

Innovation Meets Experience

*How Air Products Helped Excellent Foods
Turn an Inspiration into a Tasty Reality*



The new often needs the tried and true.

Excellent Foods LLC of Burbank, Washington, is a case in point. When the people at Excellent Foods decided to bring their exciting new food idea to market, they needed more than a freezing system. They needed Air Products.

The union of a great new concept with an experienced and helpful supplier proved to be a powerful combination.

The food idea was Apple Fries. Today Apple Fries are a growing favorite at fairs, sporting events, and amusement parks. They're all-natural, making them a healthful snack. They have broad culinary applications, too, for chefs and caterers. And the new, bakeable product line is available for retail, food service, military, and schools.

But getting Apple Fries from the imagination of the Excellent Foods people to a food vendor's stand took knowledge based on experience as well as a healthy dose of creativity. Innovation usually does.

Simple Concept

The concept behind Apple Fries seems simple: apples are peeled, cut into wedges, then deep-fried and finished with a tasty topping. Excellent Foods would prepare, package, freeze, and ship the apple slices. A point-of-purchase provider would fry them, top them, and sell them to customers.

There were two big challenges, though: making the apple wedges right and keeping them right.

Just cutting the apples into slices and dropping them into hot oil won't do the trick. They found that out on the first try. So the search began for the perfect Apple Fry. It took a lot of trial and error—four years' worth.

The starting point, of course, is the apple. Washington State Granny Smiths and Fujis proved to have the right taste and the right consistency.

"They're not too sweet," says Roy Hillman, manager at Excellent Foods, "just the right amount of tartness, which works best with our product."

The next challenge was preventing the apples from absorbing too much oil during the deep-frying. To do that, they developed a proprietary powder coating that is essential to the success of the product.

Once they were satisfied they had a marketable product, they had to figure out how to produce it.

They found a former asparagus production plant in southern Washington, in the heart of apple country. They then converted some equipment for the front end of the production: peeling, coring, slicing, and coating.

How to Freeze?

Next question: how to freeze the apples? Mechanical freezing equipment is expensive and requires a lot of space. Plus, the long freezing time was totally ill-suited to the needs of the product.

“The freezing is critical,” Roy states. “The quality depends on locking in the moisture—which is high in apples. Slower mechanical freezing would ruin this product. We figured out pretty quickly that we would need a quick freeze, and that meant cryogenic freezing. We were a little nervous, expecting it to be too costly.”

So they contacted an industrial gas company. The company said they couldn’t provide the freezing, but they did something better. They recommended Air Products.

Air Products has been making cryogenic freezing systems since 1965. They use liquid nitrogen at a temperature of -320°F as the cooling agent. The company has earned a well-deserved reputation for technology, reliability, and service.

Roy called Air Products salesman Kevin Proctor in Washington. His response was very different from the competitor’s. Kevin was there the next day.

“We knew going in that Excellent Foods was a start-up and needed a flexible, creative approach as much as our product,” Kevin recalls. “That was okay with us. We’re very good at working with smaller companies. We’re in the relationship business as much as the industrial gas business.”

Brian Roy confirms that.

“We look for products new to market,” Brian explains. “Sometimes those are at existing companies, sometimes at new companies. The new ones especially are not in a position to put out a lot of money. That works well with us, because the nature of our equipment and our approach makes us very good at getting our customers up and running economically and quickly.”



So Air Products' Rick Whited, commercial technical specialist on the west coast, and Earl Moore paid a visit to gain some insight into Excellent Foods' needs. The start-up company found out that Air Products provides more than products and technology. They offer sound business judgments on the best system and the best way to use it.

"When we meet a new customer," Rick says, "we assess the business, see where they are today, what their goals are, and where they want to go. Then we offer solutions for their food-freezing needs to get them there. We want to help them make good technical and business decisions.

"In the case of Excellent Foods, because they are a start-up, we were more creative and willing to assume a little more of the risk. We also recommended a longer freezer, rather than a smaller one. Not only does it use the nitrogen more efficiently, but it will be much less expensive to expand production. The entire process, from peel to freeze, takes three to five minutes."

Rick also emphasizes that the Air Products approach presents an honest projection of future costs as well as the initial costs.



Roy Hillman, Excellent Foods

“We discuss their plan and try to provide a good economic picture of what their costs will be down the road,” Rick points out. “We structure the business agreement to be as helpful as we can be, but also try to be straight with them about the future.”

An Industry Leader

Air Products’ technical expertise is as good as you can find anywhere. The company has been an industry leader in cryogenic food freezing for 40 years. Its equipment has frozen nearly every kind of food product, and the reliability of the systems is matched by the quality of the frozen product. Rick Whited himself serves customers making foods in the meat, poultry, prepared foods, and specialty categories. And while his customers’ products include fruit, this is the first apple application he has handled.

With the help of Earl Moore, Rick did some product testing to figure out the usage profile for their needs.

“Fruit has cut surfaces and a lot of moisture,” Rick explains. “It will stick to the belt in a regular tunnel freezer. So we installed an Air Products Freshline® immersion tunnel freezing system. The liquid nitrogen bath crust-freezes the surface, then the apple slices move onto the tunnel belt to finish the freezing process. The product spends four to five seconds in the immersion bath and minutes in the tunnel, and is completely frozen in three to four minutes.”

When everyone was happy with the process, Rick and Earl spent three days at the plant getting the equipment up and running smoothly. Air Products’ customer station people also did a turnkey install of the nitrogen tank and piping, another capital-minimizing step.

But even then, Air Products did not just walk away. Rick and Earl provided ongoing training to the plant operators, showing them how to run the system as efficiently as possible.

Are the Excellent Foods people happy with the freezing system?

“The system is easy to use and maintain,” says Roy Hillman. “It took a little work to get it running exactly right, certainly. But turn it on and it goes. We couldn’t make this product without quick-freezing.”

Sales manager Dean Hatch agrees.

Incredible Taste

“With this quick-freeze system, there is virtually no moisture loss,” Dean says. “That explains the incredible taste of the product.”

Because the product is totally natural, with no preservatives, the freezing is even more important to the integrity of the product. And interestingly, the crust-freeze acts as a further barrier to the oil so frozen apple slices even have an advantage over fresh apple slices.

And what do they say about Air Products?

“Excellent Foods wouldn’t be in business without Air Products’ help,” Dean states. “Their tech support has been immensely helpful. When we need delivery of liquid nitrogen, they’re here the next day. And their plant is three-and-a-half hours away. They’ve been invaluable to us.”

“I’ve been in the food business for 35-plus years,” Roy says. “I’ve worked with a lot of companies, and I’ve never run into a company that’s been more helpful or with people easier to get along with. From my point of view, Air Products’ service helps to achieve their main goal—the success of the customer.

“Service is the key. You can buy gas from three or four companies. But you can’t get this kind of service from three or four companies. They understand the demands of the business. That’s a big help to a newer company.”

Those thoughts are music to Air Products’ ears.

“We’re glad to hear that, of course,” Brian Roy states. “That’s really what we try to provide for all our customers—understanding of their needs, a business approach that works for them, great technology and products, and first-class service.”



Value Through Relationships

“We try to bring value,” Rick Whited echoes. “We help them optimize their process. We give them training. In short, we want to build a relationship. I think the critical piece of our dealings with Excellent Foods was our business approach.”

Brian Roy sums up Air Products’ view.

“We’re a large, global supplier,” Brian states. “We’ve been in business for 65 years and we serve many of the largest industrial companies in the world. Some big companies are interested only in big customers. Not us.

“We not only have the capability to help the smaller guy, but the inclination too. We’re happy to give the start-up the same attention we give our larger customers. Because when they’re ready to expand, we’ll be ready to help them.”

And expanding is what the Excellent Foods folks have in mind. Because the hot new treat is the perfect fit for fairs, parks, schools, and all things American.

“As American as Apple Fries,” as Roy Hillman likes to say.





For More Information

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