

Supplementary Table S2

Summary of QTLs detected in pea for stress resistance and agronomic traits

| Trait | Loci/QTL | Reference number |
|---|----------|------------------|
| Biotic stress resistance | | |
| <i>Fusarium solani</i> resistance | 3 QTLs | 149 |
| <i>Fusarium solani</i> resistance | 3 QTLs | 150 |
| <i>Fusarium solani</i> resistance | 1 QTL | 151 |
| <i>Fusarium oxysporum</i> resistance | 3 QTLs | 156 |
| <i>Ascochyta pisi</i> resistance | 3 QTLs | 168 |
| <i>Mycophaerella pinodes</i> resistance | 3 QTLs | 161 |
| <i>Mycophaerella pinodes</i> resistance | 13 QTLs | 159 |
| <i>Mycophaerella pinodes</i> resistance | 11 QTLs | 160 |
| <i>Mycophaerella pinodes</i> resistance | 14 QTLs | 160 |
| <i>Mycophaerella pinodes</i> resistance | 10 QTLs | 162 |
| <i>Mycophaerella pinodes</i> resistance | 6 QTLs | 162 |
| <i>Mycophaerella pinodes</i> resistance | 7 QTLs | 163 |
| <i>Uromyces pisi</i> resistance | 1 QTL | 179 |
| <i>Uromyces fabae</i> resistance | 2 QTLs | 182 |
| <i>Aphanomyces euteiches</i> resistance | 1 QTL | 183 |
| <i>Aphanomyces euteiches</i> resistance | 7 QTLs | 184 |
| <i>Aphanomyces euteiches</i> resistance | 6 QTLs | 185 |
| <i>Aphanomyces euteiches</i> resistance | 5 QTLs | 186 |
| <i>Pseudomonas syringae</i> resistance | 2 QTLs | 188 |
| <i>Orobanche crenata</i> resistance | 2 QTLs | 192 |
| <i>O. crenata</i> field resistance | 5 QTLs | 193 |
| <i>O. crenata</i> seed germination | 2 QTLs | 193 |
| <i>O. crenata</i> tubercle development | 3 QTLs | 193 |
| Abiotic stress resistance | | |
| Winter frost tolerance | 6 QTLs | 208 |
| Winter frost tolerance | 4 QTLs | 227 |
| Frost damage | 4 QTLs | 227 |
| Raffinose content | 2 QTLs | 227 |
| Glucose content | 1 QTL | 227 |
| Electrolyte leakage | 1 QTL | 227 |
| Rubisco content | 1 QTL | 227 |
| Seed traits | | |
| Seed weight | 3 QTLs | 214 |
| Seed weight | 7 QTLs | 214 |
| Seed weight | 5 QTLs | 220 |
| Seed weight | 10 QTLs | 217 |
| Seed weight | 9 QTLs | 221 |
| Seed yield | 6 QTLs | 221 |
| Seed yield | 6 QTLs | 220 |

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|----------------------------|----------|-----|
| Seed yield | 4 QTLs | 218 |
| Seed yield | 5 QTLs | 217 |
| Seed yield | 4-2 QTLs | 222 |
| Seed number | 9 QTLs | 217 |
| Seed number | 5 QTLs | 220 |
| Seed number | 5 QTLs | 221 |
| Seed number | 2-3 QTLs | 222 |
| Protein content | 5 QTLs | 220 |
| Protein content | 3 QTLs | 218 |
| Protein content | 8 QTLs | 221 |
| Protein content | 2-4 QTLs | 222 |
| Protein content | 2-6 QTLs | 131 |
| Protein content | 2-4 QTLs | 131 |
| Protein content | 5 QTLs | 131 |
| Protein digestibility | 1 QTLs | 131 |
| 11S (FPLC) | 5 QTLs | 131 |
| 11S (FPLC) | 4 QTLs | 131 |
| 7S (FPLC) | 7 QTLs | 131 |
| 7S (FPLC) | 5 QTLs | 131 |
| PA1 (FPLC) | 4 QTLs | 131 |
| PA1 (FPLC) | 2 QTLs | 131 |
| PA2 (FPLC) | 4 QTLs | 131 |
| PA2 (FPLC) | 5 QTLs | 131 |
| 245 polypeptides' quantity | 1-6 QTLs | 131 |
| Number of cotyledon cells | 2 QTLs | 221 |
| Volume of cotyledon cells | 4 QTLs | 221 |
| Yellow seed lightness | 9 QTLs | 226 |
| Yellow seed greeness | 3 QTLs | 226 |
| Seed shape | 15 QTLs | 226 |
| Seed dimpling | 9 QTLs | 226 |
| Plant phenology | | |
| Days to maturity | 4 QTLs | 218 |
| First flowering node | 4 QTLs | 217 |
| Beginning of flowering | 8 QTLs | 221 |
| End of flowering | 8 QTLs | 221 |
| 50% flowering | 4 QTLs | 163 |
| Plant morphology | | |
| Lodging resistance | 2 QTLs | 161 |
| Plant height | 3 QTLs | 161 |
| Plant height | 4 QTLs | 221 |
| Root length | 3 QTLs | 193 |
| Total root length | 1-2 QTL | 222 |
| Total root elongation rate | 4 QTLs | 222 |
| Root biomass | 1-2 QTLs | 222 |
| Number of lateral root | 1-2 QTLs | 222 |
| Nodule biomass | 1-3 QTLs | 222 |
| Number of nodules | 1-4 QTLs | 222 |

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|-------------------------------|----------|-----|
| Plant biomass | 3 QTLs | 163 |
| Plant biomass | 6 QTLs | 221 |
| Plant biomass | 1-5 QTLs | 222 |
| Vegetative biomass at harvest | 7 QTLs | 221 |
| Vegetative biomass at harvest | 3-3 QTLs | 222 |
| Number of basal branches | 7 QTLs | 221 |
| Number of basal branches | 3-4 QTLs | 222 |
| Number of nodes | 6 QTLs | 217 |
| Number of flowering nodes | 5 QTLs | 217 |
| Harvest index | 4 QTLs | 217 |
| Harvest index | 7 QTLs | 221 |
| Plant physiology | | |
| Nitrogen harvest index | 8 QTLs | 221 |
| Nitrogen nutrition index | 3 QTLs | 221 |
| Plant %N at BSF | 6 QTLs | 221 |
| Plant %N at BSF | 2-3 QTLs | 222 |
| Plant %N at harvest | 5 QTLs | 221 |
| Plant %N at harvest | 1-1 QTL | 222 |
| RUE | 3 QTLs | 222 |
| SPAD | 2 QTLs | 222 |