Supplementary file 3 Significant SNP of 11 quantitative traits under different association models.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Traits | Significance level | *P* value | GLM | GLM(Q) | MLM(K) | MLM(Q+K) |
| NPF | 0.01 | 2.16×10-7 | 44 | 2 | 29 | 2 |
| 0.05 | 1.08×10-6 | 187 | 18 | 137 | 17 |
| NSF | 0.01 | 2.16×10-7 | 12 | 0 | 0 | 0 |
| 0.05 | 1.08×10-6 | 40 | 3 | 4 | 1 |
| CD | 0.01 | 2.16×10-7 | 8 | 1 | 1 | 1 |
| 0.05 | 1.08×10-6 | 31 | 6 | 11 | 3 |
| APF | 0.01 | 2.16×10-7 | 1 | 1 | 1 | 1 |
| 0.05 | 1.08×10-6 | 3 | 6 | 3 | 6 |
| APA | 0.01 | 2.16×10-7 | 49 | 3 | 39 | 3 |
| 0.05 | 1.08×10-6 | 249 | 4 | 195 | 5 |
| PV | 0.01 | 2.16×10-7 | 0 | 8 | 0 | 0 |
| 0.05 | 1.08×10-6 | 4 | 43 | 3 | 1 |
| ACP | 0.01 | 2.16×10-7 | 57 | 2 | 46 | 2 |
| 0.05 | 1.08×10-6 | 195 | 10 | 152 | 10 |
| AL | 0.01 | 2.16×10-7 | 1 | 1 | 2 | 2 |
| 0.05 | 1.08×10-6 | 3 | 10 | 7 | 16 |
| TCL | 0.01 | 2.16×10-7 | 1 | 0 | 1 | 0 |
| 0.05 | 1.08×10-6 | 5 | 0 | 7 | 5 |
| TPL | 0.01 | 2.16×10-7 | 1 | 1 | 1 | 1 |
| 0.05 | 1.08×10-6 | 1 | 3 | 1 | 1 |
| TFL | 0.01 | 2.16×10-7 | 10529 | 0 | 788 | 0 |
| 0.05 | 1.08×10-6 | 20881 | 0 | 819 | 2 |