

Dairying challenges in Ireland and Japan

Japanese farmer and businessman Shintaro Naganuma came to Ireland to learn about milking robots on pasture-based systems. Here's what Teagasc advisers Patrick Gowing and Ellen Standish told him

Ellen Standish,
Teagasc dairy advisor, Portlaoise.

Traditionally, dairy had very little place in the Japanese diet. However in recent years, consumption of milk, butter and cheese has become more and more common. The domestic dairy sector has not been able to keep up with the rising demand, partly because the number of dairy farms has been in decline for several decades. The resulting fall in production has led to Japan becoming the third largest importer of dairy products in the world.

Shintaro Naganuma, CEO of popular bakery brand Bake and major user of milk in the Hokkaido region of northern Japan, decided to buy a farm and produce milk. Interestingly, land prices (€5,000/ha to €20,000/ha depending on location) are actually lower than in Ireland.

"Most Japanese cows live largely indoors in barns yielding approximately 8,000 litres/head and consume a high-concentrate diet, based on imports of expensive grain. Due to these high costs, farmers need all of the approximately 90c per litre (at 3.5% fat) they receive from processors.

"I want my cows (pure Holsteins) to be calving in spring, grazing and eating a largely grass-based diet," says Shintaro.

Dairy farm workers are increasingly hard to find in Japan. Hence Shintaro's interest in milking robots on grass-based systems.

"It's interesting that dairy farmers the world over face similar problems," says Gwen Meredith, Rosenal-lis, Co Laois who, together with her husband, is milking 200 dairy cows with three Lely robots. The couple have been operating a robot-based



Top: Trevor Carnegie, Shintaro Naganuma, Gwen Meredith, and Ellen Standish discuss grass management. **Inset:** Shintaro Naganuma's cows are pure Holstein.

Above: Shintaro Naganuma with Patrick Gowing.

Above right: Shintaro presented Trevor and Gwen with a box of his bakery's cookies.

system for the past six years and hosted a meeting between Shintaro Naganuma and Patrick Gowing.

"It's encouraging to know that

farming innovators like Shintaro and Japanese consumers and processors see value in grass-based systems," concludes Patrick.

Five things to consider before installing a robot milker

Patrick Gowing
Teagasc Dairy
Expansion Service.



The sales of robotic milkers have increased dramatically over the last five years, aided by favourable grants under TAMS, but also the labour saving the system offers. It's a significant decision for any farmer to make when deciding if a robotic unit will suit their farm. Here are five things you should consider when looking at robotic milking:

1 Labour saving: One-third of the total work on a conventional dairy farm is associated with the milking process. This equates to an average of three hours/day over the year in the milking parlour. Recent trials at Teagasc Moorepark have shown that robotic milking reduced the milking process to 40 minutes/day.

However the trials showed that there

was increased time associated with grazing management when using robotic milking. So when considering robotic milking, remember the system will save time, but will only save time on the milking process.

2 Yard design: The robot box has a small footprint and can easily be installed into sheds. However, as with any milking system, consideration needs to be given to the movement of cows in and out of the robot milker, the area available to draft cows and the slurry management around the robotic system, in particular where the grazing gates are installed.

3 Grazing: Robotic grazing farmers operate an AB (every 12 hours allocation) or an ABC (every eight hours) grazing system. The principles of grazing management are the same as a conventional dairy farm – spring rotation planner, summer wedge and the autumn budget.

In an ABC system, the farm is divided into three sections, with cows getting new grass every eight hours. This requires three new allocations of grass per day. As you are utilising your farm, additional grazing infrastructure may be required to develop an ABC grazing platform.

4 Economics: Robot milking machines are expensive and usually require additional borrowings to change the system. A business plan for the robots should be completed, which shows the increased costs (increased repayments, higher service costs and ESB costs) on your business to see if it is viable.

In some cases, farmers have changed their system to accommodate the robotic milking. Remember, a robot is only a way of milking your cows. How you operate your farm will determine the profitability of your business, not how you milk your cows.

5 Future expansion: Robots are limited in the number of cows they can milk; typically 70-75 cows. In a conventional dairy farm, as the herd grows, you can milk extra cows through your parlour by increasing the number of rows you milk. In a robotic scenario, an additional unit will need to be purchased to milk the extra cows. This can make expansion in a robotic system capital intensive.




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