Liner life-saving advice to reduce wear and tear

Maximise your milkings

Preserving the life of your milking liners can not only safeguard teat-end condition and udder health, but it can also save money in the longer term. We spoke to a milking technology specialist to find out more.

text **Rachael Porter**

Rubber milking liners, manufactured using European compounds, should be expected last for 2,500 individual milkings. The key word here is 'should'. The reality is that some parlours have liners that are not achieving their life expectancy, and producers are then faced with the possibility of teat-end damage, and/or other udder health and milk hygiene problems, or changing their liners before their expected duration. So says Dairy Spares' Tim Evanson, who is eager to share some liner life-saving advice in these 'austere' times.

"With milk price still low, can you really afford not to check that you're maximising your chances of liners lasting for as long as the manufacturer states that they will?" he asks.

He adds that new compounds, like TimePro, extend liner life by 20% – to 3,000 milkings – and silicone liners hope to achieve 5,000, but are proportionally more expensive.

Whatever material they are made from, and how ever long the expected life span, there are many factors that can cut this short and most, if not all, are within producers' control. "If you know what could be contributing to liner degradation or damage on your unit, then at least you can try to do something about it," says Mr Evanson.

Chemical attack

Top of his list are dairy chemicals and particularly their correct use. These are designed by the manufacturers to work at specified dosage rates and temperatures and to optimise liner life it is important to follow these recommendations accurately. "If you do not have an automatic plant then make sure that you measure the wash chemical accurately and add it to the correct volume of water.

"And avoid adding it to the wash water as it is being sucked into the pick up this could then go round as a big slug in a much higher concentration and not evenly dispersed throughout the wash. It is common for sodium hypochlorite to be used as part of the final rinse, as a chlorine-based disinfectant.

"This product is generally less expensive compared to other chemicals and, when dosed manually, can tend to be used more liberally and with less accuracy."

Life expectancy

"But chemicals used in excess could damage the structural integrity of liner surface and reduce its life expectancy. This can be seen as black coming off the internal surface of the rubber liners or rubber tubing. And any liners that we receive for inspection that have a strong chemical smell will automatically raise alarm bells."

Mr Evanson urges producers with automatic systems to make sure they are calibrated correctly.

"Check the chemical you use too – particularly if you're switching brands. Different strength products will require a different dose rate. It's vital to measure chemicals carefully and make sure they are added to the correct volume and temperature of water – and mixed well before circulation. And, if you have 'washing' issues, don't automatically think that more chemical is better."

Next on Mr Evanson's 'hit list' is jetters, or rather leaving the liner attached to the jetters in between milkings. "And by this I mean both the cups and the internal jetter," he explains.

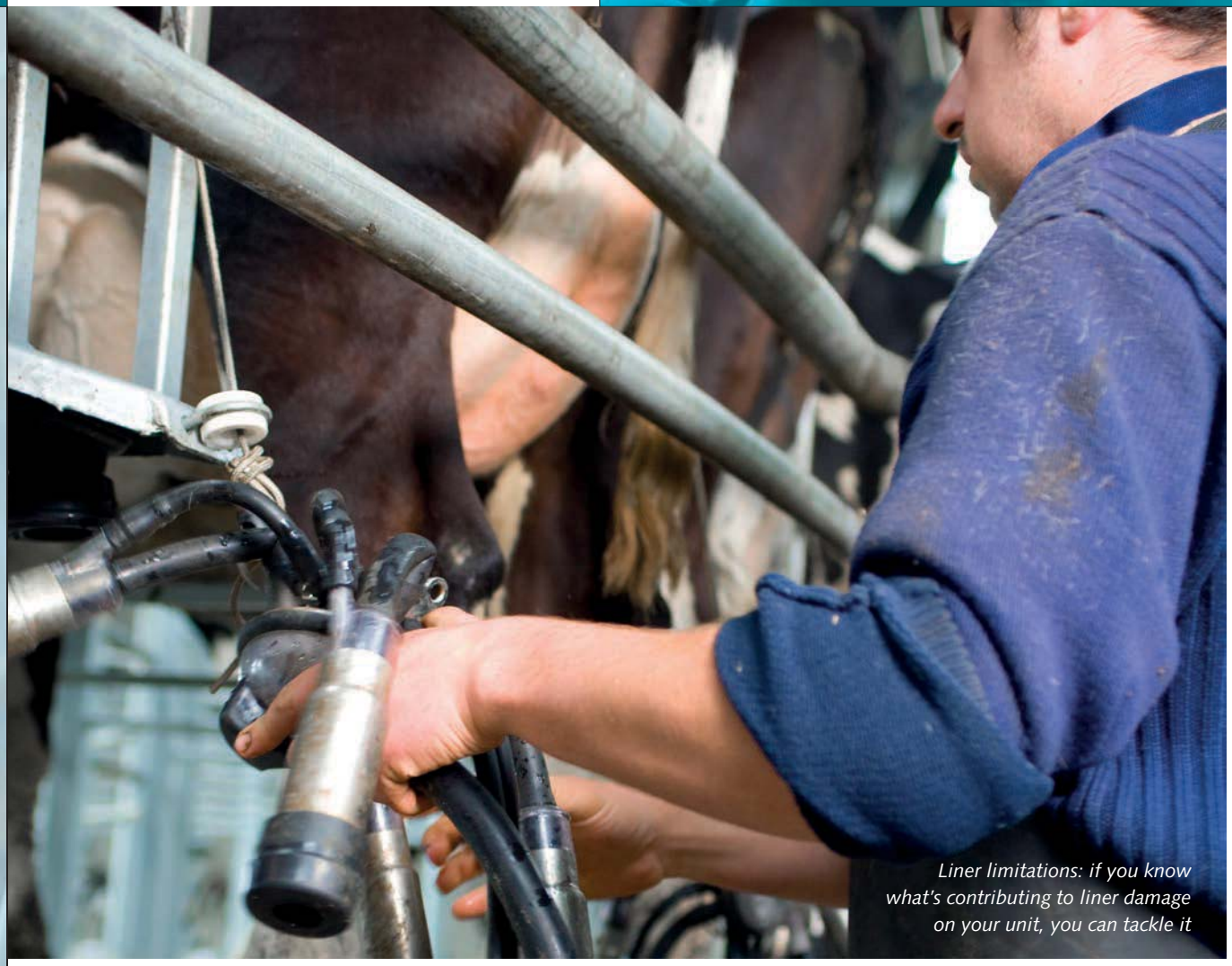
Tim Evanson: "Several factors can shorten the expected lifespan of liners"

If they're not removed they may stretch and deform the mouth of the liner and in some instances it can look as if the liner is twisted and misshapen. "The key thing to remember here is to remove them as soon as possible and certainly don't leave them on overnight or all day between milkings."

Shell size in relation to the liners is also important. "If you change your liner type or shape, always ask your dairy engineer if you have the correct sized liner for your shells. We insist on checking this information and always supply a set for free when producers are trying different liners for the first time. This is a way to make sure they fit and wash properly and it also ensures that the producer is happy with the way they work in their milking set up.

"It's important to remember that producers are paid on milk hygiene and not just quantity. So liners not only have to milk well, but they also have to

Left: Sharp edges on the nipple of the claw can result in a smile-shaped cut inside the short milk tube
Middle: An example of a sharp milk claw nipple, typically the result of impact damage
Right: Leaving jetters attached to liners between milkings can deform the mouth of the liner



Liner limitations: if you know what's contributing to liner damage on your unit, you can tackle it

wash well too – that's just as vital."
He explains that if liners don't fit the jetters properly then they won't wash well and it will eventually affect the liner performance and durability.
"Shells have to be in good condition too. Damaged and misshapen shells can limit the life of the liner.
"So it's well worth checking the size and condition of your shells – and that you buy liners that fit them correctly. If not, they may not perform correctly and it's a waste of money and time spent fitting them. To get the maximum life from your liners, they need to be the right spec for your shells and claw nipples."

Sharp edges

Claws with sharp edges, usually from age, impact and being trodden on, will also shorten the life of liners.
"This can cut a semi-circle into the inside of the liner's short-milk tube, which eventually punctures in a small outer hole. If you look at the inside of the liner short-milk tube, you'll see a cut like a smile and it's important, when you change a liner due to this sort of damage, that you check the nipple of the claw for sharp edges.
"If you don't and you fail to remedy it, the new liner will simply be cut in the same way.
"It's also worth running your thumb – carefully – over the edge of the milk nipples, both outside and inside, as sometimes the inside is sharper than the outside," he adds.

Split liners

Mr Evanson says that the diameter of the milk nipple can also be overlooked. They tend to be three different sizes, some are square ended and some are chamfered. "So if you buy new claws and think you'd like to use the same type of liner that you used before, make sure that the nipple on the new cluster nipples suit the design and milk-tube size on the liners.
"It needs to stretch a little, to form a seal. But if it's over stretched then the rubber can be more prone to impact damage."
Impact damage and sharp nipples can split liners milk tubes. And once split they have to be replaced – no matter how new they are. "You can see what's caused it to split. If it's a sharp nipple then that needs to be addressed. "Impact damage can be limited by reducing stress in the parlour, which may cause the cow to kick. In the autumn, flies can be a problem in the parlour. Improved fly control will improve cow and parlour operator comfort, as well help preserve your clusters and liners."
His final piece of advice is to change all the liners in the parlour at the same time. Gradual or phase replacement is a definite no no, because it's easy to lose track of exactly what has been changed and when. Don't mix old with new.
"You can drive a car with bald tyres, but you're taking a risk. It's the same with milking liners. Failing to replace them when they're worn and/or past their life expectancy means that you risk, among other things, teat-end damage, udder health and, ultimately, a reduction in productivity and efficiency," says Mr Evanson.
"With the current focus on reducing costs, can you really afford that risk – particularly when you can take steps to avoid it?" |