

An **EGG ECONOMICS UPDATE**

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Egg Grade-outs - Changing Patterns of Sizes

A review of farm egg prices for the period 1978 to 1997 shows a 55% annual loss in value for medium eggs compared to large egg prices. In the early 1980's, medium eggs were priced at more than 85% of the large price; today, medium eggs are valued at only 77% of the large price. In cents per dozen, this represents a loss of 6.5 cents in the difference between farm large and farm medium egg prices. Assuming 260 eggs per hen and 13% mediums, the effect of this degradation in value for medium eggs totals **\$.18** less income per hen per year.

Why has this value slipped so much? Is it a question of producing more mediums than in the past, or is it a reflection of a lessening demand for this product on the part of the buyers (retailers and consumers)? Does the retailer want to bother with mediums? Has the traditional restaurant use of medium eggs gone away?

This is a particularly aggravating issue in as much as the market for medium eggs should represent a very unique "niche" in our industry. Mediums are probably our highest quality eggs as they are produced by our youngest flocks. In addition, they should be an appealing product as they reflect a smaller serving size - just right for the consumer interested in "cutting down" on their serving sizes. And, when we calculate the cost per ounce of liquid eggs, the price should be at least 90% of the price for large eggs - not 75 to 80%. Shouldn't someone make an effort to make this a "specialty egg" rather than one that is apparently discounted below its true worth?

Are we producing more medium eggs than in the past? Not according to data we've received from Chilson's Management Controls (CMC). **CMC's** data, representing some 500,000 cases of eggs per week, shows a reduction in the number of medium eggs produced during the past ten years from about 14-15% of all eggs processed to about 12.2% in 1997. Large eggs at the same time rose from between 76-77% to 80%. This data says that we are producing substantially fewer medium eggs now than in the past.

Table 1. lists the egg size/quality breakdown for the 1988-1997 period for approximately 25 major U.S. processing plants.

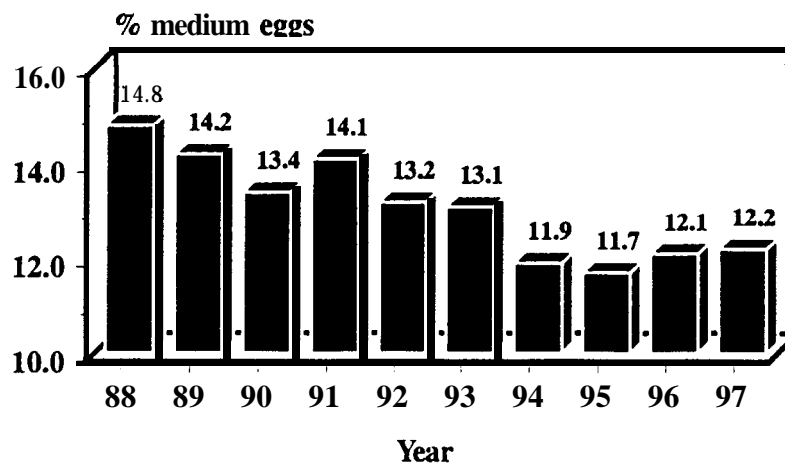
Table 1. Distribution of egg sizes - 1988 to 1997*

Year	Large + (%)	Medium (%)	Small (%)	Pee Wee (%)	Under-grades (%)	Loss (%)
1988	76.2	14.8	2.0	.2	5.7	1.1
1989	76.9	14.2	2.0	.2	5.7	1.2
1990	78.0	13.4	1.7	.1	5.5	1.3
1991	77.5	14.1	1.8	.2	5.3	1.2
1992	79.4	13.2	1.6	.1	4.4	1.3
1993	78.9	13.1	1.6	.2	4.8	1.4
1994	80.1	11.9	1.4	.2	4.9	1.4
1995	80.1	11.7	1.4	.1	5.3	1.5
1996	79.8	12.1	1.6	.1	5.0	1.3
1997	79.6	12.2	1.7	.2	5.0	1.3
Avg.	78.7	13.1	1.7	.1	5.2	1.3

Source: Chilson's Management Controls (CMC).

A graphic view of the changes in the production of medium eggs is shown in Figure 1.

Figure 1. Changes in the Production of Medium Eggs
1988 to 1997



Source: Chilson's Management Controls

Seasonal Patterns of Egg Size

Today, season has much less influence on egg size than it did ten or more years ago. Most recent studies of this question show relatively little differences in egg size distribution because of the increasing emphasis in the industry on controlling the temperature environment in the poultry house. A recent University of California study of 203 National flocks showed house temperatures in the summer months averaged 78.8° F compared to 73.6° F in the winter - a difference of only 5.2 F. The total spread in case weights for different flock ages is shown in table 2.

Table 2. Case Weights (30 dozen eggs) for Flocks of Different Ages in Different Seasons.

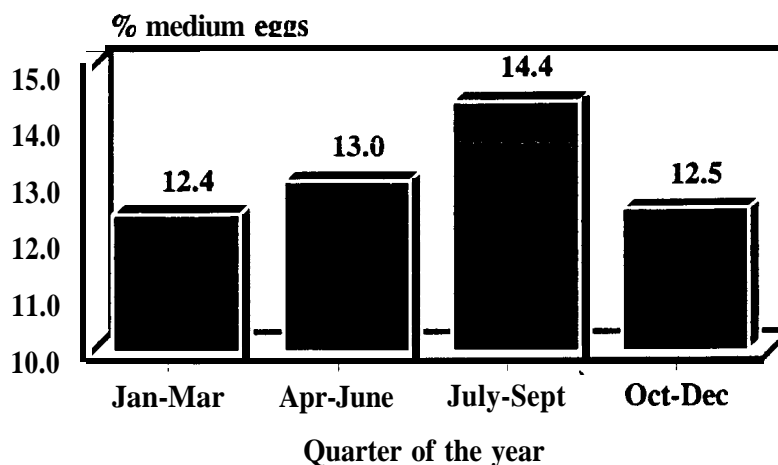
Month	25-29 weeks	30-34 weeks	35-39 weeks	40-44 weeks	45-49 weeks	50-54 weeks	55-60 weeks	All Ages
Jan	44.6	46.2	47.5	48.1	48.5	49.4	50.0	47.8
Feb	44.3	46.8	47.5	48.3	48.8	49.1	50.0	47.8
Mar	44.0	46.4	47.7	48.2	48.8	49.3	49.7	47.7
Apr	44.2	46.2	47.2	48.5	48.6	49.1	49.8	47.7
May	44.4	46.6	47.3	48.2	48.6	49.1	49.6	47.7
June	43.7	46.4	47.4	48.1	48.8	48.9	49.5	47.5
July	44.1	45.7	47.5	47.8	48.7	49.1	49.4	47.5
Aug	44.0	46.2	47.0	48.2	48.6	49.0	49.5	47.5
Sep	43.9	46.2	47.6	48.0	49.1	48.9	49.5	47.6
Oct	44.0	46.3	47.5	48.4	48.6	49.5	49.5	47.7
Nov	43.8	46.2	47.4	48.3	49.0	49.1	49.8	47.7
Dec	44.0	46.4	47.4	48.0	48.9	49.4	49.8	47.7
Avg	44.1	46.3	47.4	48.2	48.8	49.2	49.7	47.7

Source: UC national study of performance

Interestingly, the seasonal egg weights varied by only .7 pounds/case within age groups. Because the high and low months were not always the same, the all-age average varied only .3 pounds/case between months. An analysis by temperature (as opposed to season) shows very little effect on egg weight in younger flocks (less than 35 weeks), but significantly more effects in older flocks.

Figure 2 illustrates the seasonal changes in the production of medium eggs (CMC data). The July-September quarter (3rd) produces the most medium eggs as expected while the two quarters, October to March, produce the fewest. The production of large eggs is highest during the 1st and 4th quarter (79.5% and 79.3% respectively). Undergrade eggs are slightly higher in the Summer and losses stay constant the year-around.

**Figure 2. Seasonal Production of Medium Eggs
1988 to 1997**



Source: Chilson's Management Controls (CMC)

Table 3 lists the ten year averages for grade-out by quarter of the year.

Table 3. Egg grade-out by quarter of the year - 1988 to 1997

Cateorv	1st auafter	2nd	3rd	4th	Annual
Large +	79.5	78.9	77.0	79.3	78.7
Medium	12.4	13.0	14.4	12.5	13.1
Small	1.6	1.6	1.8	1.7	1.7
Pee Wee	.1	.1	.2	.1	.1
Undergrade	5.1	5.1	5.3	5.1	5.2
Loss	1.3	1.3	1.3	1.3	1.3

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