



Texas Department of Agriculture

Report to the

80th Texas Legislature

Ordered by House Bill 4062, 80th Regular Session

Trans-Fatty Acid Study

TEXAS DEPARTMENT OF AGRICULTURE

TODD STAPLES
COMMISSIONER



November 18, 2008

The Honorable Rick Perry, Governor
The Honorable David Dewhurst, Lieutenant Governor
The Honorable Tom Craddick, Speaker of the House
The Honorable Craig Estes, Chair,
Senate Subcommittee on Agriculture, Rural Affairs, and Coastal Resources
The Honorable Sid Miller, Chair, House Committee on Agriculture
The Honorable Jane Nelson, Chair, Senate Committee on Health and Human Services
The Honorable Jodie Laubenberg, Chair, House Committee on Public Health

Ladies and Gentlemen:

Thank you for the opportunity to present this report on trans-fatty acids as required by H.B. 4062 (80th session). This report details the Texas Department of Agriculture's (TDA) and the United States Department of Agriculture's steps to reduce trans-fatty acids from all school meals and nutrition programs, including all current and planned initiatives.

Through the National School Lunch Program and School Breakfast Program, approximately 4.5 million school children have access to healthy meals each day. Additionally, TDA's outreach and education efforts teach children about making positive, nutritious choices that will benefit them for a lifetime. These programs, as well as a greater availability of products, have significantly decreased trans-fatty acid content in school meals. TDA is committed to working with partners at the national, state, and local levels to ensure that this trend continues.

I appreciate your interest in this important issue.

Sincerely yours,

A handwritten signature in black ink that reads "Todd Staples". The signature is stylized with a large, sweeping "T" and a cursive "Staples".

Todd Staples



Executive Summary

Trans-fatty acid is a common saturated fat found in American diets. With the national increase in obesity and its related illnesses, trans-fatty acids or “trans fats” have become a recent focus of health advocates and policy makers. Unlike other types of fat, trans fats have no known health benefits. Rather, diets high in trans fats increase the risks of heart disease, cancer, and diabetes.

The Texas Department of Agriculture (TDA) and United States Department of Agriculture (USDA) have taken measures to reduce the trans-fatty acid content of school meals. The Texas Public School Nutrition Policy (TPSNP) directs school districts to reduce fat in their menus and reduce the purchase of products with trans fat. TDA also surveyed the 20 Education Service Centers (ESCs) in the state to determine steps taken to reduce trans fats from school meals. At the regional level, the ESCs are providing education, training, and technical assistance to school districts to reduce or eliminate trans fats from their menus.

USDA has reduced trans fat in its commodity products offered to schools and does not offer solid shortening at all. USDA is also in the process of codifying the 2005 Dietary Guidelines for Americans into its meal patterns, which requires reduced levels of trans fats.

In this report, TDA presents information on these measures. Because of the progress currently being made to reduce trans fats in school meals, TDA has identified no legislative action necessary to continue this progress.

Table of Contents

Background on Trans-Fatty Acids	2
History of Trans-Fatty Acids	2
Table 1: Major Food Sources of Trans Fat	2
Health Risks	3
Current and Planned Initiatives	5
Data Collection Methodology	5
Initiatives in Texas	5
Policy	5
Nutrition Standards	7
Fats and Fried Foods	7
Education	8
Oversight	11
Figure 2: District Initiatives to Reduce Trans-Fatty Acids	13
Federal Initiatives	15
Summary	16
Appendix A: Texas Trans-Fatty Acids Initiatives Survey	17

Charge

In 2007, the 80th Texas Legislature passed House Bill 4062, directing TDA to submit a report regarding trans-fatty acids in school meals and nutrition programs. Texas Agriculture Code, Section 12.042 reads as follows:

TRANS-FATTY ACID STUDY. (a) Not later than December 1, 2008, the department shall prepare and submit a report to the governor, lieutenant governor, speaker of the house of representatives, and appropriate standing committees of the legislature containing information on the department's and the United States Department of Agriculture's steps to reduce trans-fatty acids from all school meals and nutrition programs. The report shall detail all initiatives, proposals, and programs that the department and the United States Department of Agriculture are then currently conducting or planning to conduct and include the department's recommendations for legislative action to assist in reducing trans-fatty acids from school meals.

Background on Trans-Fatty Acids

History of Trans-Fatty Acids

Trans-fatty acids, or trans fat, is a type of unsaturated fat common in American diets. Unlike other fats, which are necessary in a well-balanced diet, trans fats are not known to have health benefits. Most trans fats consumed are artificially created. Artificial trans fats first appeared in the early 1900s when scientists created artificial solid shortening through a process called hydrogenation. Hydrogenation involves adding hydrogen to liquid oil, and improves both the taste and shelf life of products. Solid shortening quickly became popular in both home and commercial kitchens because it was cheap, easy to use in baked goods, lasted longer than vegetable oil as a frying medium, and helped products stay fresher longer. Both artificial shortening and its cousin, margarine, continued to gain popularity when Americans became concerned about the ill effects of dietary saturated fat from animal sources. Table 1 shows the breakdown of food sources in the average American's diet in the late 1990s, when the average daily trans fat intake was 5.8 grams, or 2.6 percent of calories.

Table 1: Major Food Sources of Trans Fat

cakes, cookies, crackers, pies, bread, etc.	40%
animal products	21%
margarine	17%
fried potatoes	8%
potato chips, corn chips, popcorn	5%
household shortening	4%
salad dressing	3%
breakfast cereal	1%
candy	1%

Source: Adapted from *Federal Register notice. Food Labeling; Trans Fatty Acids in Nutrition Labeling; Consumer Research To Consider Nutrient Content and Health Claims and Possible Footnote or Disclosure Statements; Final Rule and Proposed Rule*. Vol. 68, No. 133, p. 41433-41506, July 11, 2003. Data collected 1994-1996.

Health Risks

Although trans fats occur naturally in some animal products like beef and dairy, synthetic trans fats are attributed to greater health risks. Since the majority (approximately 80 percent) of the trans fats Americans consume are from artificial sources, trans fat has recently been a focus of health advocates and dietitians. It is well documented that saturated fat boosts harmful low-density lipoprotein (LDL) cholesterol, while unsaturated fat boosts protective high-density lipoprotein (HDL) cholesterol. Recent science shows that artificial trans fats both raise LDL and lower HDL, dramatically increasing the risk of heart disease and stroke. Whether natural trans-fats have the same effect on cholesterol is unclear.

In the *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids (Macronutrients)*, the National Academy of Science recommends, “trans fatty acid consumption be as low as possible while consuming a nutritionally adequate diet.” The American Heart Association is more specific, recommending people eat no more than 1 percent of their daily calories from trans fat, which is about one gram of trans fat per 1,000 calories consumed. The Food and Drug Administration (FDA) makes no recommendation at all, since there is no known safe level of trans fats in the diet.

The Dietary Guidelines for Americans (DGAs), published every five years by a committee appointed by the secretaries of the U.S. Department of Health and Human Services and the USDA, first identified trans-fatty acids as a nutrient of concern in 2005. Specifically, the 2005 DGAs make the following recommendations with regard to trans fats:

- Consume less than 10 percent of calories from saturated fatty acids and less than 300mg. per day of cholesterol, and keep trans fatty acid consumption as low as possible.
- Limit intake of fats and oils high in saturated and or trans fatty acids, and choose products low in such fats and oils.

The 2005 DGAs also state, “Trans fat content of certain processed foods has changed and is likely to continue to change as the industry reformulates products. Because the trans fatty acids produced in the partial hydrogenation of vegetable oils account for more than 80 percent of total intake, the food industry has an important role in decreasing trans fatty acid content of the food supply. Limited consumption of foods made with processed sources of trans fats provides the most effective means of reducing intake of trans fats. By looking at the food label, consumers can select products that are lowest in saturated fat, trans fats, and cholesterol.” In 2006, USDA began requiring that nutrition labels list a food’s trans fat content.

Current and Planned Initiatives

Data Collection Methodology

TDA contracts with the 20 Education Service Centers (ESCs) to have CNPs offer training and technical assistance. TDA surveyed the 20 Education Service Centers (ESCs) to evaluate initiatives within regions to reduce trans-fatty acids in all food items served or sold to students, including school meals. All 20 ESCs responded. The survey instrument is given in Appendix A. TDA reviewed two parts of the School Food Authorities' (SFA) processes for soliciting bids for food purchases in 2007–08 to review progress in attaining the policy mandates regarding trans-fatty acids. These two parts were the proposal for bid and the awarding of the bid.

Initiatives in Texas

TDA leads the drive to safeguard the health and well being of all Texans. Since TDA took over administration of the National School Lunch Program (NSLP) and School Breakfast Program (SBP) in Texas in 2003, the agency has implemented an extensive plan to improve the diets—and thereby improve the health and the futures—of our state's children. TDA's three-pronged approach to achieving this ambition is to employ policy, education, and oversight to create and encourage Texans to make better choices about food.

Policy

As shown in Table 1: Major Food Sources of Trans Fat, when the public first became widely aware of the issue, baked goods were responsible for 40 percent of the trans-fatty acids in the American diet. Margarine and shortening contributed more than 20 percent, and fried potatoes

and snack chips made up almost 15 percent. Even before trans fat labeling was required by USDA, TDA was addressing artificial trans-fatty acid content in Texas school meals.

In 2004, TDA implemented the Texas Public School Nutrition Policy (TPSNP), imposing requirements on public schools participating in the NSLP to reduce the consumption of total fat, saturated fat and ultimately trans-fat by reducing the amount of fat offered as part of school meals or a la carte menu options.

In June 2004, the policy read:

Nutrition Standards

The following specific nutrition standards pertain to all foods and beverages served or made available to students on elementary school campuses. This includes school meals, a la carte and classroom snacks.

Fats and Fried Foods

a. Schools and other vendors may not serve food items containing more than 28 grams of fat per serving size more than twice per week. The goal is to reduce this to 23 grams of fat per serving size by the start of the 2006-07 school year.

b. French fries and other fried potato products must not exceed 3 ounces per serving, may not be offered more than once per week (middle schools were limited to serving fried potato products three times per week and high schools were under no such restriction), and students may only purchase one serving at a time. We recommend that all such products be baked instead of fried.

c. Baked potato products (wedges, slices, whole, new potatoes) that are produced from raw potatoes and have not been pre-fried, flash-fried or deep fat-fried in any way may be served without restriction.

d. Schools should eliminate frying as a method of on-site preparation for foods served as part of school meals, a la carte, snack lines and competitive foods. This policy should be implemented by the 2005-06 school year in schools that do not need to make equipment changes or facility modifications to do so. A transition period of implementation is allowed for schools needing to make equipment changes or facility modifications, but all schools must be in compliance by the 2009-10 school year.

e. Foods that have been flash-fried by the manufacturer may be served but should be baked or heated by another method.

f. Beginning with the 2005-06 school year, schools should include a request for trans fat information in all product specifications. Beginning with the 2007-08 school year, schools should reduce the purchase of any products containing trans fats. (Federal labeling of trans fats on all food products is required by January 1, 2006.)

The TPSNP was the most comprehensive policy in the nation at the time it was proposed, establishing grade-specific guidelines for unregulated foods. The policy guidelines enhanced the nutrition standards for all foods served in Texas schools, including school meals, a la carte items, snack bars, vending machines, school stores and fundraising.

TPSNP was amended in 2007 to enact greater restrictions on competitive foods, candy, fats and frying. As of 2008, the fully enacted policy standards emphasize:

- Eliminating deep-fat frying as a method of on-site preparation
- Reducing the frequency of high-fat items that are served and reducing the fat content in school meal items
- Requiring that low fat or skim milk be offered at all points where milk is served
- Requiring fruits and vegetables, fresh whenever possible, to be offered daily on all points of service
- Food items must not contain more than 23 grams of fat with an exception of one individual food item per week. No food item can exceed 28 grams of fat at any time.
- Portion and nutrient restrictions apply to food item categories such as chips, cookies/cereal bars, bakery items and beverages other than milk.

Researchers at Sam Houston State University tracked the policy's progress by comparing the nutritional analyses of a sample of elementary school lunches through pre-policy School Meals Initiative evaluations (1998–2003) and post-policy nutritional analyses. For 2007–08, the study found that in the average school lunch, total fat was down 16 percent and saturated fat down 20 percent.

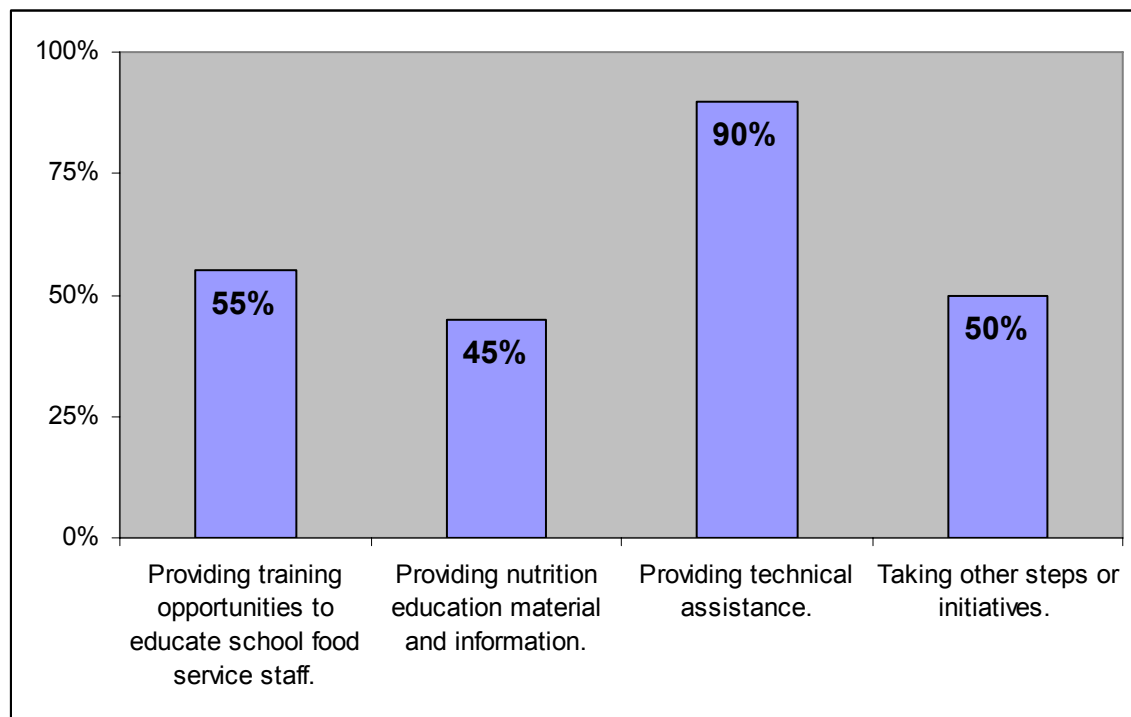
Education

To raise awareness and ultimately reduce the availability of trans-fatty acids in schools, TDA works to educate child nutrition professionals (CNPs), parents and the general public via the following avenues:

- **Web site: www.SquareMeals.org.** Offers program information and nutrition resources to the general public.
- **Articles.** Published articles for nutrition professionals educating about trans fats in early 2008 on the SquareMeals Web site. Wrote an article about the 2005 Dietary Guidelines for Americans (DGAs), including TPSNP initiatives to reduce trans fats, for *TASNews* (the Journal of the Texas Association of School Nutrition) in Spring 2008.
- **Newsletter: Kids@heart.** TDA's electronic newsletter with tips, tools and success stories on healthy eating to more than 4,300 school administrators, school food service, parents and teachers.
- **Outreach and exhibits.** TDA also provides educational materials during exhibits and outreach events to promote good nutrition among students and their families and increase participation in the school meals programs.
- **Education and training resources.** TDA creates materials for child nutrition professionals emphasizing healthy menu planning and how to promote healthy nutrition.
- **Teachers' resource Web site: NETx – Nutrition Education of Texas.** A nutrition curriculum available online for grades K-12 covering a variety of subjects.

CNPs employ several methods in their efforts to assist school districts with reducing the amount of trans-fatty acids in schools. Figure 1 shows the main approaches, as TDA identified in a survey in 2007.

Figure 1: Regional Efforts to Help Districts Reduce Trans-Fatty Acids



To assist school districts in reducing the amount of trans-fatty acids in food items served or sold to students, CNPs in the 20 regions are taking these steps:

- Fifty-five (55) percent of the regions provide training opportunities to educate school food service staff on how to effectively reduce trans-fatty acids.
- Forty-five (45) percent of the regions provide nutrition education material and information on trans-fatty acids.
- Ninety (90) percent of the regions provide technical assistance, including review of products containing trans-fatty acids.
- Fifty (50) percent of the regions are taking other steps or initiatives to assist school districts in reducing the amount of trans-fatty acids in all food items served or sold to students, including school meals. These include:

- Training staff on techniques to identify and reduce trans-fatty acids.
- Sampling new products with less or no trans fat.
- Using school media to educate students on healthy eating.

Oversight

The Texas Public School Nutrition Policy (TPSNP) states: “Schools must include a request for trans fat information in all product specifications. Beginning with the 2007–08 school year, schools must reduce the purchase of any products containing trans fats.” The TPSNP requires the School Food Authority (SFA) to lower the trans fat served in the schools, but the policy does not specify what the level should be. TDA reviews documentation to determine whether SFAs request the required trans fat information in their bidding processes. Starting with the 2008–09 Coordinated Review Effort, monitors will also begin following SFAs’ efforts to reduce trans-fatty acids.

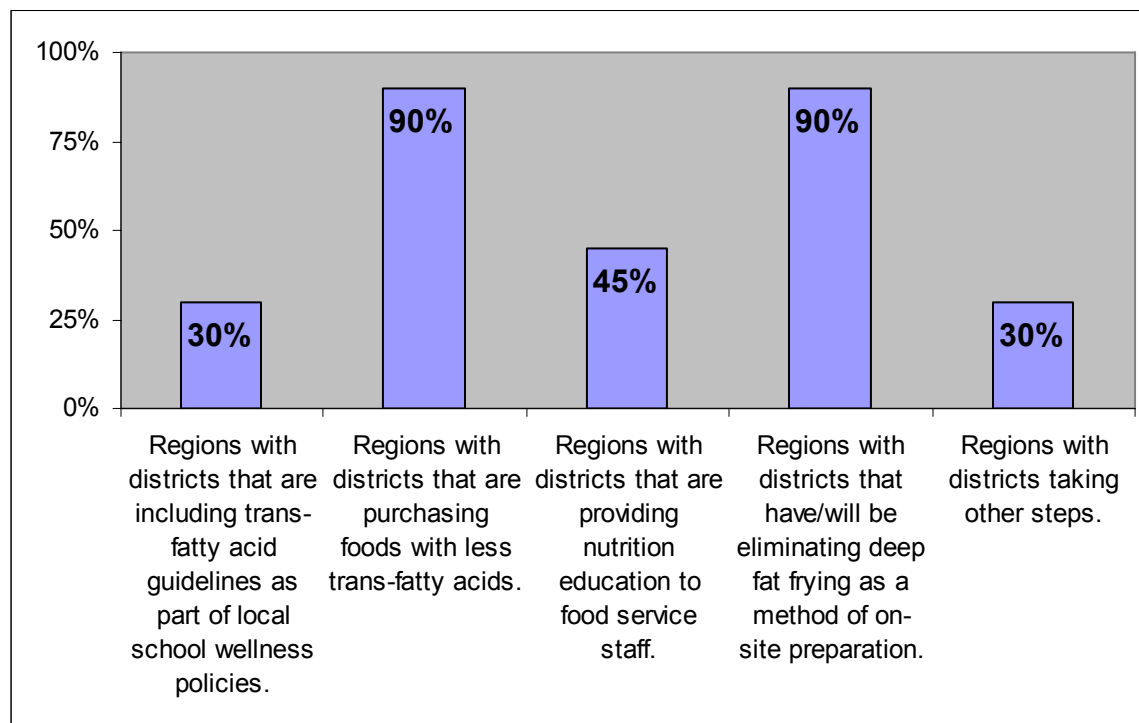
SFAs are also following the TPSNP by collecting information not only on trans fat, but sugar and other types of fat. Language in several of the bid solicitations specifies that the nutritional information must show trans fat. As a result, the nutritional information is being provided to the SFAs so the purchaser can make educated choices on items being served in the schools. Specific language included in some bid proposals for SFAs and food purchasing cooperatives in which SFAs participate includes:

- “After the RFP is awarded, the successful bidder must supply each Prospering Pals Co-op district with a complete nutritional analysis of all items awarded. These nutritional analysis sheets must show trans-fats.”

- “Nutritional information will be required on all food items to ensure compliance with the Texas Public School Nutrition Policy for nutrient standards and portion sizes. SY 2007–2008 revisions become effective August 1, 2007, which includes trans-fat information in all product specifications.”
- “The supplier shall provide Trans Fat specifications based on changes mandated by USDA/TDA in regards to the national school lunch program.”
- “The Multi Region Co-Op is requesting items whenever possible to be TRANS FAT FREE. TRANS FAT MUST BE LISTED on Nutritional Analysis Sheets.”

Similar to TDA’s survey on regional initiatives, the agency also conducted a survey on individual school district initiatives in 2007. The results are given in Figure 2 and described below.

Figure 2: District Initiatives to Reduce Trans-Fatty Acids



- Thirty (30) percent have school districts that are including trans-fatty acid guidelines as part of local school wellness policies.
- Ninety (90) percent have school districts that are purchasing foods with less trans-fatty acids.
- Forty-five (45) percent have school districts that are providing nutrition education to food service staff to learn ways to reduce trans-fatty acids.
- Ninety (90) percent have school districts that will be eliminating, or have eliminated deep fat frying as a method of on-site preparation.
- Thirty (30) percent have districts taking other steps, including:
 - Altering recipes to use non-trans-fat ingredients.
 - Hosting education booths at health fairs.

- Developing healthy trans-fat free snack lists for PTA.
 - Baking rather than frying foods.
 - Draining and rinsing cooked ground beef.
- Twenty-five (25) percent of regions reported school districts that are including trans-fatty acid guidelines for all food items served or sold to students, including school meals, as part of their local school wellness policy.

Steps school districts are taking to evaluate and identify if there has been a reduction in the purchase of products containing trans-fatty acids for all food items served or sold to students include the following:

1. Implementing New Bid Requirements

- Requesting that trans-fat information accompany all food bid items.
- Requesting updated Nutrition Facts labels for all food items from distributors and manufacturers.

2. Revising Purchasing Guidelines

- Developing bid procedures that have reduced/eliminated the number of food items containing trans fat.
- Food service management companies Aramark and Sodexo switched entirely to “zero trans fat” cooking oils by 2007. They both also work to source a variety of zero trans fat items.

3. Gathering and Distributing Information

- Posting or providing all product nutrient information available for use in menu planning.

4. Revising Menus

- Having a nutrition specialist prepare cycle menus.
- Revising menus with products containing minimal trans-fatty acids.
- Using software to analyze menus for trans-fatty acids.

5. Analyzing Progress

- Comparing the food labels of previous versus current products to analyze menus and compare trends.

Federal Initiatives

As previously mentioned, the U.S. Food and Drug Administration (FDA) passed a rule in 2003 that food manufacturers must list trans fat on their nutrition labels by 2006. The U.S. government revises its Dietary Guidelines for Americans (DGAs) every five years, most recently in 2005. Based on that update, the U.S. Department of Agriculture (USDA) is in the process of codifying the 2005 DGAs into the guidelines that manage school nutrition programs. USDA has already reduced trans fat from its commodity products for schools and stopped offering solid shortening entirely. As of October 2008, only 24 product fact sheets from among the 267 commodity products purchased by USDA for use in the National School Lunch Program listed any trans fats at all. Of those, none were for grain or bread products, two were in the fruit/vegetable category (both for prepared potato products), five were for cooking oils, and 17 were for meats.

Summary

The Texas Department of Agriculture (TDA) and U.S. Department of Agriculture (USDA) have made great progress in reducing the trans-fatty acid content of school meals in recent years. Many trans fat-free products are increasingly available to schools, diminishing their need to include trans fat in their menus at all. School districts are also taking active measures to educate their food service staff on how to reduce fat in food preparation. Finally, both students and parents are gaining a greater awareness of the health risks of trans fats. In reviewing the efforts currently being made, it is likely that trans fat will soon be non-existent in school meals. TDA will continue to monitor the progress of school districts towards reaching this goal and will work closely with the Legislature should needs arise.

Appendix A: Texas Trans-Fatty Acids Initiatives Survey

Initiatives to Reduce Trans-Fatty Acids

1. Introduction

TDA is conducting a short survey to assist in evaluating current initiatives being conducted in your region to reduce trans-fatty acids in all food items served or sold to students, including school meals.

This survey corresponds to House Bill 4062's Trans-Fatty Acid Study, in which TDA will be reporting to Texas Legislation steps that are being taken to reduce trans-fatty acids from all school meals and nutrition programs.

For each CNP Specialist within each ESC Region, please submit a completed survey by February 29, 2008.

* 1. General information

ESC CNP Specialist Name:

ESC Region:

Email Address:

* 2. What initiatives are school districts in your region currently conducting to reduce trans-fatty acids from all food items served or sold to students, including school meals? Check all that apply.

- ☐ School districts are including trans-fatty acid guidelines as part of local school wellness policy
- ☐ School districts are purchasing foods with less trans-fatty acids
- ☐ School districts are providing nutrition education to food service staff to learn ways to reduce trans-fatty acids
- ☐ School districts will be eliminating, or have eliminated deep fat frying as a method of on-site preparation
- ☐ Other (please specify)

3. If any school district(s) in your region are including trans-fatty acid guidelines for all food items served or sold to students including school meals, as part of their local school wellness policy, please list the name of the school district(s) below.

* 4. What steps are school districts in your region doing to EVALUATE and IDENTIFY if there has been a reduction in the purchase of products containing trans-fatty acids for all food items served or sold to students, including school meals?

Initiatives to Reduce Trans-Fatty Acids

*** 5. What steps or initiatives is your ESC conducting to ASSIST school districts in reducing the amount of trans-fatty acids in all food items served or sold to students, including school meals? Check all that apply.**

- ☐ The ESC provides training opportunities to educate school food service staff on how to effectively reduce trans-fatty acids
- ☐ The ESC provides nutrition education material and information on trans-fatty acids
- ☐ The ESC provides technical assistance - including review of products containing trans-fatty acids

Other (please specify)

*** 6. Please provide the name of at least five school districts that you recommend for TDA to contact on their efforts in reducing trans-fatty acids from all food items served or sold to students, including school meals.**

1.
2.
3.
4.
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