

Cool, clean and refreshing – are your cows drinking enough?

Good hydration

As summer temperatures sizzle, thoughts turn to water and cow intakes. But even when the weather's not warm, water is still one of vital ingredients to successful milk production. Read on to find out how you can help to maximise your herd's intake.

text Rachael Porter

Water is probably one of the most undervalued 'ingredients' with regard to successful milk production. Yet high yielding cows (10,000kg) can drink up to 200 litres of water per day in peak lactation. The general rule of thumb is three litres of water to produce one litre of milk.

For every kilogramme of dry matter intake is followed by five litres of water, so a lower intake of water will result in lower production results.

Dirty water

Cows like to drink large amounts of water at one time. They can drink up to 50% of their daily demand of water in just one session. And cows often drink directly after milking and between feeds. Dutch dairy vet Joep Driessen, who has 15 years of experience advising producers in 45 countries, says that 'Cow Signals' can be used to check if water intake is sufficient.

And he's concerned about water quality, saying that half of the cows in Europe are drinking dirt and faeces.

"This is because trough aren't cleaned regularly and connecting pipes are also full of dirt. On these 'bad' units, troughs

were contaminated with too many bacteria and other pollutants. "But the solution is simple. Clean your troughs regularly and as part of a routine – say every Monday, Wednesday and Friday after milking.

"Also use a brush to clean them properly, because the slimy rims are where the bacteria grow.

"This is how the better farms make sure water intakes are maintained. And this time spent cleaning is paid back in litres milk."

Promar's Jonathan Hill agrees. He says that troughs should be cleaned thoroughly at least once a week and that tipping troughs should be emptied and cleaned every day.

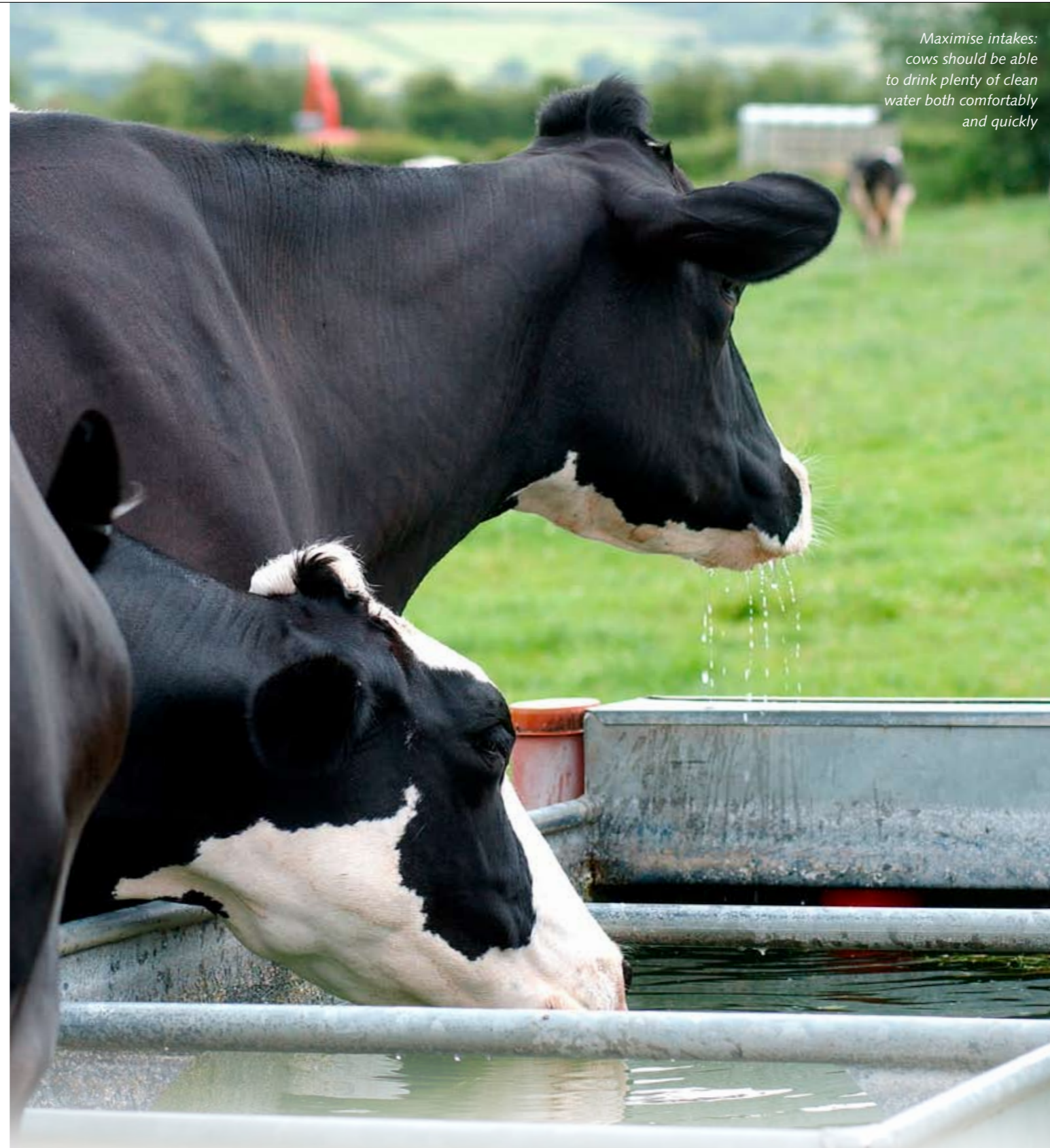
"A cow's sense of smell is 17 times keener than ours, so they will detect dirty, stale water more easily and this will reduce intakes," he says. "Clean, fresh water every day is absolutely vital – just a little grain or silage in the trough will put the cows off."

Good signs

Mr Driessen says that producers should also look closely at their cows to check if they're drinking enough water. "Look at

Top trough tips

- Place the troughs at a height that is also accessible for heifers (not too high!)
- Do not place drinking troughs in dead corners
- Make sure that the floor around the troughs is not slippery
- Clean water troughs thoroughly and routinely
- Make sure there are no feed particles in water troughs
- Control the temperature of the water
- Place water troughs close to feeding places
- Provide a large water trough per 15 cows
- Maximum distance from pasture to drinking trough should be 200 metres.



Maximise intakes: cows should be able to drink plenty of clean water both comfortably and quickly

the cows' coats. Shiny smooth coats are a sign of good water intake. Elastic skin is a good sign – lift up a piece of skin from the side of a cow's neck and it should pop back in place within half a second.

"If the wrinkle stays there after releasing it, it's a sign of dehydration. What are the eyes telling you? Lively and round eyes are good signs. If the eyes are deep

and sunken in the skull it means that this cow did not drink today."

Mr Driessen says he's seen weak cows and heifers on farms in Scotland and Ireland with very stiff manure.

"This was on farms with just one big trough for more than 100 animals. One 'big mama' is ruling the place and she likes to spend several hours in front of

the trough, showing everybody that she is the boss. The consequence is that less dominant cows do not get their window to drink as there's always another cow chasing them away.

"The toughest half of the herd will still be OK, but the weakest 50% will suffer. So we advise one trough per 20 cows, or a double-fast drinker per 20 cows. These

must be well spread throughout the cow house."

Mr Driessen urges producers to spend some time watching their cows to see how they behave at the trough. "Are they scared of other cows or stray voltage? Are they looking around before drinking? Are they sniffing and not drinking? Are they passing the first drinker and walking to the next one? Are they sticking the tongue in first, to check the water temperature?

"And if you hear them making sucking noises, this means there is not enough water pressure or the trough is too small. Can the cows reach the water or is the rim too high? Do they touch the rim of the drinker?"

He likes to see wide passages and troughs no higher than 60cm. "I see many that are 110cm high and the cows struggle to drink. Try it yourself – drink water while you push your throat with a finger. This is not a good feeling and it makes the cows drink less."

It's important to understand just how many litres of water cows need. The normal drinking speed of a cow is about 20 litres per minute and so this means that cows like to drink a minimum of 10 times a day for half a minute. The more drinkers you put in, the better chance that your heifers will drink enough water. Cows like a water depth of at least 7cm.

And 'fast drinkers' need a water flow of 20 litres per minute. That requires strong water pressure, a 3cm-wide tube and a large inlet opening in the trough.

Above freezing

"Many commercially available troughs are useless, because engineers don't know much about cows. So check the details and test it with a big bucket: do you get 20 litres per minute? Are they easy to clean? Do they have nice round edges, so there's no risk of wounding cows? Are they wide enough so a cow can stand straight and drink comfortably?

Mr Driessen says not to worry about the temperature. "Just make sure it stays above freezing. First make sure you have clean water.

"Second make sure you have enough drinkers, Thirdly: check the pressure so they will be always full.

"Then, if you have these major three things right, you can start to worry about the ideal temperature of around 17°C. And remember that cows drink more in winter time when you supply warm water." |