



Publication Date : June 10, 1997

# FLAXSEED MISSION TO JAPAN

## June 1 - 6, 1997

### Flaxseed for Bakery Products

### Flaxseed for the Laying Hen Feed Market

Prepared by:

**Bernard Badani**  
Grains and Oilseeds Division  
International Markets Bureau  
Market and Industry Services Branch  
Email: [badanib@em.agr.ca](mailto:badanib@em.agr.ca)

June 10, 1997

---

## TABLE OF CONTENTS

### ACKNOWLEDGMENTS

### PART 1: GENERAL MISSION REPORT

- [1.1 Objectives](#)
- [1.2 Mission Members](#)
- [1.3 Contacts Established](#)
- [1.4 General Findings](#)
- [1.5 Flaxseed as a Food Product in Japan](#)
- [1.6 Opportunities](#)
- [1.7 Constraints](#)
- [1.8 Conclusions](#)
- [1.9 Recommended Market Development Strategy](#)
  - [1.9.1 Flaxseed in layer rations](#)
  - [1.9.2 Flaxseed use in bakery products](#)
  - [1.9.3 Other general recommendations](#)

### PART 2: INDIVIDUAL MEETING REPORTS

- [2.1 Briefing at Canadian Embassy](#)
- [2.2 Yamazaki Baking Co. Ltd.](#)
- [2.3 Fuji Baking Company](#)
- [2.4 Shikishima Baking Company Ltd.](#)
- [2.5 Kinokuniya Food Center](#)
- [2.6 Zen-Noh](#)
- [2.7 Nihon Nosan Kogyo](#)
- [2.8 Nippon Formula Feed Manufacturing](#)
- [2.9 Japan Health Food and Nutrition Food Association - JHFNFA](#)
- [2.10 Ise Foods Inc.](#)
- [2.11 Japan Baking Industry Association](#)
- [2.12 Ministry of Health and Welfare- Food Sanitation Division - Environmental Health Bureau](#)
- [2.13 Debriefing with Canadian Embassy Officials](#)
- [2.14 Canadian Consulate General in Osaka](#)
- [2.15 Kanaka Corporation](#)

### **Appendix 1: Contacts :**

- [A\) Mission Members](#)
- [B\) Canadian Embassy, Tokyo](#)
- [C\) Canadian Consulate General , Osaka](#)
- [D\) Yamazaki Baking Co. Ltd](#)
- [E\) Fuji Baking Co. Ltd](#)
- [F\) Shikishima Baking Co. Ltd](#)
- [G\) Kinokuniya Food Centre Co. Ltd](#)
- [H\) Zen-Noh \(National Federation of Agricultural Cooperative Associations\)](#)
- [I\) Nihon Nosan Kogyo K.K.](#)
- [J\) Nippon Formula Feed Manufacturing Co.](#)
- [K\) Japan Health food & Nutrition Food Association](#)
- [L\) Ise Food Inc.](#)
- [M\) Japan Baking Industry Association](#)
- [N\) Ministry of Health and Welfare](#)
- [O\) Kaneka Corporation](#)

---

## **ACKNOWLEDGMENTS**

The mission members would like to thank the Canadian Embassy in Tokyo and the Canadian Consulate General in Osaka for their assistance in organizing and conducting this mission. Special thanks are due to Mr. Ron Davidson, Commercial Counselor, and to Mr. Yuzuru Kagi, Commercial Officer, for their invaluable assistance.

## **PART 1: GENERAL MISSION REPORT**

### **1.1 OBJECTIVES**

The purpose of this Flax Council of Canada mission was to explore opportunities and constraints existing in Japan for Canadian flaxseed exports oriented towards the bakery and laying hens feed market segments, with the objective of identifying the most appropriate market development strategy to follow.

## 1.2 MISSION MEMBERS

The mission members were:

Barry Hall, Marketing Manager of the Flax Council of Canada (FCC), Thomas Payne, Marketing Consultant for the FCC, and Bernard Badani, Deputy Director for Export Market Support, Grains and Oilseeds Division of Agriculture and Agri-Food Canada (AAFC).

Mr. Yuzuru Kagi, Commercial Officer of the Canadian Embassy in Tokyo, accompanied the mission throughout all their Tokyo meetings.

## 1.3 CONTACTS ESTABLISHED

During the course of the week, mission members participated in 15 different meetings establishing contact with 3 leading bakery companies (Yamazaki, Fuji and Shikishima); a specialty foods supermarket with in-house bakery facilities (Kinokuniya); 4 leading egg and feed production companies (Zen-Noh, Nihon Nosan, Nippon Formula Feed and ISE Food Inc.); an Osaka based major food/bakery products supplier (Kaneka); the Japan Bakery Industry Association; the Japan Health Food and Nutrition Food Association; and the Ministry of Health and Welfare. Mission members also met twice with Canadian Embassy officials in Tokyo and once with Canadian Consulate General officers in Osaka. [*For more details see Part 2 of this document "Individual meetings report", and Appendix I "Contacts List".*]

## 1.4 GENERAL FINDINGS

In general terms, the mission found the Japanese market to be very health conscious, partially as a result of their aging population. A wide variety of products claiming to include health promoting ingredients are available in the market and command premium prices. Government regulations regarding health claims are somewhat loose. While actual health claims in the packaging are normally not allowed without specific approval (see [2.9](#)), ingredient enrichment claims for allegedly beneficial components are widely prevalent, even in circumstances where either the level of enrichment, or its potential benefits, appear to be questionable or marginal by Canadian standards. Furthermore, while health claims in the packaging may be limited by regulations, the distribution of promotional literature at the point of sale making those same claims appears to be widely practiced, although it was not clear if this is officially sanctioned.

## 1.5 FLAXSEED AS A FOOD PRODUCT IN JAPAN

Flaxseed appears to be practically unknown to Japanese consumers as a food product ingredient and little known by regulatory authorities and most non-technical bakery executives. Recognition is mostly limited to linseed oil, which is basically known for its industrial uses, thus having a negative image for human consumption. Although a few bakeries feature limited amounts of flax based products as well as Roman meal, a bakery mix that includes defatted flaxseed as an ingredient, none of these products appear to be particularly popular with consumers.

The use of flaxseed in poultry rations was well known to only one of the four companies visited (Zen-Noh) which uses very small amounts of linseed oil (rather than the whole seed), in their laying hens rations to enhance Omega 3. A second company, ISE Foods Inc., also indicated some awareness of flaxseed through its extensive USA operations where they are the second largest egg producer, a factor which made them very receptive to our message.

## 1.6 OPPORTUNITIES

The health products trend prevalent in Japan offers, in principle, some marketing opportunities for flaxseed given its nutritional composition. Flaxseed is particularly high in Alpha Linolenic Acid (ALA), an Omega 3 fatty acid. The intake ratio between Omega 6 and Omega 3 fatty acids is generally considered important for the maintenance of a health enhancing balanced diet. In North America, with an Omega 6 to Omega 3 ratio of close to 12 or 13 to 1, it is widely accepted that a serious imbalance exists, with a ratio of about 4 or 5 to 1 being recommended. For this reason, flaxseed is perceived as desirable by health conscious consumers, and Omega 3 is gaining recognition. Flaxseed can be consumed directly, as in bakery products, or indirectly through its inclusion in layer rations (increasing the Omega 3 content of the eggs as well as decreasing the amount of saturated fatty acids in the yolk). These characteristics could be particularly important in the health conscious Japan market.

Canada's large flaxseed production base, high quality, the visual similarity to sesame (which is well liked as a bakery topping by Japanese consumers), and the extensive documentation available from the FCC regarding nutritional benefits and practical usage recommendations (ie. industrial bakery recipes, poultry rations data, etc.), are all positive factors that could assist penetration of the Japanese market. Flaxseed is also price competitive when compared against other specialty bakery ingredients (i.e. sesame, raisins, walnuts or, as source of ALA, Perilla Oil).

## 1.7 CONSTRAINTS

Acceptance by the Ministry of Health and Welfare of flaxseed as a food ingredient was clearly pointed out as a critical prerequisite to more extensive market penetration. In principle it appears to be a relatively simple procedure, as Ministry officials only asked for Canadian (CGC) pesticide residue regulations governing this crop [See [2.12](#)]. Nevertheless, there may still be some hurdles to be overcome regarding the presence of cyanogenic glucosides in flaxseed, an issue about which health authorities do not appear to be presently aware but which will need to be clarified to reassure them about the safety of the product.

Some other more immediate constraints were also identified, the main one being the lack of consumer familiarity with the product. Furthermore, neither Omega 3 nor ALA are extensively known by the Japanese consumer who, in this category of compounds, seems to be only aware of DHA, another Omega 3 fatty acid present in fish oil but not in flaxseed, and which they (very questionably) link with "promoting brain development and good eyesight". Furthermore, the promotion of products high in Omega 3, to alleviate a dietary imbalance in the Omega 6/Omega 3 consumption ratio, is considerably less significant in Japan which, given its much higher fish products intake per capita, already enjoys a much better ratio than North America (probably 6 to 1).

Other constraints which should be addressed are the need to improve Japanese technical knowledge on how to utilize flaxseed in bakery products to avoid potentially negative flavor and texture problems, and how to overcome the negative image of "linseed" as an industrial product in the minds of some consumer and regulatory authorities. Two other issues raised during this visit were the reliability of Canada as a supplier (linked apparently to the recent transport problems on the West Coast), and the guarantee that flaxseed does not come from transgenic varieties (which are not yet commercially available for flaxseed).

## 1.8 CONCLUSIONS

The mission members' conclusion from this visit to Japan is that, although significant constraints exist for the introduction of flaxseed as a food product in Japan, there are also significant opportunities worth exploring.

## **1.9 RECOMMENDED MARKET DEVELOPMENT STRATEGY**

### **1.9.1 Flaxseed in layer rations**

The strategy to promote this usage appears to be quite straightforward through the contact established with ISE Foods Inc. As mentioned above, this company is not only the largest single producers of eggs in Japan, but also the second largest in the USA [*See 2.10*].

The path to follow, as agreed with ISE executives during our visit, is for the FCC to establish immediate contact with the ISE main nutritionist in the USA (whom ISE executives agreed to notify of our discussions), provide the nutritionist with all available information on the subject and discuss the possibility of testing flaxseed in their USA operations. If the results are positive, we could expect a much easier acceptance by ISE Japan, once the economic and technical viability of the inclusion levels is also corroborated in that country and the marketing positioning of the resulting product is identified. The fact that ISE Japan is heavily oriented towards the "specialty eggs" market (DHA eggs), that these specialty eggs command up to three times the price of ordinary eggs, and that ISE Japan International Supervising Department manager, Mr. Masao Igawa, spent 12 years in their USA operations (from which he has recently returned) are all factors favoring this strategy.

Independently of the potential penetration of the Japanese poultry feed market, the high level contact established for contact with ISE USA, through Mr. Kinio Tabata, Vice Chairman for ISE USA (also in attendance at the meetings), should prove of significant value to the Canadian flaxseed industry.

Regarding other Japanese egg and/or feed production companies (Zen-Noh, Nihon Nosan, and Nippon Formula Feeds), follow up at this stage should be limited to distribution of additional technical information on the subject and responding to any questions that may arise after they have reviewed such literature.

### **1.9.2 Flaxseed use in bakery products**

The penetration of this market segment appears to be more complex. A market development strategy should involve both technology transfer directed towards Japanese bakeries and a consumer awareness campaign based on publicity rather than advertising. Shikishima Baking Co. Ltd., considered the most likely company to partner in this effort, is Japan's second largest bakery and is both innovative and strongly oriented towards the specialty breads market. Its executives appeared highly receptive to our message [*See 2.4*]. It is recommended that an invitation should be extended to Shikishima technical staff to visit Canada to spend time with CIGI and other bakery experts studying potential baking formulas and techniques geared to producing flax bakery products oriented towards the Japanese taste.

Extending a similar invitation to Fuji bakeries, which also showed considerable interest, should also be considered [*See 2.3*]. Yamazaki and Koyoshoka bakeries, both customers of Kanaka, should be next in line.

A second step, once the technical transfer has taken place and flax based products are ready to be launched in the market, would be to take a Canadian human nutrition expert to Japan to engage in a series of meetings or press conferences directed at Japanese food editors, particularly those writing for women's magazines, which appear to have a high degree of influence on purchasing decisions. This publicity campaign should be carefully coordinated with the launching/presence of the featured products in Japan to allow the readers to try them immediately.

A precondition to any efforts directed towards the bakery market would be to ensure official acceptance of flaxseed as a food ingredient in Japan. For this purpose, the pesticide residues regulations requested by the Japan Ministry of Health and Welfare should be sent as soon as possible through the Canadian Embassy.

Regarding the potential issue of cyanogenic glycosides, Health Ministry officials did not appear to be aware of this issue, but it was nevertheless raised by several industry contacts [See [2.12](#)]. Therefore, it is the considered opinion of the mission members that we should be prepared to respond to this issue if it is raised, and that Japanese potential invitees for flax bakery training should be fully briefed on the subject while in Canada. Their advice and assistance should be requested about making appropriate representations to Japanese Health officials, were this to be required.

### **1.9.3 Other General Recommendations**

Generally, a more prominent featuring of flaxseed as a food or feed ingredient in all appropriate CIGI international courses should be explored. In this context, aside from any potential specific flaxseed courses, the possibility of inviting major Japanese bakery companies, not just Japanese millers, should be discussed with CIGI. This could also be of assistance to other Canadian bakery ingredients.

The Japanese trading house representatives on the West Coast (Mitsui, Mitsubishi, etc.) should be approached to make them aware of these potential non-traditional uses of flaxseed and of the interest identified by some of their customers.

In-coming Japanese missions (i.e. journalists, government officials, etc.), sponsored by Agriculture and Agri-Food Canada, should consider including in their schedule of visits the FCC, bakery and laying hen operations.

The Flax Council of Canada will discuss these recommendations internally and may include them in their AIMS strategy update document for potential government assistance.

[Return to Table of Contents](#)

---

## **PART 2: INDIVIDUAL MEETING REPORTS**

### **2.1 BRIEFING AT CANADIAN EMBASSY**

Ron Davidson - Counselor (Commercial)

Louis Boisvert - Counselor (Investment)

Yuzuru Kagi - Commercial Officer

Alison Murray - Senior Program Officer (Science and Technology)

The population of Japan is rapidly aging. Japan has a very low birth rate (1.4%) and practically no immigration. As a result, 15% of the people are now over 65, a figure that could increase to 27% in 25 years. This demographic pattern will in turn change Japan's labour practices. For the time being, underemployment is still quite prevalent and female participation in the work force is limited after marriage, but if Japan wants to avoid serious labour shortages in the future, both these practices will have to change. Labour shortages are already having an impact in the agricultural sector where the average age of farmers is even higher than in urban centers. These



agricultural labour shortages are partially responsible for the decline of their domestic pork industry, as many small producers have ceased operations. This has created significant opportunities for Canadian pork exports to Japan, based not on an increase of per capita consumption (as is the case for beef), but rather as a replacement for declining domestic production.

Of more direct impact for flaxseed exports, the aging population has further reinforced the traditional Japanese attraction to herbal and holistic medicines, manifested today in the popularity of health foods and nutraceuticals.

Regarding flaxseed, a great drawback is that this product is little known to the Japanese consumer. A consumer awareness campaign is therefore recommended. Obtaining approval from the Minister of Health and Welfare for the use of flaxseed as a food ingredient is also urgently required. An attempt by a Canadian company to introduce Linola (a Solin type flaxseed oil with a composition profile similar to sunflower oil) was unsuccessful largely due to this lack of approval, as health authorities equate flaxseed with linseed oil, considered applicable only for industrial uses.

Finally, trying to obtain a Foods For Specified Health Use (FOSHU) label for flaxseed, probably through partnership with a major Japanese company interested in the product, was also advanced as a potentially significant advantage in gaining acceptance for flaxseed among processors and consumers. This 'seal of approval' is granted by the Ministry of Health and Welfare at the recommendation of the Japan Health Food and Nutrition Food Association (JHFNFA), which is apparently an advisory body with some regulatory functions. [*See 2.9 regarding the meeting with JHFNFA, which created serious doubts about the usefulness and transparency of this procedure.*]

## **2.2 YAMAZAKI BAKING CO. LTD.**

Sakae Hotta - Manager, R&D Group, Tokyo Division

Osamu Harada - Chief, Baking Technology Section, R&D Division

Seio Hosoya - Material Research Section, R&D Division

Yamazaki is the largest bakery corporation in Japan and one of the two largest in the world. Its annual sales amount to 540 billion Yen (in excess of \$6 billion Can.). It comprises 22 companies, sells to 71,000 retail outlets, operates several specialized chain stores subsidiaries and has investments in 5 foreign countries. Its products range from traditional Japanese bakery items to frozen dough, specialty breads, lunch boxes, prepared foods, etc, but its main strength is in the production of "Pullman type" bread (soft crust white bread loaf) which account for about 60% of the Japanese bakery market.

The Yamazaki Tokyo R&D Division executives we met appeared to be oriented towards white bread loaf production and not particularly familiar with the use of flaxseed in bakery products. They stated for example that "Yamazaki does not use flaxseed at all", although Yamazaki Bakeries Osaka Division is using it, albeit in a relatively small scale, obtained via Kanaka Corporation that distributes frozen dough and premixes to the bakery industry [*See 2.15*].

The Yamazaki executives were concerned about the shelf life (stability) of the product, given the high linolenic content of flaxseed, indicating that "it smells like paint after a while". They also indicated that the Japanese consumer likes soft texture products and that because of this preference, Roman meal mix (which contains defatted flaxseed), has not been able to capture significant market share. Whole wheat bread sales are also flat for the same reason. Regarding flavor, they indicated consumers like roast seeds flavors and aromas after baking, such as obtained from the use of sesame seed, walnuts, hazelnuts, etc. Regarding this point, Yamazaki officers

commented favorably on the appearance and flavor of the raw flaxseed sample presented by the mission as being similar to sesame, which is well accepted by the Japanese consumers. [*Kanaka Corporation, the bakery suppliers mentioned above, roasts Canadian flaxseed prior to inclusion in their bakery mixes for sale in Japan. See [2.15](#)*]

Yamazaki officers also expressed some concern about potential "digestive problems" and asked if it had been approved by the regulatory authorities for food usage in Japan. They indicated that accreditation by health authorities for food safety is a crucial first step before extensive use can be considered. Increasing consumer awareness of flaxseed and emphasizing its nutritional advantages would be important after this accreditation has been obtained.

Finally, Yamazaki officials expressed the need for Canada to ensure it does not run into future supply problems with this commodity (a remark that may reflect the recent West coast transportation problems for Canadian wheat, which Yamazaki obtains through the Japanese Food Agency).

### **2.3 FUJI BAKING COMPANY**

Kazuchiro Onishi - Manager, New Products Development Section, Tokyo Region  
Yoichiro Hagiwara - Manager, Nagoya Region

This is the second largest bakery in Japan (after Yamazaki). They consider themselves not as large as Yamazaki (particularly in the Tokyo region) but more innovative.

Fuji bakery researchers have experimented with flaxseed but were not satisfied with the end product. The flavor was good, but its oily smell was a great disadvantage, so they decided not to offer it for sale. Part of the problem may be that they tried the product ground rather than in whole seed form, a fact they found interesting when it was pointed out to them.

Fuji officials also showed interest in the potential nutritional advantages of flaxseed as the health products boom is continuing. Fuji, for example, has also tried including Quinoa, Blueberries, DHA (from fish oil) and Aloe Vera in bakery products to take advantage of this market trend. They indicated, however, that the product must be made well known to the consumer, otherwise it will not be successful. At this time flaxseed and flaxseed products are totally unknown in Japan, except for its linseed oil form associated exclusively with industrial uses.

Although considerably more receptive to the potential use of flaxseed, their message was quite consistent with Yamazaki in emphasizing the need to gain consumer awareness for the product before extensive use of it can be made by the bakeries.

### **2.4 SHIKISHIMA BAKING COMPANY LTD.**

Masaaki Tsubota - Director  
Sakae Hotta - R& D Products Manager  
Atsushi Sato

This corporation, which is also known by the brand name of Pasco, is another large bakery group with headquarters in Nagoya and operations across Japan and abroad, including a plant in Portland, Oregon which produces frozen dough for export to Japan. Shikishima also has a large research staff, including professional nutritionists, dedicated to investigating practical applications rather than pursuing academic research.

They indicated they were not familiar with flaxseed, although Mr. Sato appeared to be vaguely



aware of its presence in some bakery mixes (such as Roman meal mix). Nevertheless, Shikishima is particularly strong in the specialty bakery products market and they were very interested in meeting with our delegation (to the point of bringing their R&D Product Manager from their Research Headquarters in Nagoya to meet us). They already produce health oriented bakery products featuring DHA, Beta Carotene and similar components. They mentioned, however, that this trend may have gone too far on certain products (particularly in the case of DHA, whose benefits for brain development are questionable at best, and which apparently produces poor quality bakery products), and therefore felt it was time to "go back to basics". With this in mind they are now trying an organic blend.

Shikishima officials were very interested in the nutritional advantages of flaxseed and wondered why trading houses have not pushed it before. They suggested that working with a specialized food company, such as Shoei (from which they purchase a significant part of their inputs) may be more useful, as general trading houses tend to concentrate on large volume products (sold by the shipload rather than at the container level).

In conclusion, Mr. Tsubota stated that "Flaxseed fits exactly with variety breads at which Shikishima is very strong given our extensive experience in that field". Shikishima officials also attend the annual Bakery Expo in Las Vegas and will be in contact with the Flax Council at that show.

## **2.5 KINOKUNIYA FOOD CENTER**

Mr. Watanabe - President

Mr. Saisumi - Vice President

Kyonosuke Odajima - Director/Plant Manager

Tsuneharu Amano - Chief, Customer Relations

This is a unique supermarket chain featuring a high percentage of specialty and imported products, geared towards the high income Japanese and expatriate communities. They have their own in-house bakery producing a wide variety of products, including several German type flaxseed breads.

They indicated that the Japanese bread market consumes about 5 million tonnes of flour a year. "Pullman" type bread (white soft crust loafs) accounts for about 60% of the market, while the other 40% is captured by a mixture of specialty breads and traditional Japanese bakery products. Specialty breads are becoming more popular, particularly if they appear to offer some nutritional or health benefit. Japanese food decision makers (most of which are women) are very reactive to what they see on TV or read in magazines and seem very ready to try any new product being recommended. The downside of this tendency is that product life cycles tend to be quite short, with consumers rapidly changing from one trendy product to another.

Kinokuniya executives stated they cannot promote flaxseed on a nutritional basis due to its "cyanide content" (by which they meant cyanogenic glucoside). As we had already heard in previous meetings, they also emphasized the need of obtaining government approval for flaxseed as a food ingredient. They indicated that obtaining approval is up to the importer, as was recently the case with Quinoa, which they also use in bakery products.

They also mentioned that neither flaxseed, nor Omega 3 or ALA, are familiar to the Japanese consumer and an awareness campaign would be required, side by side with promotional efforts directed at the bakery sector. They indicated that other commodities, such as raisins and, more recently, plums, have engaged in extensive promotional campaigns with good results. While originally they mentioned TV advertising as most effective, they recognized its high cost and the

potential benefits of conducting instead a publicity campaign oriented towards food editors of women oriented magazines. They believe that it would have considerably more credibility if flax were to be featured in an article rather than as a paid advertisement. Participation in Foodex was also recommended as that show is attended not only by industry but also by consumers and food editors.

## 2.6 ZEN-NOH

Teruya Akayama - Manager, Information Center of Technology and Management  
Yuzuru Inoue - Assistant Manager, Product Development and Analysis Group  
Akimasa Kurashige - Manager, Dairy and Beef Cattle Research

We visited Zen-Noh Central Research Institute for Feed and Livestock. Zen-Noh is the National Federation of Agricultural Cooperative Associations and one of the largest compound feed and poultry producers in Japan, including a significant market share in egg production.

Zen-Noh officials were well acquainted with research regarding feeding flaxseed to layers to increase Omega 3 levels in the eggs. They were nevertheless under the impression that the technology was protected by a patent. This misconception, combined with other technical reasons, has lead Zen-Noh to use linseed oil rather than whole flax seed in layer rations. They market those eggs as "Shin Tamago" ("new eggs"), claimed to be high in Omega 3.

Most of the ensuing discussion centered on technical aspects of the use of flaxseed in poultry rations. Regarding their own use of linseed oil, they appear to include it only at about 1% of the diet (2.5% whole seed equivalent) which makes any significant increase of Omega 3 on the eggs very questionable. Nevertheless, it does seem to give them a significant market advantage, as "specialty eggs" command very high premiums.

Zen-Noh officials also indicated they do not publicize their use of linseed oil in the rations, as linseed oil is linked with industrial uses in consumer minds and therefore not perceived as particularly fit for human consumption.

They also mentioned that, in Japan, more attention is being paid to DHA, an Omega 3 fatty acid derived from fish oil and perceived as "good for the brain and eyesight", than to Omega 3 itself.

The total market for eggs in Japan, according to Zen-Noh, is about 2.5 million tonnes. Of this total they considered that almost half are processed and the rest go to the shelleggs market. *[Note: These percentages were disputed, in a later meeting held with ISE Foods Inc., which indicated a considerably more credible figure of less than 25% of the eggs being processed. See [2.10](#)].* The specialty eggs market is estimated at about 1/3 of the total shell market.

Zen-Noh officials were also interested in the potential inclusion of flaxseed in broilers, beef, dairy and hog rations and want to receive any pertinent literature on the subject.

## 2.7 NIHON NOSAN KOGYO

Yoshiaki Aoyagi - Assistant General Manager and Purchasing Manager

This is a major Japanese egg producer and Mitsubishi subsidiary. They were not familiar with flaxseed and indicated they could not find any literature references to it.

Their main specialty product is iodine enriched eggs. They have patented a method for "feeding inorganic iodine to poultry to produce organic iodine enriched eggs". They have no major

competitors in that market segment.

They indicated that regular eggs are a "loss leader" in supermarkets due to "excessive competition". Specialty eggs that can differentiate themselves through the inclusion of iodine, vitamins or any other compound perceived as health enhancing command a significant premium. At the same time they complained that making actual health claims on the package, beyond indicating the enriching compound, is severely restricted. However, the distribution of literature at point of sale making those claims appears to be widely practiced. Regarding this point, the mission members were shown a publicity brochure claiming significant Alpha Linolenic Acid (ALA) levels in meat products, a claim that Canadian mission members found quite surprising.

They also mentioned that the main source of ALA in Japan is Perilla oil, an expensive oilseed of Chinese origin which, aside from price and availability problems, presents significant composition differences depending on the region where it is produced. Perilla oil has benefited in recent times from a considerable amount of publicity in Japan.

Perhaps the main conclusion that mission members were able to draw from this meeting, aside from potential future interest of Nihon Nosan of including flaxseed in their feed formulation, is that, in the Japanese egg market, any scheme that allows a claim that the product is enriched in some form (regardless of the significance of the enrichment level or its real benefits) is vitally important to producers to be able to differentiate their product and command premium prices. As mentioned before, it would also appear that, while regulations may be quite strict regarding actual health claims in the packaging, they certainly are not strict regarding what can be called enriched or the claims that can be made in the promotional literature, when compared to Canadian standards.

## **2.8 NIPPON FORMULA FEED MANUFACTURING**

Matsuji Suzuki - Assistant General Manger, Animal Feed Division  
Kosei Sato - Assistant to the Manager

This leading compound feed manufacturer is loosely associated with Mitsui, from which they get most of their supplies. They indicated that about 50% of the Japanese feeds market is for poultry, with layers being the most important segment. They claimed Nippon Formula controls about half of the Japanese feed market. They have also diversified into layer production, controlling about 10% of that sector.

Nippon Formula officials were concerned that flaxseed had "some adverse toxic compounds" and are not using it. At the same time they indicated their interest in "exploring many things". They are particularly proud of their research on green tea from which they extract tocopherol to produce a patented compound called "Catechin" which they feed to their layers. They claim that Catechin has anticarcinogenic, antiallergic and antiseptic properties (against *E. Coli*), as well as reducing fat and cholesterol. Nippon Formula would like to receive more technical information regarding the inclusion of flaxseed in feed formulation.

## **2.9 JAPAN HEALTH FOOD AND NUTRITION FOOD ASSOCIATION - JHFNFA**

Sanshi Wakasa - Managing Director  
Kunio Nakagawa - Department Manager, Food For Specific Health Use (FOSHU)

This startling meeting was an eye opener in many ways. It began by the delegation requesting some clarification on the exact composition of the JHFNFA and its relationship with the Health Ministry and industry, as the literature provided was not totally clear on the subject. The officials

indicated this was a very good question but very complicated and difficult to explain, and so they avoided giving us an answer. They informed us instead that they had never heard of flaxseed and proceeded to indicate that FOSHU certification was not for foods targeted towards health maintenance (which their literature appears to indicate), but rather for those products targeted to the "not-too-well but not-too-sick" segment of the population, a statement which Dr. Nakagawa kept repeating, whenever faced with a question he did not appear to be interested in answering, accompanied by an appropriately obscure chart. (After forty-five minutes, Mr. Wakasa left the meeting).

The other point that Dr. Nakagawa kept emphasizing was how difficult and complicated the process of obtaining FOSHU certification was, and how tough and time consuming were the procedures, citing examples of quite a few requisites not fully clear in the literature, such as having a Japanese agent, conducting double blind consumption tests with human subjects in Japan, ensuring supporting literature be translated to Japanese (and to emphasize the point he showed us a 4-inch thick binder, indicating it was typical of the amount of documentation required), and proving that the product has a history of consumption in Japan (although some foreign data may be acceptable if this was not the case).

He also indicated that the licence to use the FOSHU symbol has to be renewed every 4 years, mentioning that Kelloggs had "forgotten" to renew its licence for wheat bran cereal and was therefore being dropped from their list (incidentally, Kelloggs cereal was the only product we could identify as being of foreign origin among the 78 which have obtained the FOSHU approval).

When asked if any foreign companies had been able to obtain FOSHU approval from outside Japan (as their literature indicates is possible to do), Dr. Nakagawa once again avoided a direct reply, reemphasizing instead the great difficulty of the process. However, he proceeded to mention that practically all applications received from JHFNFA members have been successful thanks to the backing of the Association.

When the question of the cost to join arose, Dr. Nakagawa proceeded to read a long schedule of assorted assessment, analysis and evaluation fees (including an administrative fee, which he indicated would go to him as a consultant), amounting to a minimum of between 1.75 and 2 million Yen (about \$24,000). However, this schedule did not include any cost estimates for the double blind human tests or literature translation, leaving the mission members with the clear impression that the final amount would be much higher.

Dr. Nakagawa also clarified that, even if flaxseed were to obtain certification as a FOSHU ingredient, each product using it would also have to go through the same procedure before being allowed to use the FOSHU symbol, which would make the costs involved astronomical.

Dr. Nakagawa was nevertheless quick to indicate that non-members could expect much higher costs (of 100,000 to 200,000 Yen per paper reviewed and, according to him, an average application can easily run into 50 papers), plus a high possibility of being rejected. He specifically mentioned that, aside from the JHFNFA, there are some medical doctors on the "Advisory Committee" that makes recommendations to the Ministry of Health on granting of FOSHU certification, who can be quite tough, particularly with applicants not enjoying the backing of the JHFNFA. He further stated that even regional authorities, that in theory can also process applications, depend in practice on JHFNFA advice, "given their lack of expertise".

He concluded the meeting by congratulating us on our perceptiveness, apparently in finally having asked the right questions.

It was the unanimous conclusion of the mission members that FOSHU certification was not an avenue worth pursuing, at least for flaxseed, a conclusion confirmed through the remaining meetings held during this visit. [*Executives of ISE, the largest egg and egg food products producer of Japan, had apparently not heard of FOSHU; Kanaka's Nutraceuticals and Health Products Manager could not recognize the symbol even when it was explained to him; and the Executive Director of the Japan Baking Industry Association told us point blank that his members "don't pay much attention to that scheme" as they are too busy producing low price good bread, and only one member (Yamazaki) has even attempted to obtain it for a couple of minor products*].

## **2.10 ISE FOODS INC.**

Masao Igawa - International Supervising Department  
Kimio Tabata - ISE USA, Vice Chairman

ISE is the largest egg producer in Japan and the second largest in the United States. Aside from standard shell eggs, they are also involved in the production of a wide range of specialty eggs and egg food products, as well as poultry feed.

They indicated they have 6 million layers, making them the largest single operator in the highly fragmented Japanese egg production sector, which they estimate to be in the order of 140 million layers, a large portion of which is owned by small operators. Japan is the second largest consumer of eggs in the world (after Israel) with an annual consumption of 340 eggs per capita (compared to about 240 in North America). About 15 to 20% of ISE's production is for the lucrative specialty eggs market.

ISE executives had already heard of the use of flaxseed in layers' rations through their extensive USA operations. Mr. Igawa spent 12 years in the USA and returned to Japan two years ago to take care of their international department. Mr. Tabata is Vice President of their USA operations, based in Galena, Maryland. They believed this technology could, in principle, be of interest for their North American operations and perhaps for Japan (after being tested by their USA subsidiary).

ISE Japan has a line of Omega 3 (specialty) eggs obtained through the inclusion of fish oil in the ration which increases the DHA content (rather the ALA). These DHA eggs sell for as much as 100 Yen per egg (about \$1.20 Can), or more than three times the price of their standard eggs (30 Yen/egg). They also have low boiling temperature eggs, DHA soups, DHA egg custards, egg tofu, etc.

The same technology is applied in the USA, with the main difference that, for the more demanding Japanese market Bonito or Tuna fish oil is used in the ration, while in the USA whichever fish oil is more economical is used. They also found it more difficult to create consumer awareness/demand for DHA eggs in the USA, but the public seems better educated now and more interested in Omega 3 fatty acids. However, the toughness of USFDA regulations was mentioned as a discouraging factor compared to the much more liberal Japanese regulations. They repeated the information previously received that health claims are not allowed on the package, only content/enrichment claims. Nevertheless, as we had already observed in other companies, they also seem to have a significant amount of health claims in the publicity literature they distribute, apparently at point of sale, which considerably lessens the impact of the regulations.

In conclusion, ISE officials appear to be very interested in testing the flaxseed technology through their USA operations and it was agreed that contact will be established upon return with their chief USA poultry nutritionist for that purpose.

## **2.11 JAPAN BAKING INDUSTRY ASSOCIATION**

Kenji Koide - Executive Director

This association of Japanese bakeries is located in the same building as the Australian Wheat Board. At the beginning of the meeting, Mr. Koide indicated that he was not familiar with flaxseed but recognized it when shown a picture of the crop. Apparently linseed for fiber purposes was grown as a cash crop in the Hokaido area up to 30 years ago, but it is no longer under cultivation. This is a surprising piece of information that would be interesting to pursue since, even if it was linseed grown for fiber purposes, the crop must have produced some seed in excess of replanting needs and it would be useful to know if it was consumed as food. Were this to be the case, it could prove historical usage in Japan and further facilitate linseed's approval as a food ingredient were any difficulties to arise with the health authorities.

Regarding its use in bakery products, Mr. Koide was initially highly surprised to learn that up to 15% by weight in relation to flour can be used in bakery formulations. It soon became apparent that he was thinking of flaxseed as a topping, given its similarity to sesame seed, rather than as an ingredient of flour mixes. Mr. Koide indicated its similarity to sesame seed is a defined advantage as sesame is well liked by Japanese consumers, particularly if price competitive. He thought it had a pleasant flavor. However, Mr. Koide also remarked that older Japanese may confuse flaxseed with castor seeds, which were given to them as children for laxative purposes.

Mr. Koide indicated that, in his opinion, it would be easier to penetrate the market through small or medium size bakeries which be more receptive than the larger ones.

He indicated that the Pullman type bread (soft crust white bread) accounts for 55% of the market, specialty breads for about 30%, and the remaining 15% is captured by other types, including traditional Japanese bakery products. These figures are quite similar to the ones we had received in previous interviews (i.e. with Kinokuniya).

Mr. Koide also indicated that there is an organization in Japan, the Training Institute Laboratories, that works on development and transfer of baking technology. He indicated that organization is not directly linked to the Japan Baking Industry Association.

Finally, regarding FOSHU certification, he told us that his members do not pay much attention to such schemes, busy as they are producing good bread at a low price. Only one of their members, Yamazaki, has tried to obtain such labeling for DHA bread, which in any case is not a particularly important or successful product for Yamazaki.

## **2.12 MINISTRY OF HEALTH AND WELFARE, FOOD SANITATION DIVISION, ENVIRONMENTAL HEALTH BUREAU**

Satoshi Tabaya D.V.M. - Senior Officer for Imported Food Inspection

Akihiro Minami - Assistant Director, Office of Port Health Administration

Atsuko Ishii D.V.M. - Technical Official

Initially the government officials we met were under the impression we were talking about food use of the oil. Accordingly, they indicated that Japan has no official standards for linseed oil. The only condition for its use is the absence of any harmful components. If any harmful substance is found as part of its composition it would not be allowed for human consumption. They indicated the basic yardstick for acceptance is the "Codex Edible Fats and Oil Criteria", and as long as these criteria are met, no other regulatory requirements need to be observed.



Mission members clarified that the purpose of this mission was to discuss the utilization of flaxseed for human consumption, rather than linseed or Solin oil. In that case, Mr. Tabaya indicated that their only concern would be with pesticide residues and requested we send him, for this purpose, the standards applied in Canada pertaining to flaxseed. They will issue a formal reply once they have studied them. We promised to send them this information as soon as possible via the Canadian Embassy.

Finally, health officials made a point of asking if there were any transgenic flaxseed varieties, indicating this has recently become an issue of great concern due to pressure from the Consumers Association. They appeared quite relieved when it was clarified that no such varieties are commercially available for this crop. On this positive note, the meeting came to an end.

*[In subsequent discussions among mission members regarding this meeting, it was tentatively decided that, aside from sending the Ministry of Health and Welfare the pesticide residue standards requested, it would be advisable to be prepared to respond with the appropriate information regarding the presence of cyanogenic glucoside in flaxseed, and the nutritional studies proving it presents no dangers for human consumption at the levels present in this product. Although the Ministry of Health officials we met are not apparently aware of the presence of this substance in flaxseed, others in industry mentioned it in a negative connotation during our interviews. While it may not be wise to raise it immediately on our own, we should fully brief our Japanese bakery customers and request their assistance/advise about approaching Health officials on this subject.]*

## **2.13 DEBRIEFING WITH CANADIAN EMBASSY OFFICIALS**

Ron Davidson - Counselor (Commercial)  
Yuzuru Kagi - Commercial Officer  
Renee Umezuki - Second Secretary (Commercial)  
Hiroshi Matsunaga - Commercial Officer

Mission members debriefed Embassy officials about their findings during this visit and their tentative conclusions regarding opportunities and follow up [*See [Part 1](#) of this document for details*].

FOSHU certification was specifically discussed with Ms. Umezuki and Mr. Matsunaga, who cover this subject. Mission members clearly indicated that applying for FOSHU certification was not considered an option for flaxseed at this point in time. Furthermore, in more general terms, it was also pointed out that mission members had serious reservations about both the overall usefulness as well as the transparency of the procedure, and that none of the Japanese contacts we made appear to consider FOSHU particularly important or, in most cases, even recognize the symbol. Embassy officials were quite interested in these comments, as they appeared to contradict the glowing impression reported to them by a previous visitor (on which they had based their recommendation to us to meet with the JHFNFA) and indicated they would look closer into the issue.

Finally, commenting on the Ministry of Health remark about transgenics, Embassy officials indicated that negative publicity derived from the recent Limagrain problems with a canola line not authorized for release, has added to the growing debate and concern in Japan regarding this issue. They informed us that it is being linked to labeling of products containing transgenic ingredients and that it was now being discussed in the Japanese Diet (Parliament). At the same time, they advanced the opinion the Japanese authorities may not do anything about it until the Europeans decide on their own regulations. However, once this happens (and there is strong

pressure in Europe to have all products labeled), Japan may follow suit.

## **2.14 CANADIAN CONSULATE GENERAL IN OSAKA**

Peter Campbell - Consul General  
Toshihisa Seki - Commercial Officer

This was a courtesy visit with Mr. Campbell, who was kind enough to send Mr. Seki to receive us at the rail station. Mission members informed Consulate officials of the purpose of the mission and the results achieved so far.

## **2.15 KANAKA CORPORATION**

Ryozo Nakahara - Manager  
Dr. Takehiko Ohfuji - Manager, Marketing Group II, Foods Division  
Toshikata Horji - Functional and Nutritional Food Products

This chemicals and food products corporation is subdivided, by region, into 6 companies, with 60 offices in Japan for the distribution of their products. Of the 10 divisions that integrate Kanaka, the Food Division is the second largest, with sales last year of about \$600 million. Of this total, half comes from products manufactured by Kanaka and the other half from products they import and redistribute in Japan. Kanaka has a strong presence in bakery supplies, including a small line of frozen dough (which they import from an Australian subsidiary).

Regarding flaxseed, they came across this product two years ago and began experimenting with it. They decided that raw flaxseed was not appropriate for Japanese taste preferences, so they roast it before adding it to their bakery mixes, as they consider this enhances its flavor, by cracking the shell, and facilitating the digestion of polysaccharides. They use oxygen scavengers in their product packaging to avoid oxidation. Kanaka imports all its flaxseed from Canada and sells it to several bakeries, including a division of Yamazaki, and to Koyoshoka, a Hiroshima based bakery which pioneered the use of flaxseed in Japan.

Kanaka officials indicated that Koyoshoka may drop their flaxseed product line as they found some "arsenic" in the product (by which they probably meant the previously mentioned cyanogenic glucoside). Regarding this point, they consider that addressing the issue in a positive light with health authorities would be advisable. However, the main problem for expanding sales is the lack of consumer recognition of flaxseed (which coincides with what we heard during this visit).

Regarding transgenics, Mr. Ohfuji, who joined the meeting specifically for this subject, indicated that this issue is becoming a growing concern in Japan due to lobbying by the Japanese Consumers Association. He indicated the pressure is very strong regarding labeling and that it has been specifically requested that no soybean products for human consumption (i.e. tofu) be produced from transgenic origin ingredients. He considers this may also affect their imports of vegetable oil, as the soy and corn oil Japan already imports from the USA may have to be replaced from other sources offering the guarantee of no transgenic origin, such as palm oil. He conceded, however, that this would create serious formulation problems for some companies. He was not specifically aware of the situation regarding canola.

[Return to Table of Contents](#)

---

**APPENDIX I: CONTACTS****A) Mission Members**

Barry Hall Marketing Director Flax Council of Canada	465 - 167 Lombard Ave Winnipeg, MB R3B 0T6	Tel: (204) 982-2115 Fax: (204) 942-1841
Thomas J. Payne Thomas J. Payne Market Development	330 Primrose Road, Ste. 510 Burlingame, CA 94010 USA	Tel: (415) 340-8563 Fax: (415) 340-8568
Bernard A. Badani, Deputy Director, Export Market Support Grains & Oilseeds Division Inter'l Markets Bureau Agriculture and Agri-Food Canada	930 Carling Ave. Ottawa, ON K1A 0C5	Tel: (613) 759-7701 Fax: (613) 759-7499

**B) Canadian Embassy, Tokyo**

Louis A. Boisvert Counsellor (Investment)	3-38 Akasaka 7-Chome Minato-Ku, Tokyo 107	Tel: (011-81-3) 5412-6320 Fax: (011-81-3) 5412-6247
Ron Davidson Counsellor (Commercial)	3-38 Akasaka 7-Chome Minato-Ku, Tokyo 107	Tel: (011-81-3) 5412-6263 Fax: (011-81-3) 5412-6247
Alison M. Murray Senior Program Officer (Science & Technology)	3-38 Akasaka 7-Chome Minato-Ku, Tokyo 107	Tel: (011-81-3) 5412-6330 Fax: (011-81-3) 5412-6254
Yuzuru Kagi Commercial Officer	3-38 Akasaka 7-Chome Minato-Ku, Tokyo 107	Tel: (011-81-3) 3408-2101 Fax: (011-81-3) 3497-0783
Renee Umezuki Second Secretary (Commercial)	3-38 Akasaka 7-Chome Minato-Ku, Tokyo 107	Tel: (011-81-3) 5412-6232 Fax: (011-81-3) 5412-6247
Hiroshi Matsunaga Commercial Officer	3-38 Akasaka 7-Chome Minato-Ku, Tokyo 107	Tel: (011-81-3) 5412-6200 Fax: (011-81-3) 5412-6247

**C) Canadian Consulate General, Osaka**

Peter G. Campbell Consul General Canadian Consulate General	Daisan Shoho Bldg., 12F 2-2-3, Nishi-Shinsaibashi Chuo-Ku, Osaka 542	Tel: 06-212-4910 Fax: 06-212-4914
Toshihisa Seki Commercial Officer Canadian Consulate General	Daisan Shoho Bldg., 12F 2-2-3, Nishi-Shinsaibashi Chuo-Ku, Osaka 542	Tel: 06-212-4910 Fax: 06-212-4914

**D) Yamazaki Baking Co. Ltd.**

Osamu Harada Chief, Baking Technology Section Research & Development Division	3-15-6, Chitose, Sumida-Ku Tokyo 130, Japan	Tel: Tokyo (3632) 0334 Fax: Tokyo (3635) 7420
Seio Hosoya Material Research Section 0 Research & Development Division	3-15-6, Chitose, Sumida-Ku Tokyo 130, Japan	Tel: Tokyo (3632) 0334 Fax: Tokyo (3635) 7420

**E) Fuji Baking Co. Ltd.**

Kazuhiro Onishi Chief	2-12 Shiohama Ichikawa Chiba 272-01 Japan	Tel: (0473) 96-5725 Fax: (0473) 96-5784
Yoichiro Hagiwara Chief	1-50 Matsuzono-Cho Mizuho-Ku Nagoya, Japan	Tel: (052) 831-5151

**F) Shikishima Baking Co. Ltd.**

Sakae Hotta Manager, R & D Group Tokyo Division	1-12 Meguro Hon-Cho 2-Chome Meguro-Ku, Tokyo 152	Tel: 03-3711-7582 Fax: 03-3711-4614
Masaaki Tsubota Director	1-12 Meguro Hon-Cho 2-Chome Meguro-Ku, Tokyo 152	Tel: 03-3711-7581 Fax: 03-3711-4614
Atsushi Sato	1-12 Meguro Hon-Cho 2-Chome Meguro-Ku, Tokyo 152	Tel: 03-3711-7582 Fax: 03-3711-4614

**G) Kinokuniya Food Centre Co. Ltd.**

Mr. Watanabe  
President

Mr. Sausumi  
Vice President

Kyonosuke Odajima Director Technical Manager	1-34, 7-Chome, Shimo-Renjaku Mitaka-Shi, Tokyo	Tel: 0422(48)2361 Fax: 0422(41)2854
Tsuneharu Amano Chief, Customer Relations International	3-11-7, Kita-Aoyama Minato-Ku, Tokyo	Tel: (03) 3409-1236 Fax: (03) 3409-5172

**H) Zen-Noh (National Federation of Agricultural Cooperative Associations)**

Teruya Akayama Manager Information Center of Technique and Management, Central Research Institute for Feed and Livestock	1708-2 Tsukuriya, Tsukuba-Shi Ibaraki-Ken 300-42, Japan	Tel: 0298- 69-1058 Fax: 0298- 69-1044
Yuzuru Inoue Assistant Manager Product Development and Analysis Group Central Research Institute for Feed and Livestock	1708-2 Tsukuriya, Tsukuba-Shi Ibaraki-Ken 300-42, Japan	Tel: 0298- 69-0173 Fax: 0298- 69-1052
Akimasa Kurashige Manager Dairy and Beef Cattle Research Sec. Central Research Institute for Feed and Livestock	1708-2 Tsukuriya, Tsukuba-Shi Ibaraki-Ken 300-42, Japan	Tel: 0298- 69-0176 Fax: 0298- 69-1052

**I) Nihon Nosan Kogyo K.K.**

Yoshiaki Aoyagi Assistant General Manager Purchasing Department	Landmark Tower 46F 2-2-1, Minatomirai, Nishi-Ku Yokohama, 220-81, Japan	Tel: 045-224-3707 Fax: 045-224-3724
-----------------------------------------------------------------------	-------------------------------------------------------------------------------	----------------------------------------

**J) Nippon Formula Feed Manufacturing Co.**

Kosei Sato Assistant to the Manager Feed Production Division	No. 2 Yasuda Bldg 3-32-13, Tsuruya-Cho Kanagawa-Ku Yokohama 221, Japan	Tel: (045) 316-7331 Fax: (045) 316-7413
Matsuji Suzuki Assistant General Manager Animal Feed Division	No. 2 Yasuda Bldg 3-32-13, Tsuruya-Cho Kanagawa-Ku Yokohama 221, Japan	Tel: (045) 316-7350 Fax: (045) 316-2309

**K) Japan Health Food & Nutrition Food Association**

Senshi Wakasa Managing Director	6-1, Jingumae 2-chome Shibuya-ku, Tokyo 150	Tel: (03) 5410-8231 Fax: (03) 5410-8235
Kunio Nakagawa, Ph.D. Department Manager Dept. of Food for Specified Health Use	6-1, Jingumae 2-chome Shibuya-ku, Tokyo 150	Tel: (03) 5410-8231 Fax: (03) 5410-8235

**L) Ise Food Inc.**

Kimio Tabata Vice Chairman	P.O. Box 267 Galena, MD 21635-0267	Tel: (410) 755-6300 Fax: (410) 755-6367
Masao Igawa International Supervising Dept.	Ise Shokuhin Bldg., 2nd Fl. Negishi2-1-4 Taito-Ku Tokyo 110, Japan	Tel: 03(3876)1974 Fax: 03(3876)1977

**M) Japan Baking Industry Association**

Kenji Koide Executive Director	Oeifun Kaikan Bldg, 15-6 Nihobonshe Kabuto-cho, Cheso-Ku, Tokyo
-----------------------------------	--------------------------------------------------------------------

#### N) Ministry of Health and Welfare

Atsuko Ishii, D.V.M. Technical Official Office of Port Health Administration Food Sanitation Division Environmental Health Bureau	2-2, Kasumigaseki 1- chome Chiyoda-Ku, Tokyo 100-45	Tel: (03) 3503-1711 ext. 2469 Fax: (03) 3591-8029
Akihiro Minami Assistant Director Office of Port Health Administration Food Sanitation Division Environmental Health Bureau	2-2, Kasumigaseki 1- chome Chiyoda-Ku, Tokyo 10	Tel: (03) 3503-1711 ext. 2433 Fax: (03) 3591-8029 0-45
Satoshi Takaya, D.V.M. Senior Officer for Imported Food Inspection Food Sanitation Division Environmental Health Bureau	2-2, Kasumigaseki 1- chome Chiyoda-Ku, Tokyo 100-45	Tel: (03) 3503-1711 ext. 2442

#### O) Kaneka Corporation

Ryozo Nakahara Manager, New Business Development Department Foods Division	3-2-4, Nakanoshima Kita-Ku Osaka 530, Japan	Tel: (06) 226-5256 Fax: (06) 226-5275
Dr. Takehiko Ohfuji Manager, Marketing Group II Foods Division	3-2-4, Nakanoshima Kita-Ku Osaka 530, Japan	Tel: (06) 226-5266 Fax: (06) 226-5275
Toshitaka Horji	3-2-4, Nakanoshima Kita-Ku Osaka 530, Japan	Tel: (06) 226-5254 Fax: (06) 226-5273

[Return to Table of Contents](#)

Canada