

# INCUBATOR INSTRUCTIONS FOR USE COVATUTTO 6



## DIRECTIONS

This incubator is used to create the ideal conditions allowing the fertilised eggs to continue their embryonic development already started before they were laid, up to the little chicken birth.

But in order that this might happen, it is essential to remember that the most important subject to give attention to, always remains the egg.

Not only the egg shall be fertilised if you want to obtain an excellent birth percentage, but the whole cycle taking to the egg formation, and more, to the laying is also very important. Therefore, you shall very seriously consider the following directions:

- Do not use eggs purchasable on the market for alimentary use, but eggs collected in the poultry pens, where sexually mature, not too young or too old, healthy and well-nourished animals live only shall be used and male number shall be proportional to female number in order to obtain a good percentage of fertilised eggs. To this end, follow the instructions contained in the table:

Egg type	Sexual maturity			
	Male	Female	Proportion Males and Females	between Females
			N.	N.
QUAIL	60 Days	50 Days	1	3
HEN	6/8 Months	6/8 Months	1	10
GREY PARTRIDGE	10/12 Months	10/12 Months	1	1
HEN-PHEASANT	6/7 Months	6/7 Months	1	7
GUINEA-FOWL	8/10 Months	8/10 Months	1	2
DUCK	8 Months	4 Months	1	4
TURKEY-HEN	7 Months	7 Months	1	10
GOOSE	8 Months	7 Months	1	4

- Avoid crossbreeding consanguineous animals, for they could beget eggs containing weak embryos or embryos going to die.

- Accustom the animals to laying eggs into their nests and not on the ground where the eggs could get dirty or infected. Place the nests in the shade and keep them clean.

- The most fertile period for animals corresponds to the most luminous one, that is from February to October. But the ambient temperature too shall not be less than 16°C or more than 24°C, while the relative humidity may vary from the 55 to the 75%.

- Carefully avoid exposing laid eggs to the sunshine or in very hot places, as inside them germination is starting and it is interrupted for the conservation necessary before incubation.

- The eggs shall be collected four times a day (with clean hands) and they shall be placed on a suitable tray, their point turned downward. In the event the temperature was excessive, or on the contrary if it was too low, you should collect the eggs every hour.

- At the end of each day, you shall collect all the eggs left, avoiding leaving them in the nests during night; besides, you shall close the access to the nests and open it again very early in the morning, before the new laying.

- The eggs shall be laid and immediately collected without shaking them or knocking one another and shall be selected according to their size, shape, weight and shell porosity. The eggs shall be of middle size, (neither the small nor the big ones), not too tapered or rounded, with a not much porous shell and they shall not be different one from the other; clean them: do not use water. Tapered or too rounded eggs might lead to weak chicks, the ones with wrinkled shell shall be left out as they contain too much calcium and they harden because of humidity and heat, thus preventing the embryo from developing regularly and making it die inside the shell.

If other kinds of eggs are used, birth percentage decreases.

The selected eggs shall be placed into the apposite well cleaned egg trays (available everywhere) with the point down and preserved for 24 hours at least in a room at a stable temperature of 15°-18° C, with a relative humidity between 70 - 75%; after that they can be put inside the incubator.

In order to get a good result, eggs shall not be preserved for more than 5 days since they were laid.

The fresher the eggs are, the more the hatching is regular and the hatched chicks are healthy and robust.

If you use eggs laid more than 5 days before, the incubation is compromised:

1. No hatching occurs and the unborn chicks die inside the eggs.
2. Embryos do not become mature.
3. Hatching occurs late and irregularly and chicks are not much vital or misshapen.
4. Some hatched chicks succeed in making a hole in the shell but they remain trapped in the egg as they are too weak.
5. Bright eggs are in large amounts when the germ is too old and does not develop.

It is known however old eggs cause a birth decrease.

Incubation is often irremediably compromised by the ones who want to preserve the eggs for more than 5 days since they were laid, in order to collect enough of them so as to fill the incubator.

In conclusion, before incubating the eggs, 24 hours shall go by, not more than 5 days since they were laid, however, as previously said.

### EGGS TO BE PUT INTO THE INCUBATOR

Shape, measures, weight of eggs suitable to be put into the incubator, incubator indicative capacity (see colour insert n. 1).

Egg type	Indicative size Diameter x Height Mm	Indicative Weight gr.	Indicative Capacity
			COVATUTTO 6 N.
QUAIL	25x30	11	22
HEN	40x50	45	7
	43x50	53	7
GREY PARTRIDGE	30x40	12-14	15
HEN-PHEASANT	35x46	30-35	8
GUINEA-FOWL	35x49	45	8
	38x49	50	7
DUCK	46x60	70	5
	46x65	75	5
TURKEY-HEN	46x66	70	5
	50x70	85	5
GOOSE	65x100	120	2
	68x106	140	2

### EGGS NOT TO BE PUT INTO THE INCUBATOR

Typology and defects of eggs not to be put into the incubator (see colour insert n. 2).

### WHERE TO PLACE THE INCUBATOR

Choose a room where the temperature is stable, not lower than 19°C (otherwise the incubator temperature would decrease), and not higher than 22°C, with a relative humidity between 45 - 55%, free of smells, well-aired, without leaving windows or doors open as they could cause draughts, thus making the hatching irregular and, as a consequence, birth percentage decrease. The room shall be dimly lit and the incubator shall be put on a wooden and solid plane not lower than 80 centimetres high above the floor. The incubator shall not be placed next to direct sources of heat, as they may alter the inner temperature. No animal, neither the hatched ones, shall be inside the selected room. The objects placed near the incubator shall not be washed, otherwise eventual jets may deteriorate the insulation and cause electrocution risks (electric shock).

### INCUBATOR PREPARATION AND START

**Before starting the machine read all instructions!**

Use the machine for the above-mentioned purpose only, if used for other purposes it is considered to be dangerous and the Manufacturing Company refuses all responsibility for eventual damages to people, animals or things resulting from inobservance of this warning.

Remove the machine from its packaging and make sure nothing is missing or damaged. Do not scatter the packaging in the environment; neither the packaging nor the machine shall be within reach of children, minors, incapable people or animals.

Make sure all its parts are well fastened and in the right place and then, before assembling them, check the machine name plate data and make sure they are suitable for the rated mains voltage and the available power.

1) Remove the transparent cover and pour tepid water into the two compartments of one of the two basins taking the water level very close to the edge of the basin itself (see fig. 1).

2) Replace the transparent cover, make sure it is in its own seat and that the triangle of the "ROOM TEMPERATURE" is in line with the "T" notch which sticks out the furniture (see figure 4) and then plug in.

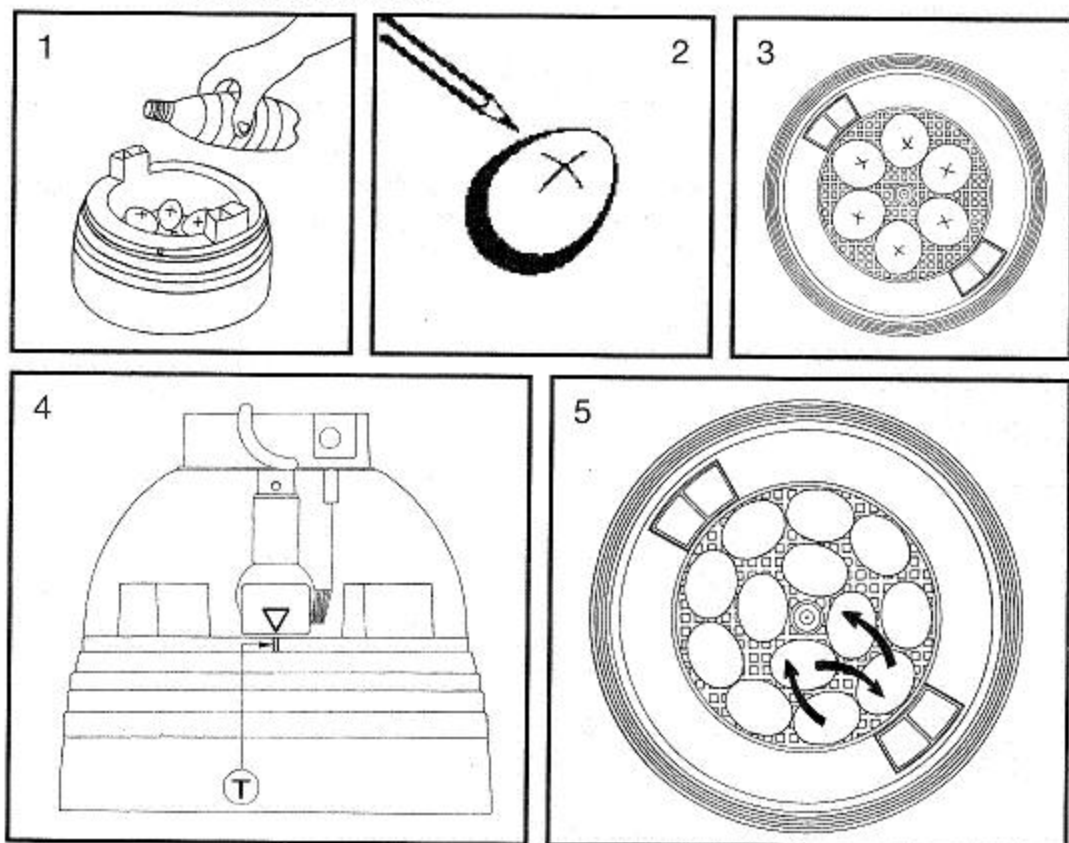
Wait for 7-8 hours, after the lamp flashes, so that the temperature becomes stable and it reaches the optimum value.

3) With a graphite pencil mark a zone of the eggshell (see Figure 2) to have a reference while rotating.

4) Unplug, remove the transparent cover and then put the eggs inside the incubator (see Figure 3), do not overlap them so that the marked zone can be visible. Replace then the transparent cover in its own seat.

**N. B. Before opening the incubator, always unplug the machine.**

5) Note down the day in which the incubation begins on a calendar and then follow the relevant instructions.



### BIRTH RULES

A) Incubate eggs laid not more than 5 days before.

B) The eggs collected after they have been laid shall be preserved for 24 hours before being incubated with the point down in a cool place where the temperature is 15-18° C.

C) Turn the eggs half, twice a day (morning and evening) with great care, until the "marking" (see Figure 2) isn't in the upper part anymore, but is instead in the lower one.

Besides, once a day, when turning the eggs, it is important to change their place too, in a rotatory way as regards the lamp (if needed, also from the centre towards the periphery). So doing, all the eggs may benefit of the same temperature at the same time during the whole incubation period (see fig. 6).

This operation can be carried out manually, removing the cover and then placing it in the same position again, as shown in the Figure 4.

D) Check the water level in the basin every two days and add some water, if necessary, as, otherwise, risks for the incubated eggs could arise.

N.B. - The operations (point A, C, D) shall not be carried out in the last 3 days before the hatching; the water shall be therefore put at level in the four compartments of the two basins (see Figure 5) immediately and exclusively before the 3-day-hatching begins. In fact, during this span of time, the incubator shall not be opened anymore, otherwise the birth would be disturbed.

E) By the sixth-seventh day eggs can be "candled" to remove the unfertilised eggs (this operation is not indispensable, however).

This operation shall be carried out inside a dark room, lighting the egg from the side opposite to the point, which will keep being turned down, using a bri-

ght light torch or the proper "egg-candling" tool.

When a little red spider like shape oscillating in case of little shocks is visible inside the fertilised egg, the latter contains the developing embryo. Other visible shapes different from the above-mentioned ones, however, are visible in case of unfertilised eggs or eggs containing dead embryos, to be therefore rejected.

F) If duck and goose eggs are incubated, the incubator shall be opened (removing the transparent cover) each day from the ninth incubation day and the eggs shall be let getting cold for 15-20 minutes. After that, before closing the incubator and continue the incubation, the eggs shall be moistened with tepid water by means of a nebulizer or a sponge. This operation shall not be carried out during the last three day preceding the hatching.

G) After the hatching, chicks shall remain inside the incubator for about 24 hours to dry themselves, then they shall be put in a hot place, in the apposite heated cages or under a heater equipped with an infrared rays lamp. If heat is enough, chicks will not frenetically crowd and move away from the heat source, either. They shall be watered with an apposite trough and fed with proper feed available in specialised shops.

Do not disturb the new born chicks, as, in their turn, they would disturb the ones about to be born, thus temporarily altering conditions inside the incubator.

### **WARNINGS**

a) If possible, do not incubate eggs of different species or in different periods. In case of smells during the hatching and chicks' death at the end of the hatching, clean the incubator with a wet sponge paying attention not to wet the electric parts and above all **AFTER UNPLUGGING THE MACHINE**.

b) In case of misting of the transparent cover and resulting little drops, during the incubation, open the incubator for some minutes to rebalance the inner degree of humidity and if needed, try to take the water off from one of the two basin compartments (see fig. 1). The occurring again of the condensate on the cover in proximity to the tub, won't excessively compromise the hatch outcome. By the hatching time instead, the transparent cover obviously gets wet, do not open it, otherwise the humidity degree decreases.

c) If electric energy supply fails for some hours, incubation is not compromised, as long as the incubator is not opened. If it is not supplied for more than 5-6 hours, as last attempt, move the incubator to a quite warm room: leave it open, so that the eggs can cool as little as possible.

### **AT THE END OF INCUBATION**

After each incubation the state of the eggs eventually left, shall be checked. For this purpose candle the eggs or break them.

Keep in mind the weak germ develops but might not be able to ripen and hatch.

### **IMPORTANT**

The incubator may be automatically adjusted at the optimal incubation temperature, without any manual adjustment intervention.

### **USEFUL INSTRUCTIONS**

- It is an electric device, therefore never touch it with wet hands or barefoot.
- The machine is conceived for inner use only, water jets might cause an electric shock.
- Do not use improper extensions, do not wet connections, do not damage the feeder. While the machine is working the feeder shall not be within reach of animals.
- The machine shall definitely never be used in dangerous places where the saturation with inflammable gases may occur or where it may get in touch with different liquids or inflammable substances and liquids.
- The cleaning and the maintenance of the machine shall be carried out with a cloth and/or brush without using tools or liquids. Dusts can be removed with an air jet just after unplugging the machine.
- The maintenance shall be carried out after usual periodic inspections only (before the use) of the moving parts and of the feeder, in order to check if they are eventually damaged or worn. If the machine proves to be damaged, it shall not be used.
- Other cleaning and/or maintenance operations shall be carried out by qualified personnel of an authorised Service Centre or NOVITAL only.
- Do not pull the feeder to move the machine and always unplug it before moving it, anyway.
- For eventual repairing, feeder replacement included, apply to qualified per-

sonnel of the authorised Service Centre only or NOVITAL itself.

- The heating lamp replacement shall be carried out by skilled personnel only, at NOVITAL or at an authorised service centre. Before carrying out this operation, unplug the machine.

Screw the new lamp securely in the lamp-holder: such lamp shall be of the same type and shall have the same characteristics as the old one.

Check the distance between lamp and probe body by means of a drill of the diameter of 4,5 mm as shown in Fig. 6.

To change the distance (see Fig. 7), unscrew the two screws "A", remove the box "B", loosen the screw "C", shift the probe body "D", according to your necessities, and then block the screw "C".

Check the distance as shown in Fig. 6. If this is correct, reassemble everything. If not, repeat the operation to adjust the distance.

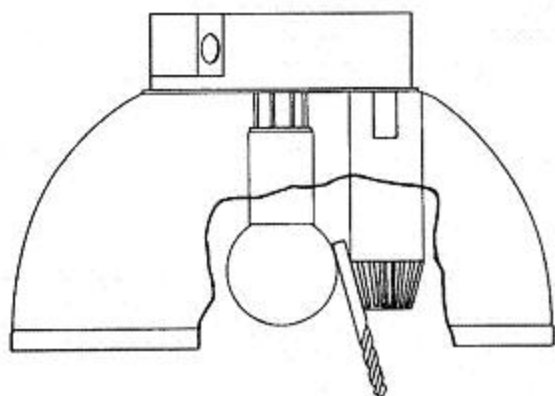


Fig. 6

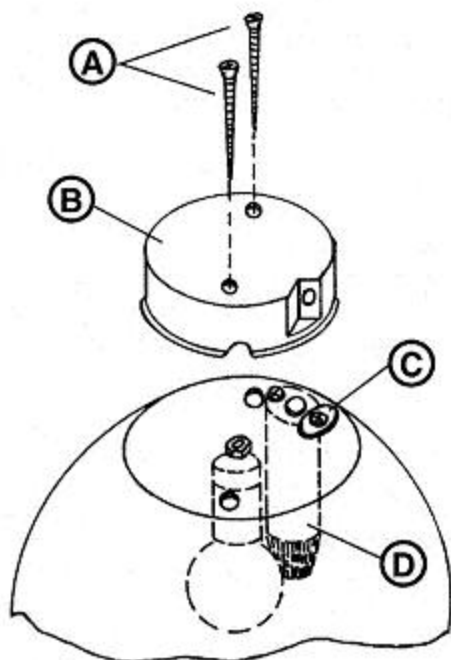


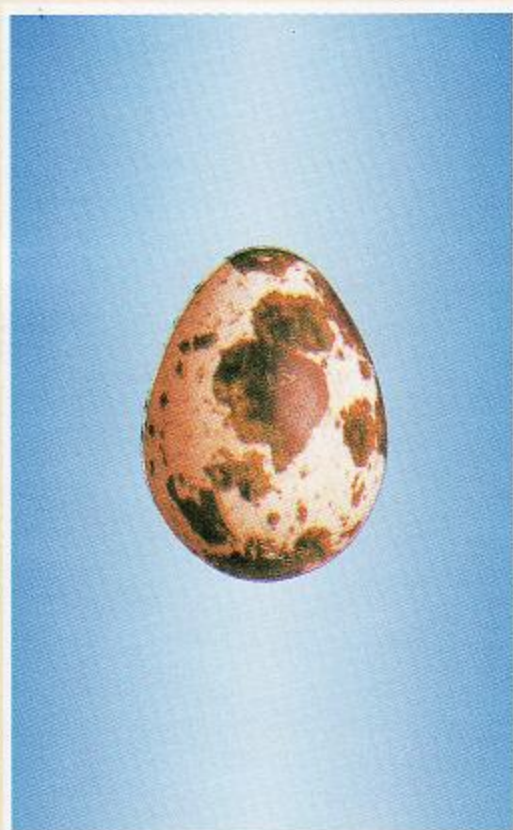
Fig. 7

- As for all electric devices, in case of fire, you can extinguish it by means of powder extinguishers; never use water as electrocutions might occur.

- If the machine is proved to be disabled, it is brought to an authorised dump; however, first of all, it shall be made idle by cutting the feeder as much close as possible to the machine output point, after unplugging the machine itself.

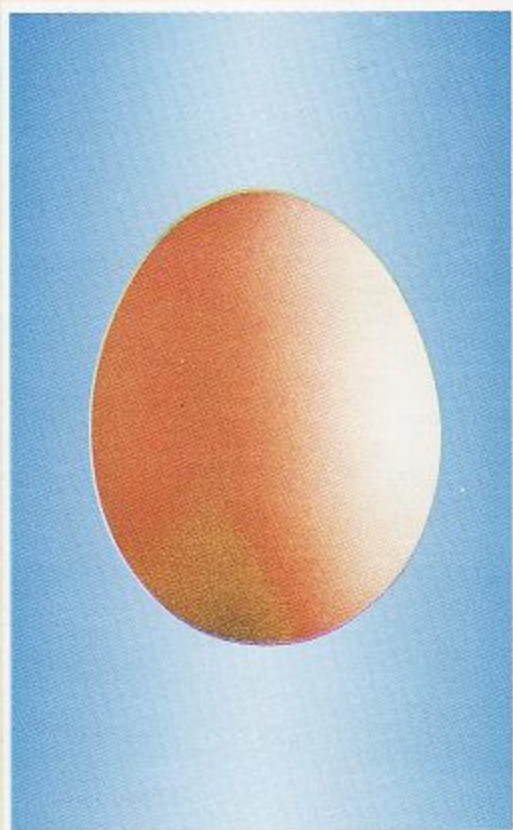
#### INCUBATION TABLE

Egg species	Incubation days no.	Egg rotation
QUAIL	16-17	from the 1st to the 14th day
HEN	20-21	from the 1st to the 18th day
GREY PARTRIDGE	23-24	from the 1st to the 20th day
HEN-PHEASANT	24-25	from the 1st to the 21st day
GUINEA-FOWL	26-27	from the 1st to the 23rd day
DUCK	27-28	from the 1st to the 25th day
TURKEY-HEN	28-30	from the 1st to the 26th day
GOOSE	29-30	from the 1st to the 27th day



30 mm

25 mm  
QUAGLIA  
QUAIL  
CAILLE  
WACHTEL



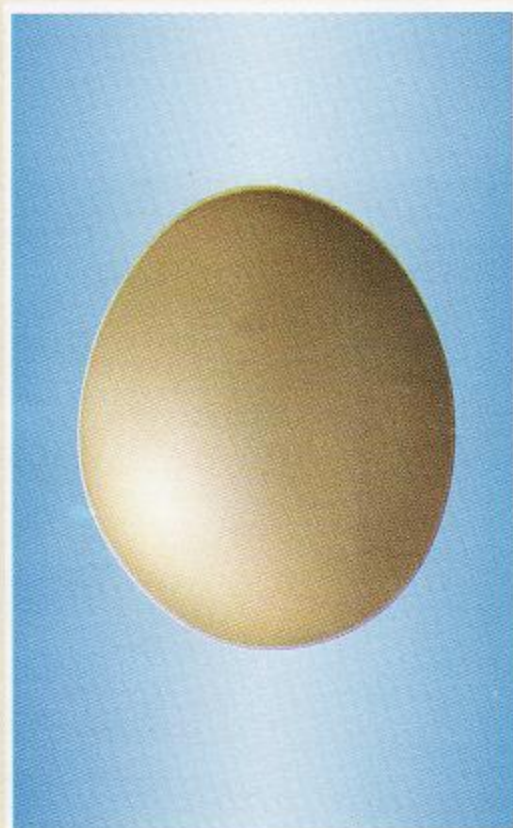
50 mm

40/43 mm  
GALLINA  
HEN  
POULE  
HUHN



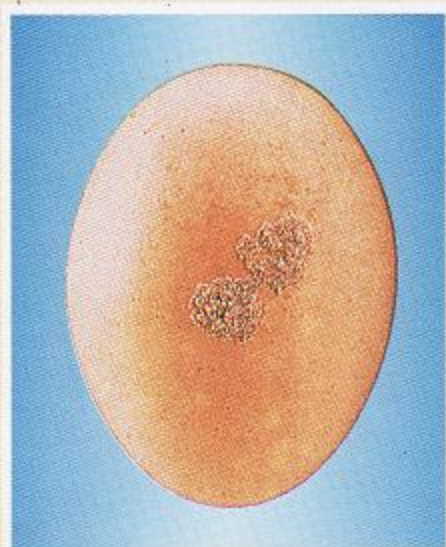
40 mm

30 mm  
PERNICE  
PARTRIDGE  
PERDRIX  
REBHUHN

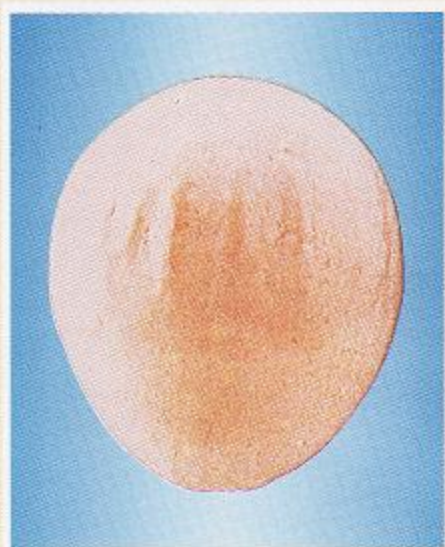


46 mm

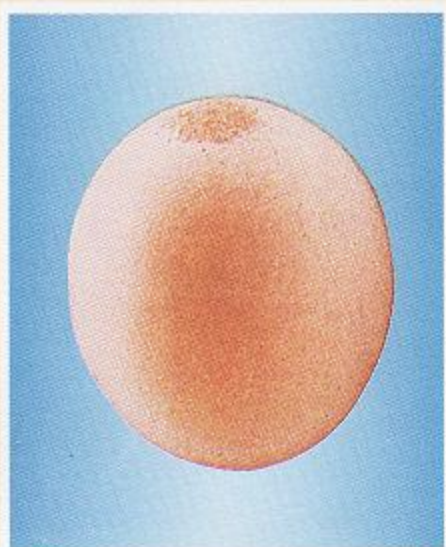
35 mm  
FAGIANO  
PHEASANT  
FAISAN  
FASAN



Presenza di calcare  
With limestone  
Présence de calcaire  
Kalkbestand



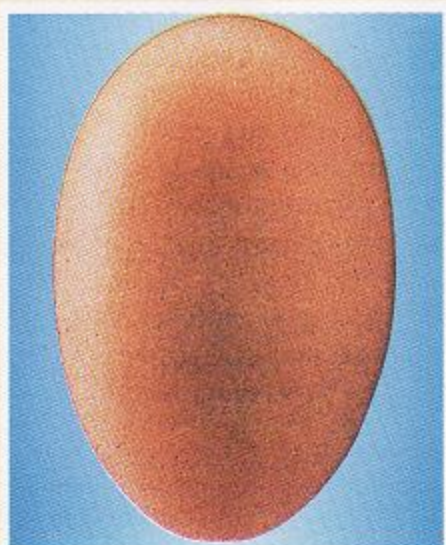
Ondulato  
Corrugated  
Plissé  
Wellenförmig



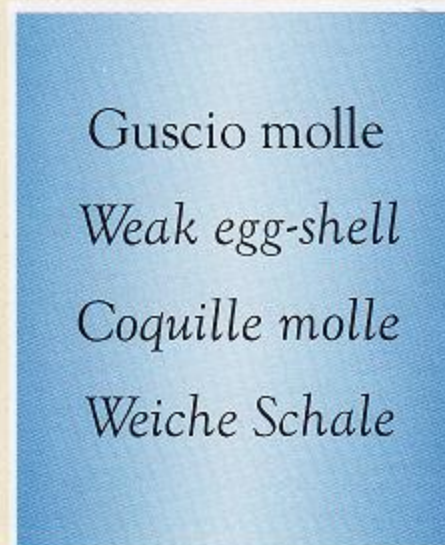
Guscio sottile  
Thin egg-shell  
Coquille mince  
Dünne Schale



Sporco  
Dirty  
Sale  
Schmutzig

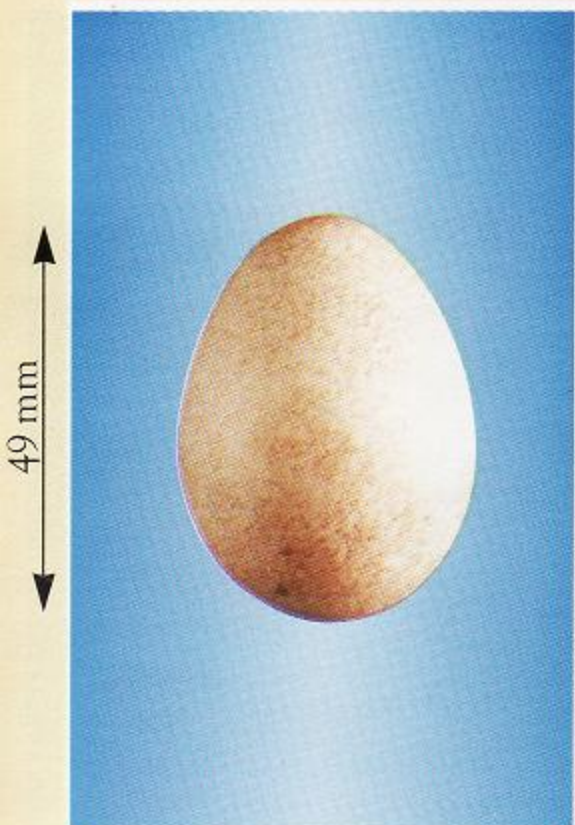


Esageratamente grande  
Too big  
Exagérément grand  
Extrem groß

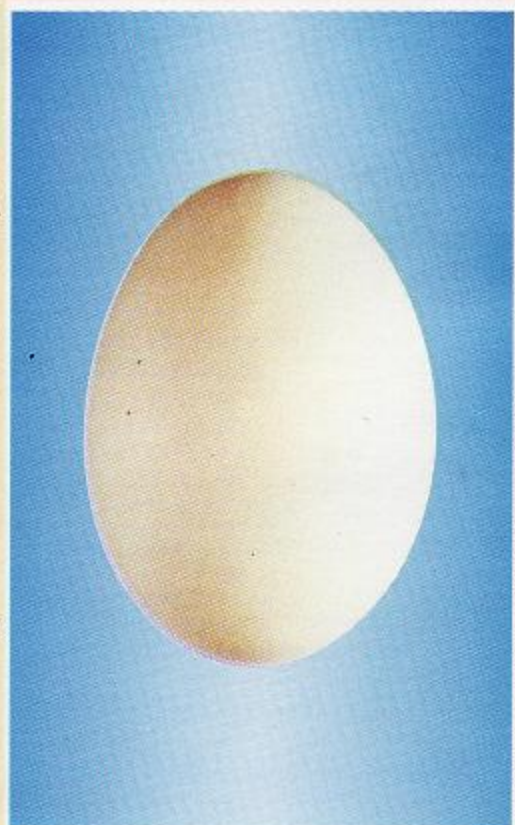


Guscio molle  
Weak egg-shell  
Coquille molle  
Weiche Schale

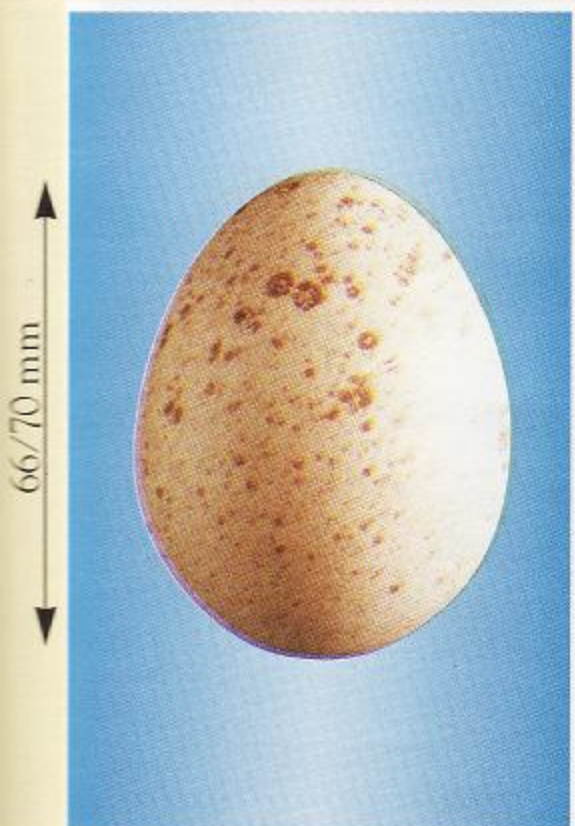
**INS. 1**



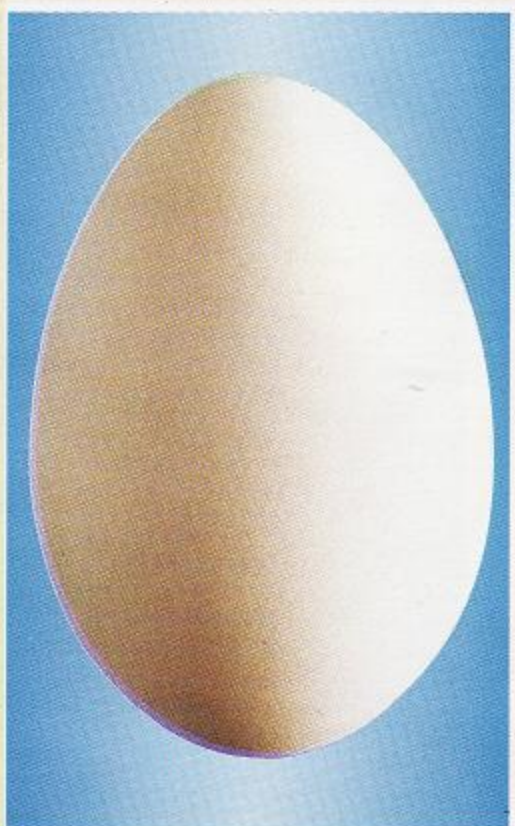
35/38 mm  
FARAONA  
GUINEA-FOWL  
PINTADE  
PERLUHN



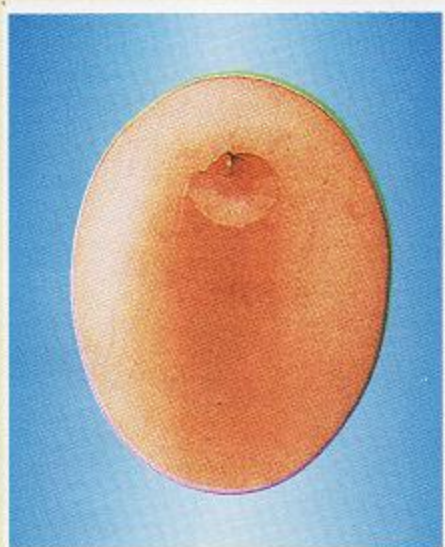
46 mm  
ANATRA GERMANATA  
DUCK  
CANE  
ENTE



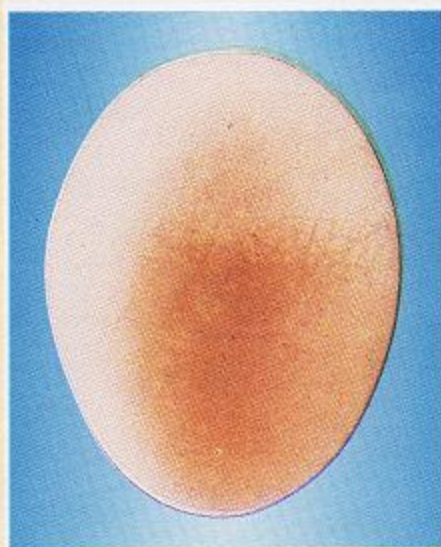
46/50 mm  
TACCHINA  
TURKEY  
DINDE  
TRUTHAHN



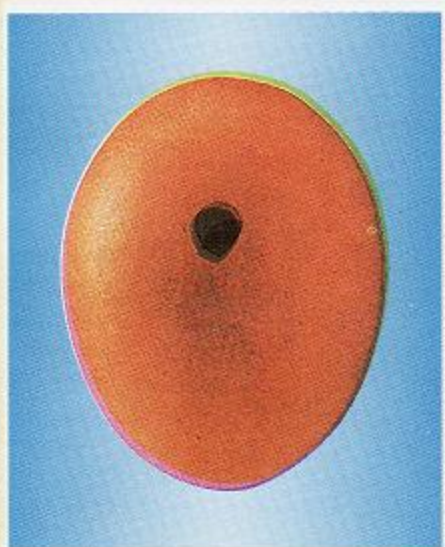
65/68 mm  
OCA  
GOOSE  
OIE  
GANS



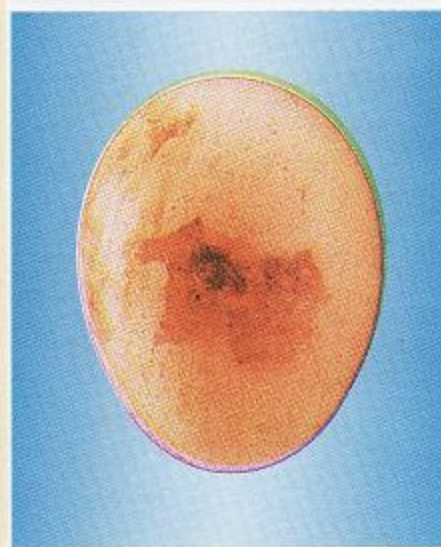
Rotto a causa di urti  
Broken due to impacts  
Cassé à cause de coups  
Auf Grund der Schläge gebrochen



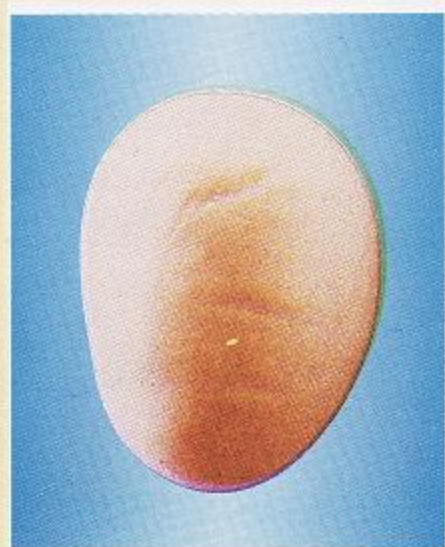
Malforme a gradini  
Misshapen with steps  
Malformé avec marches  
Stufenförmige Mißbildung



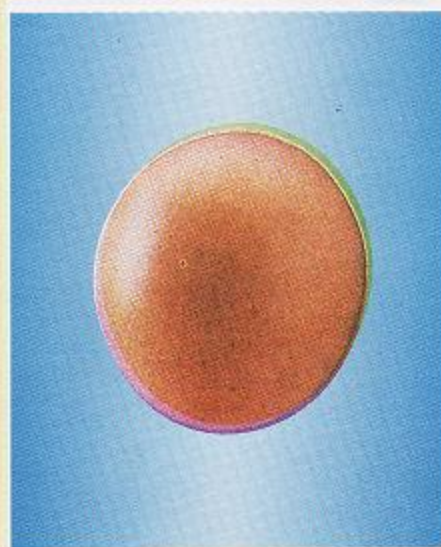
Bucato  
With holes in  
Percé  
Löcher



Macchiato  
Spotted  
Tacheté  
Gemahlen



Deforme  
Misshapen  
Déformé  
Verkrüppelt



Rotondo a palla  
Round like a ball  
Rond comme une balle  
Ballförmig