Big Drop in Hog Herd Brightens Outlook

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Reductions in the size of the breeding herd by 8.5%, finally provided a positive spin for hog markets after the release of the September *Hogs and Pigs* report. The breeding herd reductions are very large in a number of states and involve most major production states. Unfortunately, the reduction in the breeding herd will not be matched by a similar reduction in pork production due to higher productivity.

Pork supplies will only be down about 3% over the next 12 months, far less than the drop in the breeding herd as a result of more productive sows and heavier market weights.

Liveweight prices at terminals are expected to average in the mid-$30s this fall, drop modestly in the winter, then move back to the low $40s in the spring and summer. Producers are expected to operate at small losses for much of the fall and winter. While they may not cover total costs, most will be able to cover their variable, or out-of-pocket costs. Given the anticipation of a return to profitability in the spring, many should try to “hang on” until that time. The evaluation of whether to stay or leave is an individual one, and some with high costs or low production efficiencies could be better served by exiting.

Some argue there is no longer a hog cycle. I disagree as the current herd reductions fit nicely into a cyclical pattern. If one buys into the idea of a hog cycle, the next favorable price period would be expected from mid-2000 to mid-2001. Given the current low costs structure, terminal liveweight prices only need to average about $46.50 per hundredweight to provide the level of profits that have been experienced for the highest one-year period on cycles in the 1990's. These prices could be achieved during the mid-2000 to mid-2001 period.

A financial comeback for the industry is still premature to talk about given the numbers in this report. However, if the herd size does come down further in the coming December and March 2000 reports, a comeback will be underway with a much leaner, and more consolidated production and processing sector.

The Numbers

The numbers from the September report are shown in Table 1. The most encouraging number for pork producers is that the breeding herd has been reduced by 8.5%. This is a large magnitude and reflects the continuing exit from the industry in the Midwest. Dramatic breeding herd reductions continue in: Wisconsin (-21%), Illinois (-20%), Nebraska (-14%), and Kansas (-14%). Other large declines included: Indiana (-11%), Iowa (-11%), Ohio (-10%), and Minnesota (-9%). This clearly indicates that the liquidation is widespread, with only the state of Oklahoma showing an increase in the breeding herd (+10%).
The current reduction is an ongoing transition for a number of states. **Figure 1** illustrates the declines in the breeding herds of several Eastern Corn Belt states this decade. While the U.S. breeding herd currently stands at about 92% as large as the breeding herd in 1990, a much greater reduction has occurred in Indiana and Ohio at 73% as large, and especially in Illinois at only 61% as large as 1990. Illinois’ breeding herd numbers have dropped much more sharply this year (1999) than Indiana or Ohio.

In the Western Cornbelt (**Figure 2**) a somewhat different picture emerges. Both Missouri and Minnesota were able to maintain, or increase the size of their breeding herds in the 1990's while Iowa and Nebraska have experienced continual declines. The Iowa breeding herd currently stands at 69% of its 1990 level, while the Nebraska herd is 73%. These are similar to Ohio and Indiana in the East.

While sows have left Iowa this decade, a different picture emerges when the number of market hogs are included. Even though the Iowa breeding herd is down 31%, the total inventory is up 5%. Total inventory numbers are dominated by market hogs. Thus Iowa has shifted sharply toward a finishing state with abundant corn and packers.

Illinois has also experienced some movement toward a finishing state. While their breeding herd is down 39% their total inventory is down 26%. They have lost both breeding as well as market hogs, but the decline in market hogs is not as pronounced. Nebraska in contrast has lost 27% of their breeding herd and 30% of the market herd, reflecting sharp declines in both breeding and market animals.

While the national breeding herd is down 8.5%, the market herd is only down 3.8% due to productivity gains in the sow herd. The sows that are being saved are the most productive, and the operations that remain are managed most intensively.

There are several reasons why pork production is not dropping at the same
percentage as the decline in the breeding herd. First, the sows that remain are being weaned earlier and returned to pregnancy more quickly, increasing the number of litters born per year. Secondly, the number of pigs born per litter continues to set new records. As an example, pigs per litter reached 8.86 pigs this summer which represented a 1.6% gain in the past year. Third, hog weights continue to trend higher. For the coming year, the trend to higher weights and moderate priced feed will increase weights by an estimated 1%. Finally, the dressing percentage continues to increase as more edible pork is produced per pound of liveweight. For these reasons, an 8% reduction in the breeding herd may only result in a 2% to 4% reduction in pork production over the next year.

The heightened productivity of the breeding herd can also be seen in the size of the breeding herd relative to the number of sows to farrow in upcoming quarters. With an 8% decline in the breeding herd, producers expect to farrow only 5% fewer sows this fall. Perhaps the most disturbing number in the report is the indication that pork producers will only reduce winter farrowings by 3%. With higher pigs per litter and weights, this means only a 1% reduction in pork supplies for summer 2000, or a virtually unchanged supply situation next summer. If this is an accurate reading, it suggests that pork producers are not planning to trim the size of the breeding herd much more. Alternatively, since this is a first intention, it seems more likely that farrowings will ultimately be down at least 5% by this winter, more than producers currently indicate.

**Pork Supply Head Down**

Pork production is expected to decline by about 3% over the next 12 months, providing a positive tone to prices, at least compared to year-previous levels. Supplies will finally drop below year-ago levels in the final quarter of this year when they should be down near 5%. Winter supplies are anticipated to be down about 2%, with spring and summer supplies down about 3%.

There is perhaps the most uncertainty regarding next summer supplies. These supplies will come from winter farrowings which producers indicated they would drop only 3%. It is likely that the reduction will actually be larger, maybe in the 5% to 7% range.

The report gives no data with which to calculate supplies for the last quarter of 2000. However, some additional reductions in supplies should be expected for that time. I have estimated a 3.5% reduction for that quarter.

Given these estimates, pork supplies will actually be up by 1% in 1999, as a result of the large slaughter supplies in the first three quarters. For 2000, supplies are expected to drop by about 3%. Continuation of smaller year-over-year supplies are anticipated for the first-half of 2001, with production once again moving higher in the last-half of 2001. Thus, at this point it appears that the turn to higher pork production on the next cycle will not come until mid-2001.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Production Change</th>
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### Yearly Production

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>Million#s</th>
<th>Year-Ago</th>
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<tbody>
<tr>
<td>1996</td>
<td>Year</td>
<td>17,085</td>
<td>-4.1%</td>
</tr>
<tr>
<td>1997</td>
<td>Year</td>
<td>17,244</td>
<td>+0.9%</td>
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<tr>
<td>1998</td>
<td>I</td>
<td>4,688</td>
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<tr>
<td></td>
<td>II</td>
<td>4,429</td>
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<tr>
<td></td>
<td>III</td>
<td>4,625</td>
<td>+10.3%</td>
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<tr>
<td></td>
<td>IV</td>
<td>5,239</td>
<td>+9.9%</td>
</tr>
<tr>
<td></td>
<td>Year</td>
<td>18,981</td>
<td>+10.1%</td>
</tr>
<tr>
<td>1999</td>
<td>I</td>
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<tr>
<td></td>
<td>II</td>
<td>4,631</td>
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<tr>
<td></td>
<td>III</td>
<td>4,700</td>
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<tr>
<td></td>
<td>IV</td>
<td>4,984</td>
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<tr>
<td></td>
<td>Year</td>
<td>19,180</td>
<td>+1.0%</td>
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<tr>
<td>2000</td>
<td>I</td>
<td>4,791</td>
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<tr>
<td></td>
<td>II</td>
<td>4,483</td>
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<td>III</td>
<td>4,579</td>
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<tr>
<td></td>
<td>IV</td>
<td>4,810</td>
<td>-3.5%</td>
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<tr>
<td></td>
<td>Year</td>
<td>18,663</td>
<td>-2.7%</td>
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### Prices Will Begin to Heal the Wounds

The tone for prices is expected to finally begin to feel more positive this fall. Rather than seeing terminal liveweight prices dip back into the higher $20 in late October and November, it appears now that prices may only drop into the lower $30s. Last quarter prices are expected to average in the mid-$30, with a couple of dollar lower average for the winter quarter. Prices are expected to move back to breakeven levels in March 2000 with the first profitable period emerging in the spring of 2000.

Using the modest 3% reduction in this winter’s farrowings, prices next summer should average in the lower $40s. However, as mentioned above, I think it is more likely to see a smaller farrowing number and therefore better prices next summer. Prices could reach the mid-$40s at least for some daily highs, and could have an average in the $43 range for the third quarter.

<table>
<thead>
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<th>Year</th>
<th>Quarter</th>
<th>6 Terminal Mkt($/Cwt)</th>
<th>Change</th>
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<tbody>
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<td>Year</td>
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<tr>
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<td>I</td>
<td>$34.74</td>
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<td>II</td>
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<td></td>
<td>III</td>
<td>$33.95</td>
<td>-37.6%</td>
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<td>IV</td>
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<td></td>
<td>Year</td>
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<td>I</td>
<td>$28.83</td>
<td>-17.0%</td>
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<td>II</td>
<td>$35.18</td>
<td>-10.7%</td>
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<td>III</td>
<td>$35.63</td>
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<td>IV</td>
<td>$35.01</td>
<td>+81.4%</td>
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<td>+5.7%</td>
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<td>I</td>
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<td>+15.5%</td>
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<td>IV</td>
<td>$43.85</td>
<td>+25.3%</td>
</tr>
<tr>
<td></td>
<td>Year</td>
<td>$39.83</td>
<td>+18.3%</td>
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**Industry Returns Lean and Reorganized**

The sharp decline in the breeding herd leaves the market with more confidence that excess supplies will not be the plague of 1998 and early 1999. It appears that the industry will need about 5 more months to reduce supplies sufficiently to provide profitable prices for many producers. Those that have found a way to hold on this long will likely see some rewards coming by next spring.

I am expecting to see year-over-year reductions in the breeding herd through the entire year of 2000. This means reductions in the market herd through mid-2001. The best price period would then come from the summer of 2000 through the summer of 2001. On past price cycles during the 1990s, this one year period has resulted in prices that are above costs by about $8.50 per live hundredweight, with the most profitable quarter providing prices $12 to $15 above costs. Assuming a costs structure for farrow-to-finish operations at $38 per live hundredweight for the period from mid-2000 to mid-2001, this means that terminal prices would have to average $46.50 during this period to reach the $8.50 per hundredweight average profit for the year around the cycle high price. The current data from this *Hogs and Pigs* report does not yet confirm those prices, but the further herd liquidation I expect can certainly make those prices achievable.

Is talk of $60 live hog prices silly? The answer is yes, because the costs structure in the industry is so low at the current time. The last time we experienced a period of prices above $60 was in July of 1996. Total costs of production at that time average about $52, with quarterly average corn prices at $4.10 per bushel and hi-pro meal at $265 per ton. Thus, given the expected costs structure in the higher $30s, the highest daily prices on the next price upsurge may only be in the low $50s rather than the low $60s. However, the point is that these are essentially the same when profits per hundredweight is the benchmark.
As the market looks toward a more positive price tone in 2000, the industry looks much different than a few years earlier. The net worth’s of those who make it through are going to be depreciated, if not depleted. Survivors will tend to have very low production costs, high production efficiencies, economies of size, and operate in some type of alliance for inputs and marketing of hogs. Plus, there will be many fewer producers in a much more consolidated industry at the producer and packer level. Given the depth of losses over the past two years, one would expect a timid expansion, and perhaps a period of extended profits to come.