

SUBJECT: Agricultural Science
LEVEL: Forms 4 & 5
TOPIC: The Hen's Reproductive System

CSEC Agricultural Science Syllabus
Section C: Animal Production
4. Animal genetics, breeding and reproduction

Specific objective(s):
4.8 Relate the structure of the parts of an egg to its function

Reproductive organs of the hen (ovary and oviduct)

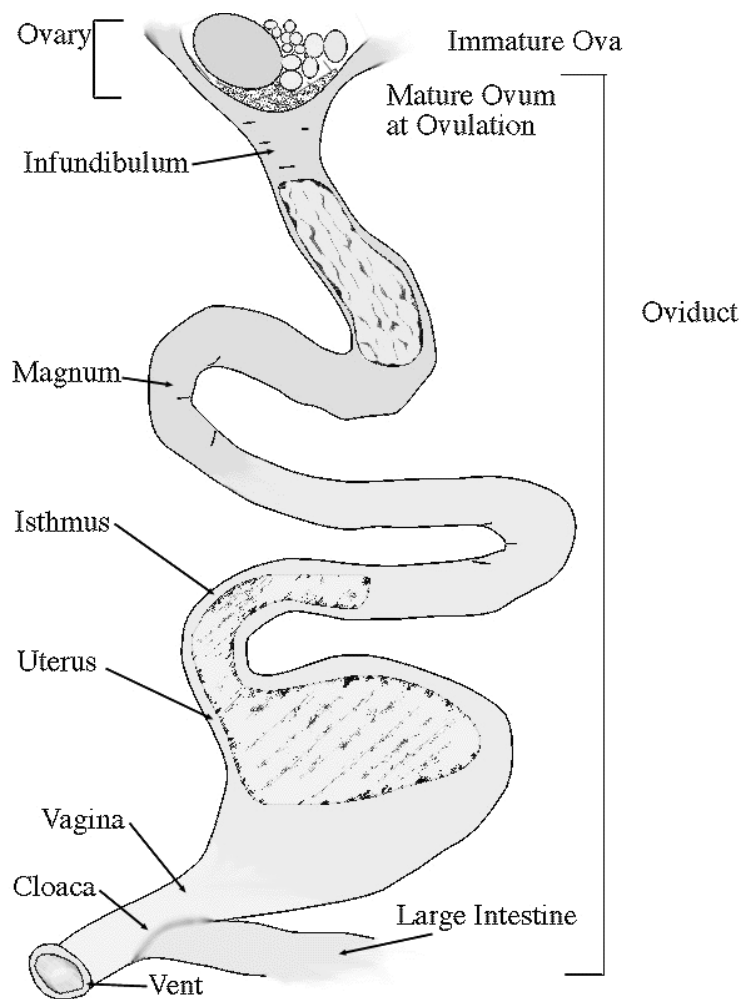


Table 1: Functions of various sections of the hen's oviduct

Section of oviduct	Approximate time egg spends in this section	Functions of section of oviduct
1. Funnel (infundibulum)	15 minutes	Receives yolk from ovary.
2. Magnum	3 hours	Albumen and chalaza are secreted and layered around the yolk
3. Isthmus	1 hour	Inner and outer shell membranes are added, along with some water and mineral salts
4. Shell gland (uterus)	21 hours	Some water is added, along with the shell material (mainly calcium carbonate). Pigments may also be added to make the shell brown
5. Vagina/ cloaca	less than 1 minute	The egg passes through this section before laying.

Abnormalities in Egg Formation

- Double Yolk Egg
- Soft Shelled Egg
- Yolkless Egg

References

Ragoonanan, S. (2017). *Agriculture for CSEC - New Edition Revision Course*. La Romaine: Caribbean Educational Publishers (2003) Ltd.

Ramharacksingh, R. (2011). *Agricultural Science for CSEC Examinations*. Oxford: Macmillian Publishers Limited.

Review Questions

1. Summarize the process of egg formation using one of the following:
 - A Mathematical formula
 - A written statement on egg formation
 - An illustration of egg formation
2. Which stage would you consider the most important in the egg formation process?
3. How often would you get eggs from your layers and why?
4. Use the internet to research the following abnormalities in egg formation and summarize the information in the table below:
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Abnormality in Egg Formation	Cause of Abnormality	Possible way(s) to address this issue