

## TRANS FAT FREE OILS

# The Trans Fat Effect

BY FRED MINNICK

Producers question whether farmers can keep up with the demand for trans fat free commodities, while operators sort through the many trans fat free solutions in the market.

Burt Heinrich steps out of his red 1979 Jeep Wrangler with AC/DC blaring from the stereo. His tan leather work boots kick up a little dust as he walks toward his vast green cotton fields. The morning sun glows over his crops, and there's a look of satisfaction on his face.

"My great-grandpa started this," Heinrich says, pointing at seemingly endless rows of cotton.

The fourth-generation cotton farmer walks into a patch and jumps into a three-foot-deep trench with freshly dug soil spilling out over the top. He digs into the ditch's inner wall and pulls out a black piece of plastic tubing. His calloused hands gently caress the skinny PVC pipe as if it were piece of gold. "This [irrigation setup] will give my fields a drink of water," Heinrich says.



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The Lubbock, Texas, farmer hopes the \$700-per-acre “drip irrigation” setup will increase his yields by 30 to 40 percent and maximize his profits. He and his partner, brother Eric Heinrich, are gearing up for the cottonseed oil demand that trans fat free oils have created.

“Cottonseed oil is a healthy alternative right now and if we [cotton farmers] can promote that, it will help stabilize my situation,” says Heinrich, who adds the price of cotton hasn’t really changed in the past 50 years. But there’s reason for him to be enthused about the future of his crops.

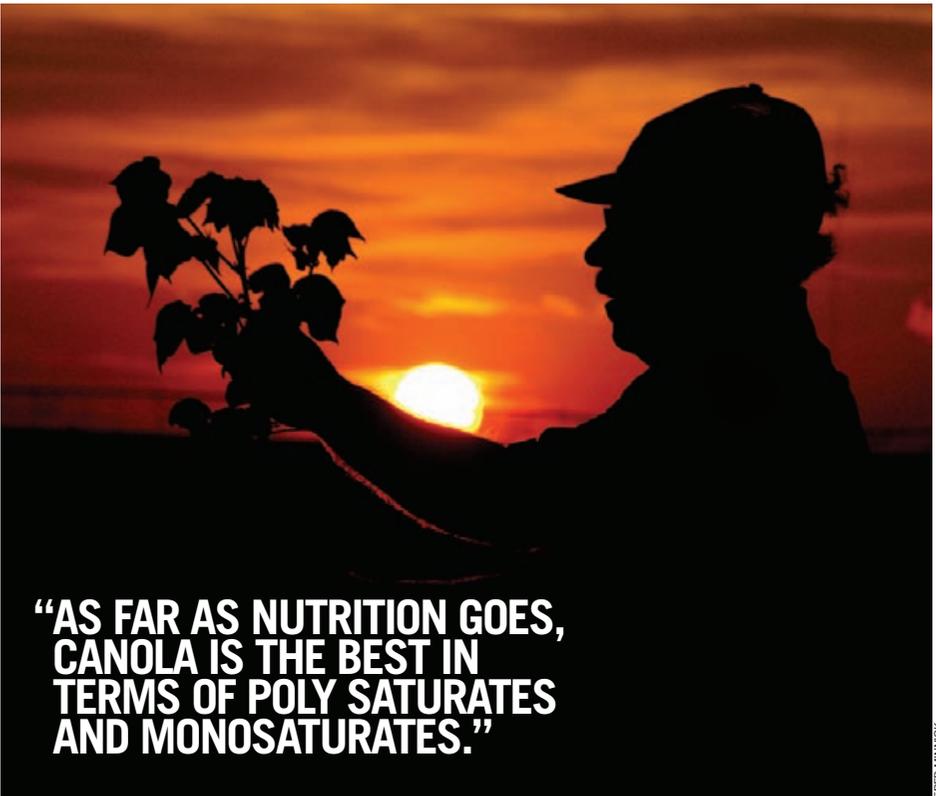
While cotton lint has always been the breadwinner for cotton farmers, the seeds are hot commodities in today’s marketplace, with demands from animal feed producers and frying oil manufacturers.

Cottonseed oil—America’s first vegetable oil and the main ingredient in Crisco, which is short for crystallized cottonseed oil—is popping up on the labels of Wesson, Bunge, Fry-Max, and Mazola oils. But representatives of the National Cottonseed Products Association (NCPA) believe their oil products have lost their marketing power to canola, soybean, and sunflower. In fact, in a recent survey of restaurant operators, cottonseed oil scored very low on awareness compared to the other three oils.

“The hardest thing for us to overcome is the fact that you can eat cotton,” says Ronnie Gilbert, vice president of oil trading for PYCO Industries, a cottonseed oil manufacturer.

But that stigma has not slowed the demand much. Gilbert estimates his company will crush 200,000 to 500,000 tons of cottonseed for oil in 2007, with 40 percent going to the production of cooking oils and the rest to snack food companies or foreign exports.

With the surge of NCPA’s “Cottonseed Oil Is Back” marketing campaign and the possibilities of a nationwide ban on trans fats, some cotton producers are concerned that there are not enough seeds to meet what could become a Goliath demand. However, other crop producers have just as many issues—if not more—surrounding the supply of their commodities, says Robert Lacy Jr., senior vice president of PYCO Industries. Soybeans, for example, are being used for biodiesel, which “has created a better price for the other [cooking oil] products—cottonseed, canola, and sunflower,” Lacy says. “Everybody’s got their struggles on plantings and everything else.”



**“AS FAR AS NUTRITION GOES, CANOLA IS THE BEST IN TERMS OF POLY SATURATES AND MONOSATURATES.”**

FRED MINNICK

The soybean supply is even grimmer than that of cottonseeds. According to the U.S. Department of Agriculture, total soybean area is expected to fall 15 percent from last season’s record plantings as growers increasingly turn to corn production. U.S. soybean production is forecast to decline 18 percent to 71.4 million tons, leading to tighter supplies. The result, of course, for the restaurant operator is high prices and poor supply.

When KFC converted to a high-oleic, low-linolenic soybean oil in 2006, the company claimed more than half of that particular oil’s supply over the next five years, says Dr. Clay King, professor of Nutrition and Food Sciences for Texas Woman’s University who has written several research papers on the efficacy and nutritious content of the various trans fat free oils. At the American Oil Chemists’ Society meeting in May, Mary Miller, senior manager of product quality for KFC, presented the food industry’s concerns regarding the availability of suitable oils and fats, including soybean oil, canola, and formulations, to provide both healthy products and meet the requirements of the industry.

“All of a sudden, there’s this increased demand for the trans free oil,” and not everybody is equipped to grow the goods, King says. “American farmers and European farmers can produce millions and millions of

tons once they get set up to do it.”

However, the story is not as dire as market forecasts might lead one to believe. Farmers will chase the market and the demand will be met, says Kasey Christensen, director of purchasing for Arctic Circle Restaurants, an 80-unit quick-service chain based in Midvale, Utah.

“I believe in a true capitalistic society, where eventually there will be a balance in the market,” Christensen says.

**SLIGHT DIFFERENCES//** When Christensen was testing trans fat free oils, he received phone calls every day from oil companies.

“It got to the point where I said ‘Let me digest these five or six oils I’m testing,’” he says.

Christensen looked at oils from Ventura, FryMax, and Wesson—all canola-based oils. Christensen says he wanted oil that not only performed well in the vat but also didn’t take away flavor. He says they all were relatively the same coming out of the fryer.

“For the same day’s light, the fried foods were staying a consistent color,” Christensen says.

Although the canola oils seemed to have a lighter color out of the fryer, Christensen and his testing team were still not convinced. They began to fry foods every morning and let them

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cool to room temperature.

"Nobody likes to eat their food when it's lukewarm, but you really picked up the oil taste the cooler the food was. ... The [heat] almost masks the oil taste," he says.

After months of testing, Artic Circle Restaurants went with a cottonseed-canola blend from FryMax. Christiansen says this oil created a clean taste on the lukewarm tests, and the fries had a true potato taste.

Alex Garza, general manager for two-unit River Smith's Chicken & Catfish, found similar results after rolling out an all-cottonseed oil in his Texas-based fast-casual restaurants. He says the oil retained the fried catfish and chicken taste better than anything he'd ever used, and the "cottonseed oil retains the color a lot better."

While that might be true for Garza's operation, many chefs say all the trans fat free oils are so similar that differentiating between them is splitting hairs. Walter Bronowitz, board member of the American Culinary Federation and executive chef of Seattle Children's Hospital & Regional Medical Center, says quick-service operators cannot go

wrong with a soybean, sunflower, canola, or cottonseed oil. But if he were forced to choose, he'd pick canola.

"As far as nutrition goes, canola is the best in terms of polysaturates and monosaturates. ... It is little more expensive," he says, adding that many manufacturers are blending canola with cottonseed to drive down the price.

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According to King's research, a cost-effective and healthy frying oil is a blend of cottonseed oil and high-oleic low-linolenic canola oil.

"Cottonseed oil can be blended with these high-oleic canola or soybean oils or sunflower oils to give you good flavor and improved nutritional qualities, or high monos, and less saturation." King says.

King and the NCPA believe every jug of cooking oil could benefit from a splash of cottonseed oil. NCPA's taste-test research shows that cottonseed oil does not experience undesirable flavor reversion and that vegetable-oil blends containing 75 percent or more cottonseed oil received the highest preference scores.

But according to Bronowitz, cottonseed oil is very plain and the real flavor saver is canola oil. One might say canola seeds have been bred for this trans fat free generation. In the mid-1990s, Dow AgroSciences developed NEXERA seeds, a new line of canola seed that was naturally-bred for high stability, without the need for hydrogenation. According to Dow, a taste panel of Canadian students demonstrated significant consumer preference for the new canola-based oils over commercial standards. Sensory scores for french fries, chicken strips, and fish sticks prepared in the oil were rated twice as high as partially hydrogenated canola. And an American consumer product study of 170 adults and 179 teenagers found that french fries prepared with these oils were equally

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preferred to fries prepared using partially hydrogenated soybean oil. When compared to a new, trans fat free soybean oil, however, both the adults and teenagers significantly preferred the taste of fries cooked in the new trans fat free canola oil by a margin of two to one, the company says.

Meanwhile, soybeans supply 81 percent of the U.S. demand for edible oils, according to Iowa State University (ISU), which in 2006 announced a new breed of soybean seed for producers to use during the trans fat free oil trend. ISU says the 1 percent linolenic soybean oil only has two grams of saturated fats per serving. According to Asoyia, which uses the ISU soybean variety in its oil, food managers like the crispness, extended freshness, look, and flavor of foods fried in soybean oil.

Then there are the sunflower oil producers, who claim their oil is light in taste and appearance and supplies more Vitamin E than any other vegetable oil.

With all the major trans free oil producers claiming to have the superior products, which one is actually best for a brand? Christensen

says none of the oils are dramatically different and that a change wouldn't truly damage the taste and profile of foods. So while he's selected a cottonseed-canola blend for now, Christensen is also keeping an open mind for the future.

"We realize and understand this is so new in the market that the oils are evolving. We may be comfortable with where we're at, but we're still going to look and might find something else that performs better," he says. "There are some very good oils out there, and most manufacturers are doing good research."

Nonetheless, some restaurateurs have not adapted to trans fat free oils, even though there's consumer demand for the product and potential government regulation. "There's a lot of resistance to adapt. We've got franchisees who've said 'I've used that vegetable oil for 50 years. I'm not going to change now,'" Christensen says, who strongly encourages them to make the switch anyway.

Some industry followers wonder whether the trend will indeed continue. Will America

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lose its distaste for trans fats? Or will organizations like the Center for Science in the Public Interest, which sued KFC in 2006 for its use of trans fats, decide that trans fats aren't all that bad after all?

Bronowitz says these are the questions farmers should be asking. He compares trans fat free crops and the current market demand to Mexican agave farmers who overplanted during a high market demand for tequila only to have the market dissipate and need government help to survive.

"By the time the supply catches up, will that demand still be there?" Bronowitz asks. "As a farmer, I'd be trying to figure where am I going to get my buck for the next five to 10 seasons."

Heinrich has also asked those questions and he—along with the PYCO executives—are convinced the future of cotton's byproduct is in five-gallon jugs sitting next to fryers.

"These oils are better for the public and help the farmer—everybody wins," Heinrich says.

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