

Enhancing the value of eggs: how to make *balut* and century eggs

BALUT

The retail price of balut is about 50% higher than that of fresh eggs. Moreover, all the materials needed are cheap, and easily available in rural villages.

What are *balut* ?

Balut (Pilipino) or *hot vit lon* (Vietnamese) are incubated fertilized duck eggs, which are boiled for 20-30 minutes when the embryo is 16-18 days old. The embryonated eggs are incubated in a *balutan* or some other kind of artificial incubator. A typical balutan is a low building with walls of bamboo or nipa palm and a corrugated iron roof. Small windows are provided for ventilation. Rice hull or sawdust is spread on the floor to absorb excess moisture.

How to make *balut*

- ❑ Select eggs that are fit for incubation. Eggs should come from mated flocks, and be not more than five days old. They should have thick shells without any cracks.
- ❑ Preheat the selected eggs under the sun for three to five hours.
- ❑ Heat some unpolished rice in an iron cauldron or vat until it reaches a temperature of about 42 to 42.5 degrees C (107 to 108 degrees F).
- ❑ Put 100 to 125 eggs into a large cloth made of either abaca (*sinamay*) or nylon.
- ❑ Place a layer of heated rice at the bottom of a cylindrical bamboo incubator basket (45 cm in

diameter and 60 cm deep, Fig.1 and Fig. 2), and place a bag of eggs on the rice.

Alternate the bags of eggs with the bags of heated rice. Eight bags of eggs will fit into the basket. Bamboo baskets can be arranged either in a single row along the wall of the balutan, or in double rows placed in the middle of the balutan. Rice hull is firmly tamped down between baskets as an insulator.

- ❑ Turn the eggs at least two or three times a day (Fig. 3).
- ❑ Heat the rice in the morning and in the afternoon on cool days.



Fig. 1. Putting a bag of eggs into the incubator basket

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- ❑ Candle the eggs on the 7th, 14th and 18th day to select infertile eggs; D1 (dead embryo on first candling) and D2 (dead embryo on second candling). The infertile eggs, both D1 and D2, are removed, hard-boiled, and sold as a snack.
- ❑ Eggs containing a normal embryo candled on the 16th to 18th day should be hard boiled and sold as balut or hot vit lon.

Precaution

Numerous entrepreneurs have successfully adopted this technology. However, marketing aspects such as demand for the product, promotional activities and pricing need to be considered. The shelf life of balut is one day, but this may be extended to one week if the eggs are kept in a refrigerator.



Fig. 2. Incubator basket with rice and bags of eggs



Fig. 3. Turning the eggs

CENTURY EGGS

This simple procedure adds value as well as extending the shelf life of duck eggs. Century eggs are a very popular traditional Chinese delicacy, served as an appetizer or as a condiment for some dishes.

What is a century egg ?

Pidan (Chinese) or alkalized egg is a traditional Chinese delicacy made from either duck or chicken eggs. These are often called thousand-year or century-old eggs, even though the preserving process lasts only about 30 days. Eggs are soaked in a saline solution (for 15 days in summer or 20 days in winter). No boiling is needed. To check eggs for cracks, test according to the sound of eggs knocked gently against each other. Good eggs give off a higher pitch. Ammonia (NH₃) is sometimes emitted, which has a pungent smell.

How to make century eggs

- ❑ Preparing the pickling solution:

Water	1L
Sodium chloride(NaCl)	72g
Sodium hydroxide(NaOH)	42g

 Dissolve the NaCl and NaOH completely in water. Bring the solution to a boil and allow it to cool down before use.
- ❑ Submerge the eggs in the saline solution, and store at 15 to 20^oC for about 10 days.
- ❑ Pick out the pickled eggs and rinse them. Then allow them to dry naturally.
- ❑ Coat with PVA (polyvinyl acetate) or some other non-ventilated packaging material. An alternative is to add red soil to the saline solution after the pickled eggs are removed. Coat the eggs with the mud, and roll them in rice husk. Age for about 2 weeks.
- ❑ Crack the eggs lightly and remove the shell. The white of the egg will have a grayish, translucent color, and a gelatinous texture. The yolk, when sliced, will be a grayish-green color.
- ❑ To serve, cut into wedges and serve with bean curd (tofu) as an appetizer, or as a condiment for dishes such as rice gruel (congee).

Precaution

Numerous entrepreneurs have successfully adopted this technology. However, the market demand for century eggs may be low in some areas. Promotional activities may be helpful. Ammonia (NH₃) is sometimes emitted, especially from cracked eggs, which has an unpleasant smell.