IECA 2021
The 2nd International Electronic Conference on Animals
Global Sustainability and Animals: Welfare, Policies and Technologies

Silvopastoral systems as a sustainable alternative to mitigate the effects of climate change on farm level

MATHEUS DENIZ

KAROLINI T. DE SOUSA

MARCOS M. VALE

JOÃO R. DITTRICH

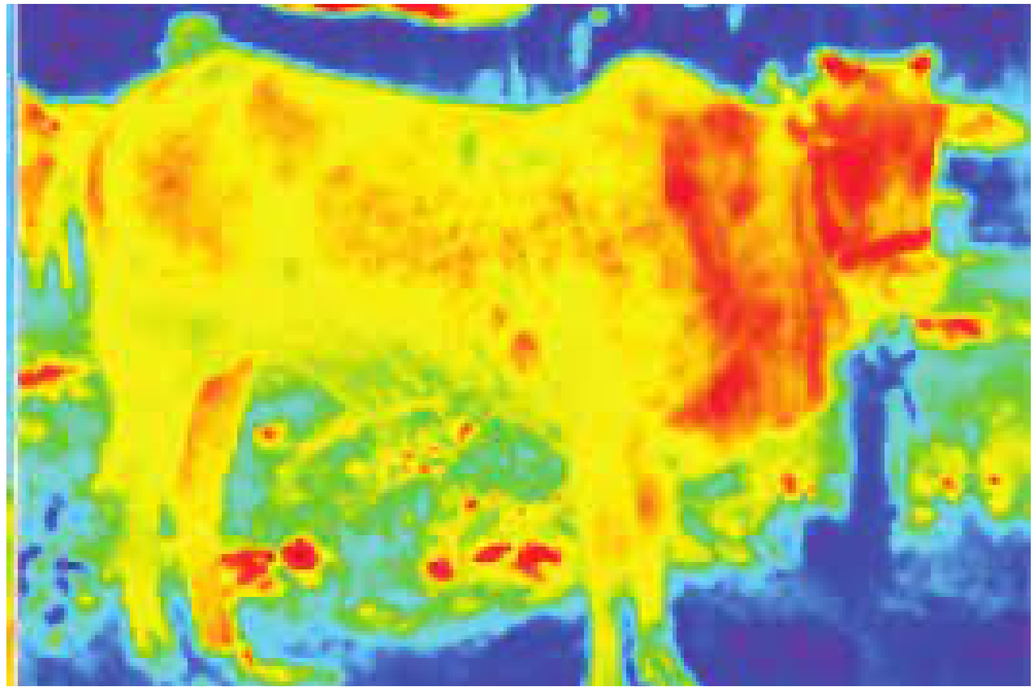
JOÃO A. G. HILL

MARIA J. HÖTZEL

INTRODUCTION

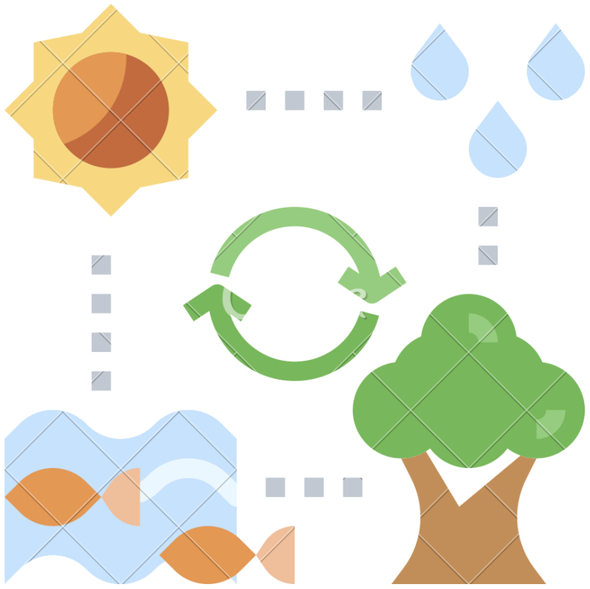
CLIMATE CHANGES

THERMAL COMFORT ZONES



INTRODUCTION

SILVOPASTORAL SYSTEMS



NATURE-BASED SOLUTION

OBJECTIVE

Estimate the thermal comfort of bovines during hot seasons (spring and summer) in a silvopastoral system compared to treeless pasture

MATERIAL AND METHODS

Location

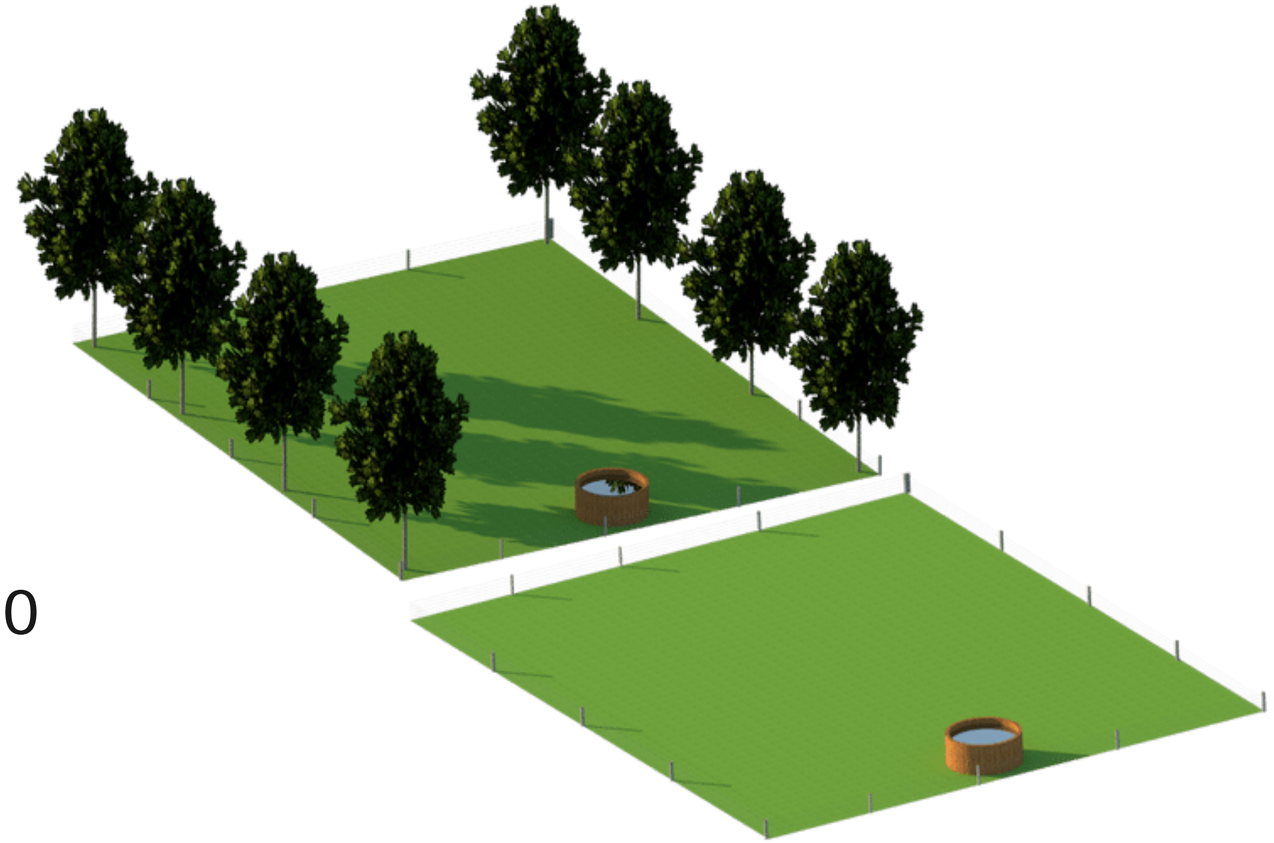
Southern

Brazil

Period

September of 2020

February of 2021



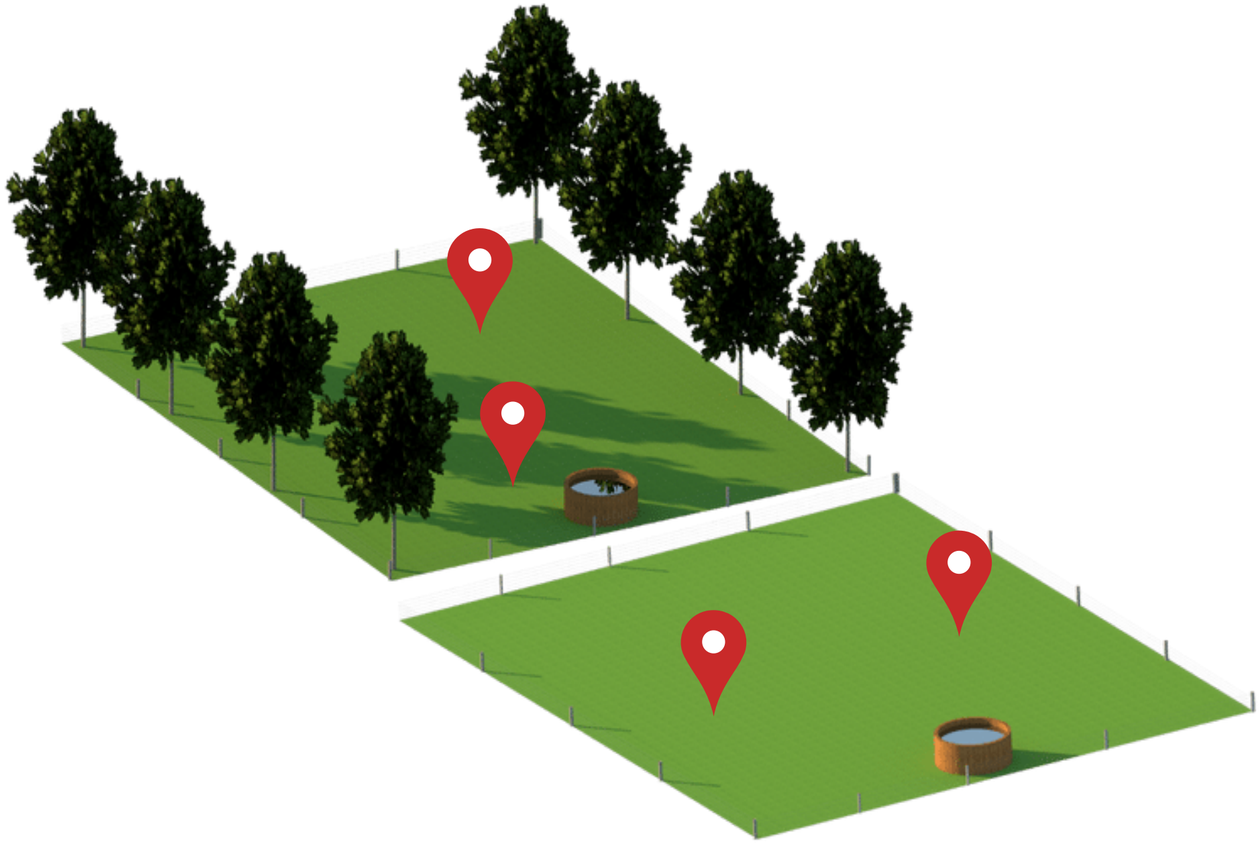
MATERIAL AND METHODS

Air temperature

Relative humidity

Black globe temperature

Wind speed



MATERIAL AND METHODS

BLACK GLOBE-HUMIDITY INDEX (BGHI)

RADIANT THERMAL LOAD (RTL)

HEAT LOAD INDEX (HLI)

Treeless pasture

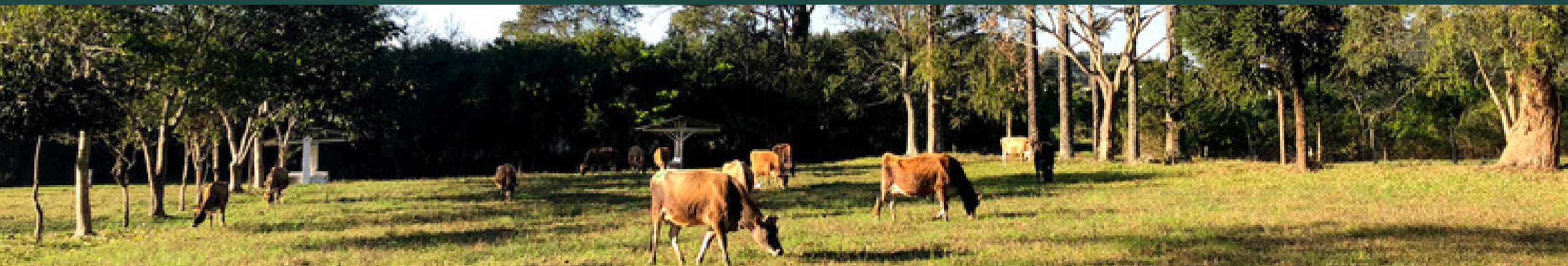
BGHI	RTL	HLI
78	581	59

Silvopastoral system

BGHI	RTL	HLI
72	439	47

Conclusion

The SPS provided a better thermal environment for pasture-based systems when compared to TLP, indicating that it can mitigate the effects of heat during the spring and summer of subtropical climate.



THANK YOU!

Matheus Deniz, Ph.D. Candidate - UFPR
Animal Scientist
MSc. in Agroecosystems
matheus-utfpr@hotmail.com
http://www.agrarias.ufpr.br/portal/litez/