



Jens Hermanussen and Joost Klein Herenbrink, left, from CRV – genomic testing is becoming more vital for Dutch farmers.

BUSINESS EUROPE

“I didn't exactly know what was coming,” Jens Hermanussen says.

They increased their herd numbers from 140 to 220 cows, so to counter their increased phosphate they now send all their young stock to Belgium for grazing from five months old.

The number of replacements they are rearing has dropped from 34-40% to about 25%.

“We sold a lot of heifers to England and Spain, now with the phosphate limits it's too expensive to rear them,” he says.

Many Dutch farmers are rearing fewer replacement heifers and grazing young stock off-farm so they don't have to be included in the farm's phosphate calculations.

‘We sold a lot of heifers to England and Spain, now with the phosphate limits it's too expensive to rear them.’

Farmers therefore want to know the genetic potential of their calves immediately and are increasing their genomic testing, CRV Holstein global product manager, Joost Klein Herenbrink says.

“There is a big interest in genetics again. There has been a big increase in genomic testing by farmers.”

The cost of rearing a heifer replacement is about €1400, so the break-even point for rearing a heifer replacement is two-to-three lactations, so longevity is important, he says.

“There is more emphasis on cow health, not just breeding for production.”

The Hermanussen family DNA tests every heifer calf born onfarm to ensure they are keeping the best genetic stock.

The Hermanussens also work closely with CRV and buy and test 10 CRV heifers from the CRV Dairy Breeding Centre every year.

“We buy them because we want to see how our cows go beside them,” Jens says.

Genetics count

Increasing environmental restrictions are changing the way Europe's farmers work, as Dairy Exporter deputy editor Sheryl Brown found during a recent visit.

Breeding efficient and healthy cows has never been so important for Dutch farmers who are under restrictions due to imposed phosphate limits.

The European Commission's plan to reduce phosphate emissions from the Dutch livestock sector has led the Dutch Government to grant phosphate rights to farmers based on the number of dairy

cattle they owned on July 2, 2015.

To increase their herd size from their 2015 figures, farmers must now pay about €10,000/cow (NZ\$17,177) to buy phosphate rights.

The Hermanussen family were in the middle of building a second free-stall barn in 2016 to increase their herd size when the limits were introduced.

“When we started building our barn we

KEY FACTS

- Owners: Hermanussen Family
- Location: Millseweg, The Netherlands
- Area: 100ha
- Cropping: 70ha grass, 30ha maize
- Cows: 220
- Young stock: 140
- Farm dairy: Two free-stall barns, 4 Lely robotic milkers
- Production: 2,100,000kg milk
- Fat/protein: 4.40%/3.55%
- Average milk production: 10,600l/cow
- Average DIM: 400 days
- Average rainfall: 800-1000mm/day
- Supplement: 8kg of maize silage, 7kg of grass silage, 0.5 kg hay, 1 kg brewers' grains and 2.3 kg soya/corn flour and max 8 kg concentrates via the automatic feed dispenser in the milking robot.
- Brewers grain, 1kg/cow/day, 1kg hay.



Dutch farmers are sending their young stock to graze in Belgium to avoid phosphate regulations.

CRV has nine test farms in total where they place their heifers to show CRV's breeding programme in practice.

The Hermanussen family uses about 80% genomic bulls and flushed more than 130 embryos from their heifers last year to use across their own cows and sell to other farmers.

They have bred numerous bulls into the CRV sire teams, including Barendonk Hattrick, Barendonk Red Spirit, Barendonk Trendsetter and Barendonk Famous.

While many Dutch farmers spend a lot of time in the tractor seat, the Hermanussen family pride themselves on being 'cow people'.

"We are real cow farmers, there is always someone in the barn looking at the cows," Jens says.

They don't use any heat detection so they have to have a good eye to spot cows on heat, throughout the year.

GRAZING PREMIUM

With the increasing environmental regulations in The Netherlands, many older farmers are getting out of the industry, Jens says.

The 24-year-old is focused on a profitable future by maximising the opportunities within the industry such as grazing cows outside for a premium milk price.

Dairy co-operative FrieslandCampina now offers a €1.5/100kg milk premium to its farmers grazing cows outside for at least 120 days a year for a minimum of six hours/day.

A partly pasture-grazing premium of €0.46/100kg milk is also paid to farmers putting a minimum of 25% of their cattle outside for 120 days and minimum of six hours/day.

The percentage of dairy farms in the Netherlands that graze cows outside increased to 79.4% in 2017 and FrieslandCampina has a range of dairy products made from the 'Meadow Milk'.

The Hermanussens graze their cows outside from early April until the end of November, weather dependent.

The farm has about 23 hectares they can graze the cows on, with the cows eating from 3-6kg drymatter (DM)/day in the paddock.

The cows' diet is predominately made up of grass silage (60%) and maize silage (40%), with a little bit of brewers grain, hay and concentrates.

About 70% of the feed is made onfarm, with the remainder bought-in.

"We want to grow up to 80% of our feed on our land, more grass, less meal," Jens says.

To be profitable the family is also cashing in on high-value dairy beef calves and mate 30% of their herd to Belgian Blue semen. They get €400 for a Belgian Blue bull and €200 for a heifer calf, compared with €40-70 for a Friesian bull.

The calves must stay on their mother for the first two weeks and beef calves must be sold before 35 days, so most farmers aim to sell excess calves when they are two-three weeks of age.

FARM SUCCESSION

Jan's mother was milking 10 cows in the local village before his parents bought the farm they are on today.

His father died when he was 13 and he has worked on the farm ever since. At 18 he took over the farm and was milking 40 cows.

He slowly built up cow numbers and built a double five-aside farm dairy, which used to take him three hours to milk 90 cows.

He installed two Lely robots in 2005 and bought another two robots in 2016 when they built the new 125-cubicle barn.

His two sons Jens and Ivo work alongside Jan on the family farm now. Jens also works 20 hours on another farm and Ivo works at FrieslandCampina to supplement their incomes.

"We need to grow by about another 30 cows, for it to be a good income for the two of us in the future," Jens says.

Their sister Tessa works alongside their mother Liesbeth in the family's Agri-tourism business, which provides about 40% of the farm's profit.

The successful Agri-tourism business includes accommodation and business meeting facilities. Jan and Liesbeth converted an old barn into accommodation and opened a campsite 20 years ago and now have more than 10,000 visitors a year, with local businesses using the venue frequently.



Networking with international agricultural journalists.



**BUSINESS
EUROPE**

Words by: **Sheryl Brown**

A world of challenges

When you're under fire it can be reassuring to know you have allies.

The New Zealand dairy industry faces challenges from reducing nitrogen leaching, bobby calves, Mycoplasma bovis, to the disruption of alternative proteins on the market. But we are certainly not alone.

Dairy farmers globally are battling many of the same issues and are adapting their systems to meet growing public expectations.

My recent trip to The Netherlands to attend the International Federation of Agricultural Journalists' Congress highlighted the many issues the dairy industry is facing around the world.

The New Zealand Guild of Agricultural Journalists sponsored me to attend the congress. It was a fantastic opportunity to network with award-winning journalists and discuss what is happening globally in agriculture.

Key themes were climate change, increasing environmental regulations, and growing public interest in how animals should be farmed and how food should be produced.

Irish and Australian journalists were discussing the impact of their countries'

FACTS ON DUTCH DAIRY FARMING:

- Number of dairy farmers: 17,500
- Number of cows: 1.63 million
- Milk Production: 1.4 billion litres
- Land use: 864,000ha
- Average farm size: 49.4ha
- Milk production per cow: 8706kg
- Cost of land: €50,000-€60,000/ha.

droughts, an American journalist told me he can't report on climate change in his grain magazine because farmers abuse him and tell him it's not real, while Romanian journalists told me about the influx of Chinese investors buying land in their country.

Meanwhile in The Netherlands dairy farmers were facing one of their worst droughts. They hadn't had rain for about a month when I was there in July.

Farmers are scrambling to change their systems following new phosphate legislation. To increase their dairy herd farmers now must buy phosphate rights at €10,000/cow. Many are trucking young stock to Belgium to counter the phosphate



Take a bite: an Impossible Burger in New York.

loading on their farms so they can milk more cows.

These Dutch farmers are putting cows out on pasture during summer because people living in Amsterdam want to see cows grazing outside and are prepared to pay a premium for their 'Meadow Milk' dairy products.

Several of the farmers I interviewed told

IT'S ELECTRIFYING

- Arriving at Amsterdam airport we jumped in a taxi – it's electric.
- Took a boat trip down the canals – the boat's electric. All boats must be electric in the next few years.
- Travel into the countryside and solar panels are everywhere.
- Sense a theme?
- Europe is going to renewable energy.



All cruise boats in The Netherlands must be electric by 2025.

me farmers had lost their connection with the people living in the cities and they had to tell their story better. It sounded like what many farmers are doing back home.

After five days visiting farms, including the site of the floating dairy farm being built at Rotterdam, I flew to New York City which was another education.

I tried the Impossible Burger in New York, and as I wasn't flying business class on Air New Zealand I had to buy it myself for US\$12.

While it had a strange sweetness to it, it was actually pretty delicious, but not as delicious as my Brontosaurus Ribs I had later in the week.

Meat is still front and centre in America

and I noticed on several menus the meat was called 'naturally grown' – another indicator of where the market is heading.

The logistics alone to bring in fresh food and feed a city like NYC is a comfort in itself to know farmers everywhere in the world will be needed for a long time to come. So I should have a job reporting on NZ dairy farmers for some time yet.

I sat next to a young American tourist sitting on the plane home from Houston. He was visiting NZ for the first time and was going to Timaru to hunt chamois. He asked me about farming in NZ and I said we were in the process of meeting new environment regulations to be more sustainable.

"You want to be greener than you already are?" he asked.

The reality is NZ is seen as clean and green by the rest of the world. It's an image we need to ensure is accurate and a story we need to use to our advantage in the market place.

After leaving NZ mid single-use plastic bag debate it did make me cringe seeing all the plastic bags and bottles floating in Amsterdam canals and the amount of plastic packaging on food in New York.

The world has a long way to go on becoming more sustainable and maybe if NZ can lead that journey we can cash in on another premium. 

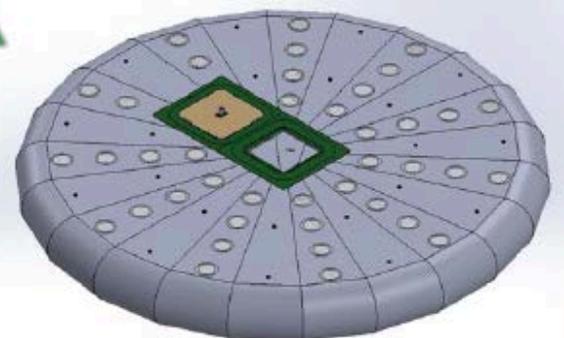
There is no longer a reason to run out of storage ...

FLEXITANK-R™

INSTANT STORAGE "ROLL

OUT & STORE"

No matter how much rain or what the conditions are like you will always have instant extra storage on hand 100-2000 cube certified storage solutions.

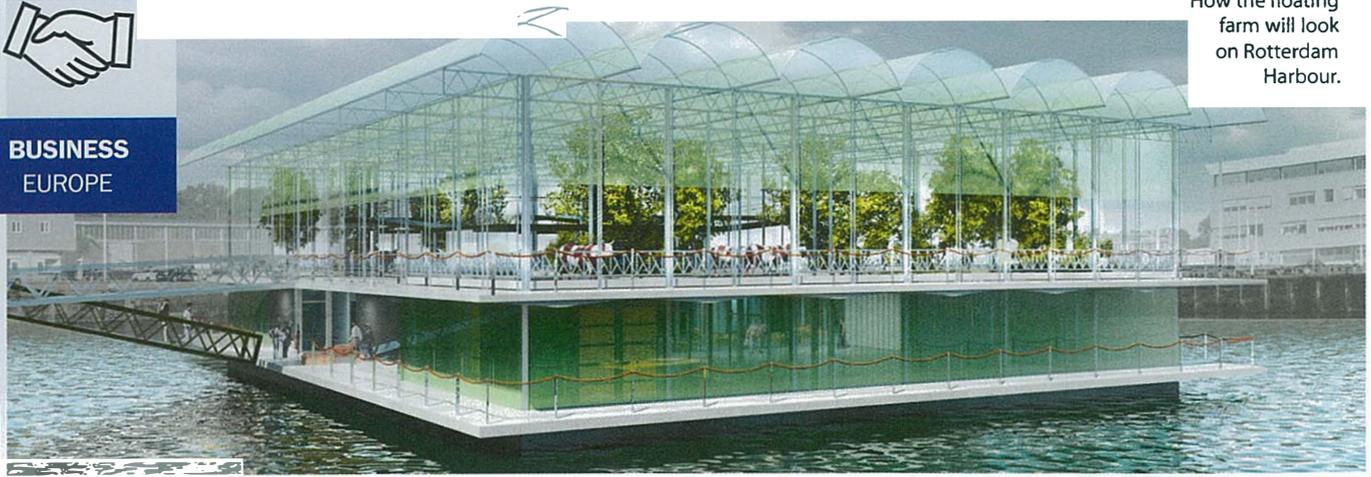


www.technipharm.co.nz FREE PH: 0800 80 90 98



BUSINESS
EUROPE

Wo
by: Sheryl Brown



How the floating farm will look on Rotterdam Harbour.

Farming on the water

With 70% of the world's population expected to be living in large cities by 2030, a Dutch company believes a floating dairy farm could hold some answers.

The pilot farm is expected to be operating by the end of 2018, floating on the harbour in Rotterdam, The Netherlands.

Forty cows will be housed on the top platform, with a milk processing plant, manure treatment plant and area to grow crops underneath.

The €2.5-million project is the brainchild of Beladon, a Dutch property development company that designs floating buildings.

The time has come for more sustainable models for housing and feeding people into the future.

The human population is going up and migrating to cities and there is increasing pressure for food and clean water, project leader Peter van Wingerden says.

"I've been travelling around the big cities in the world and there is huge migration to cities. We are getting another two billion people in the next 30 years – how are we going to feed these people and give them clean water to drink?"



Forty cows will live on top of the three-story floating farm in Rotterdam with a milk processing plant and manure treating plant underneath.

Growing cities currently have to build up or out, essentially building more concrete on valuable agricultural land.

“At the same speed the sea is rising, land is subsiding. Jakarta is sinking up to 25cm a year and it’s a permanent threat to the millions of people living there,” Peter says.

“Why not grow these cities on the water? I believe there is room to grow on the water.”

There will be challenges that come with building cities on the water, including how to source fresh water and food and how to

deal with waste. But the solutions will be solved with technology, he says.

The concept of building farms to grow food on the water inside cities was conceived after Hurricane Sandy hit New York City in 2012. Every day in New York City, 1500 trucks drive into the Bronx to supply food. When the hurricane hit Manhattan was flooded and that transport route was cut off.

It resulted in empty shelves and a city without fresh food for days.

Instead of solely relying on food being

transported in, cities need to start feeding themselves and they could do that from the water, Peter says.

Cities are the largest producers of waste which could be used to grow food.

The floating dairy farm being built in Rotterdam will milk 40 cows and produce fresh milk to produce dairy products to sell to city residents.

It’s expected they will produce 320,000 litres of yoghurt a year.

The farm has been designed to be circular, taking waste from the city to

create food for the cows, and returning food and fertiliser to the city.

The cows' urine will be purified and used to grow fodder crops under special LED lighting and the manure will be treated and turned into energy, and fertiliser that can be returned to the city. The ammonia will also be treated straight away.

'At the same speed the sea is rising, land is subsiding. Jakarta is sinking up to 25cm a year and it's a permanent threat to the millions of people living there.'

The farm will also make use of waste feed from the city such as grain from breweries, potato skins and grass from football stadiums.

The floating farm owns land nearby and has transported bales of grass silage to store at the harbour.

Animal welfare is their priority and the cows will have more square metres than in most barn systems, Peter says.

The average cow in Holland has six square metres/cow whereas on the floating farm it is 15sq m/cow, he says.

The top floor will consist of a soft rubber floor, which will be cleaned constantly, with plants and trees to provide shelter for the cows.

There will be individual cow cubicles where the cows will sleep and a Lely robotic milker will milk the cows. Lely has partnered with Beladon in the project.

Having floating farms in cities can also help rebuild the knowledge of healthy food and food production with a population that has lost its connection to producing food, Peter says.

The floating farm will be an opportunity for education and research, a transparent farm where visitors can see the cows and become familiar with the processes that take place on the farm.

'I feel we are at a turning point, where we need to realise that instead of money, the existence of our planet should be our driving force.' – Peter van Wingerden, Holland Herald.

An idea to include the residents in the farm could be adopting a calf and when that calf comes on to the farm as a milking cow, that person gets a message to say their cow's milk is being sold, and they start earning money, he says.

Beladon wanted to start with a dairy farm because they wanted to take on the biggest challenge first and prove the concept.

The company has plans to build a chicken farm and a vegetable farm alongside the floating dairy farm, creating a food strip in the harbour.

"When John F Kennedy announced they were going to the moon they didn't actually know how they were going to do it. We don't know yet how we are going to do it, but we believe in helping the world."

The project is being privately funded, but Peter is hoping the government does step in to support them. They are yet to find out if they will have to buy the phosphate rights to milk the cows – which would cost €400,000.

There has been huge international interest and Peter hopes the world sits up, takes notice and joins them on the journey toward finding alternative and sustainable ways of producing food.

"It's a crime to patent something on fresh food, I hope people copy it."

Rotterdam is one of the world's largest ports and a great test location, but the real demand for this concept could come from Asia and Africa, continents with rapidly growing populations and a demand for alternative food production, he says. 



Dairy Lady Myrthe: Myrthe Brabander has studied animal and livestock keeping and will manage dairy and retail at the Floating Farm.



Farmer Albert: Albert Boersen is the first floating farm farmer in the world. Raised among cows in Friesland, a business and agribusiness degree will see him caring for the cows and the stables on the Floating Farm.

