

Improving dairy cow performance

What can your cows tell you?



Practical Guide

Monitoring yields is an easy way to assess how well your herd is performing, however finding what has caused a sub optimum yield is more challenging. The best way to find out is to monitor the cows themselves, observing them in the shed. Spending a few hours watching the cows and acting on your findings can have a big impact on cow performance and help to improve efficiency.

There are 6 areas that should be covered when observing cows—feed, water, air, space, rest and light. The health of the cow should also be observed. By



having this information, the areas limiting milk production of the herd can be identified and rectified. Often this does not require a large investment to make a big difference.

This practical guide looks at helping to maximise performance of cattle by improving their environment.

Cows at grass

Observing cows when they are at grass is hugely beneficial. It can show the behaviour of the cattle when there is nothing to impede their movement e.g. slippery floors or small cubicles. This allows you to train yourself to spot any issues when cows come back in the shed. However, even at grass there can be problems - water can be a real issue. Cows should have free access to water when in the field. Troughs should be observed to make sure they can fill up quickly so that cows are not waiting for water. Larger troughs can be fitted to give a bigger reserve, however this water can go stale and troughs may need cleaning more often. With the majority of milk being water it is vital that cows get a good intake.

Temperature can also be an issue for cows. Above 21°C and cows can experience heat stress. This can reduce feed intakes and milk production. If this occurs consider grazing fields that have shaded areas for the cows to lie in and fit fans or sprinklers in the collecting area.

Our Practical Guides cover five useful topics:

1. Use energy and fuels efficiently
2. Renewable energy
3. Lock carbon into soils and vegetation
4. Making the best use of nutrients
5. Optimise livestock management

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What can your cows tell you?

Cows being housed

Almost every cubicle shed could be improved in some way to better improve cow conditions. 50% of cubicles in the UK are not the correct size for the cows that are using them. Small alterations can be made to improve this. Observe cows as they lie down and stand up. Usually a wall or the neck rail impede natural movement. Consider moving this or removing it to improve movement. If a cow feels nervous about lying down because she will hurt herself it will reduce lying times. **Every extra hour lying will help to produce an extra litre of milk.** The bed of the cubicle needs to also be comfortable. Observe the cows knees and hocks and look for any damage caused by hard beds. Carry out a drop test—stand on the beds and drop to your knees. If it is sore for you then it is likely it is sore for the cow. This can massively reduce lying times. Cows should lie down for at least 13 hours per day.

Access to feed is another area that can have a big impact on cow health and performance. Cows should have access to feed for 21 hours per day. This leaves 3 hours per day for milking. If milking takes longer than this consider splitting the herd into 2 groups to reduce the time spent standing in the collecting area. Feed should always be easy to reach for the cows and pushed up regularly. When the cows are eating observe how they interact with the feed barrier. **A poorly placed rail can reduce feed intake by over 1kg per day.** If cows have rubbed or swollen necks the bar will need raised or moved further away from the cow. Similarly if cows have rubbed or swollen briskets it could be caused by the bottom of the barrier being too high, and this will need lowered. Both of these issues will reduce the time cows spend eating, reducing dry matter intakes and subsequent yields. Keeping feed fresh can also increase dry matter intakes. Remove any waste feed before feeding any fresh feed. Monitor how much waste feed is left each day, if it starts to increase there may be something reducing intakes and this should be investigated. It may also be a nutritional factor and this should also be observed.



Water is also important. There should be at least 10cm of trough space per cow filled with clean, palatable water. Warm water can help to boost intakes, however does need cleaning more regularly. Cows are thirsty immediately after milking so consider fitting a trough filled with the water from the plate cooler just outside the parlour.

Cows should have space to socialise in the shed. Floors should give a good footing to allow her to show signs of oestrus without fear of falling over. In sheds that are too tight cows will struggle to mount and this can reduce pregnancy rates. Consider having fewer cows in the shed to give more space or construct a loafing area next to the shed. This will give cows a space to move about freely. Each cow should have a minimum of 7m². Stocking cows higher than this will depress yields and reduce performance.

Having sufficient light is paramount for a healthy herd. Cows require 16 hours per day of 200 lux. This means you can easily read a broadsheet newspaper anywhere in the shed. Melatonin production is increased improving milk yield and fertility. For 8 hours at night this should be reduced to 50 lux. Lux meters are relatively inexpensive and a good way to assess the light levels in your shed. Even on an overcast day there can be more than 200 lux outside. Making the most of this natural light will **reduce the cost of running lights.**

The air inside the shed should not be stale. There should be 0.1m² outlet on the roof per cow and 0.2m² inlet per cow. A good flow of air is required to keep cows cool and remove bacteria and other pathogens. Smoke bombs are a great way to assess the air flow in a shed.