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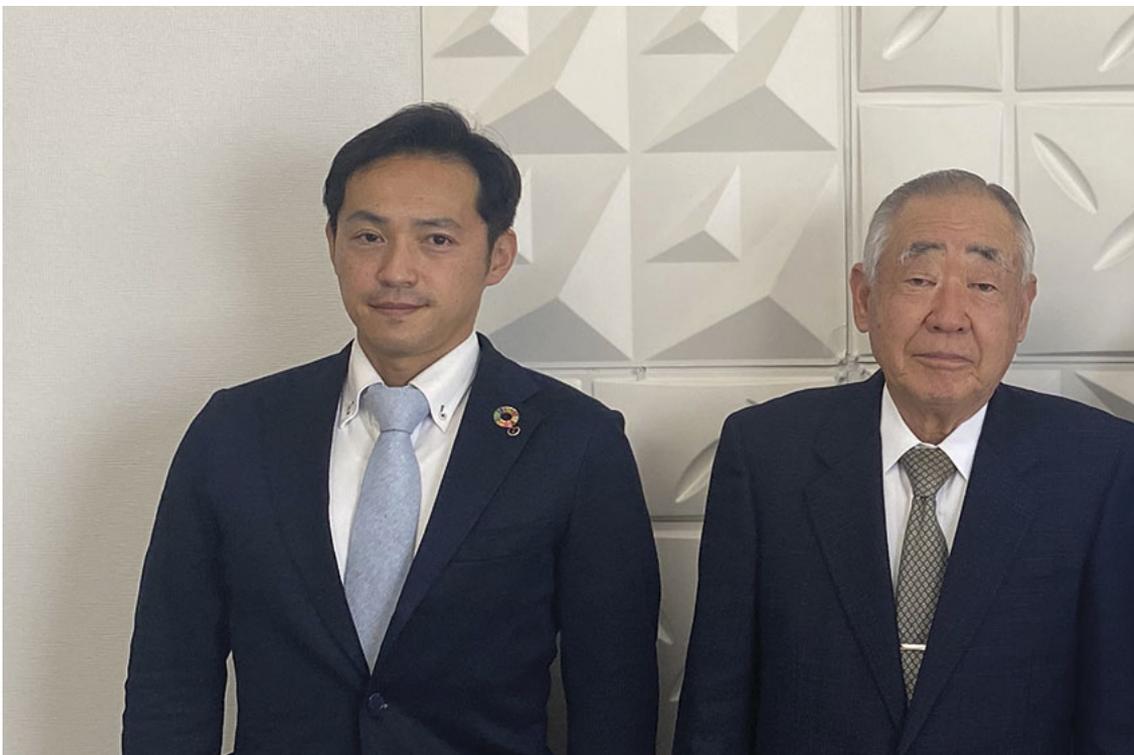
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# Nippon Molding providing the next generation of packaging

Interview - January 18, 2023

The number-one egg tray manufacturer in Japan, Nippon Molding is providing sustainable solutions as the packaging industry aims to reduce its use of plastic.



AKIRA ISHIHARA, PRESIDENT (RIGHT), TAKEHIRO ISHIHARA, MANAGING DIRECTOR (LEFT), NIPPON MOLDING CO., LTD.  
AKIRA ISHIHARA | PRESIDENT OF NIPPON MOLDING CO.LTD.

**Your company has become a specialist in paper molded products, and you've created a number of solutions to become the number one manufacturer of egg trays here in Japan. Can you tell us what you believe are the advantages of Japanese packaging technology compared to regional competitors in South Korea, China, and Taiwan, for example?**

I think that in general there is a bottom up approach to continuously improving our processes. It's more about a collective effort than following a single leader. Our progress may be slow at times but it is steady and we work together in harmony because we realize that we're all in the same boat, and it's like we're a family. We're always streamlining our processes, and that is key. Our company was formed and is currently still located in Aichi prefecture, which is widely known as the cradle of Japanese manufacturing especially when it comes to the automobile industry, and Nagoya has been at the forefront of Japan's economic expansion. Geographically, it is centrally located which helped it serve the needs of customers all over Japan and become the leading producer of egg trays for the poultry industry in Japan ever since it was established.

Our goal is also to achieve a sustainable society. Profit is important, but more than that, we have to pay attention to all stakeholders, so we'd like to expand our business using a model built on sustainability. We do all the design, tooling, production, sales and logistics ourselves. Our raw materials, including old newspapers, are historically inexpensive and we source them from Anjo City where we make a contract with the municipal authorities to collect them directly through a visit to each residence individually. This activity could convey behavioral change to promote separate used paper from rubbish drastically. 20% of the garbage there is paper based, so we help to reduce their garbage levels there. It's a win-win situation.

**Japan is undergoing a huge change now with the population decline. 28% of the population is already over 65 and this trend will continue in years to come. As a packaging company specializing in paper molded products, can you tell us how you're adopting your packaging for an aging society?**

That is a very serious problem for Japanese society. For the first 60 years after the war, the population had been going up. Before World War II, the population was approximately 43 million, but that had increased by around three times but now it's decreasing. As a packaging company, however, we're not too concerned because Japan is still a big producer of products, over 90% of which involve plastic and less than 10% involve paper.

We are expanding our market share and we're focusing on more economical and eco-friendly packaging, so we are changing our behavior with the support of the government. From next month, April 2022, the government is changing its policy to no longer use plastic cutlery such as spoons or knives. This makes us very positive about expanding our business more and more because according to studies in Europe, the packaging accounts for over 50% of garbage and the 25% use of plastic in packaging is converted into paper. We provide not only paper based egg trays but also food trays and packaging so all we have to do is promote our viewpoint and focus on our business.

**Plastic is one of the worst materials when it comes to pollution. You have paper technology which uses a mold together with a mixture of water, plant based material and recycled paper. Can you tell us more about the advantages of this particular product over plastics and how it is much more environmentally friendly?**

Initially the aim of the company was to introduce different kinds of small pulp based products such as trays for fresh fruits, industrial components and car components with a view to increasing the margin of our client companies in the long run. Furthermore, an extremely important point is that the trays actually extend the life of fruit and vegetables and other products by maintaining their features, such as freshness and hardness or softness. Nippon Molding is preserving the best features of fruits and vegetables, keeping them as fresh as possible for as long as possible until consumption. This is our policy and it's a continuing challenge in the future.

Pulp mold is a molded paper product made by mixing recycled paper containing plant fibers with water, meaning that it's 100% eco-friendly, biodegradable, recyclable, and is a good alternative to conventional plastic products. It's a good contribution to society. Post consumption, the packaging is effectively garbage and we have an obligation to minimize this amount of garbage, so we believe that pulp is the solution. Recycling is the best solution but it's not always convenient.

With regard to packaging in the world, plastic amounts to 78 million tons and only 14% is recycled but of that amount much of it is lost in the recycling process and roughly only 2% is actually made into a final recycled-based product. As for paper packaging including pulp mold, certain products like carton boxes, about 60% is closed loop recycled. That's why we believe pulp mold is a better solution environmentally speaking.



Fruit tray



One-way pallet "LOGIPALE"



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**In terms of your business continuation plan (BCP), what changes in demand did you see from Covid, and what long term structural changes did it serve to implement for you?**

Supply chains were halted during the period of the Covid pandemic and during that period people were not allowed to go outside freely, dine in restaurants or go shopping without restrictions. As a result, industrial demand for food packaging decreased by over 10% in line with the related logistical disruption. On the other hand, a good outcome has been the increase in demand for things like egg cartons and items that could be classed as personal pulp mold-based items for use within homes. Although these products are of a smaller size and represent less margin for the company, we believe that in the long run, more people will get used to using those products to dine at home since the Coronavirus is not going anywhere soon. It's going to be with us for some time. Therefore we believe that this particular business segment is still in good shape at least for now.

**As well as egg trays, you have fruit and vegetable trays of various different types, as well as logistic cushioning and packing materials. Can you tell us which products are your best-selling ones and who are your main customer bases?**

One of our flagship products is the transportation pallet which can be used inside shipping containers. Usually, companies use plastic which transmits vibration to the products being shipped, but our transportation pallets absorb those vibrations, protecting the products better. It's made from molded pulp (100% recycled paper) and cardboard, so we consider them a 'hybrid' product, but both materials are highly recyclable. Cardboard forms the outer surfaces, with the pulp mold providing strength on the inside. It's also very lightweight and cost effective.

More and more companies in Japan and worldwide will be looking at this type of logistical transportation pallet, with the low cost of the units being the main attraction for them. One downside, however, is that the product is vulnerable to humidity but as long as the customer realizes that and uses the proper type of storage which preserves good humidity levels inside their warehouses, then they're going to be fine with that.

Our egg trays are B2B products and those companies who use them have the appropriate storage facilities to negate the humidity issue. Furthermore, our pulp mold products can actually withstand direct contact with water for extended periods, including when it rains, so the durability level is good enough, when coupled with the low cost, to make these products become more and more popular, as we are seeing.

**You mentioned that this Logipale palette p is taking off in Japan and DHL is one of your main customers. Internationally, where do you foresee this being demanded? Which particular markets or locations do you see really needing this technology?**

We're still in negotiations to open up wider prospects for these types of trays, and we're talking to some manufacturing companies here in Japan which are aiming to export products, so there will be more demand not only for the egg trays but for the transportation pallets also. Also, we are seeing coffee makers who previously used plastic for their trays, starting to use our pulp mold trays. Many trays are made in China or Taiwan but ours are made to high level Japanese specifications. They are oil resistant and microwavable and a new factory has been built to make them.

**Japan is famous for the levels of spending on R&D - up to 3% of annual GDP goes towards this endeavor. Could you tell us more about Pulp Mold 2.0 and the various new strategies you're developing to create new products?**

Pulp Mold 2.0 has a bright future particularly in the area of frozen foods, as trays are becoming more popular and food manufacturing companies are now paying attention to this type of packaging rather than packaging from Chinese manufacturers because our product is considered to be of a higher quality. Also, most Japanese companies that produce food would obviously like to have packaging that is produced locally in Japan from the viewpoint of food security. The type of trays being produced here in our factory are the first of their type anywhere in the world so that gets a lot of attention and traction from Japanese food manufacturing companies. Therefore frozen foods are one promising segment, and we have a new factory opening soon in Nagano which will increase our capacity for making paper trays for frozen foods from 10 million to 100 million packs per year, so you can imagine the kind of demand we're already seeing.

**What role does collaboration or co-creation play in your business model and are you currently looking for partners either in Japan or overseas?**

We're not really looking for partners right now because we have all the capabilities we need to produce our core products. Our strategy to achieve pulp mold 2.0, however, is based on open innovation and mutual help. We have to keep up with market trends and our association with Kyoto University helps us do that. The fruits of our open innovation initiative will help us both domestically and globally. We cooperate with existing partners in both Europe and Asia and this lets us bring our products – which are considered to be of good quality simply by virtue of being of Japanese design and quality – to markets in those regions. While we're not looking for partnerships that involve the raw materials for our products, we are in talks with various organizations about future products,

**You've been present in Thailand since 2014 and you have partnerships in Malaysia and Mexico too. You've spoken about having joint ventures, perhaps with European partners, pre-Covid. Could you tell us more about your international strategy and which particular markets you're focusing on to grow your business?**

There are two sites where we are still constructing facilities. One in Nagano is a production site and the other is a logistics hub, so whilst we're focused primarily on domestic demand we're also putting out feelers around Southeast Asian countries, since they're geographically close. We may be able to do business there as long as geopolitical issues remain stable, and preference will be given to countries in Southeast Asia with economical or investment attractiveness. We're also pursuing certification which will make our products more attractive in overseas markets, where we'll be targeting packaging companies with our carton boxes.

**Let's say we come back to interview you again in four years' time for your company's 70<sup>th</sup> anniversary. What would you like to tell us about your goals and dreams for the company in that timeframe, and what would you like to have achieved by then?**

I'm 82 years old and I'd like to live as long as possible so in four years I'll be 86 but I still have dreams and ambitions to discover new possibilities for pulp molds and heighten the profile of our company as a pulp mold manufacturer. We still believe that demand for paper based products is on the rise, particularly as an alternative to plastics, and I also hope to build another plant in Southeast Asia one day.

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