

ISTRUZIONI



INSTRUCTIONS

BEDIENUNGSANWEISUNGEN



MODE D'EMPLOI

INSTRUCCIONES

ΟΔΗΓΙΕΣ

INTRUÇÕES

الإرشادات

INSTRUKTIONER

ISTRUZIONI PER L'USO
DELL'INCUBATRICE
COVATUTTO 20
COVATUTTO 20+20

INCUBATOR INSTRUCTIONS FOR USE COVATUTTO 20 E COVATUTTO 20+20



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	Male	Sexual maturity		Proportion	
		Female	Males and	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 Measures Diameter x Height	Indicative Weight	Indicative Capacity	
			COVATUTTO 40	COVATUTTO 120
	mm	gr.	N.	N.
QUAIL	25x30	11	70	140
HEN	40x50	45	24	54
	43x50	53	24	48
GREY PARTRIDGE	30x40	12-14	42	84
HEN-PHEASANT	35x46	30-35	30	60
GUINEA-FOWL	35x49	45	30	60
	38x49	50	24	54
DUCK	46x60	70	20	40
	46x65	75	16	32
TURKEY-HEN	46x66	70	16	32
	50x70	85	12	28
GOOSE	65x100	120	6	15
	68x106	140	4	10

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).

DESCRIPTION OF THE EGG-HOLDER PLANE

It is used to collect the eggs of all the species that can be incubated and is suitable for local hatching. The eggs are laid and lined up in it: the movable separators running in the guides, obtained on the faces, according to the egg size, hold the eggs in this position. The eggs are rotated by moving the sliding plane, with the egg-turning tie rod, first of all in one way (morning) and then in the other way (evening). Not only this sliding plane does collect all the eggs and enable the hatching, but it also gives the opportunity of turning the eggs from the outside without opening the incubator. For further information see directions at point 5. On request, the "automatic egg-turning device" may be supplied: if applied to the incubator, it allows to automatically turn the eggs, without having to intervene by hand.

HOW TO USE THE SEPARATORS

Insert the separators inside the apposite guides and space them out, according to the egg size, leaving a slight clearance for their rotation. Insert one row of eggs between the separators, or even two or three rows as long as there is a proper clearance enabling the eggs themselves to rotate. This solution is recommended, when small eggs are incubated (quails, pheasants, etc.), or

even with quite big hen eggs: some separators shall be therefore removed, so as to get a clearance of the eggs and enable them to rotate freely (see Fig. A).

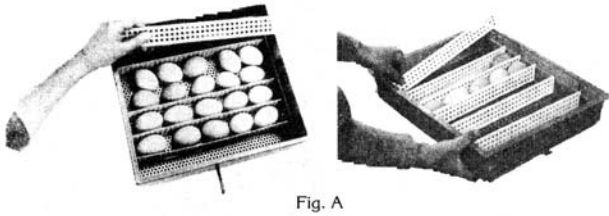


Fig. A

WHERE TO PLACE THE INCUBATOR

Choose a room where the temperature is stable, not lower than 16°C and not higher than 26°C, even if the incubator may function in a room where the temperature reaches 31°C, with a relative humidity between 45 - 55%, free of smells, well-aired, and not dry, 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) Mount the accessories packed inside (see instructions in the following pages).

2) Remove the egg-holder drawer and the water basins, close the door, plug the machine in: make sure the socket is safe and there is no wrong contact, wait for about an hour till the temperature is quite stable and make sure the liquid has reached the red line in the thermometer scale (See Fig. F).

3) Prepare one or more little bottles of tepid water to fill in the basin on the bottom of the incubator COVATUTTO 20 (see Figure B).



Fig. F

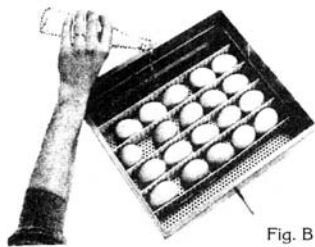


Fig. B

On the contrary, in case of COVATUTTO 20+20, firstly place the basins putting them on the bottom against the wall opposite to the turning-egg tie-rod wall, keeping them equidistant from the side walls (See Fig. E).

N.B. - Before opening the incubator door to lay the egg-holder drawer inside or to carry out other operations, always unplug the machine to avoid sudden increases of temperature. Open the door only if necessary and just for little time.

4) Once the inner temperature is stable, (make sure the liquid is on the red line in the thermometer), the eggs are laid on the sliding plane; between them and the separators clearance shall make the relevant rotation easier.

It is recommended to move the turning-egg tie rod in the two ways gently to make sure the eggs rotate.

5) Fill the basin almost till the rim and, for an easier water charging, which will be carried out with a possibly small bottle, move the sliding bottom by pulling the egg-turning tie rod towards the outer side of the incubator.

6) Now close the incubator and, after about an hour, check the thermometer temperature, the liquid shall be on red line.

Now the incubation cycle begins: it is recommended to note down the day on a calendar and follow the instructions as per below-mentioned schedule.

BIRTH RULES

A) Incubate eggs laid not more than 5 days before, with regular shape and weight.

B) Turn the eggs half twice a day (morning and evening) by means of the egg-turning tie rod jutting out of the incubator.

C) Add tepid water into the basin about every 2 days.

N.B. - The operations (point A, B, C) shall not be carried out in the last 3 days before the hatching; the water shall be therefore put at level in the basin immediately before the 3-day-hatching begins. In fact, during this span of time, the incubator shall not be opened, otherwise the birth would be disturbed.

D) Each time eggs are turned, make sure the thermometer temperature is on the red line. A slight change in the red line does not cause problems, especially if it is a consequence of the movements of the first hatched chicks.

E) If the eggs to be incubated are not enough to fill the egg-holder plane, the eggs themselves shall be always arranged on the plane itself and not concentrated in the middle or at the sides, in order to balance air circulation.

F) 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 bright light electric torch or the proper "egg-candling" tool.

When a little red spider alike shape oscillating in case of little shocks is visible inside the fertilised egg, the latter contains the developing embryo.

Other shapes different from the above-mentioned ones, however, are visible in case of unfertilised eggs or eggs containing dead embryos, to be therefore rejected.

As a consequence, the eggs left shall be arranged in the drawer, as already specified in the point E.

G) If duck and goose eggs are incubated, the incubator shall be opened (removing the transparent cover) each day starting from the ninth incubation day and the eggs shall be let getting cold for 15-20 minutes. After that, before closing the incubator to 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.

H) Remove the separators from the guides and then from the incubator, at the beginning of the 3 days before the hatching, so that they do not hinder the unborn chicks. Move the sliding plane to an equidistant position from the walls and put two of the separators, the machine is equipped with, horizontally,

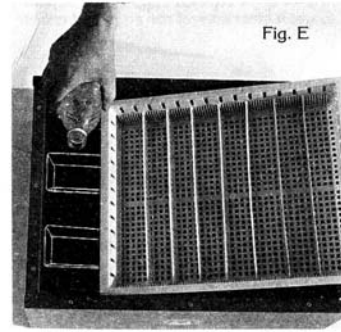


Fig. E

above the two resulting gaps. In this way the gaps themselves are closed, thus preventing the unborn chicks from falling below the plane itself (see Fig. C).

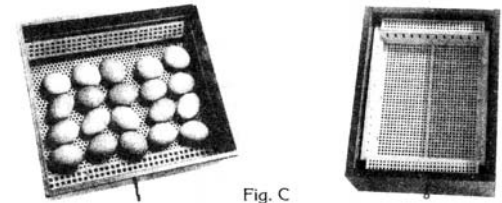


Fig. C

I) 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 opposite 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.

L) At the end of the incubation, clean the incubator with a moist cloth and, where it is possible, with tepid water, too.

M) 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.

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, disinfect the incubator (after the incubation) with formalin and potassium permanganate, available in the chemist's shop. Preferably insert a plastic container into the incubator with about 30 gr. 40% formaldehyde solution (formalin) inside. Immediately add half spoonful of potassium permanganate before closing the incubator, to avoid breathing poisonous vapours. Before carrying out this operation, plug all the holes made in the incubator and take it at the incubation temperature (on the red line in the machine thermometer) for some hours; finally leave the incubator door opened for 24 hours to discharge vapours and smells.

In any case, all necessary precautions shall be taken in order to avoid breathing poisonous vapours both before and after the operation. It is therefore recommended to make use of gloves, glasses and a mask, and to carry out the operation itself in an open but sheltered place, temporarily unplugging the machine.

B) During incubation time the transparent cover shall not mist up: if this should occur, lift the cover up a little and wait for the machine to stabilize. It is normal that some little drops of water appear on the cover walls. Then replace the cover and make sure that the normal conditions have been restored. By the hatching time instead, windows get obviously wet; therefore do not open the door or pull the basin out of the incubator, 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 the door open, so that the eggs can cool as little as possible.

D) At the beginning of the three days immediately before the hatching remove the separators from the drawers and make room for the unborn chicks.

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 thermometer the machine is equipped with, is used for checking temperature only; in fact the incubator self-regulates in proximity to the normal temperature of incubation as it has already been adjusted with a lab precision thermometer.

If, in particular cases or due to imperfect adjustment, the temperature needs changing, keep in mind that (see figure D) the temperature itself can be increased by turning the screw clockwise with a screwdriver, whereas it decreases if the screw is turned counterclockwise. For this operation please refer to the warning light: it goes on when the resistance is warming, otherwise it goes off. Then turn the screw little by little clockwise to increase temperature, after switching the light on till the liquid reaches the point wished on the control thermometer scale. Turn the screw little by little counterclockwise after switching the light off, to decrease the temperature till the liquid level decreases and reaches the point wished in the control thermometer scale.

This operation shall be carried out with great care and only if necessary.

As a consequence, before the incubation make sure the thermometer liquid has not been broken because of pushes. The liquid shall look as a single and continuous line, from the bulb on the "point", in the capillary: if so, it works. Should the liquid be broken, a spare thermometer is necessary.

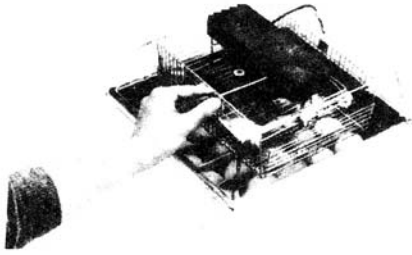


Fig. D

USEFUL INSTRUCTIONS

If the thermometer is mercury type (that is to say that liquid is silver), if the thermometer bulb breaks and the mercury goes lost, follow the instructions hereafter:

- collect the mercury in a glass or plastic container with hermetic plug; send everything to NOVITAL for disposal.
- If the mercury thermometer proves to be defective even if unbroken, send it to NOVITAL for disposal.
- 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 limited to the usual periodic inspections (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 personnel at the authorised Service Centre only or at NOVITAL itself.
- 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.

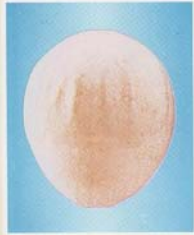
INCUBATION TABLE

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
DJACK	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

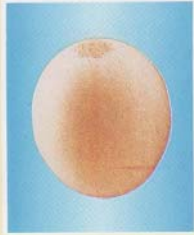
INS. 2



Presenza di calcare
With limestone
Présence de calcaire
Kalkbestand



Ondulato
Corrugated
Plissé
Wellenförmig



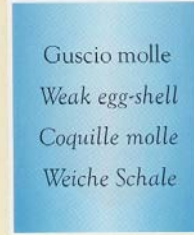
Guscio sottile
Thin egg-shell
Coquille mince
Dünne Schale



Sporco
Dirty
Sale
Schmutzig



Esageratamente grande
Too big
Exagérément grand
Extrem groß



Guscio molle
Weak egg-shell
Coquille molle
Weiche Schale

INS. 1



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

INS. 1



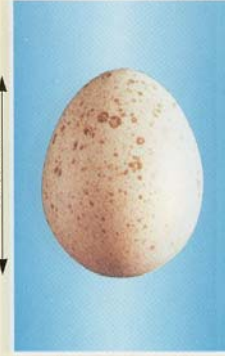
49 mm

35/38 mm
FARAONA
GUINEA-FOWL
PINTADE
PERLUHN



60/65 mm

46 mm
ANATRA GERMANATA
DUCK
CANE
ENTE



66/70 mm

46/50 mm
TACCHINA
TURKEY
DINDE
TRUTHAHN



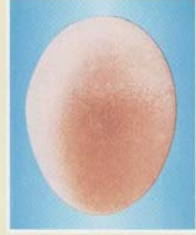
100/106 mm

65/68 mm
OCA
GOOSE
OIE
GANS

INS. 2



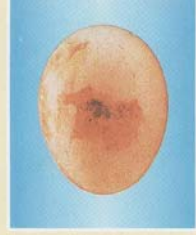
Rotto a causa di urti
Broken due to impacts
Cassé à cause de coups
Auf Grund der Schläge gebrochen



Malforme a gradini
Misshapen with steps
Malformé avec marches
Stufenförmige Mißbildung



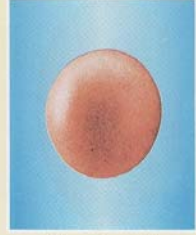
Bucato
With holes in
Percé
Löcher



Macchiato
Spotted
Tacheté
Gemahlen



Deforme
Misshapen
Déformé
Verkrüppelt



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