

EGG STORAGE

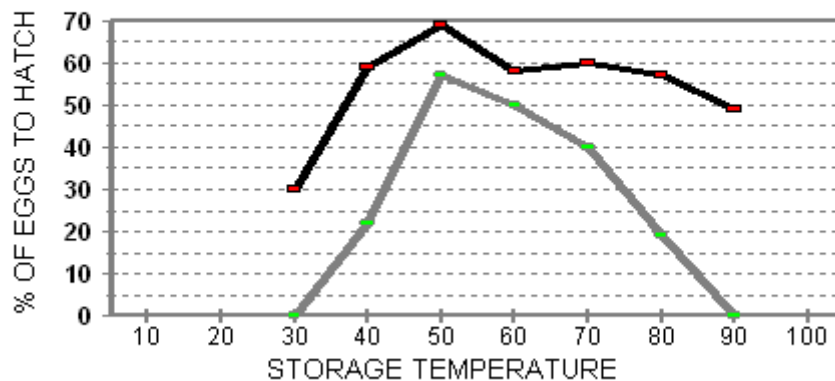
Fertile eggs will only develop into chicks if they are kept at a constant temperature for 3 weeks. The temperature must be about 103° F. If kept cooler they will remain alive, but the embryo will not be developed inside the egg. The longer the egg is kept, the lower are the chances of its survival.

A hatchery owner wanted to find the best temperature at which to store fertile eggs before hatching. He also wanted to know just what affect time had on the viability of the eggs. He thought that if they were kept at a very low temperature, they would keep for a longer period of time before the embryo died.

He set up the following situation: 2000 eggs were collected on the same day. They were divided into 20 groups of 100 eggs each. Each group was stored at a different temperature (32°, 40°, 50°, 55°, 60°, 70°, and 90° F.) One half of the eggs were incubated after 7 days and the other half after 14 days.

The graph below shows the results:

TIME AND TEMPERATURE OF EGG STORAGE



Dark line represents eggs stored for 7 days
Light line represents eggs stored for 14 days

The hatchery owner decided to set his storage refrigerators at 50° F. He also decided not to change the temperature no matter how long he stored the eggs. He decided that, if possible, he would not store the eggs longer than 2 weeks.

Answer the following questions on the back of his page:

- To what question did he want to find an answer?
- What made him think of that question?
- What was his hypothesis? (Write in IF...THEN... format)
- Describe his experiment?
- Do you have enough information to verify his experiment?
- How did he state his data?
- Can you understand it?
- Did he use a reasonable number of eggs? Explain.
- Do you agree with his decision? Defend your answer.