

Supplementary materials

Table S1. All sperm motility parameters (means \pm SD) in C, D-532, OF 50% and OF 100% and pairwise comparison among treatments.

| Sperm traits | Treatments | | | |
|------------------|--------------------|--------------------|--------------------|--------------------|
| | C | D-532 | OF 50% | OF 100% |
| MOT (%) | 44.88 \pm 11.40 | 43.04 \pm 13.59 | 57.49 \pm 14.00 | 55.56 \pm 13.83 |
| VCL (μ m/s) | 134.91 \pm 28.52 | 138.01 \pm 18.74 | 122.29 \pm 32.01 | 107.72 \pm 27.69 |
| VAP (μ m/s) | 111.75 \pm 23.85 | 120.45 \pm 17.01 | 100.82 \pm 28.12 | 89.61 \pm 25.88 |
| VSL (μ m/s) | 66.13 \pm 17.15 | 94.70 \pm 24.83 | 63.78 \pm 20.33 | 56.84 \pm 20.91 |
| STR (%) | 59.13 \pm 6.72 | 69.49 \pm 5.55 | 61.14 \pm 7.31 | 61.24 \pm 8.44 |
| LIN (%) | 49.88 \pm 6.69 | 64.23 \pm 7.79 | 50.00 \pm 8.55 | 49.98 \pm 9.90 |
| ALH (μ m) | 3.58 \pm 0.90 | 2.49 \pm 0.57 | 3.21 \pm 0.80 | 2.84 \pm 0.70 |
| BCF (Hz) | 3.52 \pm 0.79 | 4.28 \pm 0.72 | 3.71 \pm 0.84 | 3.72 \pm 0.94 |
| DSM (sec) | 30.43 \pm 6.32 | 32.86 \pm 6.33 | 46.39 \pm 9.60 | 45.98 \pm 10.84 |

Figure S1. Correlation matrix among all the sperm motility traits.

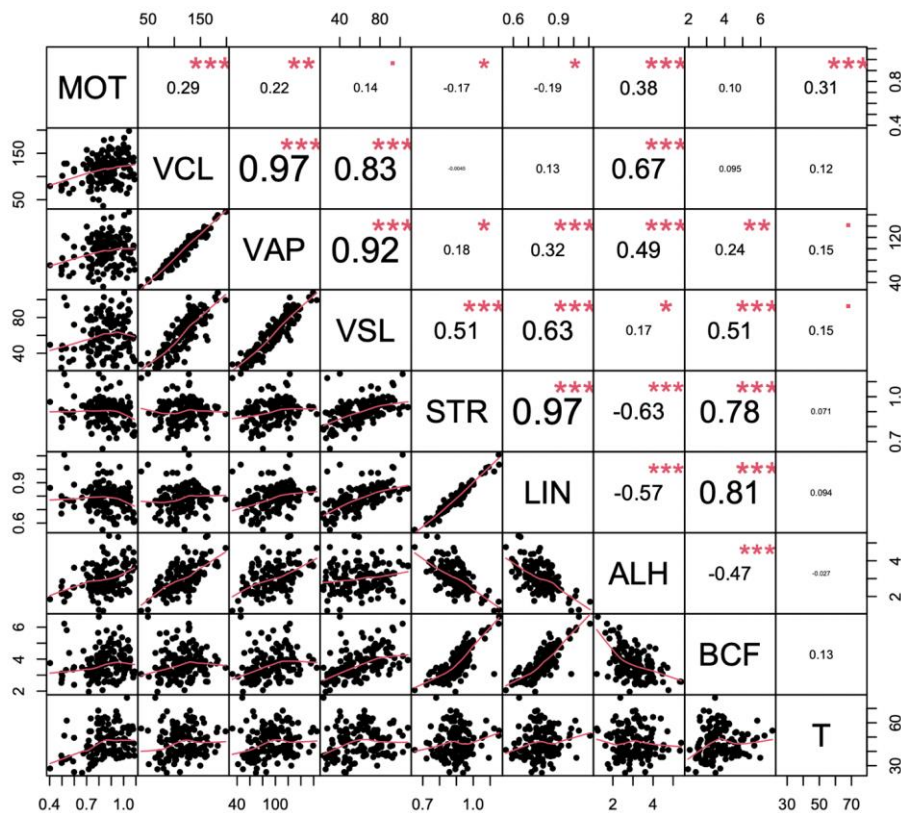


Figure S2. The barplots show the additive male effect on total motility (MOT) and duration (DSM), grouping all treatments.

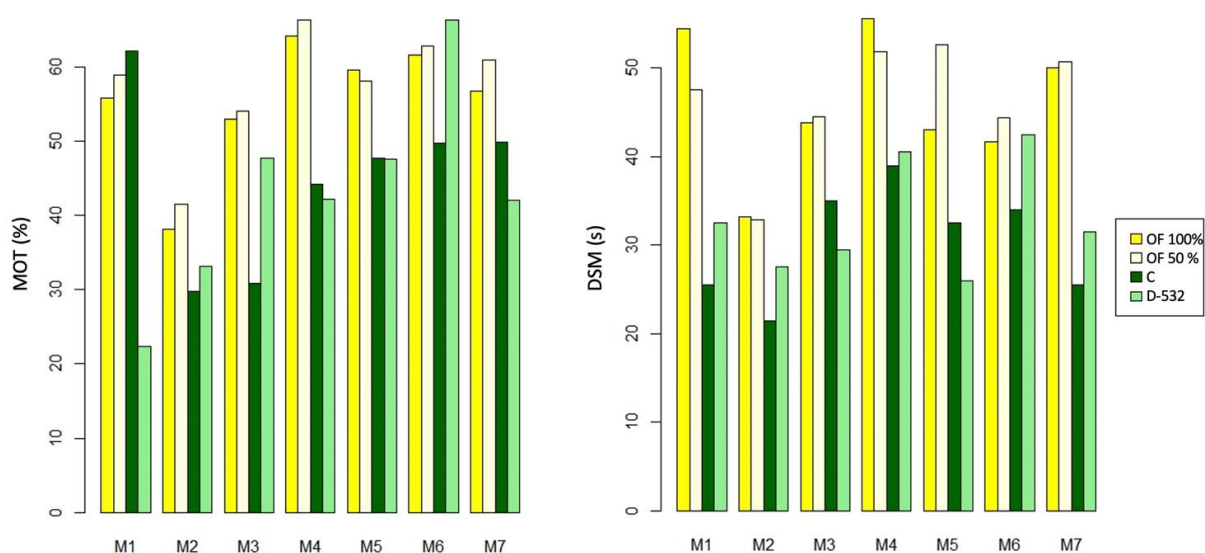


Figure S3. The barplots show the additive female effect (mean of all male crosses) on total motility (MOT) and duration (DSM), grouping OF 50% and OF 100%. Values registered in C and D-532 are shown.

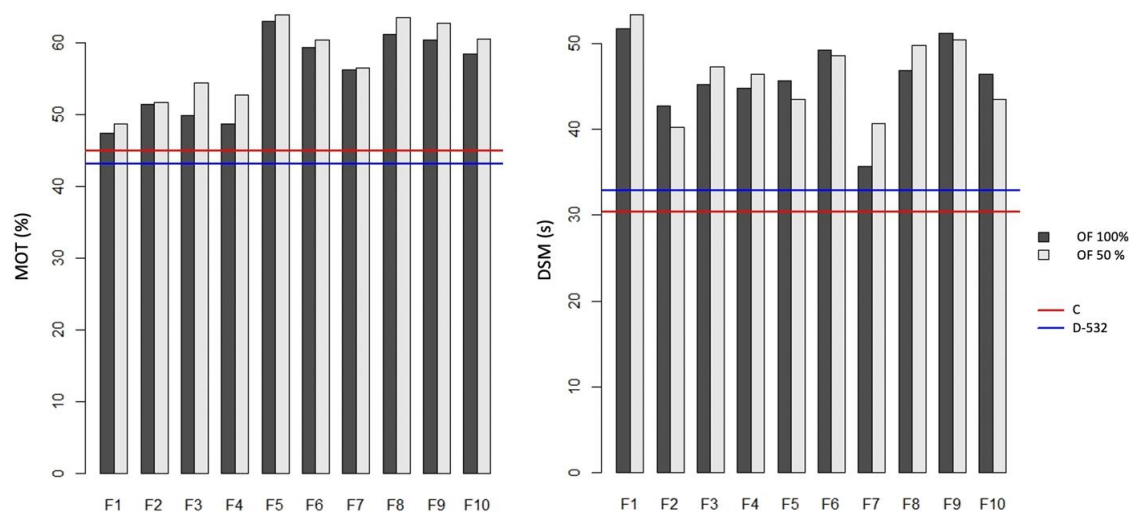


Figure S4. The barplot shows the interaction effect between males and females on total motility (MOT) grouped by male (each colored bar) and female (each group of bars). Both females and males are sorted by their overall means.

