Figure 1. Photographs showing flower color of (A) *Sesamum radiatum*, (B) *Sesamum alatum*, (C) *Sesamum indicum* cv. Goenbaek; an overview of the seed color diversity (D); Vertical (E) and horizontal section view of capsule harboring eight, six four locules (from left to right) respectively.

Figure 2. Boxplots showing the distribution of data from accessions from Africa, Asia, and others continents, and pairwise comparison following Yuen’s trimmed mean test. Only significant differences among continent were highlighted. (A) Plant height; (B) Productive axis leaf; (C) Branch number; (D) Stem diameter.

Figure 3. Boxplots showing the distribution of data from accessions from Africa, Asia, and others continents, and pairwise comparison following Yuen’s trimmed mean test. Only significant differences among continent were highlighted. (E) Capsule number; (F) Dried biomass; (G) Dried seed weight; (H) Harvest index.

Figure 4. Boxplots showing the distribution of data from accessions from Africa, Asia, and others continents, and pairwise comparison following Yuen’s trimmed mean test. Only significant differences among continent were highlighted. (I) Thousand seed weight; (J) Days to 50% flowering; (K) Days to 50% maturity; (L) Days from 50% flowering to 50% maturity.

Figure 5. Boxplots showing the distribution of data from accessions from Africa, Asia, and others continents, and pairwise comparison following Yuen’s trimmed mean test. Only significant differences among continent were highlighted. (M) Capsule width; (N) Capsule length

Figure 6. Pie chart showing the percentage of categorical traits following Africa and Asia continents. The Pearson Chi-square test and the accompanied p-value, display the difference between Africa and Asia for each trait. (A) Branching patterns; (B) Capsule hairiness; (C) Flower color; (D) Seed color; (E) Number of locules per capsule; (F) Number of capsules per leaf axil.

Figure 7. Spearman correlation test among quantitative traits. Significant correlations have not cross symbol on the values. Green and yellow square represents positive and negative correlation respectively.

Figure 8. Projection of variables in the factorial plans (1 x 2) (A), (1 x 3) (B), and (1 x 4) (C) following the contribution values gradient. Traits details are provided in the Table 1.

Figure 9. Clusters representation of the accessions following quantitative traits. Traits details are provided in the Table 1.

Figure 10. Relative contribution of region of origin per cluster.

Figure 11. Map showing the quantitative distribution of accessions for the worldwide panel (A) and the inferred core collection (B). Traits details are provided in the Table 1.

Figure 12. Projection map showing accessions and traits as well as the identified clusters for the core collection (A) and the top 30 most contributive accessions (B). Traits details are provided in the Table 1.