



Good housekeeping: hygiene is second to none in the calf shed



Busy pit: herringbone parlour runs for 23 hours a day

Antibiotic use is shunned as a management tool at one US-based unit

# It's all down to details

During the past eight years the average somatic cell count at Reuter Dairy has been 76,000 cells/ml. Strict protocols for dealing with mastitis, as well as sand-bedded cubicles and low protein rations, contribute to the notable performance of the 850-cow herd.

text **Jaap van der Knaap**

**N**ot a piece of straw lies out of place and no crumb of feed is spilled on the yard. The hygiene in the calf sheds resembles that of a hospital and the 850 cows are in excellent condition.

Whether dealing with feed rations, housing, work flow, or the breeding philosophy, Rick and Dan Reuter, from Peosta in Iowa, have clearly considered every detail of the management of their operation. For example, during the past six months, all the cows have been dried off without routine use of antibiotics, following the introduction of a policy of no longer using antibiotics to treat cases of mastitis. It seems inconceivable that, with a herd average yield of more than 14,000 litres of milk, at 3.8% fat and 3.1% protein, that antibiotics are no longer used.

Reuter Dairy is not organic, but a deliberate decision was made not to use antibiotics. "Of course we do have mastitis, but if you ensure that the cows are healthy, seven out of ten cows with mastitis are able to cure themselves," says Rick. "The other three cows we don't want to work with. We work with a strict protocol. When a milker finds a

cow with mastitis, the cow will be given an injection of oxytocin to ensure that the udder is milked out really well. After that we use an udderment oil on the udder. The cow then has two days to prove she will recover.

"If she doesn't, she leaves immediately. The advantage of our system is that we no longer run the risk of putting 'antibiotic' milk in the tank."

An important factor in the strict mastitis policy is the large number of young stock on the farm and the high beef prices. "A culled cow brings in £720, while raising a heifer costs £900," Dan says. "Many producers are not aware that culled cows are an important contribution to the total income of their dairy operation."

## Improved resistance

Anyone who thinks that the replacement rate is high is wrong. With a cull rate of 30% it is below the US average. The dry period is also antibiotic free.

"By radically changing the environment and the feed ration you create stress and as a result the cow dries up nicely, regardless of production," Rick

says, basing his thoughts on experience. He points out that the rolling average tank cell count for the past eight years stands at 76,000 cells/ml. "The cell count demonstrates the resistance and the health of the herd."

So, what is the secret of the high production and good health of the herd? "Sand bedding, a low level of protein in the ration and a focus on breeding," says Dan. He has worked for many years as a hoof trimmer and mentions the combination of sand bedding and rubber on the floor as an important basis for good hoof health.

Rick is clearly the feed specialist. "The reduction of protein in the ration to 15% has also contributed greatly to the health and resistance of the herd," he says. The TMR ration that is fed to all milking groups comprises: all groups are fed: 34kg of maize silage, 5kg of alfalfa hay and 12.5kg of a concentrate mix, which includes cotton seed, soya, bone meal, cereals and minerals.

## Mixer wagon

The mixer wagon, with a 17.5 cubic metre capacity, appears small for this number of cows. "We make up 14 feed rations per day," Rick explains. "We chose this small feed mixer wagon deliberately. It has just one vertical auger. We have noticed that this produces the best mix. We want every bit of the ration to be the same for every cow." At the end of each year the wagon is exchanged for exactly the same new wagon. The bunk silos are remarkably clean with hardly any loose corn silage



### Reuter Dairy

Zero antibiotic use, high production and healthy cows. Tight protocols and strict management are key to Dan and Ricky Reuter's success.



United States

Herd size:	<b>850</b>
Average yield:	<b>14,000 litres</b>
Somatic cell count:	<b>76,000 cells/ml</b>
Unit size:	<b>340 hectares</b>

spilled on the floor. Moreover, there is only maize silage – all the alfalfa hay is purchased. “We grow maize on every hectare we own. In two days we chop everything and every load is weighed. In this way we know exactly what a field produces, how much feed we must buy in and which field we must fertilise a little heavier next season.”

### Calf rearing

No alfalfa itself is cultivated. “Alfalfa changes too much in quality because of the weather and the seasons. Also the yield is lower than maize silage. We buy alfalfa with the exact protein values that we want,” says Dan.

A total of 32,000 litres of milk leave the dairy operation every day. The milkers, in total a staff of 15, milk the herd three times a day and keep the 2:12 herringbone milking parlour running 23 hours a day. “The milking parlour has recently been modernised, but we did not extend it and kept it simple,” Rick explains, as the cows walk calmly into the parlour.



Clean beds: using sand helps to keep the somatic cell count low

The cows and first calved heifers are kept separate, but there are no other groups. Not even a transition group or a group of hospital cows. “We don’t need one,” says Rick. “For a year we kept the fresh cows in a separate group with the idea that they could get stronger before they went to the main group. But we ended up with more problems.

“Now cows go from the dry group in as short a time as possible to the calving barn and, several hours after calving, to the large group.”

Calf rearing is also strictly organised. The hutches are in a ventilated barn, where hygiene is the key word. Everything is clean and appears brand new, despite the fact that the facility is already a few years old. This year a new, identical calving barn has been built.

“We want to use this barn to reduce the risk of infection,” Rick explains. “We can leave one of the two barns empty for a while so that the bacteria and viruses disappear. We can easily use the barn for feed and straw storage and after a time fill it with calves again.”

### Genomic bulls

In addition to the business organisation, the Reuters also make time for a ‘hobby’ – keeping a number of special breeding cows. In three pens are three animals that originate from the Reuter Bailey, a cow the father-and-son team bred

themselves. With 95 points, she is a Goldwyn daughter from the family of Regancrest Barbie. “We like to give a couple of cows a bit of extra attention,” says Dan.

“There is AI interest in these animals. We have flushed Bailey and there are more than 25 daughters from her in the herd.”

Is she also the type of cow that is best suited to the farm? Dan laughs. “We want to breed cows that produce around 41,000 litres in three lactations. We are looking, on average, for large cows that produce a lot of milk.”

Reuter Dairy also has a breeding strategy. “We use genomic bulls on our yearlings. It gives our calves the fastest rate of genetic progress.” Half of the dairy cows have progeny tested bulls as a partner and the other half older genomic bulls. “I am not a huge fan of genomics because I think that progeny tested bulls are underestimated. Therefore I also continue to use them,” says Rick. “Furthermore, we use some older genomic bulls whose fertility indexes are known. With them we can keep up with the rate of genetic gain, but we can exclude genomic bulls with poor fertility.”

It all sounds so simple and logical and it is yet another example of the well-thought-out management at the Reuter’s dairy. |

Tidy silo: the bunks are kept clean and any loose maize silage is regularly swept up

