

Supplementary Table S1. Genome size estimations of *Fabeae* species

| Species | Code | Accession | | Chrom. number [2n] | Genome size | | | | |
|--|------|-----------------------|---------|--------------------------|-------------|-------|------|-------------|--------------|
| | | source | code | | 2n | SD | std. | 1C [Gbp] | 1Cx [Gbp] |
| <i>Vicia</i> | | | | | | | | | |
| <i>V. sativa</i> 'Ebena' | VSA | commercial | | 12 | 3.627 | 0.025 | ZM | 1.77 | 1.77 |
| <i>V. villosa</i> | VVL | IPK | VIC876 | 14 | 4.164 | 0.056 | GM | 2.04 | 2.04 |
| <i>V. lathyroides</i> L. | VLT | IPK | VIC874 | 12 | 4.960 | 0.019 | ZM | 2.43 | 2.43 |
| <i>V. cracca</i> L. var. <i>cracca</i> | VCR | IPK | VIC71 | 28 | 11.848 | 0.055 | PS | 5.79 | 2.90 |
| <i>V. tetrasperma</i> (L.) Schreb. | VTS | IPK | VIC726 | 14 | 6.245 | 0.015 | GM | 3.05 | 3.05 |
| <i>V. sepium</i> L. | VSP | IPK | VIC55 | 14 | 7.656 | 0.047 | ZM | 3.74 | 3.74 |
| <i>V. grandiflora</i> | VGR | IPK | VIC741 | 14 | 7.732 | 0.087 | ZM | 3.78 | 3.78 |
| <i>V. hirsuta</i> (L.) S.F.Gray | VHR | IPK | VIC728 | 14 | 7.925 | 0.049 | ZM | 3.88 | 3.88 |
| <i>V. ervilia</i> (L.) Willd. | VER | IPK | ERV52 | 14 | 8.297 | 0.067 | ZM | 4.06 | 4.06 |
| <i>V. unijuga</i> A.Br. | VUN | IPK | VIC78 | 12 | 8.932 | 0.055 | ZM | 4.37 | 4.37 |
| <i>V. pannonica</i> 'Dětěnická panonská' | VPN | commercial | | 12 | 11.720 | 0.069 | PS | 5.73 | 5.73 |
| <i>V. pisiformis</i> L. | VPF | IPK | VIC36 | 12 | 12.585 | 0.018 | PS | 6.15 | 6.15 |
| <i>V. narbonensis</i> | VNR | ICARDA | 14 | 14 | 13.675 | 0.064 | PS | 6.69 | 6.69 |
| <i>V. sylvatica</i> L. | VSL | IPK | VIC63 | 14 | 14.280 | 0.063 | PS | 6.98 | 6.98 |
| <i>V. melanops</i> Sibth. et Sm. var. <i>melanops</i> | VML | IPK | VIC474 | 10 | 16.495 | 0.036 | PS | 8.07 | 8.07 |
| <i>V. peregrina</i> L. | VPR | IPK | VIC765 | 14 | 17.273 | 0.043 | PS | 8.45 | 8.45 |
| <i>V. faba</i> 'Merkur' | VFB | commercial | | 12 | 27.423 | 0.214 | PS | 13.41 | 13.41 |
| <i>Lens</i> | | | | | | | | | |
| <i>L. culinaris</i> 'Eston' | LNS | commercial | | 14 | 8.771 | 0.027 | ZM | 4.29 | 4.29 |
| <i>Lathyrus</i> | | | | | | | | | |
| <i>L. vernus</i> (L.) Bernh. | LAV | natural population | | 14 | 12.091 | 0.040 | PS | 5.91 | 5.91 |
| <i>L. sativus</i> L. | LAS | commercial | | 14 | 13.343 | 0.094 | PS | 6.52 | 6.52 |
| <i>L. latifolius</i> L. | LAL | commercial | | 14 | 20.404 | 0.092 | PS | 9.98 | 9.98 |
| <i>Pisum</i> | | | | | | | | | |
| <i>P. sativum</i> 'Terno' | PST | commercial | | 14 | 8.921 | 0.020 | ZM | 4.36 | 4.36 |
| <i>P. fulvum</i> | PFL | ICARDA | IG64207 | 14 | 9.587 | 0.020 | ZM | 4.69 | 4.69 |

Genome size standards (column "std."): ZM, *Zea mays*; GM, *Glycine max*; PS, *Pisum sativum*