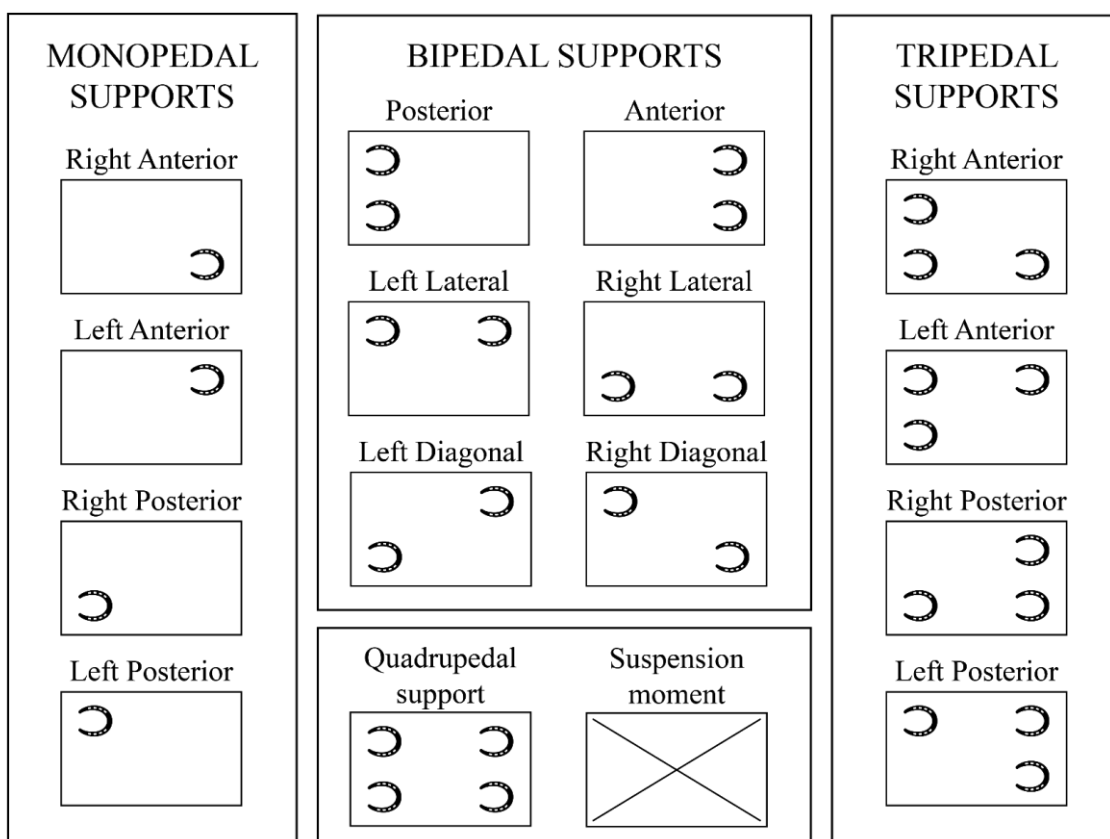


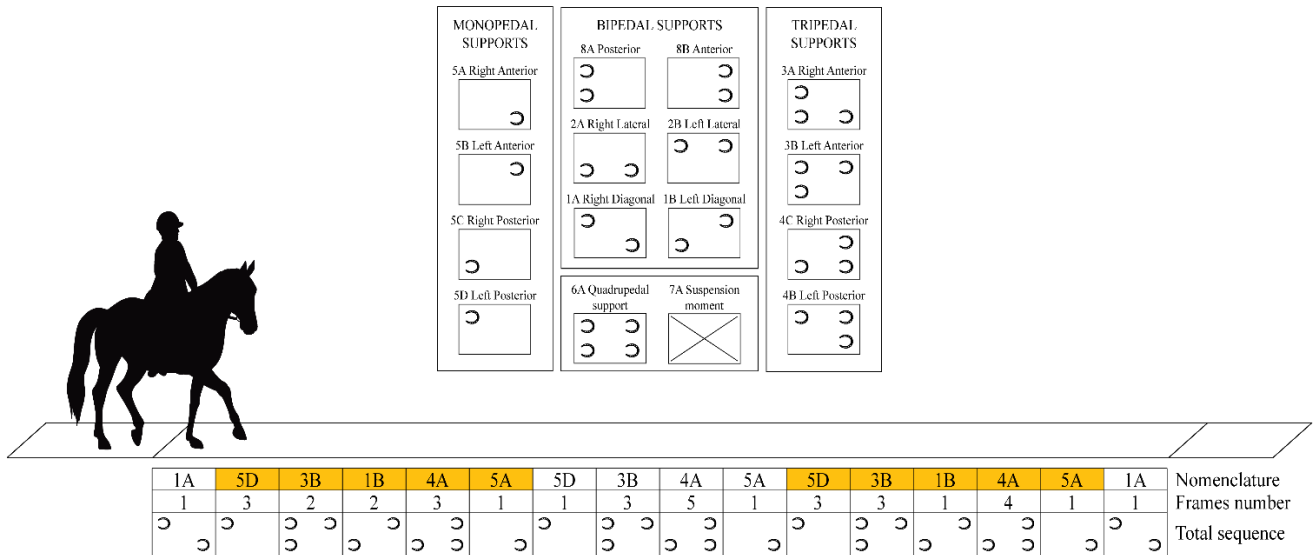
Supplementary Figure 1: Graphical representation of the sound track, which is flat and firm, installed at ground level to prevent the creation of obstacles during locomotion. The track measures 15 metres in length and 2 metres in width. The figure illustrates the perpendicular position of the camera in relation to the sound track, showing the horse and rider along the trajectory.

MOMENTS OF SUPPORT



Supplementary Figure 2: Types of support moments—monopedal, bipedal, tripedal, and quadrupedal—and the suspension moment of equines. In the video analysis, the support moments are abbreviated as follows: MA: anterior monopedal (left and right); MP: posterior monopedal (left and right); BD: diagonal bipedal (left and right); BL: lateral bipedal (left and right); BA: anterior bipedal; BP: posterior bipedal; TA: anterior tripedal (left and right); TP: posterior tripedal (left and right); and Q: quadrupedal. Adapted from [1].

NOMECLATURE OF SUPPORT MOMENTS



“A” SEQUENCE

5D	3B	1B	4A	5A
3	2	2	3	1
○	○	○	○	○
○	○	○	○	○

Supplementary Figure 3: Represents the graphical illustration of the methodology. In this figure, the horse moved along the sound track and the video was analysed frame by frame. For this analysis, each support moment was identified with a specific nomenclature, which was subsequently recognised by Excel and automatically plotted. In addition, the graph shows the support moments – nomenclature, together with the Excel spreadsheet containing: First row: insertion of the nomenclature according to the video analysis. Second row: number of frames per support. Third row: design of the support moments along the trajectory (5 metres).

Supplementary Table 1: Speeds in meters per second (m/s) of the variations in the gallop, by animal, are based on the calculation of the number of frames converted into seconds (1 frame equals 0.033 seconds), considering the five-meter distance covered by each animal.

HORSES	FRAMER	TIME	SPEED m/s
1	95	3.14	1.59
2	45	1.49	3.37
3	77	2.54	1.97
4	88	2.90	1.72
5	52	1.72	2.91
6	57	1.88	2.66
7	89	2.94	1.70
8	52	1.72	2.91
9	66	2.18	2.30
10	51	1.68	2.97
11	79	2.61	1.92
12	77	2.54	1.97
13	74	2.44	2.05
14	91	3.00	1.67
15	90	2.97	1.68
16	55	1.82	2.75
17	99	3.27	1.53
18	87	2.87	1.74
19	71	2.34	2.13
20	76	2.51	1.99
21	87	2.87	1.74
22	68	2.24	2.23
23	98	3.23	1.55
24	44	1.45	3.44
25	98	3.23	1.55
26	77	2.54	1.97
27	75	2.48	2.02
28	67	2.21	2.26
29	52	1.72	2.91
30	92	3.04	1.65
31	87	2.87	1.74

32	67	2.21	2.26
33	69	2.28	2.20
34	50	1.65	3.03
35	77	2.54	1.97
36	66	2.18	2.30
37	42	1.39	3.61
38	49	1.62	3.09
39	38	1.25	3.99
40	64	2.11	2.37
Mean			2.29
Standard Error			0.64

Supplementary Table 2: Incidence of the support gallop group: Incidence of support in the different sequence groups of gallop variations. where MA: anterior monopedal; MP: posterior monopedal; BD: diagonal bipedal; BL: lateral bipedal; BA: anterior bipedal; BP: posterior bipedal; TA: anterior tripedal; TP: posterior tripedal; and Q: quadrupedal, with repetitive percentages.

SUPPORT INCIDENCE GALLOP GROUP		
Support	Number of Equines	%
MA	39	97.5%
MP	39	97.5%
BD	38	95.0%
BL	12	30.0%
BA	0	0.0%
BP	35	87.5%
TA	40	100.0%
TP	40	100.0%
Q	7	17.5%

References

[1] Duarte HOG, Rosa G dos S, Alberto Hussni C. Aspectos da locomoção e bases gerais dos andamentos básicos naturais dos equinos [Aspects of locomotion and general bases of basic natural equine gaits]. *Veterinária e Zootecnia* 2022;29:1-12.
<https://doi.org/10.35172/rvz.2022.v29.1012>.