

Blood Spot Eggs Produced by Small and Backyard Chicken Flocks

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At least once in their lives, small flock owners producing eggs for family consumption (and sometimes for sale) have encountered an egg similar to the one in Figure 1. These are referred to as 'blood spot eggs.' The presence of the blood spot does not adversely affect the safety or nutritional value of the egg, but it definitely is not appealing! Many producers mistakenly believe that the red material in such eggs are chick embryos. While the egg may be fertile (which is another issue all together) the red material is not an embryo but blood that was deposited when the egg was being produced in the hen.

Figure 1. Blood spot egg. Source: Jacquie Jacob, University of Kentucky

Figure 2 shows the different parts of the female reproductive tract involved in the formation of an egg. It is composed of two main parts—the ovary and the oviduct. The yolks, with female genetic material, are developed in the ovary. Once the yolk is ready, it is ovulated and picked up by the oviduct for the assembly of the other various components of the egg (egg white/albumen, shell membranes, shell, etc).



Figure 2. Reproductive tract of a female chicken. Source: University of Kentucky

As shown in Figure 3, the ovaries have a lot of blood vessels. Sometimes one of these blood vessels will break leaking blood. It is this blood that may contaminate the egg yolk. Blood or meat spots that appear in the albumen and away from the surface of the yolk arise from to the oviduct rather than the ovary. The incidence of blood spot eggs is often related to the stress level of the hens. Stress factors can include sudden loud noises, poor housing, inadequate feed and water, etc. Other factors that may affect the frequency of blood spot production include activity level of the hens, age of the hen, vitamin balance and genetics. It has been shown that brown egg layers tend to have a slightly higher incidence of blood spots than those laying white eggs. This is unfortunate since detection of blood spots is more difficult in brown-shelled eggs.

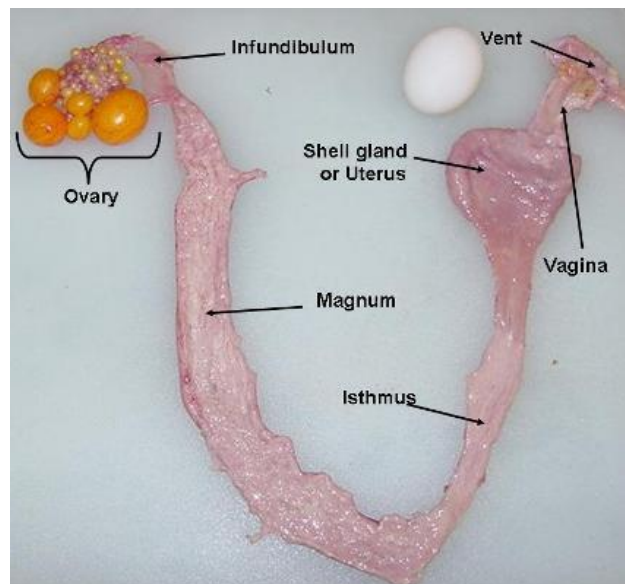


Figure 3. Ovary of a female chicken. Source: Jacquie Jacob, University of Kentucky

