

Why invest in egg products?

Egg products are **quick, hygienic, convenient, modern and 100% natural** products. They represent a new way to consume eggs meeting the requirements of contemporary consumption.

The term “egg products” refers to fresh eggs processed into **liquid, dried or frozen eggs**, according to stringent hygiene and safety standards. They are obtained from whole eggs, their various components or mixtures, after removal of the shell and membranes.

Nature or with special formulations, liquid, dried or frozen, processed eggs are both high value-added products and a new mean for egg producers and investors to develop their sources of profit.

Once processed, eggs are easier to preserve, transport, store and use. Not only are they practical, safe and healthy products, but they are also similar to raw eggs in flavor and nutritional values



Why invest in an egg processing line?

Eggs remain a safe bet whose consumption levels are stable, not to say increasing in most of the countries. Consumption levels are a good health indicator of the industry. However, is the same true of egg producers and investors?

The main difficulty remains the **control of egg prices which vary according to seasons**. This fluctuation truly penalizes the management of the production sites.

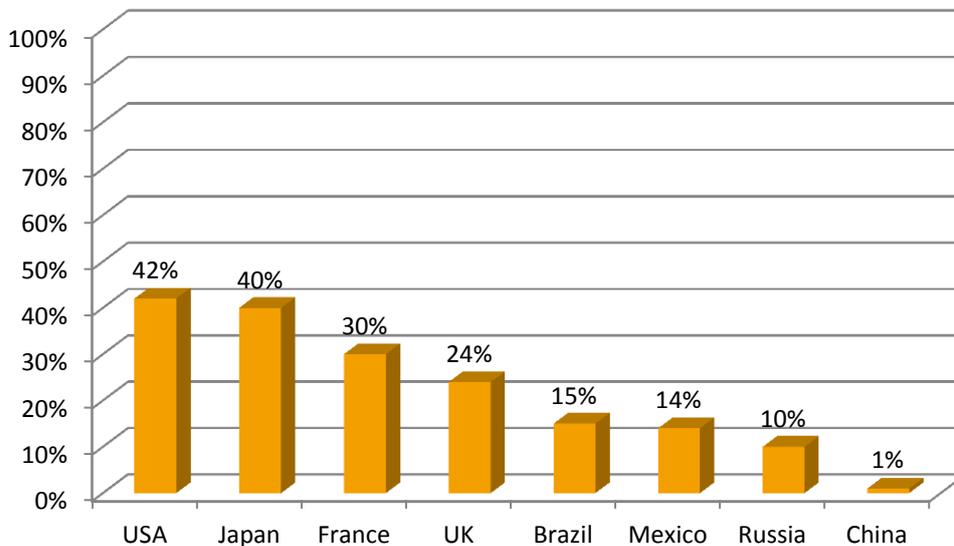
- **To diversify** your activities by working with food industrials whose needs in intermediate food product keep growing
- **To control** and ensure your sources of profit and in some cases to increase your level of activities significantly by developing towards export markets
- **To process** into egg powder with minimal storage requirements when the shell eggs market is less in demand

... many reasons to go into the production of egg products.

The rate of egg processing is increasing in most of the countries.

Growing industrialization of the egg-based products, tightening of health standards related to food safety or evolution of the final customers' ways of consuming eggs in a processed form; in some countries which have been processing eggs since many years, the proportion of egg products has reached 25 to 40% of global egg production.

Percentage of eggs processed into liquid eggs



This activity is not the prerogative of investors who buy eggs to process, also egg producers can go into this buoyant egg products market without fear.

The key of success... on the one hand a real willingness to invest and to put oneself in the development of his activity, and on the other hand a combination of skills.

The ones of the egg producer... who knows eggs better than him?

The ones of the equipment manufacturer... who will advise on the most adapted technical solution but above all who will support him in all the steps of his project to give him his experience for the optimization of his budget and financing.

For many years, egg processors have been considering that the only advantage of egg processing was the opportunity to give value to downgraded eggs...

Another trend: to propose high added-value product...

First and foremost, egg products are intended to those who need big quantities of eggs: confectioners, cooks of the catering business, and professionals of the food industry. According to the activity of the user, egg products are appreciated for:

- The **binding** property of Yolk and White proteins for pastry and delicatessen.
- The **whipping** property of White proteins used in biscuit making, pastry, confectionery and prepared food.
- The **emulsifying** property and the stability given by the Yolk viscosity to emulsions.
- The **crystallization control** of White in confectionery.
- The natural **coloring** property of egg pigments, highly appreciated in biscuit making, pastry, pasta and sauces industries.
- The **flavoring** property of Whole and Yolk.

How to come up the expectations of the users of egg products?

By offering them a **formulated and safe product with functional qualities similar to fresh eggs**. It is possible by investing in a production line equipped with a performing pasteurizing system which will make the elimination of all potential pathogenic microorganisms possible.

Thermally treated, the egg product can get a shelf life up to 10 weeks.

The thermal scale but also the preparation and egg treatment technologies are thus essential.

The **flash pasteurization** remains the most reliable pasteurization technology such as a treatment at **74°C** to guarantee a shelf life and a very short treatment time to preserve the egg quality.

This patented technology proposed in ACTINI processing lines has proved itself since many years.

By starting with breaking capacities of 8,000 eggs/hour, ACTINI's modular solutions allow to go into egg processing with a controlled investment project and a quick return on investment.

The conditions: a sufficient quantity of eggs to be processed, an available space to place the production unit, a partner to design and install the line and above all the willingness of an egg producer to control the development of his activity towards high added-value markets and to be a leader in the supply of egg products in his country.

A wide range of growth options are then possible for egg producers-processors

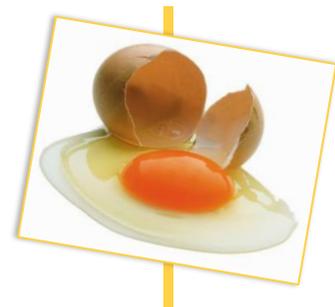
- Increasing in the processing capacity up to 1 to 3 million eggs per day for the biggest operational pasteurization units
- Integration of an egg drying process to develop business towards export markets

Applications and Markets

Egg is a multifunctional ingredient, that is to say it can perform simultaneously several technological functions in an elaborated food product. Its emulsifying, whipping, gelling, thickening, coloring and flavoring properties make it a basic component of domestic cooking and food industry.

More precisely, egg Yolk is the emulsifying agent par excellence, while egg white is a reference in terms of whipping. On an industrial scale, the egg is processed into egg products called "of first process" (egg Whole, Yolk or White, liquid, frozen or dried), or in some cases cooked and/or prepared, so as to recreate some classic domestic recipes; in this case, we speak about egg products "of second process".

This pretty recent industry has experienced a **significant growth since a couple of years**. The knowledge about components, egg structure and the understanding of the mechanisms at stake during thermomechanical treatments, coming from research developed since over twenty years, have enabled both to enhance the control of the functions of the egg components and to adapt the process techniques used in the egg product industry.



What is at stake for egg processors... to meet the needs of the market

Egg products are mainly intended to markets such as food industry, catering and artisans (bakers, caterers, etc.). Thus, the market evolution mainly depends on the new behaviors of the consumers and the demand of the intermediate users. Except for the USA, Canada and Japan, egg products have not become known yet in the consumer products market because of some psychological brakes and easy domestic use of shell eggs.

The market of the Food and Artisans Industry

The market of the Food and Artisans Industry turns towards products with better controlled bacteriological, functional and nutritional qualities.

Egg products of first process can be mixed with other ingredients for even more accurate uses (formula nucleus). Hence, they become a very specific Intermediate Food Product jointly developed with the Industrialist through a genuine collaboration and partnership.

What is the good egg product? Who is looking for what?

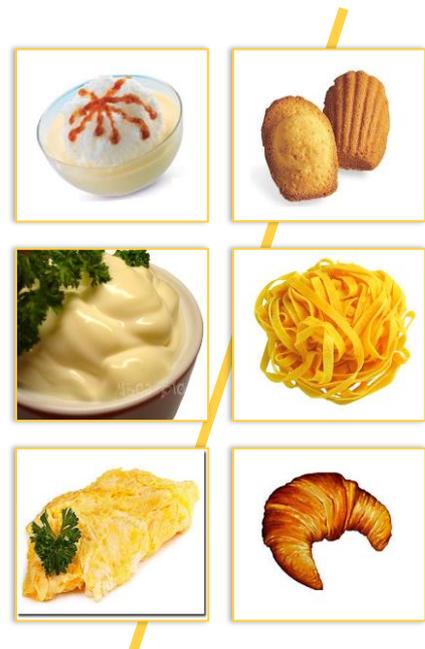
Eggs regain their old purpose: to be the **necessary element to any culinary recipes**, the ideal protein of our dishes.

- A guarantee of emulsion and viscosity for sauces or mayonnaises.
- The use of a heat-stable Yolk to make hot sauces.
- White adapted to the smoothness of pasta.
- Dried high gel White egg for surimi endowed with a texture similar to crab meat.
- Instantaneous dried egg for dried recipes and soups...

Egg products act as nutritional or functional ingredients and decline ad infinitum and always with a view of the best technico-economic ratios for the industrial user.

Each recipe has its special functional egg product:

- The good fatty acid levels for the infant nutrition
- The smoothness of a liquid Yolk for a creamy ice cream
- The aseptic fresh liquid egg in ultra-clean containers for heat-sensitive products that will not bear a new pasteurization.
- Dried Whole adapted to cakes for very airy pastries such as sponge cakes, muffins and donuts.
- Whipping White for meringues, nougats, chocolate mousses...
- The good color of Yolk for custards.



Small summary of the main applications

	BISCUIT MAKING	PASTA	MAYONNAISE	SAUCES	SOUPS	CHARCUTERIE	SURIMI	FOOD SUPPLEMENT	CONFECTIONERY
Liquid Whole									
Dried Whole									
Liquid Yolk									
Dried Yolk									
Dried White									
Crystal White									