



Brush benefits are more than skin deep

Well-placed brushes offer cows more than the ability to simply scratch an itch. We found out more about why producers should invest in specialist grooming equipment for their herds.

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Research shows that investing in cow brushes can increase milk yields, cut mastitis rates and reduce damage to buildings. And, with enrichment climbing the farm-assurance agenda, the question is shifting from whether to install them to how many and what type.

Cow brushes help to fulfil a dairy cow's natural desire to scratch, and the milk production case is building alongside the welfare one. Research from Cornell University using DeLaval swinging cow brushes found second-lactation cows with access to automated brushes produced around a litre more milk per day, while clinical mastitis rates fell by 34%.

With enrichment increasingly written into farm-assurance

requirements and milk buyers placing more emphasis on welfare, brushes are moving from 'nice to have' to something closer to expected.

"When you talk about enrichment, it's not just sensory," says Kingshay's Sarah Bolt. "It's also about sound, sight, smell, taste, tactile contact. All of those things should come into it."

With more than 20 manufacturers selling cow brushes, choice has quickly expanded. "I think producers can be confused as to what to buy and what questions to ask," she adds. "So we are currently surveying our members to assess which systems are delivering value as part of our 'tried and tested' series, and we will share the results in the near future."

Sarah Bolt:
"Producers can be confused as to which brushes to buy"



Cow behaviour

Researchers at the University of British Columbia found cows were as motivated to access a mechanical brush as fresh feed. "On farm that demand is obvious. Wherever you go, the brushes are typically always in use," adds Ms Bolt.

Vet Owen Atkinson agrees that cow behaviour is the clearest indicator of value. "If a cow is choosing to use ▶

◀ a brush, that shows you're providing something she really wants."

It also explains why brushes quickly become focal points within a shed. Without them, cows will find alternatives. "If we don't provide somewhere to scratch, sheds and buildings become the outlet," adds Ms Bolt.

Cornell University's trial monitored 400 cows across four pens during a nine-month period. Two pens were fitted with swinging brushes, while two without brushes acted as controls. A 3.5% milk yield increase was seen in second-lactation cows in the pens fitted with brushes, as well as greater activity and cleaner skin likely contributing to lower mastitis rates.

"Freshly-calved cows, high-yielding cows and dominant cows use brushes more frequently because they are more active," says DeLaval's Lisa Harris. "Brushes reduce the number of parasites and organisms on cows' coats and usage increases during winter housing," she adds.

Cow cleanliness

Cleanliness benefits are visible, particularly for herds bedded on fine sawdust, but is not necessarily universal. "It depends where the 'dirtiness' is," says Mr Atkinson. "Brushes make little difference when it comes to removing dirt on udders and lower legs. But they do have a role in overall cow cleanliness."

There are many types of cow brush. Swinging and rotating brushes hang vertically from a horizontal arm and rotate when the cow makes contact, while the arm swings freely to allow grooming across the head, neck, back and rump. This is the most research-backed design and the one cows consistently prefer, with 71% choosing swinging-rotating over other types in preference trials. The brush activates automatically on contact and stops when not in use, keeping energy consumption low. These typically service between 50 and 60 cows per unit. Upfront costs are higher, but they are a strong all-round option for dairy herds.

Rotating (fixed arm) brushes offer limited movement compared to swinging models. They groom backs and sides well but offer less flexibility. These brushes are a good mid-range option where a full swing brush is impractical. Hanging (non-motorised) brushes are simple to install as no electricity is required. These move when pushed by the cow. Some can be fixed to reduce swing, which helps where tail paint is used. They are both lower cost and require less maintenance.

Static or sprung wall-mounted brushes are, typically, L-shaped and offer movement when the cow leans in. These are budget-friendly and are often used as supplementary provision rather than a sole solution. Rubber panels also offer grooming. These are fixed, textured panels with no moving parts. They are low cost and durable and can be installed in multiple locations to reduce competition.

Calf and youngstock brushes are smaller versions designed for calves from a few weeks old. Electrical and non-electrical options are available. The wrong brush size or type is a common reason calves fail to engage with them. Where producers tend to go wrong is when siting cow brushes. Kingshay recommends allowing around 3.5m of clearance for swinging or rotating brushes and three metres for static units.

"Positioning is extremely important to maximise usage," says Ms Harris. "Brushes should be installed in areas where cows naturally pass or spend time, but narrow bottlenecks or areas that may disrupt cow flow must be avoided. A feed fence is also not a good position as it can block the feeding passage."

Dominant cows can and do monopolise brushes, which is why stocking rates also matter. As a rule of thumb, producers should install one brush per 60 cows, although assurance scheme recommendations vary. Overstocking increases wear and tear, and can lead to competition around the unit.

Heat-detection systems can also influence cow brush choice. Some brush types may interfere with tail paint and scratch cards, although fixed or non-swinging options can reduce this risk.

Correct siting

Brushes are not just for milking cows either. Calves and youngstock will use them readily if size and siting are right. "If brushes are not being used, it's usually down to siting or suitability," adds Mr Atkinson.

Like any piece of equipment, brushes require upkeep. "Bristles wear down like a toothbrush and their condition should be regularly checked. Brushes also need to be washed and disinfected to avoid transferring contaminated material back to the cow," says Ms Bolt. For motorised units, manufacturer guidance on lubrication and motor care should be followed, and worn components replaced. Ms Harris adds that cylinder heads can be replaced once worn, and that most producers include brush inspections into their routine herd checks.

Ms Bolt's advice for any producers considering purchasing brushes is simple. "Visit a unit with brushes and actually see where the cows are queuing up to use them. Most units that have brushes will see them in almost constant use, which underlines that installing them is the right thing to do." |

Cow-brush considerations

- **Siting:** Place brushes on natural cow traffic routes and avoid feed fences and bottlenecks
- **Space:** Allow around 3.5 metres for swinging/rotating and three metres for static units to prevent crowding and allow natural use
- **Stocking rate:** Aim for roughly one brush per 60 cows to reduce competition and overuse
- **Type:** Consider whether motorised, static or non-swinging models suit housing, power supply and management
- **Heat detection:** Some brush types can interfere with tail paint or detection aids so fixed or static options may be better
- **Check the spec:** poor use is usually a design or siting issue, not lack of interest
- **Energy consumption:** brushes are often in use for more than 12 hours a day and many have a big motor and high energy consumption.