

# ISU Swine Enterprise Records Program

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### Summary and Implications

High profit producers in the Iowa State University Swine Enterprise Record program are characterized by having the best combination of efficient production levels and lower than average production costs. Records for 1995 indicate that producers in the top 10% based on profit margin were above average for all production parameters, but were not always in the top 10% for each individual production measure. Being above average in most production areas allows a producer to achieve efficient production levels and the optimum cost of production.

### Introduction

The annual ISU Swine Enterprise Record Program State Summary is used by producers to determine their competitive position and to set production and financial goals for their operation. Producers are divided into the following categories by type of operation: Farrow-to-Finish, Feeder Pig Production, Feeder Pig Finishing, and Combination. The annual summary lists production and financial values for producers in the top 10%, top one-third, average, and bottom one-third groups based on profit margin.

### Materials and Methods

Daily and monthly financial and production records are recorded by Iowa pork producers using the ISU Swine Enterprise Record program. Producers meet with their extension livestock field specialist annually to summarize their data and submit it to the state extension office for inclusion in the state summary. The extension field specialist uses the producer's individual data and the benchmark values in the state summary to identify strengths and weaknesses of each operation and recommends areas that offer potential for improvement.

### Results and Discussion

Producer data is sorted into the top 10%, top one-third, average, and bottom one-third groups based on profit margin (line 16) by enterprise type in Tables 1-4. Records for 1995 indicate that the top 10% of farrow-to-finish producers based on profit margin averaged a return of \$10.22/cwt. compared to \$7.14/cwt. for the top one-third of producers (Table 1). The bottom one-third of the producers averaged a loss of \$3.12/cwt.

Table 5 compares the production values for the top 10% profit group with the top 10% producers based on individual

production measures. Records show that the 10% most profitable producers averaged 18.19 pigs/sow/year (p/s/y) while the top 10% of producers based on p/s/y averaged 21.44. Only four of the herds in the top 10% of producers ranked on p/s/y were also in the top 10% profit group. In addition, the most profitable producers had a whole herd efficiency average of 337 lb. feed/cwt. gain compared to 308 for the most efficient herds. Only five herds were in the top 10% group for profit and for feed efficiency.

Fifteen of the 18 most profitable producers were among the producers with the lowest cost of production (Table 5). The second most important production factor was feed cost/cwt. Eight producers with the lowest feed cost/cwt. were also among the most profitable herds. Market price had very little bearing on profit. Only three of the herds (out of 18 possible) that received the highest average market price were in the top 10% based on profit margin.

Table 6 lists group means for various production measures and shows a large spread among producers for each individual category. Pigs/sow/year averaged 16.32 for all 180 producers in the data set while the top 10% recorded 21.44. The bottom one-third had only 12.78. The top 10% weaned 10.05 pigs/litter compared to 8.59 for the average and 7.76 for the bottom one-third. Whole herd feed efficiency was 308 lb. feed/cwt. gain for the top 10% herds while the entire group averaged 361 lb. and the bottom one-third required 400 lb. Feed costs were \$20.74/cwt. for the top 10% compared to \$25.29 for the average herd and \$28.55 for the bottom one-third.

Production efficiencies improved in nearly all categories for 1995 compared to 1994 (Table 7) with the biggest gains made by the top 10% profit group. These improvements are the result of improved management, genetics, and the implementation of new technology. Market price was up in 1995, resulting in better profit margins for producers in all categories.

<b>Table 1. 1995 ISU Swine Enterprise Summary Farrow to Finish Enterprises (Total of 180) Sorted on Item #16 (Margin Over All Costs)</b>		<b>Top 10% Based On Profit</b>	<b>Top 1/3 Based On Profit</b>	<b>Bottom 1/3 Based On Profit</b>	<b>Average Of 180 Farms</b>
1.	Return to Capital, Unpaid Labor and Management, \$	10,1088	74,702	26,800	50,917
2.	Net Profit and Return to Management this Period, \$	70,798	46,385	-392	22,702
3.	Return per Hour for All Hours of Labor & Mgmt., \$/Hr.	33.24	26.46	7.84	17.61
4.	Annual Percent Return on Capital, %	54.27	40.61	7.74	22.97
5.	Average Price per Cwt. of Feeder Pigs Sold, \$	58.34	67.10	78.82	74.75
6.	Average Price per Cwt. of Market Hogs Sold, \$	44.06	43.87	42.82	43.38
7.	Average Price per Cwt. of Breeding Stock Sold, \$	30.38	30.91	29.90	30.35
8.	Average Price per Cwt. for All Hogs Sold, \$	43.29	43.20	42.05	42.66
9.	Feed Cost per Cwt. of Pork Produced, \$	22.23	23.48	27.35	25.29
10.	Other Oper. Costs (Except Hir. Labor)/Cwt. Pork Prod.,\$	3.45	4.28	5.92	5.24
	10a.Utilities, Fuel, Elec.,& Telephone/Cwt., \$	0.91	1.18	1.58	1.36
	10b.Veterinary Services & Medicine per Cwt., \$	0.97	1.18	1.74	1.52
11.	Depreciation, Taxes & Ins. Costs per Cwt. of Pork Prod.,\$	1.86	1.94	3.22	2.61
12.	Capital Charge on Fixed Capital/Cwt. of Pork Produced, \$	0.71	1.14	1.72	1.38
13.	Capital Charge on Operating Capital/Cwt. of Pork Prod., \$	0.98	1.20	1.71	1.42
14.	Value of Labor (All) per Cwt. of Pork Produced, \$	3.83	4.03	5.25	4.59
15.	Total Cost per Cwt. of Pork Produced, \$	33.07	36.07	45.17	40.55
16.	Margin Over All Costs per Cwt. of Pork Produced, not Including Inventory, \$	10.22	7.14	-3.12	2.11
17.	Margin Over All Costs per Cwt. of Pork Produced, Inventory Included, \$	10.98	8.69	-0.30	4.22
18.	Margin Over All Costs per Head Sold, \$	27.86	22.46	-0.80	10.80
19.	Fixed Costs per Year per Female Maintained, \$	127.46	133.14	173.80	157.18
20.	Fixed Costs per Year per Crate Maintained, \$	537.54	585.06	730.99	671.58
21.	Fixed Costs per Pig Weaned, \$	6.47	7.57	11.48	9.43
22.	Net Profit per Year per Female Maintained, \$	483.17	363.07	-2.01	176.65
23.	Net Profit per Year per Crate Maintained, \$	2,030.08	1,534.33	-36.60	737.05
24.	Average No. of Feeder Pigs Sold	88	77	70	83
25.	Average Wt. of Feeder Pigs Sold, Lb.	49	55	50	50
26.	Average No. of Market Hogs Sold	2,615	1,982	1,391	1,778
27.	Average Wt. of Market Hogs Sold, Lb.	250	249	247	247
28.	Pig Death Loss, Birth to Weaning (% of No. Far. Live).	11.88	12.55	14.25	12.75
29.	Pig Death Loss, Weaning to Mkt. (% of No. Weaned)	5.50	5.51	7.50	6.17
30.	Breeding Stock Death Loss, (% of No. Maintained)	5.99	5.09	4.52	4.67
31.	Average Female Inventory, No. of Head	163	131	108	124
32.	No. of Litters Weaned per Female per Year	2.02	1.97	1.80	1.90
33.	No. of Pigs Weaned per Litter	8.95	8.74	8.38	8.59
34.	No. of Pigs Weaned per Female per Year	18.19	17.28	15.10	16.32
35.	No. of Litters Weaned per Crate per Year	9.08	8.58	7.55	8.24
36.	No. of Pigs Weaned per Crate per Year	80.85	75.04	63.20	70.88
37.	Total Pounds of Grain per Cwt. of Pork Produced, Lb.	268	276	305	287
38.	Total Pounds of Supplement per Cwt. of Pork Prod., Lb.	70	69	78	74
39.	Total Pounds of Feed per Cwt. of Pork Produced, Lb.	337	345	382	361
40.	Average Cost of Diets per Cwt., \$	6.63	6.83	7.17	7.02
41.	Hours of Labor per Cwt. of Pork Produced, Hours	0.55	0.54	0.72	0.60
42.	Hours of Labor per Female Maintained per Year, Hours	23.46	22.36	24.06	22.31
43.	Hours of Labor per Litter Weaned, Hours	11.54	11.34	13.72	11.86
44.	Cost of Feed Additives & Drugs/Cwt. of Pork Produced, \$	0.89	1.04	1.30	0.88
45.	Average Price of Grain, \$/Bu.	2.49	2.51	2.54	2.53
46.	Average Price of Supplement, \$/Cwt.	14.62	14.44	15.85	15.24

**Table 2. 1995 ISU Swine Enterprise Summary  
Feeder Pig Producing Enterprises (Total of 20)  
Sorted on Item #16 (Margin Over All Costs)**

	<b>Top 1/3 Based On Profit</b>	<b>Bottom 1/3 Based On Profit</b>	<b>Average Of 20 Farms</b>
1. Return to Capital, Unpaid Labor and Management, \$	23,149	4,196	17,032
2. Net Profit and Return to Management this Period, \$	10,249	-10,551	1,556
3. Return per Hour for All Hours of Labor & Mgmt., \$/Hr.	13.22	0.23	8.15
4. Annual Percent Return on Capital, %	33.15	-8.69	12.01
5. Average Price per Cwt. of Feeder Pigs Sold, \$	79.77	78.97	79.17
6. Average Price per Cwt. of Market Hogs Sold, \$	47.80	41.09	41.94
7. Average Price per Cwt. of Breeding Stock Sold, \$	30.75	29.50	30.41
8. Average Price per Cwt. for All Hogs Sold, \$	69.30	62.22	63.46
9. Feed Cost per Cwt. of Pork Produced, \$	30.34	34.36	31.58
10. Other Oper. Costs (Except Hir. Labor)/Cwt. Pork Prod., \$	12.65	14.76	12.02
10a. Utilities, Fuel, Elec., & Telephone/Cwt., \$	2.52	5.34	3.37
10b. Veterinary Services & Medicine per Cwt., \$	3.46	4.41	3.58
11. Depreciation, Taxes & Ins. Costs per Cwt. of Pork Prod., \$	5.05	8.38	6.07
12. Capital Charge on Fixed Capital/Cwt. of Pork Produced, \$	2.31	3.69	2.94
13. Capital Charge on Operating Capital/Cwt. of Pork Prod., \$	0.60	1.47	1.20
14. Value of Labor (All) per Cwt. of Pork Produced, \$	8.64	13.70	11.54
15. Total Cost per Cwt. of Pork Produced, \$	59.60	76.36	65.35
16. Margin Over All Costs per Cwt. of Pork Produced, not Including Inventory, \$	9.70	-14.14	-1.89
17. Margin Over All Costs per Cwt. of Pork Produced, Inventory Included, \$	8.39	-10.16	-0.06
18. Margin Over All Costs per Head Sold, \$	5.21	-6.08	0.24
19. Fixed Costs per Year per Female Maintained, \$	90.02	129.63	98.67
20. Fixed Costs per Year per Crate Maintained, \$	426.04	537.49	434.31
21. Fixed Costs per Pig Weaned, \$	5.23	6.71	5.60
22. Net Profit per Year per Female Maintained, \$	105.13	-116.19	5.02
23. Net Profit per Year per Crate Maintained, \$	464.91	-467.02	21.51
24. Average No. of Feeder Pigs Sold	1,787	1,355	1,676
25. Average Wt. of Feeder Pigs Sold, Lb.	51	49	49
26. Average No. of Market Hogs Sold	105	164	150
27. Average Wt. of Market Hogs Sold, Lb.	237	253	245
28. Pig Death Loss, Birth to Weaning (% of No. Far. Live).	11.42	15.32	12.71
29. Pig Death Loss, Weaning to Mkt. (% of No. Weaned)	1.81	2.72	2.48
30. Breeding Stock Death Loss, (% of No. Maintained)	5.16	3.72	3.98
31. Average Female Inventory, No. of Head	105	88	109
32. No. of Litters Weaned per Female per Year	2.00	2.04	2.01
33. No. of Pigs Weaned per Litter	9.22	9.05	8.83
34. No. of Pigs Weaned per Female per Year	18.45	18.54	17.82
35. No. of Litters Weaned per Crate per Year	9.31	8.42	8.72
36. No. of Pigs Weaned per Crate per Year	85.20	75.99	77.13
37. Total Pounds of Grain per Cwt. of Pork Produced, Lb.	271	315	287
38. Total Pounds of Supplement per Cwt. of Pork Prod., Lb.	94	101	91
39. Total Pounds of Feed per Cwt. of Pork Produced, Lb.	366	416	378
40. Average Cost of Diets per Cwt., \$	8.35	8.31	8.40
41. Hours of Labor per Cwt. of Pork Produced, Hours	1.39	2.04	1.60
42. Hours of Labor per Female Maintained per Year, Hours	15.86	23.18	17.84
43. Hours of Labor per Litter Weaned, Hours	7.71	11.44	8.81
44. Cost of Feed Additives & Drugs/Cwt. of Pork Produced, \$	0.63	1.69	1.40
45. Average Price of Grain, \$/Bu.	2.45	2.41	2.44
46. Average Price of Supplement, \$/Cwt.	17.92	18.25	17.57

**Table 3. 1995 ISU Swine Enterprise Summary  
Combination Enterprises (Total of 22)  
Sorted on Item #16 (Margin Over All Costs)**

	<b>Bottom 1/3 Based On Profit</b>	<b>Average Of 22 Farms</b>
1. Return to Capital, Unpaid Labor and Management, \$	33,655	52,413
2. Net Profit and Return to Management this Period, \$	10,220	26,068
3. Return per Hour for All Hours of Labor & Mgmt., \$/Hr.	12.78	17.56
4. Annual Percent Return on Capital, %	14.79	24.44
5. Average Price per Cwt. of Feeder Pigs Sold, \$	72.66	80.98
6. Average Price per Cwt. of Market Hogs Sold, \$	43.86	44.00
7. Average Price per Cwt. of Breeding Stock Sold, \$	30.65	29.96
8. Average Price per Cwt. for All Hogs Sold, \$	46.62	47.31
9. Feed Cost per Cwt. of Pork Produced, \$	28.06	27.08
10. Other Oper. Costs (Except Hir. Labor)/Cwt. Pork Prod.,\$	7.68	6.42
10a. Utilities, Fuel, Elec., & Telephone/Cwt., \$	1.31	1.40
10b. Veterinary Services & Medicine per Cwt., \$	2.10	2.04
11. Depreciation, Taxes & Ins. Costs per Cwt. of Pork Prod.,\$	4.19	3.03
12. Capital Charge on Fixed Capital/Cwt. of Pork Produced, \$	2.20	1.61
13. Capital Charge on Operating Capital/Cwt. of Pork Prod., \$	1.91	1.51
14. Value of Labor (All) per Cwt. of Pork Produced, \$	6.38	5.43
15. Total Cost per Cwt. of Pork Produced, \$	50.42	45.07
16. Margin Over All Costs per Cwt. of Pork Produced, not Including Inventory, \$	-3.79	2.24
17. Margin Over All Costs per Cwt. of Pork Produced, Inventory Included, \$	-0.65	4.44
18. Margin Over All Costs per Head Sold, \$	2.15	8.23
19. Fixed Costs per Year per Female Maintained, \$	142.21	117.33
20. Fixed Costs per Year per Crate Maintained, \$	686.60	618.82
21. Fixed Costs per Pig Weaned, \$	8.91	6.99
22. Net Profit per Year per Female Maintained, \$	80.05	150.57
23. Net Profit per Year per Crate Maintained, \$	190.75	693.59
24. Average No. of Feeder Pigs Sold	827	1,088
25. Average Wt. of Feeder Pigs Sold, Lb.	52	50
26. Average No. of Market Hogs Sold	1,256	1,567
27. Average Wt. of Market Hogs Sold, Lb.	248	244
28. Pig Death Loss, Birth to Weaning (% of No. Far. Live).	13.06	13.30
29. Pig Death Loss, Weaning to Mkt. (% of No. Weaned)	7.60	5.57
30. Breeding Stock Death Loss, (% of No. Maintained)	3.52	3.61
31. Average Female Inventory, No. of Head	137	168
32. No. of Litters Weaned per Female per Year	1.86	1.92
33. No. of Pigs Weaned per Litter	8.62	8.83
34. No. of Pigs Weaned per Female per Year	15.99	16.88
35. No. of Litters Weaned per Crate per Year	8.82	9.73
36. No. of Pigs Weaned per Crate per Year	75.72	86.04
37. Total Pounds of Grain per Cwt. of Pork Produced, Lb.	301	295
38. Total Pounds of Supplement per Cwt. of Pork Prod., Lb.	89	84
39. Total Pounds of Feed per Cwt. of Pork Produced, Lb.	390	379
40. Average Cost of Diets per Cwt., \$	7.24	7.18
41. Hours of Labor per Cwt. of Pork Produced, Hours	0.79	0.71
42. Hours of Labor per Female Maintained per Year, Hours	19.60	18.73
43. Hours of Labor per Litter Weaned, Hours	10.43	9.78
44. Cost of Feed Additives & Drugs/Cwt. of Pork Produced, \$	1.08	0.93
45. Average Price of Grain, \$/Bu.	2.48	2.51
46. Average Price of Supplement, \$/Cwt.	15.94	15.06

**Table 4. 1995 ISU Swine Enterprise Summary  
Feeder Pig Finishing Enterprises (Total of 15)  
Sorted on Item #16 (Margin Over All Costs)**

	<b>Bottom 1/3 Based On Profit</b>	<b>Average Of 15 Farms</b>
1. Return to Capital, Unpaid Labor and Management, \$	16,628	40,458
2. Net Profit and Return to Management this Period, \$	112	22,028
3. Return per Hour for All Hours of Labor & Mgmt., \$/Hr.	7.74	31.88
4. Annual Percent Return on Capital, %	11.26	25.87
5. Average Price per Cwt. of Feeder Pigs Sold, \$		
6. Average Price per Cwt. of Market Hogs Sold, \$	43.24	44.48
7. Average Price per Cwt. of Breeding Stock Sold, \$		
8. Average Price per Cwt. for All Hogs Sold, \$	43.23	44.49
9. Feed Cost per Cwt. of Pork Produced, \$	25.08	22.66
10. Other Oper. Costs (Except Hir. Labor)/Cwt. of Pork Prod., \$	4.45	3.30
10a. Utilities, Fuel, Elec., & Telephone/Cwt., \$	0.91	0.67
10b. Veterinary Services & Medicine per Cwt., \$	0.73	0.46
11. Depreciation, Taxes & Ins. Costs per Cwt. of Pork Prod., \$	1.24	1.57
12. Capital Charge on Fixed Capital/Cwt. of Pork Produced, \$	1.20	0.88
13. Capital Charge on Operating Capital/Cwt. of Pork Prod., \$	1.34	1.29
14. Value of Labor (All) per Cwt. of Pork Produced, \$	3.61	2.92
15. Total Cost per Cwt. of Pork Produced, \$	36.93	32.62
16. Margin Over All Costs per Cwt. of Pork Produced, not Including Inventory, \$	6.30	11.87
17. Margin Over All Costs per Cwt. of Pork Produced, Inventory Included, \$	0.70	4.85
18. Margin Over All Costs per Head Sold, \$	0.80	10.67
19. No. of Feeder Pigs Purchased, No. Head	1,554	2,035
20. Average Wt. of Purchased Feeder Pigs, Lb.	47	49
21. Price per Feeder Pig Purchased, \$/Head	35.54	39.01
22. Price per Cwt. Paid for Purchased Feeder Pigs, \$	84.71	85.69
23. Fixed Cost per Pig Purchased, \$	4.28	4.69
24. Total No. of Feeder Pigs Sold this Period.		
25. Average Wt. of Feeder Pigs Sold, Lb.		
26. Total No. of Market Hogs Sold this Period.	1,260	1,732
27. Average Wt. of Market Hogs Sold, Lb.	250	251
28. Pig Death Loss, Percent of No. Purchased (%)	3.39	3.18
29. Total Pounds of Grain per Cwt. of Pork Produced, Lb.	290	268
30. Total Pounds of Supplement per Cwt. of Pork Prod., Lb.	68	66
31. Total Pounds of Feed per Cwt. of Pork Produced, Lb.	358	334
32. Average Cost of Diets per Cwt., \$	7.01	6.79
33. Hours of Labor per Cwt. of Pork Produced, Hours	0.26	0.26
34. Cost of Feed Additives & Drugs/Cwt. of Pork Produced, \$	1.13	0.85
35. Market Price Needed to Break Even, \$/Cwt.	44.41	42.22
36. Average Price of Grain, \$/Bu.	2.50	2.50
37. Average Price of Supplement, \$/Cwt.	16.86	15.19

**Table 5. Productivity values for the top 10% profit group compared to the top 10% for various production measures.**

	Top 10% For Each Category	Top 10% Profit Group Average
Pigs/Sow/Year	21.44 (4)	18.19
Litters/Sow/Year	2.36 (4)	2.02
Pigs/Crate/Year	129 (4)	81
Sow Herd Size	310 (3)	163
Pigs Weaned/Litter	10.05 (3)	8.95
Feed Efficiency	308 (5)	337
Feed, \$/cwt.	20.74 (8)	22.23
Total Cost, \$/cwt.	32.56 (15)	33.07
Market Price	46.31 (3)	44.06

( ) = No. in top 10% for each category also in top 10% profit group.

**Table 6. Group means for various production measures.**

	Top 10%	Top 1/3	Average	Bottom 1/3
Pigs/Sow/Year	21.44	19.51	16.32	12.78
Litters/Sow/Year	2.36	2.19	1.90	1.55
Pigs/Crate/Year	129	102	71	40
Sow Herd Size	310	211	124	54
Pigs Weaned/Litter	10.05	9.49	8.59	7.76
Feed Efficiency	308	326	361	400
Feed Cost, \$/cwt.	20.74	22.39	25.29	28.55
Total Cost, \$/cwt.	32.56	35.69	40.55	45.74
Market Price	46.31	45.08	43.38	41.67

**Table 7. Comparison of production measures for 1994 and 1995.**

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	1994	1995
<u>Margin/Cwt.</u>		
Top 10%	6.25	10.22
Top third	4.02	7.14
Average	-0.99	2.11
<u>Market Price</u>		
Top 10%	41.13	44.06
Top third	40.76	43.87
Average	40.39	43.38
<u>Total Cost/Cwt.</u>		
Top 10%	34.27	33.07
Top third	36.05	36.07
Average	40.63	40.55
<u>Feed Cost/Cwt.</u>		
Top 10%	23.12	22.23
Top third	23.71	23.48
Average	25.46	25.29
<u>Feed Efficiency</u>		
Top 10%	351	337
Top third	353	345
Average	369	361
<u>Pigs Weaned/Litter</u>		
Top 10%	8.90	8.95
Top third	8.73	8.74
Average	8.50	8.59
<u>Litters/Sow/Year</u>		
Top 10%	1.97	2.02
Top third	1.87	1.97
Average	1.84	1.90
<u>Pigs/Sow/Year</u>		
Top 10%	17.5	18.2
Top third	16.4	17.3
Average	15.7	16.3

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