



Use of Critical Care® for Herbivores in the Common wombat (*Vombatus ursinus*)

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Digestive Physiology of the Common Wombat

The Common wombat mainly eats a diet of grasses with a low nutritional value. The majority of this diet is indigestible fibre from the plant cell walls. The first part of the large bowel (proximal colon) has evolved into site where energy is taken from the grass fibre. The proximal colon of the Common wombat is so large it represents 68% of the total gut volume.

The grass fibre is broken down by bacteria. There are more bacteria in the colon than elsewhere in the gut. These bacteria break down the fibre to create a source of energy for the wombat, permitting it to use low quality grasses and survive periods of food shortages that occur with drought.

The horse is the mammal with a similar digestive tract to the Common wombat. Although the Southern Hairy-nosed wombat has some subtle but significant differences in its grazing strategy and length of the proximal colon, its digestive tract is similar to the Common wombat.

Why Use Oxbow's Critical Care® for Herbivores?

Critical Care® for Herbivores is a premium grass-based recovery food which can be given to herbivores that are unwilling or unable to eat their normal diet due to injury or illness. Providing an easily digestible source of fibre to promote the development of the normal bacterial population in the proximal colon seems prudent when the digestive physiology of the Common wombat is considered. As Common wombats eat grass, a supplement with finely ground grass, as the primary ingredient, is an appropriate addition to the diet.

The addition of high sugar or high fat ingredients to the diet of wombats may be detrimental in that it may favour the growth of less desirable bacteria that prefer those conditions, and not those adapted to a high fibre diet.

Uses for Oxbow's Critical Care® for Herbivores

In a healthy wombat:

Oxbow's Critical Care® for Herbivores can play a role in assisting the wombat at the age of weaning when the introduction of solid food takes place. By providing an appropriate fibre level, the normal gut flora can be established. This can be offered at the stage that the molars have erupted and grass is being introduced for the first time. This occurs from an Age Factor of 0.6 or approximately 1.2kg onwards.

In a sick wombat:

1. *Diarrhoea*: Oxbow's Critical Care® has been successfully used in wombats with diarrhoea, together with medical therapy. It has been used in cases with bacterial, fungal and protozoal diarrhoea. In these instances, Critical Care® provides a source of fibre that can be readily converted into energy and helps the faeces to become firm.
2. *Other diseases, for example cystitis or pneumonia*: Oxbow's Critical Care® can be used as a supplement for energy during these illnesses. A grass-based diet can assist in the alkalisation of urine. Care should be taken with offering any food item by mouth to a wombat with pneumonia to ensure that aspiration into the lungs does not occur.
3. *Failure to thrive*. Once it has been confirmed that there is not an infectious cause for failure to gain weight, by examination of the faeces by a veterinarian, Critical Care® may assist by providing a readily available source of energy. The protein levels are sufficient to meet the requirements of a growing wombat.

Instructions for use of Critical Care®

Wombats may accept either the original (aniseed) or apple/banana flavour.

Making up Critical Care® for Herbivores

Except in particular cases under veterinary care, Critical Care® should not be added to the milk, but fed separately at the consistency of mousse or porridge. Addition to milk will result in less energy being offered to the wombat, and thus a greater volume will be required. As the wombat stomach is small, it is less likely to get sufficient energy before it feels full if added to milk.

Add 2 two tablespoons of pre-boiled warm water to 1 level tablespoon of Critical Care® and mix well to a consistency that can be drawn up into a catheter-tipped syringe. Although the mixture can be refrigerated for up to 24 hours, it is preferable to mix up fresh for each feed.

How to Offer:

Oxbow's Critical Care® should only be offered once wombats are warmed and adequately hydrated. Giving food to a cold, dehydrated and shocky wombat means that the food will not be absorbed by the gut and runs the risk of aspiration of the food.



Wombats are fed in an upright position – i.e. not lying on their back like a kangaroo. Critical Care® is offered using a 60ml catheter-tipped syringe. The nozzle of the syringe is placed in the mouth behind the incisors and in front of the molar teeth. Only 1-2ml per kg is offered at a time before the syringe is removed from the mouth and the wombat is permitted to chew and swallow for up to a minute before more is offered.

Amount to Offer in a Day

As wombats have a lower energy turnover in comparison to mammals, **they only require 18 grams (2 tablespoons) of dry product per kilogram of body weight per day, if fed as a sole food.** This is not normally recommended as both milk and free access to grasses (if appropriate for the age) should be offered wherever possible. What this does mean is that a small volume may be of benefit to the wombat. This amount may be divided into 2 – 3 feeds a day. It can be offered after, or instead of a milk feed.

References

1. *Marsupial Nutrition*. Chapter 4: Hindgut fermenters – the wombats. Ed: ID Hume. Pub: Cambridge Press, 1999
2. *Life of Marsupials*, Chapter 8: Wombats: vegetarians of the underworld, by H Tyndale-Biscoe, Pub: CSIRO Publishing, 2005.
3. *Fauna of Australia*, Chapter 32. Vombatidae, by RT Wells. Available online: <http://www.environment.gov.au/biodiversity/abrs/publications/fauna-of-australia/fauna-1b.html>

Where Can I Get it?

Oxbow's Critical Care® for Herbivores is available in Australia from your veterinarian or directly from Specialised Animal Nutrition Pty Ltd (www.oxbowaustralia.com; 07 5525-1014) with veterinary approval.