Table 1: Mean leaf Δ13C (‰) of five contrasting faba bean genotypes under rainfed and irrigated conditions at Narrabri, NSW. Leaf sample was taken at the three-pod stage; plant age was between 120-128 days. Standard error is shown

|  |  |  |
| --- | --- | --- |
| Genotypes | Irrigated | Rainfed |
| Leaf Δ13C (‰) | Leaf Δ13C (‰) |
| 11NF010c-4 | -29.91±0.04 | -28.78±0.05 |
| 11NF008b15 | -28.18±0.03 | -28.78±0.05 |
| AC0805#4912 | -29.10±0.05 | -28.08±0.06 |
| 11NF020a-1 | -28.60±0.05 | -28.97±0.04 |
| PBA Warda | -28.49±0.02 | -28.22±0.05 |

Table 1a: Pedigree of the selected genotypes in field trial 2016

|  |  |  |
| --- | --- | --- |
| Genotypes | Pedigree | Origin (country/region/state) |
| AC0805#4912  | Seln ex ILB445 | Yemen |
| 11NF020a-1  |  453/4-2 X 331b/1-1 | Narrabri, NSW, Australia |
| 11NF010c-4 | 331b/1-1X220d/2-5 | Narrabri, NSW, Australia |
| 11NF008b-15 | AF07091X114/1-16 | Narrabri, NSW, Australia |
| PBA Warda | SP99046 × SP99081 | Narrabri, NSW, Australia |

**Table 2**: Mean transpiration rate (E, mmol m-2 ms-1), net photosynthetic rate (A, mol m-2 ms-1), Stomatal conductance (gs, mmol m-2 ms-1) and ratio between intercellular carbon concentrations (Ci) to atmospheric carbon concentration (Ca) measured across the day five times among five contrasting faba bean genotypes under rainfed and irrigated conditions at Narrabri, NSW. Data recorded five times over the day (9.00 am to 4.00 pm). The measurement was done at the three-pod stage; plant age was between 120-128 days. Standard error are shown.

|  |  |  |  |
| --- | --- | --- | --- |
| Genotype | Time after sunrise (hours) | Irrigated | Rainfed |
| E (mmol m-2 ms-1) | A (mol m-2 ms-1) | gs (mmol m-2 ms-1) | Ci/Ca | E (mmol m-2 ms-1) | A (mol m-2 ms-1) | gs (mmol m-2 ms-1) | Ci/Ca |
| 11NF 10c-4 | 2 | 1.18 | 10.79 | 220.45 | 0.83 | 1.29 | 11.39 | 111.95 | 0.89 |
| 11NF 10c-4 | 4 | 0.92 | 11.95 | 156.31 | 0.71 | 0.88 | 9.26 | 140.54 | 0.68 |
| 11NF 10c-4 | 6 | 0.55 | 12.01 | 119.80 | 0.60 | 1.00 | 8.35 | 105.48 | 0.61 |
| 11NF 10c-4 | 8 | 1.07 | 14.36 | 160.37 | 0.62 | 0.62 | 8.08 | 92.20 | 0.73 |
| 11NF 10c-4 | 10 | 1.15 | 11.42 | 152.97 | 0.72 | 0.60 | 7.64 | 65.15 | 0.69 |
| 11NF008b15 | 2 | 0.76 | 12.56 | 212.55 | 0.81 | 1.09 | 9.38 | 184.37 | 0.76 |
| 11NF008b15 | 4 | 0.52 | 14.02 | 134.44 | 0.69 | 0.53 | 12.43 | 246.55 | 0.53 |
| 11NF008b15 | 6 | 0.54 | 11.28 | 120.83 | 0.62 | 0.84 | 13.88 | 181.11 | 0.68 |
| 11NF008b15 | 8 | 0.91 | 13.32 | 208.36 | 0.69 | 0.21 | 10.70 | 148.51 | 0.53 |
| 11NF008b15 | 10 | 1.13 | 12.42 | 224.17 | 0.66 | 0.22 | 9.70 | 111.44 | 0.56 |
| AC0805#4912 | 2 | 1.63 | 12.51 | 204.50 | 0.75 | 0.97 | 10.88 | 142.86 | 0.71 |
| AC0805#4912 | 4 | 1.54 | 15.26 | 291.83 | 0.85 | 1.06 | 15.97 | 174.47 | 0.55 |
| AC0805#4912 | 6 | 1.68 | 18.16 | 207.00 | 0.77 | 0.96 | 14.43 | 170.21 | 0.65 |
| AC0805#4912 | 8 | 1.17 | 16.26 | 168.56 | 0.64 | 0.94 | 12.51 | 168.48 | 0.71 |
| AC0805#4912 | 10 | 1.37 | 14.59 | 142.39 | 0.68 | 0.87 | 11.50 | 160.68 | 0.68 |
| 11NF020a-1 | 2 | 1.89 | 15.00 | 309.61 | 0.79 | 1.08 | 7.48 | 160.84 | 0.83 |
| 11NF020a-1 | 4 | 1.10 | 11.41 | 169.46 | 0.72 | 1.74 | 12.34 | 205.24 | 0.67 |
| 11NF020a-1 | 6 | 1.51 | 15.04 | 197.17 | 0.68 | 1.12 | 10.29 | 162.24 | 0.89 |
| 11NF020a-1 | 8 | 0.54 | 9.90 | 134.23 | 0.70 | 0.62 | 8.41 | 127.04 | 0.78 |
| 11NF020a-1 | 10 | 1.20 | 17.85 | 240.43 | 0.69 | 0.60 | 7.01 | 105.00 | 0.53 |
| PBA Warda | 2 | 2.11 | 12.65 | 220.56 | 0.73 | 1.45 | 7.22 | 161.93 | 0.69 |
| PBA Warda | 4 | 0.29 | 13.61 | 273.39 | 0.78 | 0.82 | 12.10 | 121.60 | 0.59 |
| PBA Warda | 6 | 0.78 | 15.92 | 178.63 | 0.73 | 1.43 | 16.39 | 213.72 | 0.65 |
| PBA Warda | 8 | 0.55 | 11.95 | 158.91 | 0.72 | 0.65 | 10.96 | 101.68 | 0.56 |
| PBA Warda | 10 | 1.27 | 10.23 | 144.66 | 0.68 | 0.60 | 12.01 | 105.25 | 0.53 |