

Approved: 1-12-95  
Date

MINUTES OF THE HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT

The meeting was called to order by Chairperson Bob Miller at 3:30 p.m. on January 11, 1995 in Room 423-S of the Capitol.

All members were present except: Rep. Jo Ann Pottorff - excused

Committee staff present: Lynne Holt, Legislative Research Department  
Raney Gilliland, Legislative Research Department  
Bob Nugent, Revisor of Statutes  
Bonnie Fritts, Committee Secretary

Conferees appearing before the committee: Raney Gilliland, Principal Analyst, Kansas Legislative Research Department  
Ted Schroeder - Agricultural Economist, K-State University  
James Mintert - Agricultural Economist, K-State University  
Mark Campbell - Seaboard Corp.(aka Superior Farms)  
John George - Agricultural Engineering Associate

Others attending: See attached list

The meeting was called to order at 3:30 p.m. by the Chairperson Bob Miller. The minutes of January 10, 1995 were distributed and approved.

Raney Gilliland addressed the committee and presented a memorandum regarding the status of Corporate Farming Resolution by County (Attachment 1).

James Mintert and Ted Schroeder each spoke on the economic contribution of the hog industry to the state's economy (Attachments 2, 3 & 4)

Mark Campbell discussed his corporation being a direct beneficiary of **SB 554** and his involvement since passing of this bill in 1994.

John George spoke on waste and environmental problems, water rights, and residential concerns.

Meeting was adjourned at 4:40 p.m.

The next meeting is scheduled for January 12, 1995.

# HOUSE ECONOMIC DEVELOPMENT COMMITTEE GUEST LIST

DATE: 1-11

NAME	REPRESENTING
Don M. Ryan	Ryan, Ford & Associates
Roger Franke	Ks. Gov't Consulting
Mark Barcellina	KDOCH
JOHN GEORGE	Ag-Engineering Assoc.
Mark S. Campbell	Seaboard Farm
Jim Allen	Seaboard
Marty Vanier	Ks Ag Alliance
Fred Williams	
Harold Stouffer	Ks Bankers Assn
Michael Miller	KS Inc.
David Wisnyski	Ks. Dept. of Ag
Bob Jensen	Ks Pork Producers
Alan Holmes	Division of Budget
Bill Jewell	Kansas Farm Bureau
Mike Beam	Ks. LIVESTOCK ASSN.

# MEMORANDUM

## Kansas Legislative Research Department

300 S.W. 10th Avenue  
Room 545-N -- Statehouse  
Topeka, Kansas 66612-1504  
Telephone (913) 296-3181 FAX (913) 296-3824

January 11, 1995

**From:** Raney Gilliland, Principal Analyst

**Re:** Status of Corporate Farming Resolutions by County

The 1994 Kansas Legislature passed legislation which amended the Kansas Corporate Farming Law to permit the establishment of swine and dairy production facilities owned or leased by corporations or limited liability companies within counties through two methods. The first method allows a board of county commissioners in a county to adopt a resolution, subject to notification and protest petition, permitting the establishment of swine production facilities or dairy production facilities within a county. The second method allows qualified voters to submit a petition to a board of county commissioners requesting establishment of such facilities within the county. The question of whether the swine or dairy production facility should be permitted, either through the protest petition (the first method) or the petition requesting the facility (the second method), is to be triggered by the signatures of not less than 5 percent of the county electors who voted in the election of the Secretary of State in the last preceding general election. If no protest petition is filed with the county election officer protesting the resolution of a board of county commissioners or if the protest petition is inadequate, the resolution stands and these types of facilities are permitted within the county.

The 1994 amendments to the Corporate Farming Law did not require county officials to notify any central official of any action on this issue. Notification of the Secretary of State's Office is required when a county votes on the issue of permission of hog or swine operations. Below is a list of counties in which swine and dairy facilities are permitted to be owned or leased by corporations or limited liability companies. Also indicated is the type of action taken to permit these facilities.

### SWINE PRODUCTION FACILITIES PERMITTED (22 COUNTIES)

Norton  
Phillips  
Russell  
Wallace  
Logan  
Greeley  
Stafford

Lane  
Barton  
Rice  
Hamilton  
Stanton  
Finney  
Hodgeman

Haskell  
Gray  
Kiowa  
Morton  
Stevens  
Seward  
Meade  
Grant

HOUSE ECO. DEVELOPMENT  
1-11  
ATTACHMENT 1

The following counties will have an election on the swine production facility issue in future elections.

Rawlins (April)  
Decatur (April)

Logan (August)  
Scott (April)

Six counties had the issue of swine facilities owned or leased by corporations or limited liability companies on the ballot in November when it was defeated. The votes on the issue follow the identification of counties below.

Sherman (Y-817, N-2,015)  
Pawnee (Y-1019, N-1,701)  
Cheyenne (Y-638, N-1,017)

Thomas (Y-606, N-2,862)  
Sheridan (Y-252, N-999)  
Kearny (Y-522, N-784)

**DAIRY PRODUCTION FACILITIES PERMITTED**  
**(22 Counties)**

The following counties permit the establishment of dairy production facilities owned or leased by corporations or limited liability companies.

Cheyenne  
Phillips  
Thomas  
Wallace  
Logan  
Greeley  
Lane

Barton  
Rice  
Hamilton  
Stafford  
Kearny  
Finney  
Hodgeman

Haskell  
Gray  
Kiowa  
Morton  
Stevens  
Seward  
Meade  
Russell

The following counties are scheduled to vote on the corporate dairy issue in the future (four counties).

Decatur (April)  
Rawlins (April)

Trego (August)  
Scott (April)

The following county has voted on the issue of corporations operating dairies and it was not approved (one county).

Pawnee

One county has passed the resolution and is currently in the middle of its waiting period.

Grant (waiting period ends January 30)

Hog Industry Update

Statement before the Kansas Legislature

James Mintert and Ted Schroeder  
Agricultural Economists  
Kansas State University  
Manhattan, KS 66506

January 11, 1995

HOUSE ECO. DEVELOPMENT  
1-11  
ATTACHMENT 2

The Hog is Industry Characterized by:

1. Mega farms (those marketing 50,000 head or more annually) have expanded dramatically:

<u>Year</u>	<u>Number</u>	<u>Marketings</u>	<u>Share of U.S. Slaughter</u>
1988	33	5.7 million	6.5%
1991	41	8.1 million	8.8%
1993	57	12.3 million	13.0%

Seven of the 57 producers in 1993 marketed an average of 792,000 head in 1993. This was 24.6% more than in 1992.

One example of this expansion is Premium Standard Farms (PSF) which began construction of its first hog operation in 1989. Today PSF is producing at a rate of nearly 1.6 million head per year and it owns about 97,000 sows. (Source: V.J. Rhodes)

2. Many large producers use contract production to increase their size. The contractor owns the hogs and pays someone else to feed the hogs in their own facilities. The contractor bears market and production risk. Marketings of contractors have grown from 9.5 million head in 1988 to 14 to 16 million head in 1993. Note that many of these contractor hogs are finished by the contractor (close to two-thirds of the total). Plans are for the large producers with production contracts to increase by 101% from 1993 to 1996. (Source: V.J. Rhodes and G. Grimes).

3. Why has size of operation grown so rapidly?

- Economies of size  
(in 1970's economists questioned whether economies extended to 1,000 sow units, today firms with more than 90,000 sows continue to grow)
- Efficiency gains from specialization
- Production technologies  
(health management, genetics, production management)
- Large returns on equity brought significant outside capital investment
- Access to superior genetics together with large volume bring significant price premiums for market hogs

4. Growth of large operations has been primarily in North Carolina. One-third of producers marketing 50,000+ head per year are headquartered in North Carolina.

Why North Carolina?

- Total production costs are in total similar to corn belt (Feed costs higher, but labor, land, and buildings are cheaper in North Carolina. Source: C. Hurt)
- Underlying producer management expertise understood and was comfortable with large contract type production - the poultry industry was already present.
- Areas without hogs and/or few people.
- Loss of other industry created a need for new industry. Started with a few innovative producers.
- Political and cultural environments were not prohibitive to large hog farm expansion.

5. Profitable hog producer in the future:

1. Large enough to capture necessary economies of scale (either individually and/or networked with others)
2. Large enough for a small per head margin industry to make enough money for hog production to worth the effort
3. Have access to large amounts of capital
4. Have access to market and technological information
5. Be able to adopt new technology efficiently
6. Produce high quality lean hogs
7. Low production costs per pound of lean
8. Specialized production to meet demand
9. Be able to produce large amounts of hogs without nuisance problems



6. Hog production can have significant economic impacts

Study by Dennis DiPietre and Carl Watson at University of Missouri on Premium Standard Farms (PSF) indicated that PSF:

- Owns 37,000 acres in Missouri
- Vertically integrated swine producer, processor, and marketing firm
- Owns approximately 80,000 sows in Missouri and 17,000 in Texas
- Started producing hogs in 1989
- From 1989-95, PSF will create over \$1 billion in new output to Missouri's gross state product
- On-going operations will create
  - \$655 million in annual output
  - 2,739 jobs
  - \$199 million in personal income

Table 1. Number of Hog Operations, Marketings, Marketings per Operation and Total Value of Hogs Produced in Kansas, 1980-1993.

Year	Number of Operations	Hogs Marketed (1000 head)	Marketings per Operation (head)	Inventory Value of Hogs December 1 (1000 Dollars)	Value of Production (1000 Dollars)
1980	14000	3300	236	\$123,500	\$283,878
1981	13000	3069	236	\$111,510	\$307,765
1982	11200	2754	246	\$141,115	\$338,741
1983	9400	2758	293	\$88,275	\$310,335
1984	8400	2612	311	\$110,400	\$296,437
1985	8300	2636	318	\$99,560	\$269,642
1986	7000	2470	353	\$121,410	\$287,139
1987	6900	2289	332	\$102,225	\$284,292
1988	6500	2493	384	\$93,000	\$253,529
1989	6800	2598	382	\$109,475	\$261,039
1990	6000	2467	411	\$121,500	\$314,246
1991	5600	2469	441	\$92,950	\$312,864
1992	5700	2514	441	\$95,040	\$266,094
1993	5300	2472	466	\$91,800	\$283,447
1994	4500				

Source: U.S. Department of Agriculture, Hogs and Pigs, Various Issues.

Table 2. Number of Hog Operations, Marketings, Marketings per Operation and Total Value of Hogs Produced in U.S., 1980-1993.

Year	Number of Operations	Hogs Marketed (1000 Head)	Marketings per Operation (Head)	Inventory Value of Hogs December 1 (1000 Dollars)
1980	674,800	100,651	149	\$4,822,265
1981	580,060	95,986	165	\$4,113,725
1982	483,690	86,972	180	\$4,783,560
1983	462,110	89,168	193	\$3,330,803
1984	431,680	87,344	202	\$4,053,714
1985	391,000	86,731	222	\$3,340,368
1986	346,890	82,895	239	\$4,669,498
1987	332,760	84,249	253	\$4,096,647
1988	333,500	90,476	271	\$3,665,069
1989	309,700	92,553	299	\$4,258,285
1990	275,440	89,373	324	\$4,654,641
1991	253,890	92,293	364	\$3,971,637
1992	249,500	98,688	396	\$4,145,976
1993	225,210	97,911	435	\$4,337,599
1994	208,780			

Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.

Table 3. Annual Hog Marketings, Selected States and U.S., 1970-1993.

Year	Kansas	North Carolina	Nebraska	Iowa	Oklahoma	Texas	Arkansas	Colorado	Minnesota	Missouri	U.S.
------(1000 Head)-----											
1970	2719	2525	5017	20003	569	1413	458	418	5229	6910	86,919
1971	3450	2981	6001	22216	713	2186	596	563	6008	7822	98,644
1972	3285	2612	5203	20244	666	1846	530	573	5341	6991	89,555
1973	3088	2412	4766	18330	476	1510	486	556	5421	6382	82,419
1974	3201	2625	5263	19040	472	1309	463	510	5967	6511	85,504
1975	2442	2333	4411	16871	422	1181	437	419	5067	5222	73,627
1976	2617	2750	4576	18331	416	1164	573	439	4981	5038	75,747
1977	3077	2500	5007	20279	459	1163	609	394	5831	6146	80,939
1978	2974	2950	4949	19822	427	1190	712	492	6315	5842	81,271
1979	3305	3383	6282	21759	456	1191	908	551	6889	6988	92,499
1980	3300	3872	6602	23409	547	1189	1002	727	8362	7273	100,651
1981	3069	3634	6143	23324	520	1115	1082	465	8116	6577	95,986
1982	2754	3068	6017	23349	308	869	813	534	7030	5228	86,972
1983	2758	3530	6026	22651	258	818	791	498	6930	6148	89,168
1984	2612	3622	5903	22286	328	813	800	454	6721	5858	87,344
1985	2636	3746	5629	22814	297	650	918	311	7137	5683	86,731
1986	2470	3790	6073	21350	282	648	845	343	6508	4900	82,895
1987	2289	4152	6348	20953	311	731	916	302	7094	4830	84,249
1988	2493	4532	6656	22505	348	873	976	342	7595	5100	90,476
1989	2598	5204	7048	22539	422	860	1167	387	8095	4786	92,553
1990	2476	5044	6917	21994	431	699	1391	420	7689	4485	89,373
1991	2469	5717	7313	22802	419	810	1440	559	7847	4815	92,293
1992	2514	7022	7648	25446	435	762	1506	724	8557	4835	98,688
1993	2472	8097	7490	24127	591	830	1574	821	8370	5094	97,911

Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.

Table 4. Shares of Annual U.S. Hog Marketings, Selected States 1970-1993.

Year	Kansas	North Carolina	Nebraska	Iowa	Oklahoma	Texas	Arkansas	Colorado	Minnesota	Missouri
	------(%)-----									
1970	3.13	2.91	5.77	23.01	0.65	1.63	0.53	0.48	6.02	7.95
1971	3.50	3.02	6.08	22.52	0.72	2.22	0.60	0.57	6.09	7.93
1972	3.67	2.92	5.81	22.61	0.74	2.06	0.59	0.64	5.96	7.81
1973	3.75	2.93	5.78	22.24	0.58	1.83	0.59	0.67	6.58	7.74
1974	3.74	3.07	6.16	22.27	0.55	1.53	0.54	0.60	6.98	7.61
1975	3.32	3.17	5.99	22.91	0.57	1.60	0.59	0.57	6.88	7.09
1976	3.45	3.63	6.04	24.20	0.55	1.54	0.76	0.58	6.58	6.65
1977	3.80	3.09	6.19	25.05	0.57	1.44	0.75	0.49	7.20	7.59
1978	3.66	3.63	6.09	24.39	0.53	1.46	0.88	0.61	7.77	7.19
1979	3.57	3.66	6.79	23.52	0.49	1.29	0.98	0.60	7.45	7.55
1980	3.28	3.85	6.56	23.26	0.54	1.18	1.00	0.72	8.31	7.23
1981	3.20	3.79	6.40	24.30	0.54	1.16	1.13	0.48	8.46	6.85
1982	3.17	3.53	6.92	26.85	0.35	1.00	0.93	0.61	8.08	6.01
1983	3.09	3.96	6.76	25.40	0.29	0.92	0.89	0.56	7.77	6.89
1984	2.99	4.15	6.76	25.52	0.38	0.93	0.92	0.52	7.69	6.71
1985	3.04	4.32	6.49	26.30	0.34	0.75	1.06	0.36	8.23	6.55
1986	2.98	4.57	7.33	25.76	0.34	0.78	1.02	0.41	7.85	5.91
1987	2.72	4.93	7.53	24.87	0.37	0.87	1.09	0.36	8.42	5.73
1988	2.76	5.01	7.36	24.87	0.38	0.96	1.08	0.38	8.39	5.64
1989	2.81	5.62	7.62	24.35	0.46	0.93	1.26	0.42	8.75	5.17
1990	2.77	5.64	7.74	24.61	0.48	0.78	1.56	0.47	8.60	5.02
1991	2.68	6.19	7.92	24.71	0.45	0.88	1.56	0.61	8.50	5.22
1992	2.54	7.08	7.72	25.67	0.44	0.77	1.52	0.72	8.72	4.91
1993	2.52	8.27	7.65	24.64	0.60	0.85	1.61	8.39	8.55	5.20

Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.

Table 5. Hog Marketings of Ten Leading States, 1993.

1993 Rank	State	1993 Hogs Marketed (1000 head)	1993 Share of U.S. (%)
1	Iowa	24,127	24.64
2	Illinois	9,659	9.87
3	Minnesota	8,370	8.55
4	North Carolina	8,097	8.27
5	Indiana	7,524	7.68
6	Nebraska	7,490	7.65
7	Missouri	5,094	5.20
8	South Dakota	3,086	3.15
9	Ohio	3,084	3.15
10	Kansas	2,472	2.52

Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.

Table 6. Number of Hog Operations and Percentage of Inventory by Size, 1982, 1987, 1992, and 1993.

State	Year	Operation Inventory*							
		1-99 head		100-499 head		500+ head		1000+ head	
		Operations	Inventory	Operations	Inventory	Operations	Inventory	Operations	Inventory
		----- (%) -----							
Kansas	1982	67.0	12.6	26.8	37.1	6.2	50.3	N.A.	N.A.
	1987	59.1	8.9	33.3	35.4	7.6	55.7	N.A.	N.A.
	1992	56.1	8.5	33.3	28.0	6.5	18.0	3.5	45.5
	1993	54.7	7.5	34.0	27.0	7.3	18.0	4.0	47.5
	1994	51.1	6.0	35.6	26.0	7.0	15.0	3.5	53.0
North Carolina	1982	92.7	15.9	4.6	13.5	2.7	70.6	N.A.	N.A.
	1987	86.6	7.6	7.0	9.4	6.4	83.0	N.A.	N.A.
	1992	80.0	2.0	7.3	3.5	3.4	4.5	9.3	9
	1993	77.5	1.5	7.3	2.5	3.5	4.0	11.8	5
	1994	71.4	1.0	7.9	1.5	4.0	3.5	16.7	94.0
Nebraska	1982	46.9	8.7	43.7	46.3	9.4	45.0	N.A.	N.A.
	1987	42.3	6.3	44.6	37.7	13.1	56.0	N.A.	N.A.
	1992	36.9	4.5	44.6	30.0	12.3	24.0	6.5	41.5
	1993	35.2	4.0	45.6	30.0	12.8	25.0	6.4	41.0
	1994	31.7	3.5	44.8	28.5	12.6	23.0	6.5	45.0
Iowa	1982	32.6	4.7	50.1	44.6	17.3	50.7	N.A.	N.A.
	1987	29.5	3.8	49.8	37.5	21.0	58.7	N.A.	N.A.
	1992	23.1	2.5	46.6	26.5	19.7	30.0	10.6	41.0
	1993	24.2	2.5	45.4	25.0	20.0	30.0	10.4	42.5
	1994	24.1	2.5	42.4	26.5	20.7	30.0	9.7	41.0
Minnesota	1982	56.3	11.1	35.8	48.9	7.9	40.0	N.A.	N.A.
	1987	43.0	5.5	42.4	39.0	14.6	55.5	N.A.	N.A.
	1992	45.3	2.5	36.0	26.5	11.3	30.0	5.6	
	1993	42.8	4.0	37.1	25.0	12.9	25.0	7.9	
	1994	42.8	4.0	37.1	25.0	12.1	22.0	7.9	49.0
U.S.	1982	76.1	12.7	18.8	39.3	5.1	48.0	N.A.	N.A.
	1987	70.1	8.8	22.3	34.3	7.6	56.9	N.A.	N.A.
	1992	62.0	5.5	26.0	25.5	7.3	22.0	4.7	47.0
	1993	62.0	5.5	25.0	23.0	8.0	21.5	5.0	50.0
	1994	55.6	4.5	23.6	20.5	7.9	20.0	5.7	55.0

\* In 1992 a larger size class of producers with inventory of 1000 plus head was added and the 500+ head category became 500 to 999 head.

Source: U.S. Department of Agriculture, Hogs and Pigs, Various Issues.

2-10

# Group Marketing of Hogs

## Organization, Successes and Guidelines<sup>1</sup>

Department of Agricultural Economics

**L**Independent pork producers are facing increased competition in the pork industry. Pork producers are trying new marketing strategies to increase the price received per hundredweight and to lower their marketing costs. Group marketing is a strategy that some pork producers are using to help attain these goals. Group marketing entails individual pork producers marketing hogs collectively to increase the price received and/or reduce their marketing costs.

To determine the success, operation, and management of hog marketing groups, the departments of Agricultural Economics and Animal Sciences and Industry at Kansas State University intensively surveyed ten hog marketing groups located in Kansas and Iowa. The results offer insights into the structure, organization, and success of cooperative hog marketing efforts. Guidelines for organizing a successful hog marketing group are proposed, based on the survey results.

Hog marketing groups fit into two broad categories; transportation-oriented groups and quality-oriented groups. Transportation-oriented groups consist of independent pork producers banding together primarily to market hogs directly to packers in semi-trailer loads instead of smaller loads. Their primary objectives are to reduce transportation costs and to increase price, mainly by gaining access to more markets. Groups whose goal is to market semi-trailer

loads to packers need members who are willing to work with several other small producers and have a greater need to delegate load-coordinating authority to the group leader.

The other category of hog marketing groups consists of independent pork producers organized primarily to market a sufficient volume of similar, high quality hogs. These groups strive to increase prices by improving the overall quality of hogs marketed, increasing their bargaining power, and reducing packers' transaction costs. Clearly defining the group's authority over individual members, establishing membership requirements, hiring professional marketing expertise, and providing a number of member services are more important for groups marketing similar quality hogs.

Group marketing is a viable marketing strategy for Kansas pork producers. Through group marketing it is possible to increase net revenue received for hogs by reducing transportation and marketing costs, gaining access to more markets, and improving producers bargaining position with packers. Well

run hog marketing groups can increase the net return per hundredweight received by producer members.

### About the study

The survey collected information on why the marketing groups were organized, their goals, organizational structure, membership requirements, marketing group

leader responsibilities, services provided by the group to members, record keeping, fees charged, impact of group marketing on prices received, and advantages and disadvantages of group marketing.

Hog marketing groups operating in Kansas and Iowa were identified through industry contacts. The survey centered on personal interviews with marketing group leaders.

Seven of the ten hog marketing groups studied were located in Kansas. Six of these are still actively marketing hogs as groups. The groups surveyed were located primarily in the eastern half of Kansas. Group membership ranged from seven to fifteen members in the six Kansas groups still operating in 1993. During 1993, sixty-four Kansas hog producers marketed hogs through the groups included in the survey. These six operational groups marketed approximately 100,000 hogs in 1993 based on average weekly marketings reported by

<sup>1</sup>The authors gratefully acknowledge the financial support provided by the Kansas State Board of Agriculture for this study and report.





group leaders. Annual hog marketings per group in Kansas ranged from 5,000 to 37,000 head. On an annual basis, hogs marketed by groups in the survey represented less than 5 percent of the hogs marketed by Kansas hog producers during 1993. The length of time the surveyed groups were in existence ranged from less than a year to twelve years. On average, marketing groups in the survey had been in existence approximately five years.

### Marketing group organization

Reasons for organizing into a marketing group varied considerably. The majority of the surveyed groups organized to increase prices received for hogs by delivering directly to the plant and to lower marketing costs by shipping hogs in semi-trailer loads instead of small truckloads. However, several of the groups that formed more recently were organized primarily to increase prices received for hogs by marketing a large volume of consistent quality hogs. Their objective was to improve their bargaining position with packers and to take advantage of carcass merit purchase programs offered by most packers.

Only 20 percent of the groups had a formal written agreement detailing the organization and operation of the group. Most of the groups operated using informal oral agreements. Many of the oral agreements evolved over time as the marketing groups needed more organization to market hogs efficiently as a group. Factors commonly covered in a marketing group agreement included:

- Authority delegated to the group leader;
- Bid solicitation and acceptance;
- Details for efficient coordination of group shipments;
- Membership requirements;
- Services provided by the marketing group;
- Fees charged for marketing with the group;

- Payment of trucking expenses; and
- Payment for hogs marketed

### Membership requirements

Requirements to join a hog marketing group varied according to the group's objectives. Marketing groups organized primarily to reduce marketing costs generally did not have specific membership requirements. Nor were members required to market all of their hogs through the group. Marketing groups organized primarily to ship a sufficient volume of consistent quality hogs did have membership requirements to

market with the group. Their membership requirements were chiefly concerned with hog carcass quality. For example, some groups required prospective members to market hogs with a minimum lean percentage.

### Keys to marketing group success

The survey was designed to determine what factors the marketing group leaders felt were important for group marketing to succeed. The responses of the group leaders are reported in Table 1.

**Table 1. Marketing Group Leader Responses Regarding Factors That Determine Successful Group Marketing**

Factors	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
	.....percent of respondents.....				
Clearly define authority group has over individual member	20	50	10	20	0
Membership eligibility restricted to farrow-to-finish operations	40	0	10	30	20
Compare and exchange kill sheet information	50	40	0	10	0
Understand packer's carcass merit program	50	40	10	0	0
Market uniform quality hogs	60	20	20	0	0
Increase volume of hogs marketed	10	20	50	20	0
Increase membership of group	20	30	20	30	0
Need for a resourceful group leader	70	30	0	0	0
Need for group members to cooperate	50	20	10	10	10

The group leader's resourcefulness was important to the success of a marketing group. Clearly defining the marketing group's authority over individual members was also an important factor in determining successful group marketing. Understanding a packer's carcass merit purchase program, marketing uniform quality hogs, and the need for marketing group members to cooperate were other factors identified as being important to successful group marketing. Group leader responses regarding membership requirements, increasing membership, and the importance of increasing the volume marketed by the group varied concerning how important these factors were to marketing successfully as a group.

Goals of the marketing group influenced attitudes about factors affecting a marketing group's likely

success. For example, 40 percent of the groups strongly agreed that only farrow-to-finish operations should be eligible for group membership. This reflects a concern for marketing quality hogs since it would be difficult for feeder pig finishers to control or improve hog carcass quality. Groups organized to market similar quality hogs felt membership requirements were important in order for these groups to meet their objectives. In contrast, two group leaders strongly disagreed that eligibility should be restricted to farrow-to-finish operations indicating that membership requirements were not as important for groups organized primarily to reduce transportation costs.

Group leaders in 50 percent of the groups surveyed strongly agreed that successful group marketing required cooperative members. Groups organized to reduce transportation costs often

needed several producers to market hogs for a group shipment. Membership cooperation was more important to groups needing several members to complete a shipment. Groups organized to ship consistent quality hogs in most instances needed only one member's hogs to complete a shipment. Groups whose members could ship a semi-trailer load individually felt that membership cooperation was less important.

Marketing groups organized primarily to market a sufficient volume of consistent quality hogs felt clearly that defining the marketing group's authority over individual members was more important to successful group marketing than did groups organized to reduce transportation costs. These groups needed specific rules to accomplish the marketing group's objective of marketing uniform quality hogs. Marketing groups organized to reduce transportation costs could delegate authority to the group as the need arose and still meet the marketing group's objectives. Finally, marketing groups organized to market consistent quality hogs also felt that comparing and exchanging kill sheet information and marketing uniform quality hogs were more important than groups organized to reduce transportation costs.

Quality- and transportation-oriented marketing groups felt strongly that a resourceful group leader was important to the group's success. Group leaders make many key decisions that can determine a marketing group's success, regardless of the group's objectives. Both types of groups felt that increasing the volume of hogs marketed was important, but groups organized to market consistent quality hogs were only willing to add new members if they met the group's quality standards.

### Impact on prices, returns

The influence of group marketing on price received and the net return per hundredweight was positive for all groups surveyed. Nearly all groups felt that shipping hogs in semi-trailer load

**Table 2. Attitudes Concerning Group Leader Authority.**

Group leader responsibility	Strongly				
	Agreed	Agreed	Indifferent	Disagreed	Disagreed
	.....percent of respondents.....				
Solicit and accept packer bids	40	20	10	10	20
Arrange transportation for shipments	50	10	20	10	10
Allocate space on truck	60	20	10	0	10
Authority to reject hog for shipment	10	10	40	30	10
Determine location(s) for loading hogs	40	20	30	0	10
Determine time frame for loading hogs	60	20	10	0	10
Arrange loads to minimize quality and weight variability	30	20	30	20	0
Use past kill sheet data to arrange loads	20	30	30	20	0

lots directly to packers had a positive influence on their base bids. Sixty-seven percent of the group leaders surveyed felt quality and consistency of hogs marketed was the major determinant of base price received, whereas 33 percent felt the major determinant was the volume of hogs marketed.

The average price increase associated with marketing hogs jointly was approximately \$0.60 cwt., but the estimated impact ranged from \$0.00 to \$1.50 cwt. across the groups surveyed. The influence on net return averaged \$1.36 cwt. and ranged from \$1.00 to \$1.75 cwt. Increases in net returns include the impact of higher base bids, lower transportation costs, and premiums received from selling hogs using packers' carcass merit programs.

### Group leader responsibilities

The average group leader was 45 years old and had completed two years of college. They averaged 22 years of experience in the hog business and 3.5 years of experience as a marketing group leader. Approximately 75 percent of the group leaders also marketed hogs with the groups they represented. Group leaders worked an average of 4.5 hours per week on group activities and 55 percent were compensated.

Table 2 summarizes group leaders' survey responses regarding the importance of their authority to accomplish certain tasks. Sixty percent of the groups strongly agreed or agreed that the group leader needed authority to solicit and accept packer bids. Fifty to 60 percent of the groups strongly agreed that the group leader should be authorized to arrange transportation, allocate space on the truck, and determine time intervals for loading hogs. Fifty percent of the groups strongly agreed or agreed that the group leader should insure uniform hog quality through the use of kill sheet data to arrange loads. Survey results indicated there are limits as to how much authority a group leader should have. Forty percent of the groups indicated that the

**Table 3. Need For Marketing Group Services**

Advantage	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
	. . . . . percent of respondents . . . . .				
Maintain records of all kill sheet data	60	20	10	10	0
Use kill sheet data to make genetic and carcass quality improvement recommendations	50	30	10	10	0
Provide information on genetics	20	40	40	0	0
Provide information on nutrition and feeding practices	10	10	50	30	0

group leader should not have the power to reject hogs for shipment, whereas only 20% felt the leader needed this authority.

Once again, survey responses regarding the group leaders authority varied depending on the group's primary purpose. Marketing groups organized to reduce transportation costs and in which several different producers' hogs were required to complete a group shipment agreed that delegating authority to the group leader to carry out group shipment details and solicit and accept packer bids was important.

Conversely, groups organized to market consistent quality hogs felt the board of directors should be involved in negotiating sales. Leaders of these groups also need less authority regarding shipping details because fewer producers are needed to complete a shipment.

Groups oriented toward marketing high quality hogs felt it important that the group leader use kill sheet data to arrange loads, unlike the transportation oriented groups. Packer kill sheets contain a great deal of information concerning hog carcass quality. Effective use of this information can help a group leader improve the consistency and quality of the group's hogs.

### Marketing group services

Table 3 summarizes group leader responses to questions concerning services provided by the marketing group to members. Eighty percent of the marketing groups strongly agreed or agreed that records should be maintained based on kill sheet data provided by packers, although only 60 percent of the groups indicated they currently maintained kill sheet records. Kill sheets provide quality and value information about hogs purchased by a packer. Packer kill sheets report seller of the hogs, number of hogs sold, average live weight, base live weight price, and base price to be received per carcass per hundredweight for each shipment. The kill sheet separates the hogs marketed into categories based on quality variables including carcass weight, backfat measurement, and lean percentage. Premiums or discounts for each hog carcass are determined by its quality classification. The kill sheet also indicates the quality premiums received per hundredweight, sort loss discount per hundredweight, and actual live weight price received per hundredweight. Twenty percent of the groups provided group members kill sheet data in bar

**Table 4. Marketing Group Record Keeping**

	Record maintained	Record not maintained
	. . . . percent of respondents . . . .	
Volume of hogs shipped by group	50	50
Volume of hogs shipped by member	40	60
Average percentage of lean of hogs shipped by group	30	70
Average percentage of lean of hogs shipped by member	30	70
Average backfat measurement of hogs shipped by group	40	60
Average backfat measurement of hogs shipped by member	40	60
Comparison of base bid quotes with nearby terminal market	40	60
Average carcass premium received per cwt. by group member	30	70
Average sort-loss discount received by group member	40	60

chart form so members could compare their hog carcass data with the rest of the group.

All of the marketing groups preserved individual identity of hogs marketed. Packers sent payment for the hogs directly to individual producer members in 70 percent of the groups. Payment to individual producers for hogs marketed in the remaining groups went from the packer to the group leader.

The group leader used kill sheet information to deduct appropriate marketing fees and disburse payment to individual producers. This method was used to facilitate kill sheet data collection and make marketing fee collection easy and efficient. Eighty percent of the marketing groups strongly agreed or agreed that kill sheet data should be used to make recommendations to group

members concerning genetics and improving carcass quality. Forty percent of the groups said they currently used kill sheet data to make recommendations concerning genetic selection. Twenty percent of the groups also provided group members information on swine breeders, performance records, and prices of boars and gilts for seedstock selection.

Survey information was also collected on the records marketing groups maintained regarding marketing group shipments and activities. Table 4 is a summary of the records maintained by all the marketing groups surveyed. Maintaining these records required developing a database drawn from members' packer kill sheets. Forty percent of the groups maintained a detailed set of kill sheet data for each member and the group covering

previous marketings.

In general, marketing groups organized to lower transportation costs kept few if any records. Marketing groups organized to market consistent quality hogs generally kept records of kill sheet data and three of these groups provided summary information to their members periodically. Distributing the summary information facilitated comparisons among members and made it possible to evaluate their progress in improving hog carcass quality. These groups were also more likely to provide information on swine breeders and make recommendations concerning seedstock selection for group members. Finally, groups that charged fees to market hogs with the group provided more services to their members.

### Marketing fees and payment

Information on fees charged to market with a marketing group, how trucking expenses were handled, and how group members were paid for the hogs marketed with the group was also collected in the survey. Fifty percent of the groups did not charge members to market with the group. In these groups, the expense of soliciting bids and coordinating loads for shipment was absorbed by the group leader. The other 50 percent of the marketing groups charged between \$0.20 and \$1.00 per head to market with the group. Marketing groups that charged members a fee provided their members with more extensive services.

Trucking expenses were not included in fees charged by the marketing groups. Trucking expenses were usually deducted by packers prior to paying for hogs. However, in a few instances trucking expenses were the responsibility of the individual member.

Disease transmission was a concern of all the marketing groups, although none of the groups surveyed reported any specific incidence of disease transmission. Health risks were of greater concern to groups requiring more

than one member's hogs to fill a group shipment. Marketing groups minimized the risk of transmitting diseases between member herds by loading hogs at central loading sites or on rural roads away from production facilities. Some groups used a packer's hog buying station facilities to load hogs.

**Marketing strategies**

Approximately 85 percent of the hogs marketed by the groups surveyed were sold on carcass merit. The marketing techniques employed by the groups varied. Some groups routinely solicited bids from two or three packers and chose the packer with the highest bid when they were ready to make a group shipment. Other groups solicited bids from one packer and tried to choose the best day of the week to market hogs to this packer. Marketing groups organized to lower transportation costs by shipping hogs directly to packers generally used one of these two marketing methods.

Marketing groups organized to market consistent quality hogs solicited various packer bids for each shipment or entered into longer term marketing agreements with a packer. In these longer term marketing agreements, the group agreed to deliver a specified number of hogs per week, guaranteed a minimum quality for hogs marketed by the group (carcass weight range, minimum percent lean, etc.) and agreed to a base price to be received for a shipment according to a predetermined price formula for a specified period of weeks or months. Only groups organized specifically to market consistent quality hogs used this marketing strategy.

**Advantages and disadvantages**

Several advantages of group marketing were identified by group leaders responding to the survey (Table 5). The number one advantage was a higher sale price for hogs marketed through the group compared to those marketed

individually. Selling hogs directly to packers instead of through a buying station and selling on a carcass merit rather than on a live weight basis accounted for much of the price increase. Several groups reported they were able to increase their base price on carcass merit programs through group marketing. Reduced transportation costs from marketing hogs in semi-trailer load lots was another advantage often expressed. These responses indicate that marketing groups organized to increase prices and to lower transportation costs have generally been successful in meeting their initial objectives.

Information gained on carcass quality of hogs marketed in comparison with other producers in the group was another advantage often cited. Group marketing enabled members to compare their carcass quality with other members. The quality of hogs marketed by group members often improved as a result of group marketing, perhaps because of the opportunity to compare carcass quality information with other group members.

Packers desire hogs that produce carcasses in specific weight ranges which vary somewhat across packers. Carcass weights within this range have a history of providing pork cuts with the most value to the packer. Sort-loss discounts are used by packers to penalize producers for marketing hogs with carcass weights that fall outside the desired weight range. One respondent

felt group marketing allowed members to become more disciplined in their marketing which led to significant reductions in sort-loss discounts. Group marketing can help reduce sort-loss discounts by increasing producer awareness of lost revenue and by initiating competitiveness among group members to minimize sort-loss discounts.

Group marketing can potentially increase prices received for hogs through any of several avenues. First, by pooling large groups of hogs together and marketing them as a group, transaction costs of packers (as well as producers) can be reduced significantly. Packers can go to one source for a larger percentage of their slaughter. This reduces buyer search costs for hogs and the uncertainty regarding their ability to fulfill their slaughter needs. In addition, if the producer group is large enough and carcass quality is consistent, packers gain certainty regarding fabrication yields and cut qualities.

Secondly, market access may be enhanced by marketing hogs in larger groups. Packers cannot routinely afford to negotiate the purchase of small groups of hogs from numerous sellers. As a result they tend to offer "take it or leave it" price bids. But they can and will devote more effort to purchasing negotiations if larger quantities are available from a single source. Marketing in a group can lead to more potential packers competing for an individual

**Table 5. Group Marketing Advantages**

Advantage	Strongly Agreed	Agreed	Indifferent	Disagreed	Strongly Disagreed
Received higher prices for hogs from group marketing	40	40	10	10	0
Spent less time marketing hogs	70	20	0	10	0
Significantly reduced sort-loss discounts	44	22	34	0	0
Lowered marketing costs	40	40	10	10	0

producer's hogs which could increase price. Through group marketing, producers with small operations can pool together and, as a group, counter-balance some of the market power a pork packer might have in terms of market information, hog supplies, and negotiating position.

Several disadvantages of group marketing cited by group leaders were problems associated with the coordination of a group load when several producer's marketings were required to fill a semi-trailer for shipment. Notifying the group leader of marketing intentions and members following the loading schedule for group shipments were two load coordinating difficulties stated. Additionally, the lack of flexibility in marketing hogs because shipments are only made on a certain day of the week, loss of individual marketing independence, and increased susceptibility to diseases were other commonly cited disadvantages of group marketing.

## Guidelines

The following guidelines for the operation of a hog marketing group are designed to help producers interested in starting a hog marketing group and to enhance current groups' operations. Subtle policy or procedural operating changes can make the difference between success or failure of group marketing programs. Suggested guidelines for operating a successful marketing group are:

- Have a written agreement;
- Hire a marketing group coordinator;
- Market hogs on carcass merit rather than on a liveweight basis;
- Keep records of kill sheet data;
- Distribute information to group members and make comparisons concerning carcass, growth, and reproductive traits; and
- Consider using new marketing strategies.

### *Marketing groups should have a written agreement clearly stating:*

- Goals of the marketing group;
- Group operations
  - bid solicitation
  - bid acceptance
  - notification requirement to ship hogs
  - loading procedures
  - marketing fees and collection
  - payment method to producers
  - record keeping services
  - information sharing procedures
  - time frame of agreement;
- Procedures to hire, elect, or appoint group leader;
- Group leader's authority and responsibilities;
- Specific membership requirements and responsibilities; and
- Procedures to amend agreement.

### *Hire a marketing group coordinator.*

Decide what services the marketing group should provide that would benefit the group and the individual members. Assign the marketing group coordinator the authority to provide these services. Compensate the group leader according to the time and value of the services provided. The benefits of the services provided by a resourceful marketing group coordinator will significantly outweigh the costs. Charge a marketing fee per hog shipped to cover the marketing group's operating expenses.

### *Market hogs on a carcass merit rather than on a live weight basis.*

Marketing consistent, high-quality hogs will make it possible to earn carcass premiums by selling hogs on packers' carcass merit programs. These programs provide direct pricing signals to producers regarding the quality of hogs they are producing. These price signals encourage producers to improve carcass quality and better meet consumer demands. Negotiating higher base bids with packers can increase net

returns substantially. Marketing groups should use their bargaining power to obtain higher base bids. Additionally, marketing groups that are marketing hogs long distances will avoid the revenue loss associated with liveweight shrink when selling on a carcass merit program since carcass weight, unlike live weight, does not shrink significantly if hogs are slaughtered within 12 hours of shipping.

Learn how packers measure quality (backfat measurement and/or muscle measurement), and how sort-loss discounts are calculated. Selling hogs on carcass merit can generate more gross revenue per hog versus selling hogs on a live weight basis, if the hogs are average or better than average quality. Packers might also increase base bids to producers who sell hogs on carcass merit due to the reduced likelihood of over compensating producers for lower quality hogs. Determine the weight range at which the group's and the members' hogs receive the largest premiums and smallest sort-loss discounts. Decide whether a muscle measurement needs to be taken in order to be adequately compensated for quality. Producers marketing heavy muscled hogs will generally not be compensated adequately for their hogs when premiums are determined by a backfat measurement only.

### *Keep records of kill sheet data.*

Maintain data for each member and the group on all the following:

- Number of hogs marketed;
- Average weight;
- Average backfat;
- Average percent lean;
- Average premium per hundred-weight;
- Sort loss discounts; and
- Base bid received compared with nearby terminal or publicly quoted direct market.

***Distribute information to group members and make comparisons concerning carcass, growth, and reproductive traits.***

Information on hog carcass quality, pricing and productivity should be provided on a regular basis to group members so they can compare their marketings with other group members. Hold periodic meetings to discuss the operation of the marketing group, production methods, feeding programs, breeding programs, and seedstock selection. The goal of the meetings should be to share information to improve the operation of the group and individual operations. An example could be discussing if a central loading site would make the loading and shipping of hogs less time consuming and reduce disease transmission concerns. These meetings could include guest speakers who have expertise in marketing, genetics, breeding systems, or any other subject of interest to the marketing group.

Producers should not make production decisions based solely on information provided by kill sheets. Kill sheet

data should be used in conjunction with corresponding hog growth and sow productivity records. These data can be analyzed to make more informed decisions concerning seedstock selection and other variables that influence profitability. Work toward a long term goal of producing hogs with consistent high quality carcasses that provide a good combination of carcass traits, growth traits, and reproductive traits.

***Consider using new marketing strategies.***

One example of an innovative marketing strategy is selling hogs to one packer using a long term delivery contract that guarantees a certain volume and quality of carcass. The base bid is usually a regional terminal market's weekly top plus or minus some specified amount set forth in the contract. Contracts where the marketing group specifies a certain volume and quality to be delivered are appealing to packers. These agreements can lower packers transaction and procurement costs and enable packers to do a better job of using their labor and facilities. Consequently, packers are sometimes willing to

increase base bids to producers or groups entering into these contracts.

Consider purchasing inputs as a group. Although none of the groups that participated in this survey were purchasing inputs as a group, there are a number of successful input purchasing groups located in the Midwest. Buying inputs such as veterinary supplies, feed additives, soybean meal, crates, flooring, and other supplies in bulk quantities can lead to substantial discounts and lower the production costs of group members.

Finally, maintain flexibility and be dynamic in group operations and long run planning. Industry structure, production technology, slaughtering methods, pricing systems, and consumer demands are all rapidly changing.

Producer marketing groups need to be at the forefront of this change. Progressive management of the group will be required or it could quickly become obsolete and ineffective at enhancing individual member goals. This suggests that continued interaction among marketing groups, group members, industry leaders, scientists, and market analysts will be valuable.

**Richard Tynon**

Graduate Research Assistant, Agricultural Economics

**James Mintert**

Extension Agricultural Economist, Livestock Marketing

**Mike Tokach**

Extension Specialist, Livestock Production and Management, Northeast

**Ted Schroeder**

Associate Professor, Agricultural Economics

**Michael Langemeier**

Extension Agricultural Economist, Farm Management



Cooperative Extension Service, Kansas State University

MF-1104

January 1994

Issued in furtherance of Cooperative Extension Work, acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, and United States Department of Agriculture Cooperating, Richard D. Wootton, Associate Director. All educational programs and materials available without discrimination on the basis of race, color, national origin, sex, age, or disability.

File Code: Marketing (Agricultural) 1-4

1-94—1M: 3-94—1M; 9-94—1.5M

Economic trends in

# Kansas Hog Production



Extension Agricultural Economics • Cooperative Extension Service • Kansas State University

HOUSE ECO. DEVELOPMENT  
7-11  
ATTACHMENT 4



Economic trends in

# Kansas Hog Production

Ted C. Schroeder, Michael R. Langemeier, and Barry L. Flinchbaugh  
 Department of Agricultural Economics, Kansas State University

The Kansas hog industry is an industry in transition. Recent trends have been toward a declining industry in the state. Numerous factors contribute to this decline. However, the underlying factor determining hog production industry location is long-run profitability. If hogs can be profitably produced in Kansas with rates of return that are competitive with alternative uses of the resources, then hog production will occur in the state. Otherwise, it will locate in regions where the relative return is higher.

Many factors determine the profitability of an enterprise in a particular region. Production costs, market prices, environment, and policy ultimately determine profitability. Relative shifts in any of these factors—either in Kansas or in other regions—lead to eventual shifts in production location. This report

summarizes and identifies trends that have recently occurred in the Kansas and U.S. hog industry. Emphasis is placed on trends in production, marketings, structure, and profitability of Kansas hog production.

### Production and marketing trends

The size of the Kansas hog industry has declined considerably both relatively and absolutely during the last 15 years. As Table 1 and Figure 1 show, the number of hog operations in Kansas declined by 62 percent between 1980 and 1993 and by 37 percent in the last ten years. This parallels changes in the number of hog operations in the U.S. where total operations declined by 45 percent in the last decade (Table 2). Kansas swine operations increased in size at a slower rate than the national average. Kansas hog operation size increased 47 percent from an average of 311 pigs marketed per year in 1984 to a projected 458 pigs in 1993 (Table 1). Average U.S. hog

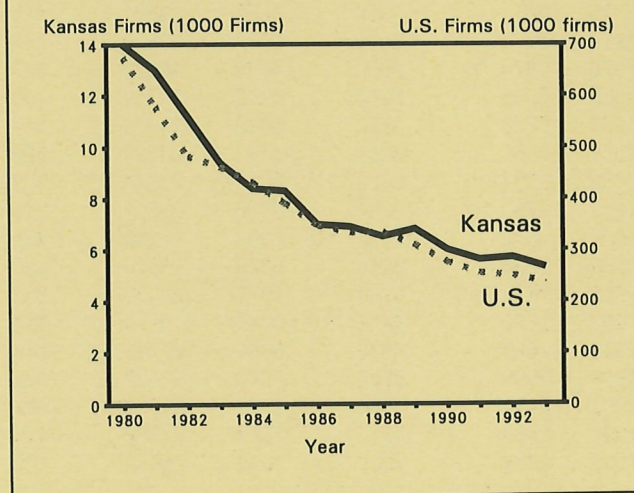
**Table 1. Number of Hog Operations, Marketings, Marketings per Operation and Total Value of Hogs Produced in Kansas, 1980-1993.**

Year	Number of Operations	Hogs Marketed (1000 Head)	Marketings per Operation (Head)	Inventory Value of Hogs December 1 (1000 Dollars)	Value of Production (1000 Dollars)
1980	14000	3300	236	\$ 123,500	\$ 283,878
1981	13000	3069	236	111,510	307,765
1982	11200	2754	246	141,115	338,741
1983	9400	2758	293	88,275	310,335
1984	8400	2612	311	110,400	296,437
1985	8300	2636	318	99,560	269,642
1986	7000	2470	353	121,410	287,139
1987	6900	2289	332	102,225	284,292
1988	6500	2493	384	93,000	253,529
1989	6800	2598	382	109,475	261,039
1990	6000	2467	411	121,500	314,246
1991	5600	2469	441	92,950	312,864
1992	5700	2514	441	95,040	266,094
1993	5300	2430*	458*	91,770	282,050*

\*KSU Projection

Source: U.S. Department of Agriculture, Hogs and Pigs, Various Issues.

**Figure 1. Number of Hog Operations, U.S. and Kansas, 1980-93.**



Source: USDA

operation size increased 115 percent over the same period, going from 202 head marketed per year in 1984 to a projected 434 head in 1993.

In the last ten years, the number of hogs marketed in Kansas declined 7 percent from 2.6 million head in 1984 to 2.4 million head in 1993 (Table 1 and Figure 2). The annual value of hog production in Kansas has ranged between \$260 million and \$314 million the last five years. In 1993, total value of

Kansas hog production is projected to be approximately \$282 million.

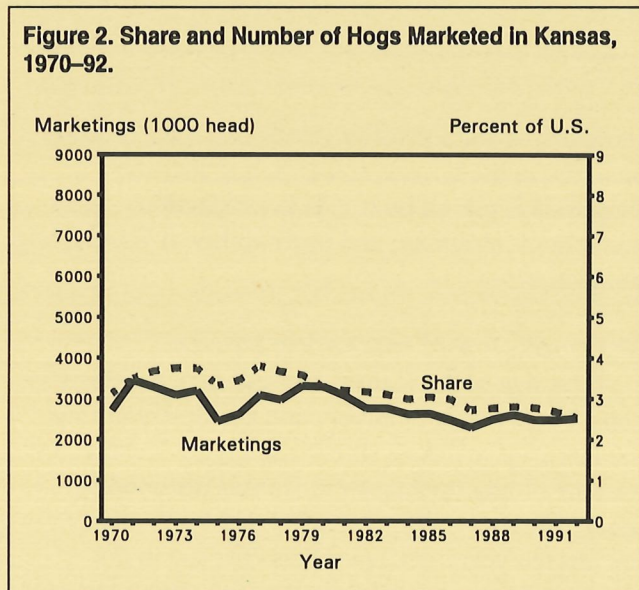
Annual marketings of hogs in Kansas and selected other states are presented in Table 3. Seven of the ten states reported in Table 3 increased marketings between 1983 and 1992. Missouri was

**Table 2. Number of Hog Operations, Marketings, Marketings per Operation and Total Value of Hogs Produced in U.S., 1980-1993.**

Year	Number of Operations	Hogs Marketed (1000 Head)	Marketings per Operation (Head)	Inventory Value of Hogs December 1 (1000 Dollars)
1980	674,800	100,651	149	\$ 4,822,265
1981	580,060	95,986	165	4,113,725
1982	483,690	86,972	180	4,783,560
1983	462,110	89,168	193	3,330,803
1984	431,680	87,344	202	4,053,714
1985	391,000	86,731	222	3,340,368
1986	346,890	82,895	239	4,669,498
1987	332,760	84,249	253	4,096,647
1988	333,500	90,476	271	3,665,069
1989	309,700	92,553	299	4,258,285
1990	275,440	89,373	324	4,654,641
1991	253,890	92,293	364	3,971,637
1992	249,500	99,115	397	4,145,976
1993	235,840	102,372*	434*	4,282,227

\*KSU Projection

Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.



Source: USDA

**Table 3. Annual Hog Marketings, Selected States and U.S., 1970-1992.**

Year	Kansas	North Carolina	Nebraska	Iowa	Oklahoma	Texas	Arkansas	Colorado	Minnesota	Missouri	U.S.
1970	2719	2525	5017	20003	569	1413	458	418	5229	6910	86,919
1971	3450	2981	6001	22216	713	2186	596	563	6008	7822	98,644
1972	3285	2612	5203	20244	666	1846	530	573	5341	6991	89,555
1973	3088	2412	4766	18330	476	1510	486	556	5421	6382	82,419
1974	3201	2625	5263	19040	472	1309	463	510	5967	6511	85,504
1975	2442	2333	4411	16871	422	1181	437	419	5067	5222	73,627
1976	2617	2750	4576	18331	416	1164	573	439	4981	5038	75,747
1977	3077	2500	5007	20279	459	1163	609	394	5831	6146	80,939
1978	2974	2950	4949	19822	427	1190	712	492	6315	5842	81,271
1979	3305	3383	6282	21759	456	1191	908	551	6889	6988	92,499
1980	3300	3872	6602	23409	547	1189	1002	727	8362	7273	100,651
1981	3069	3634	6143	23324	520	1115	1082	465	8116	6577	95,986
1982	2754	3068	6017	23349	308	869	813	534	7030	5228	86,972
1983	2758	3530	6026	22651	258	818	791	498	6930	6148	89,168
1984	2612	3622	5903	22286	328	813	800	454	6721	5858	87,344
1985	2636	3746	5629	22814	297	650	918	311	7137	5683	86,731
1986	2470	3790	6073	21350	282	648	845	343	6508	4900	82,895
1987	2289	4152	6348	20953	311	731	916	302	7094	4830	84,249
1988	2493	4532	6656	22505	348	873	976	342	7595	5100	90,476
1989	2598	5204	7048	22539	422	860	1167	387	8095	4786	92,553
1990	2476	5044	6917	21994	431	699	1391	420	7689	4485	89,373
1991	2469	5717	7313	22802	419	810	1440	559	7847	4815	92,293
1992	2514	7022	7648	25446	435	762	1506	718	8641	4863	99,115

Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.

the only state bordering Kansas that showed a decline in hog marketings during this period. This indicates that generally over the last decade the economic environment for hog production in Kansas has not been as attractive as it has been in most neighboring states. Figures 2 through 8 illustrate trends in hog marketings and shares of these seven states.

The Kansas swine industry has never constituted a major portion of the total U.S. hog industry. The

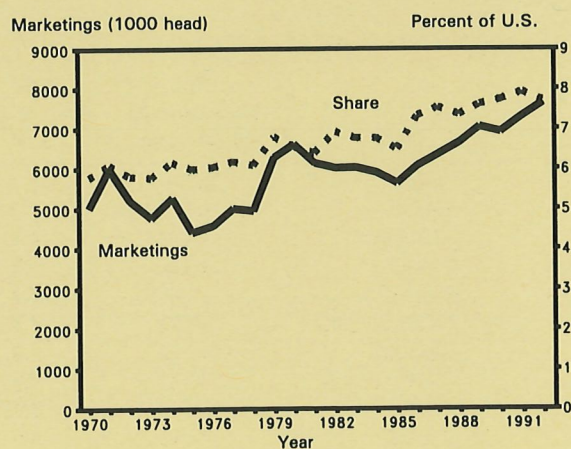
share of hogs marketed in Kansas peaked in 1977 representing 3.8 percent (Table 4 and Figure 2) with the state of Kansas ranking seventh in the number of hogs produced. Since then Kansas's share has declined to 2.54 percent and Kansas has fallen to the tenth ranked hog producing state. In contrast to Kansas, several states have realized significant increases in hog production. For example, since 1983, Nebraska (Figure 3), North Carolina (Figure

**Table 4. Shares of Annual U.S. Hog Marketings, Selected States 1970-1992.**

Year	Kansas	North Carolina	Nebraska	Iowa	Oklahoma	Texas	Arkansas	Colorado	Minnesota	Missouri
1970	3.13	2.91	5.77	23.01	0.65	1.63	0.53	0.48	6.02	7.95
1971	3.50	3.02	6.08	22.52	0.72	2.22	0.60	0.57	6.09	7.93
1972	3.67	2.92	5.81	22.61	0.74	2.06	0.59	0.64	5.96	7.81
1973	3.75	2.93	5.78	22.24	0.58	1.83	0.59	0.67	6.58	7.74
1974	3.74	3.07	6.16	22.27	0.55	1.53	0.54	0.60	6.98	7.61
1975	3.32	3.17	5.99	22.91	0.57	1.60	0.59	0.57	6.88	7.09
1976	3.45	3.63	6.04	24.20	0.55	1.54	0.76	0.58	6.58	6.65
1977	3.80	3.09	6.19	25.05	0.57	1.44	0.75	0.49	7.20	7.59
1978	3.66	3.63	6.09	24.39	0.53	1.46	0.88	0.61	7.77	7.19
1979	3.57	3.66	6.79	23.52	0.49	1.29	0.98	0.60	7.45	7.55
1980	3.28	3.85	6.56	23.26	0.54	1.18	1.00	0.72	8.31	7.23
1981	3.20	3.79	6.40	24.30	0.54	1.16	1.13	0.48	8.46	6.85
1982	3.17	3.53	6.92	26.85	0.35	1.00	0.93	0.61	8.08	6.01
1983	3.09	3.96	6.76	25.40	0.29	0.92	0.89	0.56	7.77	6.89
1984	2.99	4.15	6.76	25.52	0.38	0.93	0.92	0.52	7.69	6.71
1985	3.04	4.32	6.49	26.30	0.34	0.75	1.06	0.36	8.23	6.55
1986	2.98	4.57	7.33	25.76	0.34	0.78	1.02	0.41	7.85	5.91
1987	2.72	4.93	7.53	24.87	0.37	0.87	1.09	0.36	8.42	5.73
1988	2.76	5.01	7.36	24.87	0.38	0.96	1.08	0.38	8.39	5.64
1989	2.81	5.62	7.62	24.35	0.46	0.93	1.26	0.42	8.75	5.17
1990	2.77	5.64	7.74	24.61	0.48	0.78	1.56	0.47	8.60	5.02
1991	2.68	6.19	7.92	24.71	0.45	0.88	1.56	0.61	8.50	5.22
1992	2.54	7.08	7.72	25.67	0.44	0.77	1.52	0.72	8.72	4.91

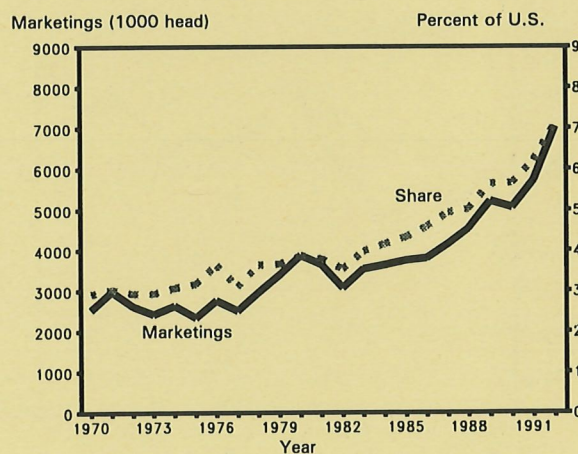
Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.

**Figure 3. Share and Number of Hogs Marketed in Nebraska, 1970-92.**



Source: USDA

**Figure 4. Share and Number of Hogs Marketed in North Carolina, 1970-92.**



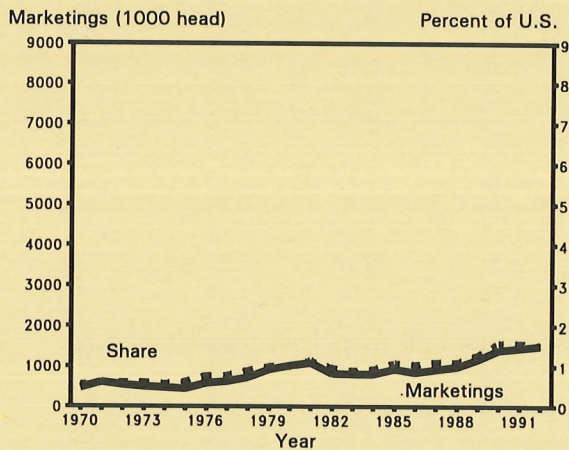
Source: USDA

4-7

4), Arkansas (Figure 5), and Minnesota (Figure 6) all had significant increases in their shares of U.S. hog production. In addition, over the last couple of years Colorado has increased its share considerably (although still representing less than 1 percent of total U.S. marketings). North Carolina has realized the largest growth in share of hog marketings of any state with a 79 percent increase in share from 3.96 percent in 1983 to 7.08 percent in 1992. Missouri faced a generally declining industry from 1980 to 1990. However, growth occurred in 1991 and 1992 (Figure 7).

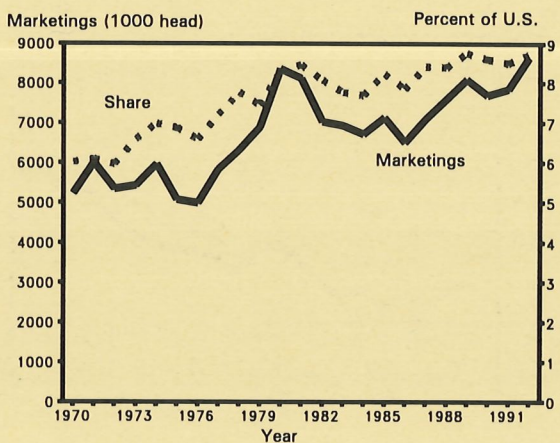
Shares of the top ten hog producing states in

**Figure 5. Share and Number of Hogs Marketed in Arkansas, 1970-92.**



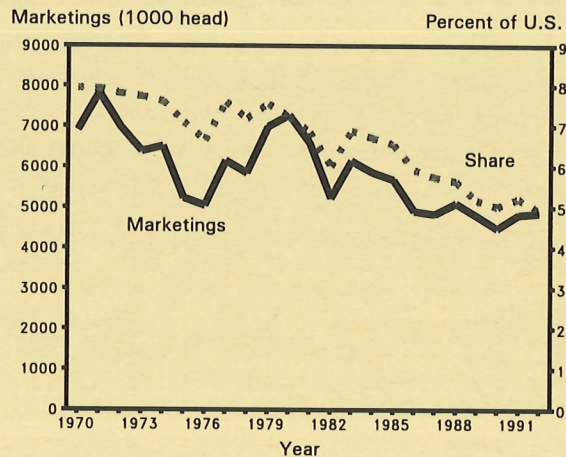
Source: USDA

**Figure 6. Share and Number of Hogs Marketed in Minnesota, 1970-92.**



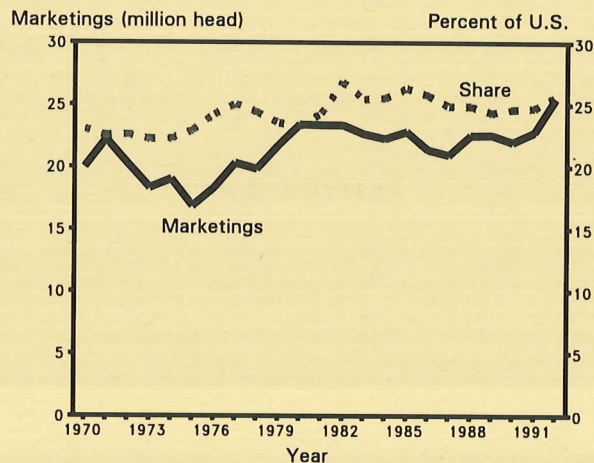
Source: USDA

**Figure 7. Share and Number of Hogs Marketed in Missouri, 1970-92.**



Source: USDA

**Figure 8. Share and Number of Hogs Marketed in Iowa, 1970-92.**



Source: USDA

**Table 5. Hog Marketings of Ten Leading States, 1992.**

1992 Rank	State	1992 Hogs Marketed (1000 Head)	1992 Share of U.S. (%)
1	Iowa	25,446	25.7
2	Illinois	9,801	9.9
3	Minnesota	8,641	8.7
4	Indiana	7,785	7.9
5	Nebraska	7,648	7.7
6	North Carolina	7,022	7.1
7	Missouri	4,863	4.9
8	South Dakota	3,307	3.3
9	Ohio	3,216	3.2
10	Kansas	2,514	2.5

Source: U.S. Department of Agriculture, Meat Animals Production, Disposition, and Income, Various Issues.

1992 are reported in Table 5. Iowa was by far the largest producing state with 25.7 percent of the nation's hog marketings. Iowa has held a large and steady share of U.S. hog production for quite some time (Figure 8). The next largest state was Illinois with less than half of the market share of Iowa at 9.9 percent. Minnesota, Indiana, Nebraska, and North Carolina all had similar sized hog industries with 7.1 percent to 8.7 percent of total U.S. hog marketings. Kansas ranked tenth with a 2.5 percent share.

The majority of the hogs produced in Kansas annually are raised in the north central and northeastern regions. Figure 9 illustrates the location of the 1992 pig crop by county. Ten counties had a pig crop larger than 50,000 head in 1992, which include in order from largest, Meade and Seward (which are not reported separately by Kansas Agricultural Statistics, but together represent the largest production area), Washington, Nemaha, Marshall, Clay, Jewell, Pottawatomie, Brown, and Butler. Of these ten only Meade, Seward, and Butler are not located near the Kansas-Nebraska border. The northeast and north

central regions of the state represented 42 percent of the total Kansas pig crop. The important point is that the largest portion of hog production in Kansas is in a relatively small geographic region. Because of this geographic concentration, hog production is an important component of local economic prosperity for several communities.

### Production organization and structure

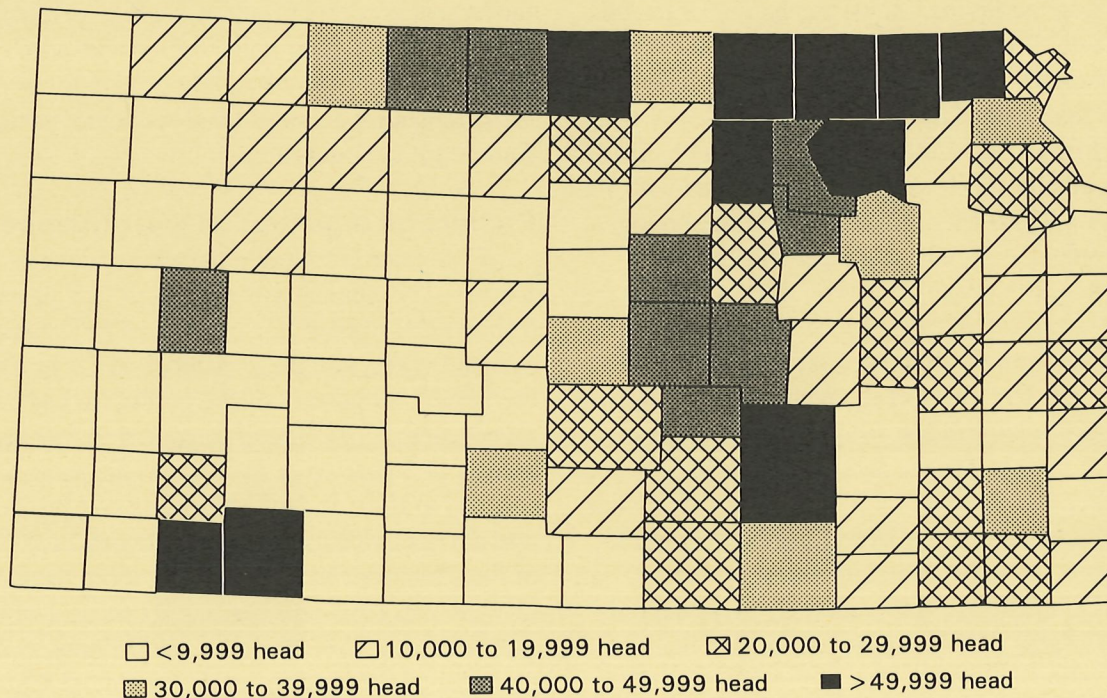
Firm concentration in the swine industry has increased dramatically over the last few years. Table 6 shows the sizes of hog operations in Kansas, selected states, and the U.S. since 1982. In Kansas, the largest 4.0 percent of the producers had hog inventories of 1,000 head or greater in 1993 and owned 47.5 percent of the hogs in the state. In contrast to Kansas, North Carolina hog production was almost twice as concentrated with 11.8 percent of the operations having 1,000 or more head in inventory in 1993 representing 92 percent of the state's hogs. Nebraska, Iowa, and Minnesota had producer concentration similar to that of Kansas and

**Table 6. Number of Hog Operations and Percentage of Inventory by Size, 1982, 1987, 1992, and 1993.**

State	Year	Operation Inventory*							
		1-99 Head		100-499 Head		500+ Head		1000+ Head	
		Operations	Inventory	Operations	Inventory	Operations	Inventory	Operations	Inventory
		(%)							
Kansas	1982	67.0	12.6	26.8	37.1	6.2	50.3	N.A.	N.A.
	1987	59.1	8.9	33.3	35.4	7.6	55.7	N.A.	N.A.
	1992	57.0	8.5	33.0	28.0	6.5	18.0	3.5	45.5
	1993	54.7	7.5	34.0	27.0	7.3	18.0	4.0	47.5
North Carolina	1982	92.7	15.9	4.6	13.5	2.7	70.6	N.A.	N.A.
	1987	86.6	7.6	7.0	9.4	6.4	83.0	N.A.	N.A.
	1992	80.0	2.0	7.3	3.5	3.4	4.5	9.3	90.0
	1993	77.5	1.5	7.3	2.5	3.5	4.0	11.8	92.0
Nebraska	1982	46.9	8.7	43.7	46.3	9.4	45.0	N.A.	N.A.
	1987	42.3	6.3	44.6	37.7	13.1	56.0	N.A.	N.A.
	1992	37.0	4.5	44.5	30.0	12.0	24.0	6.5	41.5
	1993	35.2	4.0	45.6	30.0	12.8	25.0	6.4	41.0
Iowa	1982	32.6	4.7	50.1	44.6	17.3	50.7	N.A.	N.A.
	1987	29.5	3.8	49.8	37.5	21.0	58.7	N.A.	N.A.
	1992	23.0	2.5	47.0	26.5	20.0	30.0	10.0	41.0
	1993	24.2	2.5	45.4	25.0	20.0	30.0	10.4	42.5
Minnesota	1982	56.3	11.1	35.8	48.9	7.9	40.0	N.A.	N.A.
	1987	43.0	5.5	42.4	39.0	14.6	55.5	N.A.	N.A.
	1992	45.3	2.5	36.0	26.5	11.3	30.0	5.6	41.0
	1993	46.0	2.5	35.0	25.0	13.0	30.0	6.0	42.5
U.S.	1982	76.1	12.7	18.8	39.3	5.1	48.0	N.A.	N.A.
	1987	70.1	8.8	22.3	34.3	7.6	56.9	N.A.	N.A.
	1992	62.0	5.5	26.0	25.5	7.3	22.0	4.7	47.0
	1993	62.0	5.5	25.0	23.0	8.0	21.5	5.0	50.0

\*In 1992 a larger size class of producers with inventory of 1000+ head was added and the 500+ head category became 500 to 999 head. Source: U.S. Department of Agriculture, Hogs and Pigs, Various Issues.

Figure 9. Location of Pig Crop in Kansas by County, 1992.



Source: Kansas Agricultural Statistics

the U.S. However, Iowa and Nebraska tended to have larger percentages of producers in the 100-to-499-head inventory category than either Kansas or Minnesota. The trend has been toward larger opera-

Table 7. Size Distribution of Hog Contractors, U.S., 1991.

Hogs Contracted Annually (Head)	Percent of Contractors	Percent of Contract Production
Below 50,000 head	97.5	49.5
50,000+ head	2.5	50.5

Source: Rhodes and Grimes.

Table 8. Shares of Market Hogs Produced by Contractors from Units Producing 1000 Head or More, by Region, 1991.

Region of U.S.	Share of Hogs Produced (%)
South Atlantic	57.3
Northeast	52.5
South Central	38.3
West North Central <sup>a</sup>	15.0
East North Central	7.9
West	5.5

<sup>a</sup> West North Central includes states of North Dakota, Minnesota, South Dakota, Iowa, Nebraska, Missouri, and Kansas.  
Source: Rhodes and Grimes.

tions. This suggests that economies of size have existed in hog production. Although Kansas hog production has become more concentrated in recent years, the majority of operations are still small relative to states where hog production growth is occurring. The largest operations are increasingly representing a larger portion of total hog production. This indicates that industry growth has been mostly attributable to larger operations.

Hog production has become increasingly vertically integrated. Producer surveys conducted by Rhodes and Grimes indicated that in 1991, 15.6 percent of U.S. hog slaughter was hogs produced under production contracts. This compared to 11 percent to 12 percent in 1988. Contractors are also highly concentrated. As Table 7 shows, 2.5 percent of all contractors contracted 50,000 head or more in 1991 and they represented 50.5 percent of all contract production (Rhodes and Grimes).

Contracting activity varies considerably by region (Table 8). In the South Atlantic region, which includes North Carolina, 57.3 percent of all hog production on operations that marketed 1,000 or more head in 1991 was accounted for by contract production. This contrasts with the West North Central region, which includes Kansas, which had 15 percent of production from operations marketing

1,000 or more head produced by contractors. The West region, which includes all states west of a line from North Dakota south to Texas, had the lowest relative level of contract hog production. Thus, contract hog production represents a much larger portion of production in the Eastern U.S. than in other regions. Recall that this is also where some of the most rapid production growth and operation size concentration has occurred.

**Marketing strategies**

Following the closing of the Arkansas City John Morrell hog slaughtering plant in April, 1990, Kansas lost its only major pork packing plant. The vast majority of hogs produced in Kansas are slaughtered in other states. In attempts to reduce the increased marketing and transportation costs associated with shipping hogs to distant packing plants and to increase market access, numerous producers have formed marketing groups. Although the objectives and structures of these groups vary, they have been an effective way to manage the competitive disadvantages of not having local packers (Tynon et al.). Generally hogs marketed through marketing groups are sold on a grade and yield basis and often some type of contractual arrangement with the packer is established to increase base bids. Such structural changes are likely to continue as remaining Kansas hog producers pursue innovative management techniques to survive.

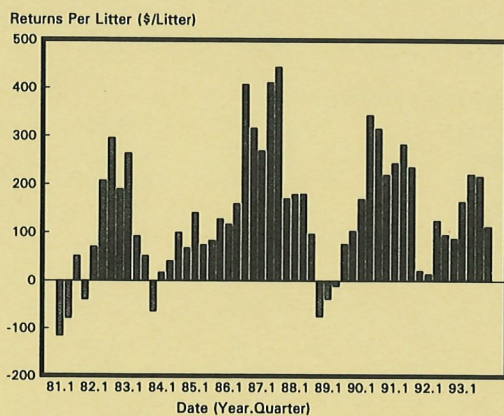
**Profitability and economies of size**

An important consideration in examining trends in the Kansas hog industry is profitability of hog production. In light of significant structural changes that have occurred, it is important to know how costs of production and profitability relate to operation size. Together these two factors directly influence the size and structure of hog production in Kansas.

Quarterly average estimated returns to labor and management per litter for farrow-to-finish hog operations in Kansas are illustrated in Figure 10. Important to note is that these are estimates for producers with average performance and these returns represent returns to *all labor and management*. In 1993 estimated labor costs (including owner-operator) were approximately \$100 per litter. Therefore, any profit above roughly \$100 per litter in 1993 is return to management. Average return to labor and management for farrow-to-finish hog production in Kansas was \$140 per litter from 1981 to 1993. This varied considerably ranging from a low of -\$115 per litter to a high of \$444 per litter.

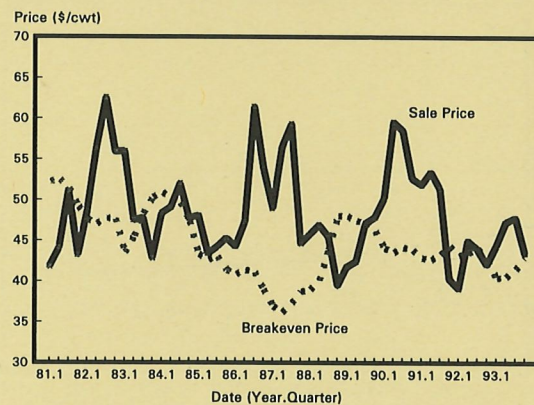
Figure 11 illustrates the average selling price of hogs for Kansas producers and the breakeven price to cover all costs including labor, but excluding management. Over 1981 to 1993, average selling price of hogs was \$48.47 cwt. and breakeven price was \$44.48 cwt. indicating that the return to management was about \$4 cwt. However, during several periods losses were realized as breakeven exceeded sale price

**Figure 10. Per Litter Returns to Labor and Management for Kansas Farrow-to-Finish Hog Operations, 1981-1993.**



Source: M.R. Langemeier, KSU Extension Agricultural Economics

**Figure 11. Comparison of Finished Hog Selling Price and Breakeven Price for Farrow-to-Finish Hog Operations in Kansas, 1981-1993.**



Source: M.R. Langemeier, KSU Extension Agricultural Economics

during parts of 1981, 1983, 1988-89, and 1991-92.

Recent production consolidation in the swine industry suggests that significant economies of size exist. Economies of size measure the relationship between break-even costs and enterprise size. To determine the impact of size on operating efficiency, enterprise data from 91 farrow-to-finish hog operations enrolled in the Kansas Farm Management Associations in 1992 were analyzed. Enterprise data included the size of the operation in litters produced, hundredweight of hogs produced, gross income, and costs of production. The total cost of production by operation size is reported in Figure 12. The line represents the average total cost of production as size increases. Points around the line represent producers actual production costs. As can be observed, average costs decline as operation size increases. Average cost for a firm with 200 litters is about 4 percent lower than average total cost for an operation with 100 litters per year. Similarly, firms with 400 and 600 litters have 10 percent and 13 percent lower costs than operations with 100 litters. Cost advantages per hundredweight are attributable to lower labor costs, lower depreciation and interest on buildings, and lower feed costs.

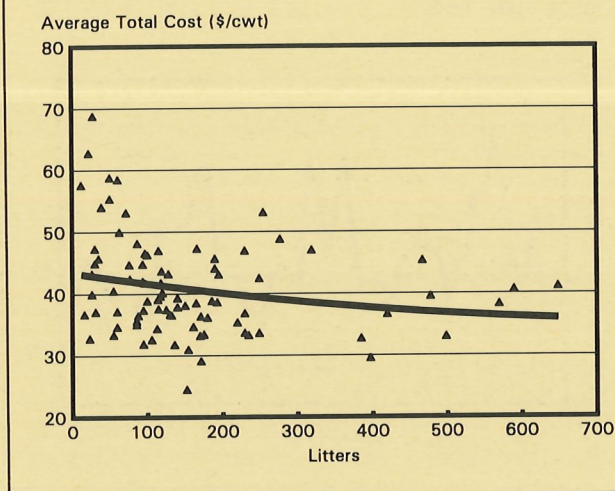
As shown in the scatter points in Figure 12, there is a tremendous amount of variability in total costs per hundredweight between farms. Differences in cost of production for operations of the same size are much greater than the differences in production costs between large and small operations. For example, for

operations producing roughly 100 litters in 1992, cost of production across farms ranged from about \$35 cwt. to \$50 cwt. suggesting a \$15 cwt. profit difference among firms of similar size. This suggests that cost efficiency, although related to operation size, is much more dependent on factors other than size, such as management.

Table 9 presents financial and production factors for the average farm compared to those in the bottom and top one-third in terms of return over total cost. The average size of farms in the top one-third profit group is about 80 litters larger than the average size of farms in the bottom one-third group. However, both groups contain farms of all sizes. Variable cost includes hired labor, repairs, interest paid, feed, veterinarian expenses, utilities, fuel, and miscellaneous cash costs. Fixed costs include operator labor, depreciation and interest on buildings and equipment, and real estate taxes.

Sale price for producers in the top one-third profit group was \$0.95 cwt. higher than sale price for producers in the bottom one-third profit group. Producers in the top one-third group either do a better job marketing their hogs or have higher quality hogs. Costs of production on a per hundredweight basis are significantly lower for producers in the top one-third

**Figure 12. Average Total Cost Per Cwt. for Farrow-to-Finish Operations in Kansas, 1992.**



Source: M.R. Langemeier, KSU Extension Agricultural Economics

**Table 9. Selected Financial and Production Factors for Farrow-to-Finish Hog Producers in Kansas, 1992.**

	Bottom One-Third (30 Farms)	Average (91 Farms)	Top One-Third (30 Farms)
<i>Financial Factors (\$/Cwt.)</i>			
Gross Income	40.35	41.35	42.44
Sale Price	41.37	41.78	42.32
Feed Cost	29.81	26.00	22.83
Variable Cost	39.90	34.18	29.51
Total Cost	48.64	40.80	34.62
<i>Financial Factors (\$/Litter)</i>			
Gross Income	712.62	784.23	870.90
Feed Cost	520.79	487.17	465.89
Variable Cost	697.66	640.30	603.75
Total Cost	851.92	763.51	709.27
Return Above Variable Cost	14.97	143.93	267.16
Return Above Total Cost	-139.31	20.72	161.63
<i>Production Factors</i>			
Number of Litters	172	222	254
Number of Pigs Sold	1336	1717	2034
Sale Weight	238	239	240
Cwt. Product			
Per Litter	17.21	19.01	20.59

Source: Kansas Farm Management Association.



profit group. A large proportion (50 percent) of the difference in cost of production between profit groups can be attributed to differences in feed costs. Feed conversion data are not available for these farms. However, other studies have indicated that farms in the top one-third group have lower feed conversions and are more efficient in terms of purchasing feed ingredients. Another 26 percent of the difference in costs of production can be attributed to fixed costs. The remaining 24 percent of the difference in costs of production results from differences in variable costs other than feed.

Hundredweight produced and pigs sold per litter are substantially higher for farms in the top one-third profit group. Gross income per hundredweight and higher productivity help explain the large difference in gross income per litter between producers in the top and bottom one-third profit groups.

A comparison of prices, costs, and profitability of the 91 Kansas hog farms with 342 Iowa hog operations for 1992 are summarized in Table 10. As can be seen, Iowa producers enjoyed a stronger finished hog market with average sale price \$1.33 cwt. higher than Kansas. Feed costs were also considerably lower for Iowa producers compared to Kansas operations. Total cost of Iowa hog producers was \$0.83 cwt. lower than Kansas producers. Iowa producers had average profits of \$5.62 per head sold compared to \$2.78 per head for Kansas operations. This indicates that because of a weaker finished hog market and higher feed costs, Kansas producers are at

a competitive disadvantage relative to Iowa producers. Without a local pork packer, it will be difficult for Kansas hog producers to secure finished hog prices that are as high as Iowa producers receive.

### Implications

The Kansas hog industry is in decline. Kansas has lost 62 percent of its hog operations since 1980. Kansas has lost market share going from the seventh largest producing state in the 1970's to the tenth largest state in 1992. During this same time, hog production has grown in several states including nearby states of Nebraska, Colorado, Oklahoma, and Arkansas. In addition, the most rapid growth has taken place in North Carolina where much of the production is under contracts. Consistent with the entire industry Kansas hog production has become increasingly concentrated.

Although economies of size are apparent in hog farrow-to-finish operations, great variability in cost of production is observed across operations of the same size. From a cost of production perspective, efficient, well managed hog farms compete well with larger operations. From a selling price perspective, operations located further from pork packers receive lower prices. Some Kansas producers have formed marketing groups and strategic alliances with packers to reduce marketing costs and increase base bids. To compete Kansas producers must continue to find innovative ways to reduce costs and increase revenue.

Kansas hog producers have higher costs and lower selling prices than comparable producers located in Iowa. This indicates that without changes in the economic environment, Kansas hog producers will find it difficult to compete. Without large pork packers located in or near Kansas, producers will continue to face a weak finished hog market. Informal discussions with pork packers suggests that current corporate farm policies in Kansas discourage pork packers from locating in the state. Another viable market for Kansas hog producers would likely boost the Kansas hog industry.

**Table 10. Comparison of Selected Financial and Production Factors of Average Kansas and Iowa Farrow-to-Finish Enterprise Hog Operations, 1992.**

	Kansas (91 Farms)	Iowa (342 Farms)
Market Hog Sale Price (\$/cwt)	41.78	43.11
Feed Cost (\$/cwt pork produced)	26.00	24.64
Total Cost (\$/cwt pork produced)	40.80	39.97
Return to Management (\$/head)	2.78	5.62

Sources: Kansas Farm Management Associations, Kansas State University, and Iowa State University Extension.

## References

Iowa State University Extension, *1992 I.S.U. Swine Enterprise Record Farrow to Finish State Summary*. Unpublished document.

Langemeier, M. *Hog Return Series*. Kansas State University, Extension Agricultural Economics, Unpublished series.

Rhodes, V. J., G. Grimes. *U.S. Contract Production of Hogs: A 1992 Survey*. University of Missouri, Agricultural Economics Report 1992-2, 1992.

Tynon, R., J. Mintert, M. Tokach, T. Schroeder, and M. Langemeier. *Group Marketing of Hogs: Organization, Successes, and Guidelines*. Kansas State University, Cooperative Extension Service, MF-1104, January 1994.

U.S. Department of Agriculture. *Hogs and Pigs*. Various issues 1970-1993.

U.S. Department of Agriculture. *Meat Animals Production, Disposition, and Income*. Various issues, 1970-1993.

## About the authors

Ted C. Schroeder is an Associate Professor of Agricultural Economics; Michael R. Langemeier is an Extension Agricultural Economist, Livestock Production; and Barry L. Flinchbaugh is Extension State Leader, Agricultural Economics.



Cooperative Extension Service  
Kansas State University  
Manhattan, Kansas

L-900

March 1994

Issued in furtherance of Cooperative Extension Work, acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Richard D. Wootton, Associate Director. All educational programs and materials available without discrimination on the basis of race, color, national origin, sex, age, or disability.

3-94-1M; 9-94-1M

File Code: Agriculture 10

4-11

SUPERIOR FARMS  
SOUTH WEST KANSAS SWINE DEVELOPMENT PROJECT

- A. Description of Project
  - 1. 1,000,000 Hogs Annually; Stevens, Morton, Stanton, Grant Counties Projects Underway in Stanton and Morton Counties
  - 2. Capital Expenditures In Excess of \$150,000,000
  - 3. 550+ Individuals Directly Employed In The Region
    - a. Salaried Wage Average @ \$ 27,000 annually (1/3)
    - b. Production Wage Average @ \$ 6.75 an hour (2/3)
    - c. Average Annual Worker Performance Bonus @ \$1,500
    - d. Benefits of Health, Life, Retirement, Disability, Vacation
  - 4. Milo/Corn Consumption of Approximately 10 Million Bushels Feedmills Planned Around Hugoton and Elkhart
  - 5. Significant Use of Local Trade; Electricians, Plumbers, Carpenters, Concrete
- B. Rationale For Locating In Southwest Kansas
  - 1. Environment and Climate
    - a. Low Rainfall
    - b. Low Humidity
    - c. Moderate Temperatures
    - d. Significant Amounts of Sparsely Populated Land
    - e. Deep Groundwater Table
  - 2. Proximity to Guymon Processing Plant; Avg of < 35 miles
  - 3. Availability and Price of Corn and Milo In The Region
  - 4. Ability to Link Pivot Irrigation Cropping With Waste Management
- C. Barriers to Development In Southwest Kansas
  - 1. Lack of Available Housing For All Workers
  - 2. Length of Time For Processing of Water Usage Permits
  - 3. Ability to Obtain Adequate County Roadways For Ingress and Egress to Properties
  - 4. Tax Disadvantages Verses Surrounding States
  - 5. Environmental Permitting Approvals
- D. Frequently Asked Questions
  - 1. Facility / Residence Separation Distances Will Exceed Statutory Requirements
  - 2. Total Swine Water Usage @ 10,000 acre feet Equivalent to Water Rights on Less Than 8 Irrigated Sections Approximately 80% of Water Is Reapplied To Land As Crop Fertilizer
  - 3. Expected Life of These Facilities Exceed 25 Year
  - 4. Waste Management
    - a. Lagoon Design
    - b. Waste Disposal

HOUSE ECO. DEVELOPMENT  
1-11  
ATTACHMENT 5