



**Trip Report on the Mission to the
2004 Tokyo Seafood and Marine Technology
Trade Show
by the Canadian Sea Urchin Sector**

July 19 - 24, 2004

**Sponsored by the Pacific Urchin Harvesters Association,
West Coast Green Urchin Association ,
Paladin International Food Sales Ltd.
and the
Canadian Agriculture and Food International (CAFI)
Funding Program.**

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1.0 Itinerary Summary

A delegation from the Canadian Sea Urchin Consortium comprising Paddy Wong from the Urchin processing side, Bob Hegedus, Bob Reinstein, Krystoff (???) and Jim Dyck from the harvesting side along with Geoff Krause as the Project consultant, attended the Tokyo Seafood and Marine Technology Show between July 21- 24, 2004. The delegation was scheduled to leave Vancouver on Monday July 19 but the flight was cancelled after the plane was loaded because of a system malfunction on the plane. The flight was rescheduled to Tuesday 20th of July and arrived at Narita at about 1850 hrs (Tokyo time) on July 21. We were picked up by Eisaku Endo from Maruki Company Ltd who delivered us to the Keio International Hotel by about 2230 hrs.

The following day we first made our way to the Tsukiji Central Market at 0400 hrs to view the uni auction and take a tour of the auction which was complete by about 0900. We met Sue Hahn, the Executive Vice President of Maruki Trading Inc.- a subsidiary company of Maruki Co. Inc. based in Los Angeles CA.. Ms. Hahn is responsible for purchasing of sea urchin products in the Americas. Yoshitomo Shimawaki of Chuo Gyorui Co. Ltd and Kunihoto Suruga of Tokyo Aircargo Co. Ltd. conducted a tour Tsukiji which started with the uni auction and included a walkthrough of the primary auction areas for a number of fresh, frozen and live products and of the adjacent primary wholesale distribution area. Two representatives from the Chilean Urchin Processors were likewise attending the Tokyo Seafood Show and joined our group.

After the Tsukiji tour was complete, we met with Akinori Sato(?), Section Manager of the Overseas Division for the Nichiyo Company, a manufacturer of bento lunch boxes, and proceeded to the city of Sagami-hara on the western outskirts of Tokyo by train for a tour of one of the company's bento factories. This tour involved a guided walk through the bento manufacturing facility and concluded with a lunch comprising a selection of some of the products produced at the plant. After making our way back to Tokyo we attended the last couple of hours of the second day of the seafood show before meeting with Kisaku and Kitaro Endo, the President and managing Director of Maruki Co., at the Maruki plant. We were also provided with a tour of the Maruki re-packing facilities and given a fairly comprehensive overview of the contrasting regulatory requirements as regards the hygiene regimen at the re-packing and the bento manufacturing plants.

Saturday was the final day in Tokyo for two of the six members of the delegation. The day was given over to meetings with Maruki where various aspects of the uni market and supply situation were discussed. Paddy Wong and Geoff Krause caught a flight to Vancouver from Narita at about 1800 hrs while the rest of the delegation followed a day later.

1.1 Synopsis of Findings

Low cost suppliers like Russia and Chile are currently driving the market and price competition is fierce in Japan for all seafood products, including uni. This in turn is transforming the supply chains for seafood in Japan so that some companies, like Maruki, are taking advantage of developments to buy directly from offshore suppliers to reduce their costs as opposed to continuing to use their traditional importers.

Maruki buys from Chile along with some minor amounts from Russia but these countries are basically mining their urchin resources and the sustainability of their fisheries remains dubious at best. In the case of Russia, fishing effort is growing in new areas on Sakhalin Island and the adjacent coastline of the mainland even as the Kuriles are being depleted. Similarly, in Chile the fishermen are using bigger boats as packers because the fishing grounds are some distance away from the centralized processing plants and they are still moving away further as the closer beds are fully cleaned out and not able to recover. In both cases, this sort of fishing is generally referred to as a serial depletion scenario but both countries have large coastlines with urchin stocks and so are likely to remain in the business for some time yet.

In both cases however, more remote fishing operations are compromising their product quality because it is usually not processed for some time after harvest (even when the plants are not backed up) and/or seeing increased costs. Transport times on the packers were reported to extend up to about 8 - 10 hours by the Chilean rep's at the meeting, in contrast to the 3-4 day periods generally bandied about by the Canadian rumour mill, but it is impossible to judge the accuracy of either claim. Fishermen in Chile use small (18-24') skiffs and use hose gear to fish the urchin beds, picking all sizes with little regard for sizes or recoveries. The fishermen make camp on shore each night and keep moving along the coast as the beds are fished down. The urchin fishery is an Olympic style fishery so many vessels, up to 5,000 boats, will be active in any given area when it is open. Recoveries were not discussed. There are currently about 10,000 divers picking about 2,000 MT of roe in Chile each year. It is interesting to note that about 40% of these divers cannot swim and depend upon their wetsuits and breathing apparatus to provide buoyancy etc

The transport times to Japan also affect the product form, particularly from Chile, as fresh deliveries are difficult because of the delays involved. The majority of product from Chile is processed and shipped frozen. We did not receive any information on the product form from Russia but it is worth noting that the majority of the production from the Kuriles is shipped live to processors in Hokkaido and that the processing capacity in Russia is limited at this time. Developing the local processing capacity, including the required grading and packing skills, for fisheries undertaken in Russia at some distance from Japan may take some time so the live shipments may continue even though the distances from the Sakhalin area are much larger.

Canadian product is generally acknowledged as safe and good tasting but the reactions of the folks watching the promotional video and examining the brochures to the Environmentally Sustainable and Responsible (ESR) components of the Canadian industry campaign were hard to read. The Japanese are naturally reserved, almost to the point of being shy at the booth when we approached them, and their responses as to the importance of ESR as a feature helping them with the purchasing decisions were generally noncommittal. Questions directed to Maruki employees

and management as to the potential of the campaign to promote sales likewise failed to elicit definitive pros or cons other than a general unease that the campaign might be used by Canadian firms to increase the price to the Japanese buyers and thereby render the product less competitive.

It is generally acknowledged that successful marketing campaigns are characterized by the full participation of all actors in the supply chain, in this case including the Canadian fishermen and processors and a representative Japanese buyer, Maruki Co. Ltd., and retailers involved in the distribution and sales of the product in Japan. This trip was successful although it appears that we still have some work to do to bring our Japanese partners on board in this campaign and will have to continue probing to determine the most likely Japanese consumer responses. The Japanese consumer is apparently focussing more price competition as the primary consideration in their buying decisions, as it is in an increasing proportion of consumers in all developed nations, and indications that a campaign based on the ESR character of the Canadian fishery to successfully reposition the Canadian uni as a superior product are thus far inconclusive.

In short it may be unrealistic to expect any price increases in the near term if we are to maintain or increase our market share in Japan. Once the marketing campaign has more time to develop and take hold this may change but the best way to increase unit revenues to the Canadian industry at this point would seem to revolve around continuing to focus on maximizing product quality and recoveries. Paladin estimates that its breakeven point for processing good quality RSU roe is at least 5% or better - processing urchins at recoveries below this is just not economic. Increasing the average recovery provides a proportional increase in the increase in volume of product available for sale and therefore of its value even as all the costs involved remain the same.

The way things in the industry apparently operate now, these benefits might be retained as a windfall by the processor and not passed along to the harvesters. This of course reduces the incentives to the fishermen to focus on higher recoveries, other than that it virtually ensures an ongoing market for their catch, but at this point it is required to compensate the processors for those times when the recoveries do not reach the breakeven for them. This would seem to be an area that fishermen and processors could work together, possibly by developing a mechanism to compensate fishermen for the extra effort and costs of focussing on better quality product as defined by recovery + other quality parameters. Assuming the recoveries of each load are tracked, a method to fairly distribute additional profits associated with higher recoveries, and possibly assess penalties for loads with lower recoveries should be within reach. Controversial for sure - but still something that should be achievable without any change in the prices paid by Japanese buyers.

This trip was very informative and the generosity of Maruki and the people working for the company exceeded at least my expectations. Working with buyers in this way and involving them as much as possible in the program will likely be critical element in the more general success of the marketing, branding and differentiation of Canadian uni from other sources.

2.0 Detailed Descriptions and Discussion of Tours and Findings

2.1 Tsukiji Tour

We arrived at the Tsukiji uni auction by about 0415 hours managed a good look at the products on offer prior to the commencement of the auction at 0500. Some high grade product from Japan and North Korea as well as considerable quantities of lower grade material from Chile were on displayed, although only about half of the table space was occupied (Figure 1)- so there were no surprises there.



Figure 1: Amount of uni prior to auction at Tsukiji.

There was some discussion that the prices for sea urchin products in Japan were continuing their decline with even Japanese urchin products declining about 20% over the past year. Comparison of the prices for the hi and low prices of Japanese white uni from Tsukiji published over the internet (Fig. 2) is not definitive in this regard but it does appear that the low values have declined somewhat. These hi and low prices do not include any indication of the average weighted price obtained at the auction for any given product are therefore of limited value.

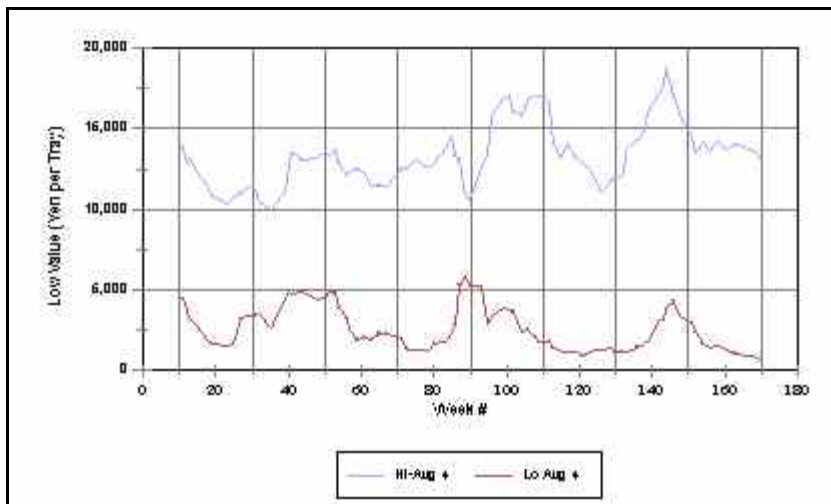


Figure 2: Moving 4 step average of hi and low Tsukiji prices for Japanese white uni between Oct 2001 and July 2004.

After observing the auction for a bit we continued along on the Tsukiji tour viewing a number of various auctions which were underway. These included fresh groundfish, salmon, tuna and pelagics, live shellfish (including crustaceans), groundfish and culture species, and frozen fish such as tuna from around the world. Shots of the various sites are presented in Figures 3 through 6. The live holding facility is particularly



Figure 3: Frozen tuna auction at Tsukiji.



Figure 4: Live shipping container with air injector

interesting as there were a number of large flatfish and rockfish from various climates (temperate, subtropical, tropical, freshwater and salt water) each with specifically tailored conditions and all held within the same facility. The secret is an array of distinct and dedicated filter, heating/cooling and pumping systems- probably in the order of 25 separate and complete systems.



Figure 5: Live hold facility at Tsukiji- 1-3 individuals of a single species is held in each basket.



Figure 6: Tsukiji tour group (left to right: B. Hegedus; A. Wong; A. Katagiri; P. Wong; J. Dyck; B. Reinstein; 2 Chilean rep's; S. Hahn; Y. Shimawaki; G. Krause.

Once the tour was complete we moved to a meeting room close to the uni auction for introductions and a discussion on the urchin market in Japan. Maruki has been in business for a bout 30 years and has maintained an office in Los Angeles since about 1998. The company had a large plant operating in LA until last year but the facility was a bit ancient and inefficient so when the lease came up last year it was not renewed. As a result, the company does not have a plant in North America at this point and, because the commercial buildings market is so high right now, the operations executive in LA foresees using existing plants as custom processors for the near to medium term.

Maruki is a very healthy company with about 300 employees in Japan and their overseas operations and they are looking for long-term relationships with suppliers in a number of countries including Canada, USA, Mexico, Chile, Russia, Korea and Japan. Low cost suppliers like Russia and Chile are currently driving the market and price competition is fierce in Japan for all seafood products, including uni. Paladin has taken note of the focus on price competition in Japan and has structured its business plan accordingly.

2.2 Bento Box Factory Tour

After the Tsukiji tour, we took the train to the outlying city of Sagami-hara to tour a Bento box factory owned by Nichiyo, a sister company of Maruki. This company operates 21 factories on the main island of Honshu, each of which serves a local market for the bento lunch boxes.

Overall the company produces about 1.5 million meals per day while the factory we toured has a capacity of about 150,000 meals per day, along with a variety of sandwiches, using 230 workers per shift for 3 shifts per day.. The products include a variety of types (Figure 7) using fish, shellfish (including clams, scallops, shrimp, prawns and crab), rice, pork, chicken, vegetables and sauces. The company sells only to 7-11 stores, the largest single retailer in Japan and Ito Yokado, 7-11 Japan's parent company.

The plant we toured supplies approximately 360 stores, each with 3 deliveries per day (@~ 0430, 1000 and 1500 hrs) so fresh meals are available for sale for breakfast, lunch and dinner.

Temperatures are controlled at a constant and ideal level throughout the whole plant and succeeding supply chain so, for instance, all bento boxes with rice are held at 20°C so the texture



Figure 7: Bento Boxes and sandwiches produced at the Sagami-hara plant.

of the rice is perfect, once the ingredients are assembled and packed and distributed to fill each order, as it is transported in the reefer and as it is held in-store for sale. Sandwiches are held at 10°C throughout so two different fleets of about 20 reefers each are required to deliver to the stores. The meals have a shelf life of only about 12-24 hours after they leave the factory and any remaining on the shelves must be discarded after 24 hours as a contractual and regulatory obligation. Individual stores

must absorb wastage of delivered but unsold meals as a risk. The plant on the other hand, tailors its production to the orders and must often estimate what each store will order in order to get production going in time to meet their delivery schedule and therefore absorbs the risk of any excess product which is not needed for the day's orders.

These meals are sold as ready to eat, albeit in some cases with some minor heating in a microwave to improve taste etc, so hygiene is critical at all stages of the operations and the HACCP plan requirements are very strict. Workers and visitors to the plant must be thoroughly decontaminated and wear full body and clothing coverings (Figure 8) which are donned just before one enters the work area. Everybody is inspected for cuts and excessively long and/or dirty and required to wash with soap, water and disinfectant solution prior to entering.

Part of any effective HACCP is the elimination of cross-contamination opportunities between ingredients so the various types of ingredients do not cross paths until they are combined in the meals from the time they enter the plant property. This starts with different loading bays for seafood, meats and vegetables, and separate coolers, elevators, preparation and cooking areas for each stream. As soon as the ingredients are unpacked, they are repacked into uniquely colour coded bins (Figure 9) before moving on to different processing steps. Once all the ingredients are prepared they are cooled to the appropriate temperature (ie. 20° C for bento meals) before moving into the general assembly room (Figure 10).



Figure 8: Full body outfit required prior to entering work area of plant. 6-bank air shower can be seen at back.



Figure 9: Blue (vegetables) and Red (chicken) coded bins in their respective preparation rooms.

The use of computer-aids and automated equipment is widespread throughout the plant. This includes a large rice cooking room within which a fully automatic machine measures the ingredients in about 50 kg batches, soaks the rice, moves it to a cooking element, removes the vat to an emptying bin where spices and vegetable ingredients for various fried rice recipes are added



Figure 10: Bento box final assembly area. 5 other lines lie to the right of this view and a separate but similar room is used to assemble sandwiches.

and finally through a cooler where the temperature is reduced to 20° C before being packed in a colour-coded bin by hand and moved to the assembly area. The cooking area comprises a number of automatic grills, vats with boiling water, deep fryers and Bar B Q's each of which is appropriately alarmed and manned to allow full and efficient cooking of the ingredients prior to shipping to the final assembly area.

The area where each order is filled (Figure 11) is also equipped with computer aided guides to direct the placement of the required number of each meal for each order. As the particular batch of meals is sent into the order filling room, a unique code for that meal is input and the computer displays the number required for each order at its own bin and sets off a flashing light so the technician can navigate to bins requiring that meal. As each order for that meal is satisfied, the technician pushes a button turn off the signal and then moves on to the next bin where the indicated number of meals of that type are left. Once all the orders for that meal are satisfied the technician inputs the next meal's code and repeats the process. Once the full order is filled, the store's bin is moved to shipping area, also temperature controlled, where it is picked up by the delivery truck.

This is a fairly large scale business which absorbs significant quantities of ingredients even though it is not using uni at this time because of its sharply limited shelf life. It is however working on appropriate recipes and may comprise a significant sales route for uni in the future. The mission of the company is to provide 3 fresh, tasty and safe meals per day at an average price



Figure 11: Order filling area for the bento box meals.

of about ¥400 to any person who wishes to purchase them. The retail markup is estimated at 30%, so the average wholesale price is about ¥308, which with a production capacity per day of 150,000 meals, generates gross revenues of about ¥46,200,000 (\$C 551,813) per day for the plant assuming the total number of meals includes the sandwiches. Company wide, the applicable number would be about 10 times that amount or ¥462 M (\$C 5.52 million). The company reports that it is operating on a margin of between 2-3% when all costs are included, suggesting a daily profit of about \$C 13,795 per day for the plant and about \$C 138 K for the company. Basic wages at the plant are about \$C 10/hour for the day shift and \$C 15/hr for the night shift.

2.3 Tokyo Seafood and Marine Technology Trade Show

We made a couple visits to the 6th Annual Tokyo Seafood show and spent a good part of the last day of the show working at the Maruke booth to offer our support for their promotion of Canadian uni. We brought along some promotional material, including a considerable amount of



sample uni for distribution at the booth, the PUHA/WCGUA promotional video, a poster showing Canadian urchin fishermen and processors at work as well as attractive Canadian uni presentations (Figure 12). English and Japanese versions of the PUHA brochures were also available at the booth and were handed out by the Canadian delegation. The Japanese versions of the brochures were black and white drafts and were inserted within the colour English versions so the impact of the pictures was complimented by the Japanese text so the information would be intelligible to our customers.

The traffic through the booth (Figure 13) was consistently heavy, quite likely in large part because of the uni being freely distributed through the booth, and Maruki was confident that

Figure 12: Promotional material at Maruki booth.



Figure 13: Wide shot of the Maruki booth at the 2004 Tokyo Seafood Show.

they would receive a very high rating when the show organizers judged the success of each booth. All the Canadian product was gone by the end of the second day of the three day show and Chilean product was substituted for the last day. The Canadian delegation helped man the booth, in teams of two at a time, and were assisted by Kunihito Suruga, a shipping broker with Tokyo Aircargo Co. Ltd., who provided pro-bono translation services as we talked with interested customers/consumers who stopped to sample the product, watch the video and examine the promotional material. Approximately 3/4 of the brochures were handed out but some of the other materials, including the promotional pins, were misplaced and not handed over to our hosts until the final day of departure.

As for a general take on the show, the attendance seemed about the same as last year (good). There seemed to be a somewhat greater representation by seafood suppliers, as opposed to equipment suppliers, this year in contrast to last year. Some countries, including Australia, and Norway had full booths promoting their products while China and Vietnam each had two full booths. Alaska had 3/4 of a booth (Figure 14) with the rest that full booth given over to NOAA. The value of such “country” booths without a Japanese company in attendance as a partner is a bit of a question mark at this time, because there did not seem to a lot of traffic in them, but their intention may be more directed to raising their profile and facilitate business with buyers by using their prominent presence as a demonstration of their commitment to the Japanese market. One possible notable absence this year was the Marine Stewardship Council (MSC) which had a half booth last year but did not seem to be there this year.



Figure 14: The Alaska booth at the 2004 Tokyo Seafood Show.

2.4 Maruki Re-packing Operations

We also toured the re-packing facilities of Maruki. The product is stored in a cooler until processing once it is delivered to the plant and is then moved upstairs where a team of about 12 ladies grades and re-packs it in trays (Figure 15). The hygiene requirements for this type of processing are less onerous than we saw for the Bento plant, presumably because the holding temperatures are maintained at about -4°C and the working temperatures at 12°C which in itself limits the potential bacterial growth rates. Full covering apparel for each worker in the processing area is still required.

Once the uni is re-packed the trays are covered (Figure 16) and again moved downstairs to the cooler or, alternatively to a freezer where it is held at -20°C . It is interesting that the freezing method used is limited to unaided convection freezing, which is likely way too slow to ensure small enough ice crystal size that the product is not mechanically damaged during the freezing process. Such damage will perforate the cell membranes, increase drip losses on thawing and generally reduce the shelf life of the thawed product. Plate or cryogenic freezing would likely produce a far superior result. At any rate the plant staff currently re-pack a substantial volume of fresh and frozen uni each year and there is some talk of expanding to increase the space available capacity of the operation.



Figure 15: Repacking from bulk to 60 gram tray.



Figure 16: Re-packed product ready for cooler and or freezer.