

Table of Contents

Highlights.....	1
1. Introduction.....	3
The Sample.....	3
Characteristics of Ohio Swine Producers.....	4
Tables 1 – 12	6
2. Structure and Plans of the Swine Operation.....	12
Tables 13 – 17a.....	14
3. Attitudes of Swine Producers towards Contract Farming.....	18
Tables 18a – 18t.....	21
4. Economics and Technology.....	32
Tables 19 – 23c.....	33
5. Constraints and Concerns of Independent Producers.....	37
Tables 24a – 31.....	39
6. Constraints and Concerns of Contract Swine Producers.....	45
Tables 32 – 40o.....	48

Highlights

- ◆ Approximately 1,500 Ohio swine producers of all sizes and types of operations were surveyed by mail in December 1998 and early 1999 by the Ohio Agricultural Statistics Service. The sample was mostly random but large independent and contract producers were oversampled so as to include a larger share of swine produced in Ohio and because the number of contract producers is small. The mailing was followed with a reminder card.
- ◆ The vast majority of the 234 independent producer and 27 contract producer respondents classified themselves as the farm operator.
- ◆ Farms of contract producers averaged larger than farms of independent producers. Contract producers on average had smaller operations than the largest third of independent producers, but had much larger swine operations than the smallest two-thirds of independent producers.
- ◆ Contract producers differed significantly from independents in type of swine. Over two-thirds of contract producers specialized in finishing hogs, and the remainder were about evenly split between farrowing and nursery operations. None of the reporting contract producers listed farrow-to-finish operations.
- ◆ Probably because of the adverse economic conditions facing producers when the survey was taken, planned cutbacks in swine operations were anticipated over the next 12 months. Independent producers were significantly more likely to cut back – 46 percent of them versus 18 percent of contract producers. Of greater interest are longer-term plans. Independents were significantly less likely to plan to expand and more likely to cut back than contract producers over the next 5 years.
- ◆ Some 68 percent of small independents, 52 percent of large independents, and 81 percent of contract producers agree or strongly agreed that megafarms are a greater threat than contract production to family farms.
- ◆ More small and medium size independent producers agreed or strongly agreed than disagreed or strongly disagreed with the statement that the government should limit farms to no more than 2,500 hogs. In contrast, large independent and contract producers tended to be opposed to size limits.
- ◆ Swine producers were in wide agreement that all swine farms should not be regulated regardless of their size and manure management practices. Far more agreement was apparent that only large farms (2,500 hogs or larger) should be regulated to meet environmental standards. Contract producers were about evenly divided on the issue, but independents of all sizes favored only regulation of large farms.
- ◆ More respondents agreed (or strongly agreed) than disagreed (or strongly disagreed) with the statement that “Pork should be supplied by whoever can produce it at lowest cost, whether the farm is large or small.”

- ◆ Some 72 percent of independent producers disagreed or strongly disagreed with the statement that “Keeping food costs low is more important than saving small farms.” The proportion for contract producers was 56 percent.
- ◆ Prospects appear to be unfavorable for large farms under local option: respondents who agreed or strongly agreed with the statement “If the issue were put to a vote, people in this county would favor livestock farms of any size” were outnumbered more than 2:1 by those who disagreed or strongly disagreed with the statement.
- ◆ People object to concentrated animal feeding operations (CAFOs) for various reasons. The three most important concerns to both independent and contract producers were threat to family farms, odor, and water contamination.
- ◆ Nearly two-thirds of independent producers but less than 4 percent of contract producers were dissatisfied or strongly dissatisfied with the overall profitability of their swine operation.
- ◆ Compared to small and medium size independent producers, contract producers and large producers are more likely to use computers, keep records, sell on carcass merit basis, and store manure (avoiding application on frozen fields).
- ◆ The vast majority of independents regarded their pigs as of equal or higher quality compared to contract produced pigs. They also believe they had equal or greater efficiency than contract producers.
- ◆ Despite the confidence listed above in their swine production capability, over two-thirds of independent producers, including the large producers, indicated they will be forced to become bigger or exit the swine business.
- ◆ Some 78 percent of contract producers implied that they make a sufficient economic return on contract production to pay for new facilities – and presumably cover operating costs as well.

1. Introduction

Ohio's swine producers have concerns about the future of the industry. Independent swine producers are concerned about contract production, profitability, and pressures for larger operations. Contract swine producers are concerned about contract arrangements and environmental regulations. Independents and contract producers alike are wary of low hog prices. The very future of Ohio's swine industry is at stake. This report of a survey of Ohio's swine producers addresses environmental, technical, and economic issues confronting the state's swine producers. The answers can help the industry prepare for the future.

The Sample

Approximately 1,500 Ohio swine producers of all sizes and types of operations were surveyed by mail in December 1998 and early 1999 by the Ohio Agricultural Statistics Service. The sample was mostly random but large independent and contract producers were oversampled so as to include a larger share of swine produced in Ohio and because the number of contract producers is small. The mailing was followed with a reminder card.

Only active producers were asked to respond. Many independent producers in the sample had ceased production due to low hog prices. This reduced the response rate. The overall sample response rate was nearly 20 percent.

The survey was planned well in advance and could not easily be rescheduled to "normal" economic times. Hence, results must be interpreted in light of the difficult economic conditions facing producers when the survey was taken.

Also, results from contract producers must be interpreted with caution because, despite oversampling, the number of respondents was not large. For many, experience with contract production was limited and could change as competition intensifies among contractors. The small number of respondents reflects the relatively small population of contract producers in the state.

Special thanks go to State Statistician James Ramey who assisted with the sampling – carefully preserving the anonymity of respondents and confidentiality of results. Steven Moeller and Dave Meeker of the Animal Sciences Department in the College of Food, Agricultural, and Environmental Sciences at The Ohio State University provided extremely useful advice. We are grateful to these individuals and to the swine producers who so generously gave of their time to make this study possible. However, any shortcomings of this study are solely the responsibility of the authors.

Characteristics of Ohio Swine Producers

Personal and farming characteristics of survey respondents are shown in Tables 1 to 12.¹ Highlights are identified below:

- ◆ The vast majority of the 234 independent producer and 27 contract producer respondents classified themselves as the farm operator (Table 1).
- ◆ Most respondents were male (Table 2).
- ◆ Independent swine producers were divided into three groups with equal numbers (78) based on annual swine receipts. The small operations had receipts up to \$20,000, the medium size operations had receipts from \$20,000 to \$80,000, and the large operations had swine sales of over \$80,000 annually.
- ◆ Independent producers averaged 49 years of age with the one-third of independent respondents having the smallest swine operations averaging 52 years (Table 3) – very near the average of all Ohio farm operators reported in the *1997 Census of Agriculture*.
- ◆ The typical respondent had a high school education (Table 4). Many large independents and contract producers had college degrees.
- ◆ More than half of all respondents, except for the small independent operator group, classified themselves as employed full-time in farming (Table 5).
- ◆ Respondents all raised swine but about half were diversified into crops also (Table 6).
- ◆ Measured by acres farmed, farms of contract producers averaged larger than farms of independent producers. It is notable, however, that farms of the largest one-third of independent producers averaged 784 acres compared to an average of 485 acres for contract producers (Table 7).
- ◆ Medium and large size independent swine producers and contract producers on average owned two-fifths of the land they farmed (Table 8). In contrast, small independent producers owned fully 72 percent of the land they farmed.
- ◆ Two-fifths of land in small and medium size swine farms was in pasture, trees, farmstead, and the Conservation Reserve Program (Table 10). This contrasts sharply

¹ A chi-square (χ^2) test was used to test the hypothesis that proportions in the various response categories were the same among small, medium, and large independent producers, or among independent producers as a group versus contract producers. A t-test was used in some instances to test for differences among means. The value of p_r is the probability of obtaining the sample χ^2 (or t) drawing at random from a population where there is no difference in proportions (or averages) of particular responses among independent producers by size or among all independent versus contract producers. A small probability implies that proportions (or means) of respondents answering questions in a particular way are unlikely to be the same among size groups or between independent and contract producers.

with the 7-8 percent of land in such uses on large independent and contract swine producer farms.

- ◆ Respondents were diversified among crops and livestock but few reported that their main farm enterprise is crops (Table 11).
- ◆ Where respondents were engaged in livestock production in addition to swine, the most frequent enterprise was beef animals (Table 12). This was especially apparent on small scale swine farms where 41 percent reported beef cows, bulls, and calves.

Table 1. Respondent is:

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	------(Percent)-----					<i>(Percent)</i>
Farm operator	92.3	100.0	97.4	96.6	226	100.0
Spouse of operator	0.0	0.0	0.0	0.0	0	0.0
Other	5.1	0.0	2.6	2.6	6	0.0
No answer	2.6	0.0	0.0	0.9	2	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27

$$\chi^2 = 0.71 \quad p_r = 0.398^1$$

Test of total independent only versus contract producer proportions.

$$\chi^2 = 0.00 \quad p_r = 0.120$$

Test of independent producer proportions only.

¹ See text footnote 1 for definitions of statistical tests in this and other tables.

Table 2. Sex of respondent

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	------(Percent)-----					<i>(Percent)</i>
Male	84.6	96.2	92.3	91.0	213	100.0
Female	7.7	1.3	1.3	3.4	8	0.0
No answer	7.7	2.6	6.4	5.6	13	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27

$$\chi^2 = 1.01 \quad p_r = 0.315$$

Test of total independent only versus contract producer proportions.

$$\chi^2 = 6.80 \quad p_r = 0.033$$

Test of independent producer proportions only.

Table 3. Age of respondent

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>
	Small	Medium	Large	Total	
	------(Average age)-----				
Years	52	47	48	49	47
<i>No answer^a</i>	5	1	0	6	0
<i>Number of observations</i>	78	78	78	234	27
t = 0.79 p _r = 0.433	Test of total independent only versus contract producer proportions.				
x ² = 11.6	Test of independent producer proportions only.				

^aNumber of respondents not answering

Table 4. Education level of respondent

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	Small	Medium	Large	Total		
	------(Percent)-----					(Percent)
Less than high school	19.2	14.1	5.1	12.8	30	3.7
High School graduate (or GED)	42.3	46.2	44.9	44.5	104	44.4
Some college or vo-tech	16.7	20.5	17.9	18.4	43	33.3
4-yr. college degree	12.8	14.1	28.2	18.4	43	18.5
Graduate degree	6.4	5.1	1.3	4.3	10	0.0
No answer	2.6	0.0	2.6	1.7	4	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
x ² = 5.48 p _r = 0.241	Test of total independent only versus contract producer proportions.					
x ² = 15.51 p _r = 0.050	Test of independent producer proportions only.					

Table 5. Respondent's employment farming is:

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	------(Percent)-----					
Full-time	46.2	69.2	85.9	67.1	157	59.3
Part-time	47.4	30.8	14.1	30.8	72	40.7
No answer	6.4	0.0	0.0	2.1	5	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 0.95$ $p_r = 0.329$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 23.44$ $p_r = 0.000$	Test of independent producer proportions only.					

Table 6. Respondent raises: (all that apply)

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	------(Percent)-----					
Crops	43.1	47.7	48.0	46.3	213	44.0
Livestock	44.4	49.7	51.3	48.5	223	52.0
Poultry	10.6	2.6	0.7	4.6	22	4.0
No answer	1.9	0.0	0.0	0.6	3	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	461	100.0
<i>Number of observations</i>	160	151	150	461		50
$\chi^2 = 0.22$ $p_r = 0.894$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 19.64$ $p_r = 0.001$	Test of independent producer proportions only.					

Table 7. Total acres being farmed by respondent

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>
	Small	Medium	Large	Total	
	------(Average no. of acres)-----				
Acres	190	412	784	462	485
<i>No answer^a</i>	8	5	2	15	2
<i>Number of observations</i>	78	78	78	234	27
t = 0.14 p _r = 0.888	Test of total independent versus contract producer means.				

^aNumber of respondents not answering

Table 8. Number of acres owned by respondent

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>
	Small	Medium	Large	Total	
	------(Average no. of acres owned)-----				
Number	137	161	302	200	187
<i>No answer^a</i>	4	2	3	9	2
<i>Number of observations</i>	78	78	78	234	27
t = 0.27 p _r = 0.789	Test of total independent versus contract producer means.				

^aNumber of respondents not answering

Table 9. Acres in crops on respondent's farm

<i>Response</i>	<i>Independent producers</i>				<i>Contract Producers</i>
	Small	Medium	Large	Total	
	------(Average no. of acres in crops)-----				
Acres	145	161	773	360	489
<i>No answer^a</i>	14	2	10	26	5
<i>Number of observations</i>	78	78	78	234	27
t = 0.48 p _r = 0.635	Test of total independent versus contract producer means.				

^aNumber of respondents not answering

Table 10. Acres in pasture, trees, farmstead, CRP, etc. on respondent's farm

<i>Response</i>	<i>Independent producers</i>				<i>Contract Producers</i>
	Small	Medium	Large	Total	
	------(Average no. of acres in pasture, trees, farmstead, CRP, etc.)-----				
Acres	55	62	52	56	40
<i>No answer^a</i>	21	27	22	70	17
<i>Number of observations</i>	78	78	78	234	27
t = 0.14 p _r = 0.888	Test of total independent versus contract producer means.				

^aNumber of respondents not answering

Table 11. Respondent's main farm enterprise is:

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	
	------(Percent)-----					(Percent)
Swine	10.3	43.6	39.7	31.2	73	37.0
Crops	15.4	7.7	5.1	9.4	22	0.0
Other livestock or poultry	17.9	21.8	20.5	20.1	47	18.5
Diversified	51.3	26.9	30.8	36.3	85	44.4
No answer	5.1	0.0	3.8	3.0	7	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
x ² = 3.16 p _r = 0.368	Test of total independent versus contract producer proportions.					
x ² = 29.18 p _r = < 0.001	Test of independent producer proportions only.					

Table 12. If respondent is currently engaged in other livestock or poultry production, please indicate: ^a

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	----- <i>(Percent)</i> -----					<i>(Percent)</i>
Milk cows	9.2	10.9	3.4	7.8	27	3.2
Beef cows	21.1	9.9	11.5	14.2	50	12.9
Sheep and lambs	9.2	7.9	2.3	6.5	23	0.0
Laying hens	9.9	3.0	1.1	4.7	18	3.2
Heifers and heifer calves	13.4	13.9	10.3	12.5	42	9.7
Steers, bulls, & bull/steer calves	19.7	17.8	14.9	17.5	59	12.9
Turkeys	1.4	1.0	0.0	0.8	3	0.0
Broilers	3.5	0.0	0.0	1.2	5	0.0
No answer	12.7	35.6	56.3	34.9	103	58.1
<i>Total percent</i>	100.0	100.0	100.0	100.0	330	100.0
<i>Number of observations</i>	142	101	87	330		31
$\chi^2 = 2.62$	$p_r = 0.918$	Test of total independent only versus contract producer proportions.				
$\chi^2 = 17.13$	$p_r = 0.249$	Test of independent producer proportions only.				

^a Respondents checked all that apply, hence the number of responses exceeds the number of respondents.

2. Structure and Plans of the Swine Operation

Tables 13-17 summarize structural characteristics of independent and contract swine producers and their plans for the future. Highlights of the results are:

- ◆ Type-of-swine-operation did not differ significantly among small, medium, and large independent producers (Table 13). About half of independents were mainly farrow-to-finish operations, and the remainder were divided between farrowing and finishing specializations.
- ◆ Contract producers differed significantly from independents in type of swine operation (Table 13). Over two-thirds of contract producers specialized in finishing hogs, and the remainder were about evenly split between farrowing and nursery operations. None of the reporting 32 observations from contract producers listed farrow-to-finish operations. (Some producers gave more than one response.)
- ◆ A notable finding is that contract producers on average had smaller operations than the largest third of independent producers, but had much larger swine operations than the smallest two-thirds of independent producers (Table 13a). Nursery operations had large numbers of baby pigs, of course, but were smaller than finishing operations on an animal-unit basis.
- ◆ Independent producers had been engaged in swine production on average for 25 years (Table 14). Size of operation was not related to years engaged in swine production. However, contract producers had been engaged in swine production significantly fewer years than independents – 17 years versus 25 years.
- ◆ As measured by gross receipts in Table 15, contract producers were on average larger than independents, and the largest one-third of independent producers averaged larger than contract producers (Table 15) – agreeing with results in Table 13a based on swine numbers. Of course, the response could be ambiguous in Table 15 because contract producers may be reporting not receipts but fees received for finishing swine.
- ◆ Probably because of the adverse economic conditions facing producers when the survey was taken, planned cutbacks in swine operations were anticipated over the next 12 months. Independent producers were significantly more likely to cut back – 46 percent of them versus 18 percent of contract producers (Table 16). Some 56 percent of small independent producers versus 42 percent of large independent producers planned to reduce production but overall there was no statistically significant difference in patterns of planned change among independent producers.
- ◆ Producers who planned to expand operations were asked how much expansion was expected. Responses were too few to give reliable results, hence results are not reported. Producers planning to expand were outnumbered by those planning to cut back in the next 12 months, and most of those planning cutbacks anticipated reductions of over 25 percent.

There was no statistical difference in the size of cutbacks indicated among independent producers by size, or between independents as a group and contract producers.

- ◆ Because the anticipated 12-month production adjustments were heavily influenced by transitory low hog prices, of greater interest are longer-term plans reported in Table 17. Independents were significantly less likely to plan to expand and more likely to cut back than contract producers over the next 5 years. Although 23 percent of large independents compared to only 13 percent of small independents reported plans to expand, overall there was no statistically significant difference in patterns of adjustment indicated by size of independent operation over the next 5 years. Still, the results in Table 17a are consistent with trends in recent years toward contract production and, among independents, towards larger size.
- ◆ Respondents who planned to expand or cut back operations over the next five years were asked by what percent they were planning to adjust. Numbers of contract producers were too few to draw conclusions. Among independents, larger percentage cutbacks were anticipated by smaller than by larger producers but differences were not statistically significant and tables of results are not shown.

Table 13. Swine operation type: (all that apply)

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	
	------(Percent)-----					(Percent)
Farrow to finish	42.7	52.7	58.2	51.2	139	0.0
Farrowing (sows)	20.2	22.0	9.9	17.4	47	12.5
Nursery	6.7	1.1	4.4	4.1	11	15.6
Finishing	22.5	22.0	27.5	24.0	65	68.8
No answer	7.9	2.2	0.0	3.4	9	3.1
<i>Total percent</i>	100.0	100.0	100.0	100.0	271	100.0
<i>Number of observations</i>	89	91	91	271		32
$\chi^2 = \text{Large}$ $p_r = < 0.001$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 10.59$ $p_r = 0.102$	Test of independent producer proportions only.					

Table 13a. Number of pigs/hogs per year in your main type of operation only:

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total		
	------(Average count of hogs)-----					
Farrow to finish	152	568	2,364	1,028		0
Farrowing (sows)	14	225	2,946	1,062		286
Nursery	159	800	8,367	3,109		8,080
Finishing	63	635	3,468	1,389		3,119
<i>Total average</i>	97	557	4,286	1,647		2,871
<i>No answer^a</i>	17	8	8	33		0
<i>Number of observations</i>	88	89	88	265		32
$\chi^2 = \text{Large}$ $p_r = < 0.001$	Test of total independent only versus contract producer proportions.					

^aNumber of respondents not answering

Table 14. How long have you been engaged in swine production?

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>
	Small	Medium	Large	Total	
	------(Average no. of years)-----				
Years	24	26	25	25	17
<i>No answer^a</i>	3	2	1	6	0
<i>Number of observations</i>	78	78	78	234	27
t = 3.61 p _r = 0.001	Test of total independent only versus contract producer proportions.				

^aNumber of respondents not answering

Table 15. Average total annual gross receipts from swine:

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>
	Small	Medium	Large	Total	
	------(Average total receipts)-----				
Receipts from swine	\$9,018	\$52,972	\$259,145	\$107,045	\$132,295
<i>No answer^a</i>	29	23	7	59	0
<i>Number of observations</i>	78	78	78	234	27
t = 0.16 p _r = 0.876	Test of total independent versus contract producer means.				

^aNumber of respondents not answering

Table 16. Over the next 12 months, this swine operation is likely to:

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	-----(<i>Percent</i>)-----					<i>(Percent)</i>
Expand	3.8	3.8	2.6	3.4	8	3.7
Cut back	56.4	39.7	42.3	46.1	108	18.5
Not change production	37.2	55.1	53.8	48.7	114	74.1
No answer	2.6	1.3	1.3	1.7	4	3.7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 7.42$ $p_r = 0.025$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 6.20$ $p_r = 0.185$	Test of independent producer proportions only.					

Table 17. Over the next 5 years, this swine operation overall is likely to:

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	-----(<i>Percent</i>)-----					<i>(Percent)</i>
Expand	12.8	20.5	23.1	18.8	44	33.3
Cut back	34.6	37.2	35.9	35.9	84	11.1
Not change production	44.9	37.2	34.6	38.9	91	48.1
No answer	7.7	5.1	6.4	6.4	15	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 7.56$ $p_r = 0.023$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 3.58$ $p_r = 0.466$	Test of independent producer proportions only.					

Table 17a. Over the next 5 years, this swine operation is likely to expand by what percent?

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	-----(<i>Percent</i>)-----					<i>(Percent)</i>
1-5%	0.0	0.0	5.6	1.9	1	0.0
6-10%	20.0	18.8	16.7	18.5	8	11.1
11-25%	30.0	6.3	16.7	17.7	7	55.6
26-50%	30.0	56.3	22.2	36.2	16	33.3
51% or more	20.0	18.8	33.3	24.0	11	0.0
No answer	0.0	0.0	5.6	1.9	1	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	44	100.0
<i>Number of observations</i>	10	16	18	44		3
$\chi^2 = 8.09$ $p_r = 0.018$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 7.04$ $p_r = 0.532$	Test of independent producer proportions only.					

3. Attitudes of Swine Producers towards Contract Farming

Tables 18a to 18t record responses of respondents to statements about contract farming and concentrated animal feeding operations (CAFOs). As expected, responses of independent producers will be influenced by whether contract production is perceived as a threat. Meanwhile, contract producers can be expected to take a more favorable view of contract farming. Major findings are summarized below.

- ◆ Only 12 percent of independent swine producers compared to 52 percent of contract swine producers agreed or strongly agreed that contract farming is a way to preserve family farming (Table 18a). In contrast, 56 percent of independents and 22 percent of contract producers disagreed or strongly disagreed with the statement that contract farming is a way to preserve family farming.
- ◆ Many swine producers felt that contract farming is the future of swine production, regardless of whether it is good or bad for the family farm (Table 18b). Three-fourths of contract producers but only one-third of independents agreed or strongly agreed with that statement. There was no statistically significant difference among independent producers by size in their response. It is notable the more independents agreed or strongly agreed than disagreed or strongly disagreed with the statement that contract farming is the future of the swine industry.
- ◆ Responses to the statement that “Contract farming is good for Ohio agriculture” did not differ significantly among independent producers but differences were large and significant between contract and independent producers (Table 18c). Only 10 percent of independent producers compared to 44 percent of contract producers agreed with the statement.
- ◆ The statement in Table 18d solicits responses to whether large, perhaps independent, “megafarms” are a greater threat than contract farming to the family farm. It may not be a surprise that independents differed significantly among themselves but independents as a group did not differ significantly from contract producers in their response to this statement. Some 68 percent of small independents, 52 percent of large independents, and 81 percent of contract producers agree or strongly agree that megafarms are a greater threat than contract production to family farms. Hence percentages for small independents were closer to contract producers than to larger independents on this issue.
- ◆ Many producers are not pleased with emergence of large swine operations but they do not agree on policies to address the issue. More small and medium size independent producers agreed or strongly agreed than disagreed or strongly disagreed with the statement that the government should limit farms to no more than 2,500 hogs (Table 18e). In contrast, large independent and contract producers tended to be opposed to size limits.
- ◆ Large independents and contract producers also shared similar views on whether animal confinement operations have more negative impacts on the environment and neighbors

than do farms with traditional livestock management practices (Table 18f). Precisely 41 percent of large independent producers and contract producers compared to only 14 percent of small independent producers disagreed or strongly disagreed with the statement that animal confinement systems have more negative impacts than do traditional practices on the environment and neighbors. The study did not solicit views on whether a *given* total number of hogs (a) on a few large farms or (b) on many small farms would have a greater impact on a given area.

- ◆ Swine producers were in wide agreement that all swine farms should not be regulated regardless of their size and manure management practices (Table 18g). The statistical probability was high that proportions of respondents who answered “agree, disagree, etc.” did not differ among independents or between independents and contract producers.
- ◆ Far more agreement was apparent (Table 18h) that only large farms (2,500 hogs or larger) should be regulated to meet environmental standards. Contract producers were about evenly divided on the issue, but independents of all sizes favored only regulation of large farms.
- ◆ “*Setbacks*” are legal requirements that confinement facilities including lagoon/pit storage of manure be at least a specified distance from neighbors, schools, churches, and community facilities. Small independents and contract producers were least supportive of setbacks (Table 18i). Surprisingly, medium and large independents were the strongest supporters with 47 percent of the medium producers and 41 percent of the large producers agreeing or strongly agreeing with the requirement for setbacks.
- ◆ Responses in Table 18j vividly highlight that the differences in producers’ opinions regarding location of swine facilities are greatest among operators *within* rather than *between* each size and type of swine operation. Producers of all types and sizes are almost equally divided over the issue of whether the location of a swine facility should be solely the owner’s decision.
- ◆ The public sector has a long history of financial incentives to producers for protecting the environment. Thus the strong sentiment among respondents that growers/producers should pay all cost required to control livestock wastes and odors is somewhat surprising (Table 18k). Small and medium size independent producers were most likely to agree or strongly agree that producers should pay costs to control waste and odors.
- ◆ Perhaps because of the mild language in Table 18l, response proportions towards bigness did not differ significantly by size of farm or independent versus contract producers. In each case, more respondents agreed (or strongly agreed) than disagreed (or strongly disagreed) with the statement that “Pork should be supplied by whoever can produce it at lowest cost, whether the farm is large or small.”
- ◆ Many scientists do not take strong stands on family farm size preferences because they like both small farms and low food costs. Perhaps not surprisingly, respondents in Table 18m had less conflict: 72 percent of independent producers disagreed or strongly

disagreed with the statement that “Keeping food costs low is more important than saving small farms.” The proportion for contract producers was 56 percent (Table 18m).

- ◆ Table 18n allows respondents to go beyond their personal preference to express how they judge people in their county would vote on farms by size. Prospects appear to be unfavorable for large farms under local option: respondents who agreed or strongly agreed with the statement “If the issue were put to a vote, people in this county would favor livestock farms of any size” were outnumbered more than 2:1 by those who disagreed or strongly disagreed with the statement.
- ◆ People object to concentrated animal feeding operations (CAFOs) for various reasons including odor (Table 18o), water contamination (Table 18p), crowding out of family-size farms (Table 18q), negative influence on small towns and communities (Table 18r), lack of space for each animal to exercise and be comfortable (Table 18s), and restricting freedom of farm operators to make production and marketing decisions (Table 18t). Percentages of respondents who agreed or strongly agreed that any one of these was the major objection are summarized as follows:

Major objection	Independents	Contract Producers
	(Percent agree or strongly agree)	
Odor	47	59
Ground and surface water contamination	45	56
Threat to family farms	45	22
Negative influence on towns and communities	34	11
Restrict freedom of farm operators	32	15
Insufficient space for animals to exercise	18	11

The three most important concerns to both independent and contract producers were odor, water contamination, and threat to family farms. Contract producers rate odor and water contamination as especially important. Relatively few independents and contract producers rated harm to towns and communities, inadequate space for animals to exercise, and restricted freedom of farm operators to make production decisions as the most objectionable features of CAFOs.

Table 18a. Contract farming is a way to preserve family farming.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	47.4	41.0	48.7	45.7	107	11.1
2	5.1	9.0	17.9	10.7	25	11.1
3 (Undecided)	15.4	23.1	9.0	15.8	37	3.7
4 (Undecided)	16.7	15.4	10.3	14.1	33	18.5
5	11.5	6.4	9.0	9.0	21	22.2
6 (Strongly agree)	2.6	3.8	2.6	3.0	7	29.6
No answer	1.3	1.3	2.6	1.7	4	3.7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27

$\chi^2 = \text{Large}$ $p_r = < 0.001$

Test of total independent only versus contract producer proportions.

$\chi^2 = 14.54$ $p_r = 0.150$

Test of independent producer proportions only.

Table 18b. Contract farming is the future of swine production, regardless of whether it is good or bad for the family farm.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	26.9	23.1	21.8	23.9	56	3.7
2	6.4	3.8	11.5	7.2	17	3.7
3 (Undecided)	14.1	11.5	7.7	11.1	26	7.4
4 (Undecided)	21.8	28.2	14.1	21.4	50	7.4
5	14.1	21.8	28.2	21.4	50	40.7
6 (Strongly agree)	12.8	9.0	14.1	12.0	28	33.3
No answer	3.8	2.6	2.6	3.0	7	3.7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27

$\chi^2 = 19.45$ $p_r = 0.002$

Test of total independent only versus contract producer proportions.

$\chi^2 = 13.40$ $p_r = 0.202$

Test of independent producer proportions only.

Table 18c. Contract farming is good for Ohio agriculture.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	43.6	42.3	44.9	43.6	102	11.1
2	10.3	19.2	24.4	18.0	42	7.4
3 (Undecided)	12.8	11.5	11.5	11.9	28	7.4
4 (Undecided)	17.9	15.4	10.3	14.5	34	25.9
5	11.5	5.1	3.8	6.8	16	25.9
6 (Strongly agree)	2.6	3.8	3.8	3.4	8	18.5
No answer	1.3	2.6	1.3	1.7	4	3.7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 31.96$	$p_r = < 0.001$	Test of total independent only versus contract producer proportions.				
$\chi^2 = 10.28$	$p_r = 0.416$	Test of independent producer proportions only.				

Table 18d. Very large “megafarms” are a greater threat than contract farming to the family farm.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	16.7	15.4	9.0	13.7	32	3.7
2	2.6	7.7	10.3	6.9	16	3.7
3 (Undecided)	6.4	9.0	7.7	7.7	18	0.0
4 (Undecided)	5.1	6.4	17.9	9.8	23	7.4
5	16.7	15.4	25.6	19.2	45	33.3
6 (Strongly agree)	51.3	42.3	26.9	40.2	94	48.1
No answer	1.3	3.8	2.6	2.6	6	3.7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 7.26$	$p_r = 0.202$	Test of total independent only versus contract producer proportions.				
$\chi^2 = 22.02$	$p_r = 0.015$	Test of independent producer proportions only.				

Table 18e. The government should limit farms to (say) no more than 1,000 animal units (2,500) hogs.

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	
	------(Percent)-----					(Percent)
1 (Strongly disagree)	20.5	24.4	29.5	24.8	58	44.4
2	6.4	7.7	16.7	10.3	24	14.8
3 (Undecided)	14.1	12.8	16.7	14.5	34	14.8
4 (Undecided)	16.7	14.1	12.8	14.5	34	11.1
5	9.0	16.7	2.6	9.4	22	7.4
6 (Strongly agree)	30.8	20.5	19.2	23.5	55	3.7
No answer	2.6	3.8	2.6	3.0	7	3.7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 8.47$ $p_r = 0.120$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 17.76$ $p_r = 0.059$	Test of independent producer proportions only.					

Table 18f. Compared to farms with traditional livestock management practices, animal confinement operations have more negative impacts on the environment and neighbors.

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	
	------(Percent)-----					(Percent)
1 (Strongly disagree)	7.7	7.7	17.9	11.1	26	25.9
2	6.4	14.1	23.1	14.5	34	14.8
3 (Undecided)	7.7	15.4	10.3	11.1	26	14.8
4 (Undecided)	16.7	19.2	12.8	16.2	38	14.8
5	24.4	21.8	14.1	20.1	47	18.5
6 (Strongly agree)	24.4	15.4	16.7	18.8	44	0.0
No answer	12.8	6.4	5.1	8.1	19	11.1
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 9.86$ $p_r = 0.079$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 19.45$ $p_r = 0.035$	Test of independent producer proportions only.					

Table 18g. All swine farms should be regulated, regardless of size and manure management practices

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	46.2	46.2	43.6	45.3	106	33.3
2	16.7	16.7	17.9	17.1	40	14.8
3 (Undecided)	3.8	10.3	7.7	7.3	17	14.8
4 (Undecided)	12.8	10.3	14.1	12.4	29	11.1
5	7.7	7.7	10.3	8.6	20	11.1
6 (Strongly agree)	5.1	3.8	3.8	4.2	10	7.4
No answer	7.7	5.1	2.6	5.1	12	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 3.36$ $p_r = 0.645$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 3.36$ $p_r = 0.972$	Test of independent producer proportions only.					

Table 18h. Only large swine farms (over 1,00 animal unit inventory-2,500 hogs) should be regulated to meet environmental standards.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	12.8	7.7	5.1	8.5	20	22.2
2	7.7	11.5	14.1	11.1	26	14.8
3 (Undecided)	3.8	15.4	10.3	9.8	23	14.8
4 (Undecided)	12.8	11.5	17.9	14.1	33	3.7
5	21.8	21.8	21.8	21.8	51	22.2
6 (Strongly agree)	34.6	26.9	26.9	29.5	69	14.8
No answer	6.4	5.1	3.8	5.1	12	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 9.46$ $p_r = 0.092$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 11.90$ $p_r = 0.292$	Test of independent producer proportions only.					

Table 18i. Swine farms using confinement and lagoon/pit storage of manure should be required to be at least a specified distance from neighbors, schools, churches, and community facilities.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(<i>Percent</i>)
	-----(<i>Percent</i>)-----					
1 (Strongly disagree)	15.4	11.5	14.1	13.7	32	11.1
2	7.7	5.1	12.8	8.5	20	18.5
3 (Undecided)	9.0	12.8	11.5	11.1	26	11.1
4 (Undecided)	15.4	17.9	15.4	16.2	38	18.5
5	14.1	21.8	25.6	20.5	48	14.8
6 (Strongly agree)	30.8	25.6	15.4	23.9	56	18.5
No answer	7.7	5.1	5.1	6.0	14	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 3.44$ $p_r = 0.632$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 10.58$ $p_r = 0.292$	Test of independent producer proportions only.					

Table 18j. The location of a swine facility should be the decision of the owner only.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(<i>Percent</i>)
	-----(<i>Percent</i>)-----					
1 (Strongly disagree)	21.8	16.7	14.1	17.5	41	11.1
2	11.5	16.7	21.8	16.7	39	14.8
3 (Undecided)	11.5	14.1	12.8	12.8	30	25.9
4 (Undecided)	11.5	10.3	19.2	13.7	32	14.8
5	12.8	17.9	15.4	15.4	36	18.5
6 (Strongly agree)	23.1	16.7	12.8	17.5	41	7.4
No answer	7.7	7.7	3.8	6.4	15	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 5.29$ $p_r = 0.381$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 9.64$ $p_r = 0.472$	Test of independent producer proportions only.					

Table 18k. Each grower/producer should pay all costs required to control livestock wastes and odors.

<i>Response</i>	<i>Independent producers</i>					<i>Contract producers</i>
	Small	Medium	Large	Total	Number	(Percent)
	------(Percent)-----					
1 (Strongly disagree)	6.4	2.6	7.7	5.6	13	7.4
2	6.4	3.8	6.4	5.5	13	14.8
3 (Undecided)	7.7	10.3	7.7	8.6	20	11.1
4 (Undecided)	14.1	16.7	16.7	15.8	37	11.1
5	21.8	26.9	28.2	25.6	60	29.6
6 (Strongly agree)	33.3	32.1	29.5	31.6	74	18.5
No answer	10.3	7.7	3.8	7.3	17	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 5.39$ $p_r = 0.370$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 3.95$ $p_r = 0.950$	Test of independent producer proportions only.					

Table 18l. Pork should be supplied by whoever can produce it at lowest cost, whether the farm is big or small.

<i>Response</i>	<i>Independent producers</i>					<i>Contract producers</i>
	Small	Medium	Large	Total	Number	(Percent)
	------(Percent)-----					
1 (Strongly disagree)	19.2	12.8	15.4	15.8	37	7.4
2	15.4	12.8	11.5	13.2	31	14.8
3 (Undecided)	6.4	15.4	16.7	12.8	30	14.8
4 (Undecided)	11.5	12.8	15.4	13.2	31	14.8
5	20.5	21.8	24.4	22.2	52	29.6
6 (Strongly agree)	17.9	16.7	11.5	15.4	36	11.1
No answer	9.0	7.7	5.1	7.3	17	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 2.18$ $p_r = 0.823$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 7.13$ $p_r = 0.713$	Test of independent producer proportions only.					

Table 18m. Keeping food costs low is more important than saving small farms.

<i>Response</i>	<i>Independent producers</i>					<i>Contract producers</i>
	Small	Medium	Large	Total	Number	(Percent)
	------(Percent)-----					
1 (Strongly disagree)	59.0	53.8	47.4	53.4	125	48.1
2	11.5	24.4	19.2	18.4	43	7.4
3 (Undecided)	9.0	3.8	10.3	7.7	18	18.5
4 (Undecided)	3.8	6.4	6.4	5.5	13	3.7
5	0.0	1.3	3.8	1.7	4	7.4
6 (Strongly agree)	6.4	3.8	7.7	6.0	14	7.4
No answer	10.3	6.4	5.1	7.3	17	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 8.70$ $p_r = 0.122$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 11.86$ $p_r = 0.294$	Test of independent producer proportions only.					

Table 18n. If the issue were put to a vote, people in this county would favor allowing livestock farms of any type or size.

<i>Response</i>	<i>Independent producers</i>					<i>Contract producers</i>
	Small	Medium	Large	Total	Number	(Percent)
	------(Percent)-----					
1 (Strongly disagree)	25.6	29.5	30.8	28.6	67	33.3
2	23.1	15.4	24.4	21.0	49	22.2
3 (Undecided)	7.7	21.8	9.0	12.8	30	14.8
4 (Undecided)	14.1	10.3	16.7	13.7	32	7.4
5	11.5	9.0	7.7	9.4	22	11.1
6 (Strongly agree)	9.0	9.0	7.7	8.6	20	3.7
No answer	9.0	5.1	3.8	6.0	14	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 1.80$ $p_r = 0.876$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 11.32$ $p_r = 0.333$	Test of independent producer proportions only.					

Table 18o. The main objection to concentrated animal feeding operations (CAFOs) is odor.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	10.3	7.7	2.6	6.9	16	3.7
2	6.4	17.9	14.1	12.8	30	11.1
3 (Undecided)	14.1	16.7	6.4	12.4	29	3.7
4 (Undecided)	16.7	11.5	15.4	14.5	34	14.8
5	16.7	30.8	38.5	28.7	67	44.4
6 (Strongly agree)	24.4	10.3	19.2	18.0	42	14.8
No answer	11.5	5.1	3.8	6.8	16	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 4.17$ $p_r = 0.526$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 23.04$ $p_r = 0.011$	Test of independent producer proportions only.					

Table 18p. The major objection to CAFOs is ground and surface water contamination.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly disagree)	6.4	1.3	6.4	4.7	11	3.7
2	10.3	15.4	9.0	11.6	27	11.1
3 (Undecided)	9.0	21.8	11.5	14.1	33	3.7
4 (Undecided)	14.1	14.1	24.4	17.5	41	18.5
5	26.9	30.8	32.1	29.9	70	29.6
6 (Strongly agree)	21.8	11.5	11.5	14.9	35	25.9
No answer	11.5	5.1	5.1	7.2	17	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 3.89$ $p_r = 0.565$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 16.47$ $p_r = 0.087$	Test of independent producer proportions only.					

Table 18q. The major objection to CAFOs is their threat to family farms.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	------(Percent)-----					
1 (Strongly disagree)	7.7	2.6	5.1	5.1	12	11.1
2	9.0	15.4	12.8	12.4	29	18.5
3 (Undecided)	11.5	17.9	12.8	14.1	33	7.4
4 (Undecided)	12.8	16.7	21.8	17.1	40	33.3
5	16.7	25.6	23.1	21.8	51	18.5
6 (Strongly agree)	32.1	16.7	20.5	23.1	54	3.7
No answer	10.3	5.1	3.8	6.4	15	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 10.94$ $p_r = 0.053$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 12.29$ $p_r = 0.266$	Test of independent producer proportions only.					

Table 18r. The major objection to CAFOs is their negative influence on small towns and local communities.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		<i>(Percent)</i>
	------(Percent)-----					
1 (Strongly disagree)	6.4	2.6	3.8	4.3	10	18.5
2	11.5	17.9	20.5	16.6	39	22.2
3 (Undecided)	7.7	20.5	12.8	13.7	32	11.1
4 (Undecided)	25.6	25.6	20.5	23.9	56	29.6
5	15.4	24.4	23.1	21.0	49	7.4
6 (Strongly agree)	20.5	3.8	14.1	12.8	30	3.7
No answer	12.8	5.1	5.1	7.7	18	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 13.35$ $p_r = 0.020$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 18.99$ $p_r = 0.040$	Test of independent producer proportions only.					

Table 18s. The major objection to CAFOs is too little space for each animal to exercise and be comfortable.

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	
	------(Percent)-----					(Percent)
1 (Strongly disagree)	9.0	14.1	26.9	16.7	39	14.8
2	12.8	21.8	25.6	20.1	47	25.9
3 (Undecided)	12.8	26.9	16.7	18.8	44	18.5
4 (Undecided)	19.2	20.5	16.7	18.8	44	22.2
5	17.9	9.0	7.7	11.5	27	7.4
6 (Strongly agree)	15.4	2.6	1.3	6.4	15	3.7
No answer	12.8	5.1	5.1	7.7	18	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 1.26$ $p_r = 0.939$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 35.44$ $p_r = < 0.001$	Test of independent producer proportions only.					

Table 18t. The major objection to CAFOs is that contracts restrict the freedom of farm operators to make production and marketing decisions.

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	
	------(Percent)-----					(Percent)
1 (Strongly disagree)	9.0	5.1	10.3	8.1	19	18.5
2	9.0	19.2	17.9	15.4	36	22.2
3 (Undecided)	10.3	15.4	16.7	14.1	33	25.9
4 (Undecided)	21.8	28.2	19.2	23.1	54	11.1
5	15.4	17.9	17.9	17.1	40	11.1
6 (Strongly agree)	23.1	9.0	12.8	15.0	35	3.7
No answer	11.5	5.1	5.1	7.2	17	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 10.11$ $p_r = 0.072$	Test of total independent only versus contract producer proportions.					
$\chi^2 = 12.93$ $p_r = 0.227$	Test of independent producer proportions only.					

4. Economics and Technology

Data from respondents indicate that the practices of small and medium size producers frequently lag behind those of large independents and contract producers. However, most notable is that, at least in late 1998-early 1999, contract producers were more satisfied than independents with their economic circumstances. The situation might have been reversed if hog prices had been high rather than low at the time of the survey. However, results are consistent with the view that a major reason for contract production is to reduce producers' economic risk.

- ◆ According to Table 19, nearly two-thirds of independent producers but less than 4 percent of contract producers were dissatisfied or strongly dissatisfied with the overall profitability of their swine operation. Profitability mainly relates to price, but production practices also matter and differ among producers as noted below.
- ◆ Selected results on farming practices reported in Tables 20 to 23c are summarized below:

Practice	Table	Independents			Contract Producers
		Small	Medium	Large	
		(Percent)			(Percent)
Use computer in swine operation	20	16.7	23.1	60.3	48.1
Keep records on swine operation	21	64.1	82.1	89.7	96.3
Sell to packer on carcass merit	22	19.1	52.6	76.9	74.1
Dispose of manure in lagoon	23	3.7	7.7	12.2	7.4
Store manure	23a	33.3	63.2	77.6	70.4
Inject manure on fields	23b	30.4	37.3	59.7	74.1
Sell manure	23c	8.7	1.5	7.5	7.4

Compared to small and medium size independent producers, contract producers and large producers are more likely to use computers, keep records, sell on carcass merit basis, and store manure (avoiding application on frozen fields). Relatively few producers used lagoons or sell manure.

Table 19. How do you feel about the overall profitability of your swine operation (independents) or return on investment (contract producers)?

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
1 (Strongly dissatisfied)	41.0	48.7	47.4	45.7	107	3.7
2	20.5	16.7	15.4	17.5	41	0.0
3 (Undecided)	11.5	10.3	7.7	9.8	23	11.1
4 (Undecided)	10.3	11.5	9.0	10.3	24	29.6
5	9.0	6.4	15.4	10.3	24	33.3
6 (Strongly satisfied)	2.6	5.1	3.8	3.8	9	18.5
No answer	5.1	1.3	1.3	2.6	6	3.7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = \text{Large}$ $p_r = < 0.001$	Test of total independent versus contract producer proportions.					
$\chi^2 = 5.89$ $p_r = 0.824$	Test of independent producer proportions only.					

Table 20. I use a computer in my swine operation.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		(Percent)
	------(Percent)-----					
Yes	16.7	23.1	60.3	33.4	78	48.1
No	76.9	74.4	34.6	62.0	145	51.9
No answer	6.4	2.6	5.1	4.7	11	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 1.80$ $p_r = 0.179$	Test of total independent versus contract producer proportions.					
$\chi^2 = \text{Large}$ $p_r = < 0.001$	Test of independent producer proportions only.					

Table 21. I (we) keep records on the swine enterprise.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		
	------(Percent)-----					(Percent)
Yes	64.1	82.1	89.7	78.6	184	96.3
No	28.2	15.4	6.4	16.7	39	3.7
No answer	7.7	2.6	3.8	4.7	11	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 3.41$ $p_r = 0.065$	Test of total independent versus contract producer proportions.					
$\chi^2 = 14.76$ $p_r = 0.001$	Test of independent producer proportions only.					

Table 22. Hogs from this operation are sold to packers on a carcass merit basis.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		
	------(Percent)-----					(Percent)
Yes	19.2	52.6	76.9	49.6	116	74.1
No	73.1	39.7	17.9	43.6	102	18.5
No answer	7.7	7.7	5.1	6.8	16	7.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	234	100.0
<i>Number of observations</i>	78	78	78	234		27
$\chi^2 = 6.53$ $p_r = 0.011$	Test of total independent versus contract producer proportions.					
$\chi^2 = \text{Large}$ $p_r = 0.001$	Test of independent producer proportions only.					

Table 23. I dispose of swine manure:

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	(Percent)
	------(Percent)-----					
In a lagoon	3.7	7.7	12.2	7.9	19	7.4
Other	85.2	87.2	81.7	84.7	204	92.6
No answer	11.1	5.1	6.1	7.4	18	0.0
<i>Total percent</i>	100.0	100.0	100.0	100.0	241	100.0
<i>Number of observations</i>	81	78	82	241		27
$\chi^2 = 0.04$ $p_r = 0.839$	Test of total independent versus contract producer proportions.					
$\chi^2 = 3.71$ $p_r = 0.156$	Test of independent producer proportions only.					

Table 23a. To dispose of swine manure, I store it.

<i>Response</i>	<i>Independent producers</i>				<i>Contract producers</i>	
	Small	Medium	Large	Total	Number	(Percent)
	------(Percent)-----					
Yes	33.3	63.2	77.6	58.0	118	70.4
No	60.9	36.8	14.9	37.5	77	11.1
No answer	5.8	0.0	7.5	4.4	9	18.5
<i>Total percent</i>	100.0	100.0	100.0	100.0	204	100.0
<i>Number of observations</i>	69	68	67	204		27
$\chi^2 = 5.68$ $p_r = 0.017$	Test of total independent versus contract producer proportions.					
$\chi^2 = 31.53$ $p_r = < 0.001$	Test of independent producer proportions only.					

Table 23b. To dispose of swine manure, I inject it on fields.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		
	-----(<i>Percent</i>)-----					(<i>Percent</i>)
Yes	30.4	37.3	59.7	42.5	86	74.1
No	60.9	62.7	35.8	53.1	108	7.4
No answer	8.7	0.0	4.5	4.4	9	18.5
<i>Total percent</i>	100.0	100.0	100.0	100.0	203	100.0
<i>Number of observations</i>	69	67	67	203		27
$\chi^2 = 17.16$ $p_r = < 0.001$	Test of total independent versus contract producer proportions.					
$\chi^2 = 12.99$ $p_r = 0.002$	Test of independent producer proportions only.					

Table 23c. To dispose of swine manure, I sell it.

<i>Response</i>	<i>Independent producers</i>				<i>Number</i>	<i>Contract producers</i>
	<i>Small</i>	<i>Medium</i>	<i>Large</i>	<i>Total</i>		
	-----(<i>Percent</i>)-----					(<i>Percent</i>)
Yes	8.7	1.5	7.5	5.9	12	7.4
No	72.5	77.6	59.7	69.9	142	48.1
No answer	18.8	20.9	32.8	24.2	49	44.4
<i>Total percent</i>	100.0	100.0	100.0	100.0	203	100.0
<i>Number of observations</i>	69	67	67	203		27
$\chi^2 = 0.55$ $p_r = 0.457$	Test of total independent versus contract producer proportions.					
$\chi^2 = 3.93$ $p_r = 0.140$	Test of independent producer proportions only.					

5. Constraints and Concerns of Independent Producers

The most notable conclusion of this section is that independent swine producers feel they are efficient and produce quality hogs. Yet they view their future as bleak. Problems confronting independent swine producers include labor quality and cost, quality of finished hogs and related breeding programs, market price, and access to markets and credit. Each of these is addressed below from Tables 24a to 24g with proportions listed for dissatisfied or strongly dissatisfied.

Item	Table	Independents		
		Small	Medium	Large
		(Percent dissatisfied or strongly dissatisfied)		
Quality of labor hired	24a	15.4	7.7	19.2
Cost of hired labor	24b	20.5	12.8	19.2
Quality of your finished hogs	34c	3.8	2.6	0.0
Breeding program	24d	5.1	6.4	5.1
Access to markets	24e	33.3	38.4	38.5
Market price for hogs	24f	79.5	83.3	76.9
Access to credit	24g	12.9	7.6	3.9

Independent producers were especially dissatisfied regarding their market access and price for hogs. Labor problems ranked next most serious. Access to credit was a source of dissatisfaction especially to small independent operators. Independents were quite satisfied with their breeding program and quality of their finished hogs.

Tables 25 to 31a provide further insights into attitudes of independent producers.

- ◆ The principal sources of knowledge by independents of contract operations were from local farmers and farm publications (Table 25). Large independents, however, seemed to learn much from contractors as well.
- ◆ Producers chose to be independents and not contract producers because they wanted independence and were comfortable with their current size (Table 26). High initial investment (for housing, etc.), concern over offending others (with odors, etc.), profitability, and lack of contractors in area were not rated as important.
- ◆ The vast majority of independents regarded their pigs as of equal or higher quality compared to contract produced pigs (Table 27). They also believe they had equal or greater efficiency than contract producers (Table 28).
- ◆ Despite the confidence listed above in their swine production capability, over two-thirds of independent producers, including the large producers, indicated they will be forced to become bigger or exit the swine business (Table 29).

- ◆ Some 14 percent of independent producers said they plan to exit the swine business (Table 30). No statistically significant difference was found between planned exit rates among operations by size.
- ◆ The major reason given for exiting the swine business was “can’t make money” (Table 31). Retirement, operation too small, no access to market, and too much risk also figured prominently in exit plans. “Too much hassle about the environment” did not seem to be important.

Independent producers

Table 24a. As an independent swine producer, how do you feel about the quality of labor you can hire?

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
1 (Strongly dissatisfied)	5.1	1.3	5.1	3.8	9
2	10.3	6.4	14.1	10.3	24
3 (Undecided)	21.8	30.8	16.7	23.1	54
4 (Undecided)	17.9	17.9	24.4	20.1	47
5	23.1	12.8	23.1	19.7	46
6 (Strongly satisfied)	11.5	19.2	10.3	13.7	32
No answer	10.3	11.5	6.4	9.4	22
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 14.17 \quad p_r = 0.165$					

Table 24b. As an independent swine producer, how do you feel about the cost of labor you can hire?

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
1 (Strongly dissatisfied)	9.0	3.8	3.8	5.5	13
2	11.5	9.0	15.4	12.0	28
3 (Undecided)	21.8	23.1	17.9	20.9	49
4 (Undecided)	16.7	15.4	23.1	18.4	43
5	19.2	23.1	23.1	21.8	51
6 (Strongly satisfied)	9.0	14.1	10.3	11.1	26
No answer	12.8	11.5	6.4	10.2	24
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 6.94 \quad p_r = 0.731$					

Table 24c. As an independent swine producer, how do you feel about the quality of your

finished hogs?

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
1 (Strongly dissatisfied)	0.0	0.0	0.0	0.0	0
2	3.8	2.6	0.0	2.1	5
3 (Undecided)	5.1	9.0	5.1	6.4	15
4 (Undecided)	2.6	14.1	6.4	7.7	18
5	42.3	50.0	52.6	48.3	113
6 (Strongly satisfied)	34.6	21.8	35.9	30.8	72
No answer	11.5	2.6	0.0	4.7	11
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 10.72 \quad p_r = 0.030$					

Table 24d. As an independent swine producer, how do you feel about your pig breeding

program?

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
1 (Strongly dissatisfied)	0.0	1.3	1.3	0.9	2
2	5.1	5.1	3.8	4.7	11
3 (Undecided)	3.8	7.7	6.4	6.0	14
4 (Undecided)	14.1	12.8	16.7	14.5	34
5	43.6	42.3	32.1	39.3	92
6 (Strongly satisfied)	21.8	15.4	26.9	21.4	50
No answer	11.5	15.4	12.8	13.2	31
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 6.56 \quad p_r = 0.766$					

Table 24e. As an independent swine producer, how do you feel about your access to

markets?					
<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
1 (Strongly dissatisfied)	19.2	12.8	23.1	18.4	43
2	14.1	25.6	15.4	18.4	43
3 (Undecided)	5.1	11.5	9.0	8.5	20
4 (Undecided)	10.3	12.8	15.4	12.8	30
5	28.2	23.1	29.5	26.9	63
6 (Strongly satisfied)	16.7	11.5	7.7	12.0	28
No answer	6.4	2.6	0.0	3.0	7
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 11.54 \quad p_r = 0.317$					

Table 24f. As an independent swine producer, how do you feel about the market price you

receive for pigs?					
<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
1 (Strongly dissatisfied)	66.7	67.9	67.9	67.5	158
2	12.8	15.4	9.0	12.4	29
3 (Undecided)	3.8	1.3	3.8	3.0	7
4 (Undecided)	3.8	6.4	7.7	6.0	14
5	3.8	1.6	3.8	3.1	7
6 (Strongly satisfied)	2.6	5.1	5.1	4.3	10
No answer	6.4	2.6	2.6	3.9	9
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 5.32 \quad p_r = 0.869$					

Table 24g. As an independent swine producer, how do you feel about your access to

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
1 (Strongly dissatisfied)	10.3	3.8	1.3	5.1	12
2	2.6	3.8	2.6	3.0	7
3 (Undecided)	15.4	10.3	10.3	12.0	28
4 (Undecided)	26.9	24.4	19.2	23.5	55
5	24.4	29.5	35.9	29.9	70
6 (Strongly satisfied)	9.0	20.5	26.9	18.8	44
No answer	11.5	7.7	3.8	7.7	18
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 17.47 \quad p_r = 0.065$					

Table 25. Most of my knowledge of contract operations comes from:

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
Other local farmers	30.6	27.8	27.5	28.6	145
Farm publications	35.4	34.4	30.2	33.3	169
Farm organizations	8.8	10.0	8.8	9.2	47
Contractors	8.8	12.8	22.0	14.5	76
County extension agents	7.5	6.1	4.9	6.2	31
Other	4.1	8.3	5.5	6.0	31
No answer	4.8	0.6	1.1	2.2	10
<i>Total percent</i>	100.0	100.0	100.0	100.0	509
<i>Number of observations</i>	147	180	182	509	
$\chi^2 = 14.87 \quad p_r = 0.137$					

Table 26. I am not a contract producer because:

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
Want to remain independent	30.8	30.6	33.7	31.7	180
Initial investment too high	15.4	15.5	9.9	13.6	78
Comfortable with current size	26.9	24.3	25.4	25.5	145
Don't want to offend (odors, etc.)	12.1	12.1	12.7	12.3	70
Independent more profitable	4.9	10.2	13.3	9.5	54
No contractors in area	2.2	1.9	0.6	1.6	9
Other	4.9	4.4	2.8	4.0	23
No answer	2.7	1.0	1.7	1.8	10
<i>Total percent</i>	100.0	100.0	100.0	100.0	569
<i>Number of observations</i>	182	206	181	569	
$\chi^2 = 13.17 \quad p_r = 0.357$					

Table 27. I believe my pigs are of higher/equal/lower quality than those of a contract producer.

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
Higher	30.8	14.1	24.4	23.1	54
Equal	59.0	71.8	69.2	66.7	156
Lower	3.8	10.3	3.8	6.0	14
No answer	6.4	3.8	2.6	4.3	10
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 9.40 \quad p_r = 0.052$					

Table 28. I believe I am more/equal/less efficient than a contract producer.

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
More	21.8	20.5	32.1	24.8	58
Equal	52.6	52.6	47.4	50.9	119
Less	17.9	23.1	16.7	19.2	45
No answer	7.7	3.8	3.8	5.1	12
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 3.60 \quad p_r = 0.462$					

Table 29. I am concerned that I will be forced to become bigger or exit the swine business.

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
Yes	66.7	73.1	69.2	69.7	163
No	25.6	21.8	28.2	25.2	59
No answer	7.7	5.1	2.6	5.1	12
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 0.76 \quad p_r = 0.682$					

Table 30. I plan to get out of the swine business.

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
Yes	12.8	11.5	19.2	14.5	34
No	32.1	41.0	38.5	37.2	87
Don't know	46.2	46.2	38.5	43.6	102
No answer	9.0	1.3	3.8	4.7	11
<i>Total percent</i>	100.0	100.0	100.0	100.0	234
<i>Number of observations</i>	78	78	78	234	
$\chi^2 = 3.16 \quad p_r = 0.206$					

Table 31. I plan to get out of the swine business because:

<i>Response</i>	Small	Medium	Large	Total	Number
	------(Percent)-----				
Retiring	9.8	4.9	4.8	6.5	23
Too much hassle about env.	4.1	2.9	4.8	3.9	14
Operation too small	12.3	11.7	9.7	11.2	39
Can't make money	19.7	19.4	21.8	20.3	71
No access to markets	8.2	6.8	11.3	8.8	31
Too much risk	7.4	6.8	12.1	8.8	31
No answer	38.5	47.6	35.5	40.5	140
<i>Total percent</i>	100.0	100.0	100.0	100.0	349
<i>Number of observations</i>	122	103	124	349	
$\chi^2 = 6.16 \quad p_r = 0.802$					

6. Constraints and Concerns of Contract Swine Producers

Contract producers are paid fees independent of market prices and hence are less concerned about economic returns than are independent producers. Nonetheless, contract producers also face formidable constraints. Before reviewing those constraints, we briefly review characteristics of contract producers.

- ◆ Some 59 percent of contract producers said, “Swine were an important part of my operation prior to my becoming a contract producer” (Table 32). Only 3 percent of independent producers had been contract producers before they became independent producers.
- ◆ Prior to becoming contract producers, independent producers had quite sizable operations, averaging 1,480 swine produced per year.
- ◆ Contract producers did not have a long history of producing under contract – averaging only 5 years. Their average length of contract was 4 years.
- ◆ The most frequent reasons cited for becoming a contract producer were “need to make more income” (24 percent), “risk is lower” (22 percent), “need to expand to be competitive” (14.9 percent), and need to diversify operations (9.5 percent) (Table 33).
- ◆ Some 18 percent said they had received complaints about being a contract producer.
- ◆ Contract producers typically receive animals, feed, and veterinary care/medicine from contractors; none received a manure management plan (Table 34).
- ◆ Of the 27 contract producers, 17 had contracts with feed millers, 4 with other producers, two with a joint feed miller-hog producer, and one with a joint packer-producer. Three producers did not answer.
- ◆ A majority of contract producers built facilities to become contract producers, but one-third of producers already had facilities (Table 35).
- ◆ Some 78 percent of contract producers implied that they make a sufficient economic return on contract production to pay for new facilities – and presumably cover operating costs as well (Table 36).
- ◆ More contract producers (37 percent) reported contractors do not have producers waiting to replace them than reported (33 percent) contractors had producers waiting to fill in if they drop out (Table 37). This could imply a modest market power advantage to producers over contractors.
- ◆ A key concern surfacing among producers in previous studies is whether new producers get better contract terms than established producers. That is, producers do

not want to feel penalized because they have sunk costs for buildings and equipment. They do not want contractors to offer lower fees and be forced to accept in desperation to cover sunk costs. Table 38 indicates that situation does not predominate in Ohio – 63 percent of contract producers reported no favoritism to new producers over established producers.

- ◆ Furthermore, contract producers note competition among contractors – 74 percent of producers say they could find another contractor if needed (Table 39). Having options to contract elsewhere give producers market power.

Several questions were asked that more narrowly focus on contract terms. Potential problems confronting contract producers range from quality of hogs and feed supplied by contractors, to veterinary services, to weighing procedures. The following summarizes from highest to lowest the percentages of contract producers who were dissatisfied or very dissatisfied with various aspects of contract production as reported in Tables 40a to 40o:

Item	Table	Contract Producers (Percent dissatisfied or very dissatisfied)
Training and educational programming	40a	11.1
Technical assistance provided	40b	11.1
Veterinary care/medicines	40c	11.1
Communication with contractor	40d	7.4
Bonus or penalty for mortality, feeding efficiency	40e	7.4
Quality of labor can hire	40f	7.4
Cost of labor can hire	40g	7.4
Overall contract agreement	40h	3.7
Weighing of finished pigs	40i	3.7
Length of contract	40j	3.7
Relations with contractor	40k	3.7
Willingness of contractor to supply pigs	40l	0.0
Quality of pigs supplied by contractor	40m	0.0
Quality of feed supplied by contractor	40n	0.0
Return on investment	40o	0.0

The foregoing results contrast considerably with those from independent producers and indicate a high degree of satisfaction with nearly every dimension of contract production. We caution, however, that the sample is small and might have given different results if conducted at a time of high rather than low hog prices.

Finally, contract producers were asked if they would be interested in joining an association of contract hog producers:

Contract producers	
<i>Response</i>	(Percent)
Yes	37.0
No	7.4
Don't know	51.9
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Only 7 percent said “no,” but over half were undecided.

Contract Producers

Table 32. Swine were an important part of my operation

prior to my becoming a contract producer.	
<i>Response</i>	(Percent)
Yes	59.3
No	29.6
No answer	11.1
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 33. I became a contract producer because:

<i>Response</i>	(Percent)
Need to diversify operation	9.5
Need to expand to be competitive	14.9
Access to capital	4.1
Need to make more income	24.3
Children entering operation	5.4
Access to technical information	1.4
Access to packers	4.1
Improved breeding (genetics)	1.4
Desire for marketing assistance	2.7
Risk is lower	21.6
Had extra labor	2.7
Other	4.1
No answer	4.1
<i>Total percent</i>	100.0
<i>Number of observations</i>	74

Table 34. Under my contract, I receive from my contractor:

<i>Response</i>	(Percent)
Animals, feed, veterinary/medicine (AFV)	44.5
Carcass quality reports & AFV	22.2
Carcass quality reports & AFV & pricing information	3.7
Carcass quality reports only	3.7
Pricing information only	3.7
Animals and feed only	3.7
Animals only	3.7
Feed only	3.7
Manure management plan	0.0
No answer	11.1
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 35. I built my facilities:

<i>Response</i>	(Percent)
To become a contract grower	55.6
Already had facilities	33.3
No answer	11.1
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 36. I could/could not afford to replace my facilities with the profit under my current contract:

<i>Response</i>	(Percent)
Could	77.8
Could not	22.2
No answer	0.0
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 37. My contractor has producers waiting to fill in if I drop out.

<i>Response</i>	(Percent)
Yes	33.3
No	37.0
No answer	29.6
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 38. New producers get better terms than producers renewing contracts.

<i>Response</i>	(Percent)
Yes	11.1
No	63.0
No answer	25.9
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 39. I could find another contractor if I needed to.

<i>Response</i>	(Percent)
Yes	74.1
No	7.4
No answer	18.5
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40a. As a contract swine producer, how do you feel about the training and educational programming?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	11.1
3 (Undecided)	18.5
4 (Undecided)	29.6
5	22.2
6 (Strongly satisfied)	14.8
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40b. As a contract swine producer, how do you feel about the technical assistance provided?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	7.4
2	3.7
3 (Undecided)	7.4
4 (Undecided)	25.9
5	33.3
6 (Strongly satisfied)	18.5
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40c. As a contract swine producer, how do you feel about the veterinary care/medicines?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	3.7
2	7.4
3 (Undecided)	7.4
4 (Undecided)	18.5
5	33.3
6 (Strongly satisfied)	25.9
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40d. As a contract swine producer, how do you feel about the communication with the contractor?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	3.7
2	3.7
3 (Undecided)	14.8
4 (Undecided)	14.8
5	25.9
6 (Strongly satisfied)	33.3
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40e. As a contract swine producer, how do you feel about the bonus or penalty for pig death, feeding efficiency?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	7.4
3 (Undecided)	14.8
4 (Undecided)	22.2
5	29.6
6 (Strongly satisfied)	18.5
No answer	7.4
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40f. As a contract swine producer, how do you feel about the quality of labor you can hire?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	7.4
2	0.0
3 (Undecided)	29.6
4 (Undecided)	18.5
5	22.2
6 (Strongly satisfied)	11.1
No answer	11.1
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40g. As a contract swine producer, how do you feel about the cost of labor you can hire?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	3.7
2	3.7
3 (Undecided)	33.3
4 (Undecided)	14.8
5	25.9
6 (Strongly satisfied)	7.4
No answer	11.1
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40h. As a contract swine producer, how do you feel about the overall contract agreement?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	3.7
3 (Undecided)	3.7
4 (Undecided)	11.1
5	55.6
6 (Strongly satisfied)	22.2
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40i. As a contract swine producer, how do you feel about the weighing of finished pigs?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	3.7
3 (Undecided)	3.7
4 (Undecided)	29.6
5	37.0
6 (Strongly satisfied)	18.5
No answer	7.4
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40j. As a contract swine producer, how do you feel about the length of your contract?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	3.7
3 (Undecided)	7.4
4 (Undecided)	14.8
5	51.9
6 (Strongly satisfied)	18.5
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40k. As a contract swine producer, how do you feel about the relations with contractor?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	3.7
2	0.0
3 (Undecided)	3.7
4 (Undecided)	22.2
5	37.0
6 (Strongly satisfied)	29.6
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40l. As a contract swine producer, how do you feel about the willingness of contractor to supply pigs?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	0.0
3 (Undecided)	7.4
4 (Undecided)	11.1
5	37.0
6 (Strongly satisfied)	40.7
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40m. As a contract swine producer, how do you feel about the quality of animal supplied by contractor?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	0.0
3 (Undecided)	14.8
4 (Undecided)	11.1
5	44.4
6 (Strongly satisfied)	25.9
No answer	3.7
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40n. As a contract swine producer, how do you feel about the quality of feed supplied by contractor?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	0.0
3 (Undecided)	11.1
4 (Undecided)	3.7
5	48.1
6 (Strongly satisfied)	29.6
No answer	7.4
<i>Total percent</i>	100.0
<i>Number of observations</i>	27

Table 40o. As a contract swine producer, how do you feel about the return on investment?

<i>Response</i>	(Percent)
1 (Strongly dissatisfied)	0.0
2	0.0
3 (Undecided)	7.4
4 (Undecided)	25.9
5	44.4
6 (Strongly satisfied)	14.8
No answer	7.4
<i>Total percent</i>	100.0
<i>Number of observations</i>	27