Table A1 The means and standard errors of GEBV accuracy for ungenotyped individuals comparing different validation generations at different QTL scenarios and different single-step models (supplemental table for Figure 2).

Models	QTL scenarios	Validation generations		
		5003	5004	5005
SSGBLUP	5 QTL	0.43±0.020	0.31±0.027	0.27±0.017
	50 QTL	0.41±0.018	0.34±0.015	0.27±0.029
	500 QTL	0.44±0.020	0.34±0.018	0.23±0.008
SS-BayesA	5 QTL	0.61±0.012	0.53±0.014	0.48±0.019
	50 QTL	0.45±0.020	0.40±0.018	0.35±0.028
	500 QTL	0.44±0.020	0.34±0.018	0.24±0.008
SS-BayesB	5 QTL	0.63±0.012	0.55±0.013	0.47±0.039
	50 QTL	0.51±0.018	0.48±0.014	0.40±0.031
	500 QTL	0.40±0.033	0.31±0.027	0.22±0.018

Table A2 The means and standard errors of GEBV accuracy for genotyped individuals comparing different validation generations at different QTL scenarios and different single-step models (supplemental table for Figure 2).

Models	QTL scenarios	Validation generations		
		5003	5004	5005
SSGBLUP	5 QTL	0.48±0.015	0.41±0.020	0.34±0.021
	50 QTL	0.45±0.019	0.39±0.008	0.34±0.016
	500 QTL	0.46±0.020	0.36±0.017	0.32±0.021
SS-BayesA	5 QTL	0.95±0.006	0.95±0.006	0.95±0.008
	50 QTL	0.58±0.029	0.58±0.027	0.55±0.028
	500 QTL	0.46±0.019	0.37±0.016	0.32±0.021
SS-BayesB	5 QTL	0.98±0.002	0.98±0.003	0.93±0.050
	50 QTL	0.74±0.019	0.75±0.017	0.66±0.065
	500 QTL	0.40±0.025	0.33±0.023	0.28±0.016

Table A3 The means and standard errors of GEBV accuracy for ungenotyped individuals comparing different single-step models at different QTL scenarios and different validation generations (supplemental table for Figure 3).

Validation generations	QTL scenarios	Models		
		SSGBLUP	SS-BayesA	SS-BayesB
5003	5 QTL	0.43±0.020	0.61±0.012	0.63±0.012
	50 QTL	0.41±0.018	0.45±0.020	0.51±0.018
	500 QTL	0.44±0.020	0.44±0.020	0.40±0.033
5004	5 QTL	0.31±0.027	0.53±0.014	0.55±0.013
	50 QTL	0.34±0.015	0.40±0.018	0.48±0.014
	500 QTL	0.34±0.018	0.34±0.018	0.31±0.027
5005	5 QTL	0.27±0.017	0.48±0.019	0.47±0.039
	50 QTL	0.27±0.029	0.35±0.028	0.40±0.031
	500 QTL	0.23±0.008	0.24±0.008	0.22±0.018

Table A4 The means and standard errors of GEBV accuracy for genotyped individuals comparing different single-step models at different QTL scenarios and different validation generations (supplemental table for Figure 3).

Validation generations	QTL scenarios	Models		
		SSGBLUP	SS-BayesA	SS-BayesB
5003	5 QTL	0.48±0.015	0.95±0.006	0.98±0.002
	50 QTL	0.45±0.019	0.58±0.027	0.74±0.019
	500 QTL	0.46±0.020	0.46±0.016	0.40±0.025
5004	5 QTL	0.41±0.020	0.95±0.006	0.98±0.003
	50 QTL	0.39±0.008	0.58±0.027	0.75±0.017
	500 QTL	0.36±0.017	0.37±0.016	0.33±0.023
5005	5 QTL	0.34±0.021	0.95±0.008	0.93±0.050
	50 QTL	0.34±0.016	0.55±0.028	0.66±0.065
	500 QTL	0.32±0.021	0.32±0.021	0.28±0.016

Table A5 The means and standard errors of GEBV accuracy for ungenotyped individuals comparing different QTL numbers at different validation generations with different single-step models (supplemental table for Figure 4).

Models	Validation generations	QTL scenarios		
		5	50	500
SSGBLUP	5003	0.43±0.020	0.31±0.027	0.27±0.017
	5004	0.41±0.018	0.34±0.015	0.27±0.029
	5005	0.44±0.020	0.34±0.018	0.23±0.008
SS-BayesA	5003	0.61±0.012	0.53±0.014	0.48±0.019
	5004	0.45±0.020	0.40±0.018	0.35±0.028
	5005	0.44±0.020	0.34±0.018	0.24±0.008
SS-BayesB	5003	0.63±0.006	0.55±0.006	0.47±0.008
	5004	0.51±0.029	0.48±0.027	0.40±0.028
	5005	0.40±0.019	0.31±0.016	0.22±0.021

Table A6 The means and standard errors of GEBV accuracy for genotyped individuals comparing different QTL numbers at different validation generations with different single-step models (supplemental table for Figure 4).

Models	Validation generations	QTL scenarios		
		5	50	500
SSGBLUP	5003	0.48±0.015	0.41±0.020	0.34±0.021
	5004	0.45±0.019	0.39±0.008	0.34±0.016
	5005	0.46±0.020	0.36±0.017	0.32±0.021
SS-BayesA	5003	0.95±0.006	0.95±0.006	0.95±0.008
	5004	0.58±0.029	0.58±0.027	0.55±0.028
	5005	0.46±0.019	0.37±0.016	0.32±0.021
SS-BayesB	5003	0.98±0.002	0.98±0.003	0.93±0.050
	5004	0.74±0.019	0.75±0.017	0.66±0.065
	5005	0.40±0.025	0.33±0.023	0.28±0.016