

Background: Calves are born without any antibodies to fight disease in the first few weeks of life. The only way they can get these antibodies is through colostrum. Therefore correct management of colostrum feeding is critical.

KEY POINT	WHY
ASAP after birth (Maximum 6 hrs)	<ul style="list-style-type: none"> The calf's gut lining starts to close to antibodies and is completely shut by 24 hours old If fed too late, antibodies cannot be absorbed, leading to failure to transfer passive immunity The nutritional benefits of colostrum could also be missed
First Milk	<ul style="list-style-type: none"> Antibody levels decline in the udder as time passes from calving, so colostrum should be harvested as soon as possible after calving Transition milk has reduced antibody concentration, risking failure to transfer passive immunity
Not pooled	<ul style="list-style-type: none"> Low quality colostrum is over-represented in pooled colostrum Pooling can spread disease such as Johne's disease from one dam to multiple calves

KEY POINT	WHY
Volume: 10% of bodyweight	<ul style="list-style-type: none"> 10% of bodyweight in first 6 hours (= 4L for a 40kg calf) 150-200g of antibody will provide adequate passive transfer; 4 litres of good quality colostrum at 50g/L will provide 200g Less than 10% of bodyweight risks providing insufficient antibodies and failure to transfer passive immunity More than 10% of bodyweight may predispose to ruminal drinking syndrome through abomasal overflow
Second Feed	<ul style="list-style-type: none"> Can be associated with higher blood antibody concentration Risk factors above for feeding too little or too much still apply
Scrupulous Hygiene	<ul style="list-style-type: none"> Bacteria interfere with antibody absorption across the calf's gut, risking failure to transfer passive immunity Bacteria can also cause disease directly Effective equipment cleaning requires hot water and detergent, scrub and disinfection

FEEDING COLOSTRUM CONTINUED

HOW	BENEFITS	RISKS
Suckled by dam	<ul style="list-style-type: none"> • More natural way for the calf to consume colostrum. Important to consider public perception • Sucking closes oesophageal groove delivering milk into the abomasum 	<ul style="list-style-type: none"> • Not possible to monitor quantity of colostrum consumed • Difficult to monitor quality • Risk of delayed or inadequate colostrum consumption, leading to failure of passive transfer • Hygiene of dam is critical (eg. udders and tails) • Risk of other disease from prolonged time in calving box
Suckled via bottle	<ul style="list-style-type: none"> • Sucking closes oesophageal groove delivering milk into the abomasum • Known volume of colostrum delivered in a known time period • Easy to monitor colostrum quality 	<ul style="list-style-type: none"> • Can be time consuming • If insufficient volume consumed, risk of failure of passive transfer • Hygiene and upkeep of equipment is critical
Stomach Tube	<ul style="list-style-type: none"> • Known volume of colostrum delivered in a known time period • Can help ensure consistency and staff compliance • Easy to monitor colostrum quality 	<ul style="list-style-type: none"> • If more than 10% of bodyweight administered, risk of predisposing to ruminal drinking syndrome through abomasal overflow • Training required to ensure correct tube placement • Hygiene and upkeep of equipment is critical

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