Introduction to the Veterinary Profession

VETS30030 / VETS90122

THE UNIVERSITY OF MELBOURNE

bit.ly/2ZFtXuv

Understanding and caring for domestic animals

Nutrition case study

Acknowledgement of country

Teamwork tip of the week

- Choose a group leader for each session. On that day, they will make sure the discussion stays on track to complete the work and ask different group members for contributions
- Choose another member to be scribe and write on the group worksheet

Accessing the case study documents

- Click on the discussion named ‘Link to case study work documents’
- Within that, there are individual links for each group
- Click on the group number, then on the link for the scenario 1
- Once scenario 1 is completed, click the link for scenario 2. For scenario 2, you will also need the feed calculator, which is in the main case study folder

Questions 1 and 3: Digestive anatomy/physiology

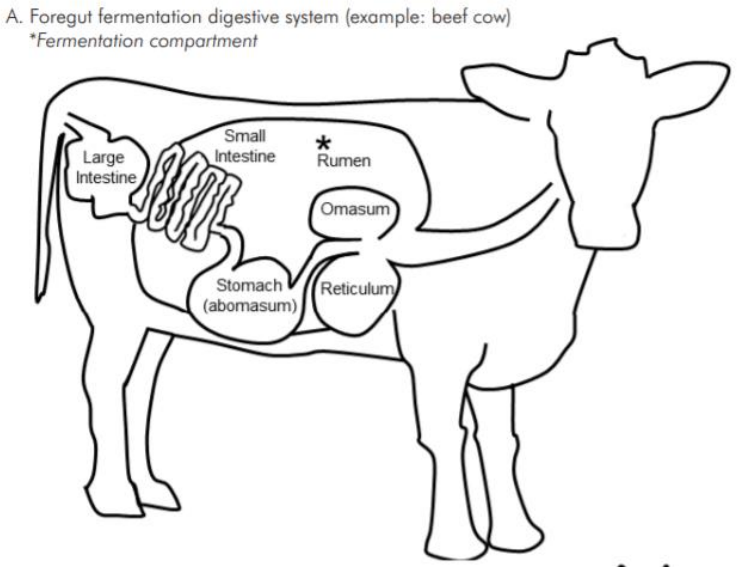
Herbivores					Carnivores	Omnivores	Insectivores
Foregut Fermenters				Hindgut Fermenters			
Ruminants/pseudoruminants			Non-Ruminants				
Grazers (feed mostly on grass)	Browsers (feed mostly on leaves, soft shoots or shrubs)	Concentrate selectors					
Hippo	Moose	Giraffe	Kangaroo	Elephant	Dingo	Bandicoot	Echidna
			Macaw	Koala - caecum	Kookaburra	Meerkat	
					Wedge-tail eagle	Emu (mostly seeds)	
Cattle, Sheep, alpaca	Goats, alpaca			Horses	cats		
				Rabbits		Pigs Dogs	
				Guinea pigs		Chickens	

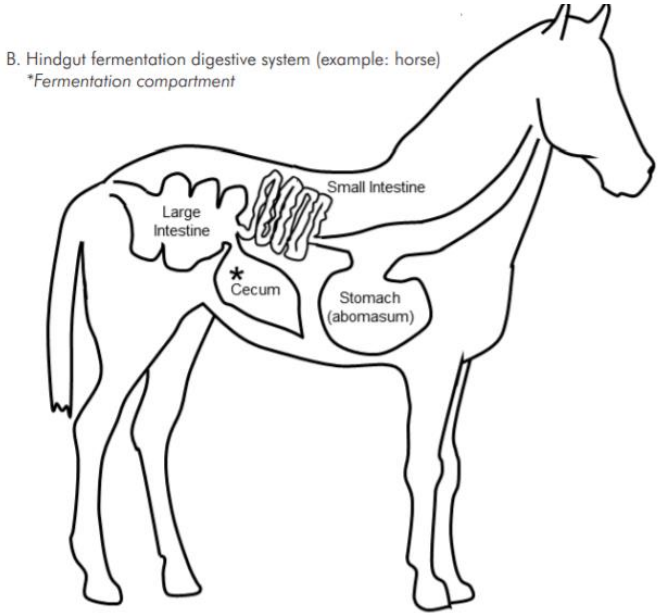
Question 2 - Matching feeds

Pasture	Hippo, kangaroo,
Acacia/willow browse	Giraffe. moose, elephant
Macropod pellets	Kangaroo
Hay	Hippo, elephant
Variety of fruits and veges	Hippo, elephant, macaw, bandicoots
Eucalyptus leaves	Koala
Small rodents	Dingo, kookaburra, bandicoots
Variety of insects (e.g. ants)	Echidna, kookaburra, bandicoots
Dog kibble	Dingo
Variety of berries	Macaw, bandicoots
Variety of seeds	Macaw, emu, bandicoots

Question 4 – Benefit of foregut fermentation compared with hindgut

- Cellulose is not fermented until after passing through the stomach and small intestine. Absorption of products from cellulose fermentation is less efficient in the colon so overall more nutrients are lost in faeces





Images: University of Wyoming

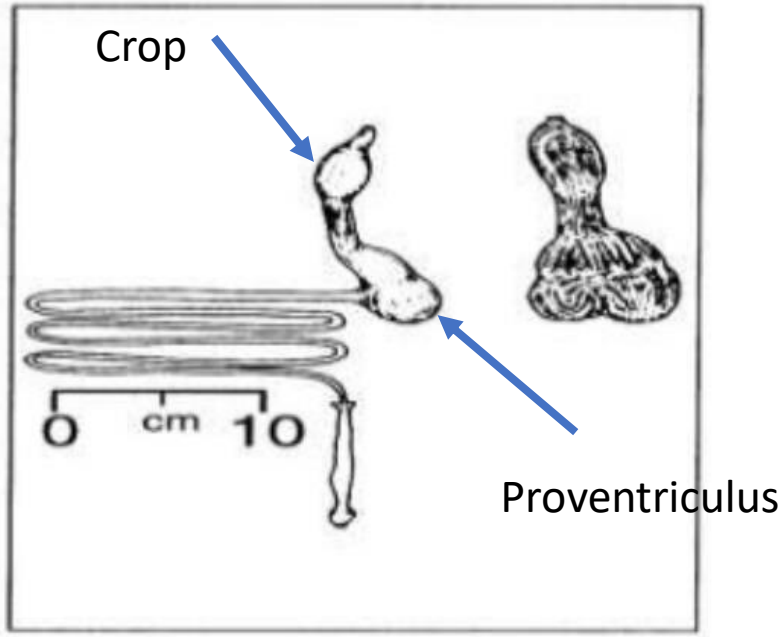
Question 5 – Benefits of coprophagy

- Horses have the most to gain it helps increase absorption of nutrients lost in faeces, as discussed in previous question. Cattle and sheep are foregut fermenters so have maximal opportunity to absorb nutrients in the small intestine

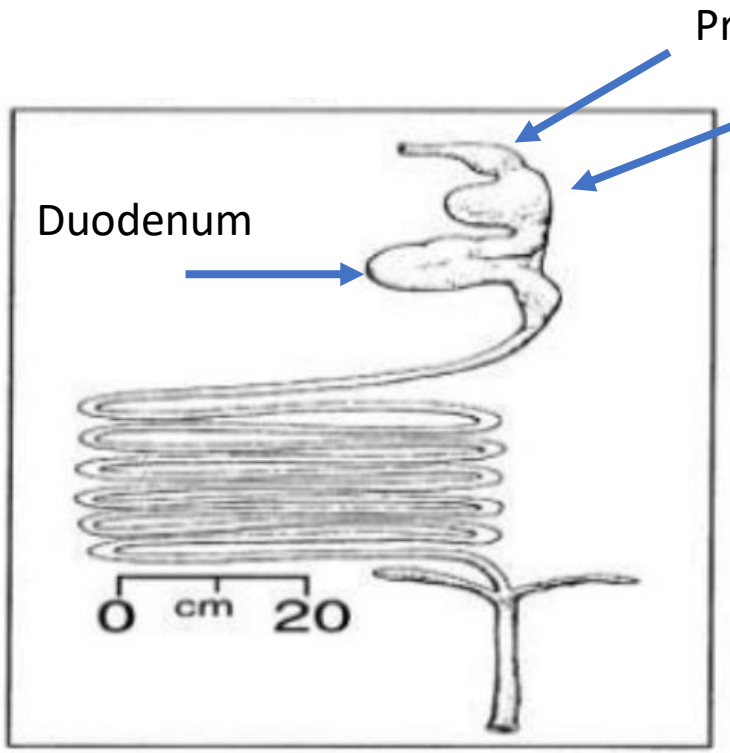
https://www.equisearch.com/discoverhorses/coprophagy-in-horses-gross-but-not-abnormal

Question 6 – Avian digestive systems

- The proventriculus is like a human stomach where food is digested as it is exposed to gastric (stomach) enzymes and is well developed in carnivorous birds. The ventriculus (gizzard) grinds up foods so is more important in seed eaters.



https://www.slideshare.net/rollandarriza/avian-digestive-system



Stevens and Hume, 1995