Table S2 The 8216 QTLs responsible for the 9 major traits (see Table S1) in the 12 chromosomes from Gramene Rice database (<http://www.gramene.org/>).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chr. | Length(cM) | Yield | | Vigor | | Anatomy | | Development | | Abiotic stress | | Quality | | Sterility or fertility | | Biotic stress | | Biochemical | | Total | |
| 1 | 184.19 | 351a | 1.91**b** | 310 | 1.68 | 165 | 0.90 | 86 | 0.47 | 118 | 0.64 | 71 | 0.39 | 61 | 0.33 | 61 | 0.33 | 24 | 0.13 | **1247** | **6.77** |
| 2 | 161.49 | 198 | 1.23 | 159 | 0.98 | 128 | 0.79 | 95 | 0.59 | 92 | 0.57 | 44 | 0.27 | 28 | 0.17 | 44 | 0.27 | 19 | 0.12 | **807** | **5.00** |
| 3 | 165.83 | 206 | 1.24 | 257 | 1.55 | 149 | 0.90 | 152 | 0.93 | 69 | 0.42 | 73 | 0.45 | 75 | 0.45 | 33 | 0.20 | 11 | 0.07 | **1025** | **6.18** |
| 4 | 132.72 | 178 | 1.34 | 188 | 1.42 | 144 | 1.08 | 58 | 0.44 | 73 | 0.55 | 26 | 0.20 | 29 | 0.22 | 32 | 0.24 | 15 | 0.11 | **743** | **5.60** |
| 5 | 121.24 | 166 | 1.37 | 141 | 1.16 | 87 | 0.72 | 51 | 0.43 | 57 | 0.47 | 70 | 0.5**9** | 26 | 0.21 | 12 | 0.10 | 14 | 0.12 | **624** | **5.15** |
| 6 | 126.56 | 213 | 1.68 | 123 | 0.97 | 138 | 1.09 | 75 | 0.61 | 43 | 0.34 | 88 | 0.71 | 43 | 0.34 | 44 | 0.36 | 10 | 0.08 | **777** | **6.14** |
| 7 | 119.54 | 132 | 1.10 | 125 | 1.05 | 71 | 0.59 | 103 | 0.87 | 72 | 0.60 | 46 | 0.39 | 40 | 0.33 | 26 | 0.22 | 13 | 0.11 | **628** | **5.25** |
| 8 | 122.49 | 124 | 1.01 | 118 | 0.96 | 107 | 0.87 | 90 | 0.74 | 44 | 0.36 | 45 | 0.37 | 42 | 0.34 | 30 | 0.25 | 11 | 0.09 | **611** | **4.99** |
| 9 | 95.79 | 89 | 0.93 | 101 | 1.05 | 93 | 0.97 | 64 | 0.68 | 70 | 0.73 | 27 | 0.29 | 13 | 0.14 | 20 | 0.21 | 6 | 0.06 | **483** | **5.04** |
| 10 | 84.56 | 98 | 1.16 | 55 | 0.65 | 66 | 0.78 | 39 | 0.47 | 27 | 0.32 | 16 | 0.19 | 58 | 0.69 | 12 | 0.14 | 5 | 0.06 | **376** | **4.45** |
| 11 | 118.47 | 130 | 1.10 | 113 | 0.95 | 64 | 0.54 | 48 | 0.41 | 49 | 0.41 | 27 | 0.23 | 37 | 0.31 | 31 | 0.26 | 14 | 0.12 | **513** | **4.33** |
| 12 | 104.02 | 71 | 0.68 | 77 | 0.74 | 55 | 0.53 | 40 | 0.39 | 53 | 0.51 | 22 | 0.21 | 18 | 0.17 | 33 | 0.32 | 13 | 0.12 | **382** | **3.67** |
| Total | **1536.9** | **1956** | **1.27** | **1767** | **1.16** | **1267** | **0.82** | **901** | **0.59** | **767** | **0.50** | **555** | **0.36** | **470** | **0.31** | **378** | **0.25** | **155** | **0.10** | **8216** | **5.35** |

a: the number of QTLs in each chromosome. b: average number of QTLs per cM. The average QTL numbers of the chromosomes larger than (or equal to) the total average QTL number are underlined.