



The importance of fibre in rabbits' diet

...and introducing 'Fibrevores'



In this presentation

- ⌘ What are 'fibrevores'?
- ⌘ Why is fibre important?
 - Rabbit digestion, how it works and what it needs
- ⌘ What are the types of fibre
- ⌘ The importance of fibre to the health and wellbeing of rabbits
- ⌘ Sources of high quality fibre
- ⌘ The best way to feed pet rabbits



'Fibrevores'

⌘ 'Fibrevores' are animals that are obligatory fibre-eaters

- This means that they absolutely NEED to eat fibre, first and foremost
 - In a similar way, cats are obligatory meat-eaters

⌘ Fibrevores are:

- Rabbits
- Guinea pigs
- Chinchillas
- Degus



Fibre

- ⌘ Fibre is found particularly in plant cell walls
 - It includes pectins, hemi-cellulose, cellulose and lignin
- ⌘ It can be divided into:
 - Digestible Fibre and
 - Indigestible Fibre
- ⌘ Together both types are beneficial fibre and are **essential** in rabbit nutrition

What Rabbits Want



FIBRE!

- ⌘ In the wild, rabbits mainly eat **grass**
 - with a few leaves, vegetable matter and occasionally bits of twig & bark
- ⌘ Rabbits have a digestive system perfectly developed for eating fibre, such as grass
- ⌘ Pet rabbits rely on their owners feeding them a diet that mimics what they would eat in the wild
- ⌘ Their digestive system relies on:
 - A very delicate balance of bacteria
 - Fibre moving through their gut at all times
- ⌘ If levels of bacteria change
 - Health problems such as diarrhoea and sticky bottom occur
- ⌘ If movement of fibre through the gut stops
 - This can quickly be a cause of death



Rabbits are prey animals

- ⌘ Grass is not rich in nutrients but rabbits have evolved to be able to digest grass and fibre to extract all the nutrients they need
- ⌘ Cows are big animals that also eat grass and so have developed massive stomachs (80 litres big) and a rumination process to digest grass and nutrients.
- ⌘ Rabbits however, are prey animals who have many predators in the wild
 - They need to be a size and build that enables them to quickly run away from predators
 - So they can't have a large stomach & digestive system like a cow
- ⌘ When eating they are looking for predators not at what they are eating
 - Hence evolved with eyes toward top of head
 - They cannot see what they eat
 - So the look and colour of food is irrelevant to them



Rabbits

Let's talk about droppings!

- ⌘ Rabbits need to process their food twice to get all the nutrients they need from it
- ⌘ So rabbits are physically unique
- ⌘ They eat their own droppings
- ⌘ And they should and **NEED** to do this
 - It is not the same issue as for dogs!
- ⌘ Actually, rabbits have 2 types of droppings
- ⌘ The droppings that rabbits eat are special
 - They are full of additional nutrients that the rabbit needs
 - Called 'sticky droppings' or caecotrophs



Rabbits

Let's talk about droppings!

♂ Left hand side:

Sticky droppings

- or 'caecotrophs'

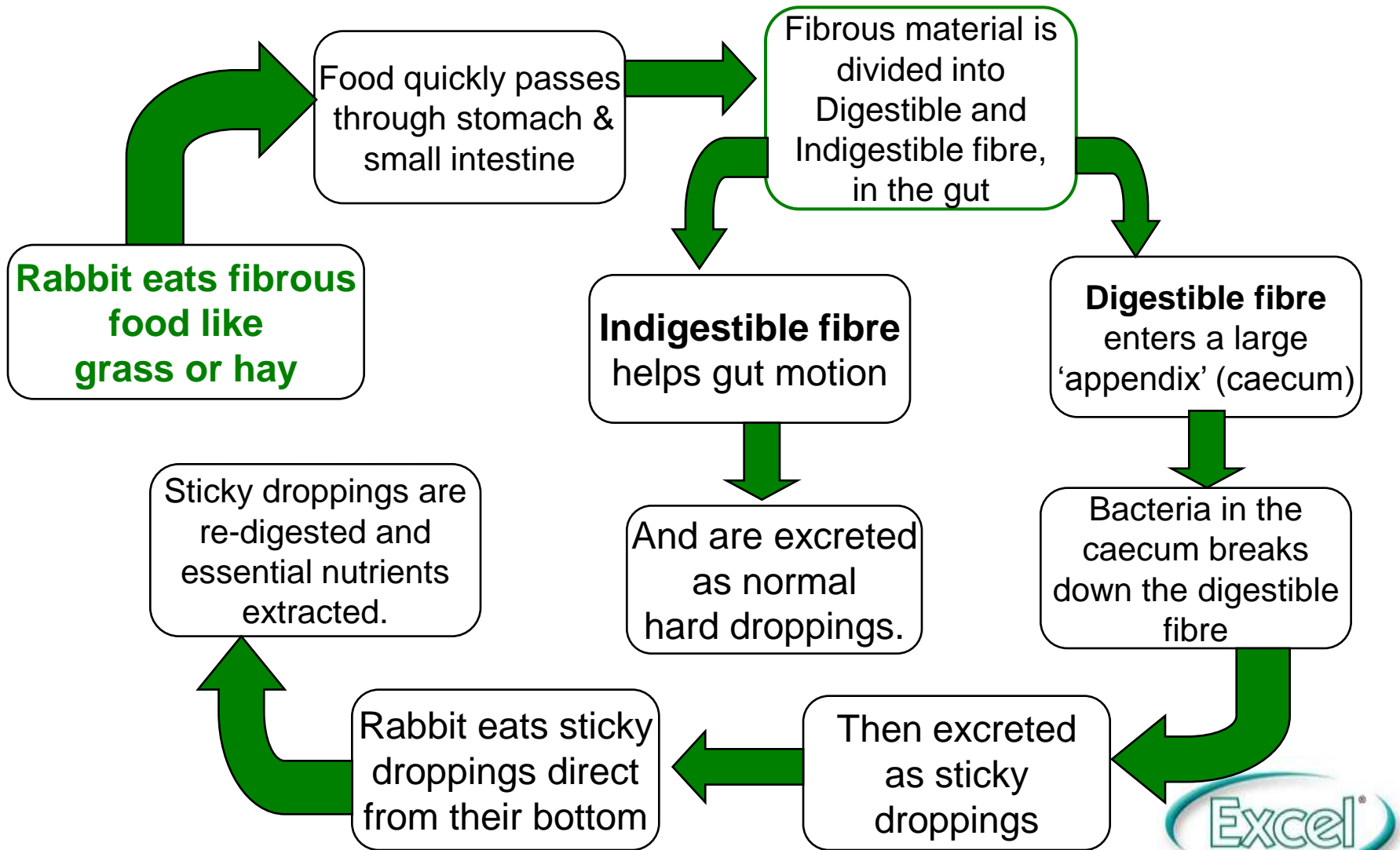
♂ Right hand side:

Hard droppings

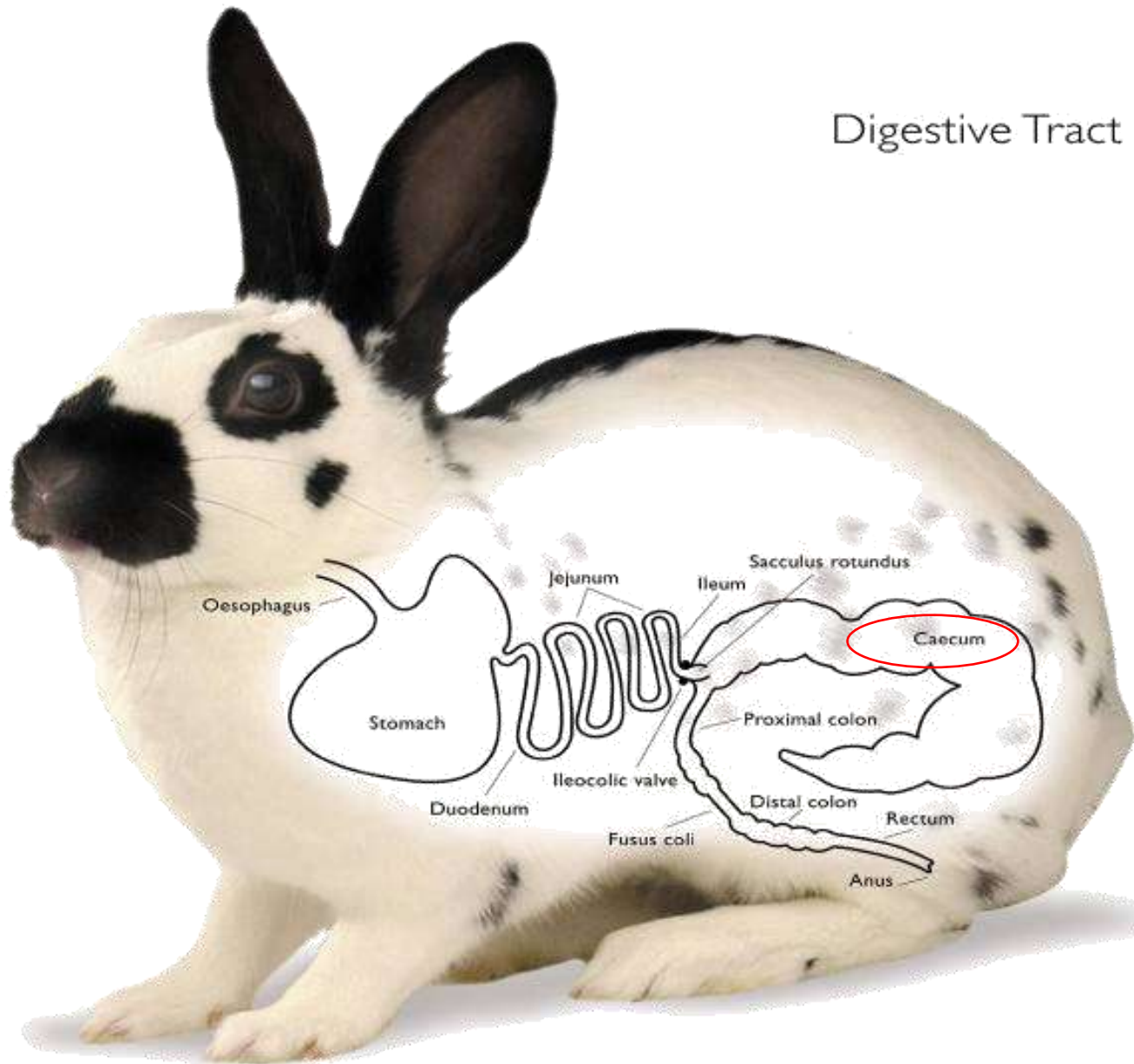
- Hard droppings from a healthy rabbit are perfectly spherical
- Not tear-drop shaped



Rabbit Digestion



Digestive Tract of the Rabbit



Feeding the good bacteria in the rabbit

- ⌘ Rabbits cannot digest their food without the help of beneficial bacteria and other microbes
- ⌘ Maintaining the balance of bacteria in their digestive system keeps rabbits alive
- ⌘ Feeding rabbits the right sort of food is therefore one of THE most important aspects of rabbit care to ensure healthy, happy bunnies!
 - Choice of food is therefore critical



Rabbit Diet

...and the role that fibre plays



The problem with muesli-style food for rabbits

1. Selective feeding

- ⌘ Rabbits can become fussy eaters
- ⌘ They will eat sweet foods, as an easy way to get a glucose fix
- ⌘ This can result in rabbits picking out bits of their food and leaving the rest
- ⌘ Leading to an imbalanced diet, with rabbit missing out on essential nutrients, like fibre, calcium, phosphorous and Vitamin D

2. Lack of fibre

- ⌘ Muesli-style foods do not contain enough fibre

3. Unhealthy ingredients

- ⌘ Often, the actual ingredients in muesli foods are high in sugar and starch
- ⌘ These are difficult for the rabbit to digest and can lead to health problems and obesity

Remember: Rabbits can't see the food they're eating, so what it looks like really doesn't matter!



Fibre in the rabbit's diet

⌘ Indigestible fibre

- Longer in size
- Is needed by the rabbit to keep digestive system going
 - Gut motility
- Also plays an essential part in keeping teeth ground down
- And helps stimulate appetite

⌘ Too little indigestible fibre in the diet leads to gut stasis

- Movement round the digestive system stops
- This is fatal for rabbits



Fibre in the rabbit's diet

⌘ Digestible fibre

- Very short fibre, less than 0.3 - 0.5mm after being eaten
- Is needed by the rabbit for essential nutrition
- Maintains right level of good bacteria in the gut
 - Essential for digestion to work

⌘ Too little digestible fibre in the diet leads to malnutrition

Fibre

Physical & Emotional Health

♋ Fibre is vital for:

- Digestive health
- Dental health
- Emotional health



Fibre

Digestive Health

⌘ Fibre promotes healthy digestion by:

- ensuring gut motility
- promoting the optimal balance of bacteria in the gut
- helping to prevent abnormal droppings and caecotrophs
- helping stimulate appetite

⌘ Burgess Excel Nuggets

- Contain high levels of beneficial fibre (digestible and indigestible fibre) and **all** the nutrients rabbits need, in every mouthful
 - Prevents selective feeding
- Contain a prebiotic - promotes beneficial bacteria for healthy digestion



Fibre

Dental Health

⌘ Rabbits teeth grow continuously

- 8-12cm / year

⌘ Fibre promotes dental health by:

- encouraging greater use of the teeth
- helping with optimal dental wear

⌘ Excel Herbage and Forage

- Excel Herbage: Timothy hay with Marigolds & Dandelions
 - An excellent source of beneficial long fibre
 - Nibbling on hay assists the grinding of teeth, keeping them in great shape
- Excel Forage: Barn-dried grass
 - Another great source of fibre and essential nutrients

Remember: Hay is essential food for rabbits, not just bedding!



Fibre

Emotional Health

⌘ In many ways, fibre promotes emotional health for rabbits

⌘ Fibre in the form of hay or dried grass:

- Encourages natural foraging behaviour
- Prevents boredom
- Can be provided in 'containers' that stimulate the rabbit
 - Tunnels, hay balls etc

⌘ Fibrous healthy snacks (like Excel Nature Snacks):

- Provide emotional enrichment
- Encourage interaction and bonding between pet and owner



The Excel Feeding Plan: Complete nutrition in 5 simple steps



Provides all the beneficial fibre and nutrients that rabbits need



Burgess Excel



Also available in the Excel range:

- Excel Junior & Dwarf Nuggets
- Excel Lite Nuggets: lower calorie
- Excel Nuggets for Guinea Pigs
- Excel Apple Snacks: a healthy treat, ideal if your rabbit is off their food

