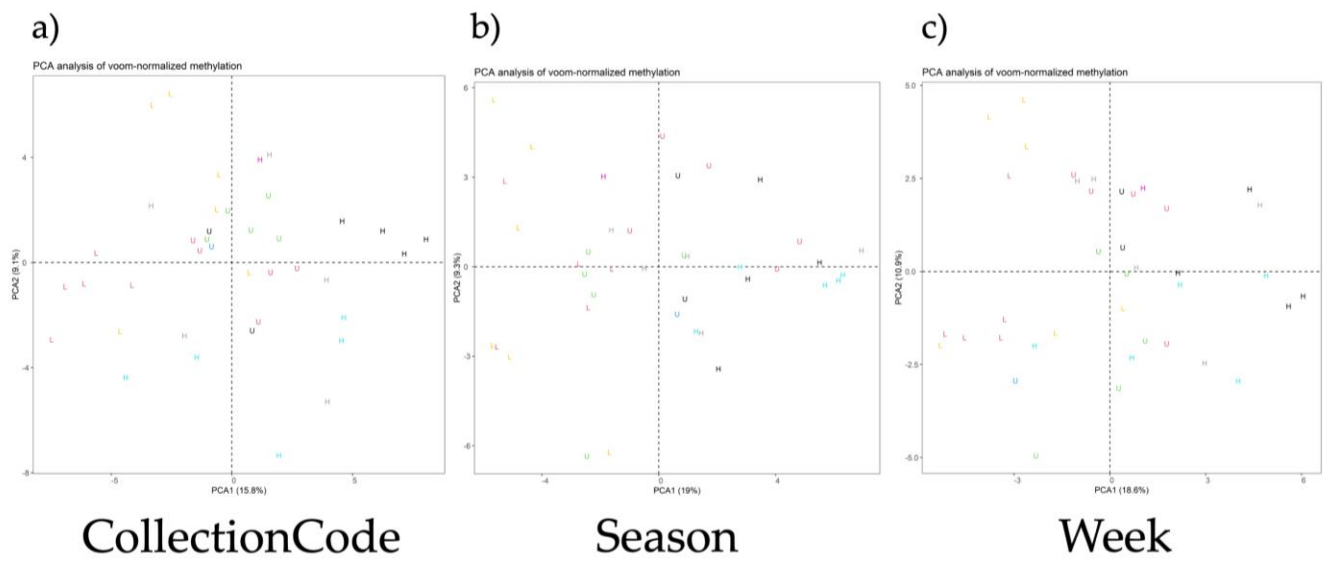


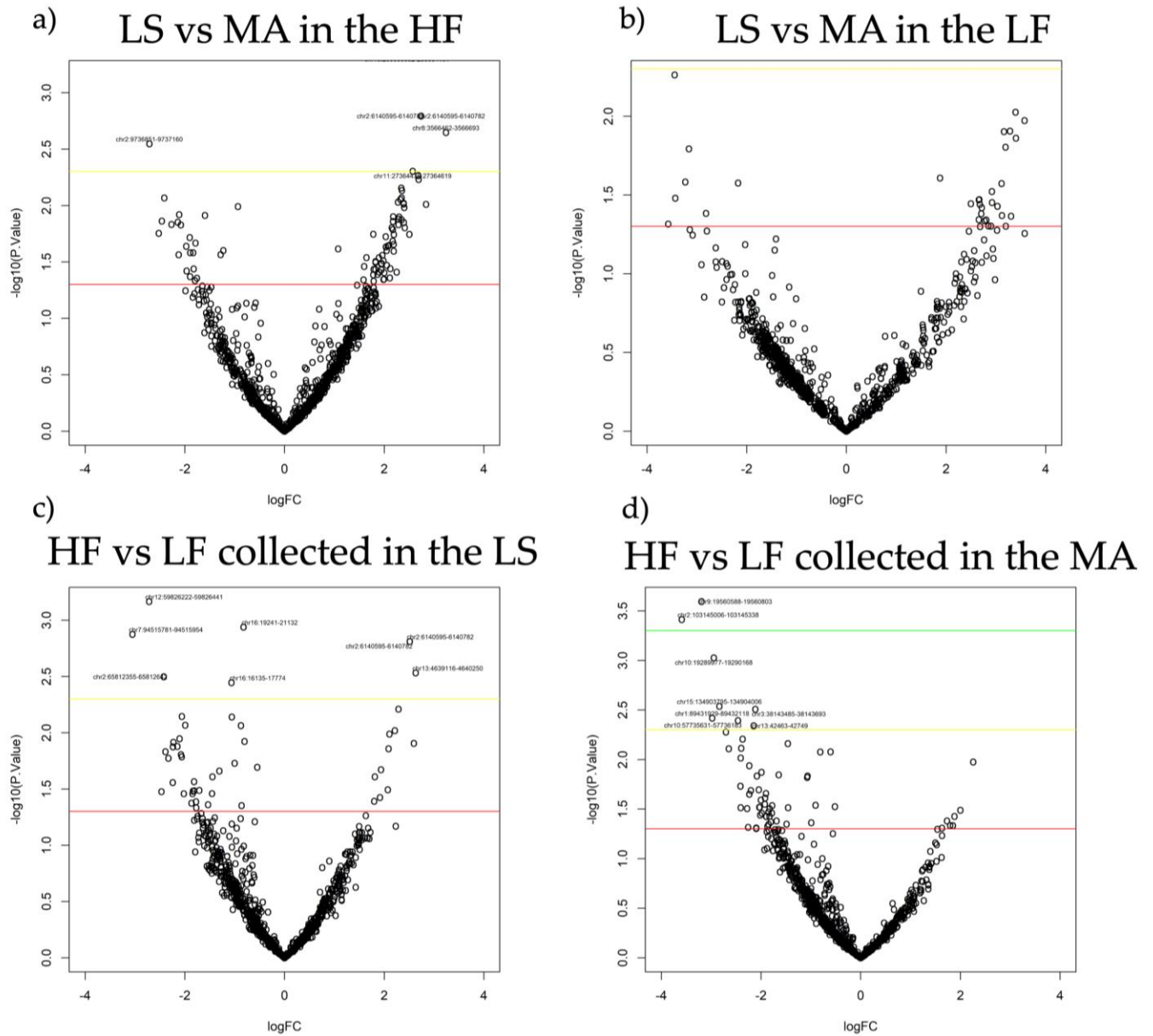
$P \leq 0.0005$

$P \leq 0.000025$

**Figure S1.** Principal Component Analysis (PCA) of 42,963 SNPs (a) and those significant ( $p < 0.0005$ ) SNPs (b) across 11 individual boars classified in experimental as High Fertile (HF), Low Fertile (LF), or with Unknown Fertility (UF).



**Figure S2.** Principal Component Analysis (PCA) of the significant Differentially Methylated Regions (DMRs, voom-normalized methylation) of the ejaculates from all 11 boars grouped by (a): collection code, (b): collection period and, (c) collection week.



**Figure S3.** Volcano plots depicting differences in fertility-related DMRs found between ejaculates collected during late summer (LS) vs. middle autumn (MA) in (a) high-fertile (HF) boars, (b) low-fertile (LF); or (c) HF vs. LF boars collected during LS, or (d) during MA.