## Supplementary Material

**Table S1.** Genetic differentiation in cowpea landraces from southeast Mexico, using ISSR markers.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sample | n | Ht | Hs (SE) | Fst (SE) | Nm |
| Yucatan Peninsula | 20 | 0.24 | 0.14 (0.006) | 0.42 (0.041) | 0.19 |

n: Number of landraces; Ht: Total gene diversity; Hs: Mean diversity within landraces; Fst: Wright's fixation index. Proportion of gene diversity that occurs among populations; SE: Standard error; Nm: Estimate of gene flow

**Table S2** Analysis of molecular variance (AMOVA) of 20 cowpea landraces from Yucatan Peninsula, Mexico.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Source of variation | Df | SS | Variance component | Variation percentage |
| Among landraces | 19 | 61.340 | 0.586 | 66 |
| Within landraces | 80 | 24.000 | 0.300 | 34 |
| Total | 99 | 85.340 | 0.886 | 100 |

Df = degrees of freedom; SS = sum of squares

**Table S3.** Genetic structure information of the populations P5 and P12. The estimated membership of each individual in the two subpopulations is shown.

|  |  |  |  |
| --- | --- | --- | --- |
| Population code | Individual number | STRUCTURE | |
| **Group red** | **Group green** |
| P5 | 1 | 0.717 | 0.283 |
| P5 | 2 | 0.429 | 0.571 |
| P5 | 3 | 0.002 | 0.998 |
| P5 | 4 | 0.923 | 0.077 |
| P5 | 5 | 0.962 | 0.038 |
| P12 | 1 | 1.000 | 0.000 |
| P12 | 2 | 1.000 | 0.000 |
| P12 | 3 | 0.988 | 0.012 |
| P12 | 4 | 1.000 | 0.000 |
| P12 | 5 | 1.000 | 0.000 |



**Figure S1** Graph of ΔK values to estimate de number of groups among 20 cowpea landraces cultivated in Yucatan Peninsula using ΔK values from 1-6.