

The Iowa Pork Production Industry – Descriptive Characteristics

A.S. Leaflet R1961

James Kliebenstein, Department of Economics
Jeffery Lorimor, Department of Ag and Biosystems
Engineering, Benjamin Larson, Research Assistant,
Department of Economics

Summary and Implications

The Iowa pork production industry has experienced a reduced number of producers and increased size of operation over time. Results of a survey conducted in 2002 showed that about one-in-four producers (23 percent) marketed from 5,000 to 9,999 market hogs annually. About one-in-three (31 percent) marketed from 2,000 to 4,999 pigs annually. The predominant operation type was a farrow-to-finish producer (40 percent of producers). Confinement production with mechanical ventilation was the primary type of farrowing and nursery production system used. There was a wide range of types of finishing facilities in use. Open lots with shelters or pastures represented the largest number of breeding/gestation facilities. The nearest neighbor for most producers was from one-eighth to one-half mile from the production facility. One-third had the nearest neighbor one-eighth to one-fourth mile from the facility. Slightly more than one-third had the nearest neighbor one-fourth to one-half mile from the facility. Most producers had only one hog production site. A few producers (10) had ten or more production sites. Only about six percent of the producers were under 30 years old. One-in-eight producers were 60 years old or older. About the same number had 40 or more years experience as a pork producer. Most had from 20 to 35 years of production experience.

Introduction

The pork production industry is dynamic and continually changing. The number of producers has been declining over time, operation size is increasing, and age is increasing. In 2002 a survey was sent to Iowa pork producers. The survey obtained information on type of production systems in use by producers. It also collected information on operation size, producer age, etc. A descriptive view of the Iowa pork production industry is provided.

Materials and Methods

Surveys were structured to obtain information on characteristics of Iowa pork producers. Information on characteristics was obtained on type of production systems such as confinement, hoop, etc., in use. Information on type of producer (farrow-to-finish,

finisher, etc.), producer age, etc., was also obtained. Other information included distance of production facilities from the nearest neighbors.

Two surveys were conducted. One was a mail survey. The mail survey was followed by a telephone survey.

Mail Survey

To obtain information on the Iowa swine industry a mail survey was sent to Iowa pork producers. The mailing list was coordinated with the Iowa Pork Producers Association. There were 3,249 surveys sent in early August 2002. Of these, 575 were returned; thirteen were no longer raising pigs leaving 562 usable surveys.

Telephone Survey

The telephone survey was conducted to help verify the results of the mail survey. It was conducted by ISU Statistics Department personnel during spring 2003. One issue was the representativeness of the mail survey. There were 354 telephone surveys completed. The telephone survey population was selected independently from the mail survey population. Questions were similar to the mail survey, but not identical due primarily to time constraints in conducting the phone survey.

The mail and phone survey respondents were similar. The similarity validates the results from both surveys, and allows the use of both for analysis and discussion of results. Information will be provided for the mail survey.

Results and Discussion

Information on the number of pigs marketed in 2001 by the survey respondents is provided in Table 1. This shows that about 11 percent marketed less than 1,000 pigs in 2001. About one-third of the respondents marketed from 1,000 to 2,999 pigs in 2001. Approximately 16 percent marketed from 3,000 to 4,999 pigs while about a fourth (22.71 percent) marketed from 5,000 to 9,999 head. Thirteen percent marketed 10,000-24,999 pigs while about 6 percent marketed 25,000 or more pigs annually. As shown above, these results for the telephone survey respondents were similar.

The largest number of respondents (40.2 percent) had a farrow-to-finish operation (Table 2). About one-in-five finished early weaned pigs (19.4 percent) or finished feeder pigs (18 percent). About one-in-seven (14.6 percent) had a contract finishing operation.

Table 3 corresponds to questions where producers provided information on the type of facilities that they used for each production phase. The facility types were hoop structures, open lot with shelter or pastures, naturally ventilated confinements, and mechanically

ventilated confinement. The producers were able to mark multiple facility types.

Table 3 shows the number of respondents with each facility type by production phase. It shows that there are large differences in facility types used by production phase. The primary type of facility for both farrowing and nursery was confinement with mechanical ventilation. Breeding-gestation and finishing were more varied but still were predominately confinement facilities. Open lots with shelters or pasture was used for breeding-gestation and/or finishing. The primary use of hoop structures was for finishing. Of those indicating they used hoop structures, 77 percent were finishing facilities.

The greatest variation in facility use was for breeding gestation facilities. About one-in-four respondents, 26.2 percent (147 out of 562) had open lot with shelters or pasture facilities for breeding-gestation; one-in-five had confinement facilities with mechanical ventilation (113/562), while one-in-six (15.8 percent) had confinement with natural ventilation facilities. Of those with breeding-gestation facilities, 40.4 percent had open lot with shelters or pasture facilities. Almost all farrowing facilities were confinement with mechanical ventilation. Of those with a farrowing facility 85 percent of the systems were confinement with mechanical ventilation systems. Similarly, respondents reported that the predominant nursery facility was confinement with mechanical ventilation. For those with nurseries, 89 percent of the systems were confinement with natural ventilation systems. Six-in-ten producers had finishing systems with natural ventilation. Four-in-ten reported confinement with mechanical ventilation. About one-in-four had open lot or pasture finishing facilities while one in ten had hoop finishing facilities.

Most producers had a deep pit as the primary manure storage system (Table 4). Sixty-eight percent of the producers indicated that they had this system as a primary manure storage system. Sixty percent of the primary systems utilized were deep pit systems. About twenty percent indicated they had a solid/bedded manure storage system. Eighteen percent had an outdoor slurry pit

system while six percent had an anaerobic lagoon as the primary manure storage system.

Information on the distance from the main production facility to the nearest neighbor is provided in Table 5. One in eight respondents (12.7 percent) indicated that the nearest neighbor was within one-eighth of a mile from the production facility. About one-third (32.8 percent) had the nearest neighbors from one-eighth to one-fourth mile from the facility. The nearest neighbor was from one-fourth to one-half mile from the facility for about another one-third (37 percent) of the respondents. About one percent had the nearest neighbor located more than one mile from the facility.

The telephone survey obtained information on number of production sites, producer age, and number of years the respondent had been a pork producer.

Most respondents to the telephone survey (about one-half) had one production site (Table 6). About another one-in-five (22.9 percent) had two production sites. Ten respondents (2.8 percent) had 10 or more production sites.

Most producer respondents (52.8 percent) were in the 35-49 age bracket (Table 7). Only 21 (5.9 percent) were in their 20's. Twenty-five (7 percent) were 65 or older. Another one-in-seven (14.4 percent) were in the 55-65 age bracket. Only 12 percent were under 35 years of age.

Many years of experience were represented by the respondents. Thirty-nine (11.2 percent) had 40 or more years experience as a pork producer (Table 8). At the other end of the age bracket, 23 (6.6 percent) had 9 or fewer years experience as a pork producer.

Acknowledgements

Support for this report was provided by the Iowa Pork Producers Association and the Iowa State University College of Agriculture.

Table 1. Number and Percent of Producers by Number of Pigs Marketed in 2001.

Number of Pigs Marketed	Number of Producers	Percent of Producers
Less Than 500	31	5.68
500-999	28	5.13
1,000-1,999	92	16.85
2,000-2,999	82	15.02
3,000-4,999	85	15.57
5,000-9,999	124	22.71
10,000-14,999	41	7.51
15,000-24,999	29	5.31
25,000 Or More	34	6.23

Table 2. Type of pork production operations.

Type of Operation	Number of Producers	Percent of Producers
Farrow-To-Finish	226	40.2
Early Wean-Pig Finisher	109	19.4
Feeder Pig Finisher	101	18.0
Contract Finisher	82	14.6
Farrow-To-Early Wean	24	4.3
Farrow-To-Feeder Pig	20	3.6
Contract Farrowing/Nursery	11	2.0
Seedstock Supplier	10	1.8
Contract Farrow-To-Finish	3	.5
Farrow-Feeder Pig, Contract Finishing	2	.4
Other	7	1.3

Table 3. Number of producers with respective production systems by phase of production.

Production Phase	Hoop Structures	Open lot with shelters or pastures	Confinement natural ventilation	Confinement mechanical ventilation	Total
Breeding-gestation	15	147	89	113	364
Farrowing	0	14	33	260	307
Nursery	3	9	29	346	387
Finishing	59	159	352	227	638

Table 4. Primary manure storage system.

Manure Storage System	Number of Producers	Percent of Producers	Percent of Systems
Deep pit	383	68.2	60.3
Solid/bedded	116	20.6	18.3
Outdoor slurry pit	102	18.2	16.0
Anaerobic lagoon	34	6.1	5.4

Table 5. Distance from main production facility to nearest neighbor.

Distance	Number of Operations	Percent of Operations
Less than 1/8 mile	70	12.7
1/8 to 1/4 mile	181	32.8
1/4 to 1/2 mile	204	37.0
1/2 to 1 mile	93	16.9
More than one mile	3	.6

Table 6. Number of hog production sites.

Number of Production Sites	Number of Respondents	Percent of Respondents
1	169	47.9
2	81	22.9
3	49	13.9
4	19	5.4
5	10	2.8
6	8	2.3
7-9	7	2.0
10-14	5	1.4
15-19	2	.6
20 or more	3	.8
TOTAL	353	

Table 7. Age of survey respondents.

Age	Number of Respondents	Percent of Respondents
20-24	6	1.7
25-29	15	4.2
30-34	23	6.5
35-39	51	14.4
40-44	67	18.9
45-49	69	19.5
50-54	47	13.3
55-59	32	9.0
60-64	19	5.4
65-69	15	4.2
70 or over	10	2.8
TOTAL	354	

Table 8. Years as pork producer for survey respondents.

Number of Years	Number of Respondents	Percent of Respondents
1-4	6	1.7
5-9	17	4.9
10-14	42	12.1
15-19	36	10.3
20-24	69	19.8
25-29	63	18.1
30-34	57	16.4
35-39	19	5.5
40-45	28	8.0
45 or more	11	3.2
TOTAL	348	