



# Born in the USA

We visit dairy and calf rearing farms on a trip to the US where cattle farming takes on quite different dimensions than in Germany, especially in the dairy state Wisconsin where we explore the American way of life for calves

Last May, we took a trip to Dairyland – the dairy state Wisconsin which is known for its milk production. According to the American farming magazine ‘Hoard’s Dairyman’, Wisconsin has about 1.27 million cows (2022 statistics) spread across 170,000km<sup>2</sup> of land. This makes Wisconsin take second place behind California. Here, milk production per cow is 11,368kg on average.

Many cows produce many calves. About 44% of the calves are raised in outdoor hutches and 46% in indoor pens, the study found out. About 25% of the animals are raised in groups. We visited a number of calf rearing farms together with Hampel's Calf-Tel, a manufacturer of calf housing systems.

Animal husbandry laws are state laws in the US. Yet, there are a number of national regulations under the National Dairy Farm Program which must be observed by all dairy farmers: for example, a minimum of 3.25m<sup>2</sup> bedded lying space must be available for animals with a body weight of up to 200kg.

*Your contact at the editorial office:  
ann-christin.fry@topagrar.com*

## KEEPING IT BRIEF

**Wisconsin**, the so-called Dairyland, has about 1.2 million cows and an appropriately large number of calves.

**Calf rearing** is a major business for many farmers.

**We visited** the production facilities of manufacturer Hampel's Calf-Tel and accompanied them on their visits to various calf rearing farms.

**The Calfranch farm** of Pagels Ponderosa, for example, takes care of 3,500 heifers.

**J Hall** is a contractor who rears about 5,000 calves for his dairy customers and houses them in hutches.



About 44% of all calves in the US live in outdoor hutches.



△ The calves are bedded in fresh wheat or oat straw twice a week. A system of ventilation hoses supplies fresh air through air outlets above every pen and keeps the temperature at a pleasant level. In winter, it is possible to cover the outlets with membranes to reduce draught.

## FEATURE

# A visit to Pagels Ponderosa

Pagel Ponderosa is a separate farm unit and operates like a clockwork to manage up to 30 new arrivals every day.

Our pick-up truck is heading down dead straight roads along which one dairy farm is lined up next to the other, passing scores of those typically red barns. The American flag is flying on nearly every rooftop. We stop at Pagels Ponderosa, a large-scale dairy business with 5,600 cows - Ayrshire, Jersey und Holstein Friesian crosses. Here, 15 to 30 calves are born every day. Manager Shawn Miller comes here twice a day to pick up the newborn and take them to the rearing farm which is about 2.3 miles or 3,7km away.

### MORE MILK IN WINTER

Our next stop is Calfranch. As we drive through the gate, we notice the large number of identical animal houses – 26 to be precise – and all are marked in alphabetical order. “We have up to 3,500 animals here. They stay with us until they are 11 months,” explains Shawn. Each barn is filled with 60 modular calf pens which measure 122cm by 183cm. All have a ventilation hole in the back wall. They are grouped by animal age and females and males are kept separately for reasons of hygiene and disease prevention. In fact, the border between the world of cow calves and the world of bull calves is marked by one

pen that is left unoccupied so the animals cannot smell each other.

All have access to water and calf muesli from day one. Water is provided in black buckets in front of each pen or hutch. Each newborn is fed about 3.5 litres of colostrum before it leaves the dairy farm. The quality of the colos-

trum is claimed to be higher than 23Brix. When the calf is being fed with colostrum it is earmarked and its navel is disinfected.

From then on, it is fed milk replacer to the following plan:

- Day 1-2: 1.9 litres twice a day
- Day 3-13: 2.4 litres twice a day
- Day 14-42: 3.3 litres twice a day

▷ A blank earmark serves as a note pad where staff enter the type and date of treatment.

▽ The buckets are shelved upside down for drying after washing.





- Day 42-49: 3.3 litres once a day
- Day 49: Weaning
- In winter and from day 14, the calves are fed half a litre extra; from day 42, they get a quarter of a litre extra to meet their higher demands.

They drink the milk from the buckets. A white band marks those pens which house animals that are fed milk only once a day; an orange band marks the weaned calves.

### HOSE VENTILATION EVERYWHERE

“Shortly after weaning when the calves are 50 days old, we remove the partition between two pens and continue to raise them in pairs”, tells Shawn. This is very beneficial in their experience and it also prepares the animals for group housing.

Once a week, the pens are bedded with fresh wheat and oat straw which is supplied by a bedding machine that is attached to the front loader on a Bobcat. “Freshly bedded pens make for fresh air in the barn”, says the stockman. Fresh air is supplied by the ventilating hoses that run above the pens on each side of the barn. The system is in



Photos: Fry

△ On day 50, the partition wall is removed and the calves are held in pairs.

operation year round and is controlled manually. A part of the system was installed by farm staff who used large-diameter pipework into which they drilled air outlets above the pens. The outlets on the purchased system have membranes that cover the holes in winter so the cold air won't drop onto the animals. In some barns, we detected thermometers that help control the temperature. Apart from that, the newborns also wear so-called jackets during the first 21 days of life.

### AN EXTRA INFIRMARY

The Calfranch employs 16 staff who look after the future cows. The staff are from Central America and the US. Manager Shawn stresses: “We want to keep stress levels as low as possible, both for man and animal. Therefore we employ enough people so nobody gets frustrated when feeding or transferring the animals and starts abusing them.” Pens that house sick animals are marked by a blank earmark where the staff enter information on animal condition and treatment to make sure everybody is on the same page. They also enter the earmark number, the date of treatment, the medication and specific observations.

Weak and seriously ill calves are treated at the infirmary. The ten pens here have no vents in the back wall and two heaters in the barn warm the air to 10 °C in winter. After seven to ten days a calf is normally fit enough to be released.

At the age of 65-70 days, the calves are transferred to group stalls. At Calfranch, all animals from one barn are transferred at the same time. Then the barn is mucked out and washed. The modular pens are taken to the pen wash where two more pressure cleaners wait for action. This takes seven days, then the clean barn is ready to welcome the next group of newborns.

The group pens have a feed passage outside the pen, slats at the feed rack and a lying area in the back. The bedding is separated slurry. “The animals weigh 80-100kg when they arrive here”, says Shawn and continues: “We weigh them immediately after they are born using mobile scales. Next, they are weighed at the age of weaning and then again at the age of four or five months when they are transferred. At that time, they weigh between 160kg and 190kg.” The barns have curtains and fans.

Within three days after arrival, the bulls are sold. Holstein calves fetch about \$180, meat breed crosses up to \$400 whereas Holstein-Jersey crosses fetch only \$10.

There are also two cubicle houses at this farm site, each housing 2,000 heifers from the age of four to five months in 120-head groups.

### COMMENT

## Not all is bad at home

We like to look to the US for successful farming operations – be it in the field of breeding, animal housing or management. And indeed, we always find great inspiration and solutions to take home.

At Pagels Ponderosa, I was impressed with the high level of hygiene and the good air quality in the barns – also in summer when hot and humid weather and temperatures of 30° C are not unusual. In summer, the farmers who house calves in hutches use sand as bedding and reposition the hutches so the doors face north in summer and south in winter and they also use straw mats in winter. In Germany, there is still potential to learn about heat stress management.

US farmers also know how to manage large numbers of staff. For example, every extra step per calf multiplies the workload by the factor 5,000. On the other hand, in Wisconsin, newborn

Photo: Meckel



◁ Ann-Christin Fry, editor for cattle farming  
English translation provided by trans-agrar

calves are transferred to another location after only a few hours of birth and are then housed individually for up to 70 days. This is one of the shadow sides of Dairyland. In Germany and in the EU, animal transportation does meet with criticism that is not always unjustified. Raising calves in individual hutches for more than 48 days is against the law in Germany. Also, our rules on minimum space and drinking requirements put us in a better position.

The standards in Germany are mostly higher than in other countries – for a reason after all, because there is potential in our animals. Let's tap this potential – for productive cows of tomorrow.



J Hall uses this double-deck trailer to ferry up to 120 newborn calves to their new housing.

FEATURE

## Contract rearing

J Hall is a contractor who rears calves for local dairy farmers and employs a team 50 staff to get the work done.

What started out with 15 hutches in his garden back in 1995, has grown into a business that operates 5,000 hutches on a space of around 20

hectares - as far as your eyes can see. Every year, J Hall raises about 40,000 heifers at his farm in Kewaunee in eastern Wisconsin.

He collects the newborn females after 12 to 24 hours of birth from 29 different dairy farms where they receive two colostrum feeds before they are

# Better Calf Raising

Invented by Calf-Tel





▷ J Hall raises Jerseys and other small calves in pairs in one hutch which is not bigger than the hutches for 'singles'.



△Feeding out the calf muesli is quick and easy from the truck.



▷ The milk is dispensed from a truck bed tank. Each animal is fed four litres in the morning and four litres in the evening.



◁ The new-born calves are initially housed in the heated group pen. They stay here for three days during which they are dehorned.



Photos: Fry

transferred to the rearing farm. Most of these dairy farms are less than a one-hour ride away from J Hall's farm, only a few are about 2.5 hours away. J Hall employs about 50 people to help with the calves, most of them come from Central America.

### EVERY CALF IS BLOOD TESTED

When the calves leave the trailer, they are grouped in pens, usually by farm of origin. "We take a blood test from every calf. This allows us to check whether the animals have been fed high-quality colostrum; and we also have a BVD test carried out," explains J Hall. A BVD test is not mandatory in the States but in Germany. On day two, the animals are dehorned and on day three they are transferred to their individual hutches.

The warm group pen is essential, because it minimises the stress for the newborn, especially during the cold winter months. When they are three days old, it is easier for them to regulate their body temperature.

Once they have arrived in their hutches, they stay there for 70 days. From their fenced front yards, they have visual contact with their neighbours. Small calves and Jerseys are housed in pairs. J Hall's hutches are 2.43 m long and 122cm wide. Twice a day, a truck with a large milk tank trav-

## Heating and forming

The Hampel's Calf-Tel company has been operating in Germantown, Wisconsin, since 1981. They manufacture calf housing systems from extruded polyethylene, which is a special type of plastic. The housing systems include hutches and modular pens. The hutches are made from about 35kg plastic sheets which are heated to 165 °C for 130 seconds during which the polyethylene sheet is sucked up and spread across a metal structure. This process is called thermoforming. The products are claimed to be robust and very resistant to deformation. A pigment that blocks UV rays is claimed to protect the opaque and non-porous material from becoming porous.

Every day, 432 calf hutches leave the assembly line – 18 hutches per hour, the equivalent of 30% of the production capacity. The manufacturer also produces mobile toilet cubicles, playground slides and plastic parts for John Deere.

▷ Heated to 165 °C, the plastic sheet is sucked up by a vacuum and formed around a metal structure.

▽ The units are further processed by humans and robots.







◁ The lanes in the village of 5,000 hutches are numbered so nobody loses their bearings.

els down the lanes and dispenses 4 litres of milk to every calf. During the first 21 days, the animals are fed a milk replacer and then a mix of milk replacer and whole milk. J and his staff collect the whole milk from some of their dairy farmers, their customers. During their first four days, the calves drink the milk from a bottle with nipple and then from a bucket without nipple. The same bucket is filled with water after feeding. The heifers are weaned when they are eight weeks old. They are fed calf muesli from day three. This is supplied from a truck that travels through the lanes every day.

The hutches are bedded with fresh straw once in week. In summer, the straw is replaced by sawdust. "The sawdust minimises the fly pressure and offers more comfort in hot weather," explains J. In winter, however, sawdust is not as warm as straw.

#### €3.70 PER ANIMAL AND DAY

After spending 70 days in their individual hutches, the calves are transferred to a pen where about 12 animals live in a group. They stay here until day 120 or 180 before they return to their home farm. After the heifers moved out, the hutches are disinfected. Once a year, they receive a full wash. The staff also spread lime to dry the unpaved and sandy ground in the hutch. Lime also raises the pH level, disinfects the ground and absorbs liquids. "The ground may be dry in summer, but in the rainy season, it's often muddy. Not ideal," admits J Hall.

The calves are also weighed when they move to the group pens. This is the second time they are weighed after their arrival. The third and last weighing takes place when they leave the rearing farm. The Holstein calves gain 900g of weight per day. Beef calves gain around 1,000g per day.

From day 1 to day 150, the dairy farmers pay J Hall \$4.10 (about €3.70) per animal and day. Some calves return to their home farms, others set out on a long journey to cattle farms in Texas, Oklahoma, Colorado and Kansas. "In these states, the costs for housing, labour and feed are much lower than here in Wisconsin," explains J Hall. In addition, Wisconsin state puts a ceiling on the number of animals that can be held on one farm; so farmers outsource the rearing part so they can have more cows and calves. The journey to Texas takes the truck about 18 hours and to Colorado 21 hours. The young animals arrive there at the age of five months and stay for 15 months. They return to their home farms when they are about 20 months old and calve for the first time at the age of 22 months. *-af-*



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