

Egg Economics Update # 275**The Relationship of the Previous 24-Month Hatch to Next Year's Egg Prices**

Our annual and monthly egg price projections are based upon:

1. The relationship of the previous 24 month accumulated hatch of replacement pullets to the following year's actual prices (Midwest and California)
2. The five-year monthly relationship of prices vs. the annual average price (See EEU # 273)
3. Adjustments of the difference between the most recent actual price and the above.

The relationship of hatch to price uses 10 years of data to develop a regression curve comparing the effects of hatch to price. Ten years is used as it represents the "best fit" for various combinations of years from 1994 to 2005. The R²s for the 10-year periods were 0.37 for the Midwest data and 0.55 for the California data (1.00 is a perfect fit).

The data used are listed in Table 1.

Table 1. Data Used for Egg Price Projections

| Year | 24 mo. Previous hatch (pullets) | MW UB Egg price | CA Farm Price | US Layers (millions) |
|-------------|--|----------------------------|--------------------------|-------------------------------------|
| 1996 | 387,446 | 91.1 | 69.7 | 245.3 |
| 1997 | 401,858 | 83.9 | 63.0 | 248.9 |
| 1998 | 416,128 | 78.5 | 56.2 | 255.4 |
| 1999 | 431,700 | 68.1 | 44.0 | 263.8 |
| 2000 | 443,576 | 71.4 | 44.8 | 269.3 |
| 2001 | 439,585 | 69.3 | 43.2 | 276.1 |
| 2002 | 441,113 | 71.0 | 43.4 | 278.2 |
| 2003 | 436,496 | 92.2 | 64.8 | 278.4 |
| 2004 | 418,591 | 86.7 | 60.0 | 283.5 |
| 2005 | 426,654 | 68.5 | 41.6 | 285.8 |

The relationships of 10 years of data for both the Midwest and California were statistically significant (P = 0.064 and P = 0.014 respectively).

Figures 1 and 2 illustrate the non-adjusted annual prices relationships for the 24-month hatch and egg price data for the Midwest Uner Barry Large price and for the California farm price for large eggs. We've identified only the 2003 year to illustrate how much this year differed from the expected. Midwest prices in 2003 were 18¢ higher than was expected considering the size of the hatch.

Figure 1.

MW Egg Prices and Chick Hatch

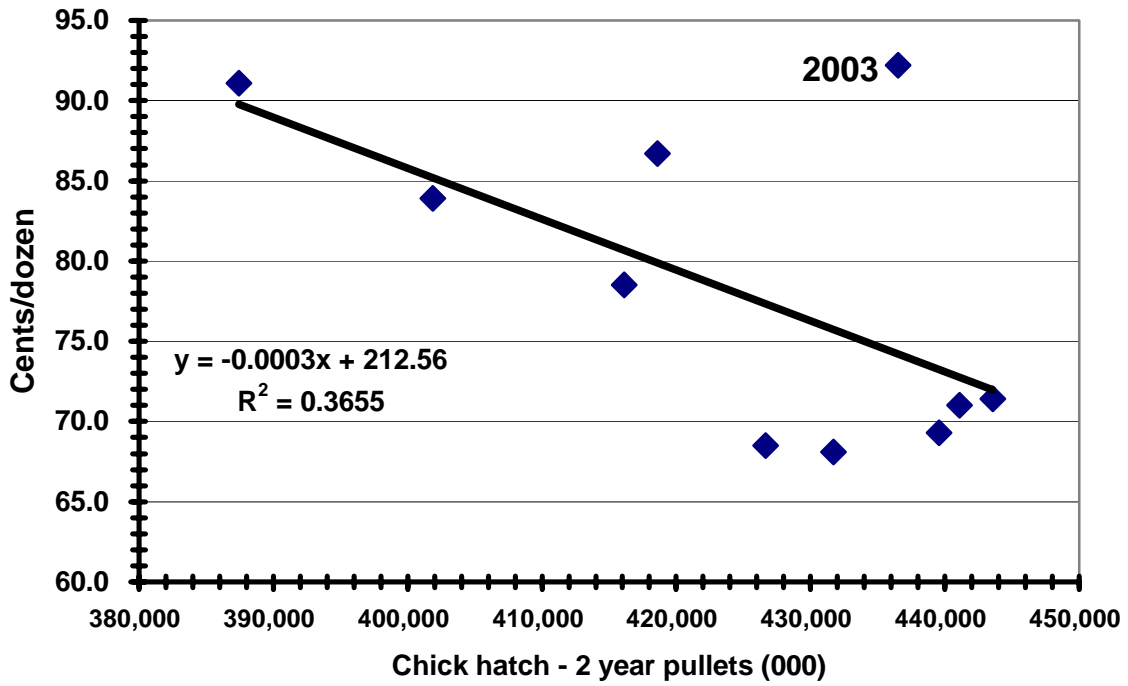
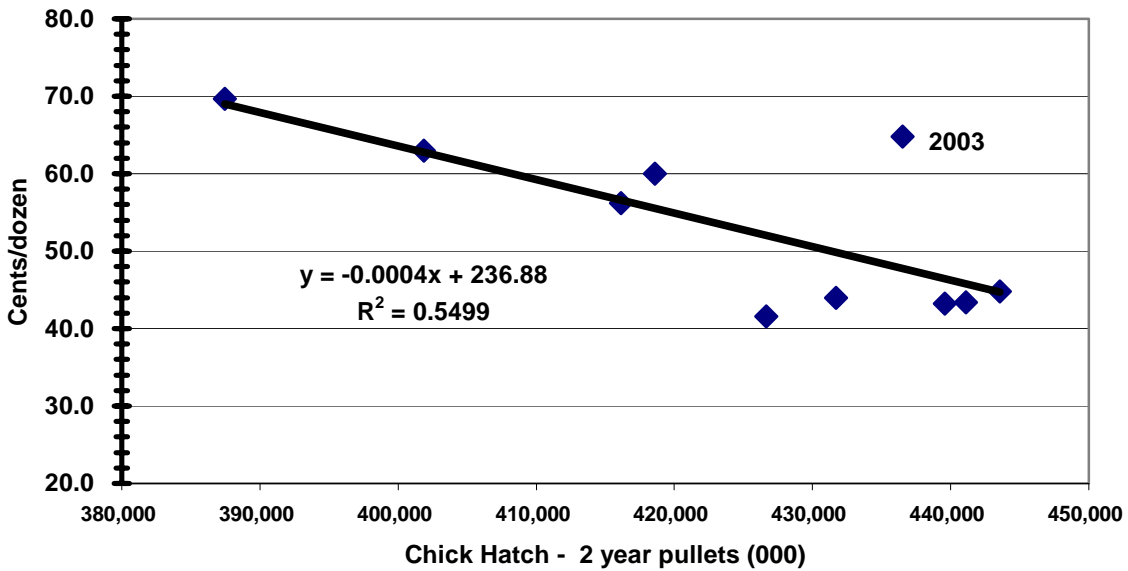


Figure 2.

California Egg Prices and Chick Hatch



Applying Hatch Data to Project Future Prices

The curves established in Figures 1 and 2 are described as “y” values (within the two graphs). The “-0.0003x and - 0.0004x figures refer to the hatch data (x) and need to be drawn out to 7 decimal places:

The Midwest formula should read - 0.0003170x

The California formula should read - 0.0004332x

Note: the minus sign results in lower egg prices with higher hatches.

X = the chick hatch as expressed in table 1. E.g.: 426,654 for 2004 plus 2005 used to predict 2006 prices.

By inserting the hatch data as “X”, the result for “Y” gives the expected egg price for the Midwest and California as the chick hatch is updated monthly.

We use the same formula for a calendar year and recalculate the formula at the start of the new year with complete calendar year records.

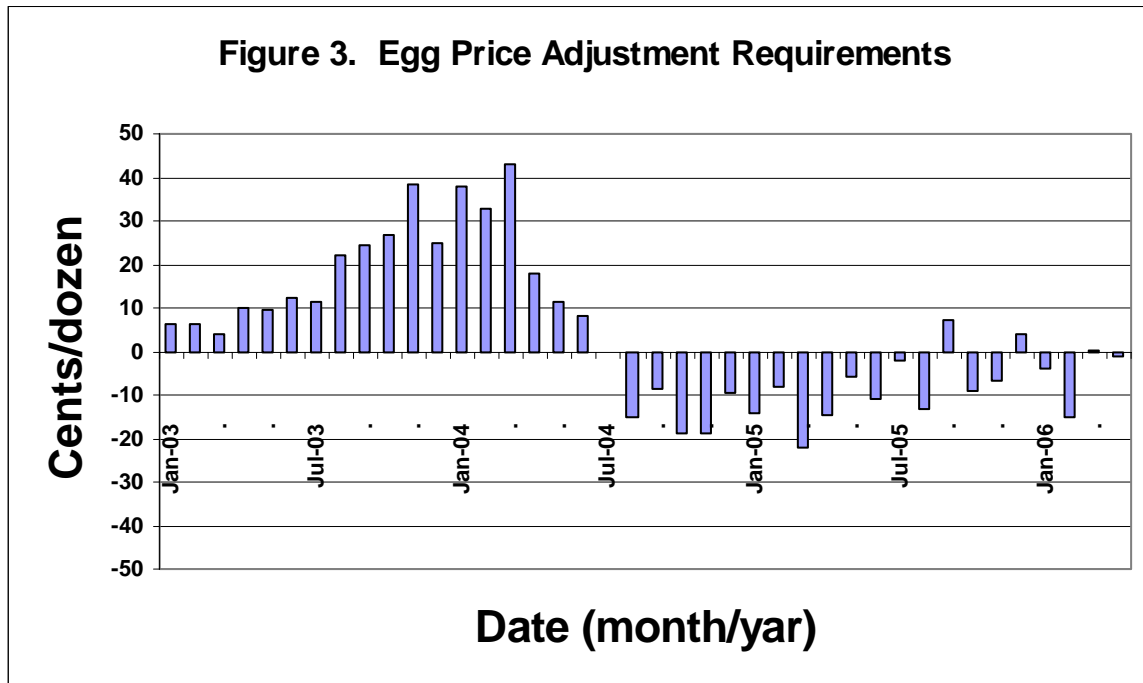
Monthly Price Projections

As discussed earlier, we then take the five-year monthly trends and apply to the formula above. For example, the annual price derived from the formula is multiplied by a monthly factor to allow for monthly price variations. Our current (May 3, 2006) estimate for Midwest June prices is based upon a 73.6¢ price (from our formula) multiplied by 91.0% (our monthly adjustment) to give us a price projection of 67.0¢ per dozen.

Adjusted Price Projections

Prior to 2003, additional adjustments were not needed – the hatch figure by itself resulted in quite respectable price estimates. As projections became less accurate, we chose to include an adjustment factor to bring estimates more in line with the most current real prices. At times, these adjustments have had to be in excess of 30¢ to 40¢ per dozen. This tended to confirm that other forces were playing a significant role in the market place to reduce the relative impact of the hatch numbers.

So far this year, our Midwest projections have been -4.0¢, -15.0¢, +0.2¢ and -1.0¢ off for January to April respectively. In other words, the hatch relationship, all by itself, was once again working to give fairly accurate estimates of future prices. We can only wait and see if this continues.



It's obvious by the chart above that new factors affecting egg prices, especially on a monthly basis, came into being in mid-2003 through mid-2004. The usual monthly relationships did not occur in those two years and therefore our projections based upon chick hatch failed to project accurate prices and prices had to be adjusted upwards. Similarly, in the next 12 months, projections were off in the opposite direction – always too high.

Interestingly, even with such erratic results, the average monthly price was adjusted only 4¢ per dozen on the average over the 40 month period. **Our adjustment procedure was brought in to correct the above problems and therefore, price projections for the following months were not published as reflecting the size of the hatch only.**

We will continue to use the above procedures and hope that our accuracy will improve over time. Predicting egg prices has not been a very precise procedure, but one the industry needs to continue.