

Regarding the practice of cooling the eggs, no set rules can be laid down as to the exact time to be allowed for cooling. Some operators get good results without cooling, others with slight cooling, and yet, again, others cool very freely and get satisfactory results. A lot depends on the time of year, whether the machine has been overheated or the reverse, temperature of the room, and also age of eggs, as to how long it is advisable to cool. Should cooling be practised, it is the general rule to cool very little the first week, and gradually increase the period up to the night of the eighteenth day, after which the eggs should not be disturbed.

It has been found that where an incubator-room temperature is above 70 degrees, the ventilators of an incubator are not of much avail for furnishing additional ventilation; but where the room temperature is low—from, say, 55 degrees to as low as 45 degrees—the ventilators will be found much more effective.

Whilst cooling the eggs it is advisable, especially in a cool room, to cover the eggs with a blanket, and also to see that the tray does not overlap the incubator-top. Eggs thus exposed get chilled much quicker than the rest of the tray, and may be injuriously affected thereby.

The chicks should not be removed from the incubator till at least twelve hours after the last chick has hatched, but the tray and shells may be removed as soon as the chicks are dry. This will give the chicks more room. Great care should be taken not to overheat the chicks whilst they are in the incubator. In hot weather it may be necessary to open the door an inch or so to provide additional ventilation. Chicks should on no account be allowed to pant. This is the primary cause of much mortality by lung-infection.

TESTING.

The germ will show signs of development within a few hours of its first exposure to heat. It is not until about the fourth or fifth day that any marked difference between fertile and unfertile eggs may be detected with the naked eye. The unfertile eggs and those with dead germs are usually tested out twice during the hatch, on the seventh and sixteenth days generally. The process of testing is simple, and after a little experience is easily acquired. The appearance of the egg can be clearly seen when placed between the light of the tester and the eye.

When testing, care should be taken to see that the eggs are not held too close to the tester. If this precaution is not taken, the heat generated by the testing-lamp will kill the germ. Temperatures of 150 to 180 degrees have been obtained by holding thermometers for a few seconds against the mouth of the tester.

When testing, the egg should be lifted straight from the tray to the lamp without turning or twisting, because by so doing the yolk is frequently ruptured.

ARTIFICIAL BROODING.

There are many different methods employed in the brooding of chicks. The advantages and disadvantages of these methods will be pointed out. The main things in artificial brooding is sufficient even temperature and cleanliness. Little chicks three or four days old are fairly hardy creatures, but when placed under extreme conditions weakness or death is sure to follow. The chick's lungs are situated along the spinal column and are protected only by a thin membranous lining over which a light covering of feathers grow. Provided with such meagre protection, the lungs may become readily chilled or overheated. An even temperature, with as few variations as possible, is most desirable. The brooder should be started up a day or two before the chicks are ready to be placed in it, so that an even temperature of about 95 degrees may be maintained. This temperature should be gradually lowered, and it depends upon the season of the year just how much it should be lowered. The poultryman must use his judgment and operate the brooder according to the condition of the chicks. Many poultrymen use no thermometer in their brooders. They study the chicks, and can tell by looking at them if the temperature is right. This emphasizes the fact that for best success the poultryman must understand his business.