What are the benefits of guided systems?

In the last four months I have visited twenty farms from the five main manufacturers throughout the UK. The purpose of my visits was to carry out an anonymous survey looking at performance levels in a whole range of situations. The smallest herd was just 60 cows and the largest was 500 with a combination of free access and routed systems. Five of them were also grazing.

When asked if there is anything that they would have done differently, everyone was generally happy with their choice of machine and their building layouts. However, this always led on to the subject of routing cows, with everyone backing their system, whether it was free access or guided.

What is a guided system?

This involves setting up a one-way system in the cubicle building with selection gates which marshal cows in to the robot waiting area, if they are due to be milked. However, if they are not due yet, they can continue on their way to the cubicles or feed fence, so avoiding unnecessary visits to the robots which would have only resulted in them being rejected from the box.

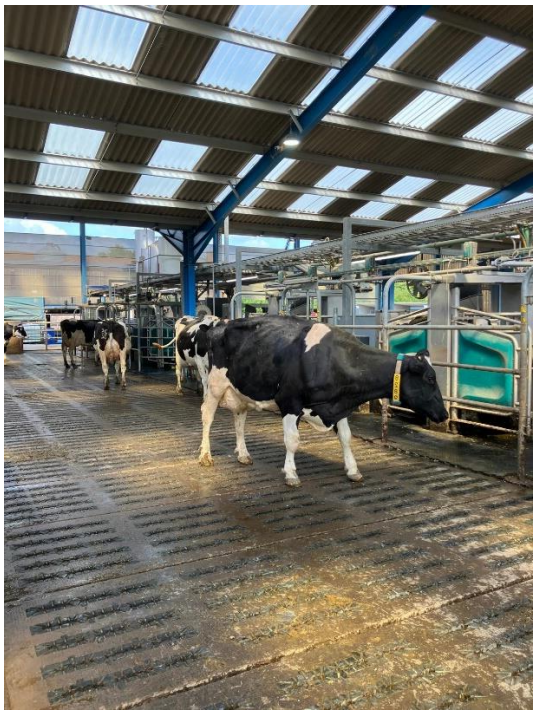
Four of the manufacturers offer guided systems but Lely interestingly, are the only ones who insist on free access. The claimed benefits from routing cows are reduced labour, as no cows will require fetching and more milk per robot, as only cows that require milking can enter the box.

So, are these claims genuine or is simply manufacturers looking for a point of difference for marketing purposes? So, I will explore this in more detail.

Reduced labour?
On all of the guided systems that I visited, they were not collecting any cows, apart from some heifers who were new to the herd, but even then, it was only for a limited period of time and so there was a labour saving here.

On the free access systems, if the balance was right with the ration on the feed fence and in the robot, then the cows that required collecting was typically around 5% of the herd, two times a day. So, in a group of 120 cows on two robots, this was equating to five or six cows at each end of the day. All of the farmers that I spoke to on these systems did not have an issue with this and just saw it as part of their daily routine, but their time still has to be factored in here.

So, I see a definite advantage here, particularly with multi robot systems, where fetching cows can become very time consuming.



More output per robot?
In theory you can get more cows on each robot, because you are not using up valuable box time when cows present themselves before they have milking permission. The typical level of “too soons” or “not yets” can be as high as one per cows per day and Lely actually target this level, as it shows that the is plenty of activity in the building.

So, if we take an example of one robot with 60 cows averaging 30 litres and three milkings per day, the robot output would be 1800 litres per day here. If we then assume an average refusal time is 30 seconds per cow, this would equate to loosing half an hour of milking time per day compared to a guided system. In turn this would result in four lost milkings per day with a box time of 7.5 minutes or 40 litres in the above example. In percentage terms this is just over 2% more milk which I do not feel is that significant.

Conclusion

The above calculations, combined with my experience of seeing the highest yielding robots during my visits operating on free access, brings me to the conclusion that you should not opt for a guided system, purely in the hope of increasing robot capacity, because the benefits seem to be marginal.

However, there is undoubtedly an advantage when it comes to saving time and therefore labour when collecting cows to take to the robot twice a day. So, if this is something that you want to avoid, then a guided system might well be a good solution for you.

Gareth Jones
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