

Breeding Chickens

Eggs should be collected a few times each day to ensure they have the best chance possible of hatching. They should be laid in a relatively clean nesting box and be free of chicken poo. It is a good idea to place eggs in a carton, pointy end down, as you collect them. An egg carton is one way of reducing the chance of breaking eggs. Your hands should be clean when collecting eggs. If your hands are dirty or if the eggs end up with chicken poo on them, there is an increased chance of them being affected by bacteria. Too much bacteria in an egg can cause the chick to die in the shell or within a few days of hatching. It can also be passed on to other eggs within the incubator, thus having a considerable impact on the percentage of eggs that hatch.

Storing eggs might not seem that important, however it is vital if you wish to have a good percentage of your chicks hatch. They should be stored in a relatively cool place where their temperature can remain constant at between 12°C and 15°C (50°F - 60°F) if possible. They should be stored well away from direct sunlight; so keep them off the window sill. A metal shed is not an ideal location to store your eggs either. One location that might be suitable is the pantry.

Most poultry books recommend you do not keep eggs more than 7 days before beginning incubation. You can keep them for 14 days and still get a reasonable hatch, provided the eggs have been well stored. Naturally, the sooner you put them in the incubator, the more eggs you are likely to hatch.

Turning your eggs during storage is also a recommended practise. If you store your eggs on their side, turn them one direction today, then the other tomorrow. Continue repeating this process until you incubate the eggs. If you store them in an egg carton, put it on a 45° lean and alternate this each day. Remember to store your eggs with the pointy

end down. If you choose not to rotate your eggs, you will still get a pretty good hatch (a fairly good percentage), as long as they were stored pointy end down. Correct storage and turning of the eggs helps to reduce the likelihood of the embryo touching and sticking to the shell membrane. If the developing chick sticks to the shell membrane it will often die during development or during the hatch as it won't be able to rotate and get free from the shell.

When it is time to set your eggs in the incubator it is best to avoid using the soiled ones. You can wash them (in warm water) if you wish, however I'd recommend avoiding this practise. There are several reasons for not using soiled eggs.

Never wash eggs in cold water. The egg will draw the moisture in along with any bacteria on the soiled shell.

If you stored a soiled egg, there is a much higher chance that bacteria have entered the egg. The bacteria will grow well in the warm, humid incubator and possibly impact some of your other eggs. It's just not worth the risk.

If you washed an egg, you have probably removed some of the 'bloom'. You may need to replace this with a special oil otherwise the egg is more likely to lose excess moisture during incubation, resulting in a dead chick.

It is also advisable to carefully inspect your eggs before incubating them. The following eggs should not be incubated:

- If they have any hairline cracks
- If they have chalky shells
- If they are a rather odd shape such as very long or really fat
- If they are too small or too large for the breed

These eggs have a low hatching rate. Some will hatch, but you are just wasting your time by putting them in the incubator.

There are two main types of incubators; still air incubators and forced draught incubators. Both incubators are capable of giving good results. Much depends on your care during egg collecting, how well you stored the eggs and how well you select the eggs to be incubated. If you fail to do

any of these well, it will result in a much lower percentage of hatched chicks than you probably hope for.

Be aware that the temperature you set a still air incubator at is somewhat higher than a forced draught incubator. In a still air incubator, you will most likely have to set it at around 103°F. It will need to be this temperature at the top of the eggs. A forced draught incubator will need to be set at approximately 99.5°F.

It is important to turn your eggs each day at least twice, otherwise you will be lucky to hatch 50% of your eggs. You do not need to turn them during the last three days. Auto turn incubators save a lot of work.

In addition to the correct temperature, eggs need the right amount of humidity. It is important that you keep water in the trough or container within your incubator to maintain this.

During incubation you might like to test your eggs for fertility. This is called candling. I won't explain the process here, however the benefit of this is that you can throw away all the clear ones. There is no point in keeping them in the incubator any longer. A good time to candle for the beginner is at about day 14.

- If you get a hatch of less than 50% you have a lot of room for improvement. (**Poor hatch**)
- If you get a hatch rate of 50%-60% you have done **okay**, but there is room for improvement.
- If you hatch 60% - 70% you have **done well**. By improving on the areas suggested in this worksheet you may do better than this.
- If you hatch 70% - 80% you should be relatively pleased with your efforts. This is a **good hatch**.
- If you hatch 80% - 90% you are doing a **great job**. Anything above 90% is absolutely **fantastic**.

If you are hatching less than 60% of your eggs, follow the information above. In addition to this, you might like to download a file called "What went wrong!" which explains where problems might be occurring.

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1. How often should eggs be collected? _____

2. What is one suggested way of collecting eggs? _____

3. Why would you want to do it this way? _____

4. What might cause bacteria to enter an egg? _____

5. How can you solve this problem? _____

6. Name two locations that are not suitable for the storing of eggs?

7. Which eggs are most likely to hatch? COLOUR the correct answer!

- those incubated within a week of being laid
- those incubated within two weeks of being laid
- those kept for 7 days on the window sill
- those kept for 7 days in the freezer

8. Why is it recommended that you turn your eggs each day during storage?

9. If you are too lazy to turn your eggs each day, how and where could they be stored?

10. Apart from eat it, break it, and shake it, what should you never do with an egg you intend to incubate? _____

11. What else should you avoid doing when it comes to storing eggs for incubation? _____

12. Washed eggs lose some of their hatchability. Why is this?

13. Describe three types of eggs that are not worth incubating?

14. What are the two types of incubators?

15. What temperature will a forced draught incubator need to be set at? _____

16. What is put into the incubator to help provide the right humidity for the developing eggs? _____

17. Name the process that involves testing your eggs for fertility?

Describe these hatch rates:

- Less than 50% _____
- More than 90% _____
- Between 60% and 70% _____
- Between 70% and 80% _____