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### Hog production poised to expand

Hog production continued to register declines during the last half of 1986. Both December inventories and the June-November pig crop dropped from a year earlier and were at their lowest levels since the mid-1970s. In addition, the breeding herd inventory is at its lowest level since estimates were first made in 1963. Producers' intentions point to continued declines in farrowings this winter, but a slight year-to-year increase in the spring. However, many analysts feel that strong prices and low feed costs will push actual farrowings above intentions. This could lead to a quicker, and more pronounced, turnaround in hog production than indicated in the USDA's latest survey of hog farmers. Nevertheless, lower-than-year-earlier market hog inventories will hold near-term pork output below last year.

December market hog inventories on U.S. farms were down 2.6 percent from a year ago, and at the lowest level in eleven years. A sharp reduction has occurred over the last several years as cuts in the breeding herd lowered the productive capacity of the industry. The December breeding hog inventory continued the year-to-year downtrend, registering a 2.5 percent drop, and is at a historical low.

Although down from a year ago in December, the U.S. breeding herd inventory registered an unusual 3.5 percent increase from the midyear level. This marks only the fourth time such an increase has occurred in the 1970s and 1980s and each occurrence has been followed by a sharp expansion in hog production the next year. If the pattern holds for the most recent increase, it would suggest that hog producers are already in the initial stages of an expansion.

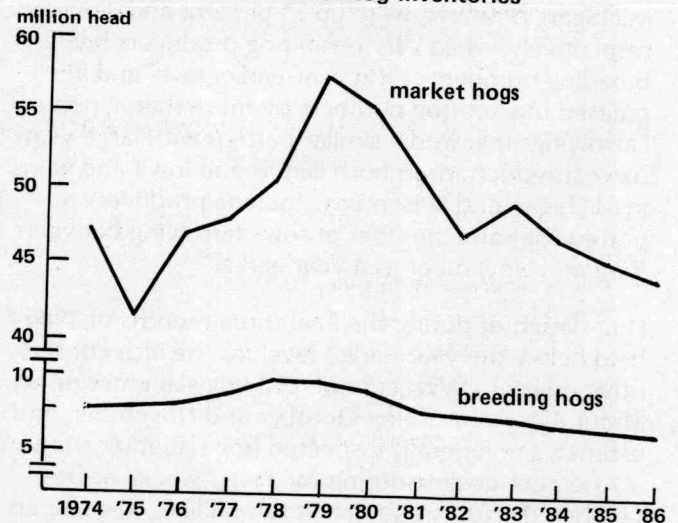
The number of sows farrowing on U.S. farms during the June-to-November period dropped more than 4 percent from the comparable period of a year earlier. The decline during the latter half of that period (September-November) was only 3 percent, considerably less than the 9 percent drop indicated by a September survey of intentions among producers in 10 states. Actual farrowings in those 10 states were off 5 percent from a year earlier during the three months ending with November.

Continued gains in breeding stock productivity offset part of the decline in farrowings. During the June-to-November period, sows that farrowed averaged 7.74 pigs per litter, about 1 percent more than the same period in 1985. Much of the gain, however, occurred during the fall months, with only a slight year-to-year gain during the summer. The increase in pigs per litter limited the drop in the U.S. pig crop during the second half of the year to 3.5 percent. Combined with a 5.2 percent drop in the December-to-May period, the 1986 pig crop was down more than 4 percent from the previous year, registering its third consecutive annual decline.

Producers' intentions regarding sow farrowings this winter and spring point to an increase. During the December-May period, U.S. producers intend to increase farrowings 2 percent from the previous year's level. Intentions among producers in the ten leading states suggest a smaller increase, with most of the gain in farrowings coming in the spring months.

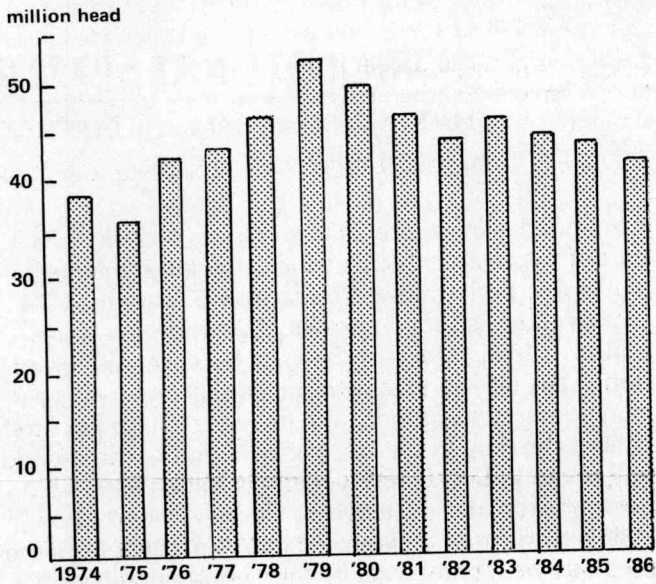
However, if the increase in breeding herd numbers during the second half of 1986 is indicative of a turn in the hog production cycle, these intentions may understate significantly the actual level of farrowings that will occur over the next several months. The trends in sow slaughter during the last several months lend additional support to the argument that a turnaround in hog production is imminent. Initial indi-

December 1 U.S. hog inventories



SOURCE: USDA.

### June-November U.S. pig crops



SOURCE: USDA.

cations are that sow slaughter was down sharply from a year ago during the last several months and accounted for a smaller proportion of total hog slaughter than last year. If this trend continues and if producers retain gilts to add to the breeding herd, farrowings could be sharply higher than the current intentions suggest.

Inventories and farrowings varied widely among the five District states, which account for about 48 percent of all the hogs and pigs on U.S. farms. Breeding and market hog inventories were both off by more than 7 percent from a year earlier in Illinois and down by 5.5 percent and 6.8 percent, respectively, in Iowa. A slight increase in market hogs offset a 3.6 percent year-to-year drop in breeding stock on Indiana hog farms. Breeding and market hog inventories in Michigan, however, were up 21 percent and 3 percent, respectively, while Wisconsin hog producers held breeding numbers at the year-earlier level and increased market hog numbers by more than 7 percent. Farrowings followed a similar pattern with large year-to-year reductions in both Illinois and Iowa and gains in Michigan and Wisconsin. Indiana producers reported the same number of sows farrowing between June and November as a year earlier.

Hog slaughter during the final three months of 1986 held below the year-earlier level for the fifth consecutive quarter. With commercial hog slaughter down about 9 percent during October and November, and estimates of federally inspected hog slaughter showing a 7 percent decline during the first 3 weeks of December, the fourth quarter total will likely register an 8 to 9 percent year-to-year drop. However, continued

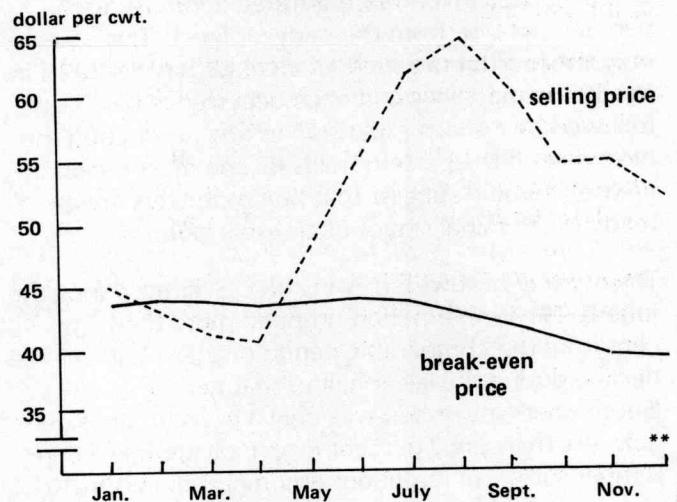
gains in slaughter weights will partially offset the large reduction in slaughter, limiting the drop in fourth quarter pork production. Current USDA estimates of pork output during the final three months of 1986 point to a drop of less than 6 percent from the previous year.

The drop in hog slaughter last year, along with lower costs, provided substantially improved profit margins for hog producers during the second half of 1986. Iowa State University estimates of the returns to a typical farrow-to-finish hog operation in Iowa, which give a good indication of operating margins through much of the Midwest, show operating margins rose to about \$44 per head during the third quarter. With feed prices remaining low and despite somewhat lower hog prices, operating margins continued to average well above \$30 per head on hogs marketed during the fourth quarter.

The December inventory and pig crop estimates suggest that year-to-year declines in hog slaughter and pork production will continue through spring. The summer pig crop for all U.S. producers was down slightly more than 5 percent from a year earlier, while the December inventory of hogs on U.S. farms between 60 and 179 pounds, which accounts for most of the hogs to be slaughtered during the first quarter of 1987, showed a drop of almost 4 percent. These measures suggest that hog slaughter will register a 4 to 5 percent year-to-year drop during the first three months of 1987.

The December inventory of all pigs weighing less than 60 pounds along with the size of the fall pig crop provide an indication of second quarter hog slaughter. Again, the measures are consistent, with both pointing

### Producers' operating margins\*



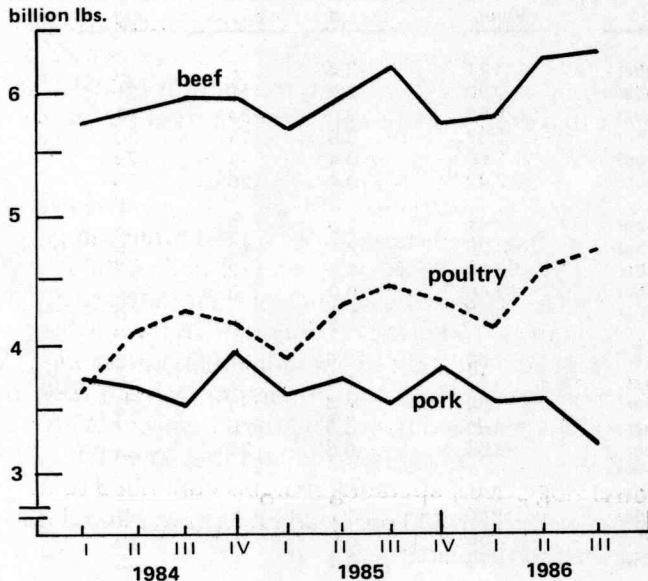
\* Farrow-to-finish hog operation in Iowa.

\*\* Estimate.

SOURCE: Iowa State University.



Trends in meat production



Source: USDA.

to a drop from the previous year of about 2 percent. However, if low feed costs continue to encourage producers to finish hogs to heavier weights, second quarter cuts in commercial pork production could be smaller.

Initial indications of hog slaughter and pork output during the second half of 1987 suggest that the downturn in production will end. U.S. producers intend to increase farrowings by 2 percent from a year earlier during the December-to-May period. In the ten major producing states, hog farmers indicated they intend to increase farrowings slightly between December and February followed by a 2.3 percent year-to-year increase this spring. However, if an expansion is indeed underway, actual farrowings this winter and particularly this spring could exceed intentions by a significant amount.

A number of factors could contribute to larger increases in actual farrowings in the first half of 1987 and subsequent second half hog slaughter. Producers have some flexibility in adjusting the number of sows that farrow and a continuation of the uptrend in pigs per litter would boost the size of the pig crops. Moreover, producers could be expected to react favorably to prospects for continued strong returns. With feed prices expected to remain low, operators' break-even prices will likely remain near the recent levels that are

well below a year ago. Although increased marketings would exert downward pressure on prices and returns, this effect will be tempered by expected declines in cattle slaughter and beef production. These considerations have led some analysts to expect that hog slaughter could be up 5 to 7 percent from a year ago during the last half of 1987.

Hog prices surpassed year-earlier levels by a substantial margin last May. From less than \$40 per hundredweight at the low, hog prices jumped to the mid-\$60-per-hundredweight range in August. Although prices for barrows and gilts at the seven major markets have trended down since late summer, dropping under \$50 during the final week of 1986, prices remain above a year ago.

Hog prices are expected to average above year-ago levels in early 1987, despite the drop in prices in recent weeks. Low prices in early January have been attributed to a backup of hogs on farms in December and subsequent larger-than-expected marketings early in the year. Along with the expected cut in pork output, lower cattle slaughter and beef production compared to last year will lower red meat supplies and maintain upward pressure on prices. While continued gains in poultry production will be partially offsetting, total meat supplies during the first three months of 1987 are projected to drop slightly below a year ago. As a result, many analysts expect hog prices at the seven major markets to average in the low to mid \$50 per hundredweight range for the period, well above the \$43.30 per hundredweight average during the early months of last year.

Peter J. Heffernan

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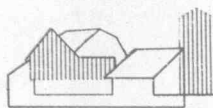
## Selected Agricultural Economic Indicators

|  | Latest period | Value | Percent change from |          |               |
|--|---------------|-------|---------------------|----------|---------------|
|  |               |       | Prior period        | Year ago | Two years ago |
| <b>Prices received by farmers (1977=100)</b> |               |       |                     |          |               |
| Crops (1977=100)                             | December      | 121   | -2.4                | -5       | -10           |
| Corn (\$per bu.)                             | December      | 99    | -2.9                | -16      | -21           |
| Oats (\$per bu.)                             | December      | 1.50  | 2.0                 | -34      | -41           |
| Soybeans (\$per bu.)                         | December      | 1.37  | 3.8                 | 14       | -20           |
| Wheat (\$per bu.)                            | December      | 4.66  | 0.4                 | -7       | -20           |
|  | December      | 2.42  | -0.4                | -26      | -28           |
| <b>Livestock and products (1977=100)</b>     |               |       |                     |          |               |
| Barrows and gilts (\$per cwt.)               | December      | 141   | -2.8                | 3        | -3            |
| Steers and heifers (\$per cwt.)              | December      | 52.20 | -2.1                | 13       | 5             |
| Milk (\$per cwt.)                            | December      | 58.80 | -1.7                | -2       | -7            |
| Eggs (¢per doz.)                             | December      | 13.40 | 0.0                 | 6        | -4            |
|  | December      | 65.2  | -1.7                | -2       | 10            |
| <b>Prices paid by farmers (1977=100)</b>     |               |       |                     |          |               |
| Production items                             | October       | 160   | -0.6 <sup>†</sup>   | -1       | -2            |
| Feed   | October       | 143   | -1.4 <sup>†</sup>   | -3       | -6            |
| Feeder livestock                             | October       | 98    | -8.4 <sup>†</sup>   | -9       | -22           |
| Fuels and energy                             | October       | 160   | 3.9 <sup>†</sup>    | 8        | 7             |
|  | October       | 154   | -0.6 <sup>†</sup>   | -24      | -23           |
| <b>Producer Prices (1967=100)</b>            |               |       |                     |          |               |
| Agricultural machinery and equipment         | November      | 291   | 0.1                 | 2        | -1            |
| Fertilizer materials                         | November      | 340   | 0.1                 | 1        | 1             |
| Agricultural chemicals                       | November      | 196   | -0.8                | -14      | -15           |
|  | November      | 478   | 0.3                 | 5        | 5             |
| <b>Consumer prices (1967=100)</b>            |               |       |                     |          |               |
| Food   | November      | 331   | 0.1                 | 1        | 5             |
|  | November      | 325   | 0.3                 | 4        | 7             |
| <b>Production or stocks</b>                  |               |       |                     |          |               |
| Corn stocks (mil. bu.)                       | September 1   | 4,038 | N.A.                | 145      | 301           |
| Soybean stocks (mil. bu.)                    | September 1   | 536   | N.A.                | 70       | 205           |
| Beef production (bil. lbs.)                  | November      | 1.81  | -15.7               | 0        | -6            |
| Pork production (bil. lbs.)                  | November      | 1.11  | -12.8               | -10      | -16           |
| Milk production (bil. lbs.) <sup>††</sup>    | November      | 9.45  | -4.0                | -3       | 6             |

N.A. Not applicable

<sup>†</sup>Prior period is three months earlier.

<sup>††</sup>21 selected states.



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