

Material - Eggs

Most of the eggs we consume are from hens. We can also get eggs from duck, geese and quail.



Purchasing Eggs

When purchasing eggs always look for the following points:

- No dirt or "poo"
- No cracks
- Check the date stamp
- Sharp end pointed down in the box

Nutritional Content

Eggs are highly nutritious and a healthy food source. They contain the following nutrients:

- Protein
- Fat
- Vitamin B, A, D and E
- Iodine
- Calcium
- Phosphorous
- Iron

Formulation: bringing two or more ingredients together to formulate a new material.



Manipulation: working with ingredients in ways that do not change their properties, composition or structure.

(Join, shape, cut)



Transformation: changing the structure or particle alignment within an existing material to change some properties.



Egg Farming Methods

Cage/Battery

Hens are kept indoors in cages. Light, food and temperature are controlled to maximise egg layering. This is the cheapest method of egg production.



Barn: Hens are kept indoors but free to move about. The light and feed are controlled. The hens have access to perches and are able to express some natural habits.

Free Range: Hens can roam in open air; they are kept in hen houses at night. They can forage for natural foods and express all their natural habits. This is an expensive method of production.

Texture (Subjective)	
Aroma (Subjective)	
Flavour (Subjective)	
Appearance (Subjective)	
Technically Feasible	Will it work
Socially Acceptable	Is it safe, ethical, environmentally friendly and economically viable?

Performance properties: Other Uses for Eggs in Cooking

Aeration: egg whites whisked stretch protein to hold air such as a meringue.

Binding: eggs used in burger, mix and hold ingredients together when cooking.

Coagulation: this is when egg sets the mixture once it reaches over 70 °C as in cake.

Coating: foods can be dipped in eggs and rolled in breadcrumbs. This results in coagulation on the outside and holds the product together.

Emulsification: egg yolk contains lecithin that stabilises oil and water suspension. E.g., in aioli.



Enriching: adding richness and extra nutrition.
e.g. mashed potato.

Garnishing: eggs can be used to decorate food either fried, boiled or poached.

Glazing: before baking eggs are brushed to give the product a golden-brown colour and crispy texture.

Thickening: when heat is applied, egg starts to thicken the mixture such as in custard.