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Fortification of Omega-3 into the eggs

Muhammad Kamil Fareed

MNS University of Agriculture, Pakistan

Over the past 20 years, there has been increase in the public interest of omega-3 fatty acids and its effects on human health. It has been shown that omega-3 fatty acids significantly decreases the chances of sudden death caused by cardiac arrhythmias. Fatty fish like tuna and salmon, and also the fish oil are good source of omega-3 fatty acids docosahexaenoic acid and eicosapentaenoic acid. Omega-3 fatty acids are well known because of their heart health benefits. Omega-3 fatty acids are anti-inflammatory and antithrombotic. Omega-3 fatty acids are being used for the treatment of hypertension, hyperlipidemia and rheumatoid arthritis. Alpha-linolenic acid is an omega-3 fatty acid which is found in the nuts and beans (soybeans and walnuts), green leafy vegetables, oils and seeds. Awareness among the people, fortified foods attains a huge attention. Egg is a nutrient dense food and it is a good source of minerals, vitamins, fats and protein. It has been proven that utilization of eggs affects the serum lipid concentration. Health benefits and nutraceutical value of eggs can be improved by the use of appropriate feeding strategies in poultry and also by developing designer eggs like omega-3-fortified eggs. Alteration in the feed of the hens raised the omega-3 contents in the egg yolk. Phospholipids and omega-3 fatty acids present in omega-3 egg yolk help to change the metabolism and mobilization of cholesterol and hence decrease cholesterol level. Omega-3 enriched eggs are nutritious which occupies an essential place in the food chain and these eggs act as functional food. Development of omega-3-enriched eggs is a good thinking to include omega-3 fatty acids in the diet at low cost. Consuming the omega-3-enriched eggs has a positive potential in the reduction of cholesterol, triglycerides, LDL cholesterol, blood pressure and increase HDL cholesterol concentration.

kamilfareed51@gmail.com

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