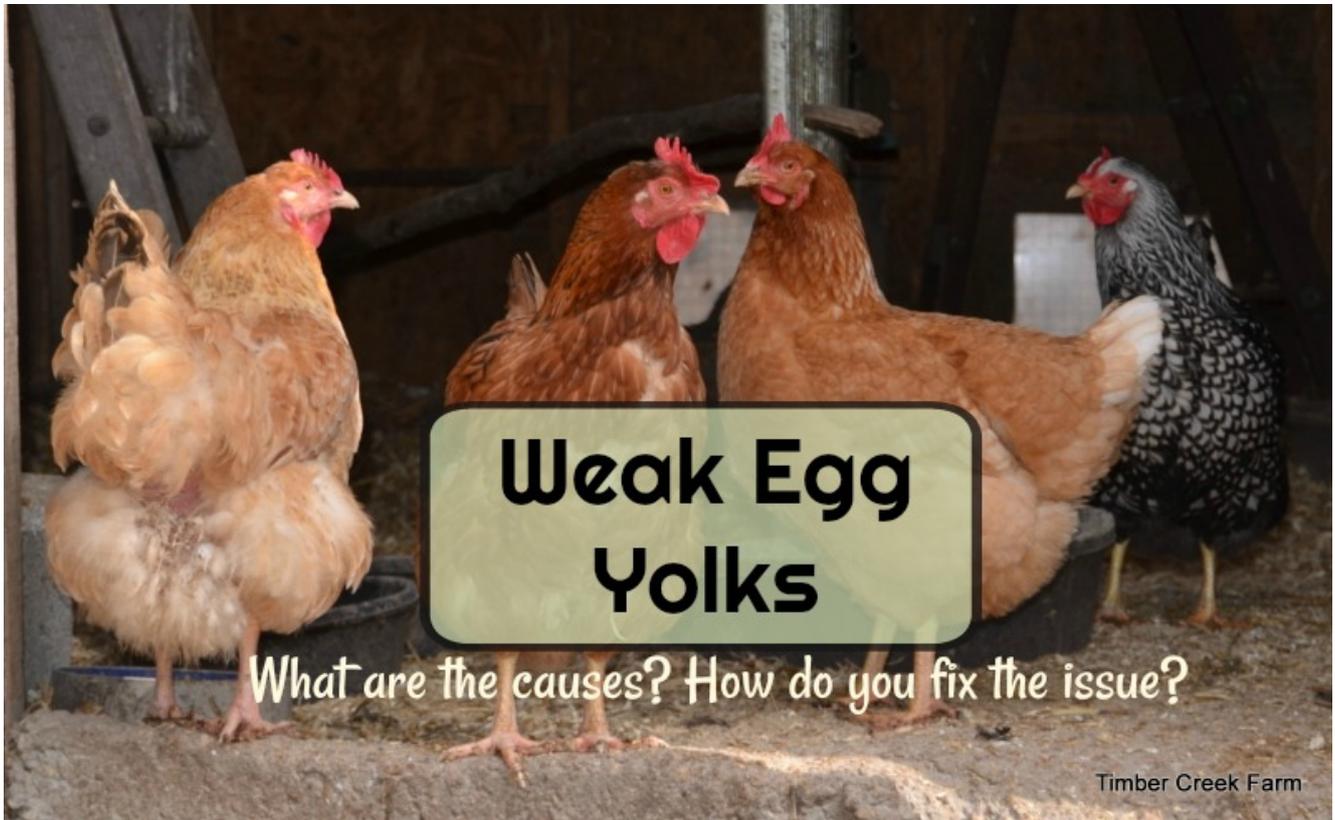


What Causes Weak Egg Yolk Membranes

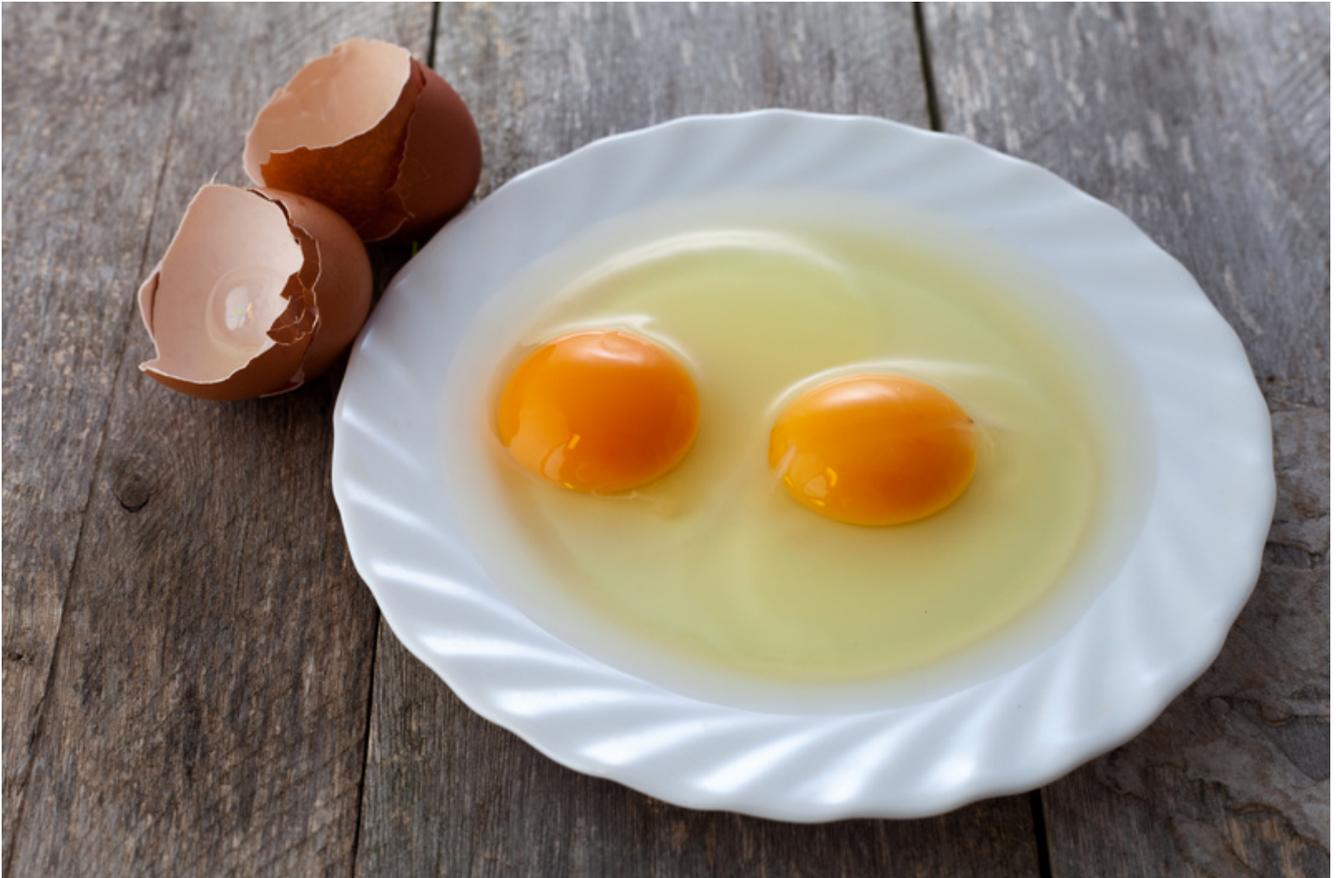


How do you correct weak egg yolk membranes and get perfect sunny-side up eggs? When you cook the egg does it run all over the pan? This was a question I received recently from a reader. It's fairly well known that a firm, strong egg shell requires plenty of free choice calcium for the hen to indulge in. But what about yolks that break apart as soon as the shell is cracked. The egg hits the pan and poof, there goes the yolk, spreading all across the pan.

The reader who contacted me had done some experimenting of her own. It didn't seem to matter which eggs she tried. The yolks still broke easily. She tried refrigerating eggs, not refrigerating, fresh, not as fresh, new hens, old hens.... you see the picture.

I was intrigued by the question of what causes a weak egg yolk and did some research of my own. The results were all across

the board! Some thought the eggs being stored in the refrigerator caused this. While others swore it was from keeping the eggs at room temperature. Even the storing in the carton was brought under the microscope, as in should they be pointy end up or down, in the carton. (the correct way is pointy end down)



How is Egg Quality Determined?

Eggs are graded for [external and internal quality](#). The external qualities of the egg are the cleanliness, texture and shape of the egg shell. It's not uncommon to find occasional [odd eggs](#) in the nest box.

The internal grading looks at the albumin's cleanliness and viscosity. The other factors of internal quality are size of the air cell, yolk shape and yolk strength.



Possible Causes of Weak Egg Yolk

After weeding through many other research articles, forums and posts, it seems there is no definitive answer to the question of what causes a weak egg yolk. However there are some areas of possibility.

Protein

Low protein diet. A low protein diet can affect the egg yolk and cause weak egg yolk membranes because the membranes are formed from protein. The entire internal quality of the egg is affected by the protein available in the hen's diet. A low quality feed may appear to be the budget conscious choice, but if the protein is not of good quality, the chicken's body may not be absorbing enough of the protein. Feed with a heavy percentage of corn can have an adverse effect on protein availability in a feed.



Stress

Stress. Both environmental and physical stress factors can cause a hen to lay an egg with a weak egg yolk. Molting can be a stress factor in weak egg yolk. Increasing protein in the diet should help eliminate the problem. Weather can also affect the hens and possibly cause stress to their system. Extreme heat would be more likely the cause than too cold.

Frequency of Egg Collecting

Frequent collection of fresh eggs, and proper storage in room temperature area for the short term storage is advised. This is especially important during heat waves. Longer storage times leads to decreased internal quality. When an egg is freshly laid, the yolk is round and firm. The vitelline membrane holds the yolk in place. As the egg ages, the yolk

absorbs water from the egg white. The yolk increases in size and causes a weakening of the vitelline membrane. The yolk becomes flatter and weaker. Any factor that hastens the aging of a fresh egg is going to have an effect on the quality of the egg.



Illness in the Flock

Prior [illness in the flock](#) or individual hens can cause weak egg yolk. Also, older hens tend to lay eggs with the weak egg yolk issue more than the younger hens.

Handling of Eggs

Rough handling during collection, can lead to a weakening of the internal membranes.

Breaking refrigerated, cold eggs, into a hot pan can cause the

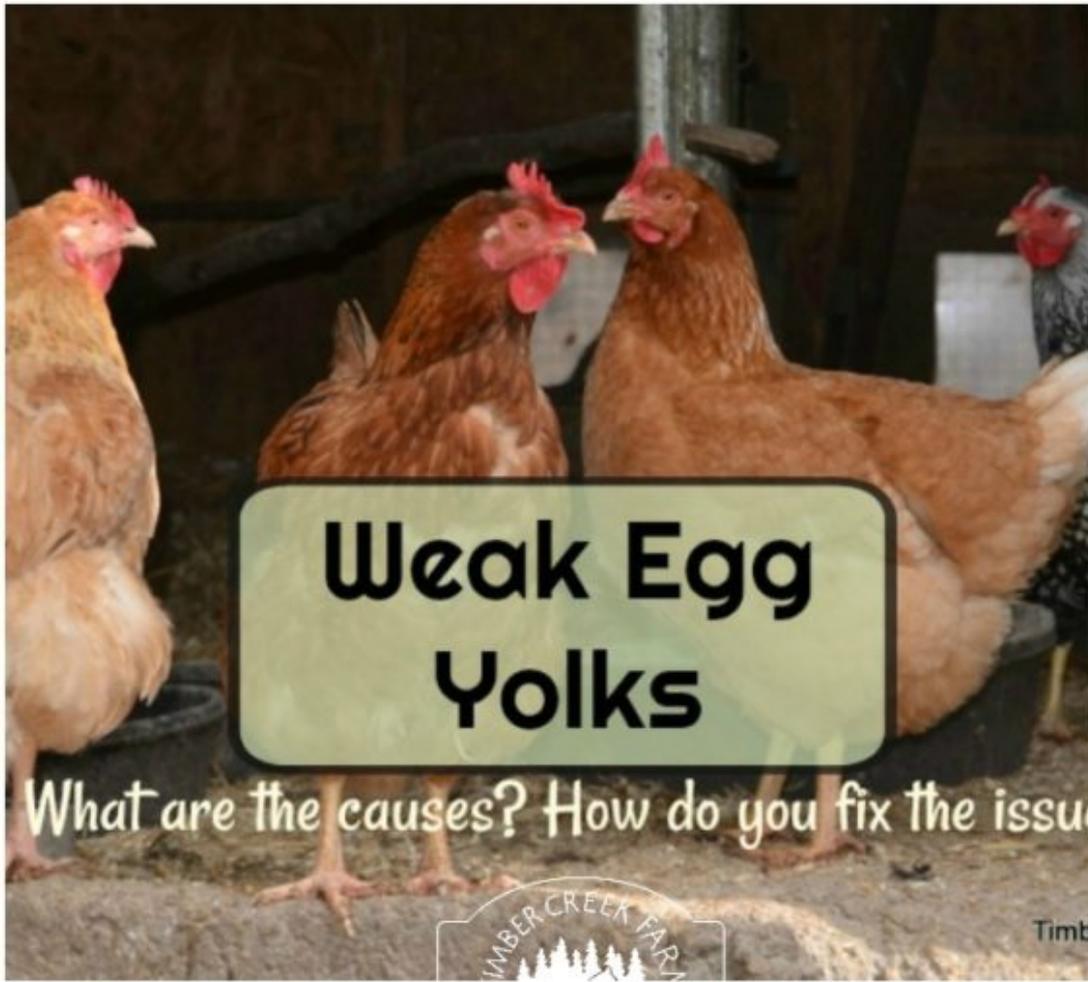
yolks to [break upon contact](#). This is easily remedied by allowing the eggs to reach room temperature before cooking.

How to Correct the Problem of Weak Egg Yolk

The main reasons found for weak egg yolk issues are the age of the egg, storage temperature, water absorption, and handling practices. In addition, disease in the flock, protein in the diet, and age of the hen come into play. If you are finding weak egg yolks in your fresh eggs, assess the list given here as a starting point to determining the cause in your flock.



My first thought would be to increase the good quality protein in the hen's diet. Adding meal worms is one tasty way to entice your flock to eat more protein. Black oil sunflower seeds are another tasty protein treat for chickens.

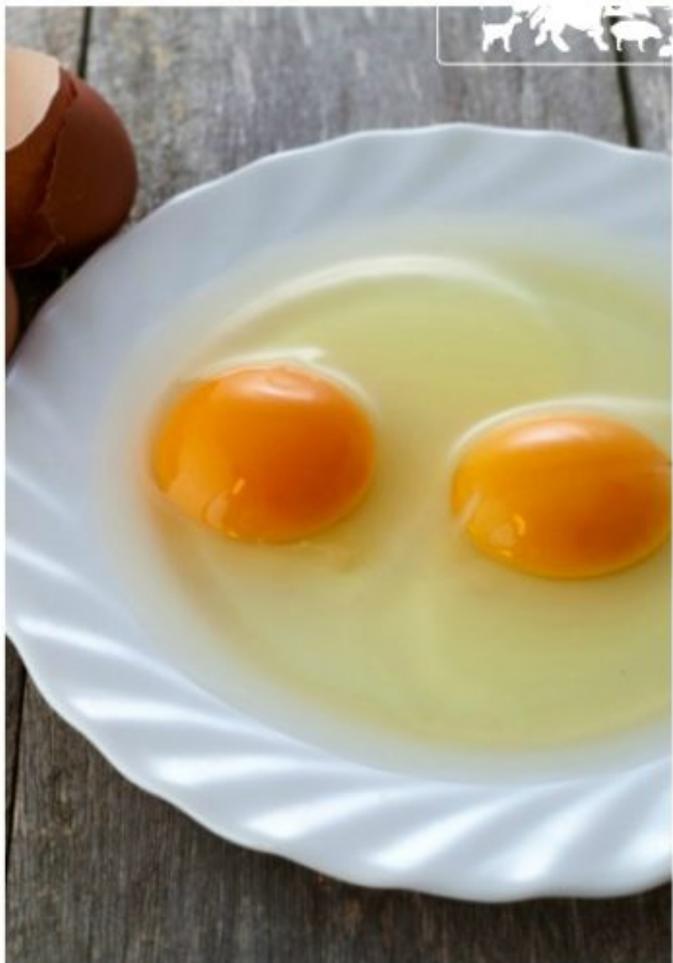


Weak Egg Yolks

What are the causes? How do you fix the issue?



Timb



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Consider any external stress that may be present in the environment. If heat is a factor, consider adding a fan to the coop to increase air flow and cool the coop down. Add cooling herbs such as mint and lavender to the area so the hens can peck at the herbs. Parsley, Marjoram, Fennel, and Borage are good to add when egg problems exist. As a result, the hens will be more comfortable while providing delicious strong, high quality eggs. In any event, adding more quality ingredients to your hen's diet can only help them build stronger immunity and live healthier lives.