

Orphan Camel Calves: First Feed

J. Coventry, Animal Production Officer, Alice Springs

INTRODUCTION

This Agnote provides information on the needs of newborn orphan camel calves, including colostrum replacers, milk replacers and hand-feeding.

Additional information should be sought on the appropriate feeding, management and handling of suckling, weaner and yearling camels.



COMMITMENT

The responsibility and commitment for raising an orphan camel calf should be considered carefully because:

- feeding and care can be time consuming;
- male camels in particular, can have management problems;
- camels can grow into potentially dangerous animals.

SURVIVAL

Orphan camel calves will have low survival rates unless they have drunk colostrum and can sit up and stand. A normal, healthy camel calf can stand and suckle within two hours after birth. Most will walk within five hours and be strong enough to follow their mother within two days after birth.

CAMEL CALF CHECKLIST

Check that the calf is:

- feeding regularly;
- urinating and defecating regularly;
- sleeping and playing regularly;
- gaining weight.

If the camel calf is doing all this, then it is probably healthy.

If the camel calf is not doing all this, then seek advice from a veterinarian or someone who has successfully raised camel calves.

Table 1. The development and needs of orphan camel calves

Age of camel calf	Approximate weight of camel calf	Note	Comment
<i>Newborn</i> (birth to 5 days)	35 - 40 kg	Navel cord is not yet shrivelled.	Feed colostrum or replacer up to 8 times per day. Provide clean, dry, quiet shelter and check that: <ul style="list-style-type: none"> • navel cord is clean and dry (<i>disinfect if still moist</i>); • urination and defecation are problem free.
<i>Young</i> (1 week to 2 months)	40 - 70 kg	Navel cord is shrivelled.	Feed milk or replacer, reducing from 8 to 4 times per day. Provide clean, dry, quiet shelter. Provide a companion animal.
<i>Growing</i> (2 to 4 months)	70 - 110 kg	Calf still drinks milk and starts eating solid feed.	Feed milk or replacer 4 times to once per day. Feed high quality, high protein solid feed. Provide clean, dry, sheltered pen. Provide a companion animal if possible.
<i>Weaner</i> (4 to 9 months)	110 - 150 kg	Calf drinks less milk and eats more solid feed.	Wean onto high protein solid feed e.g. lucerne hay, 'topfeed'. Yard with other camels.

FOSTERING

Fostering onto a lactating camel cow is the first option for an orphan camel calf. For the fostering to be successful, the calf's 'new' smell must be hidden from the cow and the calf must freely drink milk from the cow's udder. This process can be achieved by first restraining the camel cow and orphan calf, in order to wipe a strong-smelling, non-toxic substance such as fish oil over both the cow's nose and the calf. This will block the ability of the cow to detect the

orphan calf's new smell. Next the foster camel cow should then be left alone with the orphan calf for a day to let the calf drink.

HAND-FEEDING

Hand-feeding is the second option for an orphan camel calf. This can be done with one of the following:

- colostrum collected within the first three days of lactation from camels, goats or cattle;
- milk collected from camels, goats or cattle;
- customised colostrum or milk replacers; or
- commercial colostrum or milk replacers.

Commercial milk replacers such as VEANAVITE® and DENKAVITE® can be used according to the manufacturer's directions or used according to customised recipes. Customised recipes are given for camel colostrum and milk replacers in Tables 3 and 4.

HAND-FEEDING ROUTINE

Initially hand-feed fresh colostrum, milk or replacer at body temperature with a large rubber calf teat. This ensures that the camel calf receives milk at an adequate temperature and flow rate. After the first couple of weeks, room temperature milk is satisfactory.

Refrigerate excess colostrum or milk replacer and always keep the feeding equipment clean.

In general, feed ½ litre of milk or replacer four times during the day and twice during the night. Build up the amount of each feed and reduce the frequency to twice a day by four months of age. By this time, weaning onto solid feed has commenced.

See Table 2 for an age guide to the amount of milk to feed.

Table 2. Guide to the amount of milk to feed to orphan camel calves

Age of camel calf	Approximate weight of camel calf	Number of feeds per day	Maximum amount per feed
up to 1 week	40 kg	up to 8 (initially colostrum, 2-hourly)	¾ litre
2 to 4 weeks	50 kg	6 (4-hourly)	2 litres
up to 2 months	70 kg	4 (6-hourly)	3½ litres
up to 3 months	90 kg	3 (8-hourly)	4½ litres
up to 4 months	110 kg	2 (12-hourly)	3½ litres
up to 5 months	130 kg	1 (24-hourly)	3½ litres

Table 3. Camel colostrum replacers*

<p><u>Replacer #1</u> camel, cattle or goat colostrum.</p> <p><u>Replacer #2</u> commercial colostrum e.g. 'IMPACT' ® (Wombaroo Food Products)</p> <p><u>Replacer #3</u> (recipe for 1 litre) 600 mL cattle or goat milk; 300 mL clean water; 1 whipped egg; 5 mL paraffin oil (or 5 - 10 g charcoal); 10 - 15 g diarrhoea salts/ electrolytes; 10 - 20 g glucose; vitamin B and C; 10 mL plain yoghurt.</p>	<p><u>Replacer #4</u> (recipe for 1 litre) 1 L commercial cattle or human milk replacer (as per manufacturer's directions); 5 mL paraffin oil (or 5 - 10 g charcoal); 10 - 15 g diarrhoea salts/ electrolytes; vitamin B and C; vitamin A and D drops (as per manufacturer's directions); 10 mL plain yoghurt.</p> <p>* Use 'colostrum replacers' up to day 5 of life.</p> <p>* Fresh colostrum can be collected and frozen, then thawed and carefully warmed to body temperature when needed.</p> <p>* For extra immune protection, add 50 mL of camel serum to these 'colostrum replacer' recipes.</p>
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Table 4. Camel milk replacers**

<p><u>Replacer #1</u> (recipe for 1 litre) 500 mL cattle milk; 500 mL skim milk; 10 - 20 g glucose; 50 g skim milk powder; 10 mL plain yoghurt.</p> <p><u>Replacer #2</u> (recipe for 1 litre) 1 L goat milk; 50 g skim milk powder; 10 mL plain yoghurt.</p>	<p><u>Replacer #3</u> (recipe for 1 litre) 1 L commercial cattle milk replacer (as per manufacturer's directions); 10 - 20 g glucose; 50 g skim milk powder; 10 mL plain yoghurt.</p> <p>** Use 'milk replacers' as early as day 3 of life.</p> <p>** To improve calf growth rate, increase skim milk powder to 500 g in these 'milk replacer' recipes.</p>
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ACKNOWLEDGEMENTS:

The following publications were consulted for this Agnote:

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The following persons and organisations were consulted for this Agnote:

I. and L. Conway, Kings Creek Station, via Alice Springs NT.

B. Döriges and J. Heucke, Consultant Camel Researchers, c/ DPIFM (Division of Primary Industry) Arid Zone Research Institute, South Stuart Highway, Alice Springs NT.

N. and I. Fullerton, Camel Outback Safaris, Stuarts Well, via Alice Springs NT.

P. Seidel, Central Australian Camel Industry Association, PO Box 8760, Alice Springs NT 0871.

N. and M. Smail, Frontier Camel Farm, Ross River Highway, Alice Springs NT.

O.J. Williams, c/ Central Australian Camel Industry Association, PO Box 8760, Alice Springs NT 0871.

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