

Slow-feeding dispensers for horses: who, how and why?

M. Roig-Pons, S. Briefer



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**UNIVERSITÄT
BERN**



Schweizerische Eidgenossenschaft
Confédération suisse
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Département fédéral de l'économie,
de la formation et de la recherche DFEFR
Agrroscope

A photograph of two horses grazing in a grassy field. The horse in the foreground is white with a light mane and tail, and is looking down at the grass. The horse in the background is grey with a dark mane and tail, also grazing. The scene is lit with warm, golden light, suggesting late afternoon or early morning. A white fence is visible in the background.

1. Background

Feeding behaviour – Natural conditions



~ **16 hours** per day dedicated to foraging



Pauses between two feeding bouts : **2 to 4 hours** maximum
→ **small and regular meals**, spread over 24h



~ **50 000 chews** per day

Feeding behaviour – Captivity



~ **4 to 9 hours** spent foraging



Pauses between two feeding bouts **> 4 hours**
→ 1 to 3 meal of forage, mostly **during the day**



~ **20 000 to 38 500 chews** per day

Captivity – problems & strategies

- **Boredom, frustration**, development of **abnormal behaviours**
- Increased **aggressiveness** among groups
- **Digestive problems** (↓ saliva production, ↑ risk of ulcers...)

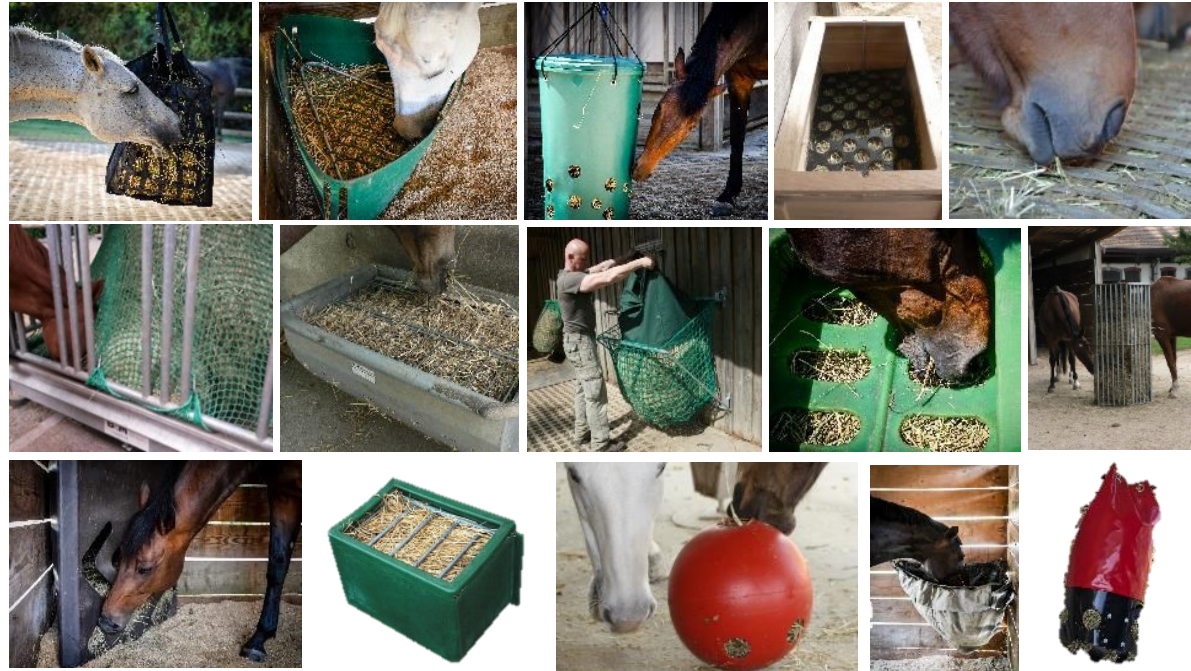
Possible feeding strategies

- **Portion the daily feed**
- Use **slow-feeding dispensers**



Slow-feeders

« Dispenser that mechanically slow down hay ingestion »



Aims

- Detailed knowledge regarding the slow-feeding practices
 - Motivation
 - Management
 - Feedbacks
- Characterize the population of horses using slow-feeders
- Compare practices depending on status (operators vs owners) and country (BE, FR and CH)

- Adapt research projects
- Identify key points

- Better knowledge of the target population
- Representative sampling

A close-up photograph of a horse's head and front legs as it eats hay from a green mesh feeder. The horse has a white blaze on its face and white markings on its legs. The feeder is filled with dry hay. The background shows a wooden wall and a gravel surface.

2. Methods

Methods

- Online questionnaire
- Several sections

**CURRENT USERS –
Operators & Private owners**

HORSES USING SF

FORMER & NON-USERS

Methods

- Online questionnaire
- Several sections

CURRENT USERS – Operators & Private owners

- Nb of horses boarded
- Informations about yard
- Slow-feeding practices
- Feedbacks

HORSES USING SF

FORMER & NON-USERS

Methods

- Online questionnaire
- Several sections

**CURRENT USERS –
Operators & Private owners**

HORSES USING SF

- General info (age, sex, breed)
- Housing & feeding
- Training
- Health
- Saddlery

FORMER & NON-USERS

Methods

- Online questionnaire
- Several sections

**CURRENT USERS –
Operators & Private owners**

HORSES USING SF

FORMER & NON-USERS

- Slow-feeding practices
- Reasons to stop
- Position regarding slow-feeding
- Reason to not use SFs

3. Results

A close-up, profile view of a brown horse standing in a wooden stable stall. The horse is facing left and has a dark collar around its neck. The stall is made of light-colored wood, and a green mesh net is visible in the background. The lighting is natural, suggesting an outdoor or semi-outdoor setting.

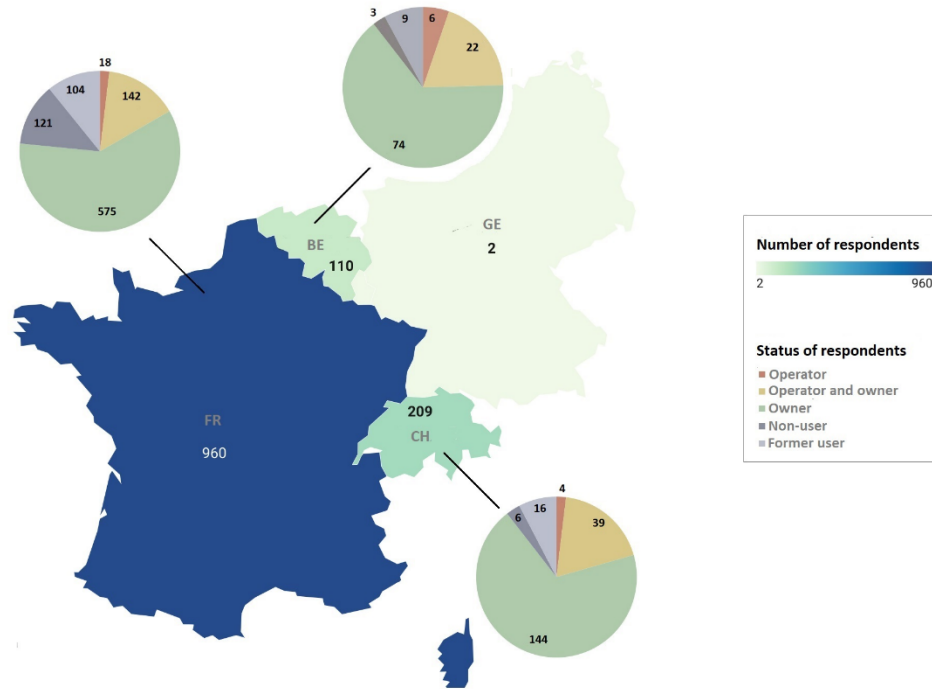
Results

**CURRENT USERS –
Operators & Private owners**

N = 1192

HORSES USING SF

N = 1430



Results

**CURRENT USERS –
Operators & Private owners**



Reasons to use SFs



Choice of SFs



Management



Feedbacks



N = 1192

- **First reason to use SFs: «Waste» (>80%), then «Weight management» (~ 55%) and «Increased ingestion time» (~ 40%)**

→ SFs designed to reduce hay ingestion

- **«Gain of time»: 30% OP but 0% PRI only**

→ Possible to save time depending on the SF used



N = 1192

- **Most common SF : Nets**
(> 90% OP and 75.3 to 89.2 of PRI)













→ Focus on nets

- **Plastic and metal : very rare**
less than 5% OP and 0.8 to 9.5% of PRI

- **Type of net used:**

- CO: most common for OP (65%) and for OW : 44.7%
- HV: mostly used in BE (~ 50%) compared to FR (40%) and CH (32%)
- HH and GR: less common (19 to 45%)

→ Most of the research projects: HV

HV – High vertical nets: <i>suspended or wall-fixed</i>			
HH – High horizontal nets: <i>covering trough or box attached to the wall</i>			
CO – Nets covering hay in hayracks or around bale			
GR – Nets on the ground <i>(free, attached or in a box)</i>			



N = 1192

- Time in use:

< 1 year: 13.1% OP and 26.9% PRI

> 5 years: 33.0% OP and 13.8% PRI

→ OP have used SFs for longer than PRI

→ Lack of long-term insights (effect on health?)

- Distribution of hay:

73.4% : hay only in SF

→ Need for safe dispensers and further research



N = 1192

- **Most respondents (41 to 55%) don't face any issues**
- **Low prevalence of incidents and injuries (1.6% to 3.7%)**
- **Low prevalence of musculoskeletal health issues (0 to 3.8%)** → Main fears regarding SFs
- **Low prevalence of oral (teeth, gums) impairments (3.1 to 7.6%)**
- **Frustration** almost only reported by **BE** (15% vs 3.2 to 7.0%) → HV nets: more frustration?
- **«Loss of time»** also reported → Effect of type of SF used

Results

HORSES USING SF



General info



Housing & feeding



Training



Health



Bit & shoes



N = 1430

- Age:

12.9 years old on average

- Sex: balanced ratio

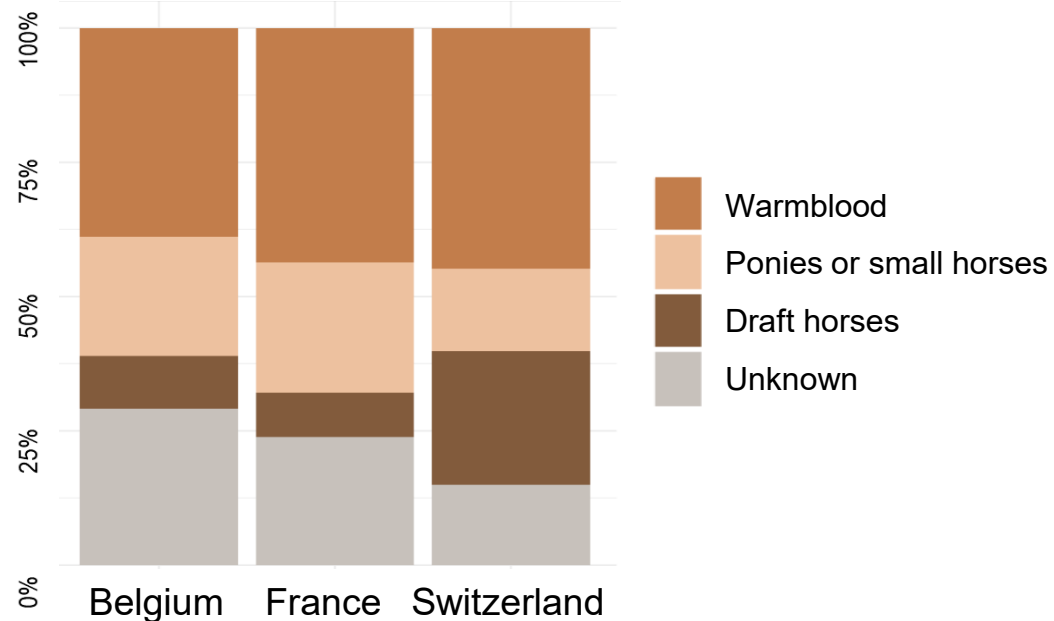
50.1% mares, 46.7% geldings and 2.8% stallions

- Breeds: depends on country

Mainly warmbloods

More “draft” horses in CH: Freiburger

→ Horses using SFs: slightly older than ridden horses (11.3 yo)





- Housing: mostly «welfare-oriented»

> 75% group-housed horses outdoor and < 20% stabled individually

84% : daily turn-out, almost all when housed individually indoor, with long turn-out

supported by findings in OP :

75.5% : outdoor in loose group-housing

almost all daily turn-out for stabled horses

90% daily social contacts

75% : additional roughage (straw and/or grass)

→ Better housing conditions than average equine population

- Feeding management:

> 50% ad libitum

90% also have another roughage (straw or grass)

→ Better feeding management than average equine population



N = 1430

- Riding frequency:

Quite low overall
Higher in CH

- Disciplines: 74.4% leisure

Same for BE, FR and CH

→ Horses using SFs: mostly leisure horses

→ Horses using SFs (CH): even less ridden than the leisure population
(~ 4 work sessions/week)

	Belgique (n=144)	France (n=1039)	Suisse (n=242)
< Once a week	51	437	46
Once a week			
Twice a week	33	246	20
Three times a week	24	157	43
Four times a week or more	24	105	49
	12	94	84



N = 1430

- **Healthy horses:**

Less in BE (33%), than FR (41%) and CH (48%)

→ Type of net used? (HV: increased neck torsions and muscular tensions)

- **Overweight:**

< 30% (41 to 55% in equine population)

→ Efficiency SFs? Or poor ability of owners to evaluate BCS of their horse?

- **Digestive problems:**

Lower than reported prevalences

→ Efficiency SFs? Or better housing conditions overall?

- **Stereotypical behaviour:**

Lower than reported prevalences



N = 1430

- Bit:

Large proportion of bitless

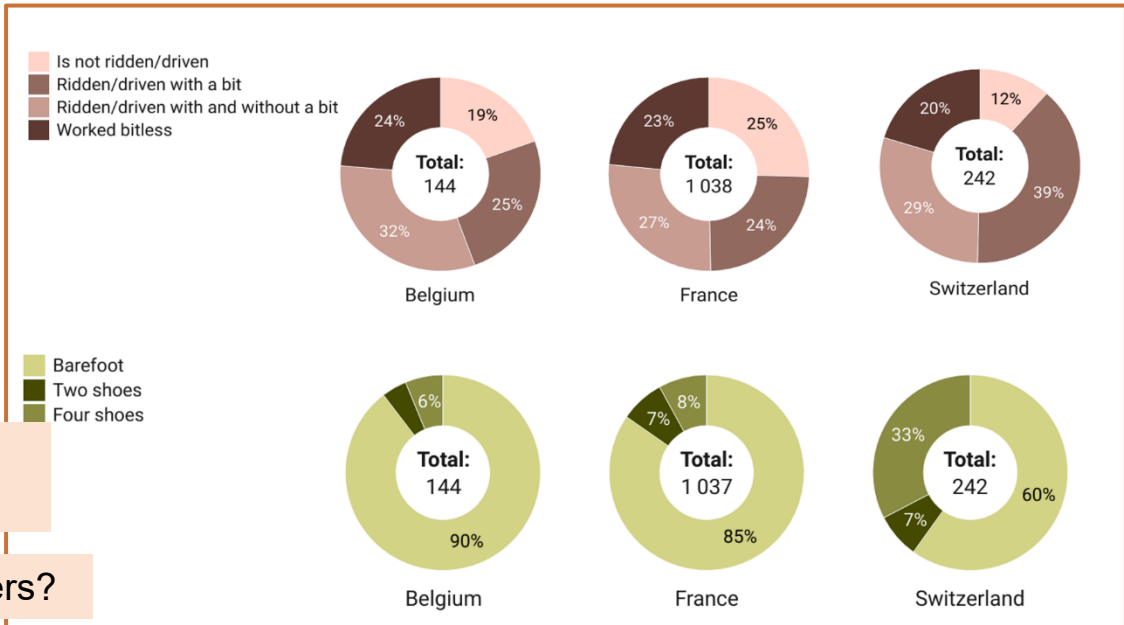
- Shoes:

Large proportion of unshod horses

More shoes in CH

→ More unshod horses than in the «leisure population»

→ SFs users = distinct category of keepers?



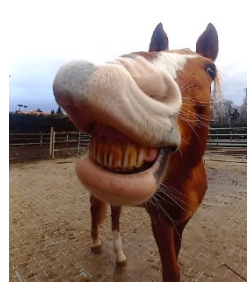
4. Conclusion



Conclusion

- **Majority of SFs: covering nets** → research should focus on such nets
- **Use of SFs: relatively recent** → lack of long-term insights
- **Different type of SFs** are associated with **different advantages/issues**
- Most of keepers using SFs: SF is the only dispenser use → **need for safe design**
- **Very low reporting of incidents / adverse effects** on horses' health: need to be verified with **experimental studies**
- Horses using SFs: **different from the equine population**
 - Target population
 - Need to be careful when sampling for observational studies

Thank you for your attention ...



QUESTIONS ?