Vietnam catches the wave of mechanized farming

In the vast stretch of mountainous areas extending across the Tibet Autonomous Region at the eastern tip of the Himalayas, China’s Yunnan province, and northeastern Myanmar, a number of deep gorges are carved into the landscape. Fed from the waters of these regions and passing through a total of six countries including Laos, Thailand, and Cambodia to eventually reach southern Vietnam is the Mekong River – Southeast Asia’s longest river with a total length in excess of 4,800 km. Vast amounts of soil washed down from erosion in the upper reaches of the river have accumulated through powerful sedimentation to form an extensive delta in the downstream areas of the Mekong River. In Vietnam alone the delta area covers an extensive area of some 40,000 km² (4 million ha), making it by far the country’s largest breadbasket. In September 2008, Kubota became the first international agricultural machinery manufacturer to establish a subsidiary in the Socialist Republic of Vietnam (Kubota Vietnam Co., Ltd. [KVC]) in order to explore the Vietnamese market with a focus on the Mekong Delta region. In this feature article, we zoom in on the circumstances faced by Vietnamese rice farmers amid the wave of mechanized agriculture with updates on Kubota’s activities there, along with a brief introduction to the Vietnamese food culture nurtured by the fertile land of the Mekong Delta. Our journey begins in Ho Chi Minh City, the country’s largest metropolis and gateway to the Mekong Delta.
Creating a Dealer Network in the Mekong Delta Region while Cultivating a Service-oriented Mindset

Ho Chi Minh City. French Colonial architecture, an opera house standing at the city center, a Catholic church – scattered throughout the city one can still see the lingering vestiges of the French colonial rule. At the same time, this is a city that has followed, and still follows, an explosive growth trajectory, propelled by the socialist-oriented market economy introduced following the Doi Moi (renovation) economic reforms initiated in 1986. Not surprisingly, nothing among the buildings recalls the days of the Fall of Saigon in 1975, which marked the end of the Vietnam War, and the southern tranquility that was so visible in the past – women clothed in ao dai and families on motorcycle excursions in the cool of the evening – is most certainly being lost. Heavy foreign capital inflow stemming from a desperate effort to accelerate the transition to a market economy has completely altered the face of the city. High-rise buildings, elegant condominiums, shopping malls, name-brand stores, restaurant chains, electronics mass merchandisers, and so forth – the scenery here is not so different from what would be seen in Japan or advanced countries of the West. However, this familiar scenery is broken up by the presence of a tremendous number of speeding motorcycles. During the morning and evening rush hours, the streets are flooded with an overwhelming tide of two-wheeled vehicles that completely cover the roads. It is as if the motorcycles themselves represent the driving force behind the economic growth of Vietnam, one of Asia’s most up and coming countries.

With a skilled driver behind the wheel, our 10-seat van maneuvers through the waves of motorcycles to KVC, Kubota’s outpost in the Vietnamese market located in the My Phuoc Industrial Park, 45 km north of Ho Chi Minh City. Some 70% of Vietnam’s citizens live in rural areas, and agricultural and marine products account for roughly 30% of the country’s exports; however, the rate of mechanization in the farming sector stands at only around 20%. Several years ago, Kubota began a market survey in the country and concluded that Vietnam, and particularly the Mekong Delta region, was standing on the “eve of mechanization.” It thus went on to establish KVC in September 2008 to produce tractors, combine harvesters, and agricultural implements. The country requires agricultural machinery, primarily due to the current labor shortage as ongoing industrialization leads the workforce to concentrate in metropolitan areas, and also because of the essential need to increase crop yields efficiently. Given this situation, KVC began its inroads into the market by creating a dealer network in and around the Mekong Delta. As of now, the network has expanded to cover nearly the entire delta area.

“Our goal is to be the leading manufacturer of a comprehensive range of agricultural machinery in Vietnam. The key to achieving our aim is to have an extensive dealer network and offer better customer service at each contact point. This is where we are pouring in the greatest amount of resources. One of the things that we are doing in this regard is helping local dealer staff to develop a ‘business mindset,’ e.g., providing training sessions and other occasions to teach them what it means to serve others. When leading players from Europe and North America and Japanese competitors enter the Vietnamese market in the future, I believe that quality of service will be the single most important factor in making positive differentiation. By fostering a service-oriented mindset in each individual staff member at our dealers, we can propose solutions that cater to specific user demands – This is something that we are eagerly engaged in at this time.” (Satoshi Suzuki, General Director, KVC)
In Vietnam, combine harvesters are evaluated in terms of loss rate and durability, because smaller loss equates to higher income. It is estimated that the loss rate of Kubota’s combine harvesters is less than half that of its Chinese competitors. Also, durability is crucial in Vietnam, where the annual operating time of combine harvesters is said to be several times greater than that of rice farmers in Japan, as double and triple cropping is common (Another major reason for this is that many users of combine harvesters are ‘harvesting services.’ We will return to this later). All in all, it was Kubota’s high reputation for performance and quality relative to competing models of Chinese manufacturers that helped to boost our sales volume.

In its 2001-2010 Strategy for Socio-Economic Development*, the Vietnamese Government set forth that it would accelerate industrialization and modernization of the country in order to become a full-fledged industrial country by 2020. Since 2000, their GDP CAGR has been over 7%, and GDP per capita topped US$1,000 in 2008. This rapid economic growth has had no small impact on rice farming. Before going into the details of the present situation, let us take some time to look back at the modern history of agriculture in Vietnam, which has undergone considerable vicissitudes as it was tossed about by the country’s political regime. When the country was divided between the north and south, farmers in North Vietnam formed “cooperatives” for collective farming, whereas their counterparts in South Vietnam followed a landholding system. After the country was unified, collectivization of agriculture was promoted rather abruptly in an effort to establish a socialist country, but agricultural output dropped significantly due to inefficient production and a decline in motivation on the part of producers, with the result that it became necessary to import rice. Faced with a serious food shortage, the Vietnamese Government made an about-face in its agricultural policy; rather than trying to collectivize farmers into cooperatives, they encouraged family operations and allowed them to trade surplus products freely at market price. As a result, Vietnam’s agricultural production increased tremendously to make it the world’s third largest rice exporting country in 1989, but this was not the end of their reforms. With the revision of the Land Law in 1993, households or individuals were entitled to exchange, transfer, lease, inherit, and mortgage land use rights. This virtually authorized the privatization of land, which was still supposed to be held by the State, if only in name. The country went on in 1996 to become the world’s second largest rice producer after Thailand, a position it still holds to this day.

The driving force behind all of these developments was the Mekong Delta, which recorded during the same period a large and rapid increase in rice production unparalleled in the history of Asia. According to the General Statistics Office of Vietnam, rice production in the Mekong Delta region stood at 12.83 million tons in 1995, which then grew to become 16.70 million tons five years later in 2000. In 2009, of the 38.90 million tons of rice produced in Vietnam (the fifth largest volume in the world), 20.48 million tons, or 52%, was produced in the Mekong Delta region. Such a surge in production is partially attributable to the Vietnamese Government’s policy for increased rice production. By casting the Mekong Delta as a strategic export rice production center, they focused their investments in the development of irrigation and drainage systems in that region. The result was an increase in the area of paddy fields and in crop acreage due to double and triple cropping. Other factors contributing to the phenomenal increase in rice production included the diffusion of new rice varieties with high yield, greater use of fertilizers and other production materials, and the introduction of tractors and other agricultural machinery.

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<table>
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<tr>
<th>Region/specific rice acreage/production in Vietnam</th>
<th>Area (10,000 ha)</th>
<th>% to total acreage</th>
<th>Total production (1,000 t)</th>
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</thead>
<tbody>
<tr>
<td>Whole country</td>
<td>774,9</td>
<td>16%</td>
<td>38,896.5</td>
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<tr>
<td>Red River Delta</td>
<td>115.6</td>
<td>9%</td>
<td>6,766.3</td>
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<td>Northern Highlands and Mountain Areas</td>
<td>66.9</td>
<td>9.9%</td>
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<td>North Central and Central Coastal Areas</td>
<td>122.2</td>
<td>16.5%</td>
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<td>Central Highlands</td>
<td>21.4</td>
<td>3%</td>
<td>994.3</td>
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<td>South East Area</td>
<td>30.7</td>
<td>4%</td>
<td>1,322.4</td>
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<tr>
<td>Mekong River Delta</td>
<td>387.5</td>
<td>52%</td>
<td>20,483.4</td>
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* 2001-2010 Strategy for Socio-Economic Development

General Manager Yutaka Iwasaki (left) and Factory Manager Nguyen Thi Thanh (right), Kubota's rigorous quality control has been fully inherited by KVC.
Temple/shrines and graves dotted amongst paddy fields form the typical landscape of the Mekong Delta.

Outside of Ho Chi Minh City, female students in ao dai are seen more frequently.

Paddies that could be mistaken for lakes stretch as far as the eye can see.

Driving south from Ho Chi Minh City, our van heads to Dong Thap Province, one of the 12 provinces in the Mekong Delta region. As we enter the Mekong Delta, urban landscapes such as those in Ho Chi Minh City vanish and an immense grain belt spreads before our eyes.

Located in the tropics, the Mekong Delta does not have seasonal changes, and instead has only a rainy season (May to October) and dry season (November to April) due to the influence of tropical monsoons. Temperatures remain high throughout the year (around 30 degrees centigrade) and the amount of solar radiation is very high. What makes the delta region so unique is that its lowlands turn into a floodplain during the rainy season, with water levels reaching a depth of several meters. With the entire area of villages submerged, all that can be seen when this flood occurs are houses built on high ground scattered throughout like so many small islands. But this is not a “flood” as we think of it – no flash floods sweep the farmland away, but rather the water level rises gradually to deeply submerge the area for some time until the water begins to recede with the arrival of the dry season. It is nature’s providence – in this case, the Mekong River – that has provided the vegetation with the nutrients required to grow, thus cultivating fertile soil that is suitable for rice farming. It was not until relatively recently that the development of the Mekong Delta, a frontier that promises vast spreads of land, went into full swing during the French colonial period between the 19th and 20th centuries. After the end of the Vietnam War, double cropping then spread extensively, driving up rice production. However, there was no way that the paddy fields could be used during the “flood season,” which typically lasts up to four months. As such, the Vietnamese would divide the remaining eight months of the year into two periods, growing and harvesting crops within those four month timeframes. Following Doi Moi, however, triple cropping began to expand in the Mekong Delta region. This was made possible by greater zeal for production among the increasing number of independent farmers, and the construction of “banks” designed to prevent inundation during the flood season. By surrounding the entire farmland of the region with anti-flood dikes, it was made possible to cultivate rice even during the flood season.

The scenery of the Mekong Delta reminds us of a grain belt in Japan, but one thing is markedly different between the two. Because rice is grown through double and triple cropping, each area represents a different stage of rice farming – in one paddy field the rice ears are all out, another field is covered with water like a lake, and in yet another field seeds are being sown (in the Mekong Delta, direct sowing, rather than planting cultivated seedlings, is preferred.). Another intriguing factor is the presence of Chinese-style temples, shrines, and graves in the middle of paddy fields. Our local guide Mr. Nguyen Hong Hap explains that they are there for “farming rice under the protection of the ancestors.” Given the fact that bodies are typically interred in the soil in Vietnam, we cannot help but recall the continuing circle of life and death – once the soul is lost, the body returns to the earth, where a crop of rice then grows. For people living in the Mekong Delta, rice truly is “life” itself.

The Bountiful Mekong Delta

Dry and Rainy Seasons in the Tropical Mekong Delta

Floowaters Produce Bountiful Soil

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A Top Dealer Leading the Way in Expanding Sales
“Cultivating/Harvesting” Services for Farmers

Dong Thap Province – bordering Cambodia in the north, this district was liberated during the Vietnam War. reclaimed by farmers escaping the war and the soldiers of liberation forces, this fertile grain belt spans over approximately 450,000 ha with 70% of its farmers engaged in double cropping and 30% in triple cropping. Our destination is “Tan Hai,” a top achiever in KVC’s extensive network of dealers. General Director Ngo Tan Hai formerly dealt in Chinese combine harvesters. Immediately after Kubota established a Vietnamese subsidiary, he opted to be Kubota’s exclusive dealer without hesitation. The reasons for his decision were clear. He had become fed up with countless complaints from users, and we have about 200 to 300 guests attend each event. Providing demonstrations is definitely a major opportunity to boost sales."

However, the price tag of a Kubota combine harvester far exceeds that of any China-made machine. While it is true that the country is undergoing rapid economic growth, this begs the question of whether people in Vietnam, where per capita GDP is estimated at US$1,100, can actually afford to pay for high-end combine harvesters from Kubota. Here are some facts from the General Statistics Office of Vietnam: the average monthly income per capita in the Mekong Delta region was 940,000 dong (approximately US$ 45*) with in the figure for urban districts being 1.6 million dong (approximately US$ 77); however, it should be noted that the income of the Vietnamese continues to grow every year, and the current level of income in urban districts may be expected to be higher than this. Incidentally, the average monthly income of workers at government enterprises was 2,917,000 dong, or approximately US$ 141, in the first half of 2010.). Following the introduction of Doi Moi, Ho Chi Minh and other large cities have been making spectacular progress, while living standards in farming villages remain low. In addition to low rice prices, a structural issue also plays a role here: intensive rice farming as aspects of cooperation within farming village collectives, rather than an old form of agricultural management created for a fee. Such services are not a new creation, but a modern farming model to the region. It is this business model that implies, these services cultivate land and harvest crops for a fee. Such services are not a new creation, but rather an old form of agricultural management created through cooperation within farming village collectives, when such tasks were carried out manually. Many customers of Tan Hai are cultivating/harvesting services, and a large number of them engage in cultivating and harvesting services while growing rice for themselves. According to Tan Hai, their typical profile is that of "affluent farmers engaged in large-scale rice farming." The area of farmland owned by such farmers usually ranges between 20 ha and 100 ha, and 20% of them own over 300 ha of farmland. If it is taken into account that the average area of farmland owned by one farmer is about 2 ha in the Mekong Delta region, we come to realize that the ongoing mechanization of the region is driven by a handful of rich farmers who also engage in cultivating/harvesting services. While strongly retaining aspects of cooperation within farming village collectives from the past, mechanized cultivating/harvesting services are introducing a modern farming business model to the region. It is this business model that creates a golden opportunity for cultivating/harvesting services to further boost revenues and make quantum leaps forward in their living standards.

Thus, attention should be turned to the contract business of “cultivating/harvesting” services, which are often found not only in Vietnam, but in other parts of Asia such as Thailand and China as well. As the name implies, these services cultivate land and harvest crops for a fee. Such services are not a new creation, but rather an old form of agricultural management created through cooperation within farming village collectives, when such tasks were carried out manually. Many customers of Tan Hai are cultivating/harvesting services, and a large number of them engage in cultivating and harvesting services while growing rice for themselves. According to Tan Hai, their typical profile is that of "affluent farmers engaged in large-scale rice farming." The area of farmland owned by such farmers usually ranges between 20 ha and 100 ha, and 20% of them own over 300 ha of farmland. If it is taken into account that the average area of farmland owned by one farmer is about 2 ha in the Mekong Delta region, we come to realize that the ongoing mechanization of the region is driven by a handful of rich farmers who also engage in cultivating/harvesting services. While strongly retaining aspects of cooperation within farming village collectives from the past, mechanized cultivating/harvesting services are introducing a modern farming business model to the region. It is this business model that creates a golden opportunity for cultivating/harvesting services to further boost revenues and make quantum leaps forward in their living standards.

* Calculated at an exchange rate of 1 dong to US$ 0.00005, current as of March 2011.
“Investing” in Combine Harvesters
High Hopes of Harvesting Service Providers in the Mekong Delta

It was only a few years ago when the mechanization of manual harvesting services went into full swing following the arrival of Chinese combine harvesters on the market. (Cultivating services using tractors are also offered, but this report focuses on harvesting services as combine harvesters are the most sought-after agricultural machines in the Mekong Delta.) Driving the wave of farm mechanization in the area, the business of harvesting services is at the center of what could be described as kind of “fever.” We interviewed Mr. Ngo Phuoc Dong (40), a harvesting service provider, who owns 20 ha of farmland.

“I used China-made combine harvesters for harvesting services in the past, but switched to Kubota machines because of their high performance. They generate little loss and do not break down easily. Aside from the hefty price tag they are perfect machines. I own several Kubota combine harvesters, but I would like some more.”

Mr. Dong receives payment to harvest about 1,000 ha of farmland. Every day of the year, he works from 7 a.m. to 1 a.m. He has enough jobs to fill up his calendar throughout the year because he works through triple cropping and travels around the Mekong Delta region with his harvesting service. To reach his customers, he transports his combine harvesters on a boat via the crisscrossing network of waterways and canals that covers the delta area. While appreciating the merits of Kubota machines, he has no small number of demands.

“I want machines with greater horsepower and lighter weight. I also want my dealer to respond to my inquiries more quickly, since I would like to work more and improve the quality of my work. I don’t care if I work the payment of expenses, which include wages for miscellaneous work during harvesting, he makes a net profit of several hundred million dong per year. He also sells rice grown on his own farmland. Although he runs his business with the help of his family (six people, including himself), his income level is much higher than that of ordinary farmers in the Mekong Delta. And yet, combine harvesters are not necessarily a “horn of plenty.” The principle of competition also comes into play among harvesting services. Mr. Dong says that he has been able to see order growth by catering to the specific demands of his customer farmers, e.g., lowering the loss rate and finishing the job more quickly.

Mr. Nguyen Van Toi (38) is another harvesting service provider who personally owns 70 ha of farmland. Every day of the year, he works from 7 a.m. to 1 a.m. He has enough jobs to fill up his calendar throughout the year because he works through triple cropping and travels around the Mekong Delta region with his harvesting service. To reach his customers, he transports his combine harvesters on a boat via the crisscrossing network of waterways and canals that covers the delta area. While appreciating the merits of Kubota machines, he has no small number of demands.

“I want machines with greater horsepower and lighter weight. I also want my dealer to respond to my inquiries more quickly, since I would like to work more and improve the quality of my work. I don’t care if I work

365 days a year. I want to increase my farmland to even double its size in the near future.”

These men certainly belong to the high income bracket in the Dong Thap Province, but it is not likely that they find Kubota-branded combine harvesters inexpensive. Nevertheless, they can afford several units because they consider the harvesting service business a good “investment.” Taking note of the steady cash flow generated by combine harvesters, financial institutions are willing to extend loans. Farmers then use such funds to begin harvesting services and recoup their investments over a short period to purchase a second machine. It is in this investment cycle that Kubota’s combine harvesters, despite their high price tags, are becoming widely used, and the market is expanding. In other words, one of the tools of a market economy, i.e., investment, serves as an engine to propel agricultural mechanization forward in the Mekong Delta region.

Our next stop brings us to the site of a demonstration, which, according to Mr. Tan Hai, is a “major opportunity to boost sales.” Despite the intense sunlight, more than 200 people gather to attentively watch combine harvesters and tractors in action. After many interviews, we find that they all share a sincere desire to leave behind the “hardships of rice farming” and achieve the affluent lifestyle that harvesting services might bring about. This “ardent expectation for the harvesting business” on the part of farmers is certainly one of the reasons why Kubota concluded that the Mekong Delta was on the “eve of mechanization.” The hard fact is, however, that the majority of farmhouses have nothing to do with this fever for mechanization. On the other hand, there are not a few cases of minorities being hired as time-limited wage labor (Vietnam is a multiethnic country). Looking at things from a different angle, one begins to see a complicated structure of farming business in the region, which defines the simple stereotype of income disparities between the haves and have-nots. Between the shortage of labor that is worsening as the country becomes increasingly urban and industrialized and the government’s request to ramp up rice production, mechanization in the Mekong Delta will only be accelerated. But what will be the outcome? The socialist-oriented market economy that this country has so eagerly pushed forward since the inception of Doi Moi is beginning to dramatically alter the internal landscape of farming villages in the Mekong Delta.
In contrast to Japan’s aging population and declining birthrate, Vietnam’s population is exploding by more than one million people each year, and is expected to top 100 million by 2020 (86.02 million in 2009). As such, the necessity of raising rice output stands as a major policy issue for meeting domestic demands. It was this emphasis on maintaining the supply of rice—the country’s staple food—that led the Vietnamese government in 2007 to establish quotas on its rice exports (These quotas were later abolished in 2009 due to strong opposition from exporters.). The export restrictions by Vietnam, the world’s second largest rice exporting country after Thailand, resulted in a tighter supply in the global rice market and higher international prices, and were considered to be one of the causes of the global food crisis at that time. In other words, Vietnam’s rice policy yields significant influence over the world’s food situation. After the global food crisis, Vietnam successfully increased its rice production and exports, but there is no guarantee that this will continue forever. The true concern, however, is whether or not the present rice farming cycle is truly sustainable. In areas where triple cropping is widespread, there is not much time for paddy fields and waterways to dry up even during the dry season. Aside from some drainage, the water within the banks remains largely unchanged and stays in the reservoir indefinitely. Furthermore fertilizers are applied intensively and a large quantity of agricultural chemicals are used. In addition to the deteriorating water quality, the ground has grown sterile and soil quality has become vastly degraded as a result of thorough exploitation of the land via triple cropping.

Some scholars even indicate that they have already reached the limit of their land productivity improvement. Will the Mekong Delta continue to bring forth a sustainable bounty? Also, higher rice prices do not necessarily increase the level of farmers’ income, with the exception of a few wealthy farmers. To make up for such low income, an increasing number of farmers are taking up wage labor as a side business. Furthermore, as the country becomes increasingly industrial and urbanized and access to information is facilitated, people, especially young people, are pouring into urban districts in the pursuit of affluence. The declining farming population can impoverish farming villages, and even now the disparities between urban and rural areas are continuing to widen. For the Mekong Delta to remain truly bountiful, it would be necessary to search for a new approach. Revival of the Mekong Delta—this is truly an urgent issue that must be addressed.

Crossing a large suspension bridge in My Tho, one of the major cities in the Mekong Delta region, we are afforded a sweeping view of the boundless expanses of cloudy brown waters making up the Mekong River. Clouds float in the blue sky and, as if stretching on into the very sky itself, the Mekong River flows wordlessly and quietly ever onward.