**Table 1. Morphological characterization of sunflower germplasm (DOR, Hyderabad, 2012)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Character**  | **Frequency** | **Character**  | **Frequency** |
| **Hypocotyl pigmentation** |  | **Position of lateral head to central head** |  |
| a) Absent | 8 | a) Above | 24 |
| b) Medium | 217 | b) Below | 276 |
| c) Strong | 75 | **Head attitude** |  |
| **Days to 50 % flowering** |  | a) Vertical | 4 |
| a) Early | 93 | b) Half-turned down | 64 |
| b) Medium | 205 | c) Turned down | 232 |
| c) Late | 2 | **Head diameter** |  |
| **Leaf size** |  | a) Small | 75 |
| a) Small | 13 | b) Medium | 217 |
| b) Medium | 229 | c) Large | 8 |
| c) Large | 54 | **Head shape** |  |
| **Leaf shape** |  | a) Flat | 136 |
| a) Lanceolate | 25 | b) Concave | 16 |
| b) Triangular | 64 | c) Convex | 148 |
| c) Cordate | 213 | **Plant height** |  |
| **Leaf colour** |  | a) Very short | 0 |
| a) Green | 240 | b) Short | 80 |
| b) Light green | 60 | c) Medium | 204 |
| **Leaf blistering** |  | d) Very tall | 0 |
| a) Absent | 10 | **Plant branching** |  |
| b) Medium | 257 | a) Present | 27 |
| c) Strong | 33 | b) Absent | 273 |
| **Leaf serration** |  | **Type of branching** |  |
| a) Fine | 4 | a) Basal | 1 |
| b) Medium | 139 | b) Overall | 10 |
| c) Coarse | 157 | c) Apical | 1 |
| **Leaf base** |  | **Seed length** |  |
| a) Obtuse | 217 | a) Short | 18 |
| b) Acute | 83 | b) Medium | 246 |
| **Orientation of leaf blade** |  | c) Long | 28 |
| a) Drooping | 170 | **Seed shape** |  |
| b) Erect | 130 | a) Elongate | 148 |
| **Leaf petiole pigmentation** |  | b) Ovoid elongate | 141 |
| a) Present | 60 | c) Ovoid wide | 11 |
| b) Absent | 238 | **100 Seed weight** |  |
| **Stem pigmentation** |  | a) Low | 10 |
| a) Absent | 274 | b) Medium | 240 |
| b) Present | 26 | c) High | 50 |
| **Ray floret number** |  | **Seed base colour** |  |
| a) Few | 2 | a) White | 5 |
| b) Medium (30-40) | 179 | b) Black | 231 |
| c) Many (> 40) | 119 | c) Gray | 64 |
| **Ray floret shape** |  | **Seed stripes** |  |
| a) Ovate | 93 | a) Absent | 246 |
| b) Elongated | 204 | b) Present | 54 |
| c) Round | 3 | **Seed stripe colour** |  |
| **Ray floret colour** |  | a) White | 1 |
| a) Orange | 145 | b) Gray | 6 |
| b) Yellow | 154 | c) Brown | 7 |
| **Disc floret colour** |  | d) Black | 203 |
| a) Orange | 170 | **Hull content** |  |
| b) Yellow | 177 | a) Low | 39 |
| c) Purple | 3 | b) Medium | 247 |
| **Disc floret pigmentation** |  | c) High | 14 |
| a) Absent | 116 | **Seed oil content** |  |
| b) Medium  | 184 | a) Low | 150 |
| c) Strong | 0 | b) Medium | 128 |
| **Pollen colour** |  | c) High | 21 |
| a) Yellow | 292 | d) Very high | 1 |
| b) White | 8 | **Bract pigmentation** |  |
| **Bract shape** |  | a) Absent | 291 |
| a) Round | 112 | b) Present | 9 |
| b) Elongate | 188 |  |  |

**Table 2** **Promising germplasm accessions in sunflower (DOR, Hyderabad,2012)**

|  |  |
| --- | --- |
| **Character** | **Accessions** |
| Days to 50 % flowering | EC- 601816(52),601750(52),601799(53),601916 (55),601950 (55),601999 (55) |
| Days to maturity | EC -601750 (79),601832(80),601752(81),601950(81),601932(81),601952(81) |
| Plant height (cm) | EC -601805(74),601772(78),601762(95),601906(95),601972(110),601962(145) |
| Head diameter (cm) | EC -601745(12),601750(12),601752(13),601945(13),601950(15),601952(15) |
| 100 seed weight (g) | EC -601801,601809,601826,601901,601909,601926 |
| Seed yield per plant (g) | EC -601762(35),601764(38),601832(38),601962(40),601964(41),601933(42) |
| Oil content (%) | EC -601747(35),601823(36),601836(36),601947(38),601923(38),601938(39) |
| Hull content  | EC -601801,6018011,601836,601902,601901,601937 |