

「GLOBAL INDEX」  
Expanding the future of food, water and the environment.  
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# GLOBAL INDEX

Expanding the future of food, water and the environment.



KUBOTA taking on the challenges of globalization

# America

America is an important market for KUBOTA.

Not only do roughly 30% of machinery business sales come from the North American market, it is also marks the place where KUBOTA began its global expansion.

While the American economy stagnated following the global recession, it is now recovering steadily.

America has now entered a new stage of economic growth, with an increase in population, the shale revolution and innovation.

The second edition of new "GLOBAL INDEX" is set in America, which is again attracting the attention of the world.

This special feature focuses on KUBOTA's business in America, which has developed significantly since its inception nearly half a century ago.

As this massive market has revived, new opportunities for KUBOTA are now emerging.



▲ The red and white stripes of the American flag represent the 13 states at the time of independence. The 50 stars represent the number of states today. The national flag is deeply loved and respected by the people and can be seen in various places around the towns.

GLOBAL INDEX 2014

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FEATURE- UNITED STATES of AMERICA

Expanding the future of food, water and the environment.

# Growth Power & Lifestyle

[A Country That Keeps Growing and Its People's Lifestyles]



A tractor is an essential part of this dream lifestyle.

### A growing population in a vast land America leads the global economy

The United States of America is made up of 50 states. This includes 48 mainland states and also the states of Alaska and Hawaii. It covers an area of 9,628,000 km<sup>2</sup> (ranking third globally) and is roughly 25 times larger than Japan. The size of the State of California on the western coast is roughly equivalent to the land area of Japan. The total population of the country is approximately 310 million. This also ranks third globally,

following China and India. This land area and population are clear indications of the "large scale" of America. However, this is not a country that is "just big." Its GDP (nominal) in 2013 was approximately 16.8 trillion USD. China had the second largest GDP in the world at 9.2 trillion USD and Japan had the third at 4.9 trillion USD. Even combined, China's and Japan's GDP figures still fall short of the American economy's total size. The "New York Stock Exchange" is the largest stock market in the world and has a total market value more than four times larger than that of the Tokyo Stock Exchange. When NASDAQ is also added, just these two markets in New York account for roughly 37% of the global market value. There has been no weakening

of the "strength" that America has to lead the global economy.

It can be said that the American economy has continued to recover since 2010. It has been supported by factors such as the new energy revolution brought about by "shale oil" and positive indicators can be seen such as rising employment rates and increased housing starts. The increase in population is a characteristic particular to America that is not seen in the advanced countries of Europe and is worthy of special mention. While Japan and many other advanced nations are facing the issues raised by an "aging society," America is accepting immigrants and its population continues to grow by 1% annually. The diverse population will no doubt continue to expand the large scale and strength of the country from here forward.

While collecting data in America this time, we saw many sites of housing construction. The "housing starts" have now recovered up to the million per month level and confirm the underlying strength of this country. We also saw many pieces of KUBOTA construction machinery at these building sites. There were also orange KUBOTA tractors and mowers in the gardens of the newly built private houses. It has been around 45 years



since KUBOTA first expanded into the U.S. The company now takes more than a 40% share of the market for compact tractors. KUBOTA has become part of the American lifestyle.

### A dream lifestyle

In Japan, home gardens are popular as a hobby, with people growing vegetables themselves for their own consumption. However, the impression received in America is that this is more deeply rooted in people's lifestyles. People work at a company on weekdays but spend their weekends working in their large gardens in their suburban homes, tending to their flower beds and lawns or growing vegetables. There are also people who work in the major cities such as New York, Los Angeles and Chicago and then buy land and housing on the outskirts after their retirement and begin the "country life" they have dreamed of. Depending on the scale, it

seems that some of these people also keep livestock such as chickens.

If we look back on the founding of America, many of the immigrants who came to the new continent from Europe were farmers. People open up the vast land, build their own houses, raise livestock and cultivate crops. The gardens are vast and there is a huge enthusiasm among people to do everything with their own hands. Although we may be exaggerating, it seems when we see the large scale of things that the values that were important to the

pioneers have led to the lifestyles of the European-origin Americans of today.

It is a lifestyle in touch with flowering plants and the soil in a rich natural environment. The compact but highly functional and high quality orange tractors are a partner supporting that kind of lifestyle.

Customers actually come to KUBOTA dealers looking for a reliable single piece of equipment that can simultaneously cut and collect the grass, dig holes for tree

planting, carry the soil and trees, plow the vegetable garden and clear away the snow in the winter. Many of the customers are repeat customers, but the expressions on the faces of the users looking for their first piece of equipment show the elation of being on the verge of achieving their dream lifestyles.

In this way, KUBOTA is making a contribution to the quality of life of the American people.



There are also many magazines published on the "country life."



America accepts many immigrants and is supported by a wide diversity of races.

### "Dealers" are essential in the tractor business



The dealers play an essential part in the expansion of KUBOTA's business in the U.S. The dealers buy products from the manufacturers and sell them to the users.

Many of the dealerships in the U.S. have been owned and managed by the

same family over many years and generations. There are currently around 1,100 KUBOTA dealer stores throughout the U.S. These are not franchise locations and are not owned by Corporate, so they make their own management decisions about which manufacturer's products to handle. The basis of their business is how successfully they can create a comprehensive offering of products and services for their customers.

A dealer handling KUBOTA products said: "There are only two types of dealers in the U.S. They are the KUBOTA dealers and those that want to be KUBOTA dealers." It seems that it is the natural course that stores want to become dealers of the orange tractors that continue to respond to the desires of customers.

KUBOTA holds a nationwide dealer meeting in October each year. It is an event with nearly 100% dealer participation where new products for the following year are unveiled. Even though lodging and travel are at their own expense, dealers gather



There would be no 45-year history of KUBOTA in America to discuss were it not for Kubota dealers.

from all around the country so that they do not miss the business opportunities and to ascertain the performance of the new products.

### Column



FEATURE- UNITED STATES of AMERICA

Expanding the future of food, water and the environment.

Why do people ride tractors on the weekend?

For some people, weekends are for enjoying gardening. To report on the lifestyles of these people, we visited the Hedges family who live in Lancaster, Ohio.

The State of Ohio is located in a very important position connecting the northeast and the Midwest areas of America. It is a state with a lot of manufacturing, finance and agriculture. It has the seventh largest economy in the U.S. It is also characteristic for the rich nature it is blessed with. Incidentally, the Wright brothers were also from the State of Ohio.

The husband of the family is Kurt Hedges.

He is an Ohio State Trooper (policeman). His wife is a pharmacist and they live happily with their three daughters. Kurt says he enjoys raising his darling daughters and the gardening he does every weekend. He says, "I use a KUBOTA BX2670." He uses the tractor to make the flower beds and for cutting the grass. The tractor is also put to use to collect the leaves that fall from the big trees of the neighboring house. He said: "I previously used a zero turn mower from a different company, but I was concerned about driving it on slopes and was unable to fully enjoy the mowing. However, the engine was very good and, as it turned out, it was a KUBOTA engine. I therefore tried changing from the mower to a KUBOTA tractor and bought a BX Series product a year ago. It is 4WD and feels very stable, so I am not concerned about the slopes. It is also very easy to use, so I am finally now able to enjoy mowing."

Kurt hummed to himself as he drove the tractor for us. Although a KUBOTA tractor is now described as a "must-have item" for gardening, there were many struggles on the way before we got to this point...

KUBOTA started its business in America in 1969. At the time, the company tried to make use of its proven results as the leading manufacturer of tractors for rice farming in Japan to advance into America. However, this was a huge miscalculation. The KUBOTA tractors had 15 to 50 horsepower. On the other hand, it was the norm for the tractors used in America's large farms to have several 100 horsepower. It was discovered that it would be difficult to get accepted into the American agricultural market.

KUBOTA therefore came up with the idea of selling the tractors for mowing grass. An implement (a work device tractor attachment) for mowing was fitted and trial sales began. The reaction was better than had been expected. Gasoline engines had been the mainstream in the mower market and Americans had not yet had the idea of using a tractor with a diesel engine for mowing. This change of direction meant that KUBOTA tractors were quickly accepted by American society.

In the dining room of the Hedges'. The time spent mowing is reduced, so more time can be enjoyed with the family.



Quality of Life [Supporting Lifestyles. Improving Lifestyles.]

A clear blue sky and a green lawn. Keeping a lawn attractive has become a status symbol.

It was also KUBOTA that was the quickest to respond to expectations for a new kind of tractor that would not only cut the grass but also support gardening work all-round, for example, by digging holes and carrying soil. It was the implements that were the driving force in this. Representative examples are loaders and backhoes. By fitting an implement to the tractor to suit the application, a completely new kind of tractor was proposed to the market that could perform anything from grass cutting to light construction work. This established a "diesel compact tractor" market in America. KUBOTA then went on to acquire a 40% market share by the latter half of the 1980s.

According to Kurt, "Mowing the grass is the best method I have for relieving stress. I get on my tractor in the evening and am able to go to work the next day feeling refreshed. It's probably also good that I can have time by myself and become immersed. That is the only time my family will allow it because it is garden work (laughs)." The time created by the tractor brings happiness for both the work and the family.

A "self-sufficient" lifestyle has also become popular among the young

Mr. and Mrs. Wilson live in Somerset, Ohio. On their 8 acre property they have a vegetable



The implements to be fitted to the tractors are made by KUBOTA in America. The manufacturing responds to the local requirements.

garden, a hen house and a swing. Craig, the husband, works in coal mining. He can sometimes take holidays, but can also be away from the house for long periods of time. Lindsay, his wife, works in the fund raising office of a public garden. This is also a dual-income family.

Lindsay said: "We moved here two and a half years ago. We had lived in town up until then, but had dreamed of living on a large plot of land where we could do everything for ourselves." People repair their own houses and produce their own food. This idea is widely accepted in America. The Wilsons are in their early 30s and many of the younger generations are wanting to follow them.

were quick to decide when we bought it. However, we devoted ourselves to saving money for the purchase a year before we bought it (laughs)." It appears that working the land was Lindsay's idea. In addition to the vegetable garden, they also have several other projects centered on the tractor going on simultaneously.



The KUBOTA tractor has become an essential part of the Wilson family life.

The couple showed me their vegetable garden. They grow vegetables such as beans and tomatoes and say that they have had a bumper crop this year. Apparently there is too much food for them to eat during the growing season, so they have been canning it. Lindsay said: "When we first moved here in 2012, we asked somebody else to till the garden. That person was using a KUBOTA tractor. We watched and saw that it was simple to operate and thought that we would be able to operate one ourselves. We bought a BX Series product the following year, in 2013. We had decided that it would be used for cutting the grass, tilling the garden and clearing snow, so we

So, how has the tractor changed this couple's lifestyle? When I asked Craig this, he smiled and said: "I ride the tractor once every 2 or 3 days. The work in the garden used to take 5 hours out of a day, but having the tractor has reduced that to 1.5 hours. I can play with the children in the time saved." Craig has irregular holidays, so the time he can spend with his children is very precious.

The couple has three daughters. They say that they have a little wish that the daughters will become farm wives in the future. From weekend farmers to a full-scale farming family. This has already gone completely beyond the realm of being just a hobby.

Column

KUBOTA quality and "service ability" support dealer success

Chris Lashley Lashley Tractor Sales

Thanks in part to shale oil, the economy in Ohio is currently doing very well. There have recently been 10 hotels constructed in a rural area that previously had none. Of course, there has also been a good effect on tractor sales. I feel that there has been a shift in customers from the stage of them "buying what they need" to the stage when they are "buying what they want."

There are many houses in the eastern part of Ohio that have vast grounds. As there are many possibilities for what can be done on the properties, there is also a wide variety of requirements for tractors. This point makes the BX Series very popular. A third of

the 600 vehicles we sell annually are the BX series. There is a wide range of implements, so it really is the tractor people want.

My store only handles KUBOTA tractors. I did have some from other companies before, but the quality became unstable when the brand started OEM supply from a different company. KUBOTA's products are all made in their own factories, so the high quality is maintained. This also affects the amount of time required for repairs. With other companies, parts may need to be brought in from various different companies and repairs may take 6 weeks. With KUBOTA, the service parts are



The store has been handling KUBOTA products since the time of Dennis (left), who is the father of Chris (right). It is very common in the U.S for dealerships to be passed on in families.

dispatched directly from the Company's own warehouse, so we can repair a tractor and return it within a week of getting it from the customer. My store has "service ability" as one of its selling points, so we are very grateful for this speed.

I would like to ask KUBOTA to continue to maintain the quality and service capabilities it has now. There are increasing numbers of new products and this is something we have come to expect of KUBOTA.



# FEATURE- UNITED STATES of AMERICA

Expanding the future of food, water and the environment.



## The agriculture situation in America as a base for world food production **Data**

America has a vast area of land and the form of agriculture in each state varies according to the region where the state is located. For example, there are corn and soybeans in the Midwest, wheat in states such as North Dakota and Kansas and beef production in the south. Let's consider this situation of agriculture in America by examining the data.

● Situation of major agricultural product production (2012) million tons

Wheat	61.76
Corn	273.83
Soybeans	82.05
Milk	90.87
Beef	11.85
Pork	10.56
Chicken	17.04

Data: FAOSTAT

America has the highest amount of corn and soybean production in the world. Similarly, the volume of beef, chicken and milk production is also the greatest in the world. Of these, the production of beef and chicken account for roughly 20% of the total production globally.

● Comparison of agricultural land area of various countries

	America	Japan	France
Agricultural land area (10,000 ha)	40,345	456	2,927
Average area managed (ha) (comparative size)	169.6 (75)	2.27 (1)	52.6 (23)

Data: MAFF, FAOSTAT, USDA

If we compare the area of agricultural land in each country, the agricultural land in America is roughly 88 times that in Japan and 14 times that in France, where agriculture is said to be prosperous. Furthermore, as there are many large-scale farms growing crops such as wheat, corn and soybeans, the average size of land managed is roughly 75 times larger than that in Japan and 3 times larger than that in France.

# Tractors in American Farms

[Entry into the Agriculture Market and the Outlook for the Future]

The maximum horsepower of KUBOTA tractors has currently reached 135 horsepower and they are used widely in America in small and medium-scale agriculture (in fruit growing and dairy farming). The next step up is the large scale agriculture in what is called "the world's breadbasket." Roughly 30% of soybeans and corn around the world are produced here in the U.S.\* Full-scale crop cultivation in the U.S supports "food provisions" around the world. We are just starting to take on the challenge of entering that as-yet untrodden area.

\*Data: MAFF



FEATURE- UNITED STATES of AMERICA

# Tractors in American Farms

[Entry into the Agriculture Market and the Outlook for the Future]



KUBOTA tractors that can also work in narrow spaces are highly valued at vineyards where the land is put to effective use in order to increase the harvest of grapes.

KUBOTA is supporting the production of California wine

It has been said that California wine has become even more popular than French wine. In comparison with France, California has better climatic conditions and is ideal for the growing of grapes. High quality wine produced from grapes with a high sugar content catapulted California wine brands to fame.

Of all the sites of California wine production, the Napa Valley has the greatest number of wineries and is famous as a location of production. Scott Bauer manages 1,370 acres of vineyard here. "Last year we harvested 8,000 tons of grapes here. Each ton can be used to produce 60 gallons of wine, so how many bottles of wine must that be?!" he laughs heartily. Scott started using a KUBOTA tractor in 1987. Nowadays there are more than 10 of the machines in action on farming operation, ranging from narrow type tractors to utility vehicles. He said: "The characteristic feature of KUBOTA products is their high reliability. In other words, they never have any big trouble. The tractors can be in operation for 12 to 14 hours a day, so something that is simple and doesn't break down is the best. However, I do buy replacement tractors every three years. You must think I am a very good customer to KUBOTA! Ha ha ha..."

It has been estimated that two thirds of the tractors being used in the Napa Valley are KUBOTA tractors. This means that KUBOTA is supporting the production of California wine. According to Craig from the Garton Tractor dealership in Santa Rosa: "The characteristic feature of our store is that 60% of the customers are vineyards. Another 20% are private homes and the remaining 20% are construction companies. The most popular product is the narrow type tractor. The gap between

trees on a vineyard is very narrow, so this tractor is perfectly suited. What is good about KUBOTA products? The customers come here demanding a KUBOTA. We also sell products of a different color (= a

different company), but we hurried to buy in KUBOTA products. The design is also good. It is the same coloring as the San Francisco Giants, so it was always bound to become popular in Northern California!"



Grapes grown in optimal weather conditions and awaiting harvesting. The harvested grapes are taken to a winery and make a new start as high quality wine.



Weather conditions that are good for wine are also comfortable conditions for humans. This makes the wine consumed in California seem even more delicious.

## Taking on the challenge of American agriculture!

KUBOTA laid the foundation for expansion into North America in 1972, with the establishment of the Kubota Tractor Corporation (KTC) as a sales company in Los Angeles, California. However, as said previously, the paddy field tractors of Japan did not suit the upland farming of America and it became necessary to change the direction of the business scheme.

Through the 1990s and 2000s, the history includes an increase in horsepower and an expansion of the product range. KUBOTA finally broke into the agriculture market with the development of utility tractors with 60 to 100 and greater horsepower, which made it possible to venture into the market for small-scale agriculture such as fruit farming. Later on, the range of horsepower increased to 135 horsepower

and the company entered the dairy farming sector, which is known as the hay market. A tractor with 170 horsepower was announced in September this year. This means that medium-scale farms are now also within view.

In terms of the product line-up, KUBOTA entered the utility vehicle (multipurpose 4-wheeled vehicle) market in 2004. Utility vehicles can be used for off-road travel and load carrying and were a product that widened the market, as there had only been buggies in American society up until that point. In construction machinery, even though the top share had been taken in compact construction machinery globally, there were few products in the line-up for load-carrying machinery and it had not been possible to fully respond to the requirements of the customers. The line-up of compact construction machinery is therefore being expanded and it is planned that a skid steer loader with excellent versatility will be introduced in 2015 to add to the wheel loaders and the compact track loaders that were launched in 2010.

There are also expectations that the utility vehicles and construction machinery will be put to use in agricultural settings. On large-scale farms there is much demand for load carrying and construction work and it is possible that these vehicles could be sold in a set with the large horsepower range vehicles. For implements, the acquisition of the Norwegian Kverneland

ASA in 2011 made it possible to produce a wider range of products such as ones for hay in-house.

Of course, for "in-house production," KUBOTA also has two manufacturing bases in North America. These are Kubota Manufacturing of America Corporation (KMA) and Kubota Industrial Equipment



In the U.S., many dealers carry construction machinery together with tractors. Construction machinery is useful on huge farms, such as in the installation of irrigation facilities.

Corporation (KIE), both in Atlanta, Georgia. KMA manufactures mowers and utility vehicles and KIE manufactures tractors and implements. According to Hironobu Kubota, the President of KMA and KIE: "Local production for local consumption is very important to strengthen our business development in North America. This means to manufacture items in the local area and to sell them in the local area. Furthermore, in 2013 we created a mower development base in North America. At last we have a system prepared where everything from development to manufacturing and sales can be performed in North America."

KUBOTA has continued to make steady progress forward over these last 45 years, with the development of high-horsepower tractors, the expansion of the product range, the implement strategy and also the strengthening of the production system. As a company that is rooted locally, we will take on the challenge of large-scale agriculture.



In America, KUBOTA takes a high share of the market for compact tractors of 40 horsepower and below and can be said to be well established as a brand. However, we want to actively venture into new markets over the next few years. Regarding tractors, in 2015 we will be releasing new tractors up to 170 horsepower for upland farming. The target for the time being is the market for farms up to medium-scale farms, which mostly make hay for livestock. We have the implement for hay (hay tool) from

## Column

### Contributing to people's quality of life with high quality products and services

#### Masato Yoshikawa, President Kubota Tractor Corporation

Kverneland ASA, which has become part of the Group through acquisition. This implement will be marketed under the KUBOTA brand and we will increase the presence of KUBOTA in the agriculture market.

Regarding construction machinery, for this too, we will be starting sales of the skid steer loader (SSL) in 2015. This will mean that we will have a full line-up with our compact excavator, wheel loaders and compact track loaders (CTL). This will assist in the expansion and strengthening of our sales network. SSL are also used widely in the agriculture market and particularly in livestock raising, so there

are growing expectations that a synergy effect will be created with the new model tractors and hay tool mentioned previously.

We will also enrich our mower product range and we hope to increase the number of customers who appreciate the good qualities of KUBOTA in the commercial market, not just in the residential market.

We want to contribute to people's "Quality of life" with high quality products and services — looking ahead, you can have high expectations for the challenges that KUBOTA intends to take on.



FEATURE- UNITED STATES of AMERICA

Expanding the future of food, water and the environment.



KUBOTA in U.S.A.

Business

The globalization of manufacturing The opening of a North American "5-Gen Dojo"

"5-Gen" is the three principles of "GENBA (Actual Sites), GENBUTSU (Actual Objects) and GENJITSU (Facts)" and the two principles of "GENRI (Principles) and GENSOKU (Basic Rules)." The way of thinking of the "5-Gen" principles is to clarify the difference between these first three "Gen" (= the current level) and the second two "Gen" (= the ideal situation according to the principles and rules) and to correctly understand the nature and the cause of a

problem. Improvement activities based on the "5-Gen" principles are implemented at the sites of manufacturing. The activities are developed to determine what is wasteful in the work and to thoroughly remove it to raise productivity. Please imagine a scene of manufacturing within a factory. At the assembly workplaces, waste is anything other than the instant when workers are fitting parts or tightening bolts. In other words, anything other than the action of adding function to a product is waste and reduces productivity. Furthermore, all products not immediately required by customers and all goods in process that are not being worked on are waste.

The "5-Gen Dojo" puts the ideas of this "5-Gen" principle into practice in a training program developed for manufacturing personnel. The training school started out at the Sakai Plant in Osaka, Japan in 2002 and to date more than 2,000 employees have received the training. In 2014, the first school at an overseas base was opened at Kubota Manufacturing of America Corporation (KMA).

The "5-Gen Dojo" at KMA has an American person as the acting master (instructor) and the students are able to receive the course in English. Local instructors are able to nurture the local personnel autonomously. Together with that at the Sakai Plant, the "5-Gen Dojo" at KMA will play an important role in the global expansion of the "5-Gen" principles.

Kevin Strike, who works in the administration of the "5-Gen Dojo" at KMA said: "First we must increase the number of personnel that have a foundation in the "5-Gen." At the present time we run a program with 12 students four times a year. Everybody feels that it is a place to learn a good way of thinking and we have certainly seen the results of it. In the future, I would like to increase the number of acting masters in the teaching position. When this happens, the graduates of the North American "5-Gen Dojo" and the acting masters will be able to come together and incorporate the 5-Gen ideas into the production workplaces. Actually, we set three model processes in the workplace per month and implement improvement support. Even so, it will probably take 2 or 3 years for improvement at each workshop independently. In the future, I hope that we will accept trainees

from bases around the world at our Dojo. Our objective is not for the Dojo to become established. It is for the culture of "5-Gen" improvements to become established over the long term."

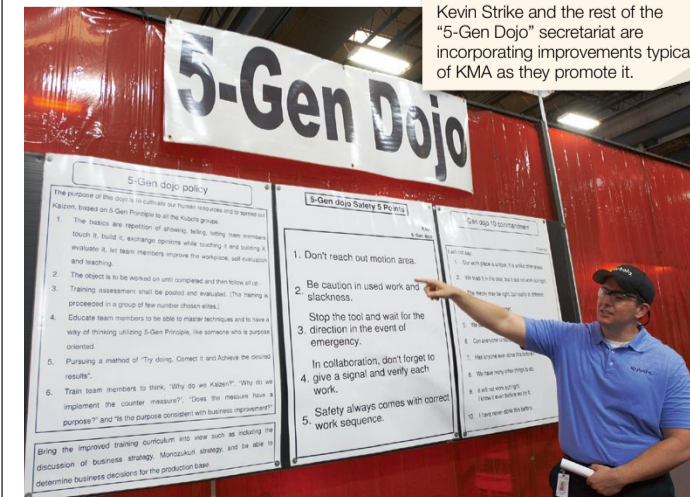
Towards "local production for local consumption" in tractors Establishment of new KIE plant (2nd plant)

As the American economy has developed and KUBOTA's line-up of products has expanded, the sales of KUBOTA tractors have grown rapidly since the late 1990s. The cumulative sales exceeded 1 million units in 2005.

At Kubota Industrial Equipment Corporation (KIE), the production of implements (work devices for attachment to tractors) began in 2005. With the establishment of this new plant (starting mass production in 2013), productivity has been dramatically improved as work such as the attachment of implements and tires and the production of tractors has been concentrated in one place. On top of this, the local production reduces the risks from foreign exchange fluctuations. The cost competitiveness has also been strengthened through "globally optimum procurement" performed by purchasing the key parts from production bases in Thailand, etc., in addition to from Japan. At present, between 80 and 90 tractors are produced per day at the new plant. The latest IT techniques have been introduced such as the computerization of all the quality data and the displaying of failure information on screens.

In addition, the new plant has a wastewater treatment facility containing the KUBOTA Submerged Membrane and is reusing its wastewater. The contaminants in the plant wastewater and domestic wastewater are separated off and 65% of the wastewater is reused in coating processes. The remaining 35% is purified beyond the required level and drained as sewage. Furthermore, the coating processes include processes which require "ultrapure water" and a high precision RO (reverse osmosis membrane) has also been installed and is contributing to increased rates of wastewater recycling.

The newly established KIE 2nd plant. A quicker response has been realized by locating the production close to the sales market.



Kevin Strike and the rest of the "5-Gen Dojo" secretariat are incorporating improvements typical of KMA as they promote it.

Environment

The development of diesel engines to meet the latest emissions regulations

An awareness of the environment is strong in the advanced nations of Europe and America and regulations related to "exhaust gas" are especially strict. In the U.S., the "Tier 4 emissions regulations" are being introduced in sequence. To survive in the American market, every product from passenger vehicles to agricultural machinery and construction machinery must be an environmentally friendly product.

regulations (for the 56 to 130 kW class). Certification of compliance for the 56 kW and smaller class was also achieved for all series in 2012 and so the response to the regulations was completed in that same year, when the regulations were begun. We have also completed development of an engine to comply with the Tier 4 final emissions regulations to be implemented in the U.S from January 2015 and certification has been obtained.

In 2011, in advance of the Tier 4 emissions regulations, KUBOTA became the first company globally to obtain certification from the U.S. Environmental Protection Agency and the California Air Resources Board for compliance with the emissions

By receiving this certification, we are able to launch models that support the emissions regulations when they are ready and we have increased our business opportunities regarding OEM sales of diesel engines. KUBOTA is already a top



KUBOTA engine V3800-4, which received the certification in 2011. One of the strengths of Kubota is the ability to make a firm and prompt response to the regulations.

manufacturer of small diesel engines for industrial use. The company also continues to be a leading company in environmental issues.

Water

The latest earthquake resistant ductile iron pipe "GENEX" is being used in Los Angeles

The west coast of America is a region that has many earthquakes. In the City of Los Angeles in California, the improvement of water pipelines against earthquake is a major issue and measures had been discussed for many years. In 2013, the City decided on the trial adoption of earthquake resistant piping made in Japan. Those pipes were the KUBOTA "GENEX" earthquake resistant ductile iron pipe for waterworks. It was the first time that water pipes with Japan's unique earthquake resistance performance had been used in the U.S.

In the background to that selection were the proven results with earthquake resistant pipes in Japan. The characteristic feature of earthquake resistant ductile iron pipes is that even if an earthquake occurs, the joints between the different pipes expand and contract and also deflect at the joints. The joints do not fall apart even if a strong force is applied, like on a chain. The effectiveness of these earthquake resistant pipes was



Trial introduction has also begun outside of California in places such as the State of Oregon. We will continue to use the proven results in Japan to try to spread the piping throughout America.

proven in the Great Hanshin Earthquake (1995) and the Great East Japan Earthquake (2011). There was no damage even where the land subsided or cracked open. "GENEX" is the latest model of earthquake resistant ductile iron pipe with improved workability and corrosion resistance on the outside. In Japan today, earthquake resistant pipes are used for roughly 90% of the newly installed ductile iron pipe for water

supply. These proven results were also highly evaluated in America. The region where the trial installation was performed was a region that suffered damage in the Northridge earthquake of 1994 and landslides have also been confirmed. KUBOTA products are supporting the residents' safety and peace of mind from under the ground.

The "KUBOTA Submerged Membrane Unit" in service at more than 300 wastewater treatment plants in the U.S

The environment surrounding KUBOTA's wastewater treatment business in the U.S is improving. An increase in demand to retrofit aged wastewater treatment plants, a strengthening of nutrient removal of nitrogen and phosphorous to improve water quality as well as the need of wastewater reuse to overcome water shortages have been observed. In addition, the housing starts index is again above the 1 million per month mark as the economy recovers.

how and experience over the many years at KUBOTA in Japan in addition to supplying just the submerged membrane unit. KUBOTA's ability to design the entire system enables our membranes to perform in operation with full optimization. The first KUBOTA MBR system is being installed in the state of Washington where KMA is located. The KUBOTA MBRs have garnered significant attention because of KUBOTA's design know-how and over 300 wastewater treatment plant references using our submerged membrane units in the U.S.

Kubota Membrane USA (KMU) has recently incorporated their product lineup with designing, integrating and supplying the MBR (Membrane Bio Reactor) system based on the wastewater treatment engineering capability, know-

In 2013, the order from the City of Canton for the MBR water reclamation facility which is the largest MBR in North America was awarded in cooperation with a partner company.

The KUBOTA Submerged Membrane Unit. Microorganisms degrade the wastewater into biologically treated water and solids (microorganisms) and then the membrane physically separates the treated water from the solids.





PEOPLE

Seeking opportunities in even larger fields

As the background experiences of people in modern society diversify, the scope of career opportunities is increasing.

Here we will introduce work in a vast field through the personalities of various individuals at KUBOTA.

Two employees will be introduced. Christine Chapman is the Turf Product Manager for at KTC in America, as introduced in the special feature.

Azusa Furihata has experience of working at KMA and is currently performing technical development for mowers.

CAREER-ENHANCING

Experiencing personal growth each day through new work and encounters with others

Christine Chapman

**Turf Product manager**  
Kubota Tractor Corporation  
Joined KTC in 2012. Works with turf products, making use of her background experience working in family turf equipment distributorship. She visits dealers and customers around the U.S studying the market and proposing new strategies to raise recognition of the KUBOTA brand in the turf market.

Meeting with a new "family" that helps in personal growth

Taking on the challenge of a new world — is having the courage to go one step further. Sometimes this may mean leaving the comfortable environment we are in.

Growing up, my family ran a commercial turf equipment dealership in Florida which later transitioned to a distribution company. After graduating from college with my Bachelor of Science degree, I spent two years teaching agriculture in junior high school and then began working with in the family's turf equipment distributorship. I worked in all facets of the company. From shipping receiving, processing warranty claims, co-op advertising then marketing manager and then eventually territory sales manager, selling commercial zero turns and handheld equipment. The background I have working with dealers definitely helped me in my role at KUBOTA.

From that very fortunate environment, I began to think about my next career. In 2012 I decided to make a big decision to leave my comfortable environment and a move across the country. Although the move away from Florida and my family was difficult, I knew that I would grow from this change. With full support of my family, I



One thing I considered when choosing to work for KTC, was the quality of the products offered and the impressive work environment surrounded by wonderful people.

took a leap of faith and moved to California where an opportunity to work for an amazing company presented itself. One of the biggest selling features of the products I previously sold, were the KUBOTA engines and their reputation for quality and durability. The fact that I grew up in the turf equipment industry and was familiar with the KUBOTA brand, I knew that it was going to be a good fit from the start.

What I loved about KTC was the atmosphere and the feeling I got of it being a family environment. Knowing many people had worked there over 20 years says a lot. Although KTC is a large corporation, I could see that people within were committed

and were happy. Coming from a family business, this was important to me and it was apparent that KUBOTA really cares for their employees. There was a new "family" waiting for me along with a new world of opportunity and experiences at KTC. I joined KTC in 2012 as the Assistant Turf Product Manager in charge of mowing equipment. The first

step in my career at KUBOTA was in the market launch of the "Kommander", which was KUBOTA's first residential zero turn mower. Launching this product meant presenting to large groups of dealers, employees as well as the public. It was successful and exceeded our sales expectations.

I want to make the KUBOTA brand shine in the turf market just as it does in the tractor market

Despite my short time with the company, KUBOTA has given me many wonderful opportunities. Market research and product surveys are the first step in making something into a product and surveys were the first step for me as a member of KUBOTA. I visit customers and dealers around the U.S and study the market. The beauty of this is being able to see first-hand, what the market trends are and act on them. As the turf product manager, not only is it a very important part of the job, but I find it very exciting. I had realized early on that this was a basic principle of KUBOTA business. There is a great amount of detail in every aspect of

product development and marketing. This shows in KUBOTA's products and I believe this is why loyalty to the KUBOTA brand is so strong in the U.S.

The following year, I was promoted to Turf Product Manager. The Z700 commercial zero turn mower was the next product I introduced at the 2013 dealer meeting. Expanding the KUBOTA brand in the commercial turf segment is one we are continually working to penetrate. We are placing significant effort on growing our turf business especially in the commercial segment through simultaneously developing turf dealerships in key markets and expanding the turf product line. I am fortunate to be a part of these growth strategies at KUBOTA because they also lead to reaching milestones along my personal development path.

So, what are my career goals at KUBOTA? I know KUBOTA has a big future in the turf industry and I want to be a part of the business growth. I see myself taking on larger roles in the future because my vision involves a strategy of taking risks and not only changing with the market but being the innovators of industry leading products, programs and ideas -ideas that are ahead of this rapidly growing industry. I want to be that kind of innovator — that is my vision.

The work of Product Managers includes introducing the new products. Launching KUBOTA's first residential zero turn mower meant presenting to large groups of dealers, employees as well as the public.



BORDERLESS

I want to make use of my experiences in Japan and America to deliver high quality products to the market



My experience working in America reaffirmed my desire to produce products that the customers will find attractive.

Azusa Furihata

**Turf & Utility Vehicle Engineering**  
Department, Farm and Utility Machinery  
Engineering Headquarters, Farm and Utility Machinery Division  
KUBOTA Corporation

Ms. Furihata lived in Los Angeles in America until she was 11, due to her father's work. She specialized in material science at university, during which she spent time studying in the U.S as an exchange student. She felt then that she next wanted to work abroad and kept hold of that feeling as she entered KUBOTA Corporation in 2008. In 2011, she was the first female KUBOTA employee to be posted abroad. After returning to Japan, she continues to work hard at new product development in her current position.

storage of documents and components related to the production of new products, the response to problems that occurred in the manufacturing process, and, more than anything else, the response to the changing notices I had been frequently issuing in Japan. The engineering department issuing the notices and the manufacturing plant are on different continents and also the procurement of components is sometimes done overseas. This means that there are cases when it is not possible to respond to the details of the changing notices as is written or by the date written. When this happens, it is necessary to understand the details and decide the level of priority for the response. A response is made for the products in production while also making preparations for the acceptance of new products. My three years in America flew by. I was constantly consulting the calendar as I got the work done and every day was thrilling and fulfilling.

I felt through the work in America that there are no international borders regarding the stance on work. Of course, if we compare individual ways of working, then there are differences in the ways things are progressed and in the ways of thinking. However, being happy when somebody is happy to use the company's product and wanting to deliver even better products to the users are thoughts that are common around the world.

New duties were waiting for me when I returned to Japan after my stay overseas had been completed. It was a full product model change. I am now able to view things from both the "development" point of view and the "manufacturing" one. It was perhaps fortunate that I had gathered some experience before working on the full model change.

KUBOTA is a company that lets young employees take on the challenges. While in America, I saw the end users and dealers of KUBOTA products being full of confidence and proud of their products. That is still a very clear sight in my mind. I want to make products that people like these will be pleased by and will be able to be even more confident about. This is the starting point for me in this project.

The days up until the realization of a desire felt from the time of entering the company

I had been brought up in Los Angeles, until the age of 11 and after returning to Japan I felt that I wanted to receive an education in the U.S again. I therefore spent the first year of my master's course as an exchange student at an American university. While there, I saw how good the environment for researcher development is. I was also able to immerse myself in research in this favorable environment. After returning to Japan, I decided to join KUBOTA Corporation as I felt that I would have an opportunity to make use of my experience of overseas study, because KUBOTA extends its

business widely overseas.

For the first three years in the company, I was involved in research work and design work for ride-on mowers. A full product model change had just been completed in the year I joined the company and the first work I took on as a new employee was the final preparation for the shipment as products. This was the first time in my life that I had been involved with foreign law. My work after that was on minor changes for the products. I worked on improvements in sitting comfort, improvements to lever usability and the response to updated regulation. Ride-on mowers are not a familiar product in Japan. The number of models handled by the team I was assigned to was large and I was involved in improvements to various types of product and component, both large and small. Each of these improvements helped deepen my understanding of the ride-on

mower products the company has.

I worked hard in development work with the one thought that I wanted to make better products. The engineering department that developed the products was in Japan and the manufacturing was performed at Kubota Manufacturing of America Corporation



While in the U.S, I worked hard on weekdays, and enjoyed visiting tourist spots on weekends.

(KMA) in Georgia, America. I therefore issued many changing notices\* for products to KMA. I knew nothing of the manufacturing workplace. Little did I know then that I would later be on the receiving end of those changing notices...

One day during my fourth year in the company, I was called by my supervisor and told I would be posted to KMA.. It was normal at the time for the mid-ranking employees to go, and, as I had not yet had much experience, I had not thought for one minute that I would be given the opportunity. This is how I got the "America residency" I had desired.

\*Changing notices: Documents sent from the engineering department to the manufacturing department as notice of component changes. The manufacturing department is then required to respond based on the notice and with consideration of the stock of components and the situation on the manufacturing line.

Experience gained while working abroad and a new challenge back in Japan

After I was assigned to KMA, I worked as a coordinator of PE (Product Engineering) at KMA. PE is a section set in between "development in Japan" and "manufacturing in North America" to transfer information from outside of KMA.

My work involved the reception and



BUSINESS TOPICS

KUBOTA's global challenge spreads

Food, water and the environment are essential for the survival of mankind.

The KUBOTA Group is working through its business to take on the challenges of the issues around the world in the food, water and environment sector.

Of the many measures being taken, the following is an introduction to four projects implemented in 2014.

► So that more people can eat delicious rice

The establishment of a rice milling and sales company for Japanese rice



To enable people around the world to eat delicious Japanese rice, KUBOTA has established Kubota Rice Industry (Singapore) PTE Ltd. (KRS) in Singapore for the importing, milling and sales of rice grown in Japan.

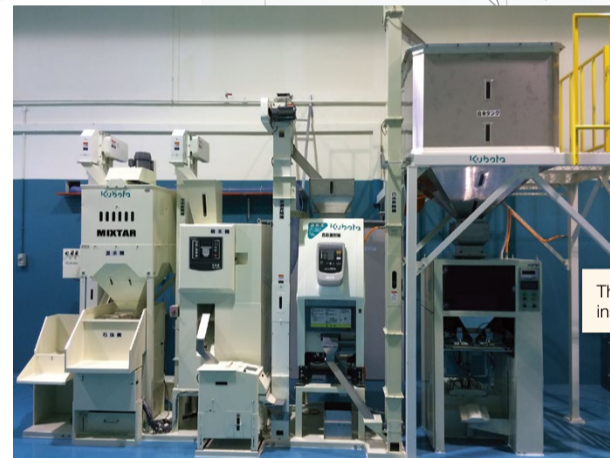
The volume of rice consumed in Japan continues to decline, due to factors such as a diversification of diet, a declining population and the progression of the decreasing birthrate and aging of the population.

The first shipment of rice from KRS was Hinohikari rice that had been produced in Kumamoto Prefecture. A "Top-level sales of Kumamoto treasures" event was held in Singapore on January 16, 2014 and Governor Kabashima and Kumamon, a mascot character created by Kumamoto Prefectural Government, came from Kumamoto Prefecture to provide support and publicize the delicious newly-polished Kumamoto rice.

Both Kumamon and Governor Kabashima of Kumamoto Prefecture promoted rice produced in Kumamoto to the people of Singapore.



Photo provided by Kumamoto prefectural government

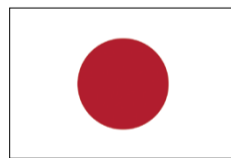


The Japanese rice is milled at a facility installed at KRS.

From Singapore

► A common desire – "To re-energize agriculture in Japan"

The sales of clothing for agricultural work in cooperation with MontBell



Based on a common desire to "re-energize agriculture," KUBOTA has cooperated with the outdoor clothing manufacturer MontBell Co., Ltd., (hereinafter called "MontBell") and started the sales of clothing suitable for agricultural work from April 1, 2014.

MontBell developed the clothing not only for people already engaged in agriculture, but also in an attempt to improve the attractiveness of agriculture in order to bring in new workers.

KUBOTA will sell the clothing through agricultural machinery sales companies with the belief that the proposal of this clothing for "a more enjoyable and more comfortable agricultural style" will help to improve the attraction of agriculture.

Through this cooperation between KUBOTA and MontBell, we will propose the "enjoyment of agriculture" to the group of customers who enjoy the outdoors.

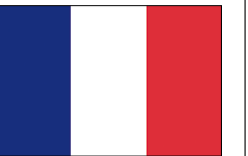
Clothing that is highly functional and an aid for actual farm work.



The colorful range of clothing has been prepared to create enjoyable agriculture that will be accepted by workers.

From Japan

► The establishment of a production base for tractors for upland farming



With the objective of making a contribution for the global problems related to food, KUBOTA has started full-scale expansion into the upland farming market, which is distributed widely around the world. Following on from the acquisition of the Norwegian tractor implement manufacturer Kverneland ASA in 2012, KUBOTA has newly established Kubota Farm Machinery Europe S.A.S. as a manufacturing base for upland farming tractors in the major market of France.

KUBOTA has previously offered agricultural machinery concentrating on the rice cultivation market in Asia and on the vegetable and fruit markets and the livestock raising market in Europe and America. Entrance into the upland farming market will be achieved by starting this new production of tractors for upland farming. Through this move, KUBOTA will aim to become an all-round agricultural machinery manufacturer for the world in both the wetland rice cultivation market and the upland cultivation market and will use this to promote business expansion around the world.



Venturing into the upland farming market and taking on the challenges of further globalization.



From France

► The establishment of new companies in Cambodia and Laos to respond to the increasing demand for agricultural mechanization



In recent years, Cambodia and Laos are facing a problem of the labor force for agricultural areas being lost to outside the county such as an increase in people moving from those countries to work in Thailand, where wages have increased. Furthermore, the establishment of the ASEAN Economic Community (AEC) is planned for 2015 and there has been a rapid increase in demand for the mechanization of agriculture as the economies of both countries develop.

As a response to this demand, Siam Kubota Corporation Co., Ltd., (SKC) established new companies in Cambodia and Laos in January 2014. SKC is a joint subsidiary of KUBOTA Corporation and the Siam Cement Group, which is affiliated with Thailand's royal family. The new companies are fully owned by SKC.

With a focus on strengthening the service organizations in Cambodia and Laos, the companies will expand the agricultural machinery business in Asia and respond to the demand through activities to gather market information and support sales.

KUBOTA tractors are in action in Cambodia and Laos.



From Cambodia and Laos



The announcement of the establishment of Kubota Cambodia. The presence of KUBOTA in Asia is increasing.





For Earth, For Life  
Kubota

# KUBOTA will continue to move forward together with America

KUBOTA has launched many different products on the American market during these past 45 years. They have been 45 years of becoming involved with the American society and people and growing together with them. KUBOTA will continue to work as a company firmly rooted in America by realizing an all-round strength through further enhancement of the strengths of the dealer network that has been constructed, a brand image backed up by quality and a rich array of products.

For Earth, For Life - KUBOTA will continue to help solve the issues faced in food, water and the environment.



▲ Today, a tractor sold over 20 years ago is still working in a vineyard in Napa Valley. The fact that the seasoned tractors are operating and being used is evidence that the KUBOTA brand is becoming accepted in America.

## Notice on “GLOBAL INDEX” back numbers

Since the first issue in 1992, the previous “GLOBAL INDEX” publications have been considering social problems around the world for more than 20 years.



## GLOBAL INDEX 2014

Special movies related to the feature articles and previous issues (magazines and web contents) can be viewed from the special “GLOBAL INDEX” website. Please visit the special “GLOBAL INDEX” website for details.

[http://giweb.kubota.co.jp/index\\_en.html](http://giweb.kubota.co.jp/index_en.html)



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