

Calf health and management: the essentials

Catherine Colfer
Teagasc dairy advisor,
Johnstown Castle

Sean Roberts, who farms at Old Ross, New Ross, Co Wexford, has 370 cows and heifers to calve down in the spring of 2017. His planned starting date is 30 January. Half of the herd will be calved before the middle of February, with 90% calved within six weeks. Ten to 15 cows will calve on any given day.

Sean condition scores his cows three times per year, including in October where any under-condition cows are identified and will be given a longer dry period and housed with heifers. "The pre-calving diet of the cows is the foundation when it comes to delivering healthy calves," says Sean. "I aim to feed 68 to 70 DMD silage to dry cows. Cows are usually in good condition at drying off, so they only need to be maintained over the winter."

Minerals

"I have the silage tested for minerals and feed dry cow minerals through the water with the target of meeting

necessary requirements as identified from the silage test. It's important in particular to supply the correct amount of phosphorus and magnesium to the dry cow, and to identify the potassium (K) level."

Potassium seems to be increasing in silages and can cause issues with milk fever, hence the recommendation to feed lower K silage/haylage in the week prior to calving.

Although Sean lost about 5% of calves last year, he feels it was a magnesium issue and so has increased the Mg level in his pre-calver mineral this year. "In general, calves are good and lively," says Sean. "We use iodine on the umbilical cord and allow it to break naturally."

Colostrum

"I'm a great believer in getting the colostrum or biestings into the calf as soon after birth as is possible," says Sean, "generally within the first two hours." He also aims for the first milk to be fed and keeps this milk stored separately. Calves have no immunity and must be given antibodies (present in biestings) to survive while they are building their own immunity.



Over 300 farmers attended the Calf Care event on Sean Roberts' farm on 9 January.



Sean measures the quality of the colostrum on his farm with a hydrometer. "Quality is usually good," says Sean. "Good cow condition and a long enough dry period contribute to this." Also, 75% of the herd are Kiwi cross, while the remainder are British and New Zealand Friesian." In general, three litres of the first milk within two hours should be fed. Sean feeds Jersey cross calves about 2.5 litres for the first feed.

AHI recommends feeding rates of six litres per calf per day. All calves are not the average weight, of course, with heavier calves sometimes not getting enough to even maintain their weight. There are many situations where calves need more energy, eg where temperatures are below 15°C (lower critical temperature), heat stress, disease or after vaccinations. Under these circumstances, calves may be underfed.

Research has shown that calves that get more than four litres/day of milk grow faster and are generally healthier. Heifers that grow faster before weaning go on to calve earlier



Sean Roberts and Catherine Colfer.

and have higher milk producing potential.

The birth weight of Sean's Kiwi cross calves averages 35kg to 36kg. Sean feeds them five litres of milk. They are on transition milk for a few weeks, and then move on to an automatic feeder where they are fed 750g milk replacer in five litres of water. This should achieve a 0.75kg ADG target. The same level of solids must be fed as the desired weight gain. They get straw and a muesli-type concentrate for a few days and go on to a pellet after that.

Concentrates

Calf concentrate should be 12MJ Energy, 18% to 20% crude protein and at least 25% starch and sugar with necessary vitamins and minerals. Access to clean fresh water must be available. "I aim to have them eating 1.5kg of ration at weaning at eight weeks, when they will have more than doubled their birthweight," says Sean. "The first three months are a very efficient time to take advantage of potential weight gain. Calves are

let out to grass mid-April to the end of April."

Housing

Ideally, calving in individual pens is preferable, but on Sean's farm cows calve in group pens. Cows are checked at midnight and again at 4am and 6am. In general, cows calve easily with few problems.

"We sell bull calves at three to four weeks old," says Sean. "These are kept in group pens in a loose house. We rear heifer calves in calf hutches roofed by a shed. Seven calves are in a hutch, 7ft x 8ft.

The door of the hutches faces the centre of the shed, with a lying area outside of the hutches. There are no walls on the shed. There are no draughts in the hutches, they come into the hutches at about two days old. A total of 112 calves are housed, ie 16 hutches with seven calves in each.

"As the calves get bigger, they tend to lie outside more. The fall of the floor of the shed is one in 20 to the centre of the shed and one in 60 down the length of the shed to a collecting

Key messages

"For me, the three key areas most important for calf rearing are to get as much colostrum as possible into the calf within two hours; to have good ventilation in calf sheds; and scour prevention including an excellent hygiene and vaccination programme.

"A good start in life for the calves is a key factor in us achieving 99% of heifers calved between 22 -26 months of age on this farm."

tank at the end of the shed. They get plenty of straw and are cleaned out twice during the calving season. Correct ventilation in calf housing is vital."

Scour

Scour prevention is a big focus on the farm. Correct ventilation and hygiene are of utmost importance. Cows are vaccinated on 10 January with Rotavec. This is effective from 12 to three weeks pre-calving to prevent against Rotavirus, Coronavirus and E Coli. Sean also feeds Biolaze Protect in the milk twice a day for the first 14 days. Calves are vaccinated for coccidiosis at 14 days and for pneumonia at one week to 10 days. They are also vaccinated for IBR at three weeks of age.

"When scouring occurs, we remove the scouring calf from the group. This helps to prevent the spread of infection and gives the calf a better chance of recovery," says Sean.

Healthy calves need up to four litres of fluid a day and scouring calves need an additional four litres to replace lost fluids. Give two extra feeds (two litres each) per day of a good quality oral rehydration solution when the calf starts scouring and while scouring persists. These should be given separately from the milk feeds (for example, at lunchtime and again late in the evening). It is safe to give these fluids by stomach tube, assuming you are competent and confident with the technique.

Continue to offer scouring calves normal amounts of milk or milk replacer as long as they want to drink. Do not feed diluted milk to calves. Continue to feed with milk or good-quality milk replacer as it does not cause, worsen or prolong scour.

Milk or milk replacer should not be stomach-tubed, as this can lead to the build up of acids in the rumen and damage to the ruminal wall.