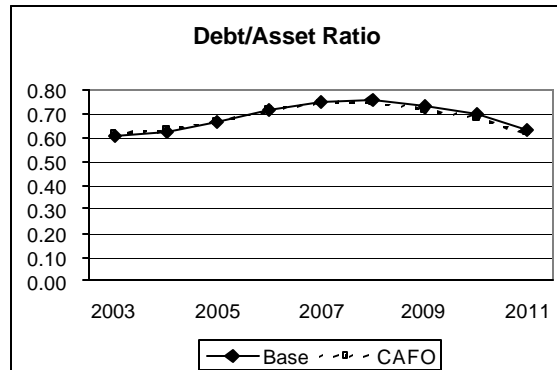
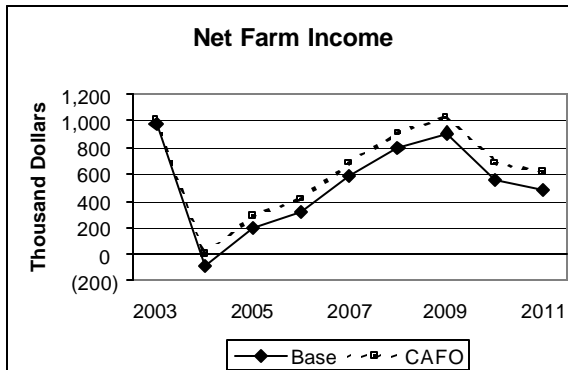
Appendix Table 2.4 Midwest 5000 Head Feedlot Operation, Distributions for 2010

	2010	----- Percentiles -----								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	6,268.8	5,685.2	5,854.9	6,038.0	6,159.1	6,234.8	6,368.6	6,511.3	6,671.1	6,894.4
CAFO	6,294.1	5,710.5	5,880.2	6,063.3	6,184.4	6,260.1	6,393.9	6,536.6	6,696.4	6,919.7
Change	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3
Total Expenses										
Base	6,178.7	5,739.1	5,905.3	6,003.3	6,097.9	6,180.3	6,283.7	6,394.4	6,504.9	6,728.3
CAFO	6,219.1	5,777.0	5,946.8	6,043.0	6,138.6	6,220.4	6,323.9	6,434.3	6,545.9	6,769.2
Change	40.4	37.9	41.5	39.7	40.7	40.0	40.2	39.8	41.1	40.8
Net Cash Income										
Base	90.2	(409.8)	(244.6)	(130.1)	(40.4)	67.0	149.1	251.1	335.2	503.7
CAFO	75.0	(426.5)	(258.5)	(146.0)	(54.1)	50.7	131.9	233.7	319.3	487.4
Change	(15.1)	(16.6)	(13.9)	(15.9)	(13.6)	(16.3)	(17.2)	(17.4)	(15.8)	(16.4)
Net Farm Income										
Base	52.1	(447.9)	(282.6)	(168.1)	(78.5)	28.9	111.0	213.0	297.1	465.7
CAFO	23.8	(477.7)	(309.7)	(197.2)	(105.3)	(0.5)	80.7	182.5	268.1	436.1
Change	(28.3)	(29.8)	(27.1)	(29.1)	(26.8)	(29.4)	(30.3)	(30.6)	(29.0)	(29.5)
Ending Cash Balance										
Base	34.7	(398.2)	(218.0)	(90.6)	8.1	56.0	100.7	148.7	217.1	265.2
CAFO	(11.1)	(323.9)	(9.5)	0.0	0.0	17.3	65.2	108.9	184.2	231.8
Change	(45.8)	74.3	208.5	90.6	(8.1)	(38.7)	(35.5)	(39.8)	(32.9)	(33.4)
Real Net Worth (1982 \$)										
Base	424.3	(286.0)	(122.2)	12.1	110.0	229.7	304.9	371.8	462.1	614.4
CAFO	305.6	(399.5)	(236.2)	(105.1)	5.0	119.3	192.1	260.3	353.8	510.4
Change	(118.7)	(113.4)	(114.0)	(117.1)	(105.0)	(110.3)	(112.8)	(111.5)	(108.2)	(103.9)
Debt/Asset Ratio										
Base	0.78	0.71	0.77	0.82	0.85	0.88	0.94	0.99	1.06	1.17
CAFO	0.85	0.77	0.83	0.88	0.91	0.94	1.00	1.05	1.11	1.21
Change	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.04
Rate of Return on Equity										
Base	0.16	-1.68	-0.66	-0.27	-0.10	0.11	0.35	0.55	0.89	1.82
CAFO	0.16	-1.57	-0.66	-0.34	-0.13	0.10	0.33	0.56	1.13	2.67
Change	0.00	0.10	0.00	-0.07	-0.04	-0.01	-0.02	0.01	0.24	0.84



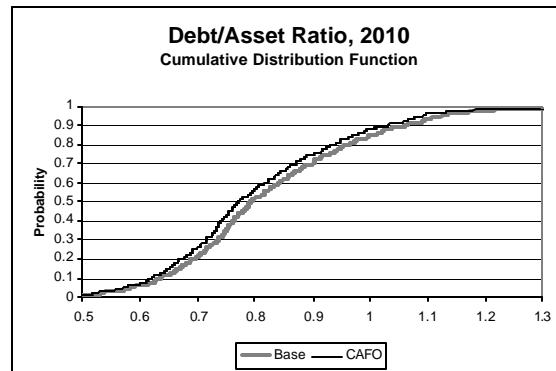
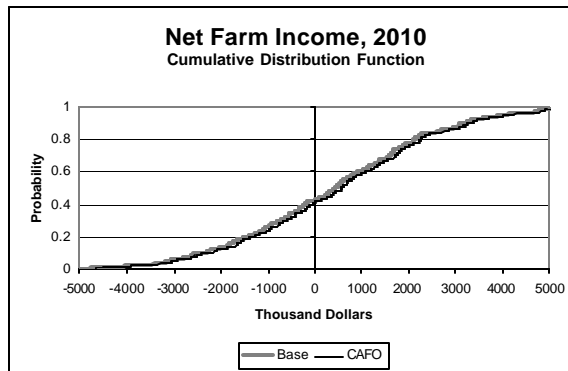
Appendix Table 2.5 Southern Plains 30,000 Head Feedlot Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
CAFO Costs (Thousand Dollars)											
Annual Costs	-	16.7	16.1	16.1	16.7	16.1	16.1	16.7	16.1	16.1	16.3
Down payment on Loan	-	192.8	-	-	-	-	-	-	-	-	21.4
Principal Payment on Loan	-	20.0	21.6	23.3	25.1	27.2	29.3	31.7	34.2	37.0	27.7
Interest Payment on Loan	-	23.1	21.5	19.8	18.0	15.9	13.8	11.4	8.9	6.1	15.4
Total	-	252.6	59.2	59.2	59.8	59.2	59.2	59.8	59.2	59.2	80.8
Total Receipts											
Base	44,345.2	44,771.5	42,701.7	41,091.9	39,426.0	38,371.5	38,096.7	38,416.4	38,910.0	40,654.4	40,271.1
CAFO	44,345.2	44,821.9	42,825.1	41,226.5	39,566.3	38,506.1	38,231.3	38,562.2	39,067.0	40,811.5	40,402.0
Change	-	50.5	123.4	134.6	140.2	134.6	134.6	145.8	157.1	157.1	130.9
Total Expenses											
Base	43,052.8	43,594.8	42,596.9	40,705.9	38,916.2	37,585.2	37,096.3	37,310.1	38,160.6	39,977.5	39,549.3
CAFO	43,052.8	43,592.4	42,605.7	40,721.6	38,934.9	37,597.8	37,102.6	37,312.6	38,158.9	39,968.7	39,555.0
Change	-	(2.4)	8.8	15.7	18.7	12.6	6.3	2.5	(1.8)	(8.8)	5.7
Net Cash Income											
Base	1,292.4	1,176.7	104.8	386.0	509.8	786.3	1,000.4	1,106.3	749.4	676.9	721.8
CAFO	1,292.4	1,229.5	219.4	504.9	631.3	908.3	1,128.7	1,249.6	908.2	842.8	847.0
Change	-	52.8	114.6	118.9	121.6	122.0	128.3	143.3	158.8	165.9	125.1
Net Farm Income											
Base	1,094.9	979.3	(92.6)	188.6	312.4	588.9	802.9	908.9	551.9	479.5	524.4
CAFO	1,094.9	1,011.6	1.5	287.0	413.4	690.4	910.8	1,031.7	690.3	624.9	629.1
Change	-	32.4	94.1	98.5	101.1	101.5	107.9	122.8	138.3	145.4	104.7
Ending Cash Balance											
Base	712.4	863.0	443.3	306.6	308.2	416.0	567.8	719.5	818.8	854.9	588.7
CAFO	712.4	742.0	423.7	336.2	371.1	497.9	664.3	830.8	945.2	992.9	644.9
Change	-	(121.0)	(19.6)	29.6	62.9	82.0	96.5	111.3	126.4	138.0	56.2
Real Net Worth (1982 \$)											
Base	6,869.5	7,326.6	6,459.1	5,195.0	3,999.9	3,156.8	2,926.6	3,259.2	3,682.1	4,593.0	4,510.9
CAFO	6,869.5	7,364.0	6,531.1	5,296.1	4,133.1	3,322.0	3,126.3	3,497.8	3,963.9	4,919.7	4,683.8
Change	-	37.4	72.0	101.0	133.1	165.2	199.7	238.6	281.8	326.7	172.8
Debt/Asset Ratio											
Base	0.64	0.61	0.63	0.67	0.71	0.75	0.75	0.73	0.69	0.63	0.69
CAFO	0.64	0.61	0.63	0.67	0.71	0.74	0.74	0.72	0.68	0.62	0.68
Change	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.01
Rate of Return on Equity											
Base	0.14	0.11	0.00	0.03	0.06	0.13	0.20	0.21	0.12	0.09	0.10
CAFO	0.14	0.11	0.01	0.04	0.07	0.14	0.21	0.22	0.13	0.10	0.12
Change	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01



Appendix Table 2.6 Southern Plains 30,000 Head Feedlot Operation, Distributions for 2010

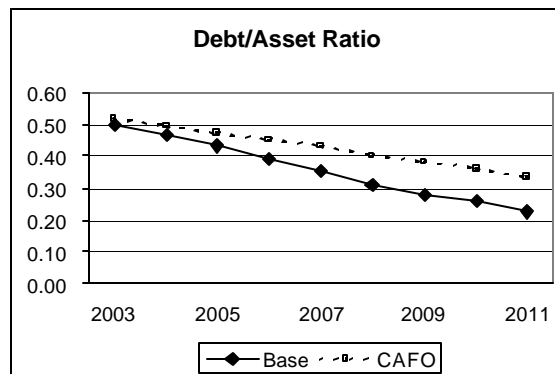
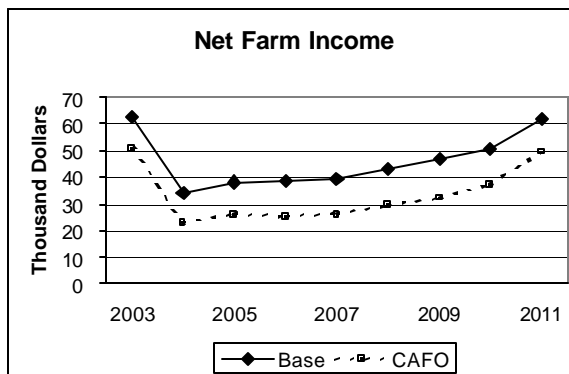
	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	38,910.0	35,287.7	36,340.8	37,477.5	38,228.9	38,698.6	39,529.3	40,415.1	41,406.6	42,793.0
CAFO	39,067.0	35,444.8	36,497.9	37,634.6	38,385.9	38,855.6	39,686.4	40,572.1	41,563.7	42,950.1
Change	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1	157.1
Total Expenses										
Base	38,160.6	35,394.9	36,435.6	37,040.8	37,624.9	38,141.9	38,772.3	39,453.0	40,149.6	41,497.0
CAFO	38,158.9	35,374.2	36,421.2	37,033.2	37,620.7	38,136.9	38,765.1	39,436.9	40,137.0	41,479.1
Change	(1.8)	(20.8)	(14.4)	(7.7)	(4.2)	(5.0)	(7.2)	(16.1)	(12.6)	(17.9)
Net Cash Income										
Base	749.4	(2,317.1)	(1,262.4)	(605.9)	(24.2)	622.2	1,132.4	1,786.0	2,318.4	3,332.2
CAFO	908.2	(2,144.2)	(1,097.8)	(438.5)	138.0	787.9	1,306.0	1,952.7	2,485.5	3,498.3
Change	158.8	173.0	164.6	167.4	162.2	165.7	173.6	166.7	167.1	166.2
Net Farm Income										
Base	551.9	(2,514.5)	(1,459.8)	(803.3)	(221.6)	424.8	935.0	1,588.6	2,121.0	3,134.7
CAFO	690.3	(2,362.1)	(1,315.7)	(656.4)	(79.9)	570.0	1,088.1	1,734.8	2,267.6	3,280.4
Change	138.3	152.5	144.1	146.9	141.7	145.2	153.1	146.2	146.6	145.7
Ending Cash Balance										
Base	818.8	(1,708.2)	(594.3)	131.5	530.2	772.8	1,012.1	1,331.5	1,706.6	2,038.5
CAFO	945.2	(103.5)	0.0	254.6	664.1	881.2	1,148.2	1,446.3	1,821.7	2,151.0
Change	126.4	1,604.7	594.3	123.1	133.9	108.5	136.1	114.8	115.0	112.5
Real Net Worth (1982 \$)										
Base	3,682.1	(624.9)	431.3	1,190.8	1,857.7	2,384.3	2,906.8	3,312.4	3,842.8	4,783.9
CAFO	3,963.9	(344.2)	751.6	1,504.6	2,183.0	2,681.4	3,236.1	3,651.0	4,175.4	5,098.3
Change	281.8	280.7	320.3	313.8	325.3	297.0	329.2	338.6	332.6	314.4
Debt/Asset Ratio										
Base	0.69	0.63	0.69	0.74	0.76	0.79	0.84	0.90	0.96	1.06
CAFO	0.68	0.62	0.67	0.72	0.74	0.77	0.82	0.87	0.94	1.03
Change	-0.02	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.03	-0.02	-0.03
Rate of Return on Equity										
Base	0.12	-1.13	-0.43	-0.18	-0.02	0.15	0.29	0.45	0.72	1.30
CAFO	0.13	-0.94	-0.37	-0.14	0.00	0.16	0.30	0.44	0.69	1.23
Change	0.02	0.19	0.06	0.04	0.03	0.01	0.01	-0.01	-0.03	-0.07



APPENDIX 3. DAIRY RESULTS

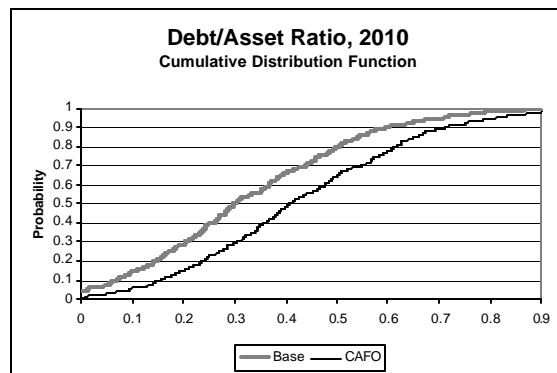
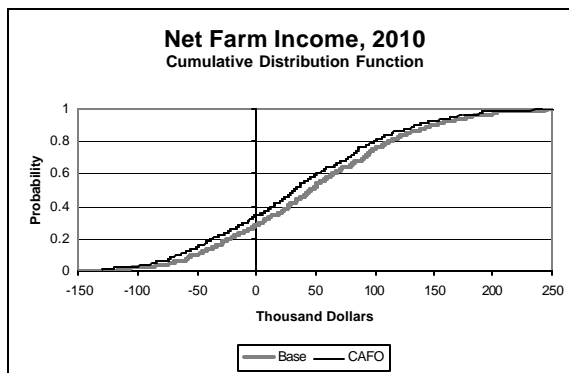
Appendix Table 3.1 Mid-Atlantic 250 Cow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
CAFO Costs (Thousand Dollars)											
Annual Costs	-	5.9	5.3	5.3	5.9	5.3	5.3	5.9	5.3	5.3	5.5
Down payment on Loan	-	34.0	-	-	-	-	-	-	-	-	3.8
Principal Payment on Loan	-	3.5	3.8	4.1	4.4	4.8	5.2	5.6	6.0	6.5	4.9
Interest Payment on Loan	-	4.1	3.8	3.5	3.2	2.8	2.4	2.0	1.6	1.1	2.7
Total	-	47.5	12.9	12.9	13.5	12.9	12.9	13.5	12.9	12.9	16.9
Total Receipts											
Base	775.9	762.4	740.7	750.1	760.5	771.4	783.8	800.3	817.5	838.9	780.6
CAFO	775.9	764.1	743.0	752.9	763.5	774.7	787.3	804.0	821.3	842.8	783.7
Change	-	1.7	2.3	2.7	3.0	3.3	3.5	3.7	3.8	3.9	3.1
Total Expenses											
Base	650.0	654.0	661.0	666.3	675.8	686.0	695.2	708.1	721.0	731.0	688.7
CAFO	650.0	664.0	671.0	677.4	689.0	699.3	708.8	722.5	734.5	744.2	701.2
Change	-	10.0	10.0	11.1	13.2	13.3	13.6	14.5	13.5	13.2	12.5
Net Cash Income											
Base	125.8	108.4	79.7	83.9	84.6	85.4	88.6	92.3	96.5	108.0	91.9
CAFO	125.8	100.2	72.0	75.5	74.5	75.4	78.5	81.5	86.9	98.6	82.5
Change	-	(8.3)	(7.7)	(8.4)	(10.2)	(10.0)	(10.1)	(10.8)	(9.6)	(9.4)	(9.4)
Net Farm Income											
Base	80.1	62.7	34.0	38.1	38.9	39.6	42.9	46.6	50.8	62.2	46.2
CAFO	80.1	50.9	22.7	26.1	25.2	26.1	29.2	32.2	37.5	49.3	33.2
Change	-	(11.9)	(11.3)	(12.0)	(13.8)	(13.6)	(13.7)	(14.4)	(13.3)	(13.0)	(13.0)
Ending Cash Balance											
Base	55.8	44.5	20.0	4.6	0.6	(2.7)	(1.0)	36.8	74.8	107.2	31.7
CAFO	55.8	14.2	(10.8)	(23.4)	(15.4)	(15.2)	(13.4)	27.4	59.3	87.1	12.2
Change	-	(30.3)	(30.8)	(28.0)	(16.0)	(12.5)	(12.4)	(9.3)	(15.6)	(20.1)	(19.5)
Real Net Worth (1982 \$)											
Base	451.6	455.2	450.0	449.2	451.2	450.3	450.6	489.2	489.3	496.2	464.6
CAFO	451.6	455.3	448.0	444.6	432.1	421.8	415.1	441.1	436.8	439.2	437.1
Change	-	0.1	(2.0)	(4.6)	(19.1)	(28.5)	(35.5)	(48.1)	(52.5)	(57.1)	(27.5)
Debt/Asset Ratio											
Base	0.53	0.50	0.47	0.43	0.39	0.35	0.31	0.28	0.26	0.22	0.36
CAFO	0.53	0.52	0.49	0.47	0.45	0.43	0.40	0.38	0.36	0.34	0.43
Change	0.00	0.02	0.03	0.04	0.06	0.08	0.09	0.10	0.10	0.11	0.07
Rate of Return on Equity											
Base	0.15	0.12	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08
CAFO	0.15	0.10	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.09	0.07
Change	0.00	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.02



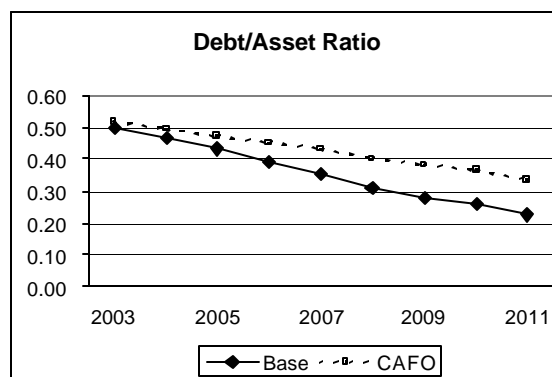
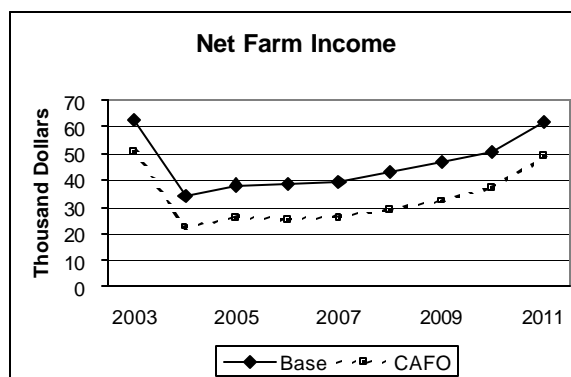
Appendix Table 3.2 Mid-Atlantic 250 Cow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	817.5	737.0	761.0	780.7	798.6	813.0	827.4	846.5	872.6	908.1
CAFO	821.3	740.8	764.8	784.5	802.4	816.8	831.2	850.4	876.5	912.0
Change	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Total Expenses										
Base	721.0	678.4	694.2	703.7	712.8	720.3	728.2	738.7	755.5	776.1
CAFO	734.5	691.7	706.6	716.9	726.0	733.5	742.2	753.0	769.8	790.5
Change	13.5	13.4	12.4	13.3	13.2	13.2	14.0	14.2	14.3	14.4
Net Cash Income										
Base	96.5	(8.7)	22.1	48.6	72.0	90.4	110.8	136.7	158.3	193.7
CAFO	86.9	(19.2)	10.7	39.0	62.3	80.8	101.3	126.9	148.7	184.8
Change	(9.6)	(10.5)	(11.4)	(9.7)	(9.7)	(9.6)	(9.5)	(9.8)	(9.6)	(9.0)
Net Farm Income										
Base	50.8	(54.4)	(23.7)	2.9	26.3	44.7	65.1	90.9	112.6	148.0
CAFO	37.5	(68.5)	(38.6)	(10.4)	13.0	31.5	52.0	77.6	99.3	135.4
Change	(13.3)	(14.1)	(15.0)	(13.3)	(13.3)	(13.3)	(13.2)	(13.4)	(13.2)	(12.6)
Ending Cash Balance										
Base	74.8	0.0	19.7	41.6	55.8	82.2	99.4	121.8	141.8	177.4
CAFO	59.3	(30.0)	3.6	24.9	40.5	61.9	80.3	100.0	120.4	157.1
Change	(15.6)	(30.0)	(16.1)	(16.7)	(15.3)	(20.3)	(19.1)	(21.8)	(21.5)	(20.3)
Real Net Worth (1982 \$)										
Base	489.3	253.7	315.6	364.5	416.1	455.6	498.2	542.3	586.6	665.8
CAFO	436.8	189.9	254.0	303.2	359.2	401.4	444.5	490.7	538.5	621.0
Change	(52.5)	(63.8)	(61.6)	(61.4)	(56.9)	(54.2)	(53.7)	(51.6)	(48.1)	(44.8)
Debt/Asset Ratio										
Base	0.26	0.07	0.15	0.20	0.26	0.30	0.37	0.44	0.50	0.60
CAFO	0.36	0.16	0.24	0.31	0.36	0.41	0.48	0.55	0.62	0.71
Change	0.10	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.12	0.12
Rate of Return on Equity										
Base	0.08	-0.08	-0.03	0.02	0.05	0.08	0.10	0.13	0.16	0.20
CAFO	0.07	-0.13	-0.06	0.00	0.04	0.07	0.09	0.13	0.16	0.21
Change	-0.01	-0.05	-0.03	-0.02	-0.01	-0.01	-0.01	-0.01	0.00	0.00



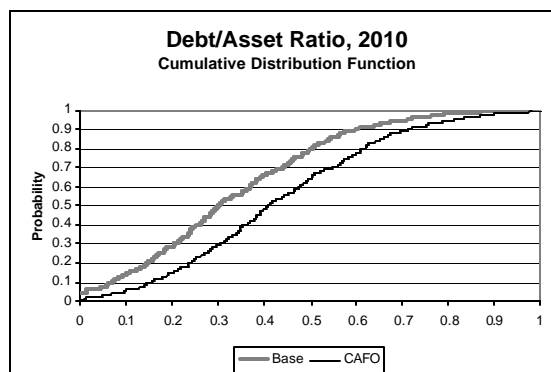
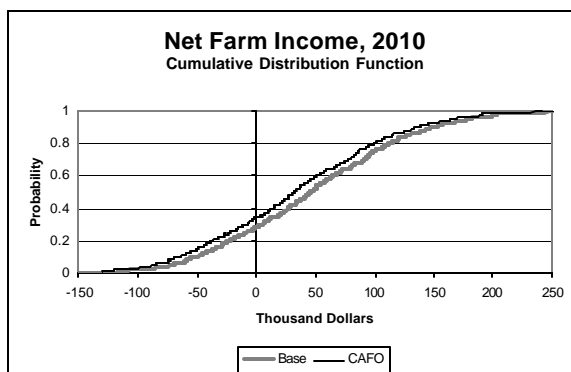
Appendix Table 3.3 Midwest 250 Cow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
CAFO Costs (Thousand Dollars)											
Annual Costs	-	5.9	5.3	5.3	5.9	5.3	5.3	5.9	5.3	5.3	5.5
Down payment on Loan	-	34.0	-	-	-	-	-	-	-	-	3.8
Principal Payment on Loan	-	3.5	3.8	4.1	4.4	4.8	5.2	5.6	6.0	6.5	4.9
Interest Payment on Loan	-	4.1	3.8	3.5	3.2	2.8	2.4	2.0	1.6	1.1	2.7
Total	-	47.5	12.9	12.9	13.5	12.9	12.9	13.5	12.9	12.9	16.9
Total Receipts											
Base	770.8	757.3	735.5	744.9	755.2	766.0	778.4	794.9	812.0	833.3	775.3
CAFO	770.8	759.0	737.8	747.6	758.2	769.3	781.9	798.5	815.8	837.2	778.4
Change	-	1.7	2.3	2.7	3.0	3.3	3.5	3.7	3.8	3.9	3.1
Total Expenses											
Base	644.9	648.9	655.8	661.1	670.6	680.8	689.9	702.7	715.6	725.5	683.4
CAFO	644.9	658.8	665.9	672.2	683.8	694.0	703.5	717.2	729.1	738.8	695.9
Change	-	10.0	10.0	11.1	13.2	13.3	13.6	14.5	13.5	13.2	12.5
Net Cash Income											
Base	125.8	108.4	79.6	83.8	84.6	85.3	88.5	92.2	96.4	107.8	91.8
CAFO	125.8	100.1	71.9	75.4	74.4	75.3	78.4	81.4	86.7	98.4	82.5
Change	-	(8.3)	(7.7)	(8.4)	(10.2)	(10.0)	(10.1)	(10.8)	(9.6)	(9.4)	(9.4)
Net Farm Income											
Base	80.1	62.7	33.9	38.1	38.9	39.6	42.8	46.5	50.7	62.1	46.1
CAFO	80.1	50.8	22.6	26.1	25.1	26.0	29.1	32.1	37.4	49.1	33.1
Change	-	(11.9)	(11.3)	(12.0)	(13.8)	(13.6)	(13.7)	(14.4)	(13.3)	(13.0)	(13.0)
Ending Cash Balance											
Base	55.8	44.4	20.0	4.5	0.6	(2.8)	(1.1)	36.7	74.7	107.1	31.6
CAFO	55.8	14.1	(10.9)	(23.5)	(15.4)	(15.3)	(13.4)	27.4	59.1	87.0	12.1
Change	-	(30.3)	(30.8)	(28.0)	(16.0)	(12.5)	(12.4)	(9.3)	(15.6)	(20.1)	(19.4)
Real Net Worth (1982 \$)											
Base	451.6	455.2	449.9	449.2	451.1	450.2	450.4	488.9	488.9	495.8	464.4
CAFO	451.6	455.3	448.0	444.5	432.0	421.6	414.9	440.8	436.4	438.7	436.9
Change	-	0.1	(1.9)	(4.6)	(19.1)	(28.5)	(35.5)	(48.1)	(52.5)	(57.1)	(27.5)
Debt/Asset Ratio											
Base	0.53	0.50	0.47	0.43	0.39	0.35	0.31	0.28	0.26	0.23	0.36
CAFO	0.53	0.52	0.49	0.47	0.45	0.43	0.40	0.38	0.36	0.34	0.43
Change	0.00	0.02	0.03	0.04	0.06	0.08	0.09	0.10	0.10	0.11	0.07
Rate of Return on Equity											
Base	0.15	0.12	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09	0.08
CAFO	0.15	0.10	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.09	0.07
Change	0.00	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.02



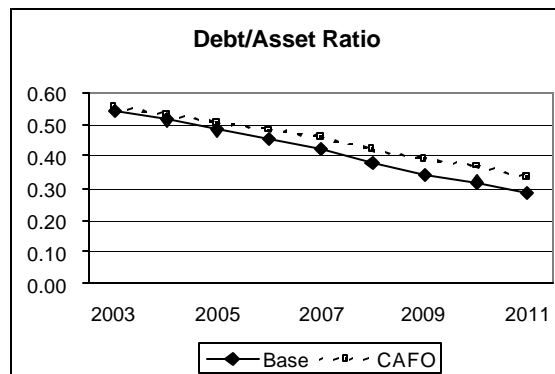
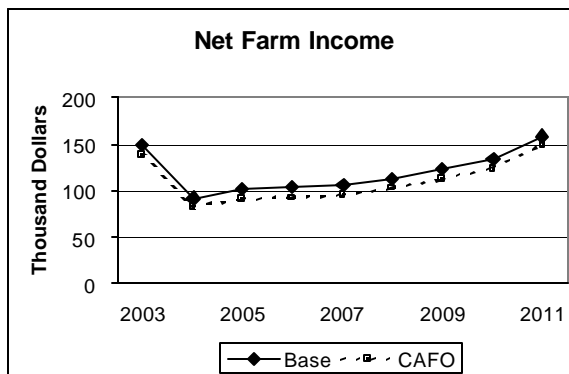
Appendix Table 3.4 Midwest 250 Cow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	812.0	731.5	755.4	775.1	793.1	807.5	821.8	841.0	867.1	902.6
CAFO	815.8	735.3	759.3	779.0	796.9	811.3	825.7	844.8	870.9	906.4
Change	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Total Expenses										
Base	715.6	673.0	688.8	698.3	707.4	714.9	722.8	733.3	750.1	770.7
CAFO	729.1	686.4	701.2	711.6	720.6	728.1	736.8	747.6	764.4	785.1
Change	13.5	13.4	12.4	13.3	13.2	13.2	14.0	14.2	14.3	14.4
Net Cash Income										
Base	96.4	(8.8)	21.9	48.5	71.8	90.3	110.7	136.5	158.1	193.6
CAFO	86.7	(19.3)	10.5	38.8	62.1	80.6	101.1	126.7	148.5	184.6
Change	(9.6)	(10.5)	(11.4)	(9.7)	(9.7)	(9.7)	(9.6)	(9.8)	(9.6)	(9.0)
Net Farm Income										
Base	50.7	(54.5)	(23.8)	2.8	26.1	44.6	65.0	90.8	112.4	147.9
CAFO	37.4	(68.6)	(38.8)	(10.5)	12.8	31.3	51.8	77.4	99.2	135.3
Change	(13.3)	(14.1)	(15.0)	(13.3)	(13.3)	(13.3)	(13.2)	(13.4)	(13.2)	(12.6)
Ending Cash Balance										
Base	74.7	0.0	19.4	41.5	55.6	82.1	99.2	121.6	141.7	177.2
CAFO	59.1	(30.7)	3.4	24.8	40.4	61.8	80.1	99.9	120.2	157.0
Change	(15.6)	(30.7)	(16.0)	(16.8)	(15.2)	(20.3)	(19.1)	(21.7)	(21.5)	(20.2)
Real Net Worth (1982 \$)										
Base	488.9	253.3	315.2	364.1	415.7	455.3	497.9	542.0	586.3	665.5
CAFO	436.4	189.5	253.6	302.8	358.8	401.1	444.1	490.4	538.2	620.7
Change	(52.5)	(63.8)	(61.6)	(61.4)	(56.9)	(54.2)	(53.7)	(51.6)	(48.2)	(44.8)
Debt/Asset Ratio										
Base	0.26	0.07	0.15	0.21	0.26	0.30	0.37	0.44	0.50	0.60
CAFO	0.36	0.16	0.24	0.31	0.36	0.41	0.48	0.55	0.62	0.72
Change	0.10	0.09	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.12
Rate of Return on Equity										
Base	0.08	-0.08	-0.03	0.02	0.05	0.08	0.10	0.13	0.16	0.20
CAFO	0.07	-0.13	-0.06	0.00	0.04	0.07	0.09	0.13	0.16	0.21
Change	-0.01	-0.05	-0.03	-0.02	-0.01	-0.01	-0.01	-0.01	0.00	0.00



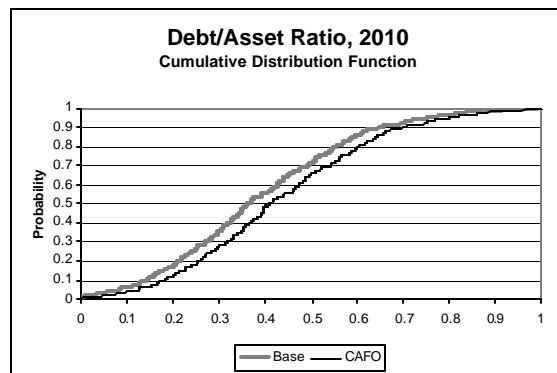
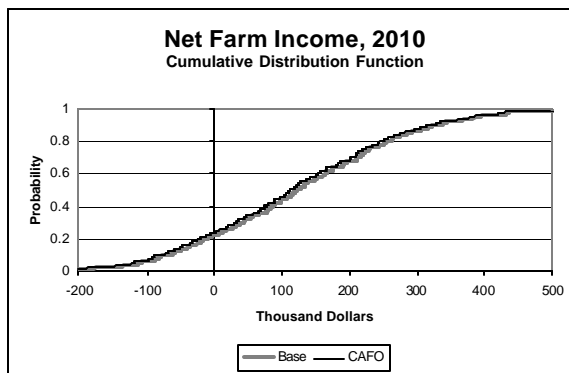
Appendix Table 3.5 Central 500 Cow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	6.0	5.4	5.4	6.0	5.4	5.4	6.0	5.4	5.4	5.6
Down payment on Loan	-	37.7	-	-	-	-	-	-	-	-	4.2
Principal Payment on Loan	-	3.9	4.2	4.5	4.9	5.3	5.7	6.2	6.7	7.2	5.4
Interest Payment on Loan	-	4.5	4.2	3.9	3.5	3.1	2.7	2.2	1.7	1.2	3.0
Total	-	52.1	13.8	13.8	14.4	13.8	13.8	14.4	13.8	13.8	18.2
Total Receipts											
Base	1,531.3	1,504.2	1,460.5	1,479.2	1,499.7	1,521.3	1,545.9	1,578.8	1,612.9	1,655.5	1,539.8
CAFO	1,531.3	1,507.7	1,465.2	1,484.7	1,505.8	1,527.9	1,552.9	1,586.2	1,620.5	1,663.2	1,546.0
Change	-	3.4	4.7	5.5	6.1	6.6	7.0	7.3	7.7	7.7	6.2
Total Expenses											
Base	1,253.1	1,260.5	1,273.7	1,283.3	1,302.1	1,321.3	1,337.8	1,361.5	1,385.3	1,403.1	1,325.4
CAFO	1,253.1	1,271.0	1,284.3	1,295.4	1,316.0	1,334.8	1,351.4	1,375.7	1,398.4	1,415.9	1,338.1
Change	-	10.5	10.6	12.0	13.9	13.5	13.6	14.2	13.1	12.7	12.7
Net Cash Income											
Base	278.2	243.7	186.8	195.9	197.6	200.0	208.1	217.3	227.6	252.4	214.4
CAFO	278.2	236.6	180.9	189.4	189.8	193.1	201.5	210.5	222.1	247.4	207.9
Change	-	(7.1)	(5.9)	(6.5)	(7.8)	(6.9)	(6.6)	(6.9)	(5.5)	(5.0)	(6.5)
Net Farm Income											
Base	184.0	149.5	92.6	101.6	103.4	105.8	113.9	123.1	133.4	158.1	120.1
CAFO	184.0	138.4	82.6	91.1	91.6	94.9	103.3	112.2	123.9	149.1	109.7
Change	-	(11.1)	(9.9)	(10.5)	(11.8)	(10.9)	(10.6)	(10.9)	(9.5)	(9.0)	(10.5)
Ending Cash Balance											
Base	79.6	58.6	15.1	(16.6)	(12.0)	(10.5)	(4.7)	75.9	153.9	219.0	53.2
CAFO	79.6	27.2	(17.7)	(40.2)	(21.8)	(19.8)	(14.3)	68.9	142.8	204.9	36.7
Change	-	(31.4)	(32.8)	(23.6)	(9.7)	(9.3)	(9.5)	(7.0)	(11.1)	(14.2)	(16.5)
Real Net Worth (1982 \$)											
Base	796.4	796.8	782.6	786.0	783.6	776.8	777.2	857.5	859.7	875.0	810.6
CAFO	796.4	798.4	786.1	783.3	764.8	752.4	747.8	819.0	818.7	831.6	789.1
Change	-	1.6	3.6	(2.7)	(18.7)	(24.4)	(29.3)	(38.5)	(40.9)	(43.4)	(21.4)
Debt/Asset Ratio											
Base	0.57	0.54	0.52	0.48	0.45	0.42	0.38	0.34	0.32	0.29	0.42
CAFO	0.57	0.55	0.53	0.50	0.48	0.46	0.42	0.39	0.37	0.34	0.45
Change	0.00	0.01	0.01	0.02	0.03	0.04	0.05	0.05	0.05	0.05	0.03
Rate of Return on Equity											
Base	0.21	0.18	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.15	0.14
CAFO	0.21	0.16	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.15	0.13
Change	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	-0.01



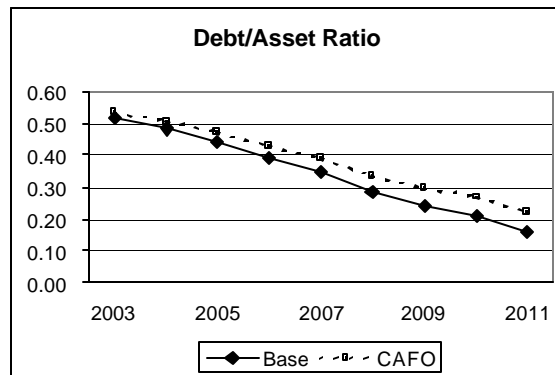
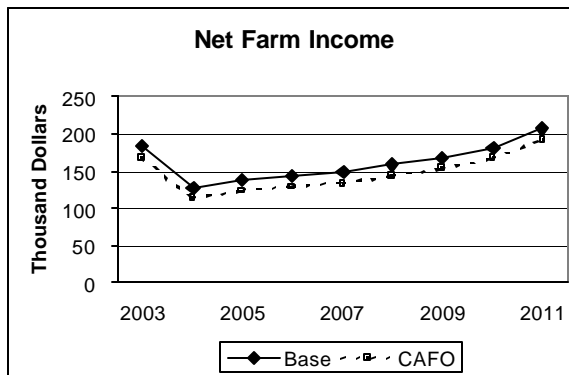
Appendix Table 3.6 Central 500 Cow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	1,612.9	1,451.9	1,499.8	1,539.2	1,575.1	1,603.9	1,632.6	1,671.0	1,723.2	1,794.2
CAFO	1,620.5	1,459.6	1,507.5	1,546.9	1,582.8	1,611.5	1,640.3	1,678.6	1,730.8	1,801.8
Change	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
Total Expenses										
Base	1,385.3	1,302.4	1,333.2	1,350.0	1,369.6	1,382.3	1,399.3	1,419.6	1,451.6	1,492.4
CAFO	1,398.4	1,315.3	1,345.2	1,363.4	1,382.6	1,395.9	1,412.5	1,432.8	1,464.8	1,505.1
Change	13.1	12.9	12.0	13.3	13.0	13.6	13.3	13.2	13.2	12.7
Net Cash Income										
Base	227.6	19.7	80.6	134.4	178.5	214.7	258.6	307.6	350.5	419.1
CAFO	222.1	13.7	73.7	127.7	172.9	209.0	252.7	301.6	345.9	414.5
Change	(5.5)	(6.0)	(6.9)	(6.7)	(5.7)	(5.8)	(5.9)	(6.0)	(4.6)	(4.6)
Net Farm Income										
Base	133.4	(74.5)	(13.6)	40.1	84.3	120.5	164.4	213.4	256.3	324.9
CAFO	123.9	(84.5)	(24.5)	29.4	74.6	110.7	154.5	203.3	247.7	316.3
Change	(9.5)	(10.0)	(10.9)	(10.7)	(9.7)	(9.8)	(9.9)	(10.0)	(8.6)	(8.6)
Ending Cash Balance										
Base	153.9	5.8	51.2	92.6	118.4	164.0	194.0	230.5	265.6	334.2
CAFO	142.8	(9.2)	42.5	80.2	105.2	148.0	180.6	214.3	248.9	319.1
Change	(11.1)	(15.1)	(8.7)	(12.4)	(13.2)	(16.0)	(13.4)	(16.2)	(16.7)	(15.1)
Real Net Worth (1982 \$)										
Base	859.7	422.7	535.3	628.6	725.1	793.0	869.8	949.6	1,026.9	1,169.0
CAFO	818.7	372.1	489.9	580.6	679.8	754.4	831.3	908.9	991.2	1,133.9
Change	(40.9)	(50.6)	(45.4)	(48.0)	(45.4)	(38.6)	(38.5)	(40.7)	(35.8)	(35.1)
Debt/Asset Ratio										
Base	0.32	0.14	0.21	0.27	0.32	0.36	0.43	0.49	0.55	0.65
CAFO	0.37	0.18	0.26	0.32	0.37	0.41	0.47	0.54	0.60	0.70
Change	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Rate of Return on Equity										
Base	0.13	-0.03	0.03	0.07	0.10	0.14	0.16	0.20	0.23	0.28
CAFO	0.13	-0.05	0.02	0.07	0.10	0.13	0.17	0.20	0.23	0.29
Change	0.00	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01



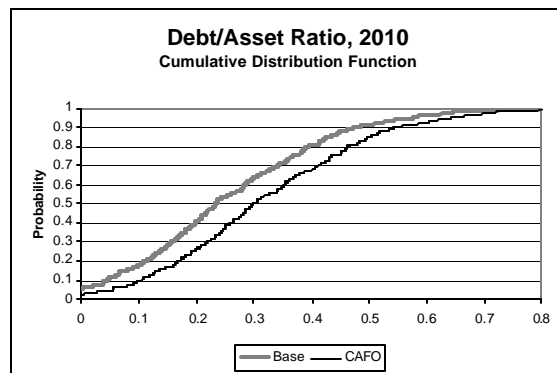
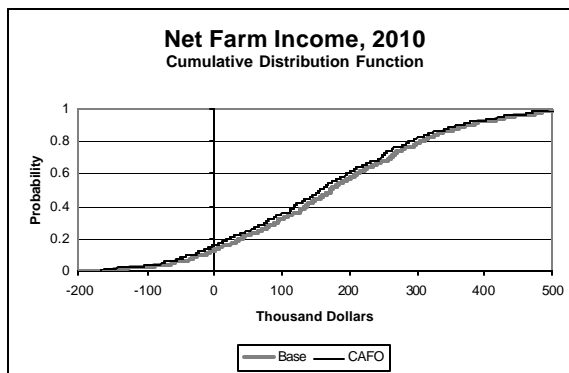
Appendix Table 3.7 Mid-Atlantic 500 Cow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
CAFO Costs (Thousand Dollars)											
Annual Costs	-	7.9	7.3	7.3	7.9	7.3	7.3	7.9	7.3	7.3	7.5
Down payment on Loan	-	50.3	-	-	-	-	-	-	-	-	5.6
Principal Payment on Loan	-	5.2	5.6	6.1	6.6	7.1	7.6	8.3	8.9	9.6	7.2
Interest Payment on Loan	-	6.0	5.6	5.2	4.7	4.2	3.6	3.0	2.3	1.6	4.0
Total	-	69.4	18.5	18.5	19.1	18.5	18.5	19.1	18.5	18.5	24.3
Total Receipts											
Base	1,551.7	1,524.8	1,481.3	1,500.3	1,520.9	1,542.8	1,567.6	1,600.7	1,635.0	1,677.8	1,561.2
CAFO	1,551.7	1,528.3	1,486.0	1,505.7	1,527.0	1,549.4	1,574.6	1,608.0	1,642.6	1,685.6	1,567.5
Change	-	3.4	4.7	5.5	6.1	6.6	7.0	7.3	7.7	7.7	6.2
Total Expenses											
Base	1,240.4	1,246.8	1,258.8	1,267.1	1,283.5	1,300.9	1,315.8	1,338.2	1,360.9	1,377.7	1,305.5
CAFO	1,240.4	1,260.7	1,273.0	1,282.0	1,299.5	1,316.7	1,331.8	1,354.9	1,376.9	1,393.5	1,321.0
Change	-	13.9	14.2	14.9	16.0	15.7	15.9	16.6	16.0	15.9	15.5
Net Cash Income											
Base	311.3	278.0	222.5	233.1	237.4	241.8	251.8	262.5	274.0	300.2	255.7
CAFO	311.3	267.5	213.0	223.7	227.5	232.7	242.8	253.2	265.7	292.0	246.5
Change	-	(10.5)	(9.5)	(9.4)	(9.9)	(9.2)	(8.9)	(9.3)	(8.3)	(8.1)	(9.2)
Net Farm Income											
Base	217.1	183.8	128.3	138.9	143.2	147.6	157.5	168.2	179.8	205.9	161.5
CAFO	217.1	167.9	113.4	124.1	127.9	133.1	143.2	153.6	166.1	192.4	146.9
Change	-	(15.8)	(14.9)	(14.8)	(15.3)	(14.5)	(14.3)	(14.6)	(13.7)	(13.5)	(14.6)
Ending Cash Balance											
Base	113.7	98.2	60.9	38.5	37.8	39.1	44.5	127.8	211.6	281.4	104.4
CAFO	113.7	55.9	23.8	5.3	6.6	9.4	15.5	98.8	182.5	251.8	72.2
Change	-	(42.4)	(37.1)	(33.3)	(31.2)	(29.7)	(29.0)	(29.0)	(29.1)	(29.6)	(32.3)
Real Net Worth (1982 \$)											
Base	835.8	850.1	851.6	863.2	881.9	893.4	913.3	1,011.6	1,028.9	1,059.6	928.2
CAFO	835.8	852.0	844.1	847.4	858.4	863.1	876.8	969.0	980.9	1,006.7	899.8
Change	-	1.9	(7.5)	(15.8)	(23.4)	(30.3)	(36.6)	(42.6)	(48.0)	(53.0)	(28.4)
Debt/Asset Ratio											
Base	0.56	0.52	0.48	0.44	0.39	0.35	0.29	0.24	0.21	0.16	0.34
CAFO	0.56	0.53	0.50	0.47	0.43	0.39	0.34	0.29	0.27	0.22	0.38
Change	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.04
Rate of Return on Equity											
Base	0.23	0.20	0.14	0.15	0.15	0.15	0.15	0.14	0.14	0.15	0.15
CAFO	0.23	0.18	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.14
Change	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	-0.01



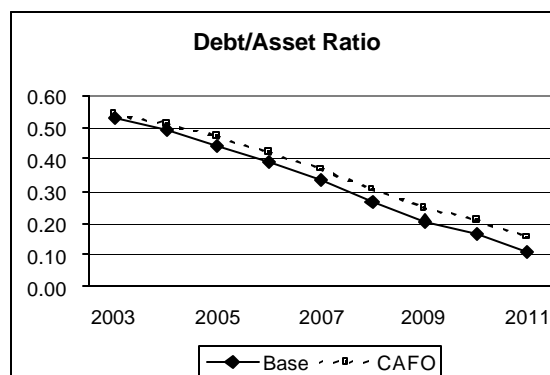
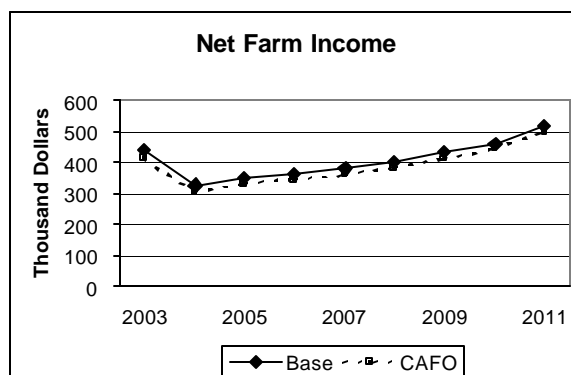
Appendix Table 3.8 Mid-Atlantic 500 Cow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	1,635.0	1,474.0	1,521.9	1,561.3	1,597.2	1,626.0	1,654.7	1,693.1	1,745.3	1,816.3
CAFO	1,642.6	1,481.7	1,529.6	1,569.0	1,604.9	1,633.6	1,662.4	1,700.7	1,752.9	1,823.9
Change	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
Total Expenses										
Base	1,360.9	1,276.9	1,307.2	1,323.5	1,343.8	1,356.0	1,372.4	1,393.2	1,424.4	1,465.7
CAFO	1,376.9	1,293.8	1,324.0	1,341.2	1,361.0	1,373.9	1,390.0	1,410.6	1,442.7	1,484.0
Change	16.0	16.8	16.9	17.6	17.2	17.9	17.6	17.4	18.3	18.3
Net Cash Income										
Base	274.0	72.8	132.2	185.4	227.7	264.3	305.2	355.2	398.7	465.9
CAFO	265.7	62.3	121.8	175.1	217.3	254.0	296.3	346.4	389.0	457.1
Change	(8.3)	(10.4)	(10.3)	(10.3)	(10.5)	(10.3)	(8.9)	(8.8)	(9.8)	(8.9)
Net Farm Income										
Base	179.8	(21.5)	37.9	91.2	133.5	170.1	211.0	261.0	304.5	371.7
CAFO	166.1	(37.3)	22.2	75.5	117.7	154.4	196.7	246.8	289.4	357.5
Change	(13.7)	(15.8)	(15.7)	(15.7)	(15.8)	(15.7)	(14.3)	(14.2)	(15.1)	(14.2)
Ending Cash Balance										
Base	211.6	58.5	102.5	139.7	172.4	214.2	248.2	285.2	321.6	391.2
CAFO	182.5	37.8	81.5	116.6	148.8	193.1	224.7	261.9	296.8	363.8
Change	(29.1)	(20.6)	(21.0)	(23.2)	(23.5)	(21.1)	(23.5)	(23.3)	(24.7)	(27.5)
Real Net Worth (1982 \$)										
Base	1,028.9	641.6	752.7	837.3	916.9	977.4	1,053.4	1,123.8	1,194.0	1,332.8
CAFO	980.9	569.9	684.7	770.8	852.6	919.4	996.1	1,072.3	1,143.2	1,284.4
Change	(48.0)	(71.8)	(68.0)	(66.4)	(64.3)	(58.0)	(57.3)	(51.5)	(50.7)	(48.4)
Debt/Asset Ratio										
Base	0.21	0.05	0.11	0.16	0.20	0.23	0.29	0.34	0.39	0.48
CAFO	0.27	0.10	0.17	0.22	0.26	0.30	0.35	0.41	0.46	0.55
Change	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07
Rate of Return on Equity										
Base	0.14	0.02	0.06	0.09	0.11	0.14	0.17	0.19	0.22	0.26
CAFO	0.14	0.00	0.05	0.09	0.11	0.14	0.17	0.19	0.22	0.26
Change	0.00	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00



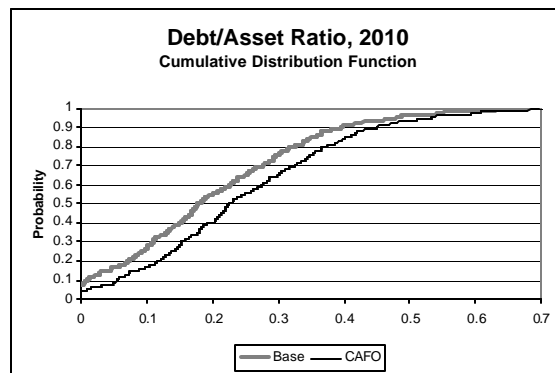
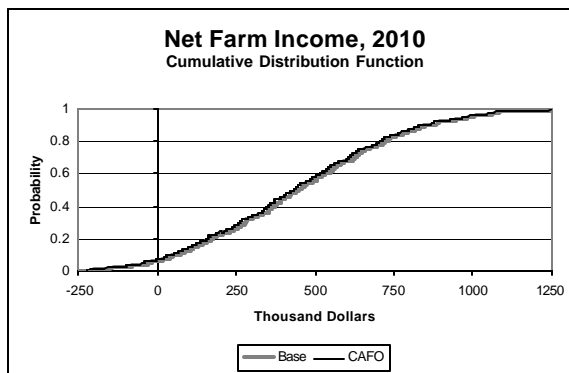
Appendix Table 3.9 Pacific 1000 Cow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
(Thousand Dollars)											
CAFO Costs											
Annual Costs	-	10.7	10.1	10.1	10.7	10.1	10.1	10.7	10.1	10.1	10.3
Down payment on Loan	-	86.9	-	-	-	-	-	-	-	-	9.7
Principal Payment on Loan	-	9.0	9.7	10.5	11.3	12.2	13.2	14.3	15.4	16.7	12.5
Interest Payment on Loan	-	10.4	9.7	8.9	8.1	7.2	6.2	5.1	4.0	2.8	6.9
Total	-	117.0	29.5	29.5	30.1	29.5	29.5	30.1	29.5	29.5	39.4
Total Receipts											
Base	3,240.7	3,184.1	3,093.6	3,134.0	3,178.1	3,224.5	3,276.7	3,345.6	3,417.4	3,506.0	3,262.2
CAFO	3,240.7	3,191.3	3,103.4	3,145.5	3,190.9	3,238.3	3,291.4	3,361.1	3,433.5	3,522.3	3,275.3
Change	-	7.2	9.8	11.5	12.8	13.8	14.7	15.4	16.1	16.3	13.1
Total Expenses											
Base	2,542.0	2,554.5	2,577.4	2,592.2	2,623.3	2,655.9	2,683.6	2,723.6	2,767.4	2,799.9	2,664.2
CAFO	2,542.0	2,575.7	2,599.4	2,615.2	2,647.6	2,680.1	2,707.9	2,748.3	2,791.3	2,823.3	2,687.6
Change	-	21.1	22.0	23.0	24.4	24.2	24.3	24.8	23.9	23.4	23.4
Net Cash Income											
Base	698.7	629.6	516.2	541.8	554.8	568.6	593.1	622.1	650.0	706.2	598.0
CAFO	698.7	615.7	504.0	530.3	543.2	558.2	583.5	612.7	642.2	699.0	587.6
Change	-	(13.9)	(12.2)	(11.6)	(11.6)	(10.3)	(9.6)	(9.3)	(7.8)	(7.2)	(10.4)
Net Farm Income											
Base	509.0	439.9	326.6	352.1	365.1	378.9	403.4	432.4	460.3	516.5	408.4
CAFO	509.0	416.8	305.1	331.4	344.3	359.3	384.6	413.8	443.3	500.1	388.7
Change	-	(23.1)	(21.4)	(20.8)	(20.8)	(19.5)	(18.8)	(18.6)	(17.0)	(16.4)	(19.6)
Ending Cash Balance											
Base	239.3	220.6	157.2	122.8	125.9	133.8	149.4	339.0	517.2	664.2	270.0
CAFO	239.3	150.2	97.7	70.7	78.8	90.5	108.4	299.0	477.7	624.4	222.0
Change	-	(70.4)	(59.5)	(52.1)	(47.1)	(43.3)	(41.0)	(40.0)	(39.5)	(39.7)	(48.1)
Real Net Worth (1982 \$)											
Base	1,608.6	1,650.7	1,669.7	1,711.0	1,765.4	1,811.2	1,874.7	2,101.1	2,160.4	2,246.3	1,887.8
CAFO	1,608.6	1,656.0	1,660.9	1,689.8	1,733.5	1,770.1	1,825.5	2,044.5	2,097.5	2,177.7	1,850.6
Change	-	5.3	(8.8)	(21.2)	(32.0)	(41.1)	(49.2)	(56.5)	(62.9)	(68.7)	(37.2)
Debt/Asset Ratio											
Base	0.57	0.53	0.49	0.45	0.39	0.33	0.27	0.21	0.17	0.11	0.33
CAFO	0.57	0.54	0.51	0.47	0.42	0.37	0.31	0.25	0.21	0.16	0.36
Change	0.00	0.01	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.05	0.03
Rate of Return on Equity											
Base	0.28	0.23	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.18
CAFO	0.28	0.22	0.17	0.18	0.17	0.17	0.17	0.17	0.16	0.17	0.18
Change	0.00	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00



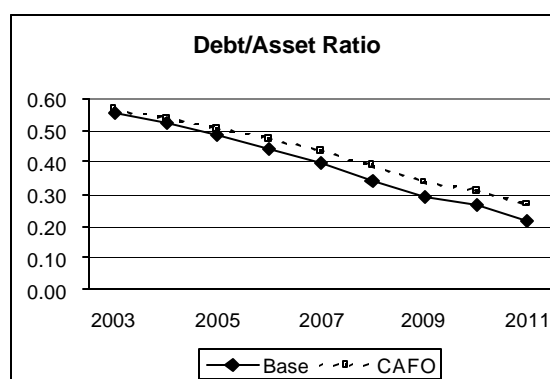
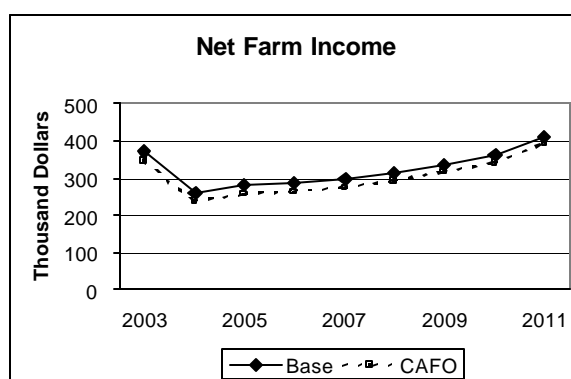
Appendix Table 3.10 Pacific 1000 Cow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	3,417.4	3,080.9	3,180.3	3,262.3	3,338.6	3,397.6	3,457.9	3,540.1	3,649.2	3,796.4
CAFO	3,433.5	3,097.0	3,196.4	3,278.4	3,354.7	3,413.7	3,474.0	3,556.2	3,665.3	3,812.5
Change	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1
Total Expenses										
Base	2,767.4	2,606.1	2,661.2	2,692.3	2,731.1	2,753.5	2,786.5	2,826.5	2,883.7	2,964.7
CAFO	2,791.3	2,630.6	2,687.1	2,718.3	2,757.2	2,779.4	2,812.1	2,852.3	2,909.3	2,990.3
Change	23.9	24.6	25.9	26.1	26.1	25.9	25.6	25.8	25.5	25.6
Net Cash Income										
Base	650.0	249.5	365.0	465.0	554.5	635.8	723.3	816.5	914.3	1,047.8
CAFO	642.2	240.4	353.4	456.0	546.0	627.0	712.9	804.8	905.1	1,040.1
Change	(7.8)	(9.1)	(11.7)	(9.0)	(8.5)	(8.7)	(10.4)	(11.7)	(9.2)	(7.7)
Net Farm Income										
Base	460.3	59.9	175.4	275.3	364.8	446.1	533.7	626.9	724.7	858.1
CAFO	443.3	41.5	154.5	257.1	347.1	428.1	514.0	605.9	706.2	841.2
Change	(17.0)	(18.3)	(20.9)	(18.2)	(17.7)	(18.0)	(19.7)	(20.9)	(18.4)	(16.9)
Ending Cash Balance										
Base	517.2	206.5	298.5	379.0	439.7	509.2	579.5	652.2	724.1	859.3
CAFO	477.7	190.8	268.8	343.2	402.7	478.2	544.8	617.3	685.8	824.2
Change	(39.5)	(15.7)	(29.7)	(35.7)	(36.9)	(31.0)	(34.7)	(34.9)	(38.3)	(35.2)
Real Net Worth (1982 \$)										
Base	2,160.4	1,488.1	1,693.8	1,837.7	1,976.0	2,089.4	2,234.8	2,361.5	2,474.6	2,744.5
CAFO	2,097.5	1,400.0	1,611.8	1,759.4	1,901.3	2,019.2	2,165.1	2,293.7	2,412.2	2,682.3
Change	(62.9)	(88.1)	(82.1)	(78.3)	(74.8)	(70.1)	(69.7)	(67.8)	(62.4)	(62.2)
Debt/Asset Ratio										
Base	0.17	0.01	0.07	0.11	0.15	0.18	0.23	0.28	0.33	0.40
CAFO	0.21	0.05	0.12	0.15	0.20	0.23	0.28	0.33	0.37	0.45
Change	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Rate of Return on Equity										
Base	0.17	0.05	0.09	0.12	0.14	0.17	0.19	0.22	0.24	0.28
CAFO	0.16	0.05	0.09	0.12	0.14	0.17	0.19	0.22	0.24	0.28
Change	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



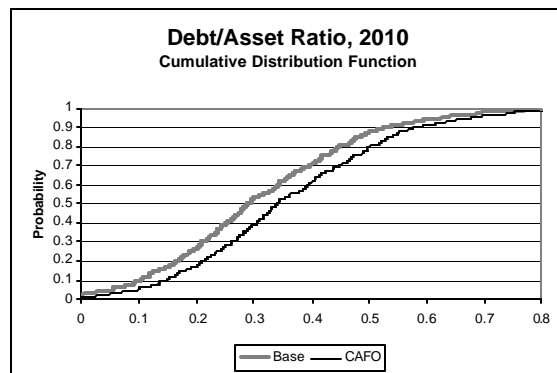
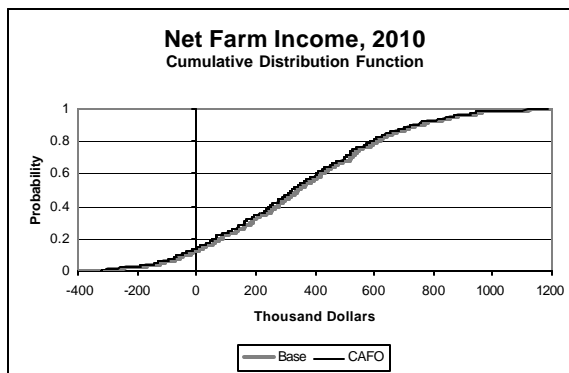
Appendix Table 3.11 Southern 1000 Cow Operation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	03-11 avg
CAFO Costs (Thousand Dollars)											
Annual Costs	-	10.7	10.1	10.1	10.7	10.1	10.1	10.7	10.1	10.1	10.3
Down payment on Loan	-	86.9	-	-	-	-	-	-	-	-	9.7
Principal Payment on Loan	-	9.0	9.7	10.5	11.3	12.2	13.2	14.3	15.4	16.7	12.5
Interest Payment on Loan	-	10.4	9.7	8.9	8.1	7.2	6.2	5.1	4.0	2.8	6.9
Total	-	117.0	29.5	29.5	30.1	29.5	29.5	30.1	29.5	29.5	39.4
Total Receipts											
Base	3,154.5	3,101.2	3,014.6	3,053.1	3,094.9	3,139.1	3,189.3	3,256.1	3,325.2	3,411.4	3,176.1
CAFO	3,154.5	3,108.0	3,024.0	3,064.0	3,107.1	3,152.3	3,203.3	3,270.7	3,340.5	3,426.9	3,188.5
Change	-	6.9	9.3	10.9	12.2	13.2	14.0	14.7	15.3	15.5	12.4
Total Expenses											
Base	2,525.5	2,540.3	2,565.9	2,583.8	2,618.3	2,654.4	2,685.3	2,728.5	2,775.6	2,810.7	2,662.5
CAFO	2,525.5	2,561.4	2,588.0	2,606.9	2,644.3	2,680.2	2,711.1	2,754.5	2,800.5	2,835.1	2,686.9
Change	-	21.1	22.0	23.1	26.0	25.9	25.8	26.0	24.9	24.4	24.4
Net Cash Income											
Base	629.0	560.9	448.7	469.3	476.6	484.8	504.0	527.6	549.6	600.7	513.6
CAFO	629.0	546.6	436.0	457.2	462.8	472.1	492.2	516.3	540.0	591.8	501.7
Change	-	(14.2)	(12.7)	(12.1)	(13.8)	(12.7)	(11.8)	(11.3)	(9.6)	(8.9)	(11.9)
Net Farm Income											
Base	439.3	371.2	259.0	279.6	287.0	295.1	314.3	337.9	360.0	411.0	323.9
CAFO	439.3	347.7	237.1	258.3	263.9	273.2	293.3	317.4	341.1	392.9	302.8
Change	-	(23.5)	(21.9)	(21.4)	(23.0)	(21.9)	(21.1)	(20.6)	(18.8)	(18.1)	(21.1)
Ending Cash Balance											
Base	173.4	145.7	73.6	30.9	26.1	26.3	35.1	218.7	390.8	531.4	164.3
CAFO	173.4	74.8	13.6	(31.1)	(10.9)	(5.9)	4.2	184.1	353.8	492.6	119.5
Change	-	(70.8)	(60.0)	(62.1)	(37.0)	(32.2)	(30.9)	(34.6)	(37.0)	(38.7)	(44.8)
Real Net Worth (1982 \$)											
Base	1,535.1	1,551.3	1,542.7	1,553.9	1,578.3	1,593.2	1,625.6	1,820.5	1,848.0	1,901.6	1,668.4
CAFO	1,535.1	1,556.3	1,533.4	1,547.5	1,545.3	1,547.0	1,567.7	1,755.2	1,776.1	1,823.9	1,628.0
Change	-	5.0	(9.3)	(6.4)	(33.0)	(46.2)	(57.9)	(65.3)	(71.9)	(77.8)	(40.3)
Debt/Asset Ratio											
Base	0.58	0.55	0.52	0.49	0.44	0.40	0.34	0.29	0.26	0.22	0.39
CAFO	0.58	0.56	0.54	0.51	0.47	0.44	0.39	0.34	0.31	0.27	0.43
Change	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.05	0.05	0.05	0.03
Rate of Return on Equity											
Base	0.26	0.22	0.16	0.17	0.16	0.16	0.17	0.16	0.16	0.17	0.17
CAFO	0.26	0.20	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.16
Change	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	-0.01



Appendix 3.12 Southern 1000 Cow Operation, Distributions for 2010

	2010	Percentiles								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
(Thousand Dollars)										
Total Receipts										
Base	3,325.2	3,003.2	3,099.0	3,177.9	3,249.7	3,307.2	3,364.7	3,441.4	3,545.7	3,687.8
CAFO	3,340.5	3,018.6	3,114.4	3,193.2	3,265.0	3,322.5	3,380.0	3,456.7	3,561.1	3,703.1
Change	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
Total Expenses										
Base	2,775.6	2,612.1	2,669.7	2,702.7	2,743.3	2,766.3	2,799.2	2,840.6	2,899.5	2,981.7
CAFO	2,800.5	2,636.6	2,695.8	2,728.5	2,769.1	2,793.3	2,825.6	2,867.0	2,928.3	3,010.1
Change	24.9	24.4	26.1	25.8	25.8	27.0	26.4	26.4	28.7	28.4
Net Cash Income										
Base	549.6	152.3	265.4	371.4	456.6	530.7	611.4	709.5	798.9	929.7
CAFO	540.0	140.4	255.0	361.0	444.9	518.8	600.8	699.5	787.2	920.3
Change	(9.6)	(11.9)	(10.4)	(10.4)	(11.7)	(11.9)	(10.6)	(10.0)	(11.6)	(9.4)
Net Farm Income										
Base	360.0	(37.3)	75.7	181.8	266.9	341.1	421.7	519.8	609.2	740.1
CAFO	341.1	(58.5)	56.1	162.1	246.0	319.9	401.9	500.6	588.3	721.4
Change	(18.8)	(21.2)	(19.6)	(19.7)	(20.9)	(21.1)	(19.8)	(19.2)	(20.9)	(18.6)
Ending Cash Balance										
Base	390.8	112.5	203.2	269.5	330.8	409.5	466.2	535.7	600.8	730.8
CAFO	353.8	89.9	174.9	237.6	297.8	380.9	431.9	503.1	567.1	693.0
Change	(37.0)	(22.6)	(28.3)	(31.9)	(33.0)	(28.6)	(34.3)	(32.6)	(33.7)	(37.9)
Real Net Worth (1982 \$)										
Base	1,848.0	1,119.5	1,326.2	1,489.3	1,634.4	1,750.0	1,893.0	2,027.2	2,155.1	2,417.8
CAFO	1,776.1	1,019.1	1,225.7	1,396.4	1,545.8	1,672.6	1,813.3	1,953.3	2,089.4	2,352.5
Change	(71.9)	(100.4)	(100.6)	(92.9)	(88.6)	(77.4)	(79.7)	(73.9)	(65.8)	(65.2)
Debt/Asset Ratio										
Base	0.26	0.10	0.17	0.21	0.25	0.29	0.34	0.39	0.45	0.53
CAFO	0.31	0.15	0.21	0.26	0.31	0.34	0.39	0.45	0.50	0.58
Change	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
Rate of Return on Equity										
Base	0.16	0.02	0.07	0.10	0.13	0.16	0.19	0.21	0.25	0.29
CAFO	0.16	0.01	0.06	0.10	0.12	0.16	0.19	0.22	0.25	0.30
Change	0.00	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01



ADDENDUM

At the request of the EPA, additional information has been generated regarding the financial implications of the proposed CAFO regulations on the cattle feedlot and dairy operations used in this report. For these sectors, we have re-generated tables 8 and 10 to show the impact of using Option 3A costs as constructed by the EPA. Option 3A costs include costs necessary for facilities that test positive for groundwater assessment. That is, a link between surface water and ground water was found. EPA assumed that 24% of all facilities would face the additional costs associated with testing positive regarding groundwater assessment.

The revised table 8 shows that if the operations constructed in this work test positive for ground water assessment that the cost of complying with the proposed regulations would increase substantially. Net cash income for all three cattle feedlots falls below baseline levels. These results are in sharp contrast to the Option 3 results. Under the Option 3 results, the 30,000 head feedlot actually experienced a rise in net farm income of over \$104,000 while under Option 3A costs it declines by over \$265,000.

The results for the dairy industry in revised table 10 show similar changes to those found for the cattle feedlots. Each of the dairy operations used in this analysis show a larger drop in net farm income using Option 3A costs than is the case with Option 3 costs. Debt/asset ratios increase an additional 1 to 2 percent with the Option 3A costs.

Revised Table 8. 2003-2011 Average Values for Feedlot Operations (3A Costs)

	500 Head Feedlot		5000 Head Feedlot		30,000 Head Feedlot	
	Midwest		Midwest		Southern Plains	
Net Cash Income						
Baseline	\$	20,780	\$	98,279	\$	721,838
CAFO	\$	11,085	\$	61,827	\$	587,793
Change	\$	(9,695)	\$	(36,452)	\$	(134,044)
Net Farm Income						
Baseline	\$	16,631	\$	60,229	\$	524,413
CAFO	\$	3,254	\$	2,843	\$	259,884
Change	\$	(13,378)	\$	(57,386)	\$	(264,529)
Ending Cash Balance						
Baseline	\$	8,175	\$	18,625	\$	588,667
CAFO	\$	(11,801)	\$	(72,102)	\$	17,716
Change	\$	(19,976)	\$	(90,727)	\$	(570,951)
Real Net Worth (1982 \$)						
Baseline	\$	98,637	\$	642,191	\$	4,510,930
CAFO	\$	69,872	\$	518,500	\$	3,978,305
Change	\$	(28,764)	\$	(123,691)	\$	(532,625)
Debt/Asset Ratio						
Baseline		0.62		0.73		0.69
CAFO		0.78		0.81		0.75
Change		0.16		0.08		0.07
Rate of Return on Equity						
Baseline		0.20		0.14		0.10
CAFO		0.19		0.12		0.08
Change		-0.01		-0.02		-0.03
P(2010 Net Farm Income < 0)						
Baseline		0.38		0.47		0.43
CAFO		0.48		0.55		0.48

Revised Table 10. 2003-2011 Average Values for Dairy Operations (3A Costs)

	250 Cow Operations		500 Cow Operations		1000 Cow Operations	
	Mid-Atlantic	Midwest	Central	Mid-Atlantic	Pacific	Southern
Net Cash Income						
Baseline	\$ 91,927	\$ 91,832	\$ 214,390	\$ 255,702	\$ 598,027	\$ 513,579
CAFO	\$ 81,524	\$ 81,427	\$ 204,376	\$ 244,079	\$ 580,604	\$ 493,687
Change	\$ (10,403)	\$ (10,405)	\$ (10,014)	\$ (11,623)	\$ (17,423)	\$ (19,892)
Net Farm Income						
Baseline	\$ 46,218	\$ 46,124	\$ 120,140	\$ 161,452	\$ 408,360	\$ 323,913
CAFO	\$ 31,782	\$ 31,685	\$ 104,927	\$ 143,581	\$ 378,437	\$ 291,521
Change	\$ (14,437)	\$ (14,439)	\$ (15,213)	\$ (17,871)	\$ (29,923)	\$ (32,392)
Ending Cash Balance						
Baseline	\$ 31,653	\$ 31,555	\$ 53,200	\$ 104,441	\$ 270,018	\$ 164,282
CAFO	\$ 10,174	\$ 10,088	\$ 30,731	\$ 65,992	\$ 201,497	\$ 104,098
Change	\$ (21,479)	\$ (21,467)	\$ (22,469)	\$ (38,450)	\$ (68,522)	\$ (60,184)
Real Net Worth (1982 \$)						
Baseline	\$ 464,586	\$ 464,405	\$ 810,565	\$ 928,175	\$ 1,887,841	\$ 1,668,350
CAFO	\$ 434,121	\$ 433,935	\$ 780,002	\$ 893,752	\$ 1,832,568	\$ 1,608,499
Change	\$ (30,465)	\$ (30,470)	\$ (30,563)	\$ (34,423)	\$ (55,273)	\$ (59,851)
Debt/Asset Ratio						
Baseline	0.36	0.36	0.42	0.34	0.33	0.39
CAFO	0.44	0.44	0.46	0.39	0.37	0.44
Change	0.08	0.08	0.05	0.05	0.04	0.05
Rate of Return on Equity						
Baseline	0.08	0.08	0.14	0.15	0.18	0.17
CAFO	0.07	0.07	0.13	0.14	0.17	0.16
Change	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
P(2010 Net Farm Income < 0)						
Baseline	0.28	0.28	0.23	0.13	0.06	0.13
CAFO	0.35	0.35	0.25	0.16	0.09	0.16

