

Commodity Spotlight



U.S. Egg Production on The Sunny Side In the 1990's

U.S. egg production is expected to reach 78.7 billion in 1997, having grown each year since 1989. Total U.S. egg production—for table use and for hatching—had remained fairly constant from 1960 to 1991, fluctuating between 62 and 70 billion eggs. Some of the growth has been driven by a 46-percent increase in hatching eggs to supply the expanding number of broilers produced each year (*AO* November 1996). Growth of egg use in processed food products has also provided an expanding outlet for egg producers and has helped to slow the long-term decline in U.S. table-egg use per capita.

Since 1980, USDA's National Agricultural Statistics Service has reported total U.S. egg production as two separate categories—table and hatching. While production of hatching eggs has shown steady growth since 1983, table-egg production has fluctuated between 59 and 63 billion eggs from 1980 through 1994. Relatively constant table-egg production levels coupled with a steadily rising consumer population reflects that per capita

consumption of eggs in the U.S. has been falling for most of the last 50 years. However, as with hatching-egg production, table-egg output has been growing since 1989, reaching an estimated 65 billion in 1996. Production is expected to reach 66.5 billion in 1997.

Production of eggs in the U.S. has changed dramatically over the years, both technologically and geographically. Formerly a minor activity on most farms, egg production has become a specialized activity conducted on relatively few farms.

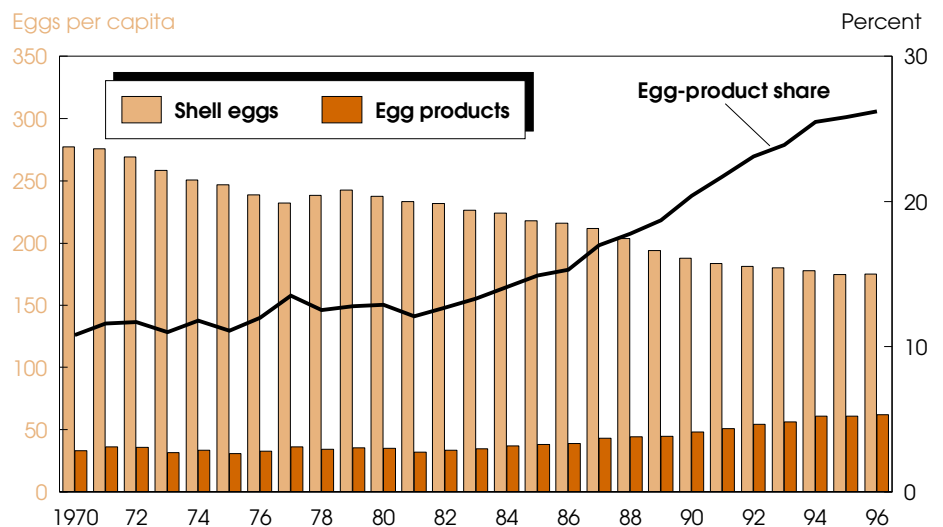
The number of commercial egg producing farms—i.e., farms with 3,000 or more egg-laying hens—has declined from more than 2,000 farms in the mid-1980's, to below 1,000 in the 1990's. With the concentration has come changes in the production environs of most table-egg-laying hens in the U.S. Individual nests in small brooding houses are no longer the norm; modern operations now house cages (6-7 birds per cage) in buildings with more than 100,000 birds. Such large operations often involve elaborate stacked cages with automated feeding, egg collection, and manure-removal processes. Production

complexes with 1-2 million birds housed on a single property is becoming increasingly common.

Geographical shifts in egg production have been just as dramatic. In 1939 Iowa, Ohio, Texas, Pennsylvania, and Illinois were the top five egg producing states, with California ranking 10th and producing less than half the number of eggs as Iowa. By 1960, California had become the leading egg producing state, with Iowa number two. Minnesota had moved up to third, with Pennsylvania and Texas still in the top five.

By 1970, southern states had become more important in egg production, driven partly by increased production of hatching eggs for the region's broiler industry. California still led in egg production, but Georgia, Arkansas, and North Carolina had entered the top five, with Texas falling to 8th, Iowa to 11th, Minnesota to 13th, and Ohio to 14th. In 1990, California was still the leading state for egg production, Indiana had risen to second (from seventh in 1970), and Pennsylvania and Georgia remained in the top five while Ohio regained its top-five spot.

Growth in Egg-Product Use Slows Decline In Per Capita Egg Consumption



Shell-egg equivalent for egg products.
Economic Research Service, USDA

The geographic dynamics of egg production have continued in the 1990's as producers, in an effort to lower costs, are perpetually confronted with the choice of locating closer to feed sources—e.g., Midwestern corn—or nearer to markets—e.g., California and the urban Northeast. In 1996, California and Ohio shared leadership—each producing about 6.5 billion eggs—and Indiana and Pennsylvania remained in the top five. Iowa regained its top-five status on the strength of new production facilities coming on-line to supply the egg-products industry, and thanks in part to investment by California egg marketers seeking additional sources of eggs for California consumers.

Egg Consumption Patterns Changing

Egg consumption has two components: shell eggs and egg products. Shell eggs are the eggs that can be purchased in cartons in the grocery store. Egg products are eggs that have been processed by egg breakers and are sold primarily to other food manufacturers in liquid or dried form. These eggs reach consumers as ingredients of processed foods—e.g., pasta, candy, baked goods, and cake mixes—or directly as liquid eggs in some grocery stores.

Between 1960 and 1979, total consumption of eggs and egg products declined from 321 eggs per capita to 278. The decline accelerated during the 1980's as egg consumption per capita dropped to 239 by 1989. During the 1990's, total egg consumption has fluctuated between 235 and 239 eggs per person, but has shown an upward trend since 1991. Increases in egg production are expected to continue, and per capita egg consumption is projected to surpass 240 in 1997.

A decline in per capita egg consumption over the last few decades reflects two very different and somewhat counterbalancing trends: a dominating, nearly constant decline in consumption of shell eggs, and a partially offsetting growth in consumption of egg products during the 1980's and 1990's.

Shell-egg consumption per capita was 292 eggs in 1960, declining to 175 by 1995. During the 1980's, per capita shell-egg consumption was declining an average of 5 eggs per year. Much of the decline was due to changing lifestyles (e.g., less time for breakfast preparation in the morning) and the perceived ill effects of the cholesterol intake associated with egg consumption.

In the early 1990's the rate of per-capita-consumption decline for shell eggs had slowed to about 2 eggs per year and is expected to slow even more. Last year saw a leveling off of the decline, as shell-egg consumption held steady at 175 and is projected to continue at that level in 1997 and to hold relatively constant in the next few years.

Consumption of egg products has been growing consistently since 1983, reaching 61 eggs per person by 1994. The growth period followed more than two decades of relatively constant consumption, remaining between 28 and 36 eggs per person from 1960 to 1983.

Egg-product consumption will continue to increase as consumers opt for more convenience foods and as any perception of potentially negative dietary attributes of eggs is lessened in processed products. However, stronger export sales and higher shell-egg prices since mid-1995 have slowed the growth in egg-product consumption in the last 2 years. Stronger growth in consumption is projected for 1997, with 65 eggs per capita expected to be consumed in product form.

Exports Grow As Share of Use

In the poultry export market, attention has focused mainly on the rapid growth in broiler exports. As a result, the phenomenal export growth experienced by the egg industry has been somewhat overlooked. Between 1990 and 1996, exports of shell eggs and egg products rose from 101 million dozen to 253 million dozen. This 150-percent increase would be considered remarkable in most other industries. As a result, egg exports' share of domestic production rose from 2 percent in 1990 to 5 percent in 1996. The value of these

exports also increased, but at a slightly slower rate, rising from \$99 million to \$206 million over the same period.

U.S. egg exports are divided into two main categories with a number of subcategories. The largest groupings are shell eggs and egg products. Shell-egg exports are divided further into eggs for hatching purposes and those for human consumption. Eggs exported for hatching in other countries are used to supply replacement birds for either laying or broiler flocks. From 1990 to 1996, the quantity of U.S. shell-egg exports for hatching fell 11 percent, while the value of these exports rose 6 percent. In 1996, over three-quarters of shell-egg exports for hatching went to countries in the Western Hemisphere, with Canada and Mexico accounting for almost 50 percent of the total.

The quantity of shell eggs exported for table consumption has expanded by over 50 percent in the 1990's, with most of the expansion occurring in 1993 and 1994. Much of this expansion was due to

U.S.-EU Meat Flap—Cracks in U.S. Egg Exports?

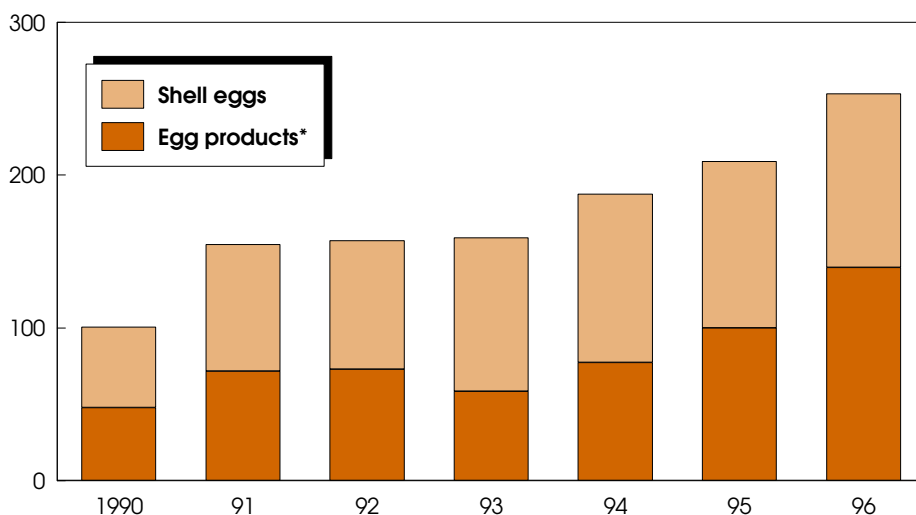
As of April 1, 1997, the U.S. had stopped issuing export certificates for all raw and further processed poultry products, processed egg products, and table eggs destined for the European Union (EU). The halt in trade is due to the failure of the U.S. and the EU to reach an agreement on mutual meat and poultry inspection methods as applied to trade between the two. Both sides are deadlocked on how to achieve veterinary equivalency with inspection systems and processing standards that are sometimes contradictory.

In 1996, the U.S. exported approximately \$69 million of poultry products to the EU. In terms of market share, the \$17 million in shell eggs and egg products exported to the EU represented 8 percent of total U.S. egg and egg-product exports.

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Egg Products Boost U.S. Egg Exports in the 1990's

Million doz.



*Shell-egg equivalent.

Economic Research Service, USDA

increases in funding of the Export Enhancement Program (EEP) for eggs, and most of this EEP funding was used to support egg exports to Middle Eastern markets.

Exports of shell eggs for consumption fell in 1995 when EEP funding declined. Then in 1996, exports rose as strong demand from Mexico, the European Union (EU), and Hong Kong more than offset lower exports to the Middle East. Hong Kong is by far the dominant U.S. market for shell eggs, accounting for over 60 percent of U.S. exports (quantity basis) in 1996.

The 1997 forecast is for continued growth of shell-egg exports, with increases in table-egg exports more than offsetting any declines in hatching-egg exports. The extent of export increases will depend on steady growth in exports to Canada, continued expansion in the Mexican economy, and the competitiveness of U.S. table eggs in the Hong Kong market.

Egg-Product Exports Boom

While exports of both shell eggs and egg products have grown, export of egg products has been the fastest growing component of egg shipments. Between 1990 and 1996, exports of egg products rose 190 percent from the equivalent of 48 million dozen eggs to 139 million dozen. Growth in these exports has been especially strong the past 2 years, increasing 80 percent.

Most egg-product exports are utilized in bakery products and in further processed foods. Egg-product exports are reported in shell-egg equivalents to facilitate combining with shell-egg export figures, and to include the impact of all egg exports in domestic supply and utilization estimates. The conversion process takes the actual export quantity and estimates the number of eggs it takes to make one pound of each of the four major egg-product export

categories—dried egg albumin, non-dried egg albumin, other dried egg products, and other non-dried egg products.

The egg-product export market is very concentrated, with the top four exporters—the U.S., the EU, China, and Canada—accounting for 95 percent of sales volume in 1996. Japan, Mexico, and Canada were the three largest import markets for U.S. eggs in 1996 and have been for some time. However, in 1996 strong demand caused exports to the EU to jump by over 70 percent to 10 million dozen, making it the fourth-largest U.S. market. The export forecast for U.S. egg products is for continued growth in 1997, but at a much slower rate than in 1995 and 1996, as a fall in exports to the EU will likely offset much of the growth expected in exports to Japan and Mexico.

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Upcoming Reports—USDA's Economic Research Service

The following reports will be issued electronically on dates and at times (ET) indicated.

May

- 13 Cotton & Wool Outlook (4 pm)**
- Feed Outlook (4 pm)**
- Oil Crops Outlook (4 pm)**
- Rice Outlook (4 pm)**
- Wheat Outlook (4 pm)**
- 16 Livestock, Dairy & Poultry (12 noon)
- 20 Agricultural Outlook*
- 23 U.S. Agricultural Trade Update
- 27 Newly Independent States & Baltics (previously Former Soviet Union)*
- 29 Agricultural Exports*

*Release of summary, 3 pm.

**Available electronically only.