

First fortnight crucial to success of calves

Rachel Pratt

The damage done to calves in the first few weeks of life are seldom recovered, says leading calf-rearing expert, veterinarian Dr Bas Schouten.

At the recent NRM sponsored nationwide series of calf rearing seminars, Schouten listed three main targets for successful rearers – low calf mortalities, early rumen development and cost effectiveness.

Schouten says selecting calves is an important first step. Calves should be selected from the same trusted sources each year to avoid the spread of disease. He says calves should be purchased at a minimum of 38kg and grown at 700g/day.

He adds that when selecting, rearers should not pick calves born by induction, calves on antibiotics, freebies or twins.

"Twins are smaller and their immune systems are less developed. And you always regret taking that damn 'free' calf that infects the whole shed with rotavirus."

He says all calves must have had at least two days on colostrum.

Colostrum has the same amount of fat as whole milk, but four times more protein and 60 times more immunoglobulins.

All calves should receive colostrum

at a rate of 10% of their body weight within ten hours of birth and Schouten recommends stomach tubing colostrum via a Bovotec Bovivet applicator, to ensure that all calves are getting adequate colostrum.

A Poukawa trial carried out by scientist, Dr Paul Muir discovered that 24% of the trial calves did not receive colostrum. Low intakes of colostrum resulted in low immunoglobulin status and a 40% mortality rate. Growth was reduced by 70g/day and the calves were 14kg lighter than they should have been at six months of age.

Another trial carried out by Massey University found that it took calves 2-4 hours on average to stand up and by the sixth hour the calf began suckling. Calves that had not suckled within six hours, had not suckled within 12 hours either.

Schouten says that it is very important to get colostrum within the first 10 hours because many large antibody proteins in colostrum can only pass through the gut wall during the first 10-18 hours.

Navels should be dipped or sprayed with iodine as soon as practical. Calves should be checked for a dry navel before purchase. Signs of navel infection include a wet, swollen, tender or bleeding navel as well as swollen joints; low feed intake and an elevated body temperature (above 39° C).

"Ninety percent of calves that stop drinking when they first arrive, do so because of a navel infection," says Schouten.

Schouten says the drug of choice for navel infection is penicillin, which can be bought off the shelf. But he



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emphasises that the recommended dosage on a penicillin bottle is just a guide and advises 5ml/day/40kg calf for a minimum of five days.

The type of Calf Milk Replacer (CMR) farmers choose is also important.

"Farmers who buy 20 tonne or more of traditional CMR must be certain it

has the same batch number to ensure consistency."

Downgraded powders used in skim based CMRs can result in poor consistency on a batch-by-batch basis, often resulting in scours.

Schouten emphasises the importance of supervising each calf to ensure it consumes the right amount of CMR, especially in the 'once a day' system.

Schouten also warns against multi-feeders for feeding milk to calves less than 2-3 weeks, because they result in uneven intake, which can lead to diarrhoea in greedy calves and poor doers that miss out on their share.

To reduce diarrhoea he recommends feeding calves hot (40° C) milk instead of cold.

"Hot milk should be fed twice a day for the first two weeks of life."

With scours, calves lose their stomach lining, energy, electrolytes and water.

Schouten recommends treating scours with 8-10l of electrolytes per day. "A 40kg calf requires four litres per day, plus four litres to correct dehydration."

Identifying the type of scour is important to prevent recurrence. Different types of scours have different causes that can be avoided. It costs \$40 to have calf faeces tested and results are usually known within 24

hours. Once the scours are gone, return the calf to milk, adding Biopect for a smooth transition.

Biopect is a new generation electrolyte treatment. Unlike most traditional electrolytes, Biopect can be added to milk to treat mild scours or added to water for more severe scours.

The rumen of young calves does not function so milk is diverted straight to the abomasum (4th stomach). To speed up rumen development Schouten suggests providing concentrates ad lib from day one. Concentrates are compound feeds usually containing a wheat/barley base with added protein and other nutrients. They can be pellets, meals or textured feeds. The starches in the concentrate feed the microbes and start the rumen fermenting.

"Make sure the concentrate has high palatability, digestibility and dry matter and there is clean water ad lib," says Schouten.

When housing calves Schouten believes any type of shed will be suitable as long as it does not compromise the health of the calf.

"Woolsheds, implement sheds or hay barns are all suitable as long as they are dry and draft free."

He says in calf barns there is always a risk of ammonia leading to pneumonia, therefore calves need good ventilation and should never be housed with more than 20 per pen.

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There is also a market outlook, a delve into calf prices, calf procurement, advice on colostrums and a recommended feeding regime and an animal health checklist.

When the 2002 newsletter was printed, there was uncertainty over the future of Poukawa and of the calf rearing research programme. However a private and independent research company, (On-Farm Research) has been established at Poukawa and funding for the calf rearing programme is still in place from Meat and Wool Innovations and the MAF Sustainable Farming Fund.

Copies of the newsletter are available by contacting On-Farm Research on (06) 874 8757.