Table S1. Mean data for leaf traits under irrigated conditions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr. No** | **Block** | **Genotype** | **Flag leaf length (FLL) (cm)** | **Flag leaf width (FLW) (cm)** | **Flag leaf area (FLA) (cm)** |
|
| C1 | 1 | Sahbhagi-dhan | 43.00 | 0.80 | 24.08 |
| C2 | 1 | IR64 | 36.00 | 0.70 | 17.64 |
| C3 | 1 | Banglami | 32.67 | 0.67 | 15.24 |
| C4 | 1 | Lachit | 34.00 | 0.60 | 14.28 |
| C5 | 1 | Dehangi | 29.33 | 1.03 | 21.22 |
| 1 | 1 | AS90 | 26.67 | 0.63 | 11.82 |
| 2 | 1 | AS36 | 32.23 | 0.93 | 21.06 |
| 3 | 1 | AS34 | 29.67 | 0.63 | 13.15 |
| 4 | 1 | AS152 | 32.27 | 0.63 | 14.30 |
| 5 | 1 | AS100 | 34.83 | 0.63 | 15.44 |
| 6 | 1 | AS47 | 38.67 | 0.83 | 22.56 |
| 7 | 1 | AS105 | 37.50 | 0.83 | 21.88 |
| 8 | 1 | AS310 | 32.67 | 0.77 | 17.53 |
| 9 | 1 | AS313 | 36.50 | 0.87 | 22.14 |
| 10 | 1 | AS75 | 42.33 | 0.93 | 27.66 |
| 11 | 1 | AS36/20 | 42.67 | 0.73 | 21.90 |
| 12 | 1 | AS206 | 36.50 | 0.83 | 21.29 |
| 13 | 1 | AS178/3 | 38.87 | 1.07 | 29.02 |
| 14 | 1 | AS208 | 35.33 | 0.77 | 18.96 |
| 15 | 1 | AS204 | 40.33 | 0.77 | 21.65 |
| 16 | 1 | AS209 | 39.00 | 0.83 | 22.75 |
| 17 | 1 | AS66-69(AHU2) | 36.17 | 0.87 | 21.94 |
| 18 | 1 | Monipuridumai | 37.33 | 0.77 | 20.04 |
| 19 | 1 | AS1196 | 29.67 | 0.77 | 15.92 |
| 20 | 1 | AS93/1 | 41.00 | 0.87 | 24.87 |
| 21 | 1 | AS36/30 | 34.50 | 0.95 | 22.94 |
| 22 | 1 | HarinKajoli | 44.00 | 1.20 | 36.96 |
| 23 | 1 | AS-1194 | 53.00 | 0.93 | 34.63 |
| 24 | 1 | AS1195 | 45.27 | 0.67 | 21.12 |
| 25 | 1 | AS1224 | 44.00 | 1.03 | 31.83 |
| 26 | 1 | AS292 | 39.33 | 0.77 | 21.11 |
| 27 | 1 | AS209 | 39.00 | 1.15 | 31.40 |
| 28 | 1 | AS312 | 31.33 | 0.63 | 13.89 |
| 29 | 1 | AS314 | 49.00 | 0.93 | 32.01 |
| 30 | 1 | AS315 | 44.33 | 0.87 | 26.90 |
| 31 | 1 | AS-30/14 | 39.00 | 0.67 | 18.20 |
| 32 | 1 | AS253 | 34.33 | 0.97 | 23.23 |
| 33 | 1 | AS159/2 | 38.33 | 0.87 | 23.26 |
| **Sr.No** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** |
| 34 | 1 | AS-327 | 43.33 | 0.83 | 25.28 |
| 35 | 1 | AS-27 | 47.00 | 0.63 | 20.84 |
| 36 | 1 | AS-328 | 51.33 | 0.83 | 29.94 |
| 37 | 1 | AS-326 | 51.67 | 0.93 | 33.76 |
| 38 | 1 | AS-325 | 51.67 | 0.73 | 26.52 |
| 39 | 1 | AS-324 | 47.00 | 1.23 | 40.58 |
| 40 | 1 | AS-323 | 48.33 | 0.87 | 29.32 |
| 41 | 1 | AS-321 | 47.33 | 0.77 | 25.40 |
| 42 | 1 | AS-320 | 42.33 | 1.00 | 29.63 |
| 43 | 1 | AS-317 | 51.00 | 1.07 | 38.08 |
| 44 | 1 | AS-180/2 | 35.33 | 1.13 | 28.03 |
| 45 | 1 | AS-305/2 | 32.50 | 0.63 | 14.41 |
| 46 | 1 | AS-38/2 | 41.33 | 0.83 | 24.11 |
| 47 | 1 | AS-177/2 | 51.00 | 0.60 | 21.42 |
| 48 | 1 | AS-39/13 | 56.33 | 1.10 | 43.38 |
| 49 | 1 | as180/4 | 63.33 | 1.30 | 57.63 |
| 50 | 1 | as-144 | 30.67 | 0.63 | 13.60 |
| 51 | 1 | as-193/1 | 32.67 | 0.67 | 15.24 |
| 52 | 1 | as203/2 | 37.00 | 0.93 | 24.17 |
| 53 | 1 | AS-46 | 51.83 | 0.83 | 30.24 |
| 54 | 1 | AS195 | 51.33 | 0.90 | 32.34 |
| 55 | 1 | AS229 | 52.00 | 0.77 | 27.91 |
| 56 | 1 | AS330 | 53.00 | 0.90 | 33.39 |
| 57 | 1 | AS156 | 48.67 | 0.90 | 30.66 |
| 58 | 1 | AS66-67(Ahu1) | 44.00 | 0.63 | 19.51 |
| 59 | 1 | Garem1 | 59.67 | 0.93 | 38.98 |
| 60 | 1 | AS313/4 | 39.67 | 0.87 | 24.06 |
| 61 | 1 | AS-48(Duboricinga) | 45.33 | 0.97 | 30.68 |
| 62 | 1 | AS-86(Rongadoria) | 48.67 | 1.03 | 35.20 |
| 63 | 1 | BasantaBahar | 42.67 | 1.03 | 30.86 |
| 64 | 1 | AS-69-70(AHU3) | 52.67 | 1.07 | 39.32 |
| 65 | 1 | AS69-70(AHU2) | 54.00 | 0.93 | 35.28 |
| 66 | 1 | AS-64-65(AHU1) | 60.67 | 1.00 | 42.47 |
| 67 | 1 | AS64-65(AHU-5) | 55.00 | 1.03 | 39.78 |
| 68 | 1 | AS-64-65(AHU1) | 36.25 | 0.75 | 19.03 |
| 71 | 2 | Bairing | 58.33 | 1.13 | 46.28 |
| 72 | 2 | Majenichambi | 32.50 | 1.23 | 28.06 |
| 73 | 2 | Koni ahu | 43.83 | 1.13 | 34.77 |
| 74 | 2 | Bijor-1 | 35.00 | 1.00 | 24.50 |
| 75 | 2 | Bijor-2 | 40.17 | 1.07 | 29.99 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** |
| 76 | 2 | Bijor-3 | 31.67 | 1.10 | 24.38 |
| 77 | 2 | Chidon | 47.33 | 1.07 | 35.34 |
| 78 | 2 | Morenchenkol | 48.67 | 0.90 | 30.66 |
| 79 | 2 | Maibi-1 | 41.67 | 1.07 | 31.11 |
| 80 | 2 | Koimurali | 42.17 | 1.17 | 34.44 |
| 81 | 2 | AS-55 | 43.17 | 1.10 | 33.24 |
| 82 | 2 | Shesamthat | 47.17 | 1.03 | 34.12 |
| 83 | 2 | 9ga ahu | 48.67 | 1.20 | 40.88 |
| 84 | 2 | Kajoli ahu | 56.17 | 1.00 | 39.32 |
| 85 | 2 | Chenga ahu | 45.50 | 1.03 | 32.91 |
| 86 | 2 | Aheniahu | 45.33 | 1.07 | 33.85 |
| 87 | 2 | Poroma ahu | 44.83 | 1.23 | 38.71 |
| 88 | 2 | Bilsa ahu | 55.17 | 1.00 | 38.62 |
| 89 | 2 | Guni ahu | 49.33 | 1.00 | 34.53 |
| 90 | 2 | Goal bhog | 49.17 | 1.37 | 47.04 |
| 91 | 2 | Malbhog | 46.17 | 1.37 | 44.17 |
| 92 | 2 | Bengonbisi | 46.83 | 1.00 | 32.78 |
| 93 | 2 | Rongadoria | 46.33 | 1.03 | 33.51 |
| 94 | 2 | Hafa ahu | 45.67 | 1.13 | 36.23 |
| 95 | 2 | Panjasali | 33.17 | 0.63 | 14.70 |
| 96 | 2 | Boga ahu | 34.83 | 0.63 | 15.44 |
| 97 | 2 | Kola ahu | 27.83 | 0.63 | 12.34 |
| 98 | 2 | Monors ahu | 34.83 | 0.93 | 22.76 |
| 99 | 2 | Bongal ahu | 40.33 | 0.63 | 17.88 |
| 100 | 2 | Kolamaghi | 35.33 | 0.63 | 15.66 |
| 101 | 2 | Rikhoijoi (1) | 28.00 | 1.16 | 22.70 |
| 102 | 2 | Bengonagutia | 26.00 | 0.93 | 16.99 |
| 103 | 2 | Kola bengenagutia | 31.67 | 0.63 | 14.04 |
| 104 | 2 | Boga bengonagutia | 32.33 | 0.63 | 14.33 |
| 105 | 2 | Raja ahu | 34.67 | 0.63 | 15.37 |
| 106 | 2 | Daukolamaghi | 35.33 | 0.93 | 23.08 |
| 107 | 2 | Bor kola ahu | 40.00 | 0.63 | 17.73 |
| 108 | 2 | Bahmori | 34.17 | 0.63 | 15.15 |
| 109 | 2 | Ahu joha | 40.00 | 0.63 | 17.73 |
| 110 | 2 | Guborguni | 33.67 | 0.93 | 22.00 |
| 111 | 2 | Soraituni | 44.67 | 0.63 | 19.80 |
| 112 | 2 | Garam ahu 2 | 46.00 | 1.13 | 36.22 |
| 113 | 2 | Ikoraguni | 29.50 | 0.63 | 13.08 |
| 114 | 2 | Meghi ahu | 33.33 | 0.93 | 21.78 |
| 115 | 2 | Haraipua ahu | 33.67 | 0.63 | 14.93 |
| **Sr. No** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** |
| 116 | 2 | Kehong ahu | 35.33 | 0.63 | 15.66 |
| 117 | 2 | Borkola ahu | 40.00 | 0.63 | 17.73 |
| 118 | 2 | Saruranga ahu | 33.33 | 0.63 | 14.78 |
| 119 | 2 | Rongajira | 56.83 | 0.63 | 25.20 |
| 120 | 2 | G130 | 33.16 | 1.13 | 26.11 |
| 121 | 2 | Tinimohia ahu | 33.50 | 0.63 | 14.85 |
| 122 | 2 | Podumoni ahu | 38.33 | 0.63 | 16.99 |
| 123 | 2 | Koijapori-1 | 45.67 | 0.63 | 20.25 |
| 124 | 2 | Koijapori-2 | 44.50 | 0.63 | 19.73 |
| 125 | 2 | Koijapori3 | 41.00 | 0.93 | 26.79 |
| 126 | 2 | RONGADORIA | 25.50 | 0.70 | 12.50 |
| 127 | 2 | Nilazi2 | 34.33 | 0.83 | 19.83 |
| 128 | 2 | CH-63 | 36.83 | 1.09 | 28.14 |
| 129 | 2 | Sarimohia ahu | 51.00 | 0.63 | 22.61 |
| 130 | 2 | Laujuli | 51.67 | 0.63 | 22.91 |
| 131 | 2 | Rikhojai(3) | 34.16 | 1.16 | 27.70 |
| 132 | 2 | Aijuri | 36.67 | 0.63 | 16.26 |
| 133 | 2 | Cauvery | 43.00 | 0.63 | 19.06 |
| 134 | 2 | PUSA 2-21 | 26.33 | 0.63 | 11.67 |
| 135 | 2 | Krishna | 29.00 | 0.93 | 18.95 |
| 136 | 2 | Kanehi | 34.67 | 0.63 | 15.37 |
| C1 | 2 | AS-490(2-21-39) | 35.33 | 0.63 | 15.66 |
| C2 | 2 | Sahbhagi-dhan | 41.00 | 0.95 | 27.27 |
| C3 | 2 | IR64 | 41.00 | 0.60 | 17.22 |
| C4 | 2 | Banglami | 34.67 | 0.63 | 15.37 |
| C5 | 2 | Lachit | 35.50 | 0.65 | 16.15 |
| 137 | 3 | Dehangi | 33.00 | 1.13 | 26.18 |
| 138 | 3 | AS-192(2-21-42) | 35.16 | 1.29 | 31.79 |
| 139 | 3 | AS-489\_2-21-2) | 39.83 | 0.99 | 27.65 |
| 140 | 3 | AS191(2-21-26) | 40.00 | 0.63 | 17.73 |
| 141 | 3 | IR-36 | 50.00 | 1.00 | 35.00 |
| 142 | 3 | IR-26 | 36.00 | 1.00 | 25.20 |
| 143 | 3 | CR-237-1(Culture-1) | 39.33 | 1.30 | 35.79 |
| 144 | 3 | IR-56 | 39.17 | 1.07 | 29.24 |
| 145 | 3 | IR-58 | 28.67 | 1.00 | 20.07 |
| 146 | 3 | IR9729-67-3 | 40.17 | 1.00 | 28.12 |
| 147 | 3 | Ahu bora | 49.83 | 1.07 | 37.21 |
| 148 | 3 | G162 | 52.17 | 1.13 | 41.39 |
| 149 | 3 | Heera | 59.00 | 1.10 | 45.43 |
| 150 | 3 | Gunidhan | 46.00 | 1.00 | 32.20 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** |
| 151 | 3 | HFC Jorhat | 47.50 | 1.00 | 33.25 |
| 152 | 3 | Bonahu | 38.83 | 1.00 | 27.18 |
| 153 | 3 | Ikoraguni-1 | 29.00 | 0.97 | 19.62 |
| 154 | 3 | Nilazi1 | 30.25 | 0.95 | 20.12 |
| 155 | 3 | Nilazi3 | 30.25 | 0.95 | 20.12 |
| 156 | 3 | IET-7566 | 41.33 | 1.33 | 38.58 |
| 157 | 3 | IET-10800 | 31.00 | 1.10 | 23.87 |
| 158 | 3 | IET-10896 | 38.00 | 1.07 | 28.37 |
| 159 | 3 | IET10898 | 29.67 | 0.97 | 20.07 |
| 160 | 3 | Jai bangla1 | 46.75 | 1.00 | 32.73 |
| 161 | 3 | Bongaloni | 37.67 | 1.23 | 32.52 |
| 162 | 3 | Maibi-2 | 45.50 | 1.23 | 39.28 |
| 163 | 3 | Dogaronga | 52.17 | 1.13 | 41.39 |
| 164 | 3 | G-179 | 29.17 | 1.07 | 21.78 |
| 165 | 3 | IR630 | 47.17 | 1.37 | 45.12 |
| 166 | 3 | Bogon bisi-2 | 41.50 | 1.30 | 37.77 |
| 167 | 3 | Area old seed | 44.33 | 1.13 | 35.17 |
| 168 | 3 | Maibi | 59.33 | 1.14 | 47.21 |
| 169 | 3 | Dimororce | 24.17 | 1.00 | 16.92 |
| 170 | 3 | Hasabumura | 18.17 | 0.90 | 11.45 |
| 171 | 3 | Jubali | 35.33 | 1.17 | 28.86 |
| 172 | 3 | Kolamanik | 31.50 | 1.23 | 27.20 |
| 173 | 3 | AD8500 | 37.17 | 1.23 | 32.09 |
| 174 | 3 | PUSA-598 | 48.00 | 1.33 | 44.80 |
| 175 | 3 | PUSA677 | 30.50 | 0.90 | 19.22 |
| 176 | 3 | Kosamoni | 45.17 | 1.00 | 31.62 |
| 177 | 3 | Lokhi | 39.67 | 1.20 | 33.32 |
| 178 | 3 | Kanua | 30.67 | 1.13 | 24.33 |
| 179 | 3 | Jai bangla1 | 46.75 | 1.00 | 32.73 |
| 180 | 3 | IET-6155(Govind) | 43.83 | 1.03 | 31.71 |
| 181 | 3 | IRRI-7 | 36.50 | 1.20 | 30.66 |
| 182 | 3 | IRRI-27 | 27.17 | 1.03 | 19.65 |
| 183 | 3 | IRRI-28-1 | 31.50 | 1.27 | 27.93 |
| 184 | 3 | IRRI-29-1 | 19.00 | 1.00 | 13.30 |
| 185 | 3 | NKD 1218 | 33.67 | 1.17 | 27.49 |
| 186 | 3 | Hybrid | 34.00 | 1.03 | 24.59 |
| 187 | 3 | Hybri-6201 | 44.00 | 1.27 | 39.01 |
| 188 | 3 | SD-8 | 55.33 | 1.43 | 55.52 |
| 189 | 3 | SD13-1 | 34.00 | 1.03 | 24.59 |
| 190 | 3 | SD13-2 | 44.00 | 1.03 | 31.83 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** |
| 191 | 3 | SD-14 | 56.67 | 1.00 | 39.67 |
| 192 | 3 | SD-16 | 36.67 | 1.20 | 30.80 |
| 193 | 3 | SD-17 | 25.33 | 1.00 | 17.73 |
| 194 | 3 | SD-18 | 32.17 | 1.07 | 24.02 |
| 100 | 3 | SD-19 | 36.00 | 1.03 | 26.04 |
| 196 | 3 | SD-28 | 32.33 | 1.00 | 22.63 |
| 197 | 3 | SD-29 | 32.33 | 1.00 | 22.63 |
| 198 | 3 | SD-35 | 48.33 | 1.10 | 37.22 |
| 199 | 3 | SD-36 | 50.00 | 1.23 | 43.17 |
| 200 | 3 | SD-52 | 43.33 | 1.17 | 35.39 |
| 201 | 3 | SD-55 | 45.00 | 1.00 | 31.50 |
| 202 | 3 | SD-68 | 36.67 | 1.07 | 27.38 |
| 203 | 3 | SD-82 | 43.33 | 1.13 | 34.38 |
| C1 | 3 | SD-87 | 37.17 | 1.23 | 32.09 |
| C2 | 3 | Sahbhagi-dhan | 42.00 | 1.00 | 29.40 |
| C3 | 3 | IR64 | 34.00 | 0.60 | 14.28 |
| C4 | 3 | Banglami | 32.67 | 0.67 | 15.24 |
| C5 | 3 | Lachit | 34.00 | 0.60 | 14.28 |
| 204 | 4 | Dehangi | 29.33 | 1.03 | 21.22 |
| 205 | 4 | BDJ 11/91 | 36.50 | 1.17 | 29.81 |
| 206 | 4 | SD-101 | 37.17 | 1.07 | 27.75 |
| 207 | 4 | SD-124 | 34.17 | 1.07 | 25.51 |
| 208 | 4 | SD-125 | 27.67 | 1.03 | 20.01 |
| 209 | 4 | SD-126 | 34.17 | 1.07 | 25.51 |
| 210 | 4 | SD-142 | 45.67 | 1.40 | 44.75 |
| 211 | 4 | SD-186 | 50.17 | 1.37 | 47.99 |
| 212 | 4 | SD-194 | 23.33 | 0.97 | 15.79 |
| 213 | 4 | SD-251 | 65.83 | 1.17 | 53.76 |
| 214 | 4 | SD-263 | 30.67 | 1.17 | 25.04 |
| 215 | 4 | SD-267 | 35.67 | 1.00 | 24.97 |
| 216 | 4 | SD-292 | 39.17 | 1.40 | 38.38 |
| 217 | 4 | Luit | 33.33 | 0.93 | 21.78 |
| 218 | 4 | SD-310 | 37.17 | 1.20 | 31.22 |
| 219 | 4 | SD-315 | 45.00 | 1.17 | 36.75 |
| 220 | 4 | SD-346 | 39.83 | 1.03 | 28.81 |
| 221 | 4 | Kapila 1 | 35.00 | 1.00 | 24.50 |
| 222 | 4 | SD-360 | 35.50 | 1.07 | 26.51 |
| 223 | 4 | SD-363 | 34.33 | 1.10 | 26.44 |
| 224 | 4 | SD-364 | 44.33 | 1.47 | 45.52 |
| 225 | 4 | SD-365 | 25.50 | 1.10 | 19.64 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** |
| 226 | 4 | Luit | 33.33 | 0.93 | 21.78 |
| 227 | 4 | Kapila 2 | 35.00 | 1.00 | 24.50 |
| 228 | 4 | SD-98 | 27.50 | 1.13 | 21.82 |
| 229 | 4 | SD-367 | 29.83 | 1.00 | 20.88 |
| 230 | 4 | SD-15 | 47.83 | 1.00 | 33.48 |
| 231 | 4 | EC 268181 | 44.33 | 1.00 | 31.03 |
| 232 | 4 | Dr.P.Pathak-1 (PP1) | 34.33 | 1.27 | 30.44 |
| 233 | 4 | Dr.P.Pathak-2 (PP2) | 51.67 | 1.03 | 37.37 |
| 234 | 4 | Dr P.Pathak-4 (PP4) | 37.33 | 1.10 | 28.75 |
| 235 | 4 | Dr.P.Pathak-5 (PP5) | 40.00 | 1.03 | 28.93 |
| 236 | 4 | E.C.267911 | 34.50 | 1.03 | 24.96 |
| 237 | 4 | Pathak-11 (P11) | 44.67 | 1.00 | 31.27 |
| 238 | 4 | Pathak-12 (P12) | 37.50 | 1.00 | 26.25 |
| 239 | 4 | Pathak-13 (P13) | 39.17 | 1.33 | 36.56 |
| 240 | 4 | Pathak-15 (P15) | 39.50 | 1.20 | 33.18 |
| 241 | 4 | Pathak-16 (P16) | 35.50 | 1.00 | 24.85 |
| 242 | 4 | Pathak-17 (P17) | 30.67 | 0.97 | 20.75 |
| 243 | 4 | Pathak-18 (P18) | 31.50 | 1.03 | 22.79 |
| 244 | 4 | Pathak-19 (P19) | 27.50 | 1.00 | 19.25 |
| 245 | 4 | Pathak-20 (P20) | 46.83 | 1.27 | 41.53 |
| 246 | 4 | Pathak-21 (P21) | 47.83 | 1.33 | 44.64 |
| 247 | 4 | Pathak-22 (P22) | 42.17 | 1.07 | 31.48 |
| 248 | 4 | Pathak-23 (P23) | 48.83 | 1.50 | 51.28 |
| 249 | 4 | Pathal-24 (P24) | 38.00 | 1.27 | 33.69 |
| 250 | 4 | Pathak-25 (P25) | 45.00 | 1.47 | 46.20 |
| 251 | 4 | Pathak-26(P26) | 55.17 | 1.43 | 55.35 |
| 252 | 4 | Pathak-27 (P27) | 48.67 | 1.00 | 34.07 |
| 253 | 4 | Pathak-28 (P28) | 44.17 | 1.00 | 30.92 |
| 254 | 4 | Pathak-29 (P29) | 58.83 | 1.20 | 49.42 |
| 255 | 4 | Pathak-30 (P30) | 34.50 | 1.33 | 32.20 |
| 256 | 4 | Pathak-32 (P32) | 37.33 | 1.33 | 34.84 |
| 257 | 4 | Pathak-33 (P33) | 33.33 | 1.40 | 32.67 |
| 258 | 4 | Pathak-34 (P34) | 55.33 | 1.37 | 52.94 |
| 259 | 4 | Pathak-35(P35) | 51.83 | 1.20 | 43.54 |
| 260 | 4 | Pathak-36 (P36) | 45.00 | 1.00 | 31.50 |
| 261 | 4 | Pathak-37 (P37) | 55.33 | 1.27 | 49.06 |
| 262 | 4 | Pathak-38 (P38) | 25.33 | 1.00 | 17.73 |
| 263 | 4 | Pathak-39 (P39) | 30.50 | 1.10 | 23.49 |
| 264 | 4 | Pathak-41 (P41) | 31.00 | 1.00 | 21.70 |
| 265 | 4 | Sathi | 39.00 | 1.37 | 37.31 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** |
| 266 | 4 | Pathak-62 (P62) | 44.50 | 1.50 | 46.73 |
| 267 | 4 | Pathak-63 (P63) | 32.33 | 1.03 | 23.39 |
| 268 | 4 | Pathak-64 (P64) | 40.50 | 1.00 | 28.35 |
| C1 | 4 | Sahbhagi-dhan | 42.00 | 1.00 | 29.40 |
| C2 | 4 | IR64 | 32.00 | 0.60 | 13.44 |
| C3 | 4 | Banglami | 32.67 | 0.67 | 15.24 |
| C4 | 4 | Lachit | 34.00 | 0.60 | 14.28 |
| C5 | 4 | Dehangi | 29.33 | 1.03 | 21.22 |

FLL- Flag leaf length, FLW- Flag leaf width, FLA- Flag leaf area

Table S2. Mean data for leaf traits under stress conditions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| C1 | 1 | Sahbhagi-dhan | 45.00 | 1.00 | 31.50 | 3 |
| C2 | 1 | IR64 | 51.00 | 1.10 | 39.27 | 3 |
| C3 | 1 | Banglami | 45.50 | 1.03 | 32.91 | 3 |
| C4 | 1 | Lachit | 45.00 | 1.00 | 31.50 | 9 |
| C5 | 1 | Dehangi | 33.00 | 1.13 | 26.18 | 5 |
| 1 | 1 | AS90 | 30.50 | 0.67 | 14.23 | 0 |
| 2 | 1 | AS36 | 40.17 | 1.33 | 37.49 | 0 |
| 3 | 1 | AS34 | 42.67 | 0.83 | 24.89 | 3 |
| 4 | 1 | AS152 | 38.33 | 0.83 | 22.36 | 5 |
| 5 | 1 | AS100 | 33.83 | 0.63 | 15.00 | 3 |
| 6 | 1 | AS47 | 40.50 | 1.00 | 28.35 | 0 |
| 7 | 1 | AS105 | 46.83 | 1.17 | 38.25 | 0 |
| 8 | 1 | AS310 | 31.83 | 0.57 | 12.63 | 3 |
| 9 | 1 | AS313 | 39.50 | 1.03 | 28.57 | 3 |
| 10 | 1 | AS75 | 44.83 | 1.10 | 34.52 | 9 |
| 11 | 1 | AS36/20 | 40.83 | 0.93 | 26.68 | 9 |
| 12 | 1 | AS206 | 37.50 | 0.97 | 25.38 | 3 |
| 13 | 1 | AS178/3 | 37.17 | 1.27 | 32.95 | 3 |
| 14 | 1 | AS208 | 30.33 | 0.83 | 17.69 | 0 |
| 15 | 1 | AS204 | 34.67 | 0.87 | 21.03 | 0 |
| 16 | 1 | AS209 | 46.17 | 1.10 | 35.55 | 3 |
| 17 | 1 | AS66-69(AHU2) | 37.60 | 0.87 | 22.81 | 5 |
| 18 | 1 | Monipuridumai | 27.37 | 0.77 | 14.69 | 3 |
| 19 | 1 | AS1196 | 21.50 | 0.77 | 11.54 | 5 |
| 20 | 1 | AS93/1 | 31.33 | 0.83 | 18.28 | 3 |
| 21 | 1 | AS36/30 | 24.17 | 0.67 | 11.28 | 0 |
| 22 | 1 | HarinKajoli | 26.00 | 1.03 | 18.81 | 0 |
| 23 | 1 | AS-1194 | 37.33 | 1.10 | 28.75 | 3 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| 24 | 1 | AS1195 | 0.77 | 0.60 | 0.32 | 3 |
| 25 | 1 | AS1224 | 37.53 | 0.87 | 22.77 | 5 |
| 26 | 1 | AS292 | 26.83 | 0.73 | 13.77 | 0 |
| 27 | 1 | AS209 | 52.25 | 1.15 | 42.93 | 3 |
| 28 | 1 | AS312 | 29.17 | 0.73 | 14.97 | 5 |
| 29 | 1 | AS314 | 46.00 | 0.77 | 24.69 | 3 |
| 30 | 1 | AS315 | 38.33 | 0.77 | 20.57 | 3 |
| 31 | 1 | AS-30/14 | 29.33 | 0.73 | 15.06 | 5 |
| 32 | 1 | AS253 | 26.00 | 0.80 | 14.56 | 5 |
| 33 | 1 | AS159/2 | 35.00 | 0.80 | 19.60 | 5 |
| 34 | 1 | AS-327 | 45.00 | 0.93 | 29.40 | 3 |
| 35 | 1 | AS-27 | 32.50 | 0.67 | 15.17 | 5 |
| 36 | 1 | AS-328 | 38.33 | 0.70 | 18.78 | 3 |
| 37 | 1 | AS-326 | 27.33 | 0.63 | 12.12 | 3 |
| 38 | 1 | AS-325 | 34.33 | 0.63 | 15.22 | 9 |
| 39 | 1 | AS-324 | 38.33 | 1.30 | 34.88 | 9 |
| 40 | 1 | AS-323 | 31.67 | 1.20 | 26.60 | 3 |
| 41 | 1 | AS-321 | 23.67 | 0.60 | 9.94 | 3 |
| 42 | 1 | AS-320 | 23.33 | 0.80 | 13.07 | 7 |
| 43 | 1 | AS-317 | 23.33 | 0.87 | 14.16 | 5 |
| 44 | 1 | AS-180/2 | 18.33 | 0.77 | 9.84 | 7 |
| 45 | 1 | AS-305/2 | 15.67 | 0.40 | 4.39 | 5 |
| 46 | 1 | AS-38/2 | 20.33 | 0.70 | 9.96 | 5 |
| 47 | 1 | AS-177/2 | 25.33 | 0.93 | 16.55 | 5 |
| 48 | 1 | AS-39/13 | 25.00 | 0.67 | 11.67 | 5 |
| 49 | 1 | as180/4 | 35.00 | 0.73 | 17.97 | 3 |
| 50 | 1 | as-144 | 17.17 | 0.70 | 8.41 | 3 |
| 51 | 1 | as-193/1 | 25.83 | 0.70 | 12.66 | 5 |
| 52 | 1 | as203/2 | 36.17 | 1.00 | 25.32 | 3 |
| 53 | 1 | AS-46 | 23.67 | 0.87 | 14.36 | 9 |
| 54 | 1 | AS195 | 26.00 | 0.73 | 13.35 | 7 |
| 55 | 1 | AS229 | 29.17 | 0.67 | 13.61 | 9 |
| 56 | 1 | AS330 | 16.67 | 0.83 | 9.72 | 5 |
| 57 | 1 | AS156 | 33.00 | 0.67 | 15.40 | 9 |
| 58 | 1 | AS66-67(Ahu1) | 24.50 | 0.70 | 12.01 | 3 |
| 59 | 1 | Garem1 | 30.67 | 0.70 | 15.03 | 3 |
| 60 | 1 | AS313/4 | 31.00 | 0.73 | 15.91 | 3 |
| 61 | 1 | AS-48(Duboricinga) | 26.33 | 0.67 | 12.29 | 3 |
| 62 | 1 | AS-86(Rongadoria) | 21.67 | 0.83 | 12.64 | 3 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| 63 | 1 | BasantaBahar | 37.67 | 0.83 | 21.97 | 9 |
| 64 | 1 | AS-69-70(AHU3) | 30.83 | 0.80 | 17.27 | 3 |
| 65 | 1 | AS69-70(AHU2) | 35.83 | 0.90 | 22.58 | 0 |
| 66 | 1 | AS-64-65(AHU1) | 34.17 | 0.83 | 19.93 | 0 |
| 67 | 1 | AS64-65(AHU-5) | 36.33 | 0.87 | 22.04 | 0 |
| 68 | 1 | AS-64-65(AHU1) | 34.75 | 0.75 | 18.41 | 0 |
| 71 | 2 | Bairing | 26.00 | 0.70 | 12.74 | 5 |
| 72 | 2 | Majenichambi | 18.17 | 0.87 | 11.02 | 0 |
| 73 | 2 | Koni ahu | 45.67 | 1.23 | 39.43 | 3 |
| 74 | 2 | Bijor-1 | 19.00 | 0.70 | 9.31 | 3 |
| 75 | 2 | Bijor-2 | 21.67 | 0.67 | 10.11 | 3 |
| 76 | 2 | Bijor-3 | 21.50 | 0.63 | 9.53 | 7 |
| 77 | 2 | Chidon | 29.17 | 0.67 | 13.61 | 3 |
| 78 | 2 | Morenchenkol | 36.00 | 0.77 | 19.32 | 5 |
| 79 | 2 | Maibi-1 | 21.17 | 0.67 | 9.88 | 3 |
| 80 | 2 | Koimurali | 30.83 | 0.67 | 14.39 | 9 |
| 81 | 2 | AS-55 | 37.50 | 0.93 | 24.50 | 9 |
| 82 | 2 | Shesamthat | 32.67 | 0.67 | 15.24 | 9 |
| 83 | 2 | 9ga ahu | 34.50 | 0.67 | 16.10 | 9 |
| 84 | 2 | Kajoli ahu | 32.67 | 0.60 | 13.72 | 7 |
| 85 | 2 | Chenga ahu | 34.50 | 0.67 | 16.10 | 7 |
| 86 | 2 | Aheniahu | 29.67 | 0.93 | 19.38 | 3 |
| 87 | 2 | Poroma ahu | 35.83 | 0.97 | 24.25 | 3 |
| 88 | 2 | Bilsa ahu | 31.33 | 0.73 | 16.08 | 3 |
| 89 | 2 | Guni ahu | 47.33 | 0.90 | 29.82 | 3 |
| 90 | 2 | Goal bhog | 33.17 | 1.00 | 23.22 | 3 |
| 91 | 2 | Malbhog | 32.50 | 0.93 | 21.23 | 3 |
| 92 | 2 | Bengonbisi | 27.50 | 1.17 | 22.46 | 9 |
| 93 | 2 | Rongadoria | 25.50 | 0.63 | 11.31 | 9 |
| 94 | 2 | Hafa ahu | 25.00 | 0.90 | 15.75 | 9 |
| 95 | 2 | Panjasali | 33.17 | 1.00 | 23.22 | 9 |
| 96 | 2 | Boga ahu | 34.83 | 1.00 | 24.38 | 3 |
| 97 | 2 | Kola ahu | 27.83 | 0.67 | 12.99 | 3 |
| 98 | 2 | Monors ahu | 34.83 | 1.00 | 24.38 | 0 |
| 99 | 2 | Bongal ahu | 40.33 | 0.93 | 26.35 | 0 |
| 100 | 2 | Kolamaghi | 35.33 | 1.00 | 24.73 | 3 |
| 101 | 2 | Rikhoijai (1) | 27.50 | 1.05 | 20.27 | 0 |
| 102 | 2 | Bengonagutia | 26.00 | 1.00 | 18.20 | 3 |
| 103 | 2 | Kola bengenagutia | 31.67 | 1.10 | 24.38 | 7 |
| 104 | 2 | Boga Bengenagutia | 32.33 | 1.03 | 23.39 | 3 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| 105 | 2 | Raja ahu | 34.67 | 1.03 | 25.08 | 3 |
| 106 | 2 | Daukolamaghi | 35.33 | 0.93 | 23.08 | 3 |
| 107 | 2 | Bor kola ahu | 40.00 | 1.17 | 32.67 | 0 |
| 108 | 2 | Bahmori | 34.17 | 0.83 | 19.93 | 0 |
| 109 | 2 | Ahu joha | 40.00 | 0.90 | 25.20 | 3 |
| 110 | 2 | Guborguni | 33.67 | 0.63 | 14.93 | 0 |
| 111 | 2 | Soraituni | 44.67 | 1.33 | 41.69 | 0 |
| 112 | 2 | Garam ahu 2 | 43.00 | 0.90 | 27.09 | 0 |
| 113 | 2 | Ikoraguni | 29.50 | 0.53 | 11.01 | 9 |
| 114 | 2 | Meghi ahu | 45.66 | 0.90 | 28.77 | 9 |
| 115 | 2 | Haraipua ahu | 53.00 | 0.83 | 30.92 | 7 |
| 116 | 2 | Kehong ahu | 59.67 | 0.90 | 37.59 | 0 |
| 117 | 2 | Borkola ahu | 51.00 | 0.93 | 33.32 | 3 |
| 118 | 2 | Saruranga ahu | 56.60 | 1.03 | 40.94 | 3 |
| 119 | 2 | Rongajira | 56.83 | 1.23 | 49.07 | 3 |
| 120 | 2 | G130 | 56.60 | 1.03 | 41.04 | 3 |
| 121 | 2 | Tinimohia ahu | 33.50 | 1.00 | 23.45 | 0 |
| 122 | 2 | Podumoni ahu | 38.33 | 1.00 | 26.83 | 0 |
| 123 | 2 | Koijapori-1 | 45.67 | 1.00 | 31.97 | 3 |
| 124 | 2 | Koijapori-2 | 44.50 | 0.90 | 28.04 | 0 |
| 125 | 2 | Koijapori3 | 41.00 | 0.80 | 22.96 | 3 |
| 126 | 2 | RONGADORIA | 33.83 | 1.00 | 23.68 | 9 |
| 127 | 2 | Nilazi2 | 33.75 | 0.75 | 18.20 | 3 |
| 128 | 2 | CH-63 | 35.50 | 0.95 | 23.70 | 3 |
| 129 | 2 | Sarimohia ahu | 51.00 | 0.83 | 29.75 | 3 |
| 130 | 2 | Laujuli | 51.67 | 0.97 | 34.96 | 9 |
| 131 | 2 | Rikhojai (3) | 37.50 | 1.05 | 28.35 | 3 |
| 132 | 2 | Aijuri | 36.67 | 1.07 | 27.38 | 9 |
| 133 | 2 | Cauvery | 43.00 | 0.83 | 25.08 | 3 |
| 134 | 2 | PUSA 2-21 | 26.33 | 0.53 | 9.83 | 3 |
| 135 | 2 | Krishna | 29.00 | 1.03 | 20.98 | 3 |
| 136 | 2 | Kanehi | 34.67 | 1.13 | 27.50 | 0 |
| 137 | 2 | AS-490(2-21-39) | 35.33 | 1.17 | 28.86 | 0 |
| C1 | 2 | Sahbhagi-dhan | 38.00 | 1.07 | 28.37 | 3 |
| C2 | 2 | IR64 | 29.67 | 0.97 | 20.07 | 3 |
| C3 | 2 | Banglami | 42.18 | 1.00 | 29.53 | 3 |
| C4 | 2 | Lachit | 46.66 | 1.10 | 35.93 | 9 |
| C5 | 3 | Dehangi | 49.50 | 1.10 | 38.12 | 5 |
| 138 | 3 | AS-192(2-21-42) | 38.50 | 1.10 | 29.58 | 0 |
| 139 | 3 | AS-489\_2-21-2) | 43.00 | 0.85 | 25.59 | 0 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| 140 | 3 | AS191(2-21-26) | 40.00 | 0.87 | 24.27 | 5 |
| 141 | 3 | IR-36 | 44.00 | 0.93 | 28.75 | 5 |
| 142 | 3 | IR-26 | 26.00 | 1.00 | 18.20 | 5 |
| 143 | 3 | CR-237-1(Culture-1) | 19.33 | 0.80 | 10.83 | 5 |
| 144 | 3 | IR-56 | 32.33 | 1.00 | 22.63 | 0 |
| 145 | 3 | IR-58 | 23.67 | 0.73 | 12.15 | 0 |
| 146 | 3 | IR9729-67-3 | 29.33 | 0.93 | 19.16 | 3 |
| 147 | 3 | Ahu bora | 32.67 | 0.73 | 16.77 | 5 |
| 148 | 3 | G162 | 38.33 | 1.03 | 27.73 | 0 |
| 149 | 3 | Heera | 34.17 | 0.97 | 23.12 | 9 |
| 150 | 3 | Gunidhan | 33.00 | 0.93 | 21.56 | 9 |
| 151 | 3 | HFC Jorhat | 33.17 | 0.87 | 20.12 | 9 |
| 152 | 3 | Bonahu | 24.17 | 0.80 | 13.53 | 9 |
| 153 | 3 | Ikoraguni-1 | 18.00 | 0.50 | 6.30 | 9 |
| 154 | 3 | Nilazi1 | 27.25 | 0.90 | 17.17 | 9 |
| 155 | 3 | Nilazi3 | 34.33 | 0.90 | 21.63 | 9 |
| 156 | 3 | IET-7566 | 30.33 | 0.97 | 20.53 | 9 |
| 157 | 3 | IET-10800 | 20.00 | 0.75 | 10.61 | 7 |
| 158 | 3 | IET-10896 | 29.33 | 0.57 | 11.64 | 7 |
| 159 | 3 | IET10898 | 29.67 | 0.53 | 11.08 | 7 |
| 160 | 3 | Jai bangla1 | 32.50 | 0.80 | 18.20 | 7 |
| 161 | 3 | Bongaloni | 23.50 | 0.93 | 15.35 | 0 |
| 162 | 3 | Maibi-2 | 41.67 | 0.93 | 27.22 | 3 |
| 163 | 3 | Dogaronga | 26.00 | 0.80 | 14.56 | 3 |
| 164 | 3 | G-179 | 13.83 | 0.47 | 4.52 | 3 |
| 165 | 3 | IR630 | 15.00 | 0.67 | 7.00 | 9 |
| 166 | 3 | Bogon bisi-2 | 18.33 | 0.73 | 9.41 | 3 |
| 167 | 3 | Area old seed | 21.67 | 0.80 | 12.13 | 3 |
| 168 | 3 | Maibi | 37.33 | 0.90 | 23.52 | 3 |
| 169 | 3 | Dimororce | 43.00 | 0.90 | 27.09 | 9 |
| 170 | 3 | Hasabumura | 22.50 | 0.77 | 12.08 | 7 |
| 171 | 3 | Jubali | 22.67 | 0.80 | 12.69 | 3 |
| 172 | 3 | Kolamanik | 16.00 | 0.60 | 6.72 | 9 |
| 173 | 3 | AD8500 | 19.00 | 0.60 | 7.98 | 0 |
| 174 | 3 | PUSA-598 | 19.00 | 0.70 | 9.31 | 9 |
| 175 | 3 | PUSA6770 | 30.67 | 0.83 | 17.89 | 3 |
| 176 | 3 | Kosamoni | 21.83 | 0.67 | 10.19 | 7 |
| 177 | 3 | Lokhi | 20.67 | 0.60 | 8.68 | 3 |
| 178 | 3 | Kanua | 18.00 | 0.67 | 8.40 | 3 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| 179 | 3 | Jai bangla1 | 32.50 | 0.80 | 18.20 | 7 |
| 180 | 3 | IET-6155(Govind) | 24.00 | 0.77 | 12.88 | 9 |
| 181 | 3 | IRRI-7 | 24.67 | 0.67 | 11.51 | 3 |
| 182 | 3 | IRRI-27 | 20.83 | 0.70 | 10.21 | 3 |
| 183 | 3 | IRRI-28-1 | 29.17 | 0.93 | 19.06 | 3 |
| 184 | 3 | IRRI-29-1 | 24.33 | 0.83 | 14.19 | 3 |
| 185 | 3 | NKD 1218 | 15.17 | 0.63 | 6.72 | 5 |
| 186 | 3 | Hybrid | 25.50 | 0.67 | 11.90 | 0 |
| 187 | 3 | Hybri-6201 | 21.33 | 0.63 | 9.46 | 9 |
| 188 | 3 | SD-8 | 31.00 | 0.80 | 17.36 | 9 |
| 189 | 3 | SD13-1 | 29.00 | 0.90 | 18.27 | 0 |
| 190 | 3 | SD13-2 | 35.33 | 0.63 | 15.66 | 0 |
| 191 | 3 | SD-14 | 31.67 | 0.67 | 14.78 | 7 |
| 192 | 3 | SD-16 | 29.00 | 0.77 | 15.56 | 3 |
| 193 | 3 | SD-17 | 24.00 | 0.87 | 14.56 | 3 |
| 194 | 3 | SD-18 | 16.00 | 0.77 | 8.59 | 3 |
| 100 | 3 | SD-19 | 30.50 | 0.70 | 14.95 | 3 |
| 196 | 3 | SD-28 | 26.00 | 0.60 | 10.92 | 3 |
| 197 | 3 | SD-29 | 26.00 | 0.60 | 10.92 | 0 |
| 198 | 3 | SD-35 | 33.33 | 0.90 | 21.00 | 3 |
| 199 | 3 | SD-36 | 22.67 | 1.03 | 16.40 | 3 |
| 200 | 3 | SD-52 | 31.00 | 0.90 | 19.53 | 3 |
| 201 | 3 | SD-55 | 30.33 | 0.97 | 20.53 | 9 |
| 202 | 3 | SD-68 | 29.00 | 0.90 | 18.27 | 9 |
| 203 | 3 | SD-82 | 28.83 | 0.90 | 18.17 | 3 |
| 204 | 3 | SD-87 | 30.67 | 1.23 | 26.48 | 5 |
| C1 | 3 | Sahbhagi-dhan | 38.00 | 0.95 | 25.29 | 3 |
| C2 | 3 | IR64 | 52.05 | 1.00 | 36.43 | 3 |
| C3 | 3 | Banglami | 36.67 | 1.07 | 27.38 | 3 |
| C4 | 3 | Lachit | 41.50 | 0.80 | 23.24 | 9 |
| C5 | 4 | Dehangi | 37.17 | 1.23 | 32.09 | 5 |
| 205 | 4 | BDJ 11/91 | 28.67 | 1.13 | 22.74 | 3 |
| 206 | 4 | SD-101 | 29.50 | 1.03 | 21.34 | 5 |
| 207 | 4 | SD-124 | 27.00 | 0.93 | 17.64 | 3 |
| 208 | 4 | SD-125 | 20.17 | 1.00 | 14.12 | 3 |
| 209 | 4 | SD-126 | 27.00 | 0.93 | 17.64 | 3 |
| 210 | 4 | SD-142 | 27.33 | 0.77 | 14.67 | 0 |
| 211 | 4 | SD-186 | 29.00 | 1.07 | 21.65 | 3 |
| 212 | 4 | SD-194 | 19.33 | 1.00 | 13.53 | 0 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| 213 | 4 | SD-251 | 26.17 | 1.07 | 19.54 | 9 |
| 214 | 4 | SD-263 | 19.33 | 0.85 | 11.50 | 9 |
| 215 | 4 | SD-267 | 27.17 | 0.83 | 15.85 | 3 |
| 216 | 4 | SD-292 | 29.17 | 0.90 | 18.38 | 9 |
| 217 | 4 | Luit | 27.00 | 0.97 | 18.27 | 0 |
| 218 | 4 | SD-310 | 25.50 | 1.00 | 17.85 | 9 |
| 219 | 4 | SD-315 | 23.17 | 1.10 | 17.84 | 3 |
| 220 | 4 | SD-346 | 48.33 | 0.87 | 29.32 | 9 |
| 221 | 4 | Kapila | 35.67 | 1.10 | 27.46 | 3 |
| 222 | 4 | SD-360 | 29.20 | 1.60 | 32.70 | 9 |
| 223 | 4 | SD-363 | 33.33 | 1.10 | 25.67 | 7 |
| 224 | 4 | SD-364 | 38.00 | 1.50 | 39.90 | 7 |
| 225 | 4 | SD-365 | 35.50 | 1.27 | 31.48 | 5 |
| 226 | 4 | Luit | 27.00 | 0.97 | 18.27 | 0 |
| 227 | 4 | Kapila | 35.67 | 1.10 | 27.46 | 0 |
| 228 | 4 | SD-98 | 26.00 | 0.90 | 16.38 | 0 |
| 229 | 4 | SD-367 | 27.77 | 0.90 | 17.49 | 3 |
| 230 | 4 | SD-15 | 47.33 | 0.80 | 26.51 | 9 |
| 231 | 4 | EC 268181 | 24.33 | 0.93 | 15.90 | 9 |
| 232 | 4 | Dr.P.Pathak-1 (PP1) | 24.60 | 0.93 | 16.07 | 9 |
| 233 | 4 | Dr.P.Pathak-2 (PP2) | 38.83 | 1.10 | 29.90 | 5 |
| 234 | 4 | Dr P.Pathak-4 (PP4) | 23.83 | 0.80 | 13.35 | 3 |
| 235 | 4 | Dr.P.Pathak-5 (PP5) | 25.00 | 0.77 | 13.42 | 9 |
| 236 | 4 | E.C.267911 | 31.00 | 0.70 | 15.19 | 7 |
| 237 | 4 | Pathak-11 (P-11) | 32.50 | 0.93 | 21.23 | 7 |
| 238 | 4 | Pathak-12 (P-12) | 25.17 | 0.83 | 14.68 | 3 |
| 239 | 4 | Pathak-13 (P-13) | 26.17 | 0.70 | 12.82 | 5 |
| 240 | 4 | Pathak-15 (P-15) | 28.33 | 1.00 | 19.83 | 3 |
| 241 | 4 | Pathak-16 (P-16) | 23.17 | 1.03 | 16.76 | 3 |
| 242 | 4 | Pathak-17 (P-17) | 17.67 | 0.83 | 10.31 | 5 |
| 243 | 4 | Pathak-18 (P-18) | 20.23 | 0.77 | 10.86 | 5 |
| 244 | 4 | Pathak-19 (P-19) | 24.67 | 0.93 | 16.12 | 5 |
| 245 | 4 | Pathak-20 (P-20) | 27.17 | 0.87 | 16.48 | 3 |
| 246 | 4 | Pathak-21 (P-21) | 35.67 | 1.00 | 24.97 | 5 |
| 247 | 4 | Pathak-22 (P-22) | 38.17 | 0.90 | 24.05 | 5 |
| 248 | 4 | Pathak-23 (P-23) | 28.67 | 1.13 | 22.74 | 3 |
| 249 | 4 | Pathal-24 (P-24) | 28.83 | 1.13 | 22.87 | 5 |
| 250 | 4 | Pathak-25 (P-5) | 36.67 | 0.90 | 23.10 | 3 |
| 251 | 4 | Pathak-26 (P-26) | 32.17 | 0.80 | 18.01 | 5 |
| 252 | 4 | Pathak-27 (P-27) | 33.50 | 0.90 | 21.11 | 5 |
| **Sr. No.** | **Block** | **Genotype** | **FLL (cm)** | **FLW (cm)** | **FLA (cm)** | **LRS** |
| 253 | 4 | Pathak-28 (P-28) | 34.43 | 1.07 | 25.71 | 3 |
| 254 | 4 | Pathak-29 (P-29) | 50.67 | 0.90 | 31.92 | 5 |
| 255 | 4 | Pathak-30 (P-30) | 26.50 | 1.03 | 19.17 | 3 |
| 256 | 4 | Pathak-32 (P-32) | 28.67 | 1.10 | 22.07 | 3 |
| 257 | 4 | Pathak-33 (P-33) | 27.33 | 1.00 | 19.13 | 9 |
| 258 | 4 | Pathak-34 (P-34) | 30.83 | 0.97 | 20.86 | 9 |
| 259 | 4 | Pathak-35 (P-35) | 43.33 | 1.13 | 34.38 | 3 |
| 260 | 4 | Pathak-36 (P-36) | 30.70 | 1.00 | 21.49 | 3 |
| 261 | 4 | Pathak-37 (P-37) | 38.83 | 1.17 | 31.71 | 3 |
| 262 | 4 | Pathak-38 (P-38) | 29.00 | 0.63 | 12.86 | 3 |
| 263 | 4 | Pathak-39 (P-39) | 27.17 | 1.07 | 20.28 | 9 |
| 264 | 4 | Pathak-41 (P-41) | 26.00 | 0.67 | 12.13 | 3 |
| 265 | 4 | Sathi | 30.17 | 0.93 | 19.71 | 0 |
| 266 | 4 | Pathak-62 (P-62) | 30.67 | 1.20 | 25.76 | 9 |
| 267 | 4 | Pathak-63 (P-63) | 26.33 | 0.90 | 16.59 | 0 |
| 268 | 4 | Pathak-64 (P-64) | 41.33 | 0.80 | 23.15 | 5 |
| C1 | 4 | Sahbhagi-dhan | 31.00 | 1.00 | 21.70 | 3 |
| C2 | 4 | IR64 | 39.00 | 1.37 | 37.31 | 3 |
| C3 | 4 | Banglami | 44.50 | 1.50 | 46.73 | 3 |
| C4 | 4 | Lachit | 32.33 | 1.03 | 23.39 | 9 |
| C5 | 4 | Dehangi | 40.50 | 1.00 | 28.35 | 5 |

FLL- Flag leaf length (cm), FLW- Flag leaf width (cm), Flag leaf area (LA) (cm2), LRS- Leaf rolling score

**Table S3.** Overall performance of cultivars in well-watered situation

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trait | Overall Mean | SD | CV | CD | Min Value | Max Value | PCV | GCV |
| FLL (cm) | 40.35 | 8.56 | 17.73 | 3.96 | 18.17 | 65.83 | 17.9 (High)) | 17.44 (Medium) |
| FLW (cm) | 0.99 | 0.22 | 17.94 | 0.11 | 0.60 | 1.50 | 17.96 (High) | 11.17 (Medium) |
| FLA (cm2 ) | 28.08 | 9.98 | 30.43 | 2.71 | 11.45 | 57.63 | 30.72 (High) | 21.57 (High) |

SD- Standard deviation, CV- Coefficient of variance, CD, critical difference, Min value- Minimum value, Max value (maximum value), PCV- Phenotypic coefficient of variance, GCV- Genotypic coefficient of variance

**Table S4.** Pearson Correlation of leaf traits with yield traits in irrigated environment

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **DFF** | **PH** | **NOT** | **NPT** | **PL** | **FLL** | **FLW** | **FLA** | **SF** | **HI** | **RLWC** | **GYP** |
| **DFF** |  | 1 | 0.103 | 0.134\* | 0.095 | 0.308\*\* | 0.202\*\* | -0.005 | 0.115 | 0.007 | 0.001 | -0.056 | 0.189\*\* |
| **PH** |  | 0.103 | 1 | 0.144\* | 0.087 | 0.213\*\* | 0.306\*\* | 0.058 | 0.236\*\* | 0.053 | -0.028 | 0.163\*\* | -0.090 |
| **NOT** |  | 0.134\* | 0.144\* | 1 | 0.077 | 0.019 | 0.130\* | 0.217\*\* | 0.187\*\* | 0.021 | 0.024 | 0.076 | 0.140\* |
| **NPT** |  | 0.095 | 0.087 | 0.077 | 1 | 0.042 | 0.150\* | 0.013 | 0.098 | 0.045 | -0.116 | 0.103 | -0.013 |
| **PL** |  | 0.308\*\* | 0.213\*\* | 0.019 | 0.042 | 1 | 0.243\*\* | 0.019 | 0.156\* | 0.002 | -0.095 | -0.035 | 0.124\* |
| **FLL** |  | 0.202\*\* | 0.306\*\* | 0.130\* | 0.150\* | 0.243\*\* | 1 | 0.380\*\* | 0.859\*\* | 0.076 | 0.043 | 0.292\*\* | 0.099 |
| **FLW** |  | -0.005 | 0.058 | 0.217\*\* | 0.013 | 0.019 | 0.380\*\* | 1 | 0.778\*\* | 0.177\*\* | 0.112 | 0.140\* | 0.117 |
| **FLA** |  | 0.115 | 0.236\*\* | 0.187\*\* | 0.098 | 0.156\* | 0.859\*\* | 0.778\*\* | 1 | 0.144\* | 0.078 | 0.288\*\* | 0.112 |
| **SF** |  | 0.007 | 0.053 | 0.021 | 0.045 | 0.002 | 0.076 | 0.177\*\* | 0.144\* | 1 | -0.023 | 0.011 | 0.216\*\* |
| **HI** |  | 0.001 | -0.028 | 0.024 | -0.116 | -0.095 | 0.043 | 0.112 | 0.078 | -0.023 | 1 | 0.067 | 0.173\*\* |
| **RLWC** |  | -0.056 | 0.163\*\* | 0.076 | 0.103 | -0.035 | 0.292\*\* | 0.140\* | 0.288\*\* | 0.011 | 0.067 | 1 | -0.060 |
| **GYP** |  | 0.189\*\* | -0.090 | 0.140\* | -0.013 | 0.124\* | 0.099 | 0.117 | 0.112 | 0.216\*\* | 0.173\*\* | -0.060 | 1 |

\*Correlation is significant at the 0.05 level (2-tailed), \*\*. Correlation is significant at the 0.01 level (2-tailed).

DFF- Days to 50% flowering, PH- Plant height, NOT- Number of tillers, NPT- Number of productive tillers, PL- Panicle length, FLL- Flag leaf length (cm), FLW- Flag leaf width (cm), Flag leaf area (LA) (cm2), SF- Spikelet fertility, HI- Harvest index, RLWC- Relative leaf water content, GYP- Grain yield per plant

**Table S5.** Markers-trait associations by GLM with leaf traits under both environment

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trait | Marker(stress) | Chr no. | *P*- Marker | Marker*R2*(%) | Trait | Marker(Irrigated) | Chr no. | *P* Marker | Marker *R2*(%) |
| FLL | RM519 | 12 | 0.0000 | 13.41 | FLL | RM519 | 12 | 0.0000 | 12.19 |
| FLL | RM1 | 1 | 0.0001 | 12.97 | FLL | RM3825 | 1 | 0.0000 | 13.57 |
| FLL | RM337 | 8 | 0.0001 | 8.82 | FLL | RM337 | 8 | 0.0000 | 11.32 |
| FLW | RM273 | 4 | 0.0000 | 11.04 | FLL | RM256 | 8 | 0.0001 | 13.57 |
| FLW | RM3604 | 2 | 0.0002 | 8.46 | FLL | RM184 | 10 | 0.0001 | 12.30 |
| FLW | RM167 | 11 | 0.0005 | 7.14 | FLL | RM296 | 9 | 0.0002 | 6.87 |
| FLW | RM234 | 7 | 0.0007 | 6.93 | FLL | RM125 | 7 | 0.0005 | 6.36 |
| FLW | RM72 | 8 | 0.0011 | 6.57 | FLL | RM273 | 4 | 0.0012 | 6.52 |
| FLA | RM519 | 12 | 0.0000 | 9.43 | FLL | RM5638 | 1 | 0.0012 | 9.82 |
| FLA | RM1 | 1 | 0.0001 | 12.87 | FLW | RM280 | 4 | 0.0000 | 19.03 |
| FLA | RM337 | 8 | 0.0000 | 8.16 | FLW | RM184 | 10 | 0.0000 | 13.25 |
|  |  |  |  |  | FLW | RM273 | 4 | 0.0001 | 8.172 |
|  |  |  |  |  | FLW | RM167 | 11 | 0.0006 | 7.03 |
|  |  |  |  |  | FLW | RM259 | 1 | 0.0006 | 5.28 |
|  |  |  |  |  | FLW | RM519 | 12 | 0.0016 | 5.53 |
|  |  |  |  |  | FLA | RM519 | 12 | 0.0000 | 14.04 |
|  |  |  |  |  | FLA | RM280 | 4 | 0.0000 | 16.10 |
|  |  |  |  |  | FLA | RM184 | 10 | 0.0000 | 12.64 |
|  |  |  |  |  | FLA | RM337 | 8 | 0.0004 | 7.97 |
|  |  |  |  |  | FLA | RM273 | 4 | 0.0006 | 7.07 |
|  |  |  |  |  | FLA | RM3825 | 1 | 0.0006 | 9.81 |
|  |  |  |  |  | FLA | RM1256 | 3 | 0.0019 | 10.55 |

*R2*– Phenotypic variance (Effect of MTA)

Chr no.- Chromosome number *P*- Significant probability value

FLL- Flag leaf length (cm), FLW- Flag leaf width (cm), Flag leaf area (LA) (cm2)

**Table S6.** Overall performance of cultivars in drought stress situation

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Trait | Overall Mean | SD | CV | CD | Min Value | Max Value | PCV | GCV |
| FLL (cm) | 31.57 | 8.56 | 23.95 | 5.31 | 13.83 | 59.67 | 30.23 (High) | 18.4 (Medium) |
| FLW (cm) | 0.87 | 0.18 | 57.43 | 0.15 | 0.40 | 1.60 | 37.42 (High) | 10.14 (Medium) |
| FLA (cm2 ) | 19.72 | 7.98 | 13.24 | 4.25 | 4.39 | 49.07 | 46.31 (High) | 29.49 (High) |
| LRS | 3.51 | 2.16 |  |  | 1 | 9 |  |  |

SD- Standard Deviation, CV- Coefficient of Variance, CD- Critical difference, Min- Minimum value, Max- Maximum value