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U.S. Hog Marketing Contract Study

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Department of Agricultural Economics Working Paper No. AEWB 2005-01

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The January 2005 data for hog marketing arrangements or marketing contracts in the mandatory price reporting information was summarized.

The definitions for the marketing arrangements in this study are not the same as those used in other studies conducted by the University of Missouri and the National Pork Board. In fact, since our first study using mandatory price reporting data was conducted in 2002, two of the mandatory price definitions have changed. Although direct comparison for all marketing arrangements cannot be made across all the years of our studies, we believe the spot market or negotiated groups are directly comparable through all of our studies since 1994.

Here are the current definitions of the arrangements reported under the mandatory price reporting system and the changes affecting comparisons of data with earlier studies:

1. Negotiated. This is comparable to the spot or cash markets of our previous studies.
2. Swine or pork market formula. This is also quite consistent with the same grouping in previous studies. It is a price that is tied to either the spot or negotiated hog market or to meat prices. Studies prior to 2002 included some packer hogs in this group.
3. Other market formula. This grouping fits with the futures market group in studies prior to 2002 and after 2002. In 2002 this group also included contracts tied to feed prices.
4. Other purchase arrangement. In the 2003, 2004, and 2005 studies this category includes the contracts tied to feed prices along with the window risk sharing contracts of previous studies. The mandatory reports do not provide information about ledgers. In 2002 this group only included the window risk sharing contracts.
5. Packer-sold hogs. These are the hogs that are produced by a packer but are probably out of position for the packer to slaughter them in one of his plants. Many of these hogs are priced with a contract, and in studies prior to 2002 most were included in Item 2 above.
6. Packer-owned hogs. These are the hogs that are produced by the packer who slaughters them. In our studies prior to 2002, most of these hogs were included in Item 2 above. The integrated operations use formula pricing methods to determine the amount of revenue to allocate to their hog production divisions.

Total hog slaughter under Federal Inspection from January 3 through January 29, 2005, was 8,001,071 head. Data for 7,297,892 head (91.2% of FI slaughter) are included in the mandatory price reporting system.

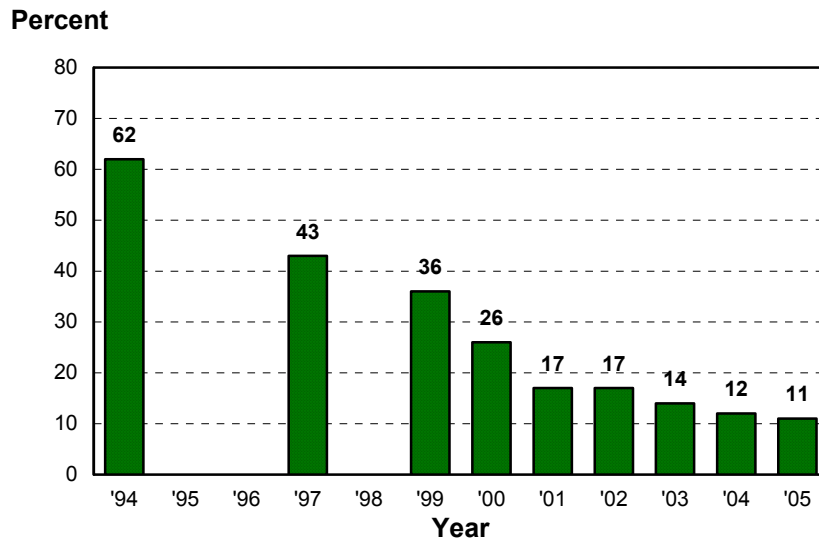
Table 1.
Percent of U.S. Hogs Sold Through Various Pricing Arrangements,
January 1999-2005*

	1999	2000	2001	2002	2003	2004	2005
Hog or meat market formula	44.2	47.2	54.0	44.5	41.4	41.4	39.9
Other market formula	3.4	8.5	5.7	11.8	5.7	7.2	10.3
Other purchase arrangement	14.4	16.9	22.8	8.6	19.2	20.6	15.4
Packer-sold				2.1	2.2	2.1	2.4
Packer-owned				16.4	18.1	17.1	21.4
Negotiated - spot	35.8	25.7	17.3	16.7	13.5	11.6	10.6

*2002, 2003, 2004, and 2005 data are based on USDA Mandatory Reports, 1999-2001 are based on industry surveys by the University of Missouri.

Non-negotiated or non-spot purchases in January 2005 accounted for 89.4% of the purchases of market hogs included in the mandatory price reporting data. The 2004 study showed 88.4%; the 2003 study showed 86.5%; the 2002 study showed 83.3%; the 2001 study showed 82.7%; the 2000 study showed 74.3%; the 1999 study showed 64.2%; and the 1997 study showed 56.6% were non-negotiated transactions.

Figure 1.
Percent of Hogs Sold on the Negotiated Market



Source:
1994 and 1997 studies by University of Missouri, Pork magazine, PIC, DeKalb Choice Genetics, National Pork Producers Council, Land O'Lakes.
1999-2005 studies by University of Missouri, NPPC, National Pork Board.
2002-05 USDA/NASS data.

By adding the percentage of hogs purchased in the negotiated markets to the percentage purchased on a swine-pork market formula, the current study indicates that the price of at least 53% of the hogs in the U.S. was directly determined by the negotiated market. The true percent is higher because a high percentage of the packer-owned and packer-sold hogs are priced with a market formula.

About 25.7% of the hogs in 2005 were purchased under some system that supposedly reduces price risk to producers, 10.3% were bought on a contract tied to the futures market, and 15.4% were other purchase arrangements. These price shifting arrangements amounted to 33.7% of the independently produced hogs.

"Supposedly" is used in the paragraph above because some of the pricing systems do not actually affect the variance of price received by the producers. Only cash contracts (the ones usually tied to futures) and contracts without ledgers reduce producers' price risk. Other arrangements may or may not result in a realized average price that is different from the actual average negotiated price.

The data in the mandatory price reports do not permit one to quantify how many ledger arrangements there are. Any amount by which the market price falls short of the arrangement's lower critical price must be repaid in at least a portion of ledger contracts. Some of the contracts contain a sunset clause to end after a specified time period. We do have data on ledgers and other characteristics for the other purchase arrangement hogs from a 2004 University of Missouri and Iowa State University study. Based on this data, for 61% of the other purchase arrangement hogs the price is tied to feed prices and for 39% the contract is a window type. The ledger contracts amount to 29% of the other purchase arrangement hogs and 71% of these hogs have no ledger.

The continued decline in the negotiated or spot market hogs increases the urgency for the industry to find another form of price discovery for most of the contracts. One possibility is to have mandatory price reporting of meat and tie the contracts to meat prices. In the 2004 MU-ISU study, 11% of the formula hogs were tied to meat prices.

The mandatory price reporting legislation also required packers to report percent lean, carcass weight, base price, and net price for each marketing arrangement type. These data for January 2005 appear in Table 2.

Table 2.
Hog Marketing Arrangement Averages,
January 2005

	% Lean	Carcass weight (lbs.)	Base carcass price/cwt.	Net carcass price/cwt.*
Negotiated	53.74	198.75	\$71.13	\$72.16
Swine-pork market formula	54.55	203.30	70.19	72.62
Other market formula	54.30	206.54	59.61	62.44
Other purchase arrangement	54.12	202.82	66.50	68.23
Packer-sold	54.55	211.44	74.60	76.13
Packer-owned	53.08	200.45		

*Net price includes credits for quality, transportation, time of delivery, etc.

The negotiated hogs had the second lowest average percent lean and the lightest average weight. The other market formula hogs (contracts tied to futures market) had the lowest average base and net prices. The packer-sold hogs had the highest average weight at 211.44 pounds and the highest average base and net prices. The packer-owned hogs had the lowest percent lean and second lightest average weight.

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