

Commodity Fact Sheet

Eggs

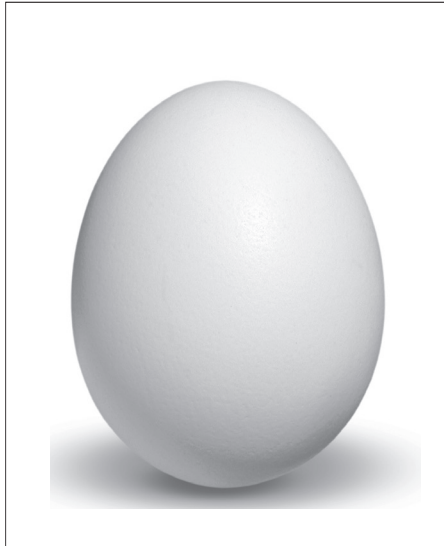
Information compiled by the California Egg Industry Association

How Produced – There are many methods of commercial egg production in the United States, including caged, cage-free, organic, free-range, and specialty eggs. All eggs produced in California are from hens living in cage-free housing, where hens are allowed to roam around a poultry house (cage-free) or outside (free-range). The egg is formed in the reproductive tract of a female chicken, called a hen. Hens start laying eggs at 19 weeks of age. To produce one egg, it takes a hen 24-26 hours. Each laying hen produces 250 to 300 eggs each year. Most eggs are laid between the hours of 7:00-11:00 a.m. Chickens must be fed a balanced diet and plenty of water each day. The hen house must be kept clean and be secure from predators. To keep hens laying year-round, producers must ensure adequate hours of daylight each day, usually 14 hours. When days get shorter in the winter months, artificial lighting helps the hens maintain production. Once laid, eggs move quickly from the hen house to the egg processing area where they are washed, graded, and sized. Eggs are packaged by size, varying from peewee to jumbo, and shipped to retail outlets. Most eggs produced today will be in the supermarket within 72 hours. Eggs have excellent keeping quality; when kept in the egg carton and properly refrigerated, clean eggs that are free from cracks will keep for months. Egg consumption nationwide is estimated at 277 eggs per person, but in California the average is 339 eggs per person. California is the number one egg consuming state in the U.S.

Breeds – The Single Comb White Leghorn is the principle breed used for production of white shell table eggs. There are various breeds that lay brown eggs. The only difference between brown and white shelled eggs is the color of the shell, there is no nutritional difference.

Commodity Value – The farm gate value of California egg production is estimated at \$537,600,000 million. In 2020, nearly 14 million laying hens produced four billion eggs in California. With an average price of \$1.30 per dozen, the total value of California egg production is \$425 million. Five percent of the eggs produced in California are exported to international destinations, approximately 17 million dozen eggs annually. The value of exported eggs, including value-added products such as cooked scrambled eggs and hard-boiled eggs, totals \$12 million each year.

Top Producing Counties – One half of California's egg production is in the southern part of the state including San Bernardino, Riverside, and San Diego counties.



One half of the state's production is in northern California. The majority of egg farms in northern California are in the San Joaquin Valley with considerable egg production in San Joaquin, Stanislaus, Merced, and Kern counties. Petaluma in Sonoma county was once known as the "egg basket of the world."

History – Egyptian and Chinese records show that fowl have been laying eggs for man since 1400 B.C. Europe has had domesticated hens since 600 B.C. Chickens came to the New World with Columbus on his second trip in 1493. While it is customary to throw rice at weddings in many countries, French brides break an egg on the threshold of their new home before stepping in,

for luck and healthy babies. At the time of the French Revolution, the French already knew 685 different ways of preparing eggs.

Nutritional Value – Table eggs are nutrient dense and one of nature's most perfect foods. Foods that supply significant amounts of one or more nutrients compared to the number of calories they supply are called nutrient dense. Nutrient dense foods help you get needed nutrients without excess calories. Each egg contains 13 essential vitamins and minerals, 6 grams of high quality protein, and the antioxidants lutein and zeaxanthin. A large egg contains 70 calories and 185 milligrams of cholesterol. Eggs contain the highest quality protein of any food. Studies show that students perform better in school after eating a high protein breakfast. Eggs are also a source of choline, an essential nutrient that contributes to fetal brain development and helps prevent birth defects.

For additional information:

California Egg Industry Association
(916) 441-0801
American Egg Board
(847) 296-7043

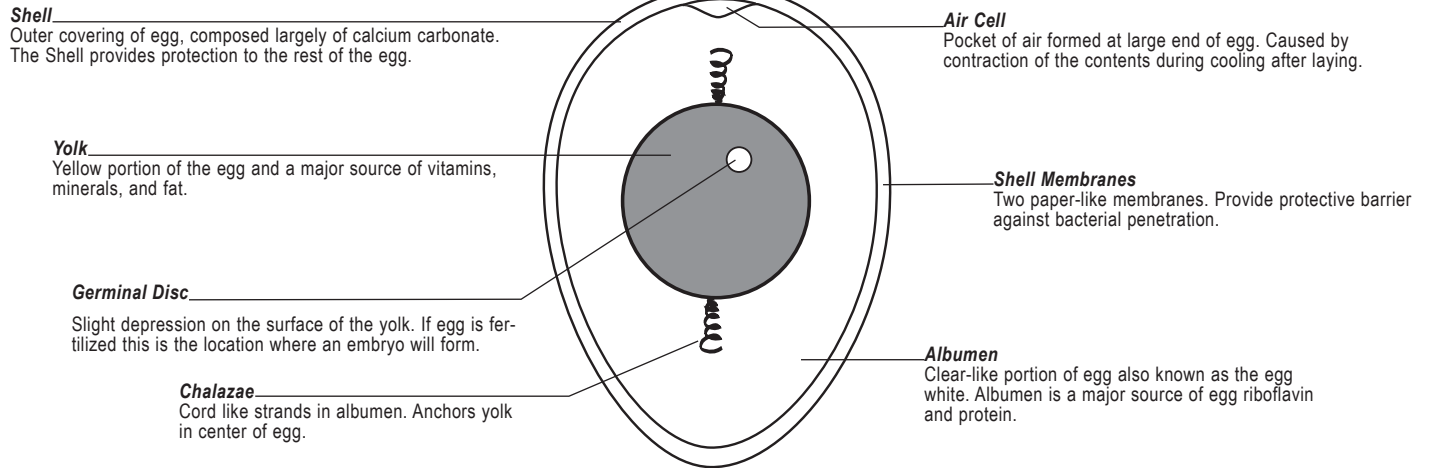
Websites:
www.aeb.org
www.incredibleegg.org



California Egg Farmers

Egg Activity Sheet

What's Inside an Egg?



Lesson Ideas

- Create an "Egg Yolk Joke Book."
- Calculate the number of eggs produced by commercial laying hens each year. Convert this number to dozens.
- Study the science of egg development in birds.
- Research how eggs were used in the development of vaccines.
- Learn how various chicken feeds affect the color of the egg yolk.
- Research how technology has improved egg production.
- Make Ukrainian eggs and study their history.
- Make a variety of egg dishes such as quiches, omelets and frittatas, and research their history.
- Create the perfect egg package, which prevents egg shells from cracking.
- Dissect a hard-cooked egg and label its parts.

Fantastic Facts

1. On the average, one laying hen produces 250-300 eggs in a year.
2. An average person today eats about 277 eggs each year.
3. The single-comb White Leghorn chicken breed is the most common egg layer in California.
4. Egg proteins are used by nutritionists as a standard for all other nutrients. They are used to grade all other proteins.
5. There are 13.5 million laying hens in California. In 2020, California hens produced about 4 billion eggs.
6. Petaluma was once known as the "egg basket of the world."
7. Most eggs arrive at supermarkets within 72 hours after laying.
8. Commercial egg sizes range from peewee (very small) to jumbo.

Lesson Plan: The Bouncing Egg

Introduction: Eggs have a variety of unique characteristics and can be used for a variety of scientific experiments.

Objective: Students will observe changes in an egg shell when placed in vinegar.

California Standards: CC ELA: W.3-5.7, W.6-8.2, 7
NGSS: 4-PS3-3, 5-PS1-4, 5-PS2-1, MS-PS1-2, 5 MS-PS2-1, 2, 4;
HS-PS1-4, HS-PS2-1

Materials: One hard-cooked egg per team, white vinegar, plastic container with lid.

Procedure:

1. Without breaking the shell, examine the hard-cooked egg carefully. Record visual observations.

2. Place egg in plastic container. Cover completely with white vinegar and seal with lid. Predict what will happen in one hour, one day, and one week. Record predictions.
3. Observe the egg at the indicated times and record observations. The egg shell should have dissolved and the egg white and yolk should have become rubbery. After rinsing and drying the egg, record what happens when it is dropped. It should bounce.

Note: After each observation, have your students wash their hands. Also, do not eat the eggs.