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Brushing benefits are more than skin deep

Brushes enrich the cow environment, providing a purpose-built scratching post for them to express natural grooming behaviour. But cow brushes can also offer other health benefits, according to research.

TEXT RACHAEL PORTER

Few things are more fascinating or satisfying to watch than a cow having a good scratch while ‘playing’ with a brush. They enjoy grooming – it’s a natural behaviour that’s key to good health and welfare.

And work has revealed that it’s about so much more than just ‘scratching that itch’. Grooming, or ‘scouring and scraping’, is essential for removing fleas and other parasites, as well as promoting blood flow. “It’s a natural instinct. If cows are in a field

they’ll rub up against hedges, gates, posts, trees – anything that offers some resistance,” says Dairy Spares’ Tim Evanson.

“If they’re inside then troughs, railings, walls – anything solid – will also take the brunt of their grooming behaviour. And, if cow brushes are fitted, these will obviously be put through their paces.” He says that brushes will be particularly popular with cows at this time of year, as they’re losing their winter coats.

Study highlights cow-brush health and production benefits

DeLaval carried out a study on swinging cow brushes, that looked at milk production and mastitis incidence.

The US-based work showed that second-lactation cows produced 3.5% (1kg) higher daily milk yield. And clinical mastitis was reduced by 34% in the cows in second and higher lactation in the cow-brush pens.

The work also revealed that cows in a pen with a mechanical brush increased their grooming time approximately five-fold compared to a pen without such a brush. The researchers concluded that a grooming device helps to satisfy the cow's need for grooming while at the same time improving cow cleanliness.

Both these factors (better 'welfare' and cleaner cows) may have an impact on disease occurrence and on milk production. And the increased activity of the cow may lead to less metabolic diseases, better digesting and eventually in higher milk production.

"They're itchy and need to stimulate hair shedding and blood flow."

A good brush will not only stimulate blood flow, but also allow the cow to groom parts of her body that other 'scratching posts' can't reach. "They certainly enrich the cow environment. It's clear to see that cows get a lot of pleasure from the brushes. And the fact that there are also health benefits is the icing on the cake really – and another good reason to consider investing in brushes."

Mr Evanson adds that for brushes to be effective, bristle strength has to be good: "Too soft and they just won't do the job. Remember, you have more than 650kg pushing up against it, so it needs to be able to stand up to that pressure."

And there's no need to take his word for it. In a trial, cows were monitored three months prior to brush installation and for a further six months after brushes were fitted.

"The time cows spent grooming was more than six times greater than before the brushes were installed," says Mr Evanson.

"And ask any producer who has fitted brushes and they will tell you that the cows never leave them alone – they're almost in constant use."

Mechanical brushes

Work has also shown that cows are more active in systems where brushes are fitted. "Particularly mechanical brushes," says Mr Evanson. "Once cows have been to groom themselves they are more likely to visit the feed fence or the water trough. The brushes have been shown to increase milk yields in some cows."

Siting is important to get right. "The brushes, as you can imagine, remove a lot of dust and dirt and hair. So next to water troughs is not ideal for that reason alone. And it's also important that they're placed away from water troughs and feed fence access. Care must be taken to avoid disrupting cow flow."

Mechanical brushes begin to rotate once a cow presses up against them, and some contra-rotate too. But because they're run with electric motors they should be sited indoors. "Some producers do install them outside in yards, but they should ideally be in the cow shed."

Non-mechanical 'swing' or 'sprung' brushes siting is



Tim Evanson:
"Improved cow health is another reason to consider installing cow brushes"

not as stringent. "They should be installed where the cows will use them, when they're housed or when they come inside during the summer for buffer feeding. Cows love to use them and regular cleaning and maintenance to help reduce wear is important."

Good position

He recommends taking advice on exactly where to site them in the cow house. "The traverses between beds can be a good place, if they're wide enough. But if you're not sure, ask a consultant or the company you're planning to buy the brushes from. They should have the knowledge and expertise to get this right on your unit."

Cow flow can also suffer if there are too few brushes installed. "It can actually serve to create stress, rather improve cow welfare and comfort, if the brushes themselves are a 'pinch point'. Cows queuing to use the brushes, or dominant cows preventing others from using them, may become an issue where there aren't enough brushes to go around."

For that reason, Mr Evanson says it's not a good idea to just put in one brush to 'see if the cows take to it'. "Believe me, they will. And they'll fight over it and it will get 'hammered'. It will appear to keep the cows happy and busy for so long, but then it will break." One mechanical brush should cater for between 50 and 60 cows: "That's the limit – they will still work it hard and it will run for most of the day with that number of cows."

A non-mechanical non-moving brush installed on a wall or rail cannot offer all-round access and so will service fewer cows. They're robust pieces of kit and, if the brushes are routinely cleaned and the key moving parts are greased regularly, they should provide a good service. |



Keeping cool – on a budget

We highlight some typical heat-stress ‘hot spots’ and offers some no-cost and low-cost tips and ideas to help keep your cows cool, on a budget, this summer.

TEXT RACHAEL PORTER

UK dairy units are not set up for extreme weather conditions – be they hot, cold, wet or dry. So when temperatures soar, as they did in summer 2018, heat stress can be a significant problem for many dairy units. In fact, the impact of 2018’s heat wave were still being felt by herds six months on (see our feature on page eight). That said, it wasn’t a typical summer and, although heat stress can still be an issue in the UK at relatively



low ambient temperatures, depending on humidity, it's difficult to justify significant investment in more sophisticated climate control buildings and equipment.

But there are plenty of no- or low-cost options to take the heat out of the situation without spending huge amounts of money. Heat stress is something that producers should be thinking about now, even while temperatures are relatively low. "It's vital to

identify areas of the system, and times of day, when cows may be subjected to heat stress. What are the 'hot spots' in your system?" asks Cheshire-based vet Stuart Russell, from Nantwich Farm Vets.

He says that the collecting yard is typically a place that generates a lot of heat and, therefore, heat stress. "Cows are tightly packed and there's not a lot of air movement to remove that heat.

"Even if that's the only time of the day that cows feel heat stress, it's probably one of the worst times because you want them to leave the milking parlour and go back to the feed fence or pasture to eat or graze.

"So, with that in mind, it's well worth taking steps to tackle heat stress in the collecting yard. And it can be as simple as just milking half the herd at a time, to reduce the number of cows in the yard at any one time," he says.

Bottle necks

"Take a look at the milking routine and cow flow, and tackling any bottle necks, to speed up the milking process and reducing the amount of time it takes to milk and, therefore, the time that cows are stood waiting in the collecting yard."

This will, by default, create more space for air movement. But producers can also install high velocity fans into collecting yards and, if they want to take it a step further, a sprinkler system.

"But never the latter without the former. Sprinkling water without adequate air movement will simply ramp up the humidity in the area – it would become a sauna and make the heat stress problem worse."

A sprinkler system with high velocity fans will also help to deter flies – they don't like moisture or high wind speeds. "And this also has benefits for staff in the parlour, helping to keep them cool and keeping nuisance flies to a minimum," says DairySpares' Tim Evanson.

Misting system

Wiltshire-based producer Richard Nevill installed two DairySpares misting kits in his 350-cow unit's collecting yard in the summer. He already had one large fan in there, but it was just blowing hot air – it wasn't cooling the cows and Richard could see they were heat stressed.

"The cows were lethargic and panting and milk let down was also poor when they came into the parlour," says Richard. "And then, after milking, they'd lost their appetite and intake were also suffering. So it was a lose-lose situation."

Something had to be done, so in early August he installed another large fan, at the other end of the collecting yard, and added misting kits to both fans. "And the difference it made was instant and noticeable. Cows were congregating under the mist and seemed happy and chilled in there. And you could see the heat and moisture rising up through the ridge in the roof."

"The air movement in there is spot on now and it's also helping to keeping the nuisance flies away. They



Dave Turner:

“A planned approach is key to success with fans”

don't like the air flow or the moisture,” says Tim. Richard adds that it was a low-cost solution to solve a heat-stress ‘hot spot’ on his unit and it was also easy to install. “It just required a few cable ties and a water supply – we fitted it easily ourselves. And when temperatures start to creep up this summer, we can just switch it on.

Cow comfort

“It's now a cooler place where the cows want to be. And the only down side is occasionally having to fetch cows in from the collecting yard to be milked, because they're enjoying the cool comfort of the misting system too much,” Richards says.

“So much of mitigating heat stress is about creating air movement,” says Stuart Russell. “And that can be something as simple as reassessing your farm buildings and removing some boarding. But it has to be done with care.

“I've seen units where the wrong side of the shed has been opened up and sun has streamed in and actually created more heat, rather than alleviating the problem.

“As a rule of thumb, boarding could be removed from north and east facing sides of sheds. Get some advice if you're not sure.”

Building survey

Advice is also essential when looking to buy and install fans, according to Stamford Agricultural Services' Dave Turner. “To ensure that you're buying the best fans and installing them in the optimum places to maximise air movement, it's vital to carry out a proper survey,” he says.

Cooling cows: fan size and positioning play a role in optimising air movement



“If not, chances are that, whatever you spend on the fans, you won't get the effect you're looking for – or value for money.

“To maximise the return on your investment, the fans have to work well to improve ventilation and keep the cows cool. And that's not just about the type and size of fan – it's also about where they're positioned in the cow house and collecting yard.” He says that he saw a lot of producers putting up fans in summer 2018, in a bid to tackle heat stress during the hot weather. “But not only were the fans not designed for the job, they also positioned them in random positions. That's a lot of time, energy and money wasted. It's important to take a planned approach to make sure you get the biggest bang – or blow – for your buck.”

The good news is that any well-planned investment will pay dividends in terms of improved ventilation and cow house conditions – and cow health and welfare – even in a typical spring and summer.

Exceptional weather

“Summer 2018 was exceptional, but even during a more typical year there will be times when cows are at risk of heat stress. Remember it doesn't have to be particularly warm for that to occur. Humidity also plays a role and housed cows can begin to feel heat stressed at temperatures in the low teens.

“Good ventilation and air movement, facilitated by fans where and when needed, in the cow house and collecting yard are important all year round – not just during the summer.”

He says that he's recently helped to install systems in robotically milked herds, which are housed all year round. “Cows were feeling the effects of heat stress, even at low temperatures, and this was making them lethargic and they were visiting the milking robot less frequently.

“Installing the fans has improved air flow, cooled the cows and made the cow house environment more comfortable. And cow visits to the robot – and milk yields – are back up where they should be.”

He says that in herds milked through conventional parlours, the equivalent could be less time visiting the feed fence and water trough.

And cows may even spend time standing to cool down, rather than lying down. “All will impact on milk yield, as well as cow health, welfare and fertility.”

Even after the summer's scorching temperatures, when most herds were, to a greater or lesser degree, affected by heat stress, Mr Turner estimates that just 20% of producers would consider installing fans.

“I'd recommend starting in the collecting yard – that can be an eye opener. Seeing the difference in cow behaviour – in the yard and milking parlour and also after milking – is often enough to convince producers that fans should also be installed in other parts of the unit, particularly in the cow house.

“That's the great thing about installing fans – producers can invest a little and add more later, once they're convinced of the benefits.” |

What's new?

We round up some of the latest equipment, designed to improve cow housing and aid cattle handling, that's been recently launched.

① Purple ear tags raise awareness

UK-based ear tag manufacturer Allflex is using its distinctive range of purple secondary ear tags to show its support for mental health charity, The Kaleidoscope Plus Group. And, with a penny from the sale of every set of cattle tags with a purple secondary tag being donated to the charity, the company hopes to raise £10,000.

The Kaleidoscope Plus Group works to promote positive health and well-being in communities – including those in remote and rural settings – and to provide appropriate services and support for people experiencing ill health.

One of the charity's key goals in 2019 and beyond is to raise awareness of the impact of mental illness in farming communities and to help those affected.

"The agricultural community suffers one of the highest suicide rates in the UK, with loneliness, isolation and the lack of opportunity for communication all being contributing factors," says Allflex UK's Ashley Musgrave.

The purple charity tags are available now and can be ordered from local agricultural merchants or through Allflex representatives.

② Motor-less cow brush offers lower-cost grooming

Dairy Spares has launched a motor-less swinging brush that it claims will help cows to satisfy their need to scratch and groom themselves.

The Jolly Cow brush hangs down, vertically, and moves mechanically 180° through one plane. Cows push it against gravity to groom both the top of their backs and along their sides.

The absence of motorisation means that this brush can be easily sited. And it has a much lower purchase and running cost compared to motorised brushes.

Installing brushes inside a shed allows cows to rub, scratch and groom themselves, providing many benefits for their health and welfare.

Studies have shown cows have less stress, fewer cases of mastitis, and improved milk yields.

The brush is 90cm x 40cm in size and should be fixed so the bottom of the brush is 80cm from the ground.

Installing one per 50 cows is recommended and each brush costs £595 +VAT.

③ Portable handling system

A portable cattle handling system has been launched by Arrowquip. The Q-Catch 86 Series, which comprises a crush, race and pen, has been designed for ease of transportation, and to help producers to meet the latest low-stress cattle handling guidelines.

Rubber floors ensure that cattle have sure footing and also eliminate noise as cattle enter the crush.

The cradle-shaped Easy Flow adjustable cattle race keeps cattle moving in single file and can handle livestock of any size. And new electric jacks add to the ease of operation of the system.

They can lift or lower the unit in 90 seconds and can ready the unit for transport in less than two minutes.

The equipment also has a new cow-flow system – the 3E BudFlow. The 3E stands for 'easy entry and exit'.

Cattle enter at the front of the pen, rather than the back, and this allows them to turn back to where they entered.

This minimises stress by using natural cattle behaviour to create flow.

