

Kolochau dairy farm
Milchgut Farm in Germany produces between 1,000kg and 2,000kg of 'night milk' each day, and it contains a high percentage of the hormone melatonin.



Manager:	Peter Hufe
Herd size:	1,500
Unit size:	2,150 hectares
Milk quota:	12.3 million litres at 4.05% fat and 3.25% protein
Milk production:	32.8kg of milk/cow/day



Peter Hufe



Calves are housed in groups



The herd's ration is fed in small passageways



Night milk is sold in dry-power form



There are special lights to facilitate night milking

Peter Hufe: "We treat our cows as if they're marathon runners"

Mid-night milking

For the Milchgut Kolochau herd, high lifetime production is essential and this is achieved through the use of modern genomically tested bulls, as well as older bloodlines. And, at night, all the lights in the cow house are turned out to aid the production of special 'night milk'.

text **Jorieke van Cappellen**

The greyish-white buildings of the Milchgut Kolochau unit, close to the east German town of the same name, show up in stark contrast against the bright blue sky. The former state farm, which was built in the 1930s, is one of the five largest in the German state of Brandenburg with 1,500 cows and a milk quota of 12.3 million litres. There are 34 staff working at the unit. "That means that we have one member of staff for every 50 cows," says manager Peter Hufe, who has been in charge of the herd since 1995. "That sounds a lot, but on this farm the work is a continuous process. We work a lot in shifts and work to set protocols." In the full, six-row cubicle stalls the cows are divided into six groups according to their stage of lactation. The animals are milked in groups and walk to the milking parlour via the central corridor.

Marathon runners

The rolling annual average yield per cow is 9,615 litres and a key aim of management is a high life time production per cow, which at 28,000kg of milk at the unit is above the average

of the 25 best farms in Brandenburg (approximately 26,500kg). It is a remarkable achievement, which Peter says is mainly down to the management. "We regard our cows as marathon runners," he says. "In my view, a high first-lactation yield is not something to strive for and we don't push the cows to achieve it. We prefer to have a problem-free lactation, so that we can get the cow in calf again easily." Because the cows are not overstretched the lifetime of the cows at Kolochau Milchgut is five months longer than the German average, with a higher life time production. "We have a low replacement rate of less than 25%, compared to 30% on other farms," he adds.

Night milking

The herd is milked twice a day in a 32-point rotary parlour that runs for most of the day. Milking continues through the night, although in a rather unusual way. "In the evening all the lights are turned out in the cow house and the milking parlour and it is completely dark," says Peter. With just red LED lights for reference, staff milk

the cows in the depths of the night. A portion of the milk produced during the night goes directly into a separate milk tank. "Our herd is the only one in Germany that produces so-called 'night milk' on a large scale," he says, explaining the somewhat secretive way of milking. "Night milk contains a higher proportion of the natural hormone melatonin."

The hormone, produced naturally by humans and mammals, controls the sleep-wake rhythm and helps to ensure a good night's sleep. "Past the age of 25, human production of melatonin decreases and night milk can help to top up the melatonin level and contribute to better and deeper sleep."

The unit became involved in the 'night milk' marketing concept in 2003. But simply switching off the light is not enough to produce night milk. The ratio between daylight and dark must be carefully controlled. So during bad weather lights are switched on in the cow house during the day to mimic daylight. "You must also milk the right cows," says Peter. "The melatonin content can be ascertained in milk samples and can differ enormously from cow to cow."

Stress, whatever the cause, is also disastrous. "We feed a fibre-rich ration, in which we try to keep the proportion of maize below 25%, and alongside that we keep the day and night rhythm as constant as possible. "By careful tuning you can increase the melatonin content in milk 14 fold."

The farm milks a permanent specially chosen group of quiet cows, because the milk melatonin content is highest in calm cows.

The herd supplies between 1,000 and 2,000 litres of night milk per night. The milk is freeze dried in a regional milk factory, packed in a suitable black milk pack, and sold at 25 euro per 192g box at the pharmacy and on the Internet.

But do you really sleep better after drinking night milk? Although scientific studies have been carried out, for the moment Hufe can't confirm the benefits of night milk. "But despite a somewhat bumpy start, we aren't dissatisfied with the sales of it," he adds.

The herd is not only unique in the production of night milk – Peter also has his own vision of cattle breeding.

Alongside bulls such as Shottle, Goldwyn and OMan, the herd is also served with semen from bulls from the past. "On the farm we now have 50 daughters of the bull Bote, which was born in 1976. And there are more than 90 animals with Cocalica Oraginator Rex as sire, and he was born in 1972."

Old genetics

The herd also includes daughters of Traylor (1989) and Orlo (1989). "That isn't to say that we find modern bulls are not good enough. On the contrary, we inseminate all maiden heifers with genomic bulls," says Peter. "But with old

bulls we try as far as possible to keep a variety of blood lines in our herd. The current bulls that, up to the fourth generation, have no OMan, Goldwyn, Shottle or, for example, Jocko blood, are rare and can be counted on the fingers of one hand."

Peter says that the cows with an 'old' sire perform just as well as far as production or type is concerned than those with a relatively young sire. "Old bulls fit in with our current breeding programme because they are often strong and healthy. And that sits well with our vision of the cow as a marathon runner." |



Traditional housing: the 1,500-strong herd is based in a typical cubicle shed