

TIME FOR AN OIL CHANGE

The push to eliminate trans fat from cooking oils will make some restaurant favorites healthier and — many say, more flavorful

In the foodservice world, it's generally thought that culinary trends like arugula, balsamic vinegar and wasabi begin in fine dining and ripple outward to multi-unit chains, the Food Network, mom-and-pop eateries and, eventually, to the supermarket shelves. Nutrition, however, is one food trend that follows a reverse cycle.

As we have seen with so many diet and health trends — low-fat and low-carb being the most recent — what starts on the supermarket shelves eventually filters into the restaurant realm.

Nowhere will this momentum be more apparent than with a U.S. Food and Drug Administration regulation requiring all products

containing trans fat to include that fact on labels by 2006. If you have purchased Triscuits or Tostitos recently, you have already seen this regulation in action. Kraft and Frito-Lay are just two of the food giants to get an early start on the trans-fat disclosure and have switched to trans-fat-free oils in the process.

For clarity's sake, let's take a moment to talk about the science of fats used in food processing. The FDA's website says trans fat, or trans fatty acid, "is a specific type of fat formed when liquid oils are made into solid fats like shortening and hard margarine.

However, a small amount of trans fat is found naturally, primarily in some animal-based foods."



US POTATO BOARD

QUICK-TAKE

THIS STORY TAKES A LOOK AT:

- The health concerns driving demand for trans-fat-free oils in foodservice
- The science behind healthier oil options, including plant breeding, naturally low-linolenic oils, interesterification and more
- Success stories from operators who have already made the change from hydrogenated oils



UNITED SOYBEAN BOARD

Trans fat comes about when hydrogen is added to liquid oils in order to stabilize them and prevent rancidity. Trans fat “behaves like saturated fat by raising low-density lipoprotein (LDL) cholesterol,” explains the FDA. Low-density lipoprotein, or “bad” cholesterol, increases coronary heart disease risk.

To the layperson, trans fat is a silent ingredient, merely an additive in many of the foods we eat everyday. But that bad LDL connection means it’s also been fingered as a silent killer.

Nutritionists and public-health officials seldom seem to agree on what exactly makes for a healthy diet; after all, it wasn’t long ago that trans fat was formulated to save us from the effects of highly saturated fats like tropicals, palm oils and tallow. While there is confusion about how much and what kind of fat we should be eating, everyone agrees that trans fat not only has zero nutritional value, it also clearly causes harm.

OPERATORS ARE LOOKING FOR TRANS-FAT-FREE OILS THAT ALLOW THE NATURAL FLAVORS OF THEIR FOOD TO SHINE THROUGH. “YOU DON’T WANT TO TASTE OIL IN YOUR FRENCH FRIES OR YOUR PREMIUM APPETIZERS,” SAYS VENTURA FOODS’ MIKE CASTAGNA.

The Harvard School of Public Health’s Dr. Walter Willet minces no words in his efforts to reduce this dietary health risk. “Trans fat is indeed a metabolic poison that increases risk of type 2 diabetes, heart attacks and, probably, dementia. Replacing these fats with healthy unsaturated fats must be a top priority of the food industry; this will have major health benefits for Americans.”

LABELS CARRY CLOUT

While there is much debate over whether restaurant foods will be required to disclose nutritional information as supermarket items must do, the fact is, nutrition labels affect all eating in this country. When



SOY FUTURES

The early successes with trans-fat-free oils and the overall health changes blowing in the wind have prompted a flurry of R&D efforts in the soybean industry, which has enjoyed its role as the top cooking oil provider throughout the hydrogenated glory days.

"Soybean oils are over 80 percent of all cooking oils used in the U.S., so there's a lot of volume at stake," points out the Soyfoods Council's Cate Puzo, director of marketing

and communications. "People are looking for zero-trans-fat alternatives that won't affect the proprietary taste of the food they serve, and soybean oil excels."

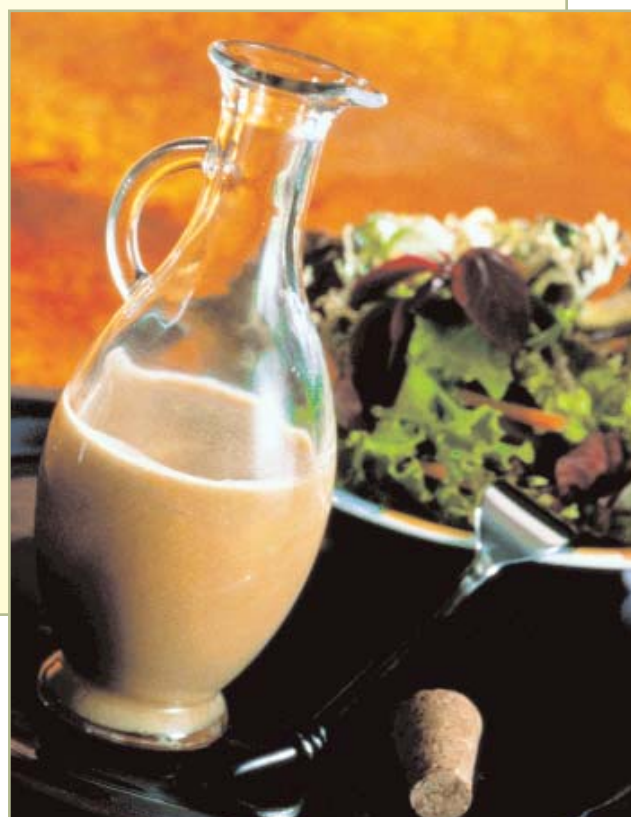
Because operators and food manufacturers are accustomed to using soybean oil, the soybean industry wants to make sure it can switch to a zero- or low-trans-fat option.

"Taste is a big deal, and people use hydrogenated soybean oil because it has flavor stability. Technology takes time, but right now the United Soybean Board (USB) is helping to accelerate the commercialization of new soybeans in order to change the plant itself and adjust the linolenic and oleic content," explains USB Manager of Marketing Communications Diana Steeble.

In 2005, the soy industry plans to introduce three new low-linolenic soybean oils — Vistive from Monsanto, Asoyia from a collective of Iowa growers and Nutrium from Bunge Limited and Dupont — that will function as intermediary solutions to the supply challenges. "These first three out of the gate have the potential to create enough oil in 2005 to address a significant portion of food manufacturers' needs," says Steeble. After that, she adds, soy's next big move will be breeding and creating bigger supplies of low-linolenic and other trait-enhanced soybeans.

Puzo explains that beyond changing the soybean plant itself, there are chemical and enzyme-based processes — interesterification being the leading one — that can physically rearrange oil molecules to stabilize them without hydrogenation. Puzo relates that, according to restaurateurs who have been using one of the new low-linolenic acid soybean oils, it performs as well as the partially hydrogenated oils the operators were using previously; they last longer, have a cleaner flavor profile and keep end products crisper longer. Soybean oil is also a non-fish source of omega-3 polyunsaturated fatty acids, and getting the hydrogenation process out of the oil makes it heart-healthy.

Kim Magin, director of Monsanto's oilseed industry affairs, says, "We are turning soybean into an olive oil [in terms of health properties]. We want all the advantages of soybean, with its health benefits, price and supply capabilities, but we also want low or no saturated fat. We know that consumers want healthy oils that taste good. Soybean oil has a neutral taste, and our new low-linolenic oil offers a healthy choice for them."



WITH OVER 80 PERCENT OF ALL COOKING OILS USED IN THE UNITED STATES AT STAKE, THE SOYBEAN-OIL INDUSTRY IS WORKING HARD TO FORMULATE LOW- OR NO-TRANS-FAT ALTERNATIVES.

people get the message they should be avoiding an ingredient in their cracker boxes, they will start inquiring about it when they eat out, too.

K. Dun Gifford, president of the Boston-based food-information think tank Oldways Preservation Trust, sees this as a very good trend.

“It’s really fortunate that the foodservice industry has had plenty of time to find replacements for trans fats, because the number of consumers avoiding products containing them will surge with the appearance of the new labels,” he predicts.

“In the months ahead, health-promotion organizations will even more heavily publicize the risks of trans fats, but the replacements will help to avoid stocking disruptions in familiar and popular products. This is a rare example of good news for consumers, business and heart health alike.”

To see how the industry is responding to the call for healthier oils, and how these new oils will affect the flavor of the foods we know and love, we’ve talked to oil manufacturers, food producers and foodservice operators to see if a nearly trans-fat-free food world is possible — and how it might taste.

EXPLORING THE ALTERNATIVES

In terms of foodservice operations, the silent trans-fat ingredient is most likely to be found bubbling away in the fryers and making baked products moist, flaky or crisp. Partially hydrogenated soybean oil stays stable for a longer period of time, can withstand the high temperatures needed to arrive at that desirable crispy coating and is inexpensive and easy to use. It imparts little or no added flavor or flavor transference to foods, and its neutral flavor is prized for allowing foods’ natural taste to shine through.

Currently, the race to provide large quantities of trans-fat-free alternatives comes down to a few major crops, with rapeseed (or canola), soybean and corn leading the charge.

“Our priorities are our operators’ priorities: performance, price and taste. We need to hit all three marks,” explains Mike Castagna, category manager of shortening, oil and margarine for Brea, Calif.-based Ventura Foods. “The zero-trans-fat Mel-Fry Free is our lead horse; it’s a naturally low linolenic product that gives us all the upsides of a partially hydrogenated oil, but its unique characteristics mean that it also has lower flavor transference; it’s bland, so it lets the flavor of food come through, and it’s naturally more stable,” he points out.



CARGILL INC.

IN ADDITION TO FLAVOR AND PERFORMANCE, SUPPLIERS LIKE CARGILL RANK VERSATILITY BEYOND THE FRYER AS A PRIORITY IN THE DEVELOPMENT OF ZERO-TRANS-FAT OILS.

“Fried food can be up to 15 percent oil, but you don’t want to taste oil in your french fries or your premium appetizers,” Castagna adds.

In describing Ventura’s Mel-Fry Free, which has been on the market since 1987, Castagna lays out the priorities for the entire industry. It’s the linolenic, or liquid polyunsaturated fatty acid, content of oils that needs to be stabilized to avoid rancidity, and the more it can be removed through plant hybridizing, the less hydrogenation or other manipulation has to be done.

OUT OF THE FRYER

Roger Berkowitz, president and CEO of the Legal Sea Foods Restaurant Group, an upscale seafood operation with 26 units, points out another advantage to removing the hydrogenation from fryers.

“Five years ago, I sat on a roundtable with Harvard’s Dr. Walter Willet. He asked me what oil I used, and I told him 100 percent pure vegetable oil. He asked me to look at the label to see if the word ‘hydrogenated’ was there and proceeded to tell me the health dangers of hydrogenated oils.

“Because I’m in the business of selling the healthiest of all proteins, I immediately set about finding a better, healthier oil for frying,” Berkowitz relates.

A blind tasting during his research really opened his eyes.

“We asked people to choose the best-tasting food,” he recalls. “Everyone kept pointing to what they liked best, and I was so relieved that it was the high-oleic trans-fat-free canola oil we were testing from Cargill. It turns out that when oil is hydrogenated to prolong its stability, it also works as a masking agent to food’s true taste.”



JR SIMPLOT

SIMPLOT'S INFINITY LINE OF POTATO PRODUCTS OFFERS OPERATORS A TRANS-FAT-FREE ALTERNATIVE TO WIDELY USED PRE-BLANCHED FRIES.

Berkowitz reports that when he made the change in all the Legal Sea Foods restaurants, he got rave reviews and plenty of comments proving that the earlier oils detracted from fresh fish flavor.

Another operator who made a better-than-seamless change to Cargill's canola oil is Newick's, a family-owned-and-run, three-unit seafood operation based in Dover, N.H. When Cargill approached owner Jack Newick about using its zero-gram-trans-fat canola oil as part of its testing of the new product, he saw it as a good opportunity to improve his food's health profile.

"Good fresh fish is good fresh fish, and we want to make sure that comes through. I'd say this oil has a lighter, fresher taste, and the only comment I've heard from customers is that the fried food is actually lighter in appearance," Newick reports. He says some people thought the lighter appearance might mean a less crispy coating, but tasting proved otherwise.

"For the most part, there hasn't been a peep [about the oil change], except that doctors are e-mailing some congratulations. Operationally, the change was seamless, and a few of our line cooks are losing weight and making no other changes to their diet," Newick relates, pointing out that the trans-fat-free canola oil also has lower saturated-fat levels.

Connie Tobin, a sales manager in Cargill's North American refined-oils business, says the company uses a multi-pronged strategy in introducing its canola oil.

"Foodservice operators are approached after we have a clear understanding of their menu and how [our oils] could benefit their operations. This is not limited to health benefits," she notes. "First comes performance."

Cargill, based in Wayzata, Minn., points out that its oil offers an improved food-to-oil ratio, can fry a greater

volume of food than the operator's current product, has good emulsifying properties for dressings and sauce applications and holds up better under high heat.

Versatility also ranks high on Cargill's priority list.

"Can it be used in other kitchen applications — dressings, sauces, griddle, sautéing, light baking, infused dipping oil, olive-oil extender, etc.?" Tobin asks.

And then, of course, are the sensory considerations: Food quality, taste, aroma, appearance.

"Oil is a flavor carrier," Tobin explains. "Therefore, if you have bland oil, you taste the food and not the oil. What you get is a solid and clean flavor delivery of the food, not masked by the oil."

Dow AgroSciences also sees great potential in its new Natreon canola oil. "Heart-healthy oils mean that people can eat fried food like fish and vegetables and not lose the benefit of those foods," points out David Dzisiak, global business leader, oils/oilseeds, for Dow AgroSciences. "In the case of Natreon, the oil itself is healthful," making deep-fried foods a more healthful treat.

BEYOND THE FRYER

For operations like Legal Sea Foods, which has committed to serving foods with extremely low or no trans fat, the challenge extends beyond the fryer. For instance, Berkowitz searched high and low for a zero-trans-fat oyster cracker to serve with Legal Sea Foods' signature chowders before finding Westminster, a small company that was able to produce what he needed.

And french fries are not zero trans fat if manufacturers blanch them in hydrogenated oil. ConAgra Foods Specialty Potato Products supplies Legal Sea Foods with its Lamb Weston brand of trans-fat-free fries. In fact, all of the major potato-product manufacturers have developed frozen potato items blanched in trans-fat-free oil.

"Consumers are becoming more aware of trans fat, and through products like olive oil, they are exposed to the concept of healthier oils," explains Alan Kahn, senior director of marketing for foodservice at Boise, Idaho-based J.R. Simplot Co.

"We are also driven by the school segment; many states are mandating a reduction of trans fat in the foods served, which was key to our introducing the Infinity line of french fries, a zero-gram-trans-fat, high-solid fry with a patented coating that keeps fries hotter and crisper for longer."

Ruby's Diner, a casual-diner-themed family restaurant chain based in Newport Beach, Calif., was

the first to sign on to serving Infinity fries in a multi-unit foodservice setting. Greg Hernandez, vice president of foodservice and purchasing, has only positive reports.

“We try to take every opportunity to make a not-very-healthy item healthier. Our guests have said that our Fit Fries taste more potato-like and that they have a very clean taste, with no oiliness and pure flavor.”

Hernandez adds, “We offer our Fit Fries at a higher price on our regular menu and make them available at no extra cost on our children’s menu. Some customers just like them better, healthier or not.”

The experience at Ruby’s shows that healthier and great tasting are not mutually exclusive.

“We’re trying to communicate to foodservice operators that when it comes to potatoes, there are many good options,” says Laurie Ryan, vice president of marketing at ConAgra Foods Specialty Potato Products, based in Eagle, Idaho. The company offers a broad range of trans-fat-free potato products with its Generation 7, Stealth Fries and Sweet Things brands. “These products are par-fried in high-oleic canola oil, which allows us to market them as containing zero grams trans fat while providing the features and benefits that our customers expect from these brands. In addition, we also offer our Lamb’s Supreme Oven Roasted line of potatoes that are lightly sprayed in olive oil and also contain zero grams trans fat.”

Another product first launched in the school sector but gaining momentum in the restaurant realm is McCain Smiles Shaped Potatoes. These potato shapes are coated in trans-fat-free liquid canola oil and are suitable both for baking and frying.

“The increased attention to healthier cooking oils has created a more receptive audience for a broader range of our product portfolio, like mashed potatoes, sweet potatoes, bakeable items and products with zero grams of trans fat,” observes Patrick Davis, vice president of foodservice potato marketing for McCain Foods, headquartered in Oak Brook, Ill.

“Smiles, along with our Ovations (OgVations) brand of zero-gram-trans-fat fries, are two ways to offer great new options for kids. They deliver the natural goodness of potatoes without trans fat.”

Davis reports that in addition to schools and even nursing homes, Smiles are popular in family-style restaurants, due to their fun and unique appearance.

THE PRICE BARRIER

While demand is growing in the foodservice sector, price and availability are the biggest obstacles to more



TRANS-FAT-FREE SOYBEAN OIL (ON THE RIGHT) IS A CLEARER ALTERNATIVE TO CONVENTIONAL SOYBEAN OIL.

operators using premium trans-fat-free fries, according to Ruby’s Diner’s Hernandez.

“Right now, there are three versions on the market and 103 that aren’t. Negotiating for better prices is a problem when there are only one or two others to choose from. Also, the level of interest and number of inquiries the manufacturers are getting drives up prices,” says Hernandez.

McCain’s Davis agrees that cost is a hurdle. “In past research that we have conducted, operators are very concerned, and only too well aware of the cost/value equation, and attempts to increase the cost part of that ratio will need major sales-and-marketing investment against it to help them see the benefits. Clearly, consumer demand and push will help.”

OUT OF THE COOKIE JAR

Because frying oils can be easily replaced with low-linolenic liquid oils, in many ways, the fryer is an easier nut to crack than the bakery in the quest to change to a more healthful oil.

“It’s pretty common to have hydrogenated issues in bakery products, because you can’t just make the change from shortening to [liquid] oil,” explains Brian Strouts, head of the experimental bakery at the American Institute of Baking.

“Solid oils give volume, texture, aeration and lightness. So far, some wholesale bakers have converted over to butter or to highly saturated fats. There’s no easy switch for quality, cost, flavor and health.

“There are some specialty fats being developed based on higher-saturated palm and palm-kernel oils that will change the melting points of fatty acids,” offers Strouts.



GETTING TRANS FATS OUT OF BAKERY PRODUCTS WILL BE THE NEXT HEALTH-MINDED PUSH IN FOODSERVICE.

This is where more science, or specifically, interesterification, comes in. Interesterifying stabilizes liquid oils, not by hardening them as hydrogenation does, but by manipulating and blending saturated and unsaturated oils to the right melting profile and creaminess. Several companies have premiered lines of non-hydrogenated shortenings that may include chemical- or enzyme-interesterified trans-fat replacements, which don't have the same deleterious effect on blood LDL cholesterol and also retain shortening's functionality. Archer Daniels Midland (ADM), maker of interesterified NovaLipid soybean oil, considers high-stearate NovaLipid oil a highly functional trans-fat replacement.

Michael Rath, general manager of specialty oils at ADM, points out that the terms interesterified, high-stearate and stearate-rich are new terminology for trans-fat replacements. "We need to explore ways to communicate to the food formulator and consumer the healthier-fatty-acid profile of these oils."

Other companies have reformulated their shortenings to contain combinations of non-hydrogenated soybean and sunflower oils and fully hydrogenated saturated oils to get trans fats out.

Strouts relates that newly formulated baking oils will not perform or taste much differently, but quality and costs are affected. Ventura Foods' Castagna agrees.

TAKE-AWAY TIPS

- **DO SOME DIGGING:** Contact suppliers and trade organizations to discuss the best trans-fat-free oil options for your operation
- **TRIAL RUN:** A taste test comparing your current oil with some of the healthier options on the market could bring surprising results

"Some manufacturers struggle from a cost standpoint. The media attention has really focused on the fry shortening and margarine categories, and not so much on the bakery shortenings," he notes.

Castagna predicts that the issue of trans-fat-free shortenings in foodservice will stay on the back burner until manufacturers are really pressed to deal with it, as the french fryers and the supermarket food manufacturers of the world have had to do.

But there is good news on the bakery front. In October 2003, the 230-café chain Au Bon Pain introduced its first zero-gram-trans-fat muffins, becoming the first casual bakery chain to address the trans-fat problem.

"Muffin sales soared 20 percent," trumpeted the company's website, and the zero-gram-trans-fat muffins are more popular than Au Bon Pain's original. This success prompted the company to get trans fats out of bagels and toppings and offer non-hydrogenated Smart Balance Buttery Spread, bringing the café closer to its goal of eliminating all trans-fatty acids from its menu.

In foodservice, we've seen that not only does money talk, but flavor has a lot to say. Don Odiorne, vice president of foodservice for the Idaho Potato Commission, has an interesting analogy for the current focus on trans fats: "I used to work in the pizza industry, and 20 years ago, the push was to reduce the fat in pizza cheese. I was skeptical, but part-skim cheese is standard procedure in the industry now, and it's an overall improvement."

Odiorne also sees coated trans-fat-free fries as an improvement over the current industry standard.

"Healthier options have to taste the same or better, or people will take one or two bites, and that's it," warns Odiorne, citing the "it's not healthy if no one eats it" rule of thumb.

Operators taking the first steps toward limiting trans fats in their restaurants are proving that some upfront costs are far outweighed by better health, better food flavors and better sales — all good reasons to trim trans fats from menus. ☺

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