

# Care of game species



evropský  
sociální  
fond v ČR



EVROPSKÁ UNIE



MINISTERSTVO ŠKOLSTVÍ,  
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání  
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

## Care:

- Regulation of the game stock and structure of their population
- Care of environment
- Additional feeding
- Protection of game



Numbers of large game species have been increasing in the last 40 years.

Numbers of small game species have been decreasing in the last 30 years.

Two main problems of game management are damages caused by large game and low density of small game.

Protection against game damages is limited and does not solve protection of natural forest regeneration which is important for ecosystems.

Comprehensive care of game is focussed on:

Winter food supply

Protection against stress

Food supply in autumn - Potrava na podzim -  
kondice do zimy

Food conditions of game are improved by care of natural food sources, by additional feeding and also by reduction of game numbers.

Density of game must respect the carrying capacity of environment. This the most important part of game management and low the intraspecific competition against food.

Quality of game management is not determined by high density of animals but by their conditions.

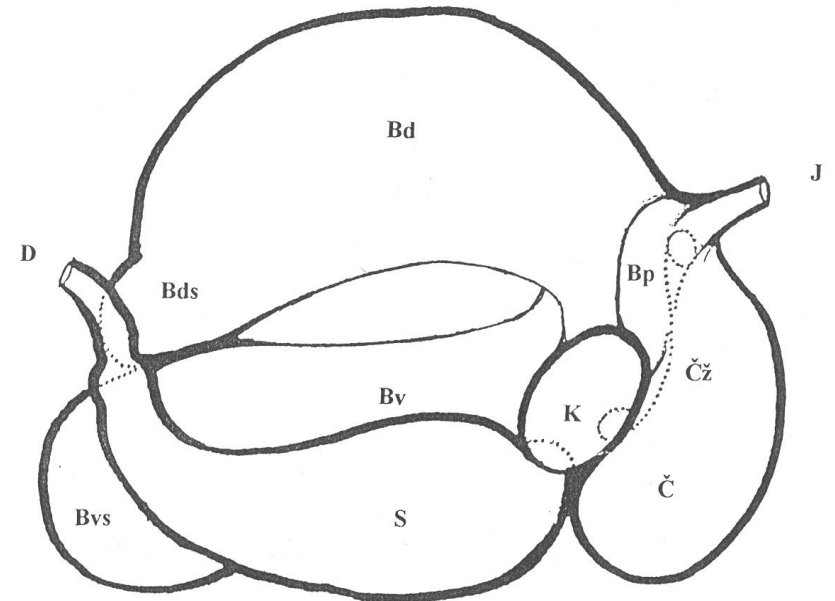
In the Central Europe is hunting the only one important methods for game control.

Planning of hunting bag is in the Czech republic based on estimation game numbers, but should respect also damages on vegetation.

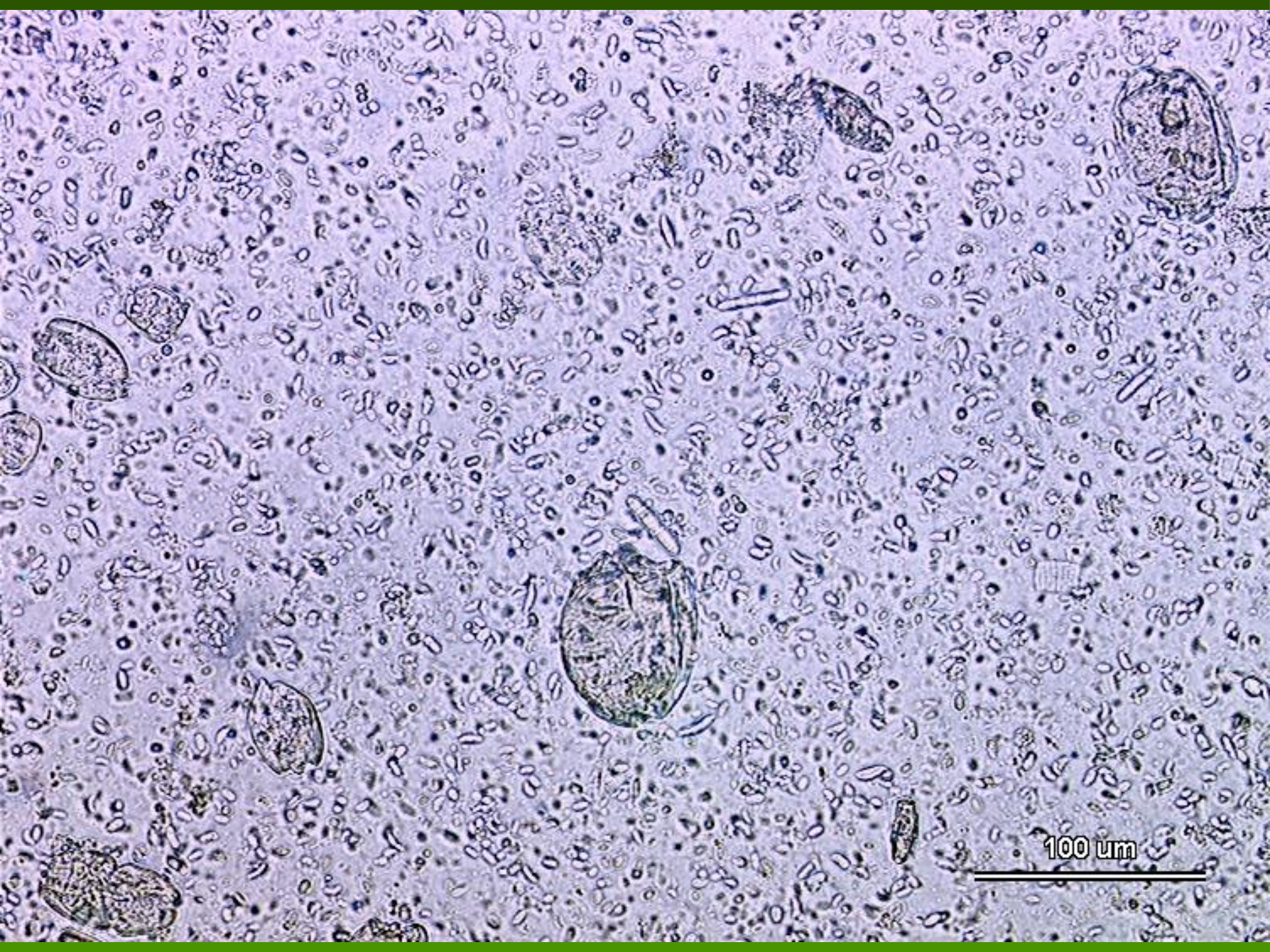
# Ungulates = ruminants= importance of rumen microecosystem

-There are differences in:

- species
- seasons







100  $\mu$ m



# Ciliates and bacteria in rumen

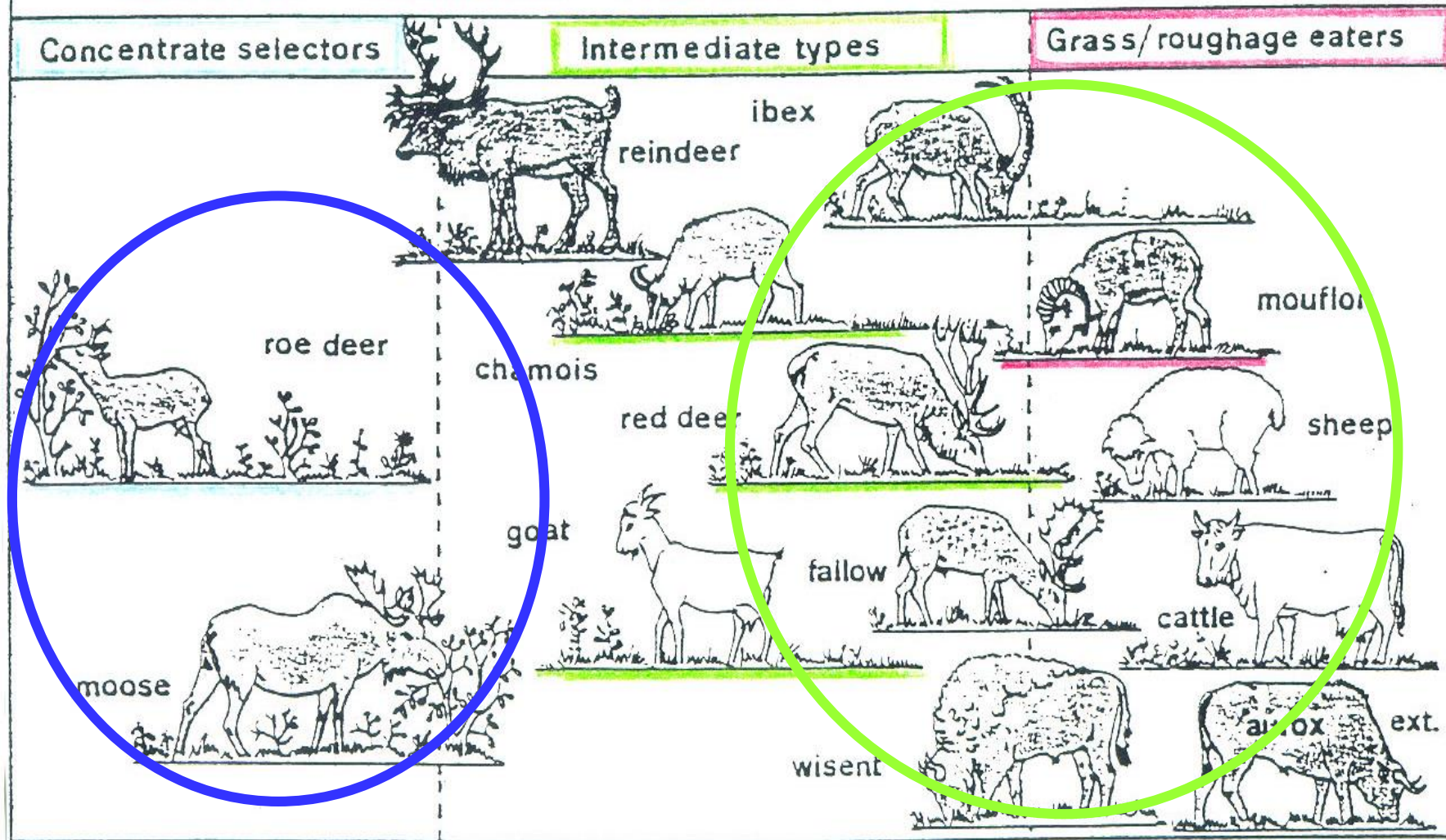
- Stable temperature and moisture
- Stable diet composition and stable feeding behaviour

Every change in the diet cause deffect in digestion.



# THEORETICAL MODEL

## EUROPE: RUMINANT FEEDING TYPES



## Browsers:

- preference of quality of diet
- consume smaller spectrum of plants
- do not consume grasses

## Other types:

- important is quantity
- can change diet





Forest on border

Forest in stones

Natural pastures

Forest connected to pasture

Pasture on the slopes

Main pasture

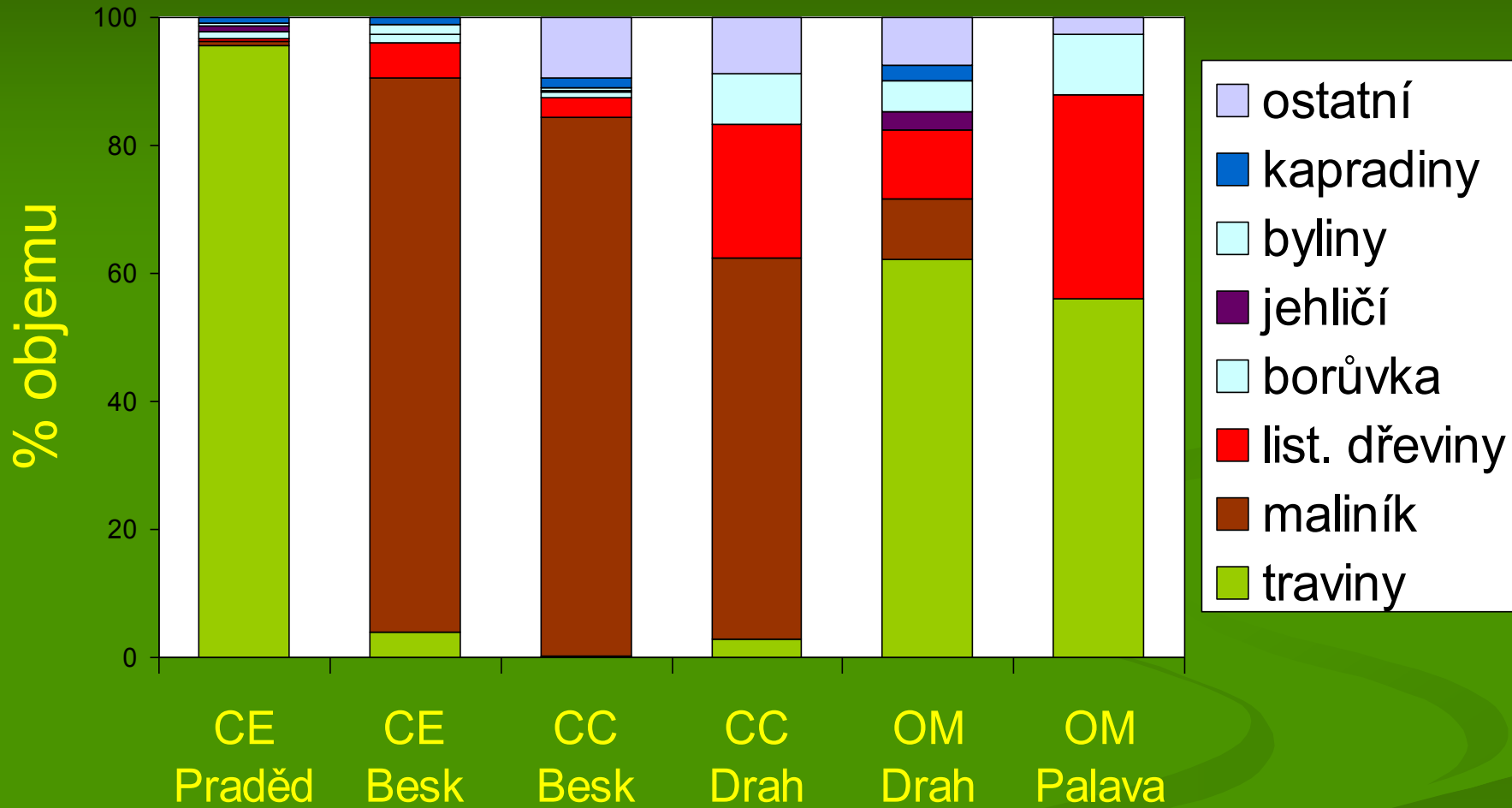




# Diet composition



# Diet composition in the vegetation period



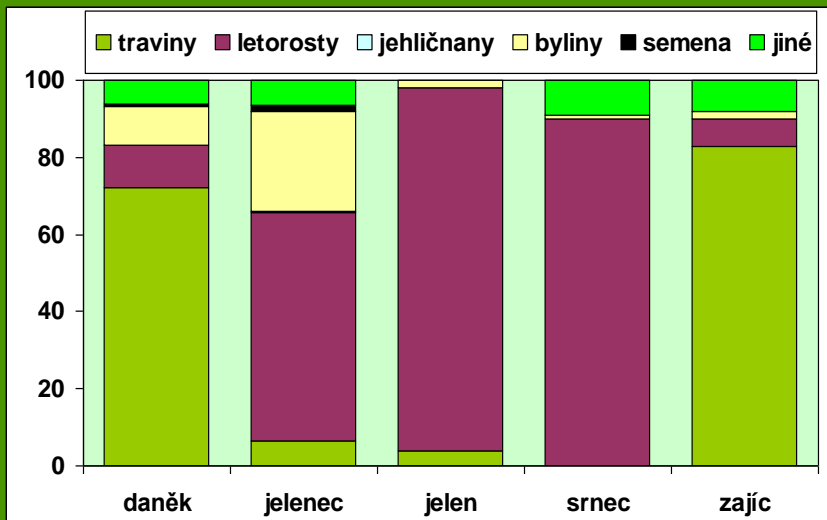
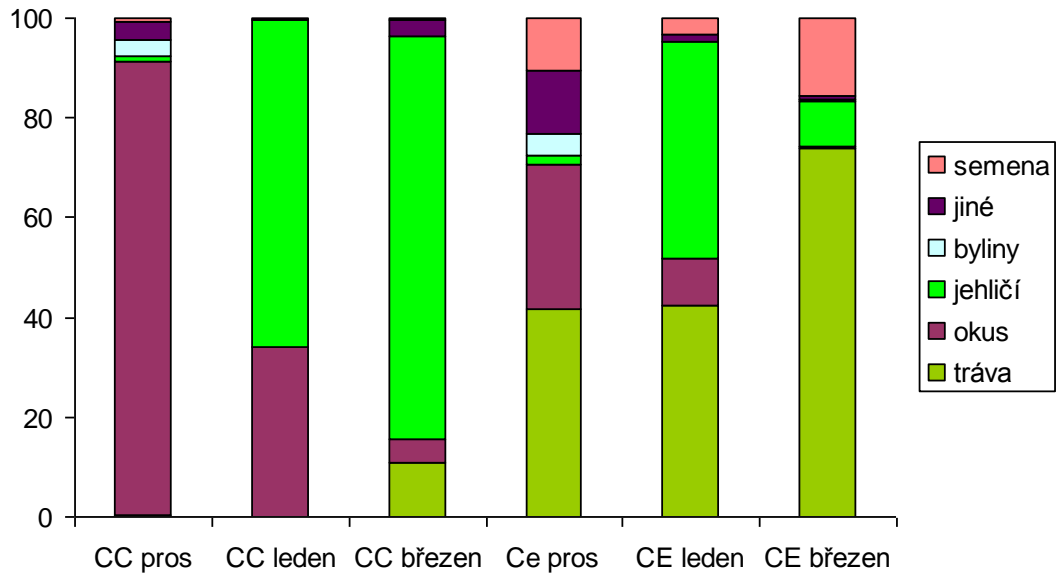
Some species eat grasses = save trees and shrubs



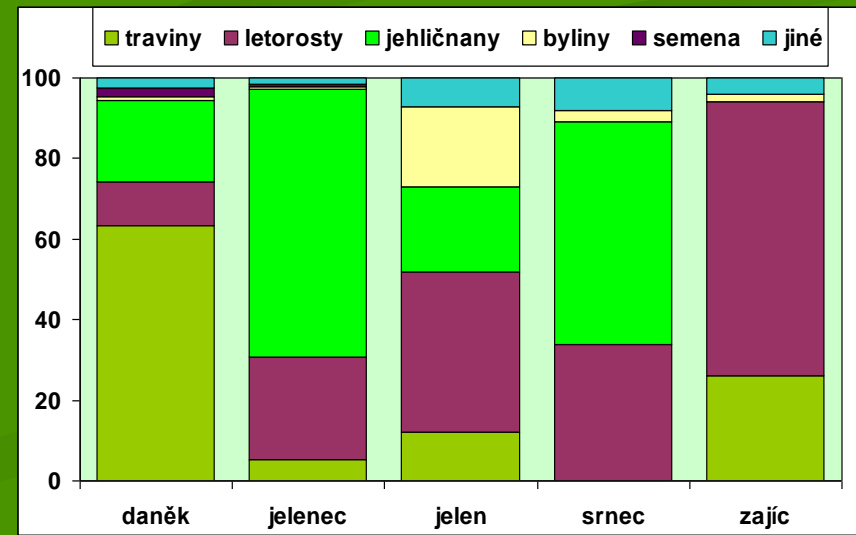
# Winter diet - important for damages on forests

Diet of roe and red deer in Brdy hills

In winter are smaller differences between specialists.

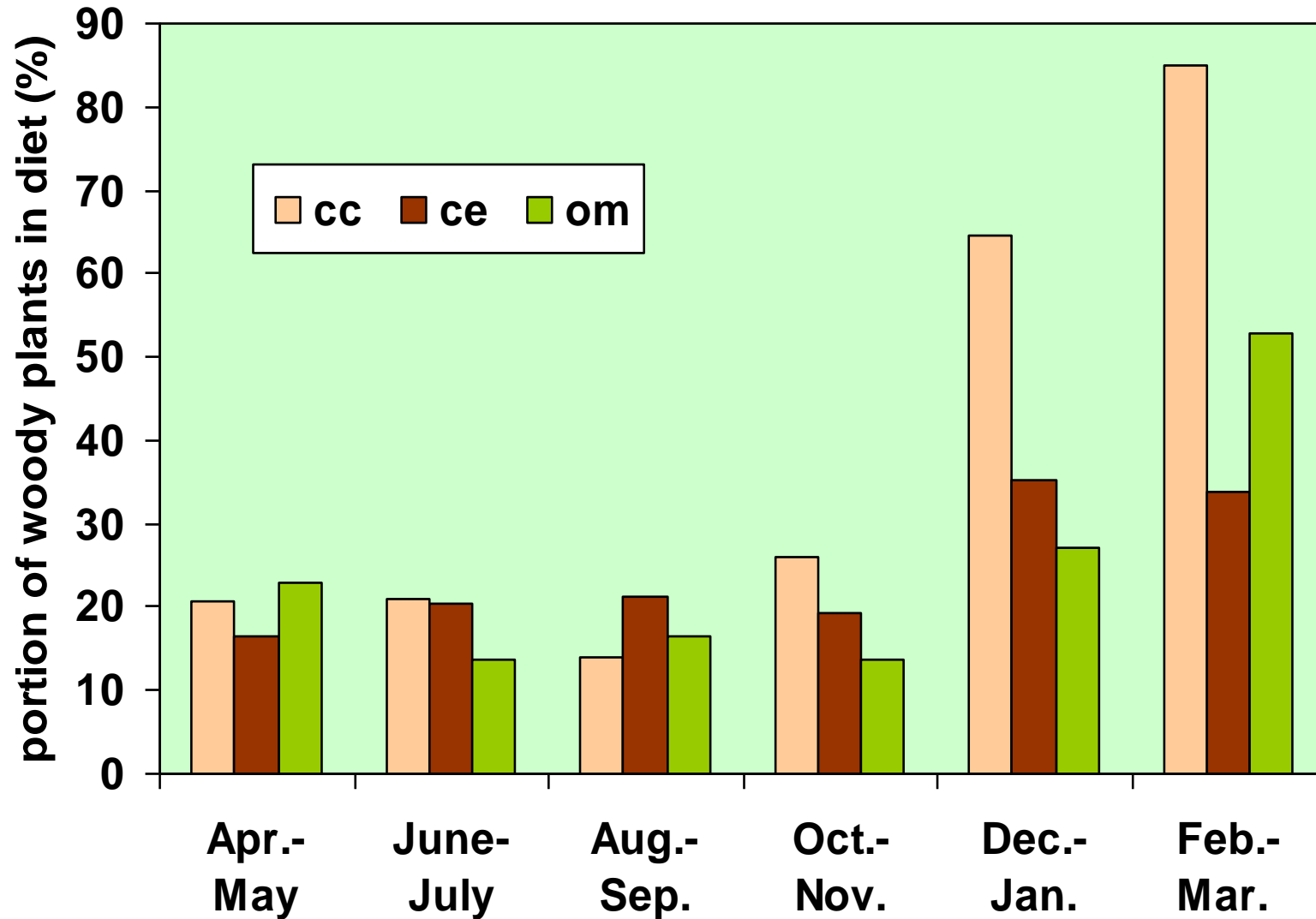


summer

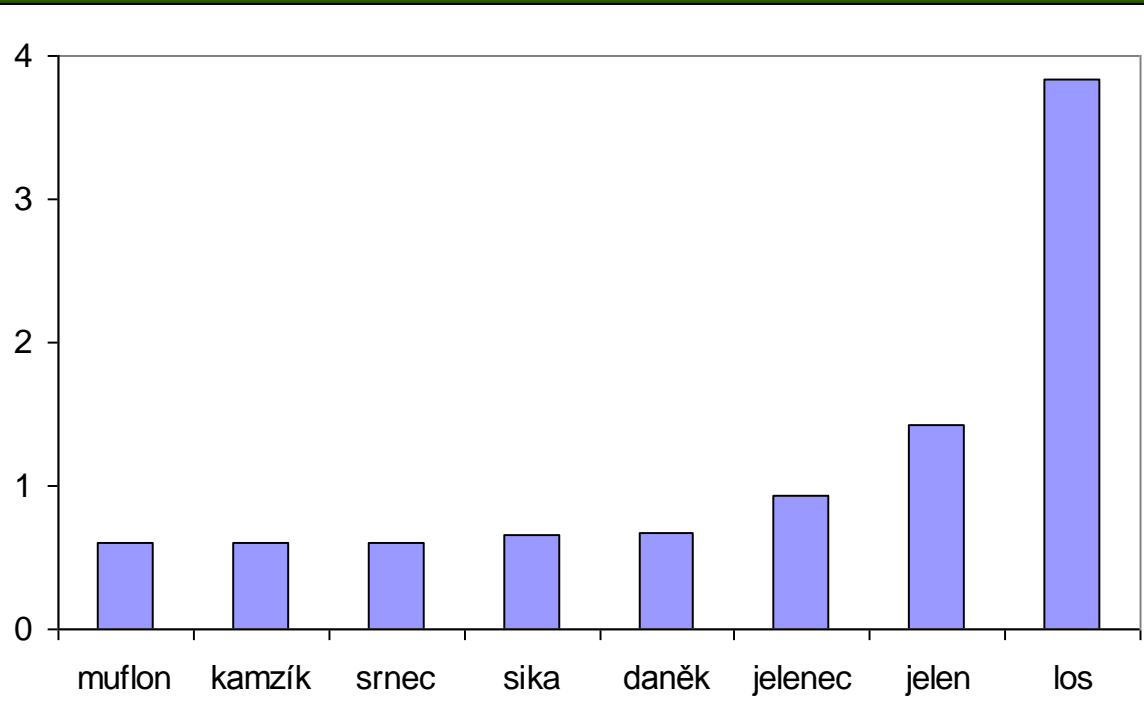


winter

# Trees and shrubs in the herbivore diet in Dražanská vrchovina highlands



# Average volume of browse in herbivore diet



Species which eat grasses are able to save browse, but there should be enough possibilities to graze (pastures and protection against stress).



# Differences between summer and winter – ruminants change their feeding ecology.



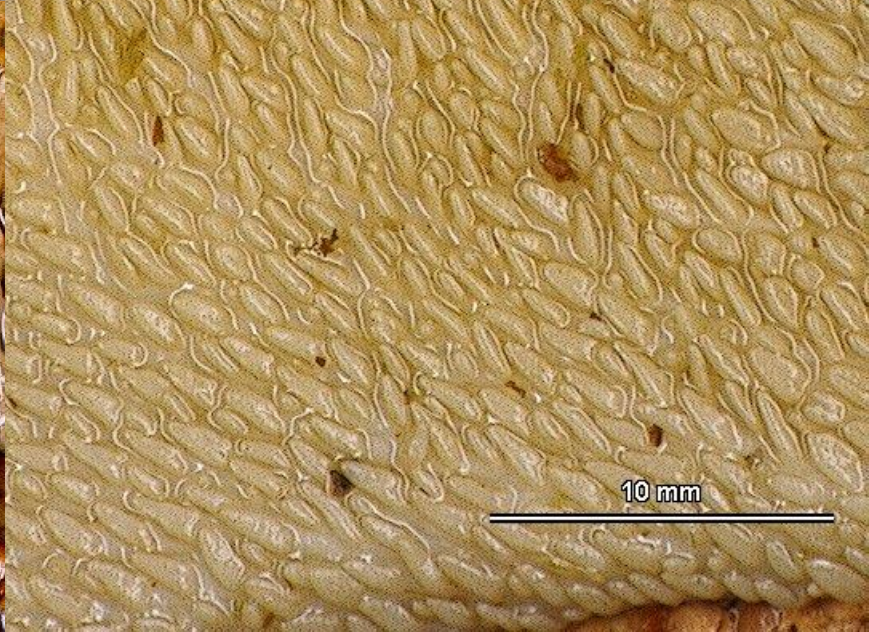


## **Changes in winter:**

- reduction of the volume of digestive tract by 20-35%**
- Reduction of rume papilae**
- Changes in rumen microorganism**
- Reduction of intensity of metabolism**
- Reduction of moving**



# Rumen papillae of red deer in differen seasons





## **Additional feeding should respect:**

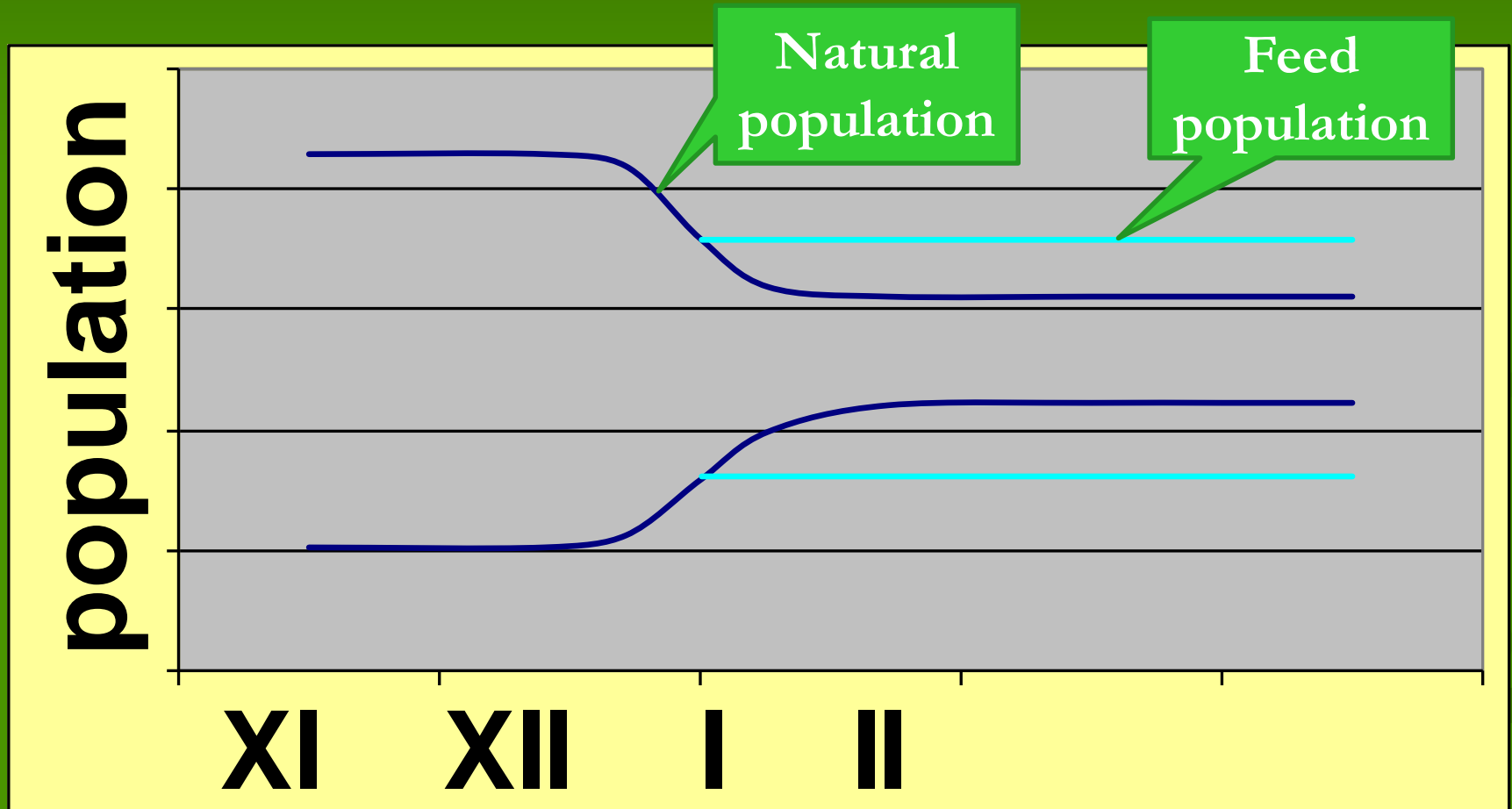
- 1. natural changes of ruminants**
- 2. Specific requirements of ruminants**

- Autumn period – intensive feeding**
- Changing period**
- Winter period from january**



"TO ŽRÁDLO UŽ SNÁŠÍM DOCELA DOBRĚ, ALE BLBĚ SE MI VĚDYCKY UDĚLÁ Z TĚCH REKLAM!"

# Feeding cause increase of deer numbers





There are differences in feeding roe deer and other ruminant species





# Problém hromad





# Feeding of wild boar

- Non ruminants
- Problem with high numbers
- Food supply is greatly changing between years and seasons
- Food can help hunters shoot



# Care of natural food in game environment

