

GLOBAL INDEX



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For the Benefit of **Farmers**

The Start of New Initiatives

Kubota

For the Benefit of Farmers

The Start of New Initiatives

Agriculture is an activity that humanity has engaged in by capitalizing on the bounty of nature. The agricultural products thus produced have provided us with the food that sustains our livelihoods, for which people have long offered up prayers of thanksgiving.

As history has unfolded, agricultural products have come to be seen in terms of two different aspects: as “provisions” that sustain daily life, and as “commodities” that are inevitably incorporated into market economy systems.

Amid population explosions and climate changes, the world faces the threat of serious food shortages in the foreseeable future. The question that now confronts humankind is, “Can we maintain the necessary supply of food and continue to survive on the face of this planet in the future?”

We all need to stop and think about the true nature of agriculture, which is often obscured as market economies increasingly go global. It is no exaggeration to say that the sustainability of agriculture is directly correlated with humanity’s chances of survival, since agriculture is something that has sustained us until now and will continue to do so in the future.

In this issue of GLOBAL INDEX, we specifically focus on farmers, who are the producers that must shoulder the future of agriculture. The feature stories cover a project to export Japanese rice to Hong Kong conducted by rice farmers in Niigata, and the opportunities that are opening up for farmhouses in Thailand as a result of localizing the entire manufacturing process of the farm machinery business there.

In all times and places, farmers have universally shared the same aspiration of “delivering their painstakingly grown crops to as many people as possible.” What can Kubota do for the farmers who have come this far together with them? In the hopes of helping farmhouses to realize their aspiration, new initiatives have already been set into motion.

For the Benefit of Farmers

The Start of New Initiatives

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Full-bodied when cooked, exported *Koshihikari* rice impressed even the producers themselves, who came to visit from Niigata (at Japanese restaurant *SESSYU* in Hong Kong).

*All affiliations, titles, etc. of individuals in the text are current as of March 2013.

For the Benefit of Farmers

I Giving Back to the Farmers—
the Japanese Rice Export Project

Opening Up the Future of Japanese Rice. Venturing into the Culinary Gold Mine of Hong Kong to Reach a Common Goal



A cosmopolitan city noted for its “million dollar night view,” Hong Kong was formerly ceded by the Qing Dynasty to Great Britain and then colonized by the British Empire. As is well known, it was only as recently as 1997 that the Hong Kong islands were returned to China, and now they form the Hong Kong Special Administrative Region. An ancient transportation hub in Asia, this free port has served as a financial and distribution center since the British colonial days, and now ranks among the world’s three largest financial centers, along with London and New York City. Committed to a free-market economy with few regulations and low tax rates, Hong Kong plays host to the Asia-Pacific regional headquarters of numerous multinational enterprises. The island is also a prominent cultural hub, not only for the Chinese world, but also for the entire globe, making it a truly cosmopolitan city. This historical and cultural background has had no small amount of influence on the “food culture” there, and the city is now known as a veritable treasure house of food and cuisine from around the world, which never ceases to delight the gourmets who are attracted by its world-famous gastronomic culture.

In 2011, Kubota kicked off a project to export Japanese rice to this city—an initiative that was originally planned as a way for the company to give back to Japanese farmers for their unflagging loyalty to Kubota-brand farm machinery. Japan is now witnessing a steady decline in rice consumption as a result of diversification of eating habits on the back of changing lifestyles, a shrinking and ageing population, and lower birthrates. Having grown together hand in hand with farmers and having received their patronage, Kubota gave serious thought to what it could do for its long-time customers in Japan. The result was a plan for helping farmers to expand sales channels by tapping into Kubota’s collective strength in the rice export business.

Having chosen rice grown in Niigata Prefecture, which is best known for the prominent brand *Koshihikari*, the company partnered with many farmers who had a strong motivation to pursue the project. Under the banner of “From Niigata to Hong Kong,” Kubota, its affiliated companies, and individual farmers united their efforts to make this Japanese rice export project a success in their bid to open up the future of Japanese rice. This report celebrates their ambitious undertakings and impressive achievements.



Hong Kong’s busiest district, Causeway Bay bustles with many young people, much like Harajuku in Tokyo.



Top: Double-decker trams, reminiscent of the British colonial days
Bottom: After the 1980s, food vendors were only allowed to set up stands in designated locations.



Hong Kong’s night view—said to be one of the world’s top three, along with those of Hakodate and Napoli

A city view from Victoria Bay, showing Hong Kong Island (right) and the Kowloon Peninsula (left)

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For the Benefit of Farmers-I

Giving Back to the Farmers—
the Japanese Rice Export Project

Empowering Farmers and the Agricultural Industry for a Hopeful Future. The Significance of the Japanese Rice Export Project

In the fall of 2012, a ship carrying Niigata-grown rice left Niigata East Port for Hong Kong. This marked the full-fledged initiation of the export of Japanese rice to Hong Kong, a project in which Kubota has been involved since the spring of 2011. The destination of the cargo holding full of Niigata rice was Kubota Rice Industry (H.K.) Co., Ltd., which the company recently established to mill rice in Hong Kong and supply made-in-Niigata rice to the local market. The overarching goal of the project was to import, mill, and distribute Japanese rice in Hong Kong, thereby helping Japanese rice to expand its sales channels. Before describing the series of developments thus far, it is necessary to explain what brought Kubota to support farmers in this “Japanese rice export project.”

As mentioned earlier, rice consumption in Japan has experienced consistent declines due to diversification (i.e., Westernization) of people’s eating habits and an aging society with a dwindling birthrate. The problem is that farmhouses usually cannot increase

production, since any additional produce would end up creating an oversupply in the market unless people suddenly began consuming more. The Japanese government has thus implemented an acreage-reduction program^{*1} to adjust the balance between supply and demand of “rice as a staple food” distributed throughout the country.

On the other hand, in addition to “rice as a staple food,” there is another category of rice that farmers can produce—“rice for new demand.” Rice in this category is used for animal feed, rice powder, or exporting, and it does not affect the supply and demand of rice as a staple food. Taking a closer look, however, one finds that both rice for animal feed and rice powder are priced low, and that demand for them has become saturated. What remains is “rice for export,” but for farmers to obtain permission to start growing rice for this purpose, they must first present a contract with overseas consumers to the authorities. In other words, no farmer is allowed to grow rice for export without a contract with prospective international

buyers or partners with sales channels overseas, no matter how desperately they may wish to sell their rice abroad.

Indeed, some farmers did team up with export businesses to export rice, but such businesses often found it difficult to proceed on their own initiative unless they were sure that they would be able to sell their goods, since they are required to reach agreements with farmers on purchasing quantities and file notification as early as the end of the rice planting process. For the farmers, on the other hand, exporting rice is a ray of hope that could lead to increased rice production—so much so that many are eager to sell their rice to international customers. However, for this to happen, they require someone to arrange stable purchasing.

In response to such requests from farmers, Kubota arrived on the scene. Having developed in tandem with farmers for many years, Kubota is keenly aware of the fact that it owes much to these agriculturists. This led to the decision to support farmers by leveraging the company’s



The sun sets over Mt. Yahiko and the fields from which the export rice was harvested. (Nishikan Ward, Niigata City)



Tractors await the farming season in spring. (Akiha Ward, Niigata City)



Overlooking Niigata City from the Toki Messe: Niigata Convention Center (Background: Sea of Japan, foreground: Shinano River)

A rural landscape found on the Echigo Plain, a prominent rice-producing district. Retaining some 600 trees for drying harvests, the sight of the “hazaki trees of Natsui” has been chosen as one of the 100 famous views of farming villages in Japan. (Natsui, Nishikan Ward, Niigata City)

^{*1} Under this policy, the Ministry of Agriculture, Forestry and Fisheries (MAFF) determines the target volume of rice production for the following year based on its demand estimate for such year in order to prevent a sharp decline in rice prices due to oversupply. Up until the 2003 production year, the Ministry had set forth targets for reduction in rice acreage to avoid overproduction, but it switched its strategy and began targeting production volume from the 2004 production year.

The Novel Approach of “Exporting Brown Rice and Milling Rice Locally.” A Future Model for Exporting Japanese Rice



Export rice waiting for shipment to Hong Kong

Export volume and value of Japanese rice



Data: MAFF

If one wishes to export rice, it is necessary to have stable and expandable consumption at the destinations for export. Taking this into account, Kubota decided to devise its own original scheme. To positively differentiate from other varieties of rice for which export had already begun, Kubota set about taking inventory of its engineering assets to determine whether any of them might be of use for the project. Their conclusion was the innovative approach of “exporting brown rice and milling rice locally.” In most of the previous cases of Japanese rice exportation, the rice had been milled in Japan before being sent abroad, following which polished rice was distributed in export markets. The problem with this procedure was the perishability of rice, which loses some of its freshness over time. In the past, this had made it virtually impossible to achieve in other countries the delicious taste that has always been the hallmark of freshly cooked rice in Japan. To resolve this bottleneck, the Japanese rice export project team opted for the clever scheme of exporting

unpolished rice, which is warehoused in Kubota’s cold storage facility in Hong Kong, milled after orders have been received, and delivered to customers in as fresh a state as possible. To help international customers who may not be skilled at cooking rice to enjoy this delicious specialty, they even came up with the idea of promoting Rice Robo, a commercial-use automatic rice cooking system, thus establishing a start-to-finish business model in which Kubota would be involved at every step of the way. This novel approach succeeded in boosting project results. “From soil preparation to cooking rice” is a business model that can be offered by Kubota and no one else.

The project was led by the Strategy Planning Office, which was set up in 2010 to launch new businesses.

“We were desperately seeking ways to give back to the farmers, whose patronage we have had the privilege of enjoying for so many years, and pondering what we could do as a private business to revitalize farming in Japan. The project was born out of this



Gen Takahashi
Senior Manager, Strategy Planning Office,
Kubota Corporation

sincere desire. We thought, ‘If we are going to do it, we need an innovative approach that taps into Kubota’s expertise in farming machinery and a business model that will last into the future.’ The result was the solution of ‘exporting brown rice and milling rice locally.’ However, even the best quality rice

may not taste like it should if it is cooked poorly. For overseas consumers to enjoy delicious Japanese rice and truly appreciate its virtues, we needed a machine that could cook rice with consistent output, and ‘Rice Robo’ manages this beautifully. Now we have a business model in which Kubota’s machinery is involved in every step from soil preparation to rice cooking. We are proud of this brand-new business model, as it is something that can only be achieved by Kubota, a leading farming machinery manufacturer.” (Gen Takahashi, Senior Manager, Strategy Planning Office, Kubota Corporation)

Incorporating the innovative solution of “exporting brown rice and milling rice locally,” Kubota’s Japanese rice export project drew considerable attention from the government of Niigata Prefecture, home to the farmers who rendered their services to the project. As consumers all over the country turn away from rice, demand for Niigata-grown rice has been on the decline. In a bid to expand sales channels, the

Niigata prefectural government had set about promoting rice export and introducing a series of stimulus programs, including support for business meetings, subsidization of sales promotion expenses, and distribution of information on their rice. Their efforts paid off, and Niigata Prefecture’s 2012 production plan for rice for exports (rice for new demand) was the largest in the country at 928 tons, 242 tons of which were produced for Kubota’s project, and the prefectural government hoped to maintain this export drive further for the benefit of farmers.

“Exporting rice for new demand serves to expand the planted area, which then revitalizes paddy fields and producers. With this in mind, we have recognized rice export as an extremely important measure for the farming business in Niigata Prefecture. Export volume is steadily increasing, but we are conducting multifaceted studies as to what backup support the prefectural government can provide to further expand the volume. Kubota’s approach of ‘milling rice locally’ is uniquely original, and so our



Minoru Fukuhara
Director, Agri-Foods and Distribution
Division, Department of Agriculture,
Forestry and Fisheries, Niigata Prefectural
Government

government has high hopes for it. We hope to see this set a model for those who aspire to export Japanese rice.” (Minoru Fukuhara, Director, Agri-Foods and Distribution Division, Department of Agriculture, Forestry and Fisheries, Niigata Prefectural Government)

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Giving Back to the Farmers—
the Japanese Rice Export Project

The Affinity between Hong Kong and Japanese Food. A “Japanese Food Boom” Has Taken Hold in Hong Kong.

Gathering various foods from all around the world, Hong Kong is a veritable treasure house of culinary delights. One of the realities of Hong Kong’s food situation is that it is dependent on imports for most of its farm products, with 100% of rice consumed there being imported. Japanese rice imports account for only a meager proportion, but Japanese food has long earned the love of people in Hong Kong.

In the fast-growing Southeast Asian region, Hong Kong, along with Singapore, is one area where Japanese food enjoys high penetration. Although restaurants serving Chinese cuisine account for 30.3% (4,770 establishments) of all food services, Japanese restaurants represent 6.9% (1,080 establishments) of the total, ahead of restaurants serving Italian, French, Korean, and other national cuisines.^{*2} In recent years, Japanese food service chains serving conveyor belt sushi, ramen, *tonkatsu* deep-fried pork cutlets, and curry and rice, as well as high-end Japanese restaurants, have set up shop in Hong Kong and seen a steady increase in clientele.

Taking notice of this high affinity for Japanese cuisine in Hong Kong, Kubota’s Strategy Planning Office surveyed the market there in March 2011. They forged relationships with people there while conducting various surveys, thus leading to Kubota’s very own network in the region.

As Kubota came to learn more about players in the local rice market and the forms of distribution there, they realized that up to around 90% of rice in Hong Kong is used by businesses, including food services. People in Hong Kong eat out much more frequently than those in Japan, with the latter

dining out an average of only 1.4 times per week (according to the Ministry of Internal Affairs and Communications), whereas the former eat out 6.9 times per week on average (according to a private research institute). Kubota’s goal had become clear—supplying rice from Niigata first to food services with the main focus being placed on Japanese restaurants, and then moving on to the retail market to gradually reach dinner tables in private homes.

A long-time food distribution business insider in Hong Kong who now owns seven Japanese restaurants there, Hiroshi Yoshida is also President of the Hong Kong Japanese Restaurant Association. “Now that the third Japanese cuisine boom has arrived in Hong Kong, we are being presented with a golden opportunity to introduce Japanese rice here,” Yoshida notes. “Over the past three decades, TV dramas, music, and other forms of subculture from Japan have resulted in a series of Japanese cuisine booms here. We are now witnessing the third boom, owing to the increased number of people from Hong Kong visiting Japan and promotions of local food by various prefectures in Japan. This opportunity is too important to pass up. When I first heard about the plan to export rice from Kubota, I was more than impressed by their underlying motive, which was to benefit farmers. Success or failure will depend on how we can effectively let people in Hong Kong experience the superb taste of Japanese rice. I really hope that this project will be a major success, and I will spare no effort to support it.”

“We need a ‘story’ to let Hong Kong people really experience the tastiness of Japanese rice,” points out Director Motoaki

Komiya, Business Development Department of the Japan External Trade Organization (JETRO) Hong Kong.

“Hong Kong people have good taste, but they favor knowledge about food so much that they are often said to ‘taste with their brains.’ It is thus important to convince them of how good Japanese rice is with a story, so that we can help them to deepen their understanding of it. I want to ask the exporters of Japanese rice to do something that helps to expand the market for Japanese cuisine as a whole. If the market does not grow, then different varieties of Japanese rice from different areas will end up competing against each other over the same small slice of the pie. I hope that Kubota will focus on broadening the width and depth of the market through its endeavors to export rice,” Komiya continues.

Hiroshi Umezu, a consul at the Consulate-General of Japan in Hong Kong, also expects much from this initiative by Kubota. “I was profoundly surprised at how good the locally milled rice marketed by Kubota is. The difference in taste is unmistakable compared with other Japanese brands of rice available here. I really want people in Hong Kong to know this exquisite flavor. It certainly is an understatement to say that people in Hong Kong show a strong interest in what they eat, and they have a firm trust in the safety and quality of Japanese cuisine. I have only the highest hopes for Kubota’s unique project.”

Expectations are running high for Kubota’s Japanese rice export project in Hong Kong.

^{*2} Census and Statistics Department (Hong Kong) (as of July 25, 2012)



Sushi, teppanyaki, and sukiyaki...some 1,000 Japanese restaurants are crowded together in Hong Kong. No matter how you slice it, Japanese cuisine is in fashion here.



Motoaki Komiya
Director, Business Development Department, JETRO Hong Kong (left)
Shinichiro Kawahara
Economic Research & Business Support Department, JETRO Hong Kong (right)



Hiroshi Umezu
Consul, Consulate-General of Japan in Hong Kong



Hiroshi Yoshida
President, Hong Kong Japanese Restaurant Association



Seafood, vegetables, meat, and more—every kind of foodstuff is available at the market, ready to fill the stomachs of discerning gourmets in Hong Kong.





Niigatakubota Co., Ltd. Head Office

Sharing a Common Aspiration. Kubota's Enthusiasm Moves Farmers.

Mt. Yahiko viewed from the Echigo Plain. This sacred mountain has long been an object of veneration among farmers.
(Nishikan Ward, Niigata City)

Joining in this project to coordinate distribution within Japan were Kubota's Japanese dealer Niigatakubota Co., Ltd. and its subsidiary Niigatanosho Co., Ltd.

One may very well wonder why the rice must be grown in Niigata. This prefecture is among Japan's largest rice-producing areas and gave birth to *Koshihikari*, the country's leading rice brand. Of course, this initiative was not undertaken without the intention to deliver *Koshihikari*—the most prestigious brand of Japanese rice—in the event that Japanese rice would be marketed outside of Japan. However, there were also other good reasons why rice grown in Niigata was chosen.

One such reason was the availability of a workforce,^{*3} i.e., farmers who were keenly aware of the issues facing the farming business in Japan and who seek new hope in rice farming. Although such workforces exist in abundance around the country,

Niigata was the optimum choice given that a workforce of a certain size located within a single area would be required. From a practical sense, one needs local contacts to first gain support from rice producers and to collect goods and distribute them through export channels. Niigatakubota and Niigatanosho readily fulfilled such requirements.

"When Kubota first came to consult with me about this project to export rice, I was moved by their enthusiasm for 'contributing services to farmers.' I myself have believed for the past 30 years that we need to export rice, and so when I heard about the story of Kubota, I had a strong conviction that I must join and make it a success. In retrospect, a large part of what drove this project was an enthusiastic spirit on the part of the farmers. At the heart of the project is their aspiration to leverage rice exports to find hope in the future of Japan's farming business, and to

thus break through the current impasse. Our efforts were made in response to their passionate aspiration," says Norio Yoshida, President of Niigatakubota.

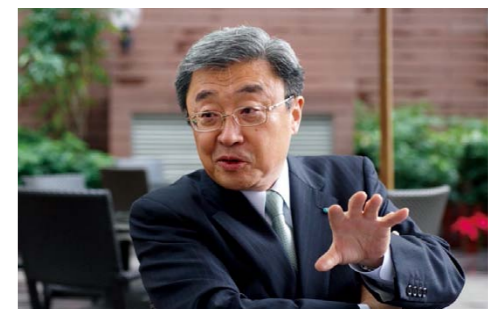
A total of 48 farmhouses decided to join the project because they approved of the new initiative to export "rice for new demand," and 242 tons of *Koshihikari* and other brands of rice harvested in 2012 over 45 ha of contracted land were collected. Although there was no regulation demanding inspection of rice for export, it was decided to conduct a 100% check to ensure safe, trustworthy rice with a clearly defined cultivation history. Taking responsibility for the inspection was Niigatanosho, a subsidiary of Niigatakubota, which is among the few companies in the industry to have as many as six qualified agricultural product inspectors.

Kimihito Ito, President of Niigatanosho says, "I recall a particularly memorable event

at a gathering to brief farmers on the project. One farmer asked about our purchasing price, which is completely understandable considering that the amount we pay for their rice is certainly important for them. On that occasion though, many others present spoke up by saying that, 'This is not the time for discussing prices.' Obviously, rather than worrying too much about prices, the farmers shared expectations for the new prospects and challenges that rice export would open up in the years to come. It was a moment when I felt their high aspiration and sensed a strong response."

With comrades sharing a high aspiration coming together, the network of producers had taken shape.

^{*3} In the context of agricultural policy, a "workforce" refers specifically to persons engaged in farming that take the lead in the farming business in their respective communities, including full-time and part-time farming households and farming corporations.



Norio Yoshida
President, Niigatakubota Co., Ltd.



Kimihito Ito
President, Niigatanosho Co., Ltd.

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Giving Back to the Farmers—
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The Pride of a Farming Machinery Manufacturer. From “Local Milling” to “Cooking Rice”



A physical distribution company that endorses support for farmers offered for use the building in the warehouse district that now houses Kubota Rice Industry (H.K.) Co., Ltd.

For the Japanese rice export project, all of the harvested rice is exported unpolished in order to keep it as fresh as possible. Upon arrival in Hong Kong, the rice is kept at Kubota’s cold storage warehouse until it is polished and shipped after orders have been placed. The central element of this whole project is Kubota Rice Industry (H.K.) Co., Ltd., Kubota’s wholly owned subsidiary (established in October 2011) that specializes in importing, milling, and marketing Japanese rice to expand its international sales channels.

Putting into practice the new strategy of “locally milling” export rice is indeed a key component of this project, but its rigorous quality control is also worthy of attention. Upon arriving in Hong Kong, brown rice is sampled for radiation measurements. Then a grain discriminator and heavy metal determinator measure the mixture rate of substandard rice and heavy metal contents, respectively, thereby ensuring safety and stable quality even before polishing.

The milling line is furnished with equipment for high-quality polishing, including a color separator (for removing colored rice) and a crushed rice remover (for removing broken rice that affects taste when

cooked). To prevent any foreign matter from being mixed in during the distribution process in Hong Kong, an automatic packing machine has been introduced, thus maintaining milling quality equivalent or superior to that of rice grown and consumed in Japan. Also in place to gauge the quality and safety of rice are an eating quality meter, which grades the taste of rice, and a whiteness meter, which stabilizes milling quality. This facility is the only fully equipped rice mill in Hong Kong that is certified as a food processing plant, having met the ISO 22000 international standard for food safety management for additional safety and security through these equipment and systems.

When shipped from Japan, the rice is transported in containers that hold only Kubota goods, as opposed to mixed containers. This is to prevent the quality of rice from deteriorating, as rice can easily absorb odors. Brown rice from Japan is held in a cold storage warehouse attached to the head office, where temperatures are kept strictly at 15°C around the clock. All of the operations throughout the process are controlled using barcodes, from shipment from Japan, warehousing in Hong Kong, and

directions when milling to de-warehousing and shipment to customers. This ensures traceability for the varieties, producers, and cultivation histories of brown rice, and also prevents any mistakes that might occur while milling. This approach of doing everything possible in-house and ensuring rigorous quality control represents the epitome of the essence and pride of Kubota’s engineering expertise as a farm machinery manufacturer.

In addition to ensuring quality, the project team worked on reducing physical distribution costs. Their solution was to outsource 100% of the distribution work to a single partner service provider that empathized with the project. This partner helped Kubota to significantly reduce overhead costs and, together with the company, created a scheme for full support throughout the entire process, from production and distribution to marketing.

A member of the Strategy Planning Office and one of the driving forces behind the project, Takushi Suminaka assumed the position of representative for Kubota Rice Industry (H.K.) Co., Ltd., which was established exclusively for accepting export rice.



From the upper left Rice imported from Japan is placed under rigorous control around the clock at a constant temperature of 15°C in the cold storage warehouse of Kubota Rice Industry (H.K.) Co., Ltd.

The only fully-equipped rice mill in Hong Kong that is certified as a food processing plant, the facilities include equipment that incorporates the best of Kubota’s engineering expertise. Farmers on a Hong Kong inspection tour for the Japanese rice export project listen to explanations on the milling machine.

Using operation sheets for the milling process that have been translated into the local language, most of the jobs are handled by Hong Kong staff members.



A local staff member explains the shipping label.



Takushi Suminaka,
Director & General Manager,
Kubota Rice Industry (H.K.) Co., Ltd.

All staff members attend daily meetings to discuss issues in Japanese, English, and Cantonese. Although they speak different languages, they share the common aspiration to “help spread delicious rice from Japan.”



A barcode is placed on the shipping bag. To assure quality, every step in the process from shipment from Japan to customer delivery is controlled using such barcodes.



Upper left: Signature “Hamburg Curry”
Upper middle: Brightly colored “Vegetable Curry” is always popular among women.
Upper right: Takashi Nakano, Director of Izumi Curry



In the kitchen of Izumi Curry is Kubota’s Rice Robo, a commercial-use automatic rice cooking system that operates at top performance to prepare some 500 dishes every day. A brainchild of the specialist farm machinery manufacturer Kubota, the “total solution for rice” covers everything from preparing the soil with tractors on the farm to cooking rice for a delicious presentation.



A child is absorbed in eating food. In any country, children always have a good appetite.



A mother eats with her child. She praises the Japanese rice, saying “It’s delicious and safe, and that’s why I give it to our child.”



A grandfather who visited the restaurant with the mother and her child (left) said, “I find Japanese rice tasty, but Thai rice is equally good, probably because I have become accustomed to it,” showing that he belongs to a generation capable of appreciating both types of rice.



Women in their 20s sit in the restaurant. “Japanese rice is so good, and we love Japan,” they exclaim. The advent of the Japanese cuisine boom has helped Japanese rice to penetrate young people’s lifestyles.

“Exporting rice is essentially exporting the rice culture of Japan,” says Suminaka. “If we are to develop sales channels and stimulate consumption in foreign countries, it is necessary to not only supply tasty, quality rice, but also to educate people on how to prepare it in a delicious way. There is no small number of people in Hong Kong who do not know how to cook or serve rice, and are unaware of the importance of freshness. Such being the case, it is extremely important to implement educational activities and advertising for enhanced understanding of Japanese rice, while at the same time allocating more resources to marketing.”

“Made-in-Niigata” Japanese rice made its debut in the Hong Kong market in the fall of 2012. In addition to supplying Japanese

restaurants there, the rice is also sold to general consumers via leading Japanese supermarket chains and online.

One of the first Japanese restaurants to purchase rice from Kubota was Izumi Curry, which operates Japanese curry restaurants in the Kansai district. In March 2012, they opened their first shop in Hong Kong in the food court of a Japanese department store. The variety of rice initially chosen for their very first location there was short-grain rice grown in China.

“Having achieved success with our first shop, we began to consider opening a second establishment in an upscale shopping mall in Causeway Bay. We wanted to make it different from the first shop. Since it is supposed to be a high-end restaurant, we wanted to serve

truly delicious Japanese curry and rice dishes using top-class rice. Naturally, we required high-quality rice, and so we decided to source it from Kubota in spite of the slightly higher costs. Also, to cook delicious rice we purchased an automatic rice cooking system from Kubota. Quite frankly, this machine makes unbelievably delicious rice. Without Kubota’s rice and the automatic rice cooking system, we would not have been able to open the second shop,” says Takashi Nakano, Director of Izumi Curry.

We invited comments on Japanese rice from local customers of different ages in the shop, who unanimously responded by saying that the “Japanese rice has its own particular flavor and is really good.” It was a powerful moment, when the “aspiration” of everyone involved in the Japanese rice export project is realized.



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For the Benefit of Farmers-I

Giving Back to the Farmers— the Japanese Rice Export Project

Farmers on the Hong Kong inspection tour for the Japanese rice export project check rice from many different countries on the shelves.

Set an Example of Resilient Agriculture for the World. Innovation in Japanese Agriculture Begins.

Soon after its rice hit the market, Kubota invited the farmers who participated in the project to inspect the Hong Kong market in December 2012. Knowing that it would take some time before they could give a fair evaluation, Kubota decided to organize a tour in response to these farmers’ ardent desire to see with their own eyes how the rice that they had painstakingly grown was being treated and accepted there. Among the group members was Eiji Hirano, President of Niigata Nouen Corporation, who is planning to participate in the next round of this export project and was once involved in the rice export business.

“I was profoundly impressed to see the milling facility at Kubota Rice Industry (H.K.) Co., Ltd. I also felt proud of what Kubota has done—they had the most rigorous quality control system in place to ensure food safety and security. We then

visited a Japanese supermarket there. To our great surprise, we found that much of the rice on the shelves there was from 2011, not from 2012, as ours would have been. Milled a long time ago, it had lost much of its flavor and was obviously priced low. There is no doubt whatsoever that our rice is more delicious by far. For us to expand the sales of our rice in this market where so many different choices of rice are available, I believe that we need to have excellent communication skills, and be there in the market to provide convincing messages to local consumers to help them learn more about our rice.”

At the basis of Hirano’s high aspiration for export rice is his pride as a professional rice producer.

“Many farmers share the same aspiration of producing quality rice so that many people will be able to enjoy it. One of the ways that we made this a reality was to voluntarily

market rice outside of the government’s price restrictions. Our attitude toward this project to export rice to Hong Kong is the same. We make quality rice, and we want someone who will appreciate our aspiration to market it,” explains Hirano.

Although Sakuichi Nomizu, President of Granary Takabatake Corporation, was unfortunately unable to join this tour, he is among the 48 farmers who participated in this project.

Says Nomizu, “As the domestic demand for rice had remained sluggish, I was seeking ways to diversify sales channels. Meanwhile, we faced the major challenge of deciding what to produce under the ‘rice for new demand’ category. There is a natural limit to what we can do about the prices of rice for feed and rice for processing. It was at that point that I suddenly heard about this rice export project using rice for new demand. We were not


without our concerns due to the fact that it is a brand new initiative, but I decided to join because I saw the potential of it opening up new paths in the future.”

Like Hirano, Nomizu is firm in saying that their role is to “produce quality rice.” The question remains as to how they should promote and market “what they want to produce” (i.e., “delicious rice”) in Hong Kong. In its very first year, members of the Japanese rice export project were assured that they could successfully compete in the gourmet city of Hong Kong if they offered “something real.” There is no doubt that making greater marketing efforts to expand sales channels and providing discerning consumers in Hong Kong with recipes and some knowledge of rice will help to deepen their understanding of the quality of Japanese rice. On visiting one of the local supermarkets, however, all sorts of rice from Southeast Asian countries and elsewhere could be found on the shelves, which are often less than one-third the price of Japanese rice. For Japanese rice to survive this kind

of competition and gain greater penetration, it must first achieve greater international competitiveness. With this in mind, Kubota kicked off the farmer support project, which pursues better control of quality, including taste, and at the same time helps producers to streamline their process.

Kubota has already launched a series of initiatives designed to streamline the rice production process. One such initiative is a proposal for “direct sowing of iron-coated seeds,” which eliminates the need to cultivate seedlings. As the name implies, the process involves sowing rice seeds coated with iron powder directly into rice paddies. Since it obviates the necessity of raising and transporting seedlings, which is an essential process in transplant production, this agricultural technique reduces costs and labor involved in the process. If this innovative rice farming technique can be spread to streamline rice production process, then there will be a high chance of increasing the international competitiveness of Japanese rice.

So far, the 242 tons of rice harvested in 2012 is selling smoothly. Going forward, the project aims to increase the sales volume in stages to reach 500 tons in three years’ time. However, the project is also aiming even higher by sharing the success of the Niigata case nationwide to invite more likeminded individuals to further increase the scale by forming an “All-Japan” team of rice producers. When production of export rice comes to play an important role in farm management in Japan, the overall picture of Japanese farming and rice production will be completely different from what is seen now. It will definitely be a day when the world realizes the true value of Japanese farming.

It is fair to say that this Japanese rice export project by Kubota represents a step toward new hope by going beyond conventional frameworks to support farmers and giving rise to innovation that could change the entire course of Japan’s farming business. However, the voyage has only just begun. 



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For the Benefit of Farmers



II

Localization Fully Established in Thailand



President Yoshida of Niigata Kubota Co., Ltd. shakes hands with a buyer who has purchased their rice milled in Hong Kong. Consumers in Hong Kong are quick to understand data on labels, such as the date of milling.



A leaflet on “How to cook delicious Japanese rice” that Kubota Rice Industry (H.K.) Co., Ltd. gives away to those who have purchased their rice. As many people outside of Japan have never cooked rice before, this kind of considerate service is important.



Made-in-Niigata Koshihikari, with a label proudly reading “Milled in Hong Kong”



Displayed side by side on retail shelves is Japanese rice along with rice from China, Taiwan, Thailand, and Australia. This market is subject to intense sales competition that is unimaginable in Japan.



President Eiji Hirano of Niigata Nouen Corporation (left) discusses matters with Kubota staff members.



President Sakuichi Nomizu (left) and Director Yoshio Kobayashi (right) of Granary Takabatake Corporation stand in front of the company’s large-scale dryer.

Start-to-Finish “Localization” to Offer Thoroughgoing Support for Thai Farmers

The Kingdom of Thailand, commonly known simply as Thailand, occupies a very high place in the global rankings for rice production and export. The production of rice and other agricultural products was once the centerpiece of Thai industry, but rapid economic growth in the 1980s and 1990s changed the nation’s status from an impoverished agricultural nation to a newly industrializing country committed to the export of industrial products. Despite a temporary socioeconomic setback in 1997, when the country became the epicenter of the Asian currency crisis, this “land of smiles” has since followed a smooth growth trajectory. Having extended a generous welcome to foreign-affiliated companies and direct investments from Japan and Western countries, Thailand has transformed itself into a full-fledged industrialized nation, and it is increasingly seen as a leading power among ASEAN countries. In 2010, its gross national income (GNI) per capita was US\$4,150 (about 1/10 of the same figure for Japan),^{*1} which makes Thailand an “upper-middle-income country” (UMC) as defined by the World Bank.^{*2}

Having established a presence there early on, Kubota has virtually led the mechanization of farming in Thailand and has come to enjoy the leading share in the national farm machinery market. With the opening of an engine manufacturing company there in 2012, Kubota completed the start-to-finish localization of the entire process from production of engines—a core component—and hydraulic equipment to assembly of farm machinery. What does this mean for agriculture in Thailand and the people who are engaged in farming there? The second feature of this issue examines the present state of agriculture in Thailand, the challenges it faces, and Kubota’s efforts to achieve solutions.



Palm trees accentuate the rustic landscape in the tropics.



Top: Bustling Bangkok is a capital city notorious for traffic jams.

Bottom: Begun in a warehouse district by the Chao Phraya River, Asiatique is a huge night market visited by many young Thai people and families, as well as tourists.



Threading its way through the urban district, the Bangkok Mass Transit System (BTS) was built to alleviate traffic congestion.

*1 The World Bank

*2 The World Bank classifies countries with per-capita GNI of US\$3,466 to US\$10,725 as UMCs.

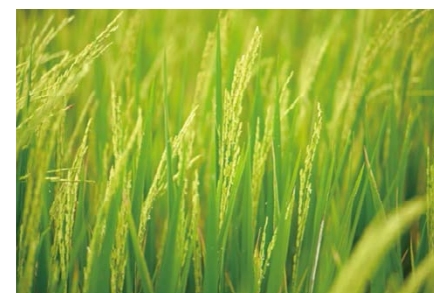
Farming in Thailand – Underpinning the Nation’s Economy and Livelihood. To Bring “True Happiness” to Farmers

Tractors at work
Tractors are essential in cultivating the heavy, clayey soil in central Thailand. (Ayutthaya Province)

Farming (agriculture, forestry, and fisheries) population as a percentage of the total labor force in Thailand



Data: Report of the Labor Force Survey, Whole Kingdom, National Statistical Office of Thailand
* Numbers are for the three-month period ending September 30 (busy farming season).



Fruitful ears of rice in double-cropping. Crops are cultivated twice annually, typically during the dry season (February - May) and the wet season (July - November).



An enormous amount of harvested rice After drying in the sun for one day, the rice is sent to a mill to be bagged.

The land area of Thailand is 51.31 million ha, making it 1.4 times larger than Japan. Farmland accounts for 38.6% of the total area, or 19.80 million ha. This vast expanse of farmland—about 4.3 times larger than the amount in Japan—has long underpinned Thailand’s agriculture.^{*3} Its mild tropical/subtropical climate makes it possible to cultivate crops throughout the year, and in the irrigable paddy fields that stretch across the central plain, rice is harvested more than once annually, with five crops in two years or three crops in a single year. Statistically speaking, however, farming (agriculture, forestry, and fisheries) as a percentage of GDP has been on a downward trend in relative terms: after recording 25.9% in 1970, the percentage has since dropped to 12.4% in 2010,^{*4} primarily due to the rapid development of the manufacturing and service industries. In 2011, the manufacturing industry accounted for approximately 34% of Thailand’s GDP and roughly 90% of its total exports.^{*5} Nevertheless, the country’s agricultural population still accounts for about 42% of the total, or 16 million people.^{*6} Grain self-sufficiency stands at 144%, which makes the country the leader in this category in Southeast Asia, and close to the top of the list globally.^{*7} It is true that these days Thailand often captures public attention as an industrial power, but much is expected from the further development of its agricultural business as farm mechanization continues to progress.

It was only in the 1960s that farming machines were first introduced to Thailand, and in those days, imported tillers accounted for most of the equipment available. They often broke down and there was little-to-no access to replacement parts, leading the Thai government to address the pressing need for domestic production of farm engines. At the time, Kubota was exporting general-purpose tillers to Thailand and offered maintenance services. Having high regard for Kubota’s impressive track record in the country, the Siam Cement Group (SCG), a conglomerate affiliated with Thailand’s royal family, chose Kubota as its partner to establish the joint venture Siam Kubota Diesel Co., Ltd. (SKDC) in 1978. SKDC started to manufacture and distribute farm diesel engines in 1980, and went on to expand the scope of its business to include the manufacturing and distribution of tillers, and, later, tractors and combine harvesters. With the merger of Siam Cement Group’s subsidiaries in 2010, the joint venture started afresh as Siam Kubota Corporation (SKC).

It is no exaggeration to say that Kubota’s history in Thailand has been defined by agricultural mechanization. The course of events changed in 2002, when the introduction of tractors and combine harvesters for paddy fields triggered an explosion in the market, boosting tractor sales there 40-fold between 2003 and 2008. Nevertheless, such machines were only being used by a small percentage

of farmhouses. We visited Apichart Jongskul, Secretary General of Thailand’s Ministry of Agriculture and Cooperatives (MOAC) Office of Agricultural Economics, to ask what he thought was the essential issue for farming in Thailand.

“The lingering problem with farming in Thailand is that farmers’ income is unstable because the business is vulnerable to droughts, floods, and other natural phenomena,” he noted. “This puts many farmers in debt, and some are even forced to sell their land to repay the debt. As a relief measure, the Thai government established a land bank, through which the national government buys up land for leasing to individual farmers at an affordable rent.”

Apichart mentioned the shortage of labor in the farming sector is also a major bottleneck.

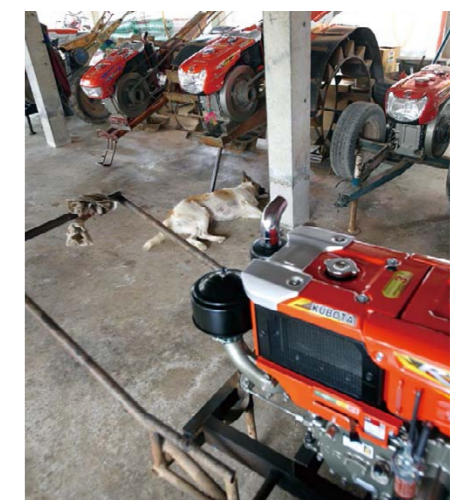
“In order to develop the next generation of agricultural producers, we offer scholarships so that young people can gain skills ‘in the field.’ However, the fact is that young people are crowding into the big cities, with the result that the farming population is now dwindling. Because of this, we believe that it is essential to mechanize farming. Going forward, we may consider a scheme under which the government purchases farming machinery and offers it to individual farmers at reasonable costs.”

Thailand’s agricultural policies are characterized by the fact that they often lean toward protecting the producers. One policy

that clearly exemplifies this is the “rice collateral loan system,” which basically amounts to a rice purchasing system under which the government purchases rice from producers at above market prices. However, this new scheme counteracted Thai rice’s export (price) competitiveness, with the result that in 2012 the nation lost its position as the largest rice exporting country in the world—a ranking it had retained for as long as thirty years.^{*8} So, the question to be asked is, “Has Thailand come to a turning point?” Apichart claims that, “Agriculture remains the foundation of the Thai economy. Agriculture and the manufacturing industry are two sides of the same coin, and therefore we must protect agriculture. It is thus an important mission for the government to realize a living standard for farmers that they will feel content with.” The Thai government has a clear recognition that farming is not just another industry, but is an important asset for the country, and thus farmers engaged in the business must be protected. This perspective is the key to a better understanding of farming in Thailand.



Apichart Jongskul
Secretary General, Office of Agricultural Economics, MOAC



Walk-behind tillers are a common sight at farmhouses. Not a few farmers own several of these tillers.

From “Manufacturing of Engines” to “Human Development.” Kubota’s Localization Accelerates.



KET’s new production lines. Farm machinery engines are produced in an orderly fashion.



Body parts for KET’s engines. The depth of the black luster evidences their sturdiness.



Operators silently concentrate on their work. They take their work as seriously as their Japanese counterparts.



Many greeting cards from customers show a relationship of trust.



KET Head Office



This state-of-the-art KET plant features an effluent-free system to reduce environmental load.



Shigenori Kobayashi
President, KET



Kazunobu Nakata
Manager, Manufacturing Department and Manufacturing Engineering Department, KET

To bring “happiness to farmers,” it is crucial to improve their standard of living by increasing their income. To make this happen, it is necessary for the farmers themselves to raise their own income by boosting yields and to maximize their profit margin by trimming production costs, before seeking support from the national government. This also requires that farm machinery, which has a significant influence on farmers’ earnings, and its manufacturers undergo a fundamental change, starting at the shop floor.

Kubota’s localization of manufacturing, which is now complete with the establishment of a local engine manufacturing plant, offers the potential for the company to reduce production costs and provide farmers with farm machinery at reasonable prices.

We visited Kubota’s production sites in

Thailand to inquire about the present state and future prospects of their business and their empathy with farmers.

Some 125 km east of central Bangkok, an industrial park in Chachoengsao Province is the home of Kubota Engine (Thailand) Co., Ltd. (KET), which was established in February 2011 to perform parts processing and assembly of farm engines (mass production began in October 2012).

The “hearts” of farm machinery, engines had until recently been imported from Japan. As demand continued to expand, however, Kubota decided to set up KET in a bid to further reduce costs. This completed the start-to-finish production process from cast manufacturing to parts processing and assembly of engines.

“If we wish to further expand business in

Thailand, we must definitely lower the prices of our engines,” says President Shigenori Kobayashi of KET. “Aside from enhancing cost competitiveness, one of the other objectives of establishing KET was to avoid forex risks. Since we have just begun mass production, our top priority now is to stabilize production at the earliest possible date, but we hope to standardize manufacturing processes like we did in Japan. This is because we believe that guaranteeing reliable product quality, in addition to lower costs, will lead to supporting farmers in Thailand.”

A founding member of KET who now supervises production, Kazunobu Nakata cites stable production and quality assurance as the two most important issues that they are currently tackling.

“Being a young company, most of the



Manufacturing cast parts at SKMT involves pouring red-hot iron into a mold.

engineers that we hired locally were new graduates,” he notes. “It is thus imperative that we help them to develop through close communications so that we can stabilize production at the plant. At the same time, we are hoping to further lower costs by streamlining production and procuring materials more efficiently.”

In addition to engines for Kubota’s tractors and combine harvesters, KET is also charged with the mission of serving as a global supply center for external sales to construction equipment and industrial machinery manufacturers in Japan, the U.S., and emerging countries. As such, the company is the heart of Kubota Thailand’s global strategies.

Standing close by KET is Siam Kubota Metal Technology Co., Ltd. (SKMT), Kubota’s first cast components manufacturing plant outside of Japan. Set up in December 2008 (mass production began in December 2010), SKMT manufactures cast components for diesel engines.

Involving the molding of molten iron, casting production requires advanced

expertise that cannot be quantified. Crankcases (engine blocks) are said to be difficult to produce in a stable manner due to their complicated shapes. With a view toward making greater inroads into the global market, however, Kubota finally decided to transfer its technology offshore. This posed a major challenge for Kubota; namely, training Thai operators on the production lines, which included improving their technological skills.

“To acquire skills, people must think for themselves and act voluntarily on their own initiative,” says President Isao Kuwahara of SKMT. “With this in mind, there is one habit that I want them to form, which is to enjoy what they are doing. If they learn the purpose of their jobs, they can become more knowledgeable, and eventually the entire plant will start changing for the better. Also, I hope that they will find the joy of working as they gain a sure sense that things are changing.”

Kuwahara says that he has an unshakable conviction that it is necessary in manufacturing “to make every decision by putting oneself in the customers’ shoes.”

More specifically, at the very basis of his plant management is a relentless pursuit to shorten lead-time, reduce costs, and improve quality for farmers.

“What we can and should do is provide machines that are affordable but do not easily break. To stabilize the global supply and demand of food, we must spread the use of machines among farmers. Our goal is to develop Thai operators who can take on this responsibility,” states Kuwahara.

Manager Satoshi Tsuji of the SKMT Manufacturing Department agrees with Kuwahara on the importance of development and localization of not only products, but also human resources. “The primary objective of human resources development is to improve product quality by training operators on their skills; however, if we are to make a really significant contribution to the farming business in Thailand, I believe that localization in the truest sense of the word is a must. Now, what I mean by this is to see Thai employees take up key administrative roles at this plant, so there won’t be any overt feeling that this is a ‘Japanese company.’”



Isao Kuwahara
President, SKMT



Satoshi Tsuji
Manager, Manufacturing
Department, SKMT



SKMT Head Office

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Localization Fully Established in Thailand

“KUBOTA Number 1 for Thai Agriculturists.” Charged with the Mission of Providing User Benefits



Combine harvester being assembled at the SKC Amata Nakorn Plant



Somchai Limthongsittikhun
Manager, Combine Harvester & Rotary Manufacturing Division, SKC



Prasong Adulratananukul
Manager, Tractor Manufacturing Division, SKC



Right: Toshihito Majima, President, KPMT
Middle: Toshiyuki Yasuda, Manager, KPMT
Left: Shuji Imanishi, Manager, KPMT

After leaving KET and SKMT, we made our way to the SKC Amata Nakorn Plant in Chonburi Province, some 60 km southeast of central Bangkok. Kubota's largest production site in Thailand, SKC manufactures horizontal diesel engines and tillers at its Nava Nakorn Plant in Pathum Thani Province, 45 km north-northeast of central Bangkok, and produces tractors, combine harvesters, and rotaries (tractor attachments with rotating hoes for plowing land) at its Amata Nakorn Plant in Chonburi Province. The production function at the Amata Nakorn Plant is under the management of Thai employees, who naturally have more than the usual amount of feeling toward farming in Thailand.

"The important thing for accelerating the mechanization of farming in Thailand is to offer services that are finely tuned to the specific demands of farmers," says Somchai Limthongsittikhun, a manager at SKC's Combine Harvester & Rotary Manufacturing Division. "I am Thai myself, and also used to be a farmer, and so I understand how the farmers in Thailand feel. Different regions have various types of soil, and farmers use the same machines differently. I hope to make machines that reflect the spirit of the Thai people."

"Agriculture is an all-too-important industry for Thailand. However, many of the

farmers who support agriculture are mired in poverty," notes Prasong Adulratananukul, a manager at SKC's Tractor Manufacturing Division. "Farm labor is so hard that you begin wondering why on earth people would go to all that trouble. That is how difficult the reality is. Mechanizing farm labor is an effective way of breaking through this impasse. Toward this goal, we must definitely reduce production costs to lower our prices."

What these two gentlemen have in common is a firm conviction that their involvement in the production of tractors and combine harvesters will help to support Thai farmers and contribute to the development of agriculture in Thailand.

The other key element of Kubota's localization strategy in Thailand is Kubota Precision Machinery (Thailand) Co., Ltd. (KPMT), which began operation in July 2011. Responsible for production of hydraulic equipment, KPMT specifically produces cylinders for controlling tractor implements. Since such machinery tends to operate for longer hours in Thailand than in Japan, higher durability is required from the cylinders.

"I believe that our mission is to produce hydraulic equipment from the viewpoint of farmers, meaning failure-free, inexpensive equipment that performs stably. By pushing forward our localization strategy, we hope to

increase our cost competitiveness, shorten lead-time, and supply service parts more efficiently, so that we can win the trust of users," says President Toshihito Majima of KPMT.

At present, production is conducted at a temporary plant within the Amata Nakorn Industrial Estate, but production will commence in full swing in January 2014 at a new plant to be built within the Pinthong Industrial Estate in Chonburi Province. At this new plant, KPMT is planning to expand the line of components that they produce and supply globally both within and outside of the Kubota Group.

Procurement of components is one factor that affects production costs. Kubota had curbed its procurement costs by purchasing more from local suppliers, but in January 2013 it established Kubota Procurement & Trading (Thailand) Co., Ltd., which specializes in procurement and supply of components, in a bid to accelerate the global procurement setup under which components are acquired without a hitch from local suppliers in Thailand. At the same time, by centralizing procurement services that had previously been taken care of by each production site, hopes are high that tapping into the scale merit will result in greater bargaining power and increased efficiency in quality improvement activities.

Kubota has by now established a start-to-finish production process covering everything from cast manufacturing, parts processing, and assembly of engines to production of hydraulic equipment and assembly of farm machinery. There is no doubt that this newly reinforced cost competitiveness will further promote the mechanization of farming in Thailand and contribute to supporting farmers there. This entire series of initiatives by Kubota can be summarized into SKC's message: "KUBOTA Number 1 for Thai Agriculturists."

"With top priority on customer benefits, we constantly think about how we can contribute to farmers in Thailand. While providing a range of products that match customers' purchasing power, we not only sell machinery, but also have assembled an R&D team to customize our machines to meet local needs and offer after-sale services when customers call on us. More recently, we have been working with our customers in the single planting area to start off-season cropping of soybeans, and teaching them how to raise seedlings and plant rice to increase productivity and yields. By offering practical solutions that maximize user benefits, Kubota sincerely hopes to move forward in step with our valued customers," says President Hiroshi Kawakami of SKC.



Hiroshi Kawakami
Executive Officer, Kubota Corporation, and President, SKC

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Engines manufactured at SKMT and KET are built into final products at SKC.



Thai users want their machines delivered sparkling new. For a beautiful finish, final checks are conducted with the utmost care.



SKC Amata Nakorn Plant



Jirawat Pasaro
Foreman, Molding Line, SKMT
"Our goal is to achieve low-cost production."



Tossawan Naudomsab
Assistant Manager, Administration & Account section, KPMT
"I am always thinking about what I can do for Thai farmers through this company."

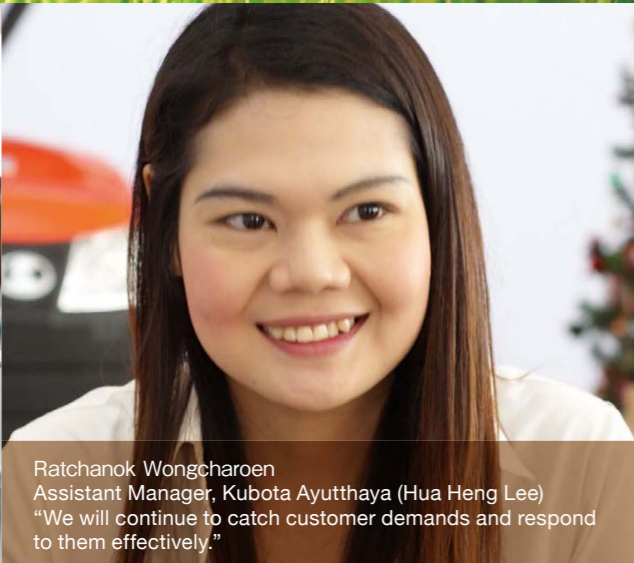


Nivath Jankaeng
Foreman, Combine Harvester Production Department, SKC
"I believe that supplying more combine harvesters will benefit farmers."



Prasert Klinchantuek
Foreman, Combine Harvester Production Department, SKC
"We will continue to meet the expectations of farmers."

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"Messages to Our Valued Customers"



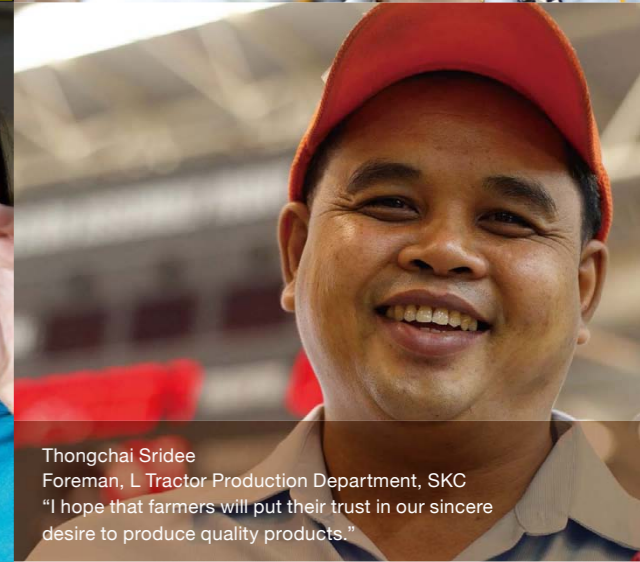
Ratchanok Wongcharoen
Assistant Manager, Kubota Ayutthaya (Hua Heng Lee)
"We will continue to catch customer demands and respond to them effectively."



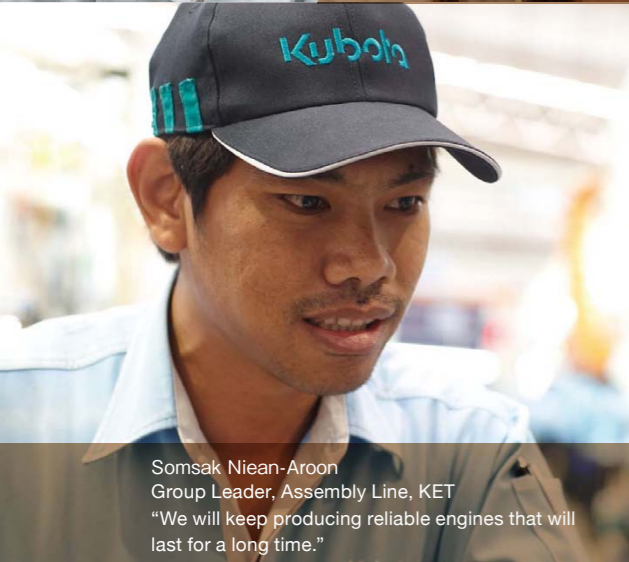
Thaweechai Moonsawasde
Assistant Manager, Production Section, KPMT
"Just try using a Kubota machine. It will make work much easier!"



Krissana Chaosuan
Foreman, L Tractor Production Department, SKC
"I hope to ease the burden of farmers by making good products."



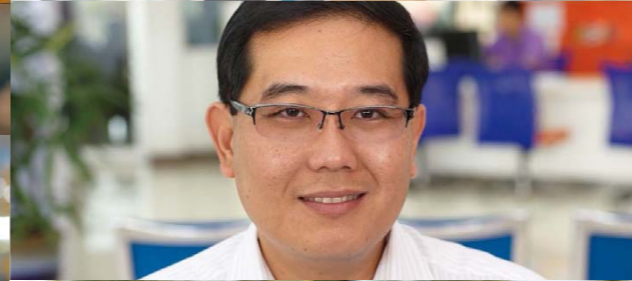
Thongchai Srdee
Foreman, L Tractor Production Department, SKC
"I hope that farmers will put their trust in our sincere desire to produce quality products."



Somsak Niean-Aroon
Group Leader, Assembly Line, KET
"We will keep producing reliable engines that will last for a long time."



Watchara Kanmee
Foreman, Melting Line, SKMT
"I would like many farmers to learn what mechanization can do for farming."



Dao Pimpa
Group Leader, Machining Line, KET
"We produce high-quality yet inexpensive engines so that many farmers can make use of farm machinery."





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Localization Fully Established in Thailand

Tamgonsak Sarwin and his son Sompop with his family. A portrait of a typical happy farming family in Thailand

Affluent Lifestyle Brought About by Mechanization. High Expectations for Affordable Lines in the Growth Market

Having seen many of Kubota's sites, we decided to pay a visit to dealers, who have daily contact with customers. Kubota now has as many as 80 dealers throughout the country, with an eye on further expansion of the network. Our first destination was Kubota Ayutthaya (Hua Heng Lee) Co., Ltd., a dealer covering the popular tourist destination of Ayutthaya Province in its entirety. It sells various types of farm machinery to some 1,000 farmhouses, and enjoys the lion's share of the market at 90%. Managing Director Wanchai Leenawatthana was born into a family that ran a Kubota dealer. After working for his parents' business for a time, he became independent three years ago. He has since built up a management model for other Kubota dealers and developed a solid track record.

"Our management focus is threefold: to maximize customer satisfaction, meet customer demands, and fulfill our responsibilities to customers," he states. "Our business is growing steadily, but I must say that Thai farmers are faced with no small number of problems. The most difficult one is unstable yields. We also have natural disasters and plagues of harmful insects. We believe that it is important for individual staff members to have a deep knowledge and understanding of farming."

To promote sales of farm machinery, prospective customers are given a trial period as an opportunity to try machines out. By constantly improving the quality of after-sale care and maintenance, the dealership ensures that it will be able to cater to the diverse demands of customers. For many farmers,

however, the high prices of machines always represent a bottleneck. Providing support for dealers' marketing efforts, SKC's salespersons feel the same way: "Every time I visit the fields, I am made to realize that many farmers are suffering from low income. Crop prices are on the rise, but many farmers find it difficult to make payments, as costs are also rising, with the result that the majority of farmers are running into debt. Mechanization of farming jobs is necessary to rectify this, but only a handful of farmers are affluent enough to afford machines. We are constantly monitoring what the farmers require and coming up with new options, such as provision of pre-owned machinery and financing by agricultural banks," says Chalermchai Kittibuntorn, an assistant manager for SKC's Central & Southern

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A service engineer carries out maintenance. Such workers are like partners for the farmers.



Long rows of tractors under maintenance—it is clear that business is good.



Kubota user Somkhit Harweete. His carefree smiling face matches the beautiful rural landscape.

“We use a Kubota tiller. It’s easy to use, high quality, and durable. We are very satisfied with Kubota machines,” say Somyot Onramuern and his wife (Ayutthaya Province).



The badge on the service engineer’s arm shows a call number. These workers rush to customers’ place after a single phone call.



Left: Chalermchai Kittibuntorn Assistant Manager, Central & Southern Region Sales Office, SKC Right: Ratchanok Wongcharoen Assistant Manager, Kubota Ayuthaya (Hua Heng Lee) Co., Ltd.



Kubota Ayutthaya Head Office

Region Sales Office.

To learn more about the actual situation, we visited some farmers at their places of work. Somkhit Harweete of Savandid Village in Ayutthaya Province has been engaged in rice production for nearly 40 years. He took his first step toward mechanization when he purchased a tiller some 20 years ago, and purchased another then-current model after 10 years. Also, he purchased a tractor five years ago, which he subsequently replaced with a higher-horsepower model two years ago.

“I once used other brands, but I found Kubota machines the easiest to use, and you could even say that I feel a great sense of affection for my Kubota machines,” says Somkhit. “Looking back on the mechanization of my work so far, I remember that the introduction of tractors had a particularly large impact. It certainly made our work a lot easier, but more importantly, it eliminated the need to hire labor, thereby

helping us to greatly reduce our costs.”

Higher earnings through lower labor costs led to improved standards of living for the farmer. He rebuilt his house, purchased paddy fields, and saw his saving accounts growing. To purchase the tractors, Somkhit took advantage of a leasing plan where he paid 60% of the cost out of his own pocket and Kubota covered the rest.

Tamgonsak Sarwin of Ban Mai Village in the same province grows rice with his son Sompop. He is a long-time user of Kubota’s pre-owned tractor, but recently purchased a new one completely at his own expense. Like Somkhit, Tamgonsak says that tractors can save them significant expenses.

“My goal is to gain more profits so that I can purchase the paddy fields which I now lease,” says Tamgonsak. “Tractors are the driving force behind this. Also, as the government is purchasing rice at high prices, my income has been growing substantially. Whenever my machines are in trouble,

Kubota comes to the spot instantly. You could say that Kubota is like a lifetime partner.”

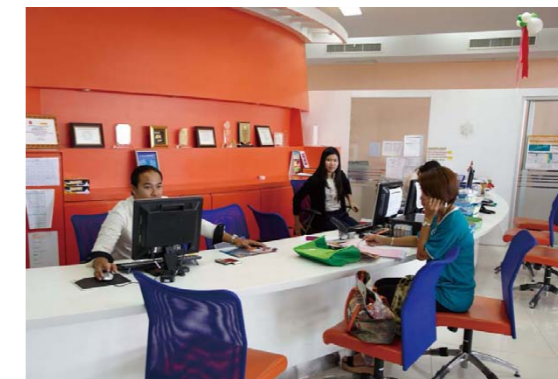
Just like their counterparts in Japan, farmers in Thailand often lack successors, but the Tamgonsak family does not seem to share this problem: their 20-year-old son quit his job at a factory and returned to the village. “One of the beautiful things about being a farmer is that you have lots of freedom. I’d like to assist my father to boost our income so that we can improve our livelihood,” says the dutiful son.

When we visited Kubota’s plants for this report, we listened to what employees on the shop floor had to say and found that, like Sompop, most of them were from farming families. They said that they send money to their families back home, in the hopes that their parents would purchase a farm machine so that they can lead easier lives, even if only by a little bit. They also spoke passionately about their future goals of returning to their parents’ homes and taking over their family

businesses. In Thailand, family ties are what underpin agriculture. The existence of young people who are ready and willing to succeed the businesses is a ray of hope for the farming industry in Thailand, and mechanization is definitely playing a leading role in this.

So long as the hurdle of initial investment is cleared, introducing farm machines will surely boost farmers’ income. As many farmers still lead modest lives, the penetration of tractors is not very high. Conversely, the market has yet to mature and there still exists much room for sales expansion.*9 Anticipation is growing that Kubota will be able to establish a completely localized production process to provide inexpensive farm machines.

*9 The main customer group for combine harvesters is the contract business of “harvesting services,” which harvest crops for a fee. Combine harvesters have yet to penetrate the level of the individual farmer, but are often purchased collectively by the village community.



An elegant customer counter at Kubota Ayutthaya



Wanchai Leenawatthana
Managing Director, Kubota Ayutthaya (Hua Heng Lee) Co., Ltd.



Spread the Working “Thai Model” Throughout the World. The First Step to Solving Food Problems

For many years, Kubota has endeavored to reduce costs for farmers by locally producing farm machinery. Beyond that, however, the company has made greater efforts to promote “true localization.” Beginning with the manufacture of farm diesel engines and tillers, this age-old initiative has resulted in a start-to-finish production process from engines to finished products, with some 90% of components procured from within Thailand. With this development, the drive to localize manufacturing has virtually come to fruition.


These consistent efforts by Kubota in Thailand have borne fruit in what might be called the “Thai model.” Farming in the country will surely make progress as the model broadens and deepens; however,

this is not exclusive to Thailand. As SKC President Kawakami proclaims, “Thailand will be Kubota’s regional production center in Southeast Asia and a ‘second mother plant,’ from which Kubota will accelerate its development into neighboring countries.” His plan is to expand sales networks in Laos, Cambodia, and Myanmar, and promote sales in the Philippines, Indonesia, Vietnam, and India.

For Kubota, “true localization” means to be completely assimilated within the host community. For this to happen, Kubota believes that these operations must be for Thai people and by Thai people, i.e., managed by Thai employees. It is in line with this policy that the importance of human

resource development has been emphasized at each subsidiary.

“Wherever we go, our mission of pursuing user benefits does not change,” notes Kawakami. “This means that we are required to offer machines and solutions that are customized to the specific demands of each region. For us to meet these requirements, we must focus on the development of our people so that we can keep pace with rapid market growth. This is why we believe that it is important to ‘make people before making products.’”

Whether it is greater localization in Thailand or expansion to neighboring countries, “people” are the ones thinking and acting “for farmers” in each locality. “We want our people to find in their work something that they can put their hearts and souls into—something that they can live for. It is when people realize such fulfillment that they truly grow,” says Kawakami. It is the awareness of each and every Kubota employee that makes it possible to make changes in production and selling sites and provide farmers with substantial benefits. Bringing this “Thai model” of manufacturing and human resource development to other parts of the world will eventually contribute to progress in agriculture in each region, and may become a key to resolving the world’s food problem. When this becomes a reality, SKC’s message of “KUBOTA Number 1 for Thai Agriculturists” will be transformed into “KUBOTA Number 1 for World Agriculturists.” For the “farmers of the world,” Kubota’s challenge is entering into a new phase. 



The presidents of Kubota’s four subsidiaries in “Thai KUBOTA Group”, all determined to support Thai farmers as a team. (From the left: KET President Shigenori Kobayashi, SKC President Hiroshi Kawakami, SKMT President Isao Kuwahara, and KPMT President Toshihito Majima)

For the Benefit of Farmers

III

OPINION

The World’s Food Situation and the Future of Japanese Agriculture

Hiroyuki Ishi

Environmental Journalist

Finding Solutions through a “Global Reach” and “Technological Innovation”

GLOBAL INDEX

For the Benefit of Farmers-III

The World's Food Situation and the Future of Japanese Agriculture

Farmland Reduced by Half, Widening Gap between Oversupply and Short Supply Increasingly Severe World Food Situation

The food situation in the world is becoming increasingly tight. The global population has climbed up to nearly 7.1 billion, and is expected to reach 9.3 billion by 2050 and 10.1 billion by 2100 if the trend continues. Currently, 6,200 people are born and 2,700 people die with each passing hour. This major gap in total births and deaths means not only population growth, but also an aging world population. With 76 million people arriving on the surface of our planet by the end of this year, the world population is quite literally “exploding.”

Rising food demand and prices on the back of population growth, shortages of farmers and decreases in the quality of their labor due to aging, competition between farmland and residential areas, soil deterioration caused by higher cultivation frequency and use of chemical fertilizers, and global climate destabilization—in addition to this mountain of difficulties, another serious concern is a reduction in the area of farmland per capita. At present, the world's total farmland stands at 1,530 million ha, or 0.22 ha per person. Despite an increase in yields per unit area due to mechanization, etc., this number is less than half of what it was 50 years ago in 1960, when it stood at 0.5 ha per person with only about 3 billion people occupying the globe. If we are to meet the growing food demand from the expanding population, an additional 17 million ha of new farmland will be needed each year.

A problem lies hidden behind the food shortage due to a population growth—an ever-widening gap between oversupply and short supply of food. In today's world, 904 million people suffer from malnourishment and 1,600 people die of hunger every hour, while the population of obese people amounts to 1,570 million. If we divide the world's annual grain production of 2.3 billion tons by the world population (7.0 billion), there should be 328 kg of grain per person. Assuming a hunger line of 180 kg per year, there should theoretically be no starvation on this planet. However, the problem is that distribution mechanisms are not functioning properly, as a result of exports to developed countries with greater purchasing power, growing demand in China and India, conversion to biofuel, and speculative trading in global financial capital. Comparing food supply per person, the supply in Japan is 33% higher in terms of calories than necessary, while the supply in countries south of the Sahara Desert in Africa is 16% short. Only those living in developed countries—some 20% of the world population—

are fortunate enough to have constant and easy access to food, and it is they who consume more than half of the world's grain production. This creates a gap between people living in hunger and those who are overweight.

Incidentally, Japan is the world's largest producer of leftover food, dumping 19.4 million tons of food every year. This is far beyond the total amount food aid offered across the globe (7.4 million tons), and is equivalent to the annual food consumption of 30 million people (or even 50 million people in the case of developing countries). It seems that no one in the world has a clear solution to these food problems, and the situation is becoming increasingly chaotic.

Eradicate Deserted Arable Land and Labor Shortages Challenges and Prospects of Japanese Agriculture

The world's food supply and demand forecast for 2020 given by the Ministry of Agriculture, Forestry and Fisheries (MAFF) predicts that consumption of grains such as rice and wheat will rise from the 1.7 billion tons recorded in 1996 and 2.4 billion tons recorded in 2010 to reach 2.7 billion tons by 2020 on account of the population increase and economic development in China and other countries, while grain production is expected to remain steady at 2.65 billion tons. By geographic region, grain demand looks set to increase substantially in Asia, Africa, and the Middle East. In particular, consumption of grain for livestock feed should increase rapidly in China, as meat consumption there is expected to grow in proportion to the rise in their income level. This will inevitably sustain the rising prices of grain, and the prices of rice, wheat, and corn are expected to jump by 31%, 24%, and 35%, respectively, by 2020 compared to 2008 levels. Given these forecasts of the world food situation, it is clear that we must go about redesigning the future of Japanese agriculture.

In 2012, MAFF published its report on the present state of Japanese agriculture and its forecasts for changes that may occur over the mid-term period. The report concluded that the number of farmers in Japan would drop to 580,000 by 2030, only 36% of what it was in 2010, and that their average age would reach an extreme high of 71.7 years. What this means is that many farmers—particularly those with side jobs and those farming on the side—should have witnessed a generation change by now, yet have not. Furthermore, as many as 50.3% of those who gave up farming as of 2010 cited an absence of successors as a reason for their decision, and elderly people are being left to farm alone in a growing number of cases. It is thus expected that many more farmers will simply quit their jobs in the future.

The immediate urgent issue that must be tackled now is the insufficient

Hiroyuki Ishi

Environmental Journalist

Profile

Having earned his bachelor's degree from the University of Tokyo in 1965, Hiroyuki Ishi joined The Asahi Shimbun Company. After serving consecutively at the Tokyo head office as a member of the Science Department and Foreign News Department and then Deputy Director of the Science Department, he became a senior staff writer in 1985.

In 1988, he met with critical praise when he published his *Global Environment Report*, which provided realistic coverage of the current conditions of our damaged planet that he compiled during his arduous travels throughout more than 80 countries.

After resigning from The Asahi Shimbun Company, he entered one public office after another, serving as a professor at his alma mater, ambassador extraordinary and plenipotentiary to the Republic of Zambia, Special Adviser to the Executive Directors of the United Nations Environment Programme (UNEP), and Member of the Board of the Regional Environmental Center for Central and Eastern Europe.

He also taught at Hokkaido University, Tokyo University of Agriculture, and Peking University.

Among the commendations that he has received are the A.H. Boerma Award from the Food and Agriculture Organization of the United Nations in 1987, the Mainichi Publishing Culture Award in 1988, and the Global 500 Roll of Honour from the United Nations Environment Programme (UNEP) in 1989.

He has authored many literary works, and co-edited and translated several others.

Selected literary works:

Crisis of the Global Ecosystem - Report from Inner Africa, Chikuma Library, Chikumashobo, 1987

Global Environment Report, Iwanami Shinsho, 1988

Disappearing Snow of Mount Kilimanjaro - Africa Environmental Report, Iwanami Shinsho, 2009

Global Environment Case File, Iwanami Shoten, Publishers, 2010

Global Environment History in the Classics, Iwanami Shoten, Publishers, 2011

The Volcanic Eruption That Changed History, Tosui Shobo, Publishers & Co., Ltd., 2012

History of Barbed-wire Fences, Yosensha Publishing Co., Ltd., 2013



workforce in the farming business and the expansion of deserted arable land. Municipal governments and relevant organizations are working on a variety of support programs for those who take over previous generations' businesses or take up farming by either returning to their hometowns or migrating from urban areas. They have also eased entry regulations for companies from other sectors going into the agriculture business, promoted efficient use of deserted arable land, supported baby boomer senior citizens in joining the agriculture business, and put aged labor to efficient use, all in a bid to alleviate the labor shortages in full-time farming households. The national government, on the other hand, is encouraging private businesses to enter the agriculture business by leasing deserted arable land to new entrants from other industries in an attempt to resolve the problem of deserted farmland. However, not many private businesses have started rice farming. This is due to the decrease in rice consumption and the resultant drop in rice prices, which have led to shrinkage of the rice market. In short, if we hope to see deserted farmland rejuvenated and the shortages of skilled rice farmers overcome, it will be necessary to streamline the industry and develop new markets at the same time. What are required, then, are development of an environment that makes young people want to carry on farming and strategies for dealing with such issues.

Hopes for a “Global Reach” and “Technological Innovation” Revitalization of Japanese Farming to Boost World Food Production


I have a few ideas that I believe will help to revitalize Japanese farming. The first is to secure farmland overseas, use local labor to grow farm products, and import them to Japan. This scheme is attracting much attention throughout the world, and food-importing nations such as China, India, South Korea, and Middle Eastern countries have started to make huge investments in farming in central Asia and Africa. Behind this is a growing concern over the global food crisis, which is premised on the assumption that the world population will reach 9.3 billion by 2050. Investment in farming in developing countries is in and of itself one of the key elements underpinning the development of national economies, taking the form of farming infrastructure improvement, job creation, and higher productivity. Furthermore, increasing food production by expanding farmland can serve as a breakthrough in resolving the world's food problems mentioned at the outset of this article.

However, anything that has to do with land risks the danger of triggering nationalism. As such, the kind of farming investment that would be most desirable is one that benefits not only investing countries,

but also helps recipient countries to achieve sustainable development of agriculture. In other words, we should realize a “win-win” relationship where both parties benefit from investments; investing countries can expect good returns on their investments and a stable food supply and recipient countries can expect the development of social infrastructures and technology transfer.

Having advocated the “promotion of responsible agricultural investment” from early on, Japan won support from the international community when it announced its belief that transparency and accountability, as well as proper consideration of communities, residents, and the environment, be included in the principles of action for international agricultural investment. As the world is counting on Japan's leadership in this regard, I believe that opportunity is knocking for Japan to set an example for the world with its farming technology, using agricultural investment as a vehicle.

Another idea concerns matters that need to be dealt with domestically; that is, enhancing productivity through technological innovation, in addition to optimizing the scale of farming. The highest expectations in this regard are for hydroponic culture, in which Japan leads the rest of the world. More specifically, this is referring to the “Plant Factory,” which is a technique used to cultivate crops inside buildings where the amount of light and nutrition are carefully controlled. Three years ago, the Ministry of Economy, Trade and Industry (METI) certified six universities in Japan as research centers to improve the control system for the cultivation environment. METI's plan is to lower production costs by 30% and commercially distribute the vegetables cultivated in the Plant Factory. In light of growing concerns over the safety and stable supply of food, this initiative perfectly meets the needs of the times and offers the potential of becoming the next growth field for Japanese businesses, which have strong assets in manufacturing technology.

Kubota is highly regarded as a farm machinery manufacturer, and has built close relationships with farmers in Japan. If they were to take new action for Japanese agriculture and farmers, it would be possible for them to support a program to seek farmland outside of Japan jointly with like-minded farmers who possess the necessary techniques, in addition to developing sales channels for rice, which they are diligently working on even now. In order to increase the world's food production, the mechanization of agriculture is an inevitable global trend. I have high expectations for Kubota's ambitious and innovative efforts in this regard, which start with collaboration with Japanese farmers and have the farmers and agriculture business of the world in mind. 

Innovation of Farmers

The Unchanging and the Changing

Agriculture is an industry that determines human survival, and at the same time shapes culture. Just as there still remain around the world customs and ceremonies in which people pray for bountiful harvests of grain crops, it is clear that within agriculture is human culture, where the workings and feelings of people are engraved.

However, modernization has been a process where the culture engraved in farm products has been cast aside in their perception as commodities. At the very source of the act of farming lies something “unchanging” that lies deep within the mind of every human being. Re-appreciating and preserving these cultural aspects of agriculture should be among the great drives for agricultural revitalization.

Meanwhile, the current environment in which agriculture as an industry finds itself is becoming increasingly difficult, and for us to overcome these hardships we must change in response to the times. To offer a solution to the world’s food problems, each and every one of us must go about “changing” the status quo in a responsible way. This is simultaneously an attempt to create new culture and make steady efforts for a bright future.

Needless to say, at the forefront of this effort can be none other than the farmers themselves, who are chiefly responsible for the production of farm products. The farmers’ own innovations will move the evolution of agriculture into a new phase.

What can a private enterprise can do to support this? Some answers can be found in the initiatives that Kubota initiated in Japan and Thailand. It could be just one small step toward innovation that will break the status quo of farmers. However, Kubota realizes that the simple act of taking a step forward is a “repayment to farmers,” and this should be the mission of any enterprise involved in agriculture. All of these efforts are for the sake of opening up new possibilities for the future of agriculture.

Herons fly over fertile farmland. Watered by the Chao Phraya River, this firm soil has brought forth bountiful harvests. (Ayutthaya Province, Thailand)

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