

Zoo animal nutrition course for zoo keepers

EAZA 2010 Verona
Tjalling Huisman, Jolanda Polet, Loes
Spit



subtitle

A tool to further develop zoo animal
nutrition?



Project participants

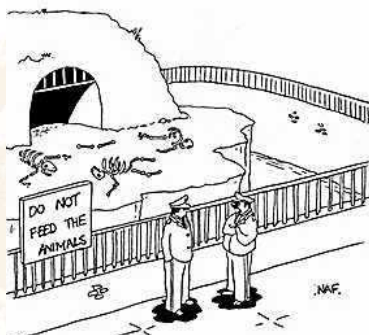
- DWW (animal welfare web)
- Hogeschool van Hall Larenstein (Bsc course Animal Management, 750 students)
- STOAS (Teachers education)
- NHL (Multimedia management course)
- Dutch zoo federation nutrition group
- EAZA nutrition group



Main funders

- Dutch Ministry/Department of Agriculture, Nature Conservation and Food Safety (LNV)
- Hogeschool van Hall Larenstein

("Green"/ agricultural education is a subdepartment of LNV)



"It means the public Bill, not the keepers."



Why this course?

(promising) Developments in zoo
nutrition:

- Conferences on zoo nutrition
- Research and publications
- Establishment of ENG

Especially in the past 15 years



Role of zoo keeper

Not much visible participation of zoo keepers in all these activities??

But they play a key role in zoo animal nutrition>

1. Give food
2. Are the first to observe effect of diet
3. Report (in an ideal zoo world)



Previous project on keepers knowledge and attitude towards zoo nutrition

- 2005
- Participation of 8 NVD zoos
- 87 keepers and 19 other staff (nutritionists, curators, vets) were interviewed, filled in a questionnaire



Main results

- **Little or no attention** for zoo animal nutrition in their formal education (mostly 'green' colleges)
- **High percentage 'wrong' ideas** (necessity of fruit and supplements, nutritional wisdom etc.)
- Feeding related activities give a lot of job satisfaction (except weighing)
- Making **diet changes** on their **own initiative**
- Not enough formal communication



Communication might be the big issue

- Keepers often do not fully believe the nutritional advice they get (from inside and outside) and/or add their own beliefs
- Keepers knowledge and experience is underused



How to solve

- Procedures
- Improving nutritional knowledge in keepers
 - Better understanding 'why' improves motivation
 - Speaking the same nutritional language improves communication



- A zoo nutrition course could help but:
How to organise and fund this?



- I am not going to bore you with the answer

In short: we managed to get the course started: 15 participants last Spring

25 – 30 participants this autumn (it just started)



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Course content

Theory (supported by a newly written course reader)

- General introduction on ZAN
 - Problems and challenges
 - Multi source approach for 'requirement' estimations
- Gastro intestinal tract systems
 - What do they tell us about nutritional needs
 - Diet should be adapted to GIT design
- Nutrients
 - Role, risks
- Feed stuffs
 - Properties, quality aspects, suitability for species
- Case descriptions (zoo context!)



Course content 2

- Assignments (all carried out with "own" animals!)
 - BCS scoring
 - Feces scoring
 - Label reading
 - Diet evaluation (ingredient level, and nutritional calculations by course staff)

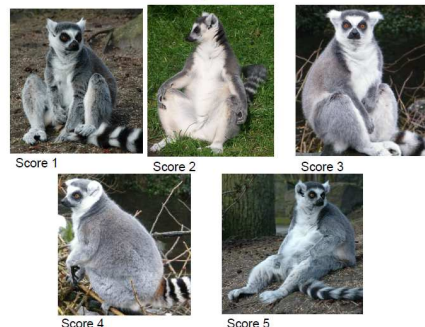


Course structure

- Three contact days
 - "Theory" pp presentations
 - Introduction on assignments
 - Short feed back on assignments
- Approx. one month between contact days
 - Working on assignments
 - Information exchange via supporting website
- Final day (last day of 3)
 - End results presentations
 - Certificate



Assignments of course participants BCS Ringstaartmaki



More

BCS Okapi



ALL
STEIN
WAGEN UR

More (faecal score chart developed by participants)

Mest score Oerang Oetan



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Bis

Mest score Guanaco



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Final presentation: all the work combined and discussed



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Course evaluation 1

- We emailed all the participants to give information on job, animals they look after and what they wish to learn
 - Keepers, kitchen staff, headkeepers, curator
 - Wide variety, primates (no reptiles etc)
 - Refreshing general knowledge, diet evaluation, very specific questions

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Course evaluation 2

- On the first day we asked them to:
 - Grade themselves on knowledge aspects
 - Agree/ disagree on statements

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Results self assessment (Marks scale 1-10)

1. Basic principles digestion, GIT 6,7
2. Feed composition 6,7
3. Feed quality assessment 6,9
4. Quality/properties roughage 6,5
5. Idem concentrate feed 6,5
6. Use of supplements 5,9
7. BCS scoring 7,1
8. Relating diet vs fecal score 6,7
9. Knowledge nutr. Terms 6,5
10. Knowledge nutrients 6,3



Course evaluation 3

- By the end:

Self assessment mark increased with 0,7 points

Much better score on nutrition statements

Customer satisfaction was high



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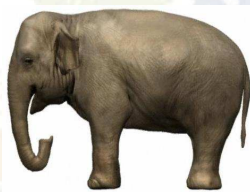
Additional course material

- One example in this PP
- Course website
- 3 D BCS tool
- Related project: [browse guide for keepers](#)

In preparation: feedstuff guide, poisonous plants map, hay assessment map etc.



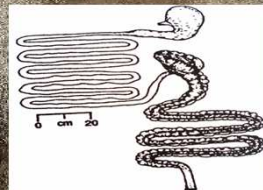
- www.cursusdierentuinvvoeding.nl
- BCS tool



Baviaan
Papio hamadryas

Gewicht: 7,9 – 18,6 kg;
Lichaamslengte: 40 - 110 cm
(staart 80 cm)
herbivoor

Leetwijze: Multi 2 / 3: 7 – 200 dieren



Dieet:



Future

- Project ends 1 March 2011
- Course material ready and available

But who will/can lecture in the course? And who will pay for it?

Role of formal education (which future keepers follow)

Going international with this concept?



Thank you for your attention

