**Table 1.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Genotype** | **MG¶** | **Lutein concentration (µg/g)** | **Mean ± SE** |
| **E1** | **E2** | **E3** | **E4** | **E5** | **E6** |
| PI592924 | 0 | € | 3.5 | 11.3 | 7.4 | 3.1 | 1.6 | 5.4 ± 1.6 |
| PI370059 | I | 8.6 | 4.3 | 9.2 | 7.6 | 2.8 | 1.6 | 5.7 ± 1.3 |
| PI438206 | I | 10.0 | 4.8 | 10.1 | 3.4 | 3.1 | 2.6 | 5.6 ± 1.4 |
| PI612708C | I | 9.1 | 3.4 | 9.7 | 3.8 | 2.6 | 2.2 | 5.2 ± 1.4 |
| PI612715 | I | 9.2 | 4.9 | 9.7 | 3.8 | 2.8 | 3.0 | 5.6 ± 1.3 |
| PI612717 | I | 6.0 | 4.3 | 9.2 | 3.4 | 2.2 | 2.1 | 4.5 ± 1.1 |
| PI464901 | II | 6.8 | 3.3 | 7.9 | 4.2 | 1.8 | 2.0 | 4.3 ± 1.0 |
| PI592938 | II | 7.6 | 3.2 | 7.8 | 2.8 | 1.9 | 2.5 | 4.3 ± 1.1 |
| PI091091 | II | 6.7 | 4.1 | 9.4 | 6.4 | 2.1 | 2.3 | 5.2 ± 1.2 |
| PI437593B | II | 6.3 | 3.2 | 8.4 | 5.2 | 2.3 | 2.4 | 4.6 ± 1.0 |
| PI071461 | III | 7.3 | 5.4 | 10.4 | 3.4 | 3.5 | 4.0 | 5.6 ± 1.1 |
| PI087619 | III | 7.2 | 4.5 | 8.3 | 7.9 | 3.6 | 3.1 | 5.8 ± 0.9 |
| PI416789 | III | 1.2 | 1.0 | 2.7 | 1.5 | 0.8 | 0.7 | 1.3 ± 0.3 |
| PI417323 | III | 1.4 | 0.8 | 1.7 | 0.7 | 0.4 | 0.6 | 0.9 ± 0.2 |
| PI567262C | III | 1.5 | 1.8 | 3.4 | 2.0 | 1.3 | 1.6 | 1.9 ± 0.3 |
| PI567263 | III | 1.5 | 1.8 | 2.3 | 1.6 | 1.0 | 1.2 | 1.6 ± 0.2 |
| PI567361 | III | 7.5 | € | 8.3 | € | 2.6 | 3.5 | 5.5 ± 1.2 |
| PI567365 | III | 7.3 | € | 7.1 | 7.1 | 2.8 | 3.5 | 5.5 ± 0.9 |
| PI603423B | III | 8.9 | € | 11.3 | 10.3 | 3.9 | 4.0 | 7.7 ± 1.4 |
| PI603428C | III | 6.6 | 6.1 | 7.0 | 7.1 | 3.1 | 2.8 | 5.4 ± 0.8 |
| FC004007B | III | 5.4 | € | 4.5 | 4.3 | 2.8 | 3.2 | 4.0 ± 0.4 |
| PI89772 | IV | 6.2 | 6.2 | 7.1 | 7.6 | 4.0 | 3.9 | 5.8 ± 0.6 |
| PI495017C | IV | 2.9 | 2.4 | 5.9 | 8.8 | 3.3 | 3.8 | 4.5 ± 1.0 |
| N98-4445A | IV | 1.2 | 1.2 | 1.9 | 1.9 | 1.2 | 1.5 | 1.5 ± 0.1 |
| Anand | V | 1.1 | € | 3.6 | 3.7 | 1.9 | 1.8 | 2.4 ± 0.5 |
| Mean  | 5.7 | 3.5 | 7.1 | 4.8 | 2.4 | 2.5 |  |
| LSD0.05 | 1.3 | 1.4 | 0.8 | 1.1 | 4.1 | 3.7 |  |

+Environments where soybean were planted: E1 (15 May, University of Missouri-Delta Center, Portageville, Lee farm, 2008); E2 (18 June, University of Missouri-Delta Center, Portageville, Lee farm, 2008); E3 (18 May, University of Missouri-Delta Center, Portageville, Lee farm, 2009); E4 (19 June, University of Missouri-Delta Center, Portageville, Lee farm, 2009); E5 (20 .May, Columbia, Mo, Bradford Research and Extension Centre, 2009); E6 (1.June, Columbia, Mo, Bradford Research and Extension Centre, 2009).

¶ MG, maturity group.

€ Missing plot

**Table 2.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Genotype** | **MG¶** | **Mean (lutein)** | **Range****(lutein)** | **CV** | §**Stability coefficient (bE)** | **Mean**\* **rank** |
| (µg/g) | Rank | (µg/g) | Rank | (%) | Rank | bE | Rank | P | r2 |
| PI592924 | 0 | 5.4 | 6 | 9.8 | 21 | 73 | 18 | 1.10 | 13 | 0.0017 | 0.9752 | 17 |
| PI370059 | I | 5.7 | 3 | 7.6 | 20 | 56 | 12 | 1.75 | 23 | 0.0021 | 0.9269 | 17 |
| PI438206 | I | 5.6 | 4 | 7.5 | 19 | 62 | 15 | 1.66 | 21 | 0.0353 | 0.7098 | 18 |
| PI612708C | I | 5.2 | 7 | 7.5 | 19 | 65 | 17 | 1.72 | 22 | 0.0133 | 0.8180 | 19 |
| PI612715 | I | 5.6 | 4 | 7.0 | 15 | 56 | 12 | 1.53 | 19 | 0.0237 | 0.7596 | 12 |
| PI612717 | I | 4.5 | 9 | 7.2 | 16 | 60 | 14 | 1.40 | 18 | 0.0108 | 0.8352 | 16 |
| PI464901 | II | 4.3 | 10 | 6.0 | 13 | 57 | 13 | 1.38 | 17 | 0.0013 | 0.9408 | 13 |
| PI592938 | II | 4.3 | 10 | 5.9 | 12 | 62 | 16 | 1.31 | 16 | 0.0263 | 0.7472 | 14 |
| PI091091 | II | 5.2 | 7 | 7.3 | 17 | 55 | 11 | 1.61 | 20 | <.0001 | 0.9929 | 15 |
| PI437593B | II | 4.6 | 8 | 6.0 | 13 | 52 | 9 | 1.38 | 17 | <.0001 | 0.9922 | 10 |
| PI071461 | III | 5.6 | 4 | 7.0 | 15 | 49 | 8 | 1.27 | 15 | 0.0462 | 0.6707 | 9 |
| PI087619 | III | 5.8 | 2 | 5.3 | 10 | 40 | 5 | 1.24 | 14 | 0.0038 | 0.9010 | 6 |
| PI416789 | III | 1.3 | 16 | 2.0 | 4 | 55 | 11 | 0.38 | 7 | 0.0124 | 0.8241 | 8 |
| PI417323 | III | 0.9 | 17 | 1.3 | 3 | 54 | 10 | 0.26 | 4 | 0.0124 | 0.8237 | 7 |
| PI567262C | III | 1.9 | 13 | 2.1 | 5 | 38 | 4 | 0.34 | 6 | 0.0662 | 0.6113 | 4 |
| PI567263 | III | 1.6 | 14 | 1.2 | 2 | 27 | 2 | 0.21 | 3 | 0.0459 | 0.6716 | 2 |
| PI567361 | III | 5.5 | 5 | 5.8 | 11 | 52 | 9 | 0.17 | 2 | 0.0221 | 0.9562 | 3 |
| PI567365 | III | 5.5 | 5 | 4.5 | 9 | 40 | 5 | 1.05 | 12 | 0.0303 | 0.8337 | 6 |
| PI603423B | III | 7.7 | 1 | 7.4 | 18 | 46 | 6 | 1.75 | 23 | 0.0109 | 0.9147 | 11 |
| PI603428C | III | 5.4 | 6 | 4.3 | 8 | 36 | 3 | 0.94 | 11 | 0.0345 | 0.7129 | 4 |
| FC004007B | III | 4.0 | 11 | 2.6 | 6 | 27 | 2 | 0.45 | 8 | 0.0877 | 0.6756 | 3 |
| PI89772 | IV | 5.8 | 2 | 3.8 | 7 | 27 | 2 | 0.72 | 10 | 0.0479 | 0.6651 | 2 |
| PI495017C | IV | 4.5 | 9 | 6.4 | 14 | 54 | 10 | 0.63 | 9 | 0.3627 | 0.2085 | 9 |
| N98-4445A | IV | 1.5 | 15 | 0.8 | 1 | 24 | 1 | 0.11 | 1 | 0.2280 | 0.3359 | 1 |
| Anand | V | 2.4 | 12 | 2.6 | 6 | 48 | 7 | 0.30 | 5 | 0.3950 | 0.2464 | 5 |
| Mean | 4.4 |  |  |  |  |  |  |  |  |  |  |

§Stability coefficients for lutein content of genotypes at each environments regressed

on the environmental index.

\*Mean rank was ranked based on the average value of four stability parameters.

¶ MG, maturity group.