**Table S2: Descriptor code for qualitative and quantitative traits studied**

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| Plant type | Trait | Code | Measurement procedure/unit |
| Qualitative Traits |
| Gross morphology | Life form | LF | 1=annual, 2=perennial, 3=unknown |
|  | Growth habit | GH | 1=procumbent-1, 2=procumbent-2, 3=decumbent-1, 4=decumbent-2, 5=decumbent-3, 6=erect, 7=other |
| Stem | Branching pattern | BP | 1=alternate, 2=sequential, 3=irregular with flowers on main stem, 4=irregular without flowers on main stem, 5=other |
|  | Stem pigmentation | SP | 0=absent, +=present |
|  | Stem surface | SS | 1=glabrous, 3=sub-glabrous, hairs in one or two rows along the main stem, 5=moderately hairy, three or four rows along the main stem, 7=very hairy, most of the stem surface covered with hairs, 9=wollywholly (as in 7 but with long hairs) |
| Inflorescence and flower | Type of inflorescence | TI | 1=simple, 2=compound (number of flowers per axil) |
|  | Standard petal colour | SCo | 1=white, 2=lemon yellow, 3=yellow, 4=orange-yellow/yellow orange, 5=orange, 6=dark orange, 7=garnet/brick red, 8=other |
|  | Colour of standard petal markings | PCo | 1=white, 2=lemon yellow, 3=yellow, 4=orange-yellow/yellow orange, 5=orange, 6=dark orange, 7=garnet/brick red, 8=other |
|  | Peg pigmentation | PP | 0=absent, +=present |
| Leaf | Leaf colour | LC | 1=yellow/yellow green, 2=light green, 3=green, 4=dark green, 5=bluish, 6=other |
|  | Leaflet shape | LS | 1=cuneate, 2=obcuneate, 3=elliptic, 4=oblong-elliptic, 5=narrow-elliptic, 6=wide-elliptic, 7=suborbicular, 8=orbicular, 9=ovate, 10=obovate, 11=oblong, 12=oblong-lanceolate, 13=lanceolate, 14=linear-lanceolate, 15=other |
|  | Leaflet surface | LS | 1=almost glabrous on both surfaces, 2=almost glabrous above, hairs below, 3=almost glabrous above, hairs and/or bristles below, 4=almost glabrous below, hairs above, 5=almost glabrous below, hairs and bristles above, 6=hairs on both surfaces, without bristles, 7=hairs on both surfaces, with bristles at least on one surface, 8=wholly without bristles, 9=wholly with bristles at least on one surface, 10=other |
|  | Leaflet margin | LM | 1=entire, 2=hairy, 3=wavy, 4=other |
|  | Pod beak | PB | 0=absent, 3=slight, 5=moderate, 7=prominent, 9=very prominent |
|  | Pod constriction | PC | 0=none, 3=slight, 5=moderate, 7=deep, 9=very deep |
|  | Pod reticulation | PR | 0=none, 3=slight, 5=moderate, 7=prominent, 9=very prominent |
| Seed | Seed colour | SC | 1=one colour, 2=variegated |
|  | Primary seed colour | PC | 1=white, 2=off-white, 3=yellow, 4=very pale tan, 5=pale tan, 6=light tan, 7=tan, 8=dark tan, 9=greyed orange, 10=rose, 11=salmon, 12=light red, 13=red, 14=dark red, 15=purplish red/reddish purple, 16=light purple, 17=purple, 18=dark purple, 19=very dark purple, 20=other |
| Quantitative traits |
| Stem | Height of main stem (cm) | PH | Measured from cotyledonary axil up to terminal bud, mean of 10 plants, recorded 60-85 days after emergence |
|  | Plant width or spread (cm) | PS | Measured at the widest point, from branch tip to tip, mean of 10 plants, recorded 45-60 days after emergence |
|  | Number of branches per plant | NMB | Calculated as the number of n+1 branches borne on mainaxis of each plant per genotype. |
| Leaf | Leaflet length (mm) | LL | Measured on the third leaf, apical leaflet, of the main stem when fully expanded, mean of 10 leaflets from different plants |
|  | Leaflet width (mm) | LW | Measured on the third leaf, fully expanded apical leaflet, of the main stem, at its widest point, mean of 10 leaflets from different plants |
| Pod | Pod length (mm) | PL | Mean of 10 mature pods |
|  | Pod width (mm) | PW | Mean of 10 mature pods measured at the widest point |
|  | Number of pods per plant | NP | Total number of healthy filled pods from each plant |
| Seed | Seed length (mm) | SL | Average of 10 mature seeds |
|  | Seed width (mm) | SW | Measured at the midpoint, average of 10 mature seeds |
|  | Seed weight (g) | HSW | Weight of 100 random, mature, wrinkle-free seeds |
| Maturity | Days to emergence | DE | From sowing or irrigation |
|  | Days to 50% flowering | DFF | The number of days from the day of sowing to the days when 50%of the plants in each plot flowered |
|  | Days to maturity | DM | This is number of days from the date of sowing to when 80% of the planthave reached physiological maturity |