Per capita consumption of egg products (dried, frozen or liquid eggs) in 1992 was practically double the rate consumed in 1960. USDA estimates that per capita consumption of eggs in 1992 consisted of 178.2 eggs in the shell form and 56.5 eggs as egg products—a total of 234.7 eggs. Products represented 24.4% of total egg consumption (figure 1).

In the 32 years studied, egg consumption in the shell form has decreased by 113.4 eggs or about 3.5 eggs per year. On the other hand, egg product consumption has risen by 27.4 eggs or about 0.8 eggs per person per year. The net effect of the two trends is for a loss of 86 eggs per person or about 2.7 eggs per person per year.

The egg product exhibiting the highest growth rate has been liquid eggs for immediate consumption. This is a refrigerated convenience item and one that has experienced a 15 fold increase in usage since 1960 (figure 2).
In 1992, 41.1 million cases of eggs were broken under Federal inspection in the U.S.. This translates to 24.4% of the estimated 168 million cases of table eggs produced in 1992. Increases for 1990, 1991 and 1992 totaled about three million cases per year and represented one of the real growth periods for the egg products industry (figure 3).

The current year (1993) though, has not kept pace with the levels broken in 1992. Egg breaking for the first three months is down about one million cases below the level set in 1992 (-10.4%). This is a traditional low period for breaking and egg prices during this period were also about 11c per dozen higher than in 1991 (figure 4).
Figure 5 illustrates the seasonal trends in egg prices and breaking. The egg prices shown are for all table eggs and not just breaking stock. Also, the month of breaking is not necessarily the month of purchase. In general, though, 53% of the eggs are broken in the May through October period compared to 47% in the remaining six months. Interestingly, more eggs than the average monthly rate are broken during the months when egg prices are less than the average price or vice versa in nine of the twelve months.

As we increase the percentage of total production that is broken, better pricing methods will have to evolve to more precisely link the two markets (shell egg and breaker). If production units are to be created for breaking eggs only, the investors must be assured that their prices will be competitive to the alternative of producing for the shell egg market. The linkage will have to be complete and any differences in prices will be limited to those associated with production cost or investment differences.

Different strains of birds will be utilized for such farms. Emphasis will be placed upon total egg mass per hen housed with less concern about egg numbers or shell and interior egg quality. Feed conversion and costs will be calculated on a weight of product basis - for example, pounds of feed per pound of product and costs per pound.

When egg products reach 50% of the nation’s production (as some have predicted by the year 2000), consideration must be taken of the need for our present egg size and quality regulations. Case weight classifications will be more meaningful and the need for six classes of egg weights will be reduced. Consideration should then be given to maybe only as few as two or three sizes for the cartoned egg user.
The USDA lists 70 egg breaking plants in the U.S. for 1992. California still leads all other states with 11 plants, Iowa is second with 7 plants and Minnesota and Indiana are tied with 5 plants each (figure 6).

Twenty-three drying plants are listed by the USDA. These plants produced 130 million pounds of dried egg products in 1992. The North Central region of the U.S. still has the greatest concentration of egg drying plants (figure 7).

The true test of the success of the egg products business will be in its ability to obtain adequate mark-ups for the added services it provides (+ profits) and in cooperation with food processors to improve the per capita consumption of eggs in new forms without a parallel drop in the consumption of shell eggs. The growth of our industry will depend upon the creation of new products and the return of former users to eating eggs once again.

Donald Bell
Poultry Specialist
Cooperative Extension
Highlander Hall
University of California
Riverside, CA 92521