

Table S10: Root mean squared error (RMSE) and mean absolute error (MAE) values when predicting selection coefficient ( $s$ ), initial frequency ( $f$ ), and time of selection ( $T_{\text{sel}}$ ) for CEU populations when trained and tested with simulations sampling  $n = 20, 50$ , or  $200$  haploid genomes. The values show RMSE and MAE measured between standardized log-scaled predicted and actual parameters.

Number of haploids ( $n$ )	RMSE( $s$ )	RMSE( $f$ )	RMSE( $T_{\text{sel}}$ )	MAE( $s$ )	MAE( $f$ )	MAE( $T_{\text{sel}}$ )
20	1.00	1.04	0.74	0.82	0.89	0.63
50	0.93	1.01	0.69	0.80	0.83	0.55
200	0.89	0.94	0.67	0.71	0.80	0.54