Food Industry Perspective on Eliminating Trans Fats in Food Products

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Project Objectives

- **to compile information through consultations with industry to address, and provide a better understanding of:**
  - **the food industry's awareness of the trans fat situation,**
  - **related potential business impacts on the food industry (resulting from the removal or reduction of trans fats,**
  - **efforts currently being undertaken or planned by the industry to reduce trans fat in processed foods, and**
  - **the status of the food industry's compliance with trans fat labeling legislation.**

TFA in Foods – Pre-2005

Of the 805,000 tonnes of deodorized oil sales:

- **39% used to manufacture shortening, a source of TFAs,**
- **15% used to manufacture margarines, a source of TFAs, and**
- **45% used for salad oils, which is not a source of TFAs.**

TFA in Foods – Pre-2005

- **Estimated daily intake of 9.5 grams of TFA per day is based on:**
  - **1.8 grams from margarine products,**
  - **4.0 grams from processed foods,**
  - **2.7 grams from restaurant meals, and**
  - **1.0 gram from naturally occurring TFAs from ruminant animals.**

- **Industrially produced TFAs (8.5 grams) are;**
  - **8% of all fats and oils consumed in a day, and**
  - **17% of mono-unsaturates consumed in a day.**

Fatty Acid Composition of Selected Fats and Oils

Oil/Fat	Trans	Saturates	Mono-unsaturates	Poly-unsaturates
	%	%	%	%
Coconut Oil	0	91	7	2
Palm Kernel Oil	0	82	15	2
Butterfat	3	65	31	2
Beef Tallow	3	46	49	2
Palm Oil	0	51	39	10
Cottonseed Oil	0	28	18	54
Peanut Oil	0	19	49	32
Soy Oil	0	15	23	61
Corn Oil	0	14	26	60
Olive Oil	0	12	81	7
Sunflower Oil	0	11	26	62
Sunflower Oil (High Oleic)	0	9	59	32
Canola Oil	0	7	65	28
Touch hydrogenation (soybean oil)	24	15	36	23
Typical shortening (soybean oil)	37	20	25	12
Fully hydrogenated (soybean oil)	0	100	0	0

A number of TFA alternatives are high in saturates

Survey Respondents

Segment
Food Retail
Food Service, including Distribution
Edible Oil & Margarine Manufacturers
Ingredient Manufacturers & Suppliers
Snack Food Manufacturers
Bakery and Related
Breaded Meat Products
Other Food Manufacturers, including Entrees
Suppliers to Agriculture and Associations

Once we contacted the appropriate person, companies were willing to speak to us on the TFA reduction/elimination issue

Findings - Awareness

- **Mandatory Labeling**
  - **High awareness at 98%**
  - **This is a large issue for specific small companies "I am not really sure what they mean to a small operator like me"**
- **Parliamentary motion to reduce/eliminate**
  - **High awareness at 96%**

Compliance with Labeling

- **76% expect to be in compliance by the end of 2005**

- **Issues Affecting Compliance**
  - **Labeling related issues**
    - **Cost of nutritional analysis**
    - **Cost of new labeling equipment**
  - **Availability of non-TFA solutions**
  - **Information available**
  - **Time available before compliance**

Who is Working on TFA Reduction

- **Over 70% of the food companies have a technical team working on the TFA issue,**
  - **For the remainder it is one person, or the owner-operator**
- **60% of these companies indicated that they are receiving assistance from their fat and oil supplier.**
- **Other:**
  - **Some use outside resources**
  - **Extra costs of hiring new staff**
  - **Some suppliers could be more responsive with solutions**

Goal: Reduce or Eliminate

- **47% were going to reduce them to make a "trans fat free" claim (<0.2 grams),**
- **29% were going to be in compliance with regulations on labeling,**
- **23% were going to eliminate TFA, or eliminate where possible and**
- **3% were planning to to reduce TFA to a level that is higher than the "trans free claim, such as 1% .**

Importance of TFA Reduction

- **38% considered it a top priority,**
- **23% considered it very important, and**
- **38% considered it important.**

Noteworthy comments;

- **It is not a top priority just a priority driven by an imposed deadline.**
- **Very important. It will have a significant impact on our business over the next couple of years. It will change the baking industry.**
- **Now we have it basically under control and so, currently, it is not as important as it was.**
- **Initially it was top priority for marketing success and positive customer interaction.**
- **Not too large an issue, only 5% of products are affected**

Achievable Levels of TFA Reduction

- **52% can (are) at zero or less that 0.2 grams of TFA,**
- **19% were not sure or did not know,**
- **10% indicated they had a concern with naturally occurring TFAs,**
- **7% indicated to be as low as possible, to meet customer requirements, or to meet labeling requirements, and**
- **7% indicated to be less than 1% TFA.**

TFA Reduction is an issue for a number of pastry products

How TFAs Are Being Reduced

- **67% would use different fats and oils,**
- **20% would use different processes/ formulations,**
- **8% would use a combination of different processes, inputs, and fats/blends, and**
- **5% would use different inputs.**

TFA Replacement -Types of Fats

Frequency of responses *"to type of fats used to replace TFAs"*

- **Canola oil – 15,**
- **Palm and modified palm oil – 14,**
- **Non-hydrogenated canola and soybean oil – 4,**
- **Poly-unsaturated and mono-unsaturated – 3**
- **Sunflower oil – 3,**
- **Coconut oil – 3,**
- **Soybean oil – 2,**
- **High oleic oil – 2,**
- **Lauric oils – 2,**
- **Fully hydrogenated oils – 1,**
- **Olive oil – 1,**
- **Corn oil – 1,**
- **Cottonseed oil – 1.**

TFA Impact on Business Volume

- **Business volume affected by TFA**
  - **Average is 52% of business volume**
  - **Median is 50% of business volume**
  - **For 29% of companies TFA affects over 90% of their business volume**

Problems Encountered

Areas of Comments Received Re; Problems

- **Food product attributes**
- **Functionality of fats and oils**
- **Property of TFA alternatives**
- **Availability of TFA alternatives**
- **New processes associated with TFA alternatives**
- **Labeling issues**
- **Marketing and product positioning**
- **Costs incurred**

Associated Impacts

- 62% mentioned a change in product formulation
- 31% did not expect to make a change in process
- 31% had to invest in new equipment; elaborating comments in the areas of:
  - Handling equipment
  - Processing equipment
  - Process related costs and higher labour costs
  - Labeling and printing equipment
- 75% indicated costs will be higher, areas include
  - Fats and oils
  - Supply chain costs
  - Loss of production efficiencies

Availability of TFA Alternatives

- 63% could find alternatives,
- 22% indicated they could not
- Areas of comments on availability included:
  - Availability of alternatives
  - Functionality of alternatives
  - Responsiveness of suppliers
  - Length of time on resolving TFA issue

Products Easier to Replace TFA

- Salty snacks
- Potato based products
- Breads and rolls
- Cookies and muffins
- RTE cereals
- Products with no texture issues
- Grain based products
- Margarines
- Puddings

Easy to replace refers to functionality and product attributes issues, and not whether the alternative is "healthier"

Products Difficult to Replace TFA

- Pastries
- Laminates
  - Bakery product with layers of shortening and dough
- Pies
- Doughnuts
- Icings
- Corn based snacks
- Biscuits
- Products with naturally occurring TFAs

Difficulty replacing TFA due to the functionality of shortenings (hydrogenated products) to produce needed structure and sensory requirements (mouth feel)

Product Related Impacts

Frequency of responses to *"product related impacts"*

- **Flavour, texture, shelf life issues and product stability - 20**
- **Shelf life issues - 11**
- **Texture - 8**
- **Product stability - 7**
- **Flavour - 6**
- **Sensory - 4**
- **Rancidity –1**

Comments

- **"expected shelf life to be reduced by 50% on pastries"**

Labeling Issues

- **58% of food companies encountering labeling issues**
- **Comments in areas of;**
  - **Standards associated with labels**
  - **Labeling costs**
  - **Complexity of the task**
  - **Harmonization with the U.S.**
  - **Labeling and communicating with consumers**
  - **Labeling strategy**

TFA Reduction a Competitive Edge?

- **24% indicated TFA reduction will provide a competitive edge,**
- **49% indicated TFA reduction will not provide a competitive edge**
  - ***TFA reduction is seen as required to remain competitive***

- **Food companies are not introducing new products based on TFA reduction;**
- **However, any new product launched will be a TFA reduced product.**

Other Business Impacts

- **In response to a closing question on other business impacts, response areas included:**
  - **Information base on TFA in products,**
  - **Labels and consumer awareness,**
  - **Harmonization with the US and border enforcement,**
  - **Business impact due to product quality,**
  - **Ability of small manufacturers to comply**
  - **Company readiness**
  - **Time required for compliance with labeling**
  - **Positioning of the food industry**

TFA Issues for Consideration - I

1. **TFA Alternatives and Food Product Attributes**
   - Increase in use of saturated fats (palm, fully hydrogenated, etc)
   - Difficult to replace TFA in some products
   - Product shelf-life can decrease
   - TFA present in deodorized oil in small quantities
   - TFA created in some food manufacturing processes
2. **Transition Issues to Mandatory Label Declaration**
   - Some TFA alternatives not readily available
   - Having labeling and packaging ready for December
   - New solutions are being developed, and time required for testing and label preparation
   - Reluctant to move too quickly as cheaper solutions may become available

TFA Issues for Consideration - II

3. **Labeling Issues**
   - Naturally occurring TFAs part of mandatory labeling, or separate labeling for industrially produced TFA?
   - Potential mis-use of "Free of trans fats" with 0.2 grams
   - Identification of required labeling equipment for in-store use
   - Cost of printing equipment
   - Cost of nutritional analysis per SKU
4. **Harmonization with the U.S.**
   - 0.5 grams versus 0.2 grams
5. **Enforcement and Compliance Issues**
   - Enforcement of mandatory labeling requirements on imports
   - Degree of precision on testing ~ +/- 0.3 grams
   - Will laggards have an economic advantage

TFA Issues for Consideration - III

6. Supply Chain Issues

- Higher costs in the supply chain to handle liquid product
- Higher costs due to shorter shelf life
- Higher costs due to more frequent order of smaller lots

7. Cost Related Areas

- Higher supply chain costs
- Higher fats and oil costs
- Labels and associated packaging/printing equipment
- Nutrient analysis ~ $500 to $800/SKU
- More staff, or contracts

TFA Issues for Consideration - IV

8. Impact on Smaller Food Manufactures

- Do not have in-house resources, or technical capacity
- Suppliers of fats and oils spending time with larger accounts
- Capital costs can be significant for small operators (bakeries)
- Need to be absolutely certain on change, as they can not afford to be wrong

9. Impact on Domestic Oilseed Industry

- Reduction in demand for domestically grown oilseeds,
- Increase in use of imported oils, e.g. palm oils,
- Opportunity for new varieties for specialty oils (e.g., high oleic sunflower, low linolenic/high oleic canola),
- I.P. Programs to deliver specialized seed varieties

In Conclusion

- **The issues associated with TFA labeling, and TFA elimination/reduction are manageable**
- **Our team enjoyed working on behalf of Agriculture and Agri-Food Canada on this project.**
- **We would like to thank Agriculture and Agri-Food Canada for using the services of the JRG Consulting Group our services**