

## Indicadores de bem-estar animal para equídeos

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## Bem-estar em horses

• Coordenadores das atividades:

- Haveland Horse Clinic
  - Dr. Dirk Lebelt
  - Dr. Diane Stucke
- Universidade de Milão, Itália
  - Professor Michela Minero
  - Dr. Emanuela Dalla Costa
  - Dr. Elisabetta Canali

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### Horse Learning objects

- <http://www.animalwelfarehub.com/LearningMaterials/Details/118>
- The link to download the app:
- <https://play.google.com/store/apps/details?id=com.daia.awinhorse&hl=itBe>
- Video presenting the equine protocols and the app:  
[https://www.youtube.com/watch?v=IBP\\_f\\_J626Q](https://www.youtube.com/watch?v=IBP_f_J626Q)

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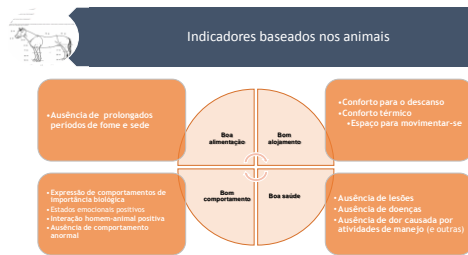
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### Protocolo




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### Interações com o setor




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### Participação em discussões oficiais



Guidelines to Assess Fitness for Transport of Equidae



EC Equine Expert Meeting – May 2014

<http://scic.ec.europa.eu/streaming/index.php?es=2&sessionno=8da57fa331317412&ccsf13328d457>

AWIN 3<sup>rd</sup> annual meeting, Prague May 15<sup>th</sup> 2014

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### Ciência que aborda bem-estar animal



Equinos tem necessidades biológicas



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### Necessidades biológicas dos equinos



- **Necessidades comportamentais** (Jensen & Toates 1993)
  - Acesso a água e comida
    - Alimentação 60-70% do tempo
    - 80% do tempo o sistema digestivo deve estar repleto.
  - Livre locomoção
  - Interação social (VanDierendonck 2006)
    - 24 horas por dia (visual) contato =>
    - "Comportamento social é muito importante" (Nelson & Panksepp 1998)
  - Manejo e ambiente com previsibilidade e controle
    - Respostas ao estresse
    - Controle e previsibilidade



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Diversidade das criações e manejo de equinos




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Critério	Representação do critério
Nutrição apropriada	Proporção de cavalos com escore corporal apropriado
Ausência de sede prolongada	Proporção de cavalos com água limpa disponível
Conforto na área de descanso	Proporção de cavalos com baias de tamanho suficiente com cama limpa
Facilidade de movimento	Proporção de cavalos com possibilidade de exercício diário
Ausência de lesões	Proporção de cavalos sem lesões
Ausência de doenças	Proporção de cavalos sem sinais clínicos de doenças
Ausência de dor e dor causada por procedimentos de manejo	Proporção de cavalos sem indicadores de dor
Expressão de comportamento social	Proporção de cavalos com possibilidade de interação social
Expressão de outros comportamentos	Proporção de cavalos sem comportamento estereotipado
Boa relação homem-Animal	Proporção de cavalos com escore positivo em todos os testes de relação homem-animal

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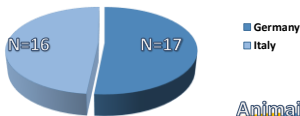
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Resultados preliminares

Propriedades visitadas



Animais por propriedade




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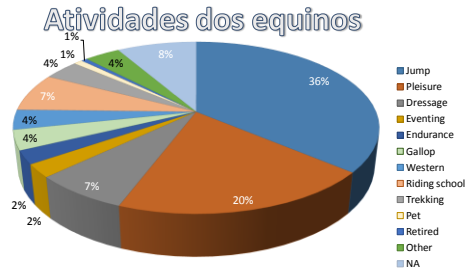
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Resultados preliminares (Minero et al.)




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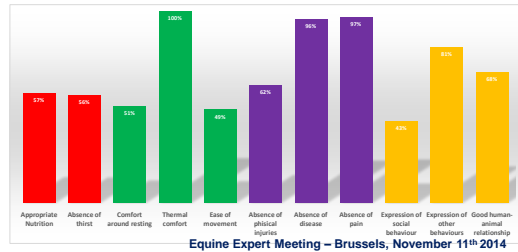
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Condições positivas



Proporção de cavalos




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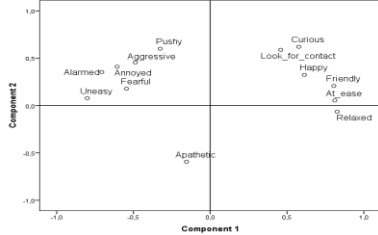
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Estado emocional



Qualitative Behaviour Assessment




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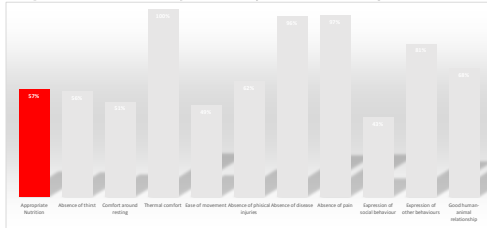
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## Nutrição apropriada



Proportion of horses per farm (median values)




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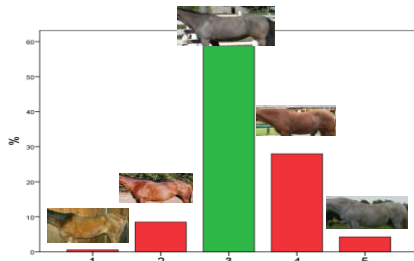
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## Escore de condição corporal




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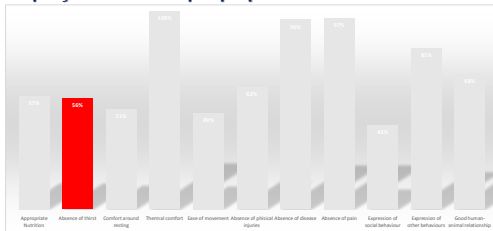
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## Ausência de sede



Proporção de animais por propriedade




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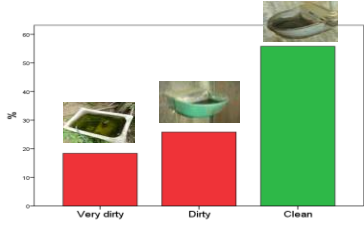
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Ausência de sede – água limpa




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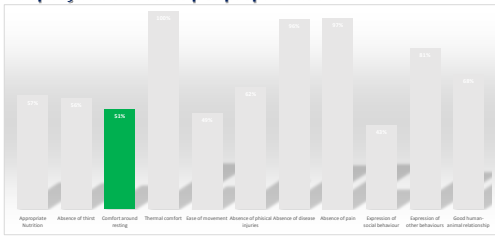
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Conforto no local de descanso



Proporção de cavalos por propriedade




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Conforto no local de descanso




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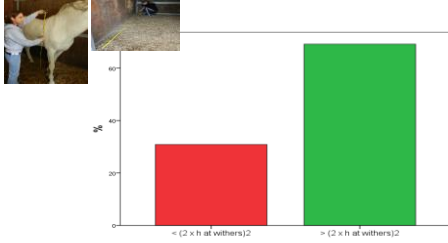
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### Dimensões da baía: conforto no local de descanso




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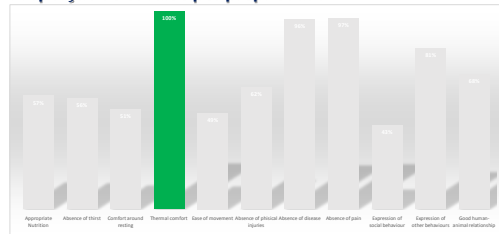
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### Conforto térmico



Proporção de cavalos por propriedade




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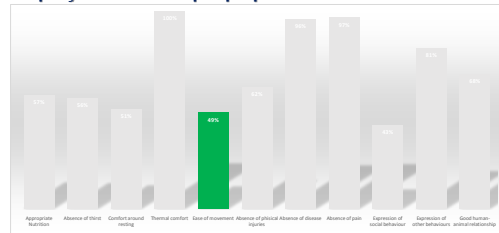
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### Facilidade de movimento



Proporção de cavalos por propriedade




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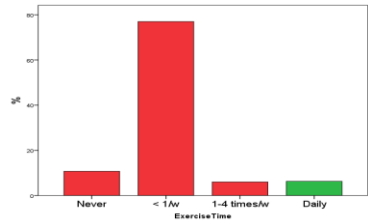
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### Facilidade de movimento



Frequência de exercício




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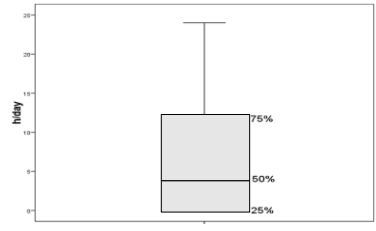
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### Facilidade de movimento



Exercício livre em pastagem, piquete ou arena




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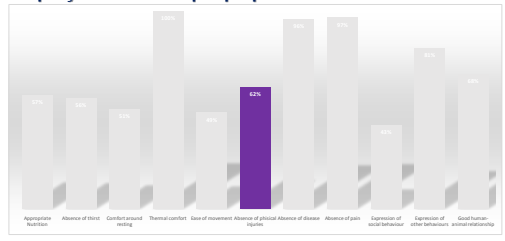
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### Ausência de lesões



Proporção de cavalos por propriedade




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### Absence of Physical Injuries (preliminary results)



#### Lesões na boca




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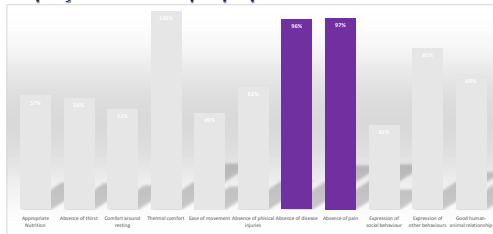
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### Ausência de doenças e dor



#### Proporção de cavalos por propriedade




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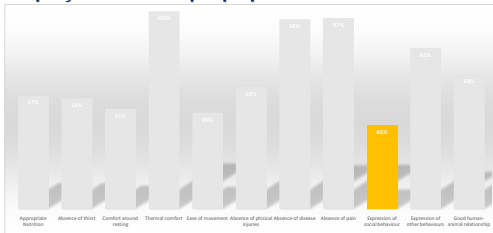
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### Expressão de comportamento social



#### Proporção de cavalos por propriedade




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### Expressão de comportamento social




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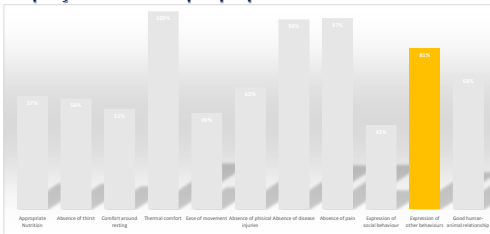
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### Expressão de outros comportamentos



#### Proporção de cavalos por propriedade




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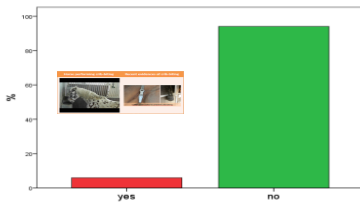
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### Expressão de outros comportamentos: aerofagia




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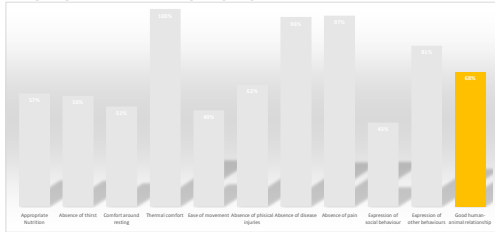
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### Boa relação com humano



Proporção de cavalos por propriedade




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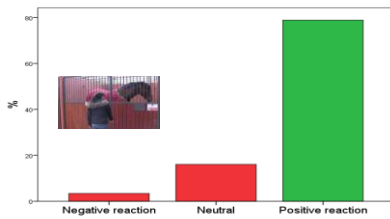
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### Boa relação com humanos



Testes de relação homem x animal




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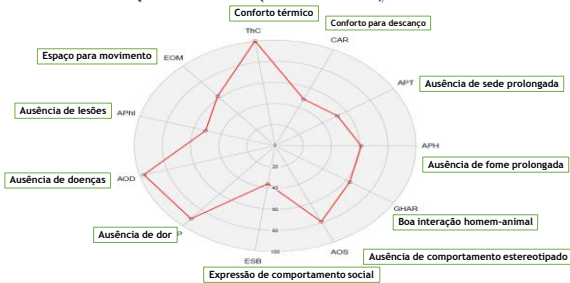
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### Resultados preliminares (Minero et al.)




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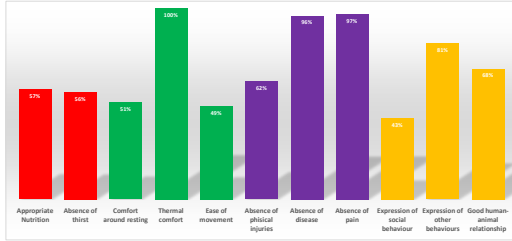
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## Resultados preliminares (medians)



### Proporção de cavalos por propriedade




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## Pain in horses

- <http://www.animalwelfarehub.com/LearningMaterials/Details/91>
- <http://www.animalwelfarehub.com/LearningMaterials/Details/83>

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## App to assess pain in horses



<http://awhub.info/>



↳ Escora corporal & app.

↳ Avaliar dor

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PLoS ONE

**Development of the Horse Grimace Scale (HGS) as a pain assessment tool in horses undergoing routine castration**

Emanuela Dalla Costa<sup>1\*</sup>, Michela Minero<sup>1</sup>, Dirk Lebelt<sup>2</sup>, Diana Stucke<sup>3</sup>, Elisabetta Canali<sup>1</sup>, Matthew C. Leach<sup>3</sup>

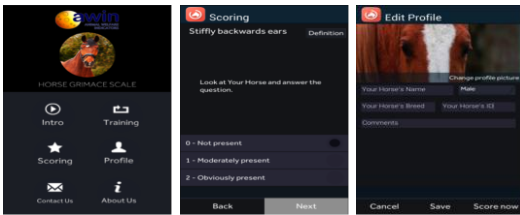
<sup>1</sup>Università degli Studi di Milano, Dipartimento di Scienze Veterinarie e Sanità Pubblica, Milan, Italy

<sup>2</sup>Pferdekllinik Havelland / Havelland Equine Hospital, Beetzsee-Brielow, Germany

<sup>3</sup>Newcastle University, School of Agriculture, Food & Rural Development, Newcastle Upon Tyne, United Kingdom



**Horse Grimace Scale (HGS) Smartphone Application**



Download for free from the Animal Welfare Science Hub: [www.animalwelfarehub.com](http://www.animalwelfarehub.com)



**Facial expressions as pain indicator in horses**



PLoS ONE

Development of the Horse Grimace Scale (HGS) as a pain assessment tool in horses undergoing routine castration

Emanuela Dalla Costa<sup>1,2</sup>, Michela Minero<sup>1</sup>, Dirk Lebelt<sup>2</sup>, Diana Stucke<sup>2</sup>, Elisabetta Canali<sup>1</sup>, Matthew C. Leach<sup>3</sup>

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Horse Grimace Scale (HGS)

Facial action coding system (according to EKMAN AND FRIESEN 1978) „action unit“= facial part/muscles changing in relation to pain

6 „Facial Action Units (FAUs)“:

- Ears
- Above eye area
- Eyes
- Facial muscles
- Nostrils
- Mouth-part

Score 0-2:  
0 = not present  
1 = moderately present  
2 = obviously present

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HGS: Ears



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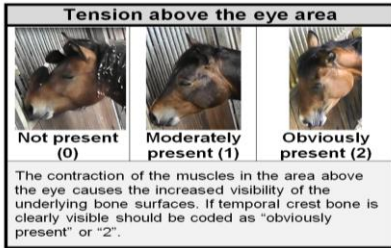
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HGS: Above eye area



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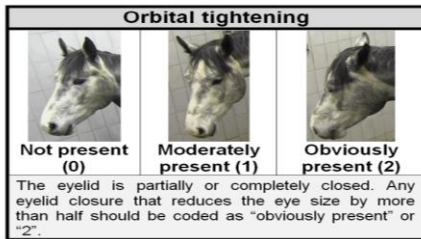
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HGS: Eyes



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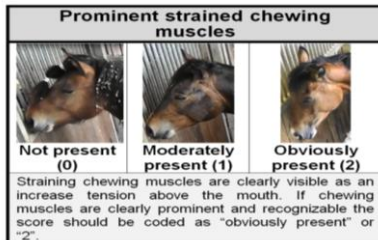
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HGS: Facial muscles



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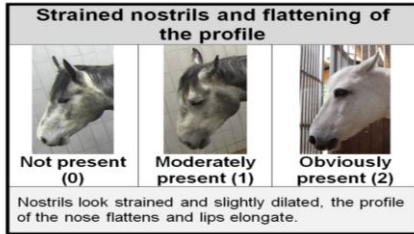
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### HGS: Nostrils




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### HGS: Mouth-part




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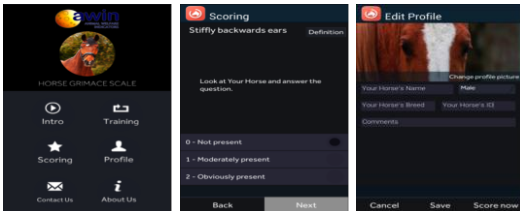
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### Horse Grimace Scale (HGS) Smartphone Application



Download for free from the Animal Welfare Science Hub:  
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### App to assess horse welfare



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### Conclusion

- Progress has been made to develop tools to promote horse welfare.

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### Acknowledgments

- Michela Minero (most of the slides were prepared from her)
- Emanuela Dalla Costa
- Dirk Lebelt
- Diana Stucke

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