

# Drugs not needed for most sick bobby calves

Fluids, not drugs, are the best way to treat scours in a young calf.

Calf rearing veterinary expert Bas Schouten says 95% of calves suffering from scours can be treated with electrolyte solutions orally (replaces body salts) without the need of alkalinizing agents or intravenous fluids.

Drugs are only needed when salmonella is involved as dehydration, not pathogens, kills calves.

"Calves die from dehydration and a lack of energy, not a lack of drugs."

Schouten says whether scouring is due to infection or nutrition the treatment is exactly the same — give the calf plenty of fluids and energy.

Diarrhoea leads to a loss of body water, salts and energy in a calf. At 5% loss of body water a calf will show mild depression and there will be less urine.

At 6% the eyes will become sunken, 7% it will be staggering and at 10% the calf will be on the ground. At 12% loss of bodyweight the calf will be dead.

A 45kg calf with 5% dehydration will need about 2 litres of fluid/day to replace what was lost and another 4L/day of water for maintenance to survive.

By offering electrolytes (to replace body salts) and clean fresh water ad lib, the calf will drink more voluntarily. This will help it recover quicker.

Schouten says electrolyte and water is not enough to meet the energy requirements of a scouring



Bas Schouten.

electrolyte at lunchtime and milk in the evening. After two days the scours should be gone or else continue the treatment.

He says a farmer with 1000 calves scouring who followed the electrolyte and milk regime ended up only losing six animals.

Schouten told a workshop at the South Island Dairy Event that for \$16.95 calf rearers can buy a digital thermometer to help detect navel infections earlier and avoid large stock losses.

"If a calf that was drinking yesterday is on its own in the corner of a pen, is not drinking and has a temperature, there is a 95% chance it has navel infection."

Farmers should use a digital thermometer as it is crucial in helping to detect navel infection.

The distance between the navel and liver in a calf is very close. An infection only has to travel 5cm from the navel to the liver.

If the liver is infected it quickly develops an abscess, then an abscess of the lungs, spinal column and then joints.

"Any calf with puss in the joints is never going to make it as a heifer replacement."

He says if a calf has a navel infection it should be treated immediately with a minimum of 5ml of penicillin/day over five days. This will save 97% of calves.

Schouten says watch for uneven feeding. Calf rearers should from the first day separate the slow drinkers from the rest with compartment feeders. Operations rearing 1300

calf. If a calf is just given electrolyte it will die after two days due to a lack of energy.

"Milk feeding must be maintained as much as possible."

A 45kg calf will need 3L/day of milk. For a mild to moderate bout of scours Schouten recommends continuing milk feeding and add the electrolyte directly to the milk plus provide water ad-lib. Don't take a scouring calf out of the pen and away from the other calves but just fence it off.

With moderate to severe diarrhoea give electrolyte in the morning, milk at lunchtime and electrolyte in the afternoon with plenty of clean water available to the calf at all times. The next day feed milk in the morning,

table 1: the composition of colostrum

Variables	Colostrum	Milk
Total solids %	23.9	12.5
Fat %	6.7	3.6
Protein %	14.0	3.2
IgG%	6.0	0.9
Lactose %	2.7	4.9

Note: Colostrum has two times more milk solids, four times more proteins, and 60 times more immunoglobulins than cows milk. The energy of the colostrum stimulates the activity and the growth of the intestinal tract.

table 6: fluid replacement for the diarrhoeic calf

Degree of dehydration (%)	Amount of fluid needed to restore body water (L/b)	Maintenance water requirement <sup>a</sup> (L/d)	Total fluid therapy required litres/day
2	1.0	4.0	5.0
4	1.8	4.0	5.8
6	2.7	4.0	6.7
8	3.6	4.0	7.6
10	4.5	4.0	8.5

Note: Calculated for a 45.4kg (100lb) calf

<sup>a</sup> Maintenance water requirement estimated to be 4.0L/d

calves still use compartment feeders as it gives control in those first 10 days calves are feeding which are so crucial.

"You can only use a bulk feeder if the calves are over three weeks of age and feeding evenly together."

He also warns against pumping milk to calves. A top calf-rearing research facility in England with

state-of-the-art feeding facilities still had a 40% mortality rate. The milk lines were far too long and the joints were dirtied by mice and birds which led to salmonella infection.

NZ farmers should avoid the temptation to pump from the dairy shed to calves and carry the milk to the feeding shed to avoid contamination.

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## Don't deprive calves of colostrum dose

Colostrum is the most important nutrient for a newborn calf, says calf rearing expert Bas Schouten.

The veterinarian says colostrum contains high energy levels, growth promoters, vitamins and immunoglobulins which give a calf passive immunity to disease and pathogens.

The most important immunoglobulin is IgG. High blood levels of IgG are closely linked to calf survival.

If calves are deprived of colostrum mortality rates can be 40% plus.

Care needs to be taken when transporting calves home to the rearing sheds.

Schouten says even short distances in an overcrowded or dirty trailer can have a devastating effect on the joints

and navel cord. The incidence of navel infection can be as high as 10%.

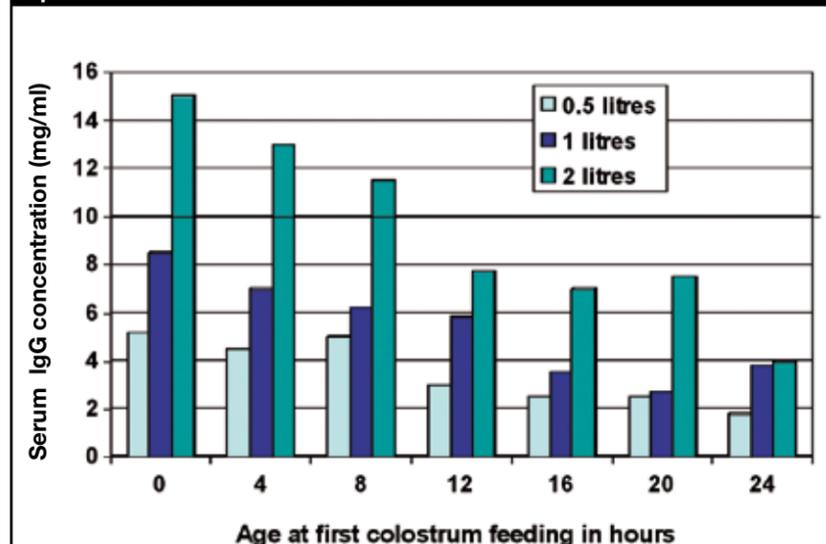
Calves should be given at least one square metre of space and straw or shavings placed in the trailer as bedding. The bedding should be replaced or sprayed daily.

Large trailers should be divided up with 5-10 calves/pen. Navels should be treated with iodine before and after transport.

Rearing sheds should be dry and draught free. They should be open on one side and the pens should hold no more than 20 calves with 10 the ideal number.

Schouten says husbandry, staff, nutrition and housing all have to be good to achieve a well weaned calf.

table 2: volume of colostrum feeding-time and amount: fluid replacement for the diarrhoeic calf



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