

Table S3 The number of times each QTL has been correctly selected over 50 replications, together with the average number of wrongly selected markers (false positives). F and N represent **VBfun** and **VBnonfun**, respectively (assuming the diagonal residual covariance structure in the model).

QTL	$n=200$ $k=10$		$n=200$ $k=100$		$n=500$ $k=10$		$n=500$ $k=100$	
	F	N	F	N	F	N	F	N
35	50	50	50	50	50	50	50	50
52	17	0	50	0	46	0	50	0
78	10	1	50	0	45	34	50	33
98	6	0	45	0	38	0	50	0
118	50	50	50	50	50	50	50	50
174	1	0	11	0	14	0	49	0
216	35	3	49	1	44	46	50	41
358	23	13	50	0	47	25	50	30
433	9	0	0	43	34	0	50	0
ave. fal. pos.	1.34	0.38	1.68	0	0.90	0.90	0.24	0.40