



# Extension FactSheet

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## The Making of an Egg

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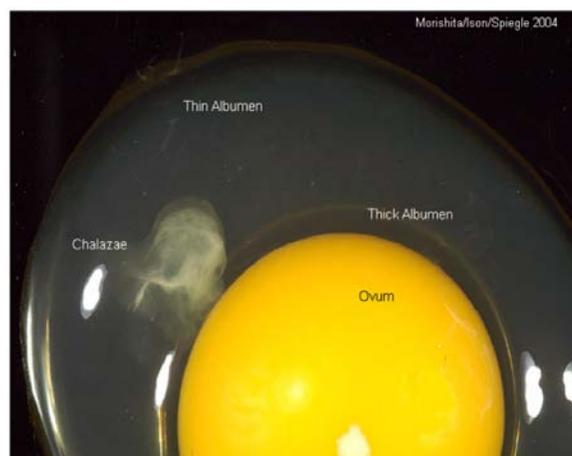
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The egg is the most complete source of nutrients available to humans. It provides protein, vitamins, and minerals and is the only food that contains all essential amino acids. For one egg to be produced it takes approximately 24 hours.

- Egg production is initiated when a mature ovum is released into the infundibulum. At this point, the egg can be fertilized, if there are live sperm present. The egg spends about 15 minutes in the infundibulum.
- The ovum transcends next to the magnum where a protective, nutritious layer is added (albumen or egg white). There are two layers to the albumen, thick and thin, which serve as a source of niacin, riboflavin, potassium, sodium, and other nutrients. The thick layer is added first and is closest to the yolk. It provides the majority of the riboflavin and protein for the embryo. In addition, the chalazae are added. These rope-like structures, appearing on both sides of the yolk, are designed to hold the yolk in place as it proceeds thru the reproductive tract.
- The isthmus is the next destination for the egg. Here, two shell membranes are added, providing additional security to the egg from the environment. There is an air pocket that forms between the two shell membranes and the outer shell as a result of cooling.
- The uterus, also known as the shell gland, is where the developing egg spends the majority of the time, approximately 21 hours. Water and minerals pass through the membranes, causing the egg to inflate. In the shell gland, calcium is then secreted forming the hard outer layer. It is interesting to note that usually if a hen has a red earlobe, the egg will be colored brown in this stage of egg production; whereas if the earlobe is white, the egg will also be white.



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- e. The vagina is the last part of the reproductive tract the egg passes through where it is coated with a cuticle.
- f. After production is complete, the egg passes through the cloaca and is laid.



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