**Modelling for the inheritance of endangered equid multiple births and fertility: determining risk factors and genetic parameters in donkeys *(Equus asinus)***

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| Animals |
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**Supplementary Table S3.**Descriptive statistics for fixed effects (yellow), interaction (green), covariates (red) and birth related variables (blue) in Andalusian donkeys (N=765).

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| Descriptive statistics  Items | Mean | Std. Error | 95% Confidence Interval for Mean | | 5% Trimmed Mean | Median | Variance | Std. Deviation | CV | Minimum | Maximum | Range | Interquartile Range | Skewness | Std. Error | Kurtosis | Std. Error |
| Lower Bound | Upper Bound |
| Birth month | 5.060 | 0.111 | 4.840 | 5.270 | 4.910 | 5.000 | 9.501 | 3.082 | 0.609 | 1.000 | 12.000 | 11.000 | 4.000 | 0.570 | 0.088 | -0.431 | 0.177 |
| Birth year | 22.160 | 0.227 | 21.710 | 22.600 | 22.540 | 23.000 | 39.313 | 6.270 | 0.283 | 1.000 | 32.000 | 31.000 | 8.000 | -0.766 | 0.088 | 0.392 | 0.177 |
| Birth season | 2.180 | 0.035 | 2.110 | 2.250 | 2.140 | 2.000 | 0.943 | 0.971 | 0.445 | 1.000 | 4.000 | 3.000 | 2.000 | 0.426 | 0.088 | -0.792 | 0.177 |
| Sex | 1.760 | 0.015 | 1.730 | 1.790 | 1.790 | 2.000 | 0.181 | 0.425 | 0.241 | 1.000 | 2.000 | 1.000 | 0.000 | -1.242 | 0.088 | -0.459 | 0.177 |
| Owner/Farm | 26.030 | 0.774 | 24.510 | 27.550 | 24.290 | 21.000 | 458.078 | 21.403 | 0.822 | 1.000 | 91.000 | 90.000 | 24.000 | 1.203 | 0.088 | 0.685 | 0.177 |
| Husbandry system | 2.940 | 0.023 | 2.900 | 2.990 | 2.960 | 3.000 | 0.392 | 0.626 | 0.213 | 1.000 | 4.000 | 3.000 | 0.000 | -0.407 | 0.088 | 0.822 | 0.177 |
| Herd\*Year Interaction | 234.650 | 4.546 | 225.730 | 243.580 | 235.790 | 239.000 | 15807.245 | 125.727 | 0.536 | 1.000 | 441.000 | 440.000 | 212.000 | -0.094 | 0.088 | -1.124 | 0.177 |
| Age (in years) | 10.762 | 0.197 | 10.375 | 11.148 | 10.568 | 10.463 | 29.675 | 5.447 | 0.506 | 0.518 | 29.362 | 28.844 | 7.927 | 0.425 | 0.088 | -0.215 | 0.177 |
| Maximum foal number per birth | 0.96 | 0.017 | 0.93 | 1 | 0.96 | 1.000 | 0.213 | 0.462 | 0.481 | 0 | 3 | 3 | 0 | -0.054 | 0.088 | 2.035 | 0.177 |
| Multiple birth number per animal for a given donkey | 0.1 | 0.013 | 0.07 | 0.13 | 0.04 | 0.000 | 0.135 | 0.368 | 3.680 | 0 | 5 | 5 | 0 | 5.469 | 0.088 | 47.932 | 0.177 |
| Historical foal number born per donkey | 1.03 | 0.089 | 0.86 | 1.21 | 0.66 | 0.000 | 6.098 | 2.469 | 2.397 | 0 | 40 | 40 | 1 | 7.214 | 0.088 | 89.613 | 0.177 |

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| TYPE OF ITEM | |
|  | Fixed effects |
|  | Interactions |
|  | Covariates |
|  | Traits/Variables |
|  |  |
| SKEWNESS | |
|  | If skewness is less than −1 or greater than +1. the distribution is highly skewed. |
|  | If skewness is between −1 and −½ or between +½ and +1. the distribution is moderately skewed. |
|  | If skewness is between −½ and +½. the distribution is approximately symmetric. |
|  |  |
| KURTOSIS | |
|  | A normal distribution has kurtosis exactly 3 (excess kurtosis exactly 0). Any distribution with kurtosis ≈3 (excess ≈0) is called mesokurtic. |
|  | A distribution with kurtosis <3 (excess kurtosis <0) is called platykurtic. Compared to a normal distribution. its central peak is lower and broader. and its tails are shorter and thinner. |
|  | A distribution with kurtosis >3 (excess kurtosis >0) is called leptokurtic. Compared to a normal distribution. its central peak is higher and sharper. and its tails are longer and fatter. |