

Portugal-based dairy producer Gijs van Hal: "High milk production means that good management is critical"

Californian dairy model suits Portuguese climate

The availability of abundant water supplies gave Gijs and Josee van Hal not only the possibility of using a sprinkler system but also the chance to build sand-bedded cow housing, on their Portugal-based unit, with a flushing system.

text **Florus Pellikaan** video www.facebook.com/cowmanagementUK

If you travel along the motorway that links Portugal with Spain, you will see in the distance Gijs and Josee van Hal-Schuringa 300-cow dairy unit. From the road you can clearly see the layout and size of the dairy unit and all its high-tech facilities, including a ventilation system. They give the set up, based in Elvas, the appearance of a Californian dairy unit. Gijs left The Netherlands and moved to Portugal in order to build the farm. "In The Netherlands, in order to take a step forward like this, we would have had to borrow the maximum amount possible. Emigrating to Portugal was a way to milk considerably more cows with less capital and to work with affordable staff so that you, yourself, can sometimes

take some time off," he says. He and Josee built everything from scratch. "We began in 2002 by milking 200 heifers, the majority of which were purchased, and this number then increased to 300 cows in 2010." However, according to Gijs, herd expansion using the 'old' cubicle shed was difficult. "We built the dairy unit in the usual Dutch way with, for example, grids and cow mattresses. But that didn't work in the Portuguese climate.

"Due to overcrowding we had to foot trim the herd three times a year and we were struggling to get cows back in calf. This meant that herd expansion was slow, with between just 5% and 10% growth per year. And daily yields of just

32 litres, on three-times-a-day milking, were also way too low."

So, in 2011, a decision was taken to build a new cubicle shed for the cows that was designed for Portuguese conditions. "Maximising cow comfort was the starting point and we were also keen to put sand in the cubicles because we believe that it is hygienic and cool. And, because we are in an area with plenty of water by Portuguese standards, we also decided to install an automatic flushing system. This makes it easier to work with sand," explains Gijs.

Recycling sand

He refers to the way in which manure and sand are removed from the floor. The floor has a 1% slope and is 'flushed' 10 times a day with 32 cubic metres of water. The sand and manure pour out into a long sand channel, where the sand sinks to the bottom. "The advantage of this system, which we saw working successfully in California, is that there is no wear and tear to worry about. There would be if we were using manure scrapers or pumps. But with this system the water does the work."



Maximising cow comfort was the starting point when building the new unit

Once a week the sand is scooped out from the channel and is heaped on the side, where the water drains away and it dries out. It is then returned to the sand supply. “In this way any manure dries out and UV light disinfects the sand. In total we can re-use 80% of the sand. That means that we can afford to be more generous when filling the cubicles with sand. Sand use is around seven cubic metres per 100 cows per week.”

The manure is separated into a thick and a thin fraction. The thin fraction is used for irrigating, with a pivot system, the unit’s crops. “This allows us to apply manure to three-metre high maize crops and reduce artificial fertiliser use,” says Josee.

The couple has also invested in a fully automatic sprinkler ‘cooling’ system, where the cows are sprayed wet once every five minutes for a minute. High speed ventilators then blow the cows dry and this provides the greatest cooling effect, according to Gijs.

The impact of the improved housing facilities could be seen almost immediately. “In the old set up, due to overcrowding, we managed to get just one cow back in calf in the difficult month of August when heat stress was a serious problem. During the past two years, thanks to the new housing and facilities, we managed a pregnancy rate of 40% in the same month,” says Gijs. “The replacement rate in the new set up has dropped to between 17% and 19% meaning that 20% herd expansion has been possible. For the first time in several years, we are able to cull selectively. If you put the technical results of before and after the new

building side by side it seems like you are looking at two different farms.”

Growing lucerne

The herd’s average yield has also improved. For the past two months each cow has produced more than 40kg of milk – a farm record. “But I actually think the improvements in health are more important,” says Josee. “It is quite often said that high production means more problems,” adds Gijs. “I definitely don’t agree with that, but it does make good management vital. There can be no compromise when it comes to cow comfort, silage quality, and overall husbandry. You can’t afford to slip up anywhere.”

In 2014 the pair began growing lucerne under a pivot sprinkler system. “Lucerne contains 23% protein compared to grass, which contains no more than 16%. And lucerne needs no artificial fertiliser. But a ration without grass is also not possible because it will be too low in sugar,” Gijs explains. The ration for the whole dairy herd comprises 20kg of maize silage, 16kg of grass silage and 11 kg of lucerne, as well as 11.8kg of concentrates.

Gijs and Josee run the herd with help from eight staff. “I still do the AI and treatments myself. Not only because I like to do it but also because you get to know the cows and ensure that technical data is accurate and regularly monitored. And Josee is responsible for the calves,” explains Gijs.

Acquiring land

With no further herd expansion planned, the couple are now working on licenses for the young stock, between



Gijs and Josee van Hal

Almost 15 years ago, Dutch dairy producers Gijs and Josee van Hal moved to Portugal. They built everything on their new unit from scratch to suit the local climate.

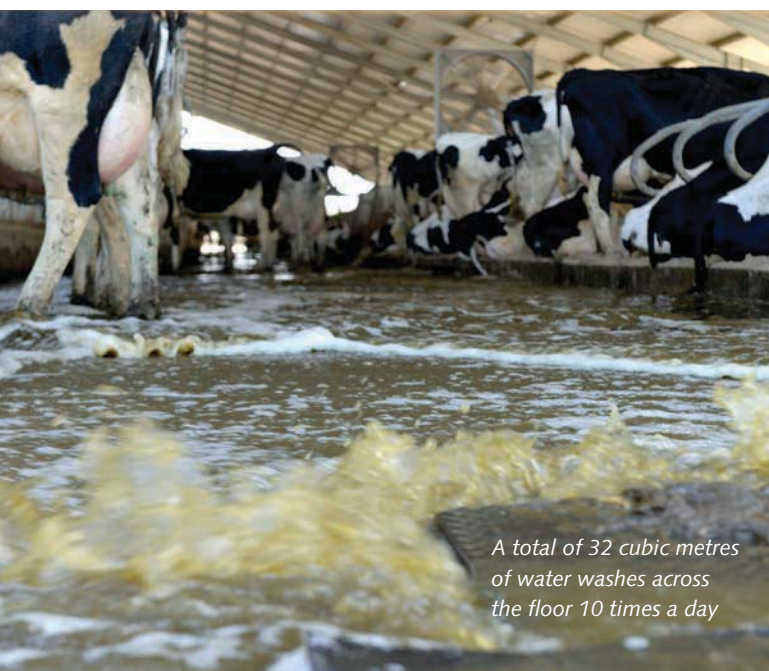


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| Herd size: | 560 |
| Land use: | 220ha (of which 132ha can be irrigated) |
| Average yield: | 11,800kg |

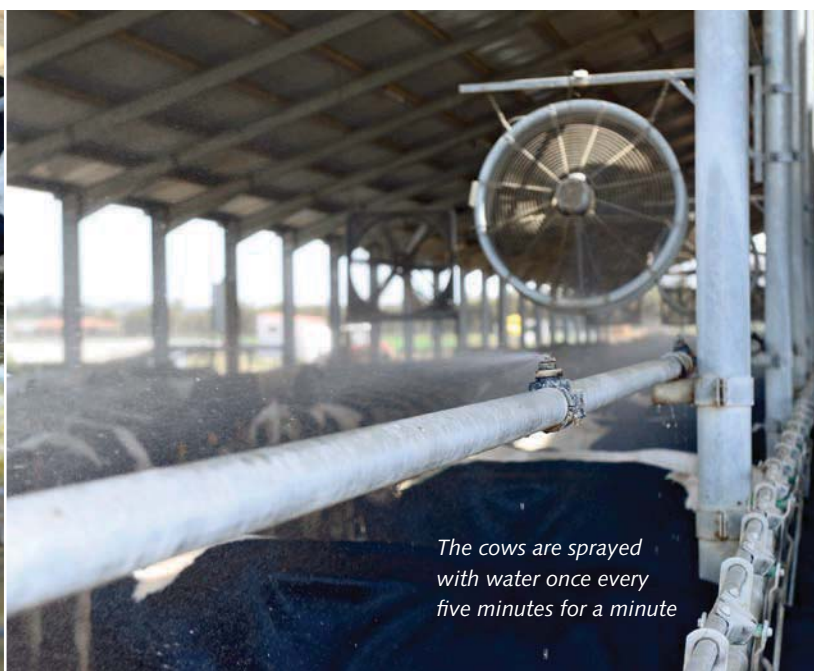
four and ten months old, which are now on the tenanted farm, to be accommodated at home.

“We do want to optimise the management of our system further and first we need to acquire more land, because we just can’t manage with feed and manure. And the land here also provides stability for the farm,” says Gijs.

“We can now finally select livestock according to, among other things, health status. This is now a luxury and will certainly help to ensure that business performance continues to improve. Expanding cow numbers gave us an advantage, but consolidation and improving efficiency is now our priority.” |



A total of 32 cubic metres of water washes across the floor 10 times a day



The cows are sprayed with water once every five minutes for a minute