

Candling

'Candling' is a method of inspecting the egg during incubation. A bright light, usually a torch, with a shielded cover and a hole about the size of a ten pence piece is used to allow light to penetrate the shell and display the contents.

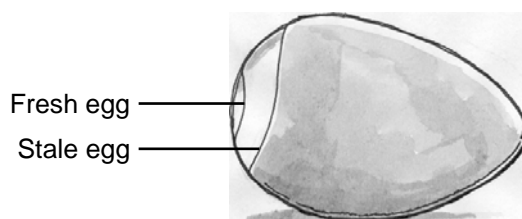
The term 'candling' comes from the old days when a candle was used to light the egg.

Candling is used for a variety of reasons:-

- **To check the quality of the egg shell before incubation:** Uneven shells (mottled) and cracked shells should be discarded at this stage. Irregular shaped eggs and those with mottled shells have a poor hatching rate. Cracked shells can introduce bacteria to the incubator which can infect the other eggs. (see *diagram*)

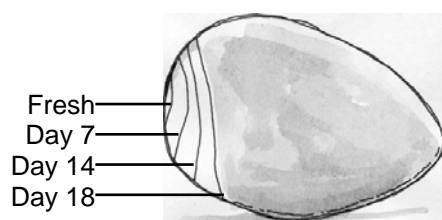


- **To check the freshness of eggs to be incubated:** The air sac at the large end indicates the level of freshness of the egg. As the egg ages, the air sac grows larger. Many people 'float' eggs to test for freshness. As the eggs age and the air sac gets larger, the eggs tend to float in water. (see *diagram*)



(candling cont'd)

- **To monitor humidity during the incubation period.** Low Humidity causes an over-large air sac, and high humidity causes a small air sac.
- **To monitor the development of the embryo.** Eggs that are clear by day 7 are infertile and should be discarded. By day 14, the embryo is well developed and shows as a dark mass occupying most of the shell. Movement can be noticed at this stage. By day 19, considerable activity can be seen and the beak can be seen in the air sac. (see *diagram— Egg at 19 Days*)



Method of Candling

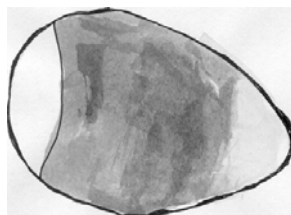
Candling needs to be done in a darkened room or area. Removal of eggs from the incubator will not harm them but they should be handled gently with a minimum of rolling and returned to the incubator as soon as candling is completed.

A handy way to move the eggs is in an egg carton base with the pointed end down.

Once in the darkened area, place the candling torch over the large (blunt) end of the egg and view the contents from the side. White or light coloured shells are easier to view.

At approximately day 4 the first signs of activity should be noticed. This will show as a small dot with blood vessels radiating from it. Eggs containing live embryos have a warm pinkish tinge to them.

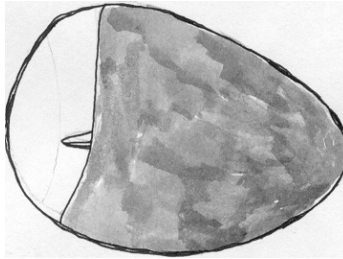
As the embryos grow, they occupy more space inside the egg until about day 14 when almost all the egg is dark inside.



Egg at 14 Days

(candling cont'd)

In the advanced stages, towards day 18, considerable activity can be seen especially as a reaction to the candling torch light. Lack of activity, however, does not necessarily mean that the embryo is not alive and well. A failed embryo at this stage is usually noticeable by a change of colour from the warm pinkish tinge to a yellow tone, the dark mass tending to become solid and stuck to the shell.



**Egg at 19 Days
(beak in air sac)**