ONE WELFARE: LOOKING FOR SUSTAINABLE ANIMAL PRODUCTION SYSTEMS

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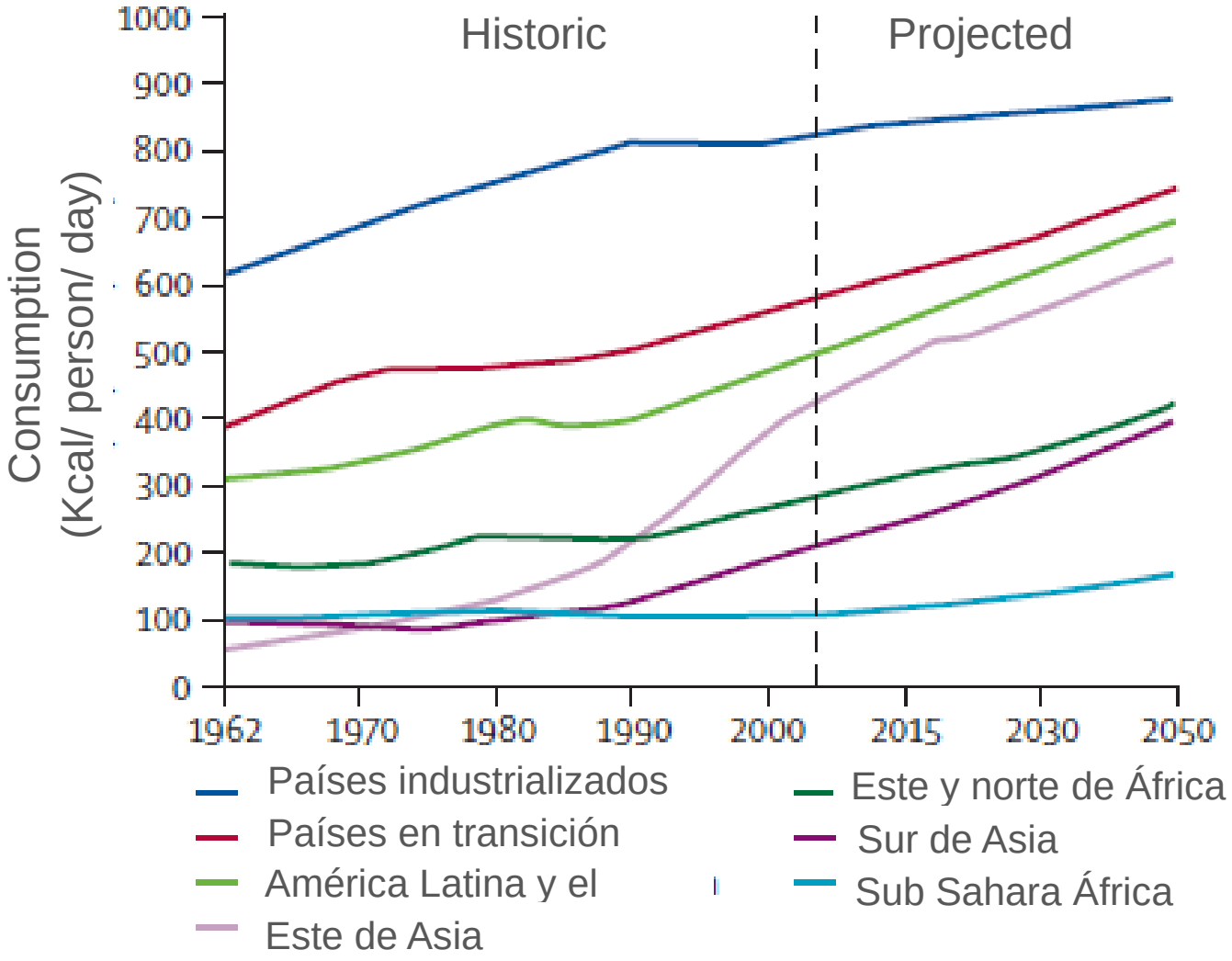
PRESENTATION

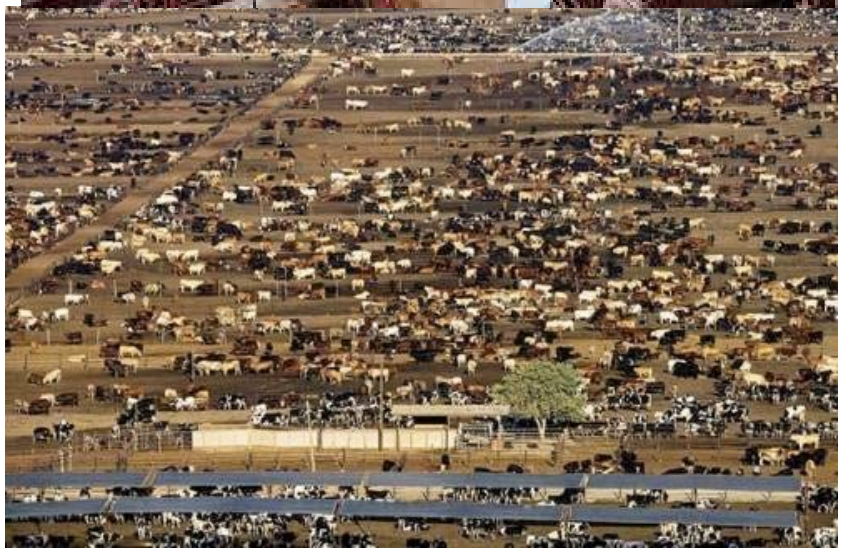
- Background
- Sustainable production: challenges
- Sustainability indicators including animal welfare: study case in Yucatan
- Work ahead

PER CAPITA CONSUMPTION OF LIVESTOCK PRODUCTS (FAO)



Challenges…

ANIMAL WELFARE PROBLEMS



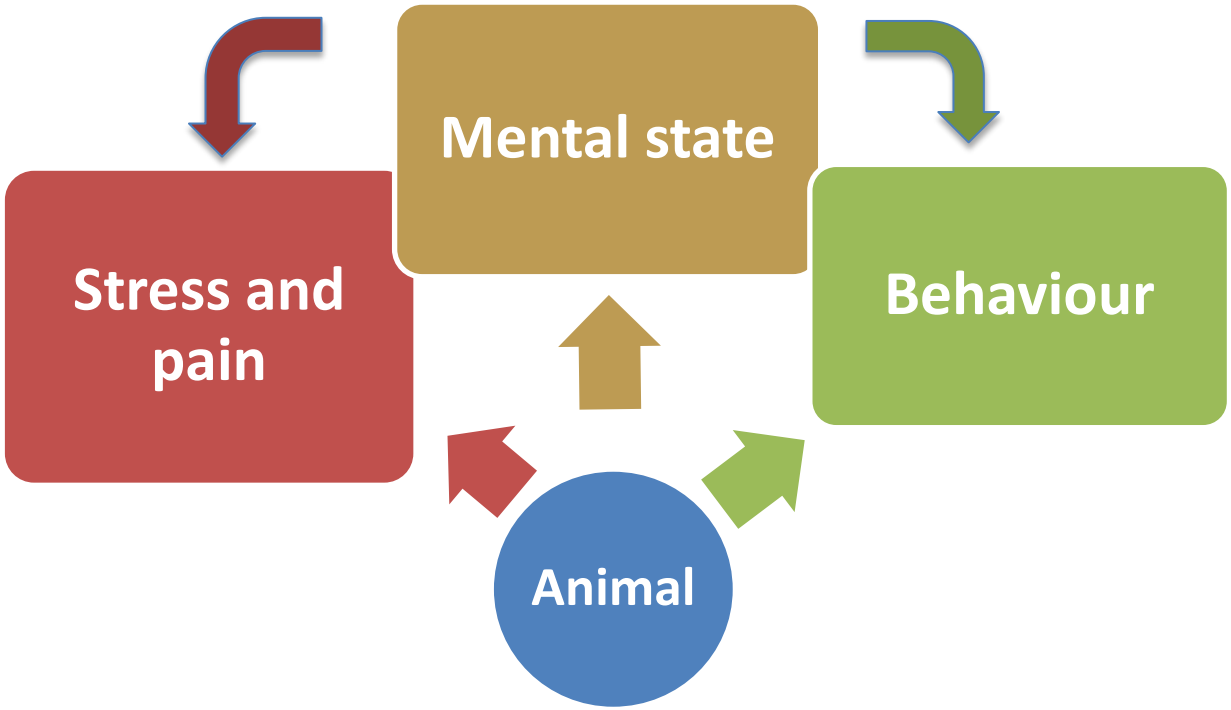
ANIMAL WELFARE

'The state of the animal as regards its attempts to cope with its environment' …

- **Refers to the biological condition of the animal**
- **Based on science**

SCIENTIFIC ASSESSMENT: BIOINDICATORS

Response to the environment:



PRACTICAL ASSESSMENT PROTOCOLS

More challenges…

ENVIRONMENTAL IMPACT AND LOSS OF ECOSYSTEM SERVICES

- Deforestation and biodiversity loss - 60% of ecosystem coverage transformed

- Greenhouse gases (GHG) and climate change

SOCIAL WELFARE

- Poverty
- Malnutrition
- Diseases

WHAT TO DO ?

- Intensify production systems reducing adverse effects on community, animal welfare, and the environment

- Reorient pastoral systems to the provision of environmental services and to improve animal welfare

SUSTAINABLE LIVESTOCK PRODUCTION : CHALLENGES SYNERGIES AND TRADE-OFFS

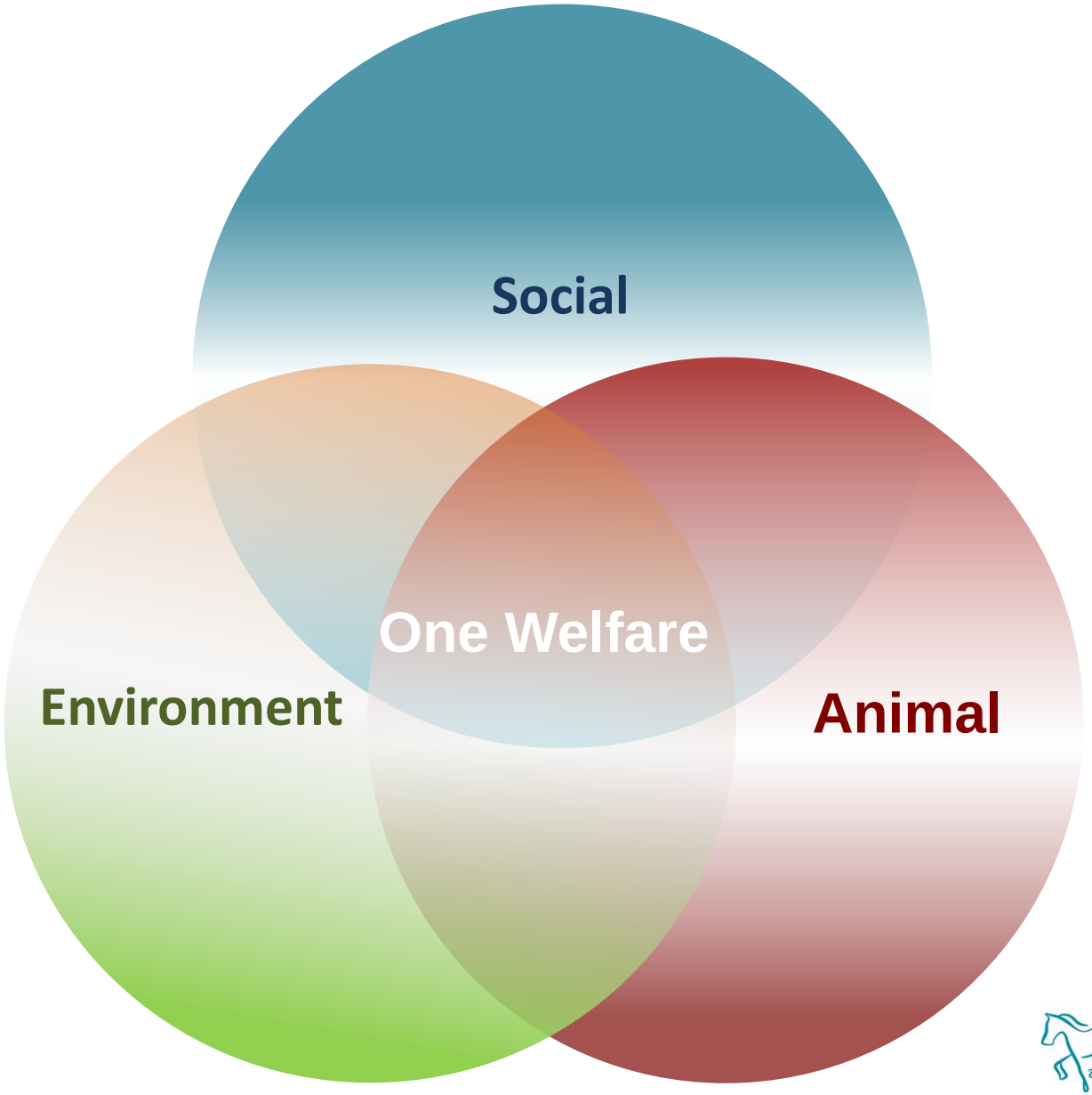
PRODUCER

ANIMAL WELFARE

CONSUMER

ENVIRONMENTAL SERVICES

One Welfare – One health



One welfare and sustainable livestock production

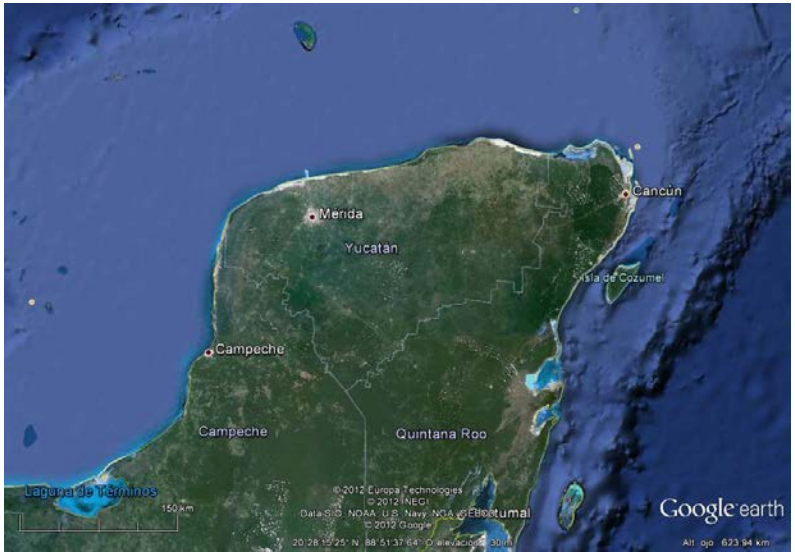
A system is sustainable when it is environmentally sound, economically viable, and socially responsible

Allen, 1991

Proyecto Gana

UNAM-UADY

STUDY CASE IN YUCATÁN

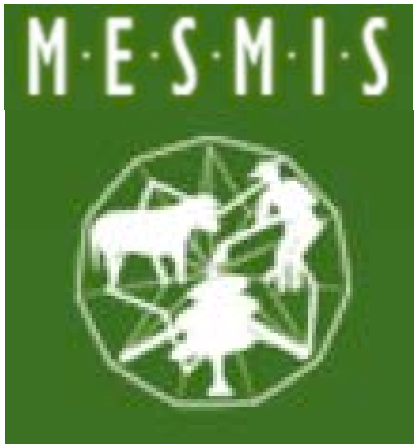


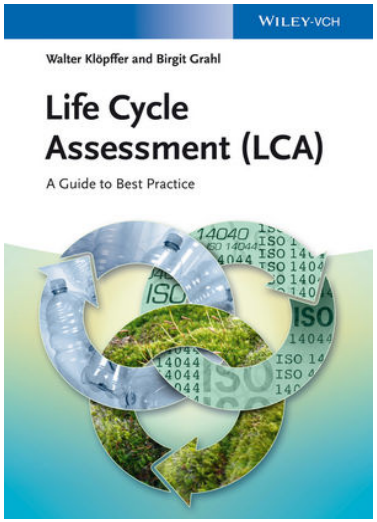
Measurements:

- Landscape structure
- Animal welfare and productivity
- Biodiversity and disease
- Greenhouse Gases (GHG)

SYNERGIES AND TRADE-OFFS

Sustainability indicators





- Animal welfare
- Environment
- Social needs
- Economics

Production units

Monoculture

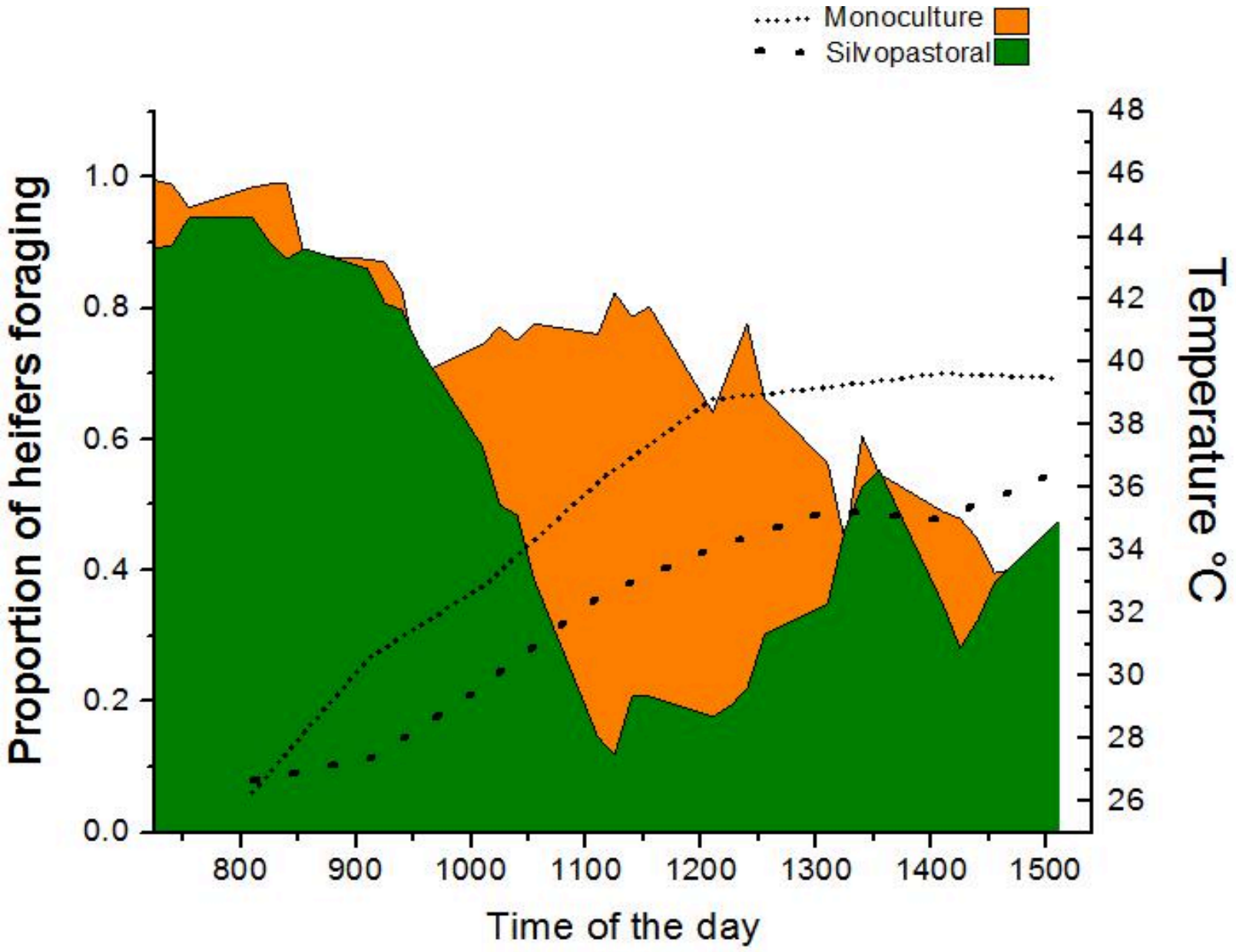
Intensive silvopastoral

Native silvpastoral

Animal welfare indicators:

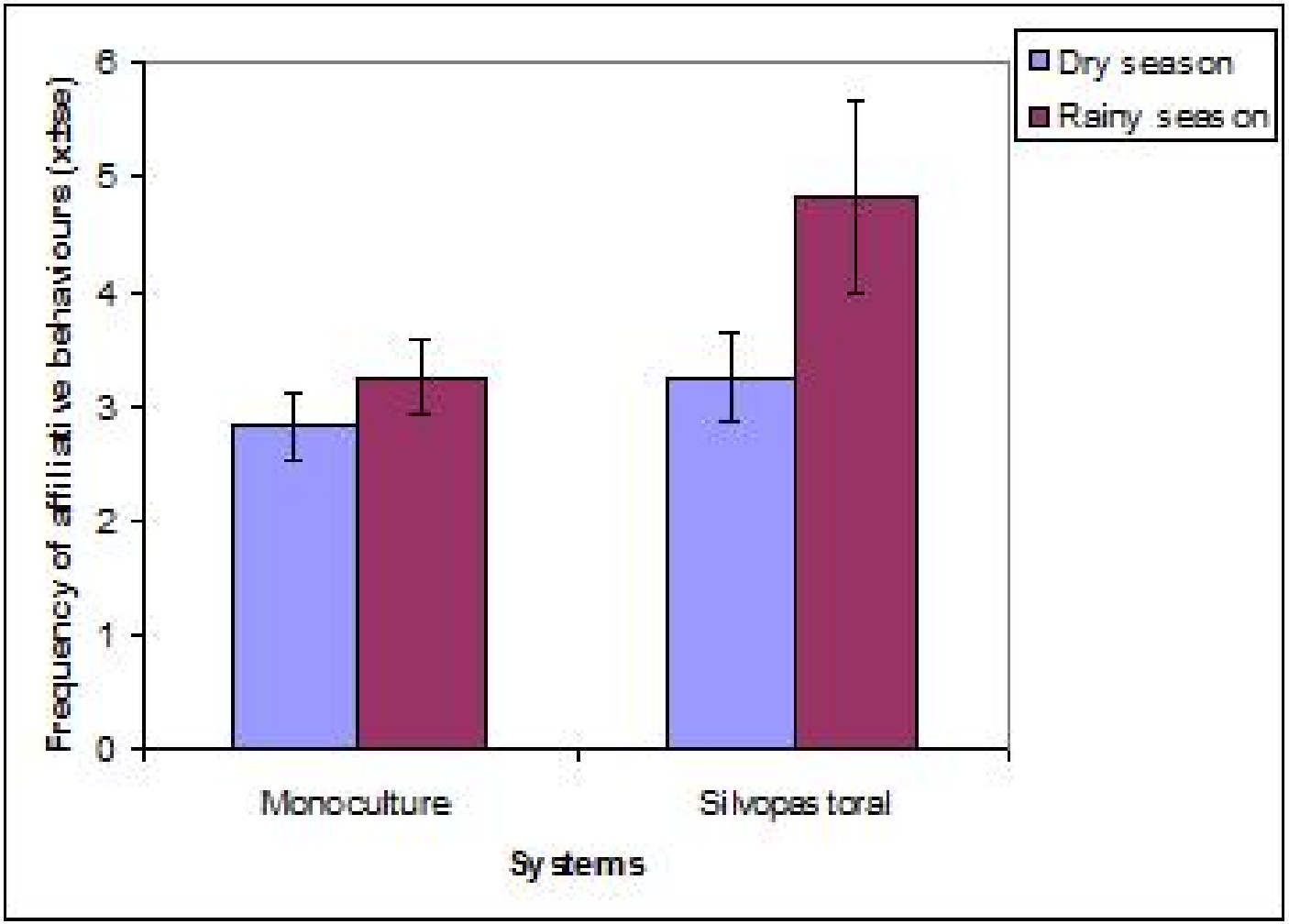
Animal behaviour

Foraging behaviour



Social behaviour

Non-agonistic interactions (30,000 leucaenas/ha) (P<0.05) in Mn and Sspi



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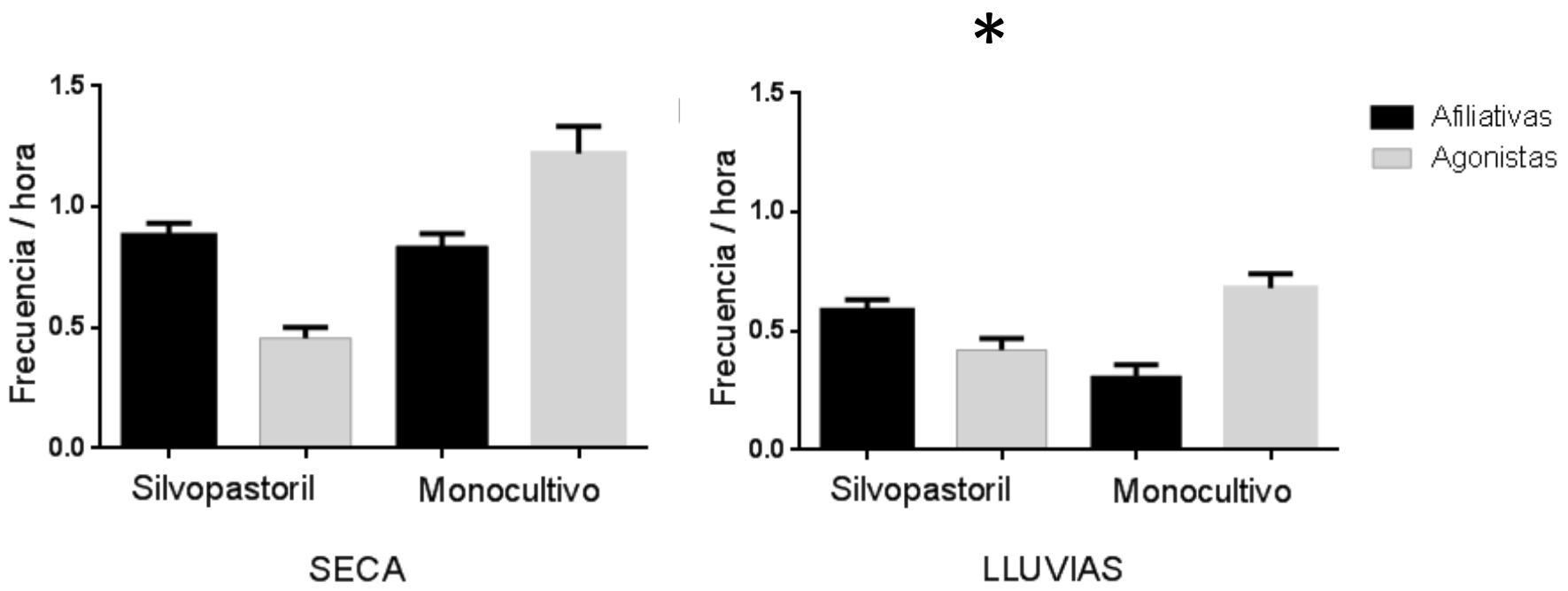


Human-animal interactions:

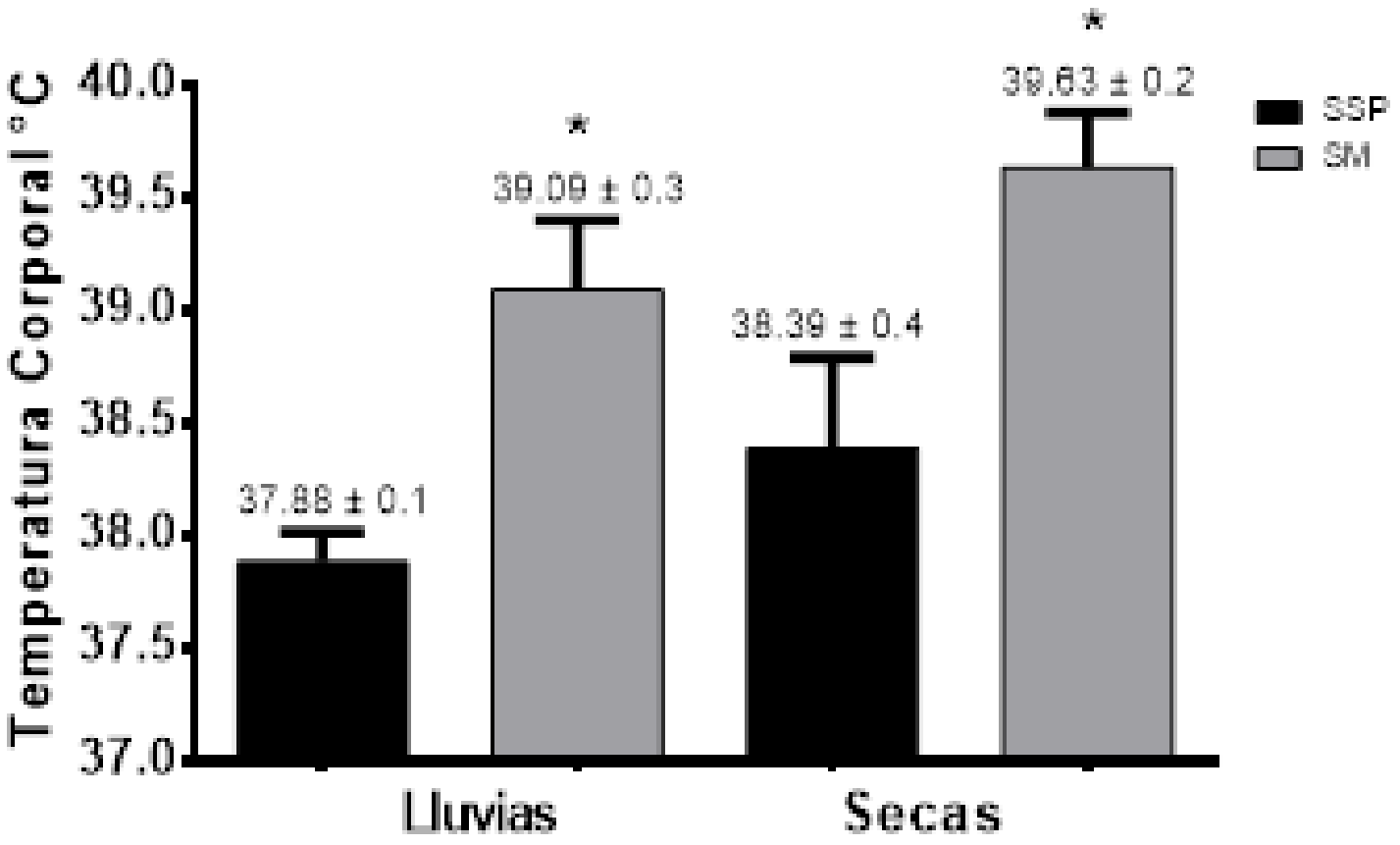
More tree coverage – shorter fligh distance

Animal welfare indicators:

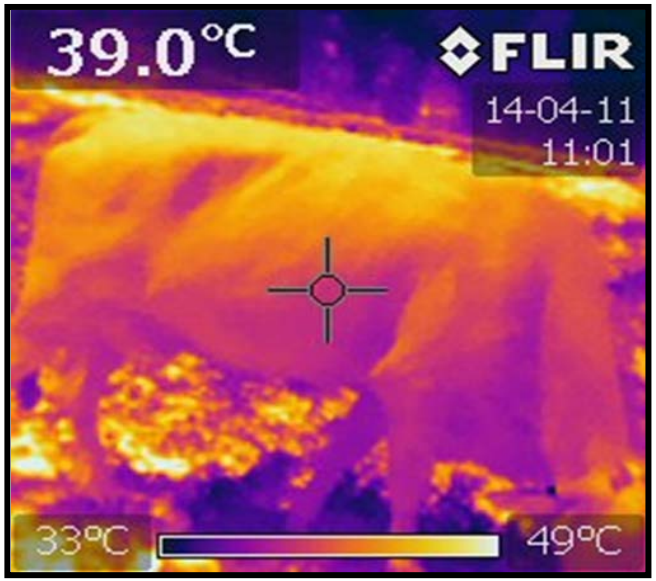
Physiology

Thermography

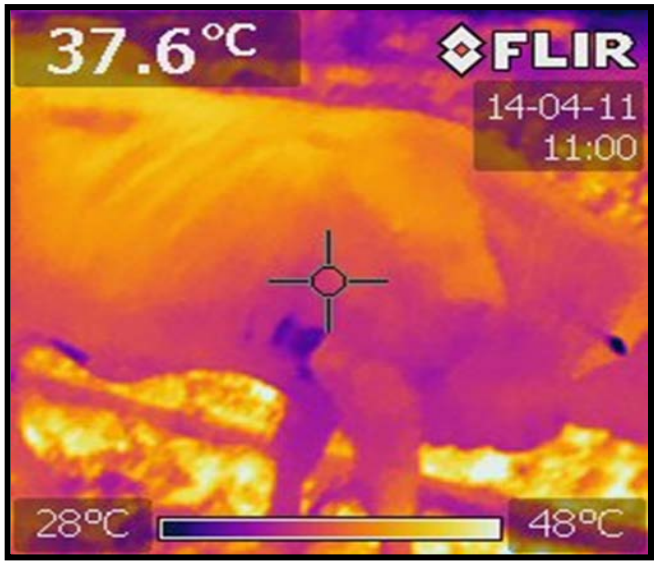
Skin temperature



THERMOGRAPHY - PADDOCK

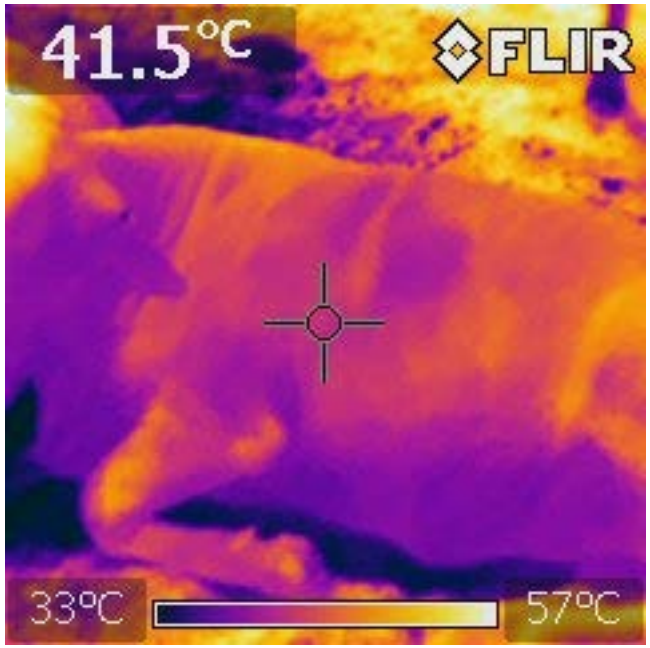


MONOCULTIVO



SILVOPASTORAL

THERMOGRAPHY - PEN



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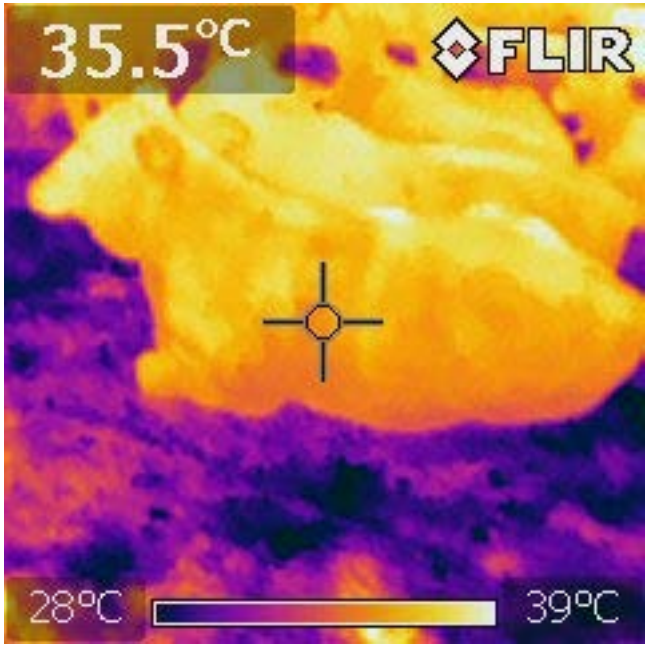
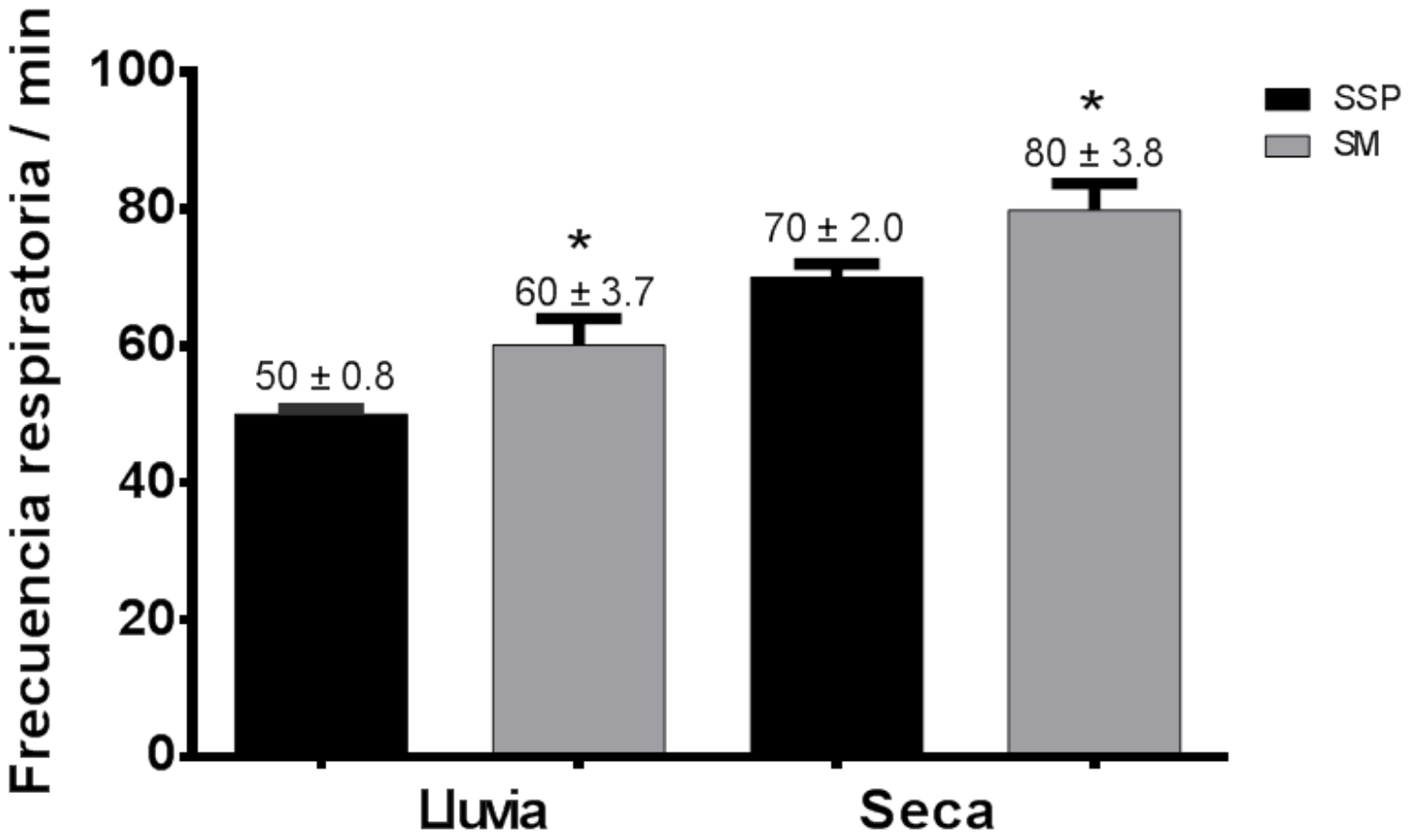


SILVOPASTORAL

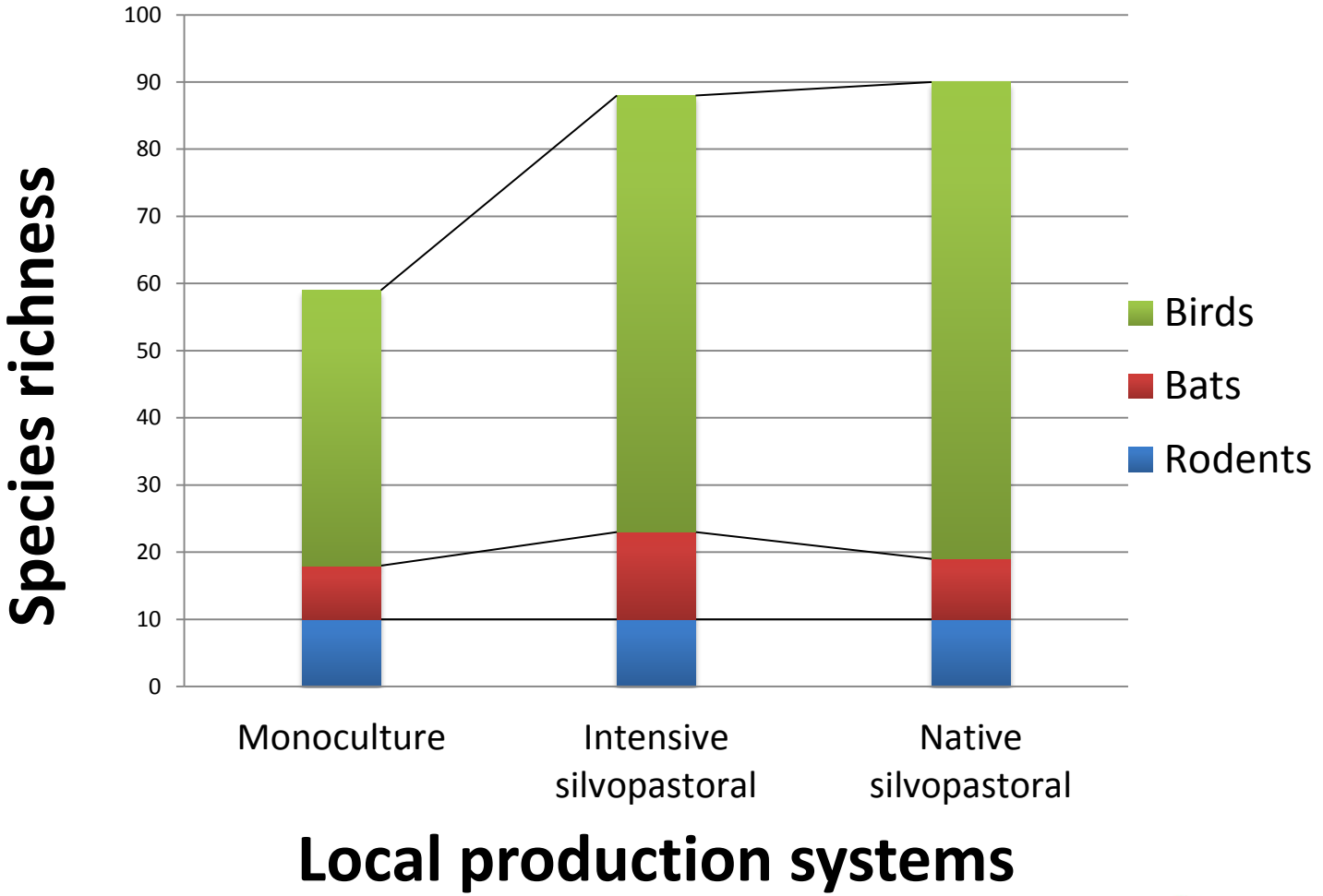
Respiratory rate (Holstein x Zebu), in SSP y SM, rainy and dry seasons.



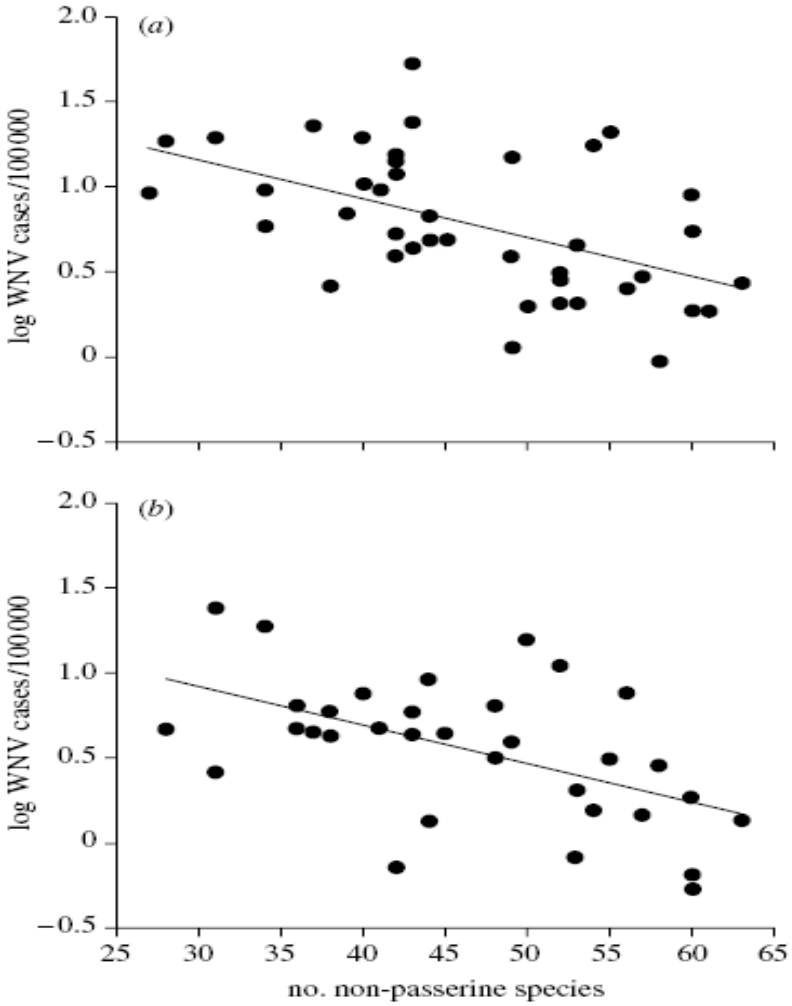
Environmental services:

Biodiversity

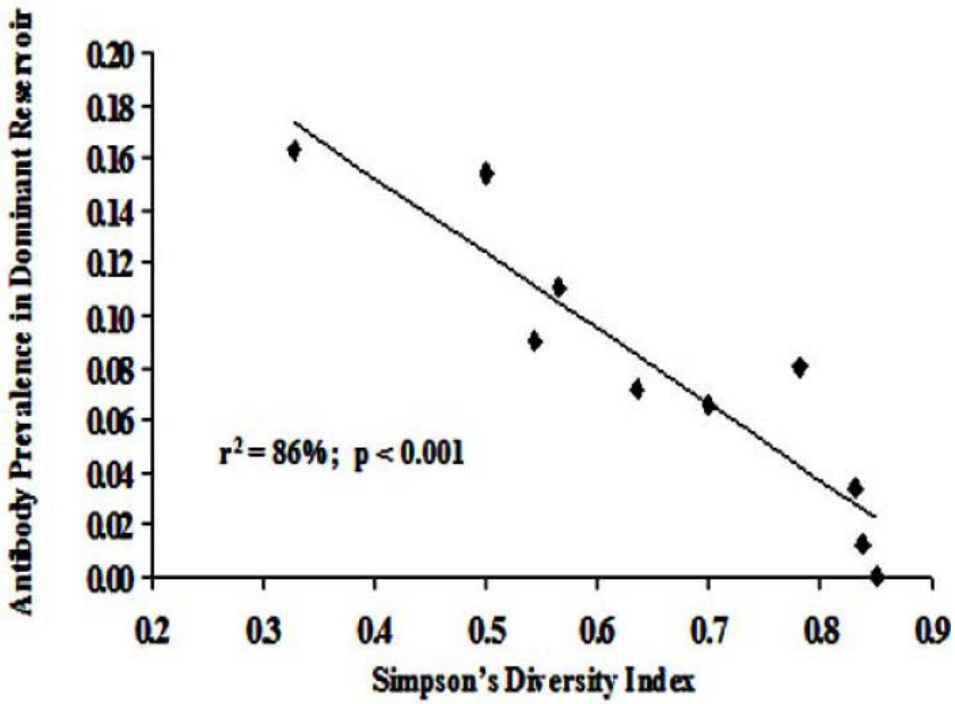
Biodiversity: wildlife



Disease and species diversity



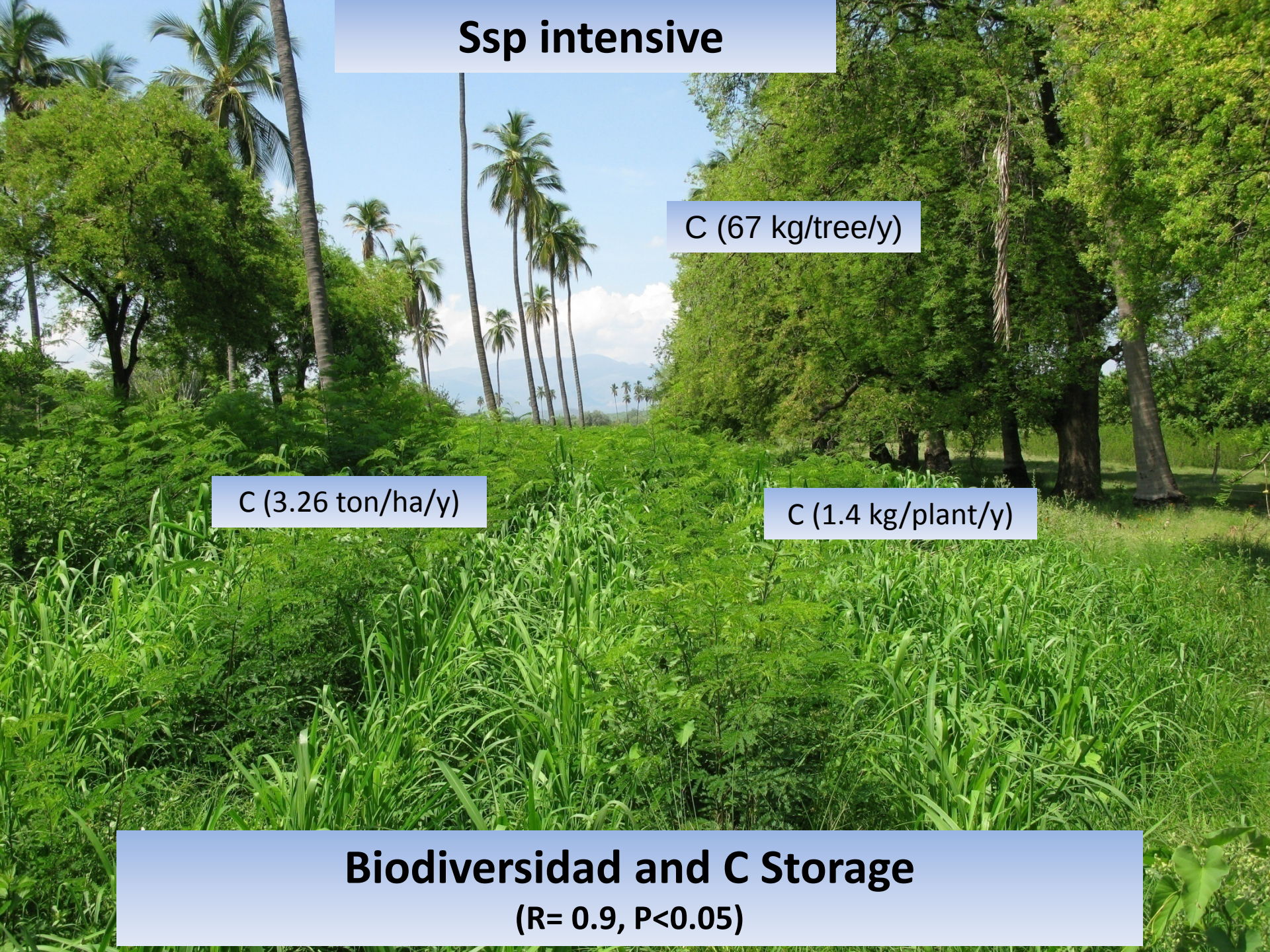
West Nile V (Ezenwa et al 2006)



Hantavirus (Mills 2006; Suzán et al 2009)

Environmental services:

Gases (GHG)


Ssp intensive
C (67 kg/tree/y)
C (3.26 ton/ha/y)
C (1.4 kg/plant/y)
Biodiversidad and C Storage
(R= 0.9, P<0.05)

Work ahead

- Animal welfare must be considered a criteria for sustainability
- Synergies and trade offs between sustainability criteria must be assessed at a system level
- Scientific research is needed to develop new policies integrating sustainability criteria

Gracias

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ORGANIZACIÓN MUNDIAL DE SANIDAD ANIMAL

Proteger a los animales, preservar nuestro futuro