From a manufacturing and retail perspective, Greek yogurt is the place to be. A niche product only five years ago, the category has more than quadrupled in size since 2008, with many data analysts predicting it will reach $1.5 billion in sales by the end of 2013.

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Greek Yogurt Meets Demands of Evolving Consumers

The changing lifestyles of the American consumer have benefitted from the popularity of Greek yogurt, which is a very high-protein snack. Greek yogurt is consumed in a variety of occasions – as a snack, as a meal, even as a condiment.

In addition to savvy marketing campaigns by the Greek yogurt power players – Chobani, Fage, Danone’s Oikos and Yoplait Greek – the popularity of Greek yogurt has been spurred by the simplicity of its makeup. The reason, Tetra Pak surmises, is that consumers are looking for a clean ingredient label.

Essential, Greek yogurt is produced in one of three ways. The first – and most common – method is centrifugal separation. In this method, the yogurt is run through the process until the solids are concentrated. At this point, the whey – the watery part of milk that remains after the formation of curds – is removed. Some of the lactose and minerals are also skimmed off, leaving behind all of the protein and some of the lactose.

“Greek yogurt was such a fast-growing product when it took off, that no one wanted to vary from the first people to market; they all wanted to copy what was already being done on the production side,” Jean-Pierre Berlan, Sales and Marketing Director for Processing, Dairy & Cheese Categories, Tetra Pak US and Canada notes.

“However, today, more companies are developing their own methodologies for producing the product.”

Thanks to innovation in recent years, the second most common way to produce Greek yogurt is by way of ultra filtration. In this process, the whey is separated from the yogurt by means of specially designed filters. The use of filters helps retain more proteins in the product than what a centrifugal separator could do.

The last method – and the one in which manufacturers are moving away from for technical reasons – is pre-concentration. In this process, there is no need of centrifugal separation. Milk proteins are added to the milk from the beginning, trying to mimic the traditional concentration process. With that much protein and calcium together, the calcium develops a gritty or chalky mouth-feel.

The Recipe for Success

Greek yogurt has a clean label and a smooth mouth-feel, but the process of obtaining these sought-after elements is quite complex.

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Jean-Pierre Berlan

Protein content in a 6oz serving:
Traditional Yogurt: 9 grams
Greek Yogurt 15 to 20 grams

Approximate amount of yogurt produced with 3 lbs. of milk:
Traditional Yogurt: 3 lbs
Greek Yogurt 1 lb
Regardless of the method used to produce Greek yogurt, it’s important to acknowledge that it is a delicate product.

Once it has been coagulated and is ready for cooling and further flavoring, Greek yogurt must be handled very smoothly and with the lowest level of mechanical shear through the pumps and the process steps. A delicate production method ensures that the end product delivers up to the consumer expectations of viscosity, flavor and appearance.

Although Greek yogurt’s popularity began its upick only a handful of years ago, technology suppliers such as Tetra Pak Inc. have been working in the industry for decades. The company has built a reputation as a leader in helping clients enter growing markets, such as the Greek yogurt segment.

Over the years, the specialists at Tetra Pak Inc. have built a vast knowledge around the production of cultured products. Unique to the industry is Tetra Pak’s expertise, attention to detail and persistent support. To ensure that the desired results are delivered to a client’s needs, the company employs food scientists, along with manufacturing specialists, to support equipment and system installations throughout the lifetime of a client’s facility.

Controlling the environment that is around the yogurt and controlling where the yogurt goes and how much pumping is done to it are little ways the quality of Greek yogurt can be improved over time. "Tetra Pak has yogurt expertise and a global expertise in the yogurt market. We know the risks associated with the process, and we can bring value to the planning process," Berlan says.

For each of the three methods of manufacturing Greek yogurt, Tetra Pak offers a technically advanced system. Highlights for the company’s various systems include the use of a unique Ultrafiltration technology for production of Greek yogurt and discharging separators that ensure technical safety with regard to nozzle usage.

In addition to product engineering and assistance with automation design, Tetra Pak Inc. assists clients looking to add Greek yogurt to their product portfolios by helping to identify the right product fit. The first step to adding a Greek yogurt line is figuring out where the sales goal lies.

Tetra Pak can guide clients through the strategizing process for a product lineup. A manufacturer needs more tanks, space and abilities because Greek yogurt needs to ferment three times the amount of yogurt you’re actually going to sell.

Acid whey is the byproduct of making Greek yogurt, and it is an operational challenge that Tetra Pak has experience with as well. Acid whey doesn’t have a lot of value in the market today, yet as a company focused on reducing waste and saving a client money, Tetra Pak and their filtration experts are able to help clients to extract the most value of this byproduct.

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– Jean-Pierre Berlan

TetraAlcross® UF for production of Greek Yogurt