

most important  
**ENEMIES**  
of egg quality

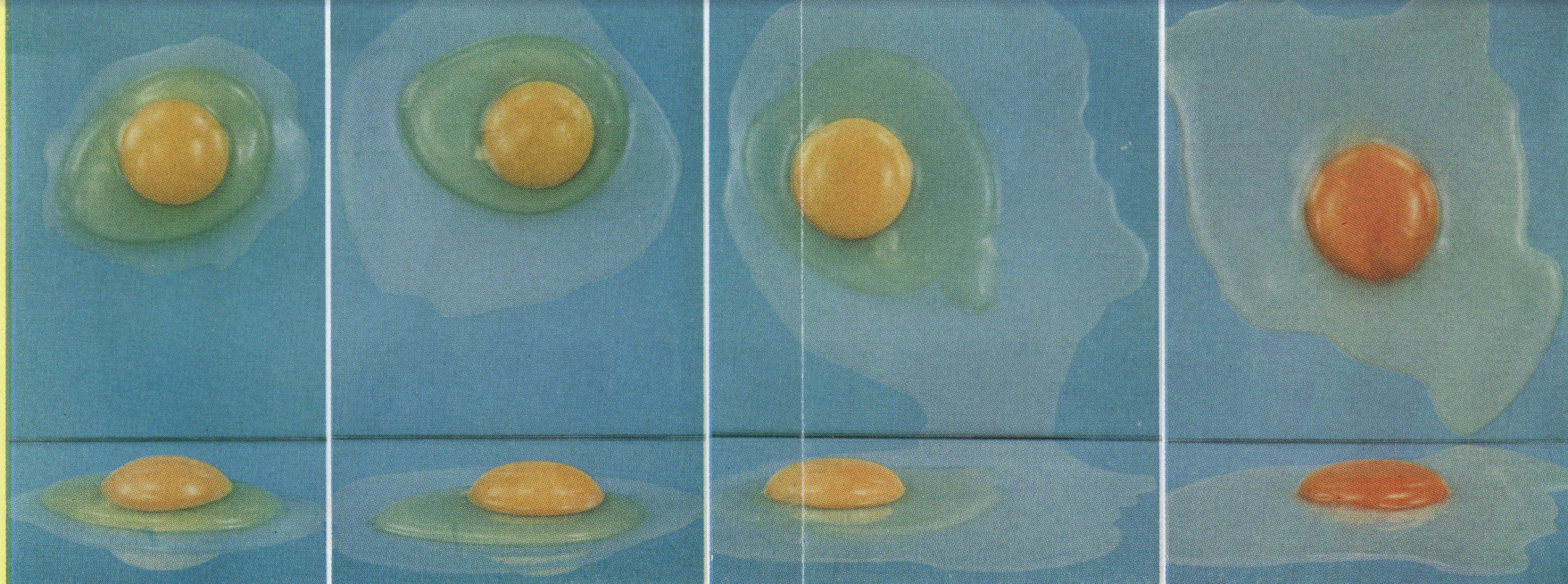
**AGE**

**HEAT**

**HUMIDITY**

TEXAS AGRICULTURAL EXTENSION SERVICE  
G. G. Gibson, Director, College Station, Texas





Egg 1 day old, held at 55 degrees F. Large amount thick white, yolk upstanding.

Egg 6 days old, held at 55 degrees F. Less thick white. Yolk slightly less upstanding.

Egg 6 days old held at 88 degrees F. Much less thick white than egg held at 55 degrees F. for some time and yolk is more flattened.

Egg held 12 days under normal summer temperatures in Texas. Mostly thin white, yolk greatly flattened and discolored.

## IMPORTANT ENEMIES OF EGG QUALITY . . . Temperature, Age, Humidity

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TEXAS A. & M. COLLEGE SYSTEM

Eggs are a perishable food product. Their quality declines rapidly unless the eggs are handled properly from the time they are laid until consumers use them. Thousands of dollars are lost annually by poultrymen and egg handlers due to loss in quality. The above pictures illustrate the extent of quality loss that occurs when eggs are not cooled soon after being laid, not held at 55 degrees F. or lower and not moved rapidly into the channels of trade.

**Heat** is one of the greatest causes of loss in egg quality. Any temperature above 70 degrees F. is sure to reduce egg quality rapidly. The higher the temperature, the more quickly it happens. Eggs maintain their high quality only a few hours at 70 degrees F. Research indicates that 50 to 55 degrees F. is a good temperature in which to hold eggs on the farm when they are marketed at least two or three times weekly. Eggs should be gathered at least three times daily, and cooled rapidly to remove animal heat. The egg temperature is about 105 degrees F. when laid. If the temperature in the hen house is around 100 degrees F., little cooling will take place unless eggs are removed from the cage or nest and put in a mechanical cooler which is held around 50 to 55 degrees F.

**Age**, or the length of time eggs have been laid, also influences quality loss. However, loss in quality due to age is slowed down greatly if eggs are kept at 50 to 55 degrees F. The pictures above

show this to be true. If the temperature is lowered to a constant 30 to 31 degrees F., eggs will maintain superior quality even longer. Because of the cost and stronger tendency toward sweating, this low temperature is not recommended for short holding on the farm where eggs are being sold several times weekly.

**Humidity** is another factor in maintaining favorable conditions for eggs. Eggs are more likely to hold their maximum quality if the cooler is operated to maintain a relative humidity of 70 to 80 percent, but a low humidity will not cause undue quality loss unless eggs are to be stored for several weeks.

**Fresh** is a word commonly used to denote top egg quality. Unless there are requirements which specify that eggs called **fresh** must be equal to known A quality standards, they may be called fresh when, in fact, they are of grade B or C quality. Eggs may be less than A interior quality when laid, or their quality may be quickly lowered due to holding under poor conditions, even for a few days.

**Good cartons** protect eggs and give eye appeal in consumer channels of trade. Printed words on the carton should accurately identify the eggs as to size and known quality standards. The carton may also show the brand name and by whom packed. This helps to strengthen buyer confidence in the product.



**I**F THE RECOMMENDATIONS relative to heat, age and humidity, given in this leaflet, are followed, eggs are more likely to give **consumer satisfaction** and will be **competitive in the channels of trade**. They also will return **greater profits to producers** if they are sold on the basis of known grade standards.

Maintaining all of the quality in eggs when laid is the responsibility of producers, handlers and consumers.

Here are some suggestions:

- Provide hens with clean nests and nesting material.
- Gather eggs three or more times daily in wire baskets.
- Clean dirty eggs immediately after gathering.
- Cool eggs in mechanical cooler at 50 to 55 degrees F. immediately after gathering and cleaning them.
- Keep eggs in a cooler which maintains the relative humidity between 70 and 80 percent.
- Always cool eggs before placing in cases.
- Use new or reconditioned cases that are clean.
- Use clean flats and fillers in good condition.
- Place eggs in case with little end down.
- Deliver eggs to buying station three or more times weekly.
- Keep eggs away from strong odors.
- Handle carefully to prevent breakage.
- Move eggs rapidly through all marketing channels.