Newer Concepts in Eggs

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BROWN EGGS vs WHITE EGGS

-LAID BY
BIGGER CHICKENS
WITH RED EARLOBES

-LAID BY
SMALLER CHICKENS
WITH WHITE EARLOBES

Newer Concepts

- In an effort to meet consumer demand, egg producers have begun marketing specialty eggs.
- These eggs offer alternative choices to consumers with special needs and preferences.
- Due to higher production costs, specialty eggs are usually more expensive than generic shell eggs.
- Since the nutrient content of an egg can be changed only by altering the hen's feed, specialty varieties such as cage-free and organic eggs have the same nutritional value as generic varieties.
- Nutritionally-enhanced varieties such as omega-3 enriched eggs provide higher levels of certain nutrients because these nutrients are enhanced in the hens' feed.

Organic Eggs

- Produced by hens given feed grown without most conventional pesticides, fungicides, herbicides, or commercial fertilizers.
- The use of growth hormones is also prohibited.
- While antibiotics are sometimes used to treat sick birds, this is not a routine industry practice.
- Hens typically stop laying eggs when ill.

Vegetarian Eggs

Vegetarian eggs are produced by hens whose feed is free of animal by-products.

Nutrient content similar to that of regular eggs

Pasteurized Shell Eggs

- These eggs have been heat treated to kill potential salmonella bacteria found inside.

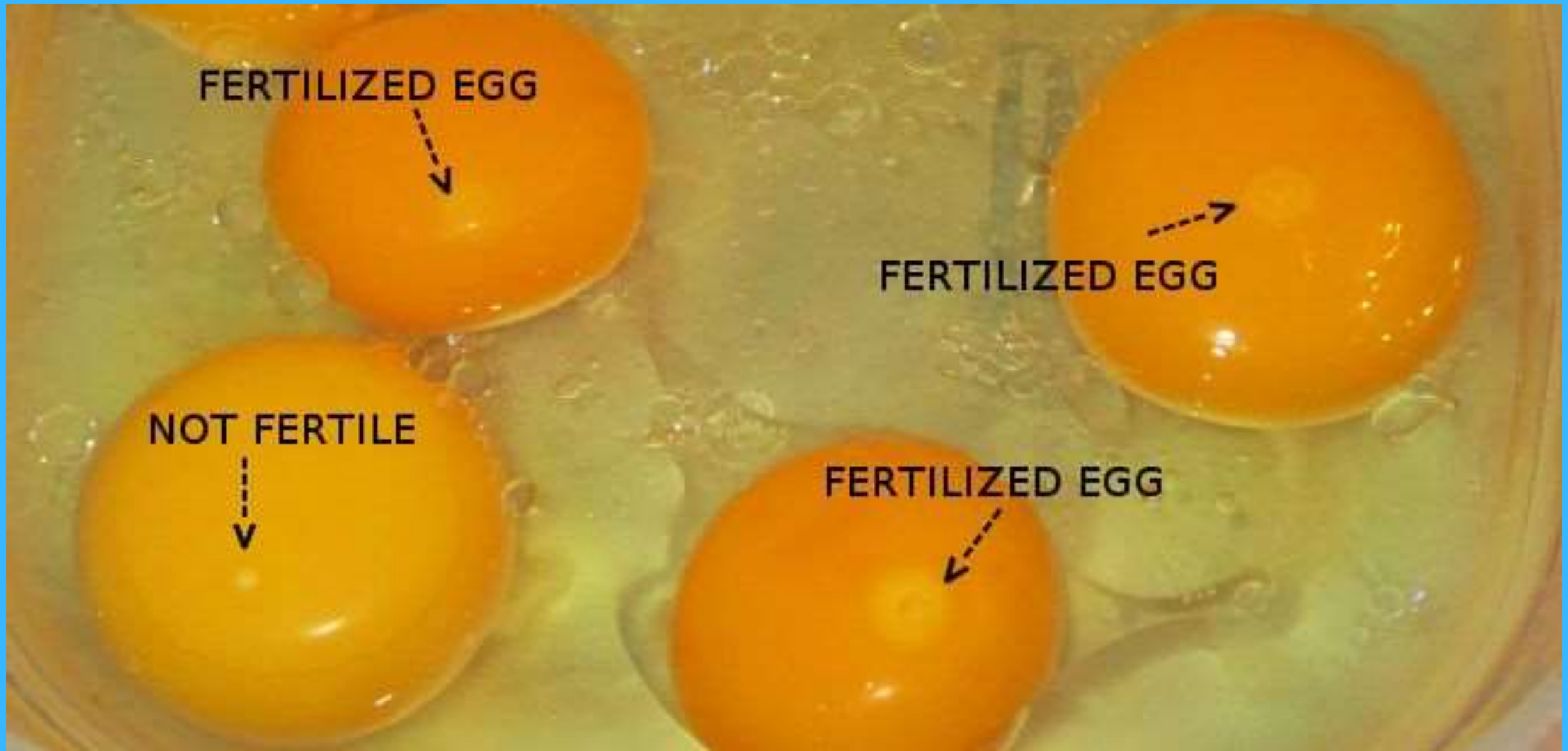
- Due to the heat processing, these eggs may have slightly lower levels of heatsensitive vitamins.

- Packaged in liquid, frozen or dried form. Used in recipes like home made ice cream or in Caesar Salad dressing

Fertile Eggs

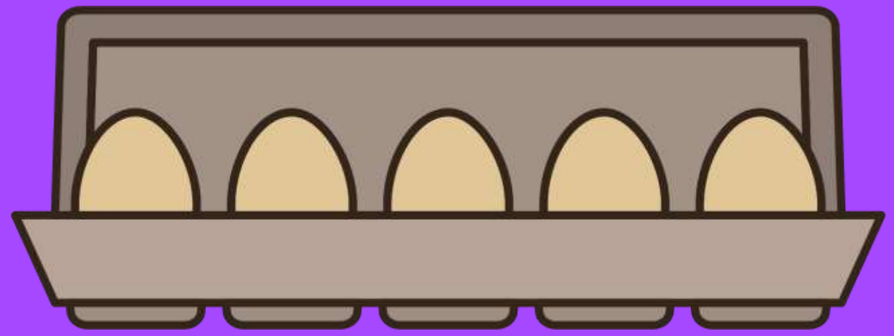
- It means the egg has been fertilized by a rooster and can develop into a baby chicken.
- The difference between fertilized and unfertilized eggs comes down to whether a rooster has been involved or not.
- Hens do not need a rooster to lay an egg; they do so (almost daily) on their own simply according to light patterns.
- However, if a rooster does mate with a hen, the eggs she produces are fertilized and, under the right incubation conditions, can bear chicks.
- No rooster means zero possibility of the egg ever becoming anything more than that.

Fertile vs Infertile egg

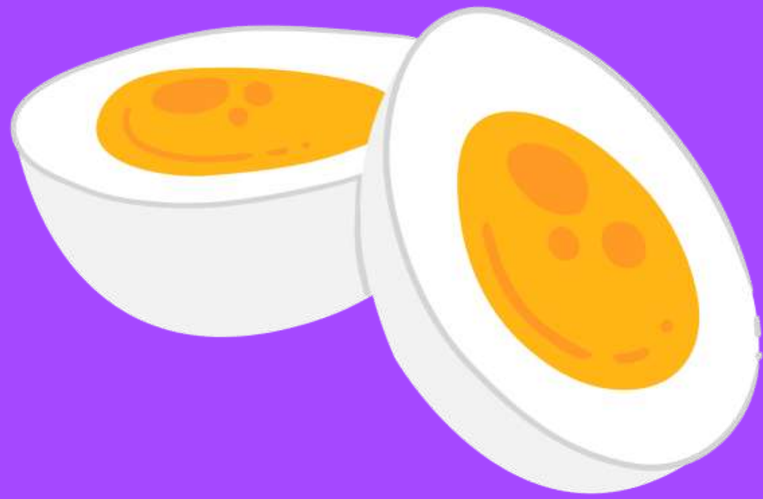


Cage Free Alternatives

- Come from hens living in indoor floor facilities.
- For consumers who object to housing hens in cages.
- They usually live on the floor of a barn or poultry house.
- Mortality rates are higher in hens living in free-range and cage-free environments since the birds tend to peck at and injure each other.
- The nutrient content of eggs from cage-free hens is the same as for those produced by hens housed in cages.



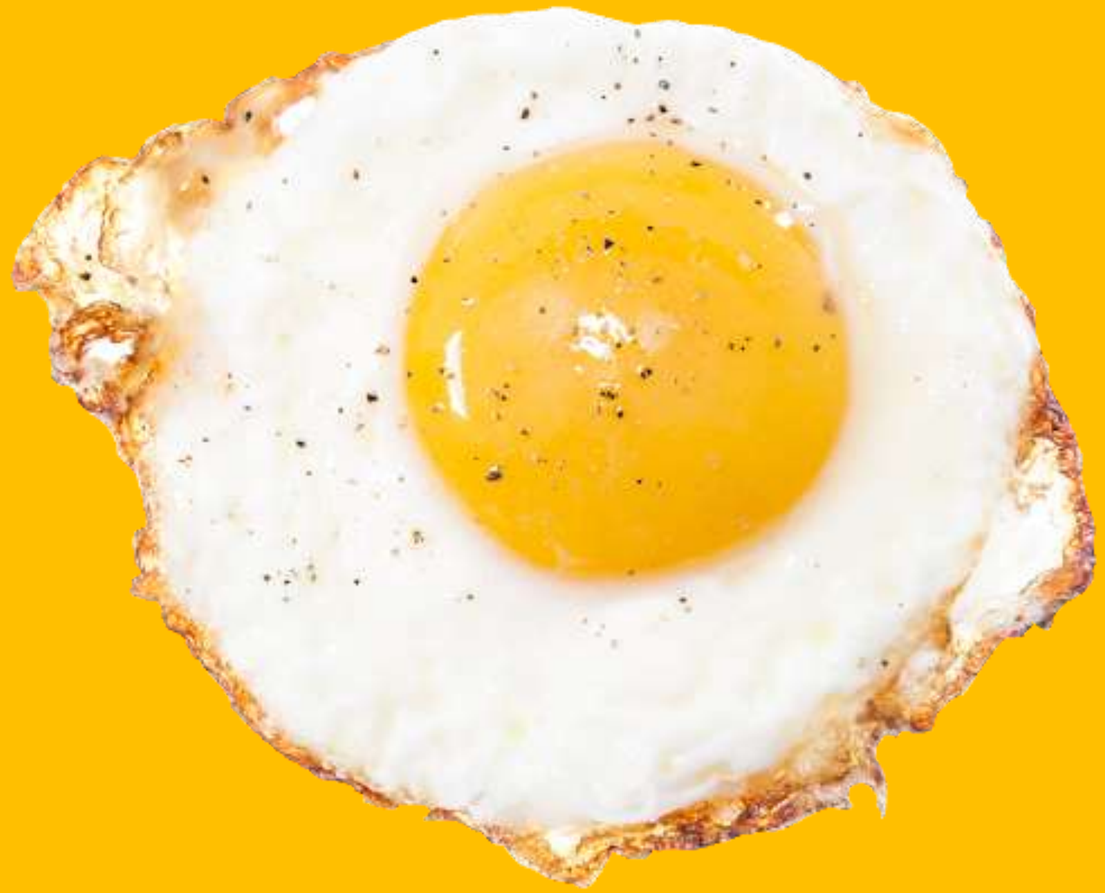
Modified/Nutrient Enhanced Eggs



Omega-3

- By including flax, marine algae, or fish oils in the feed, omega-3 fatty acid content in egg yolks can be dramatically increased.
- These omega-3 fatty acid enriched eggs are a good choice for people who want to increase their intake of omega-3 fatty acids, but do not regularly eat fish.
- Higher vitamin E content is an additional benefit of omega-3 enriched eggs.

Lutein



- Hens are fed on a diet that includes marigold extract to lay eggs high in lutein
- Lutein has been shown to reduce the risk of macular degeneration (the leading cause of blindness in people 65 and older.)
- According to one study, lutein in eggs is better absorbed by the body than is lutein from other sources

Herbal Enriched Eggs

- Herbal enriched eggs can be produced by the incorporation of herbal active principles like, allicin, betaine, eugenol, lumiflavin, lutein, sulforaphane, taurine and many more active principles of the herbs, depending upon the herbs fed to the hens.

- Moreover, these eggs had about 25% lesser cholesterol in their yolks, compared to ordinary eggs.

- Studies have shown that feeding such eggs to human volunteers has resulted in significant reduction in their Triglycerides (TG) levels, increased the good HDL cholesterol, improved immunity and haematocrit.

Vitamin-E enhanced eggs

- Vitamin E enriched eggs can be produced by feeding hens on diet high in vitamin-E
- The higher contents of vitamin-E can be obtained by supplementation of poultry feed in the form of natural sources found in butter, milk, vegetable and nut oils.

Pigment Fortification of Yolk

- Canthaxanthin is a carotenoid usually used for the production of pigment enriched yolk by the help of feeding of the hen with diets high in canthaxanthin
- Other carotenoid pigments also used and are naturally obtained from different sources such as marigold, chilly or corn
- Blue green algae is the another source of carotenoid which is basically high in protein content but also provides certain pigment that is known as spirulina pigment and can be utilized for enhancing the carotenoids content in the egg yolk.
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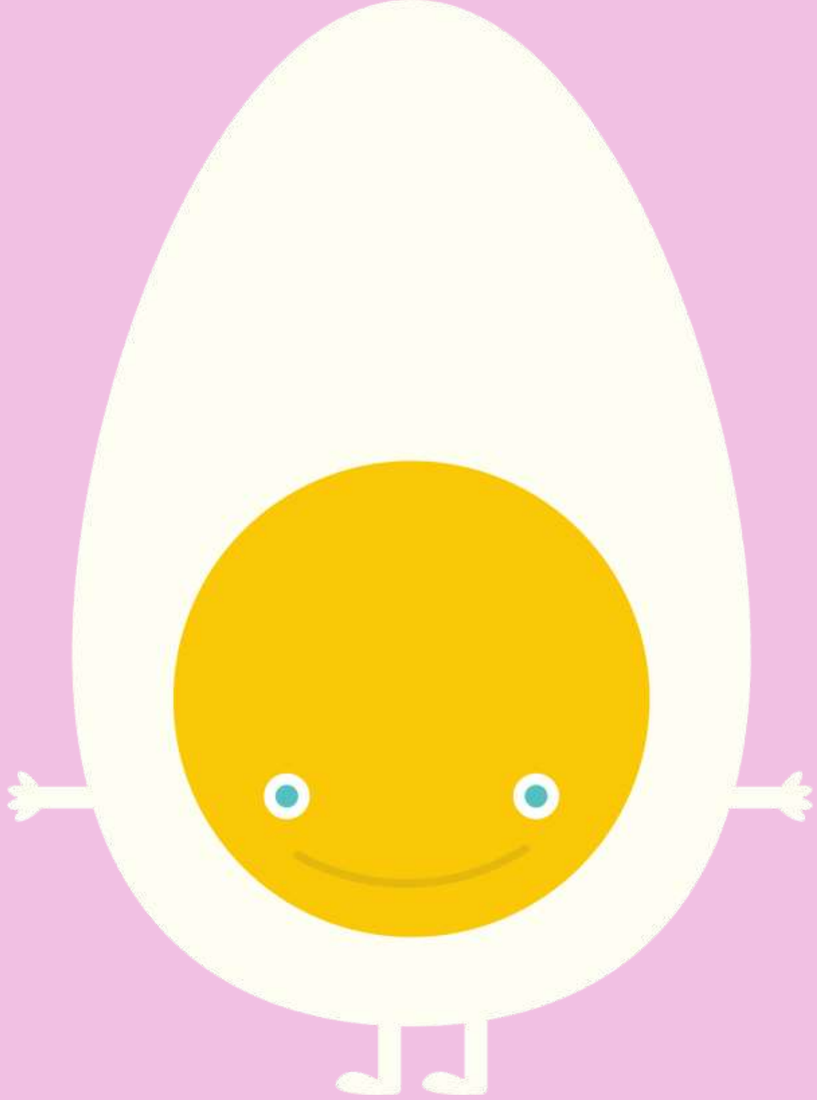
Pharmaceutical designer eggs

- GM chickens through genetic manipulation capable to produce certain pharmaceutical compounds and these compounds can be harvested through eggs - Insulin

- Alternatively, hens are given an antigen and after which they develop antibody against the antigen which are then concentrated in eggs.



THANK YOU