# U.S. Hog Marketing Contract Study 

Glenn Grimes

## And

## Ron Plain

January 2006

# U.S. Hog Marketing Contract Study January 2006 

Glenn Grimes, Professor Emeritus, and Ron Plain, Professor, University of Missouri<br>Dept of Agricultural Economics Working Paper No. AEWP 2006-01

The January 2006 data for hog marketing arrangements or marketing contracts in USDA's Mandatory Price Reporting (MPR) system was summarized. However, the participation in the reporting system was voluntary in January because the law requiring mandatory reporting expired in late 2005 and Congress did not renew it for January. However, we believe January's voluntary data is comparable because virtually all of the same plants reported as had reported under the MPR system when it was mandatory.

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 MPR data was conducted in 2002, two of the MPR 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 MPR 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 and later, this category includes the contracts tied to feed prices along with the window risk sharing contracts of previous studies. The MPR system does 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 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 1 through January 28, 2006, was $8,030,370$ head. Data for $7,261,064$ head ( $90.4 \%$ of FI slaughter) were reported through the MPR system.

Table 1
Percent of U.S. Hogs Sold Through Various Pricing Arrangements, January 1999-2006*

|  | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Hog or meat market formula | 44.2 | 47.2 | 54.0 | 44.5 | 41.4 | 41.4 | 39.9 | 41.8 |
| Other market formula | 3.4 | 8.5 | 5.7 | 11.8 | 5.7 | 7.2 | 10.3 | 8.8 |
| Other purchase arrangement | 14.4 | 16.9 | 22.8 | 8.6 | 19.2 | 20.6 | 15.4 | 16.6 |
| Packer-sold |  |  |  | 2.1 | 2.2 | 2.1 | 2.4 | 2.6 |
| Packer-owned |  |  |  | 16.4 | 18.1 | 17.1 | 21.4 | 20.1 |
| Negotiated - spot | 35.8 | 25.7 | 17.3 | 16.7 | 13.5 | 11.6 | 10.6 | 10.2 |

*2006 data were reported to USDA voluntarily; 2002 through 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 2006 accounted for $89.8 \%$ of the purchases of market hogs included in the price reporting data. The 2005 study showed 89.4\%; 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. 1999-2006 studies by University of Missouri, NPPC, National Pork Board. 2002-06 USDA/AMS 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 $52 \%$ 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 $25.4 \%$ of the hogs in January 2006 were purchased under some system that supposedly reduces price risk to producers, $8.8 \%$ were bought on a contract tied to the futures market, and $16.6 \%$ were other purchase arrangements. These risk shifting arrangements amounted to $32.9 \%$ 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 MPR system 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 target 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.

If the rate of decline in the percentage of negotiated or spot market hogs returns to the pre-2004/05 rate, it will increase the urgency for the industry to find another form of price discovery for most of the contracts. However, the slowdown in the rate of decline in negotiated or spot purchases of hogs gives us some hope that the number of negotiated hogs will hold at around $10 \%$ of total slaughter. If it does, we believe it will do a satisfactory job of representing the true supply and demand situation and can be used as the base price for market contracts.

The MPR legislation also required packers to report percent lean, carcass weight, base price, and net price for each marketing arrangement type. These data for January 2006 appear in Table 2.

Table 2
Hog Marketing Arrangement Averages, January 2006

|  | \% Lean | Carcass <br> weight <br> (lbs.) | Base <br> carcass <br> price/cwt. | Net carcass <br> price/cwt.* |
| :--- | :---: | :---: | :---: | :---: |
| Negotiated | 53.95 | 202.21 | $\$ 54.68$ | $\$ 55.52$ |
| Swine-pork market formula | 54.68 | 205.61 | 54.25 | 56.40 |
| Other market formula | 54.34 | 209.90 | 55.53 | 58.11 |
| Other purchase arrangement | 54.03 | 206.22 | 55.62 | 56.83 |
| Packer-sold | 54.29 | 205.11 | 56.51 | 59.42 |
| Packer-owned | 53.57 | 204.57 |  |  |
| *Net price includ |  |  |  |  |

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

The negotiated price 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 highest average weight at 209.9 pounds. The packer-owned hogs had the lowest percent lean and second lightest average weight. The packer-sold hogs had the highest base and net prices because a high percentage were sold on the California market.

This study was funded by the University of Missouri and the National Pork Board.

