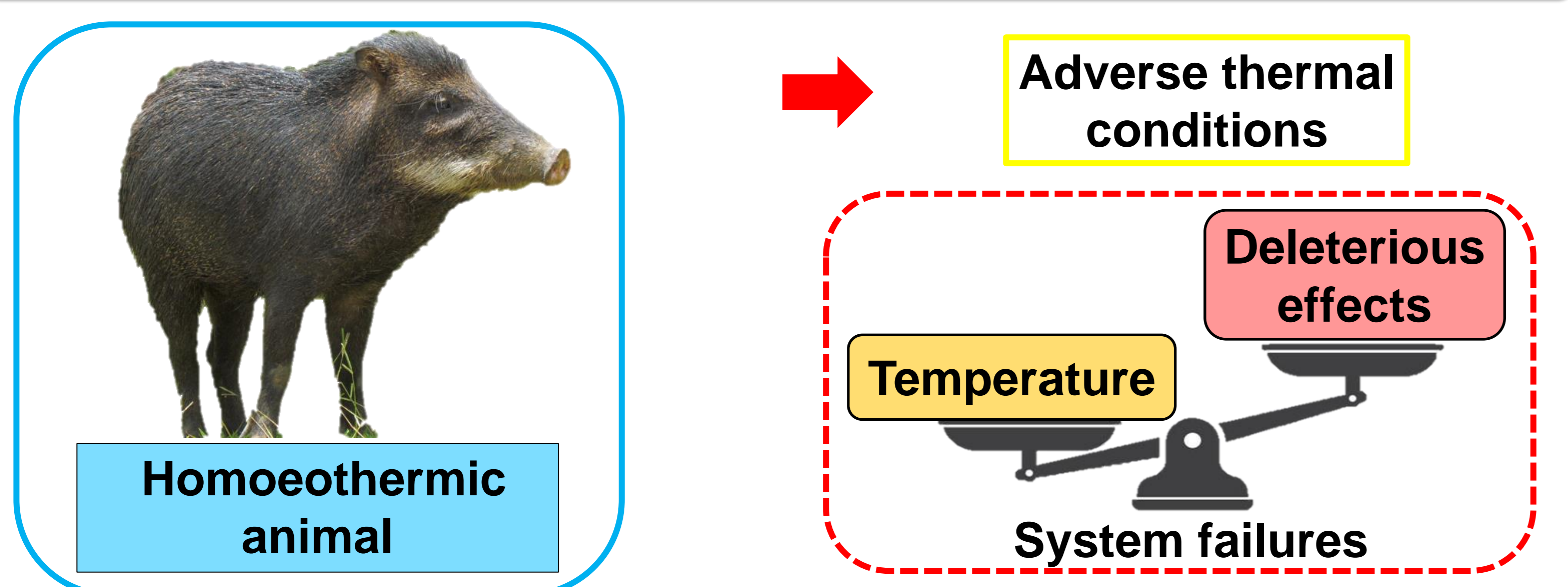


The effect of environmental variables on production, maturation and viability of sperm in white-lipped peccary (*Tayassu pecari*)

R. P. Santos¹, C. H. S. C. Barros², W.M. Machado², M. M. Santos³, J. B. F. Souza-Junior³, R. L. A. Vieira², S. L. G. Nogueira-Filho², S. V. Matarazzo², P. P. N. Snoeck², A. R. Silva¹

¹Laboratory of Animal Germplasm Conservation, UFERSA, Mossoró, RN, Brazil; ²Laboratory of Animal Reproduction, UESC, Ilhéus, BA, Brazil; ³Laboratory of Biometeorology and Environmental Biophysics, UFERSA, Mossoró, RN, Brazil.

1. INTRODUCTION



The objective was to evaluate the influence of environmental variables on semen collection, sperm maturation and production.

2. MATERIAL AND METHODS

Universidade Estadual de Santa Cruz (UESC), Ilhéus, Bahia, Brazil (14° 47' 50" South; 39° 2' 8" West).

Environmental variables

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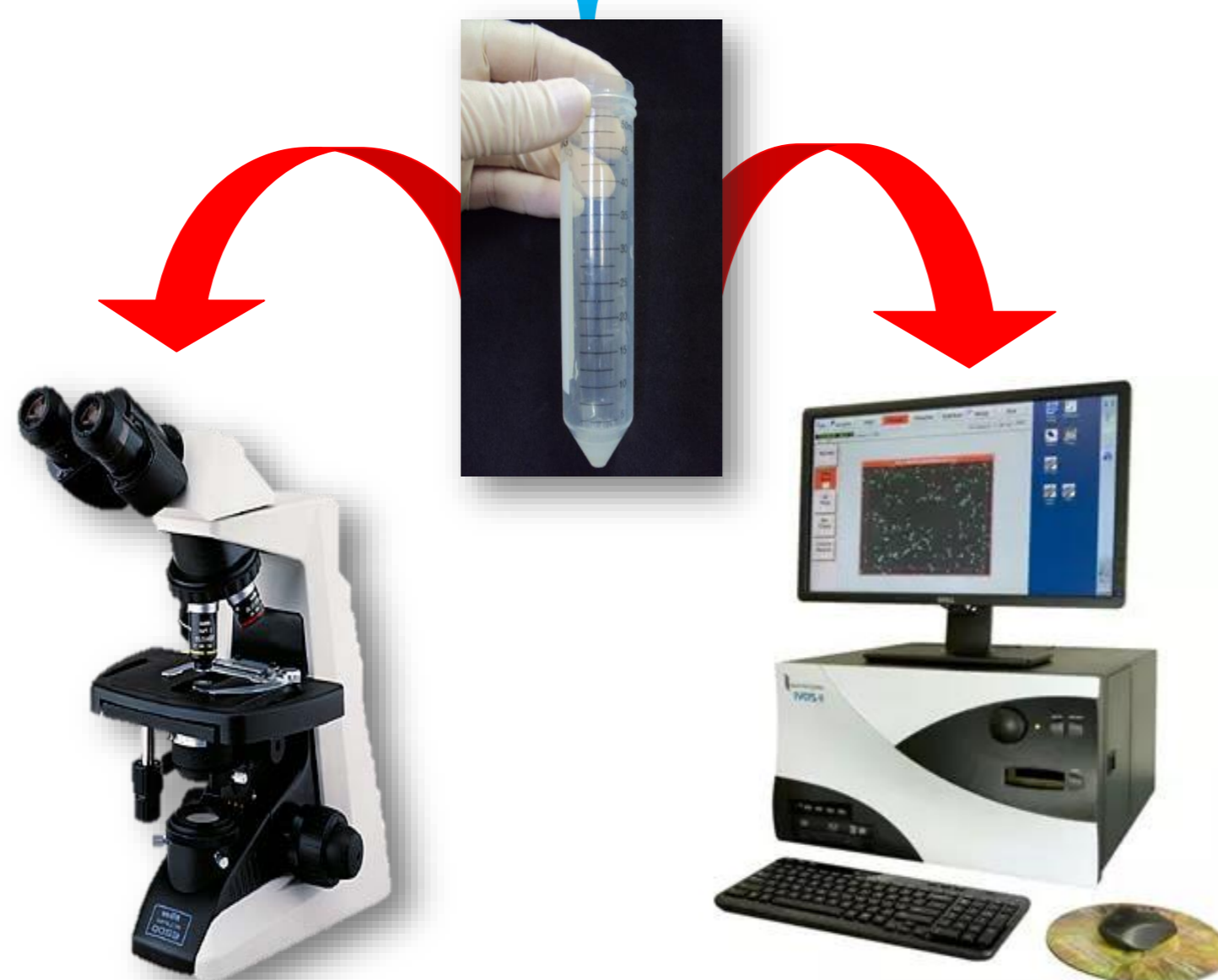
One day before

Previous 14 days

Previous 51-55 days

Semen collection

N° of animals 9



We checked the link between semen parameters and environmental variables by Spearman rank correlation tests.

3. RESULTS AND DISCUSSION

Table 1. Mean parameters of spermatic and kinematic variables of the semen of *Tayassu pecaries*

Semen variables	Mean	Standard error
Volume (µL)	420	278.8
Concentration (sptz/mL)	638.2	550.4
pH	7.1	0.2
Cytoplasmic droplets Proximal (%)	11.7	14.2
Cytoplasmic droplets Distal (%)	7.3	15.3
Morphology Normal (%)	63.7	18.8
Major defects	19.9	14.5
Minor defects	16.4	17.7
Kinematic parameters		
Total motility (%)	77.3	17.5
Progressive motility (%)	37.8	17.8
Linearity (%)	36.3	13.0
Straightness (%)	59.0	12.0
Curvilinear velocity (µm/s)	45.3	12.3
Progressive linear velocity (µm/s)	16.5	7.3
Velocity path average (µm/s)	27.5	11.7
Amplitude lateral head (µm)	2.4	0.4
Beat cross frequency (Hz)	6.0	1.7

- Highest temperature in the period of 55-51 days before collection;
- Higher rainfall and relative humidity in the period of 14 (P < 0.05).

Table 2. Significant associations between rainfall and spermatic and kinematic variables of peccary semen

	GCP	ALH
Previous 14 days		
Rainfall	r = 0,62	r = 0,62
Previous 51-55 days		
Rainfall	r = 0,67	n.s

4. CONCLUSION

In conclusion, rainfall seems to be the most important environmental variable that can influence white-lipped peccary sperm parameters, especially during the formation and maturation of the cell.

Acknowledgements:

