

Gareth Jones of Robotic Milking Systems shares his key considerations for farmers who want to transition to robotic milking technology. **Farmers Guardian** finds out more.

## What to consider when moving from conventional to robotic milking

**T**he first thing to think about, when researching options for robotic milking, should be what type of system suits your farm, as opposed to which machine you should buy. That is the advice from Gareth Jones, founder of Robotic Milking Systems, who discusses the various options available.

### Voluntary milking

For herds with under 500 cows, most dairy farmers should be considering a voluntary milking system, where cows present themselves to the robots for milking, says Mr Jones. There is then the option of implementing free access to the robots or using a guided system.

He says: "With both of these layout

types, it is essential to have even groups of cows at various stages of lactation, to get the most output from the robots – as opposed to grouping cows according to their yields."

### Housed with free access

A housed with free access system allows cows to eat at the feed fence, lie down or get milked in any particular order. Mr Jones says this system can typically expect an average of three milkings per day.

However, some cows will require fetching to the robot for milking, but as long as the balance is right with the ration on the feed fence compared to the robots, then no more than 5% of the herd should need fetching twice a day.

Mr Jones adds: "So, in a group of 120 cows on two robots, this will equate to five or six cows at each end of the day.

"The benefits of this system are simplicity, as it does not require any selection gates in front of the robots and it can be applied to most existing cubicle buildings."

### Housed with guided access

Housed with guided access systems involve setting up a one-way system in the cubicle building, with selection gates to marshal cows into the robot waiting area, if they are due to be milked.

However, Mr Jones says if cows are not due to be milked, they can continue on their way to the cubicles or feed fence, therefore avoiding unnecessary visits to the robots, which would have resulted in them being rejected from the box.

He says: "Again, you would typically expect three visits per day here."

The benefits of this system can include reduced labour due to there being no cows to fetch and, in some situations, more milk output per robot.

Mr Jones adds: "In the US and Canada, they have also pioneered a no-feed approach in the machines, by simply using the total mixed ration to encourage cows through the robots and on to the feed fence."

### Grazing with guided access

Grazing with guided access is the same principle as the housed system, says Mr Jones. However, it involves the use of a selection gate positioned just outside the barn, which only lets cows out to grass once they have been milked.

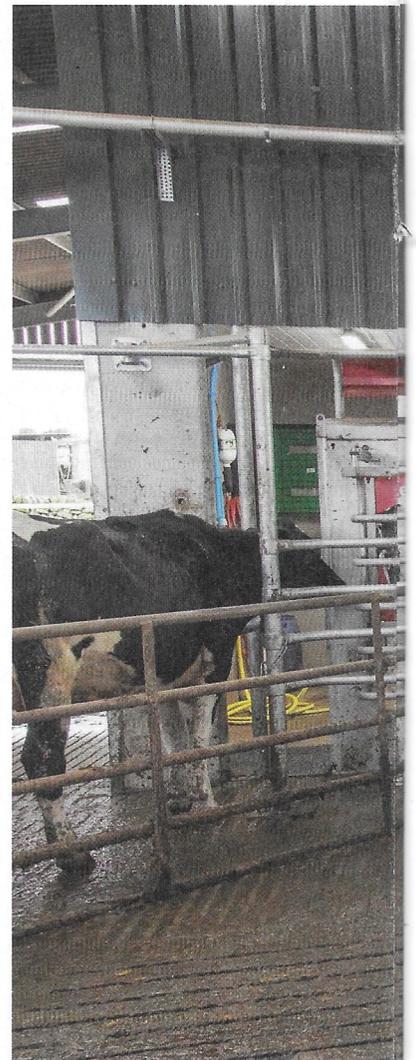
In addition, a secondary gate can be incorporated on a timer to marshal cows to different tracks; leading them to a fresh break of grass at regular intervals, during a 24-hour period.

Mr Jones says: "Grazing with a gate of this type, which changes twice a day, is commonly referred to as an A/B system, when cows travel back and forth to the robots from two paddocks."

He adds that in this situation, it is the fresh grass on offer from strip-grazing that motivates the cows to return to robots and not the concentrates in the machine.

"Typically, you can expect 2.4 milkings per day here, with cows grazing up to 500 metres. Above this distance then the milkings per day will be lower," says Mr Jones.

This layout can be taken one step



further with an A/B/C system, which allows for a gate change every eight hours, to keep cows moving and results in more visits to the robot.

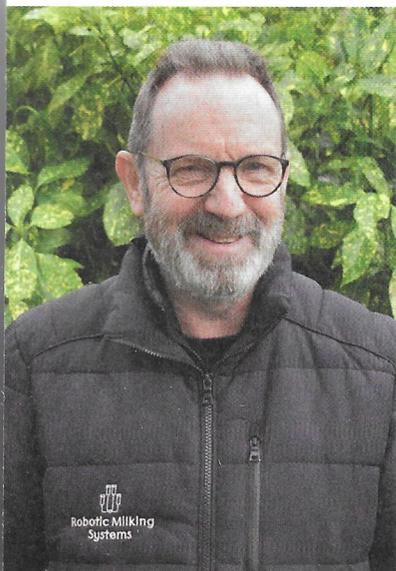
This can be done with three grazing areas, or alternatively it can incorporate an eight-hour period back in the barn with a buffer feed. Mr Jones says this is normally suited to higher-yielding herds which are looking to achieve three milkings per day.

### Batch milking

Batch milking is most suited to large herds above 500 cows, and it is exactly the same principle as conventional milking, says Mr Jones. Groups of cows are fetched into a collecting yard, where they wait to be milked automatically, through a bank of robots.

"This type of operation requires one hour's down time between milkings, for washing and maintenance. This leaves 21 hours per day for milking, assuming three milkings per day.

"So, this does form a 24-hour operation, but with reduced labour compared to conventional systems,



Gareth Jones