

Table S3. R-Squared (R^2) between realized and predicted phenotype in testing data sets, by data set, simulation scenario, genetic information used and Monte Carlo replicate.

Dataset	FRAMINGHAM						GENEVA			
Scenario	RAND			LOW-MAF			RAND		LOW-MAF	
Information	QTL	Markers	Pedigree	QTL	Markers	Pedigree	QTL	Markers	QTL	Markers
Rep-1	.600	.373	.305	.490	.191	.170	.546	.069	.529	.038
Rep-2	.524	.270	.236	.561	.226	.191	.538	.029	.535	.039
Rep-3	.463	.214	.148	.556	.222	.195	.558	.067	.541	.039
Rep-4	.501	.234	.207	.542	.254	.252	.539	.073	.522	.034
Rep-5	.571	.239	.235	.620	.254	.238	.494	.069	.508	.058
Rep-6	.586	.316	.258	.544	.245	.217	.517	.097	.503	.070
Rep-7	.531	.333	.259	.554	.263	.216	.501	.084	.583	.040
Rep-8	.586	.332	.305	.531	.216	.191	.528	.042	.542	.036
Rep-9	.523	.208	.177	.584	.237	.250	.545	.066	.548	.050
Rep-10	.486	.165	.103	.528	.241	.242	.475	.031	.552	.050
Rep-11	.522	.255	.240	.556	.233	.203	.526	.124	.514	.036
Rep-12	.525	.278	.246	.560	.236	.213	.502	.105	.547	.065
Rep-13	.538	.233	.233	.550	.205	.194	.495	.073	.533	.044
Rep-14	.592	.295	.207	.536	.176	.133	.513	.074	.521	.036
Rep-15	.542	.254	.228	.557	.226	.212	.509	.063	.518	.019
Rep-16	.571	.340	.291	.537	.218	.214	.556	.069	.585	.042
Rep-17	.570	.257	.244	.543	.245	.234	.464	.025	.554	.060
Rep-18	.495	.264	.232	.535	.243	.221	.521	.050	.531	.044
Rep-19	.493	.271	.207	.565	.212	.198	.473	.095	.507	.023
Rep-20	.629	.344	.299	.538	.280	.262	.460	.058	.522	.059
Rep-21	.540	.216	.169	.530	.307	.289	.499	.047	.473	.018
Rep-22	.516	.192	.146	.527	.243	.249	.566	.075	.563	.084
Rep-23	.565	.293	.258	.545	.248	.234	.569	.077	.579	.037
Rep-24	.532	.232	.206	.506	.212	.213	.535	.101	.500	.091
Rep-25	.491	.234	.169	.578	.232	.221	.542	.053	.527	.077
Rep-26	.558	.247	.200	.575	.306	.264	.468	.086	.540	.032
Rep-27	.587	.263	.235	.573	.265	.261	.548	.087	.536	.045
Rep-28	.595	.280	.229	.600	.249	.226	.502	.069	.544	.062
Rep-29	.548	.234	.203	.544	.280	.288	.531	.079	.548	.091
Rep-30	.561	.238	.218	.562	.243	.221	.494	.081	.571	.049
Average	.545	.263	.223	.551	.240	.224	.517	.071	.536	.049
SE	.040	.048	.047	.026	.029	.033	.031	.023	.026	.019