



Dietary optimization to enhance yolk lipid nutritional quality

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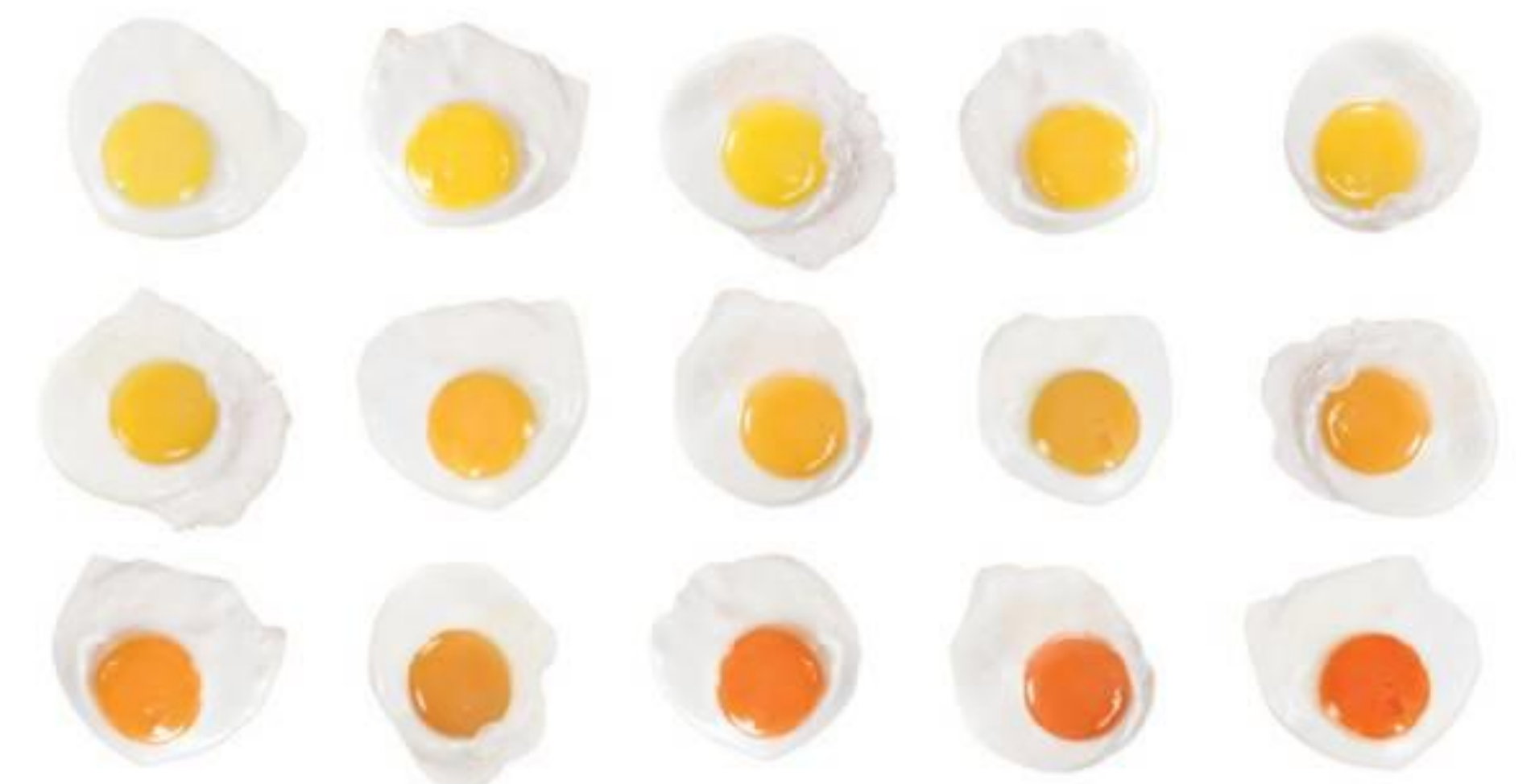
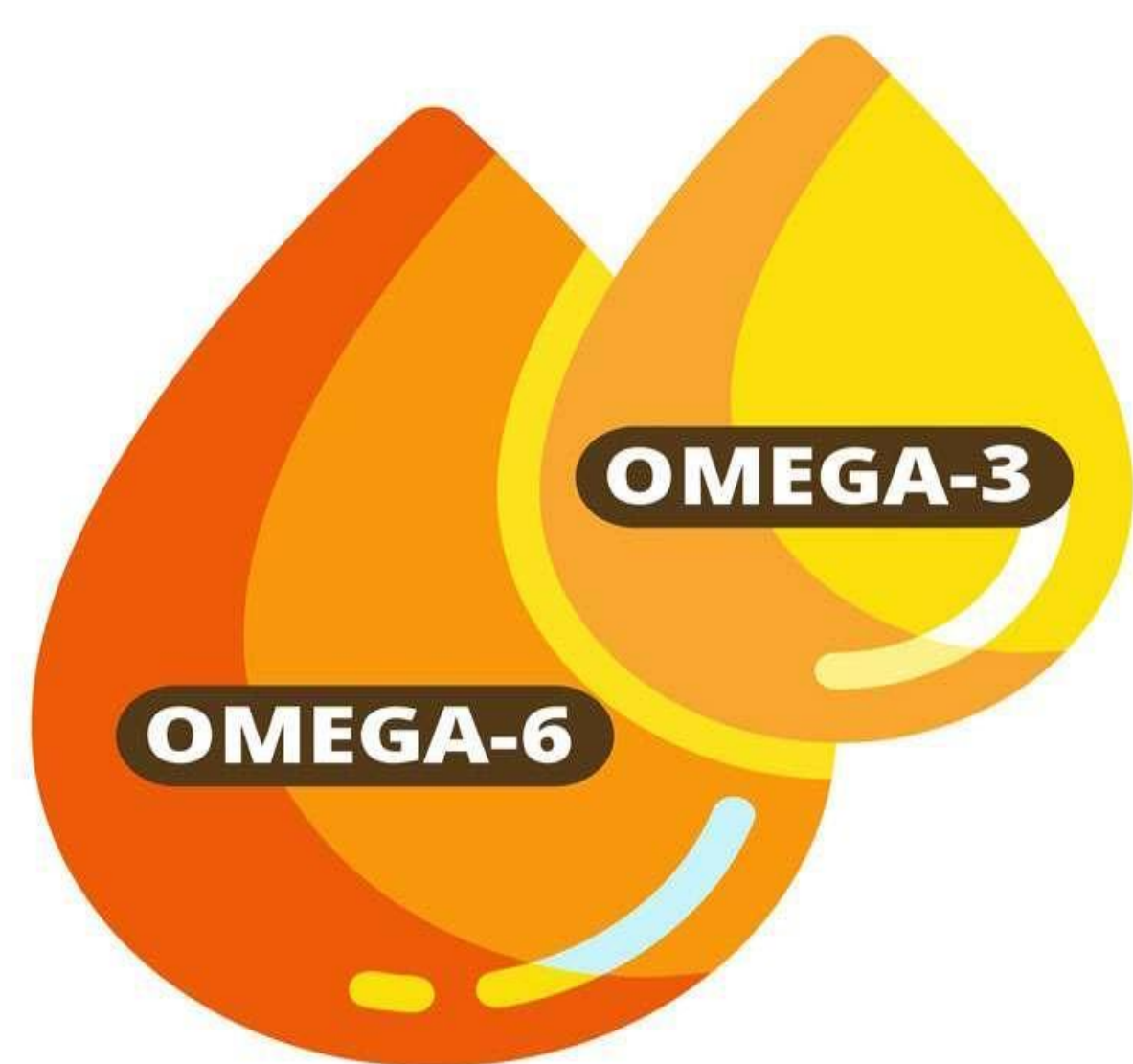
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DESCRIPTION OF THE INVENTION

- ✓ **This invention** refers to a new dietary optimization for laying hens, which, compared to a standard/commercial diet, contains two unconventional raw materials capable of improving the nutritional qualities, health indicators, and lipid profile in the egg yolk.
- ✓ **The advantages** presented by the claimed invention pertain to the production of animal-derived products (chicken eggs) while improving the nutritional quality of eggs, modifying the lipid profile, and health indices. Additionally, through the proposed invention for patenting, animal-derived foods with functional qualities can be obtained, thereby reducing consumers' concerns regarding the potentially adverse effects of certain lipids, at a competitive price compared to standard eggs.
- ✓ **The claimed invention can be obtained on an industrial scale**, targeting feed producers to diversify egg production and market a new food product for human consumption with elevated nutritional qualities compared to those already existing in the market.

This invention led to obtaining eggs with improved egg yolk color, at an appealing level for consumers, especially the group with peas seeds.



The omega-3 content in the eggs from laying hens was 3,73 g/100g FAME, whereas the control eggs contained only 1,16 g/100g FAME. The ratio of the n-6 to n-3 fatty acids was with 68,20% lower in the optimized diet, compared with control eggs, which indicate a more pro-health effect.

This invention led to significantly higher antioxidant compounds in the eggs belonging to the hens fed with claimed optimized diets, however, the TBARS values were not significantly influenced.

