

Rigid Farms Hokkaido, JAPAN

Rigid Farms is a family dairy located near the town of Nakashibetsu in the north east of Hokkaido, Japan, about the same latitude as Albany NY. Hokkaido is the 2nd largest Japanese island located at the north end of Japan. Hokkaido includes about 22% of the Japan land area but has only 4% of the population. Major industries are tourism, forestry, fishing, vegetable farming, dairy and beef cattle. About half of all dairy products in Japan originate from Hokkaido. The Japanese government encouraged settlement and development of Hokkaido beginning in the late 1800's and early 1900's to counter Russian expansion in Vladivostok and in Sakhalin Island to the north. In 1975, there were 27,000 dairy farms in Hokkaido with an average size of 22.5 cows (12.5 milking cows). In 2017, there are 6,310 dairy farms with an average size of 123.5 cows, (73 milking cows). Average milk production has increased from 9,316 pounds/cow (305 days,) in 1975 to 18,425 pounds/cow in 2017.

Mr. Morita is the owner and operates the dairy with his wife and children. He is a 4th generation dairy farmer. The farm was founded by his great-grandfather in 1930 with about 10 acres of land and 2 draft horses. Initially he made charcoal for cash while clearing the land. In 1940 he procured 2 Holstein cows to begin the dairy. The dairy increased in size, little by little over the generations until 2015 when it comprised 500 acres and had 160 cows in a tie-stall cow house. Following graduation from college, Mr Morita spent 2 years in the US as a trainee at Siemers Holsteins dairy in NW Wisconsin where he learned dairy management and breeding.

Last year they expanded the dairy by constructing a new double-16 parallel parlor and free stall cow house. Herd size has grown organically to 250 milking cows with a final goal of 350 milking cows. They utilize AI with 90% female calves from a US source. The farm grows 100% of its hay feed, which is a combination of alfalfa, Italian rye grass, and orchard grass and mixes it with compound feed and nutrients from local suppliers. Waste is collected in a pond and pumped into trucks for shipment to a local methane digester for conversion into electricity. Some manure is used for field fertilization. The methane digester is a public/private corporation which serves about 100 local dairies. It was started about 10 years ago in response to tightened environmental rules for protection of ecologically sensitive adjacent areas and endangered wildlife.

The new parlor is equipped with an Elite2 FutureCow system. Cows are milked twice daily. The milking process is in groups of 8, first a pre-dip, then prep with FutureCow, then milking followed by a post-dip. Typically there are 3 people in the parlor with Mrs Morita in charge. The Elite2 allows them to prep two groups of 8 simultaneously. Mr Morita stated that the FutureCow prep process made it easy to learn and teach the proper timing to achieve consistent and effective pre-milking stimulation. Mastitis rate has decreased steadily from about 10% to less than 2 %. Previously, due to mastitis and other reasons, he needed to sell 30% of his cows every year and purchase some replacements. He no longer has to purchase replacements thereby eliminating the possibility of introducing a virus to his herd. He produces enough female Holstein cows for replacement, and additional calves can be F1 (Holstein/Wagyu) which bring a better price at the market. Market price of a 10day old male F1 is \$3000. Female F1's are about \$2,000, and male Holsteins are less than \$1,000, sometimes much less and hardly worth taking to market. His SCC is <160,000 which is less than his goal of <200,000. He receives a 1% price premium for SCC <200,000.

Mr. Morita's goal is to be a role model for family dairies. He named his dairy "Rigid Farms" to signify his unbending efforts and strong will to achieve superior results. While many Japanese dairies utilize foreign temporary guest workers, through a government sponsored program, he prefers to utilize local people to provide jobs in the community. He also actively recruits students and recent graduates

to teach them dairy management skills. He did not reduce the crew size in the parlor, however. FutureCow allows the total milking time to be reduced, along with an increase in milk production per cow. His milk production at Rigid Farm is currently 21,560 pounds/cow which is about 17% above average for Hokkaido. He said, "No towels is a bonus". Mr Morita credits FutureCow for enabling him to fulfill his goals for excellence in dairy management and being a role model for other family dairies.

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