**Appendix A. Supplementary data**

**Table S1** Mean squares for tassel weight, phytochemicals and antioxidant capacity of eight corn hybrid varieties evaluated at four corn tassel development stages.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Source  of variations | df | Tassel weight | |  | Total phytochemicals content | | |  | Total phytochemicals yield | | |  | Antioxidant capacity | |
| Fresh | Dry |  | phenolic | anthocyanin | carotenoid |  | phenolic | anthocyanin | carotenoid |  | TEAC | DPPH |
| Block | 2 | 5.56 | 0.24 |  | 20.15 | 3,971 | 477 |  | 5.04 | 1,844 | 80.1 |  | 728 | 359 |
|  |  | (0.6)a | (0.3) |  | (5.6) | (0.0) | (3.9) |  | (4.3) | (0.1) | (2.5) |  | (6.6) | (7.1) |
| Development  stages (S) | 3 | 253.64\*\* | 15.03\*\* |  | 15.75\*\* | 130,783\*\* | 1,204\*\* |  | 15.15\*\* | 25,833\*\* | 144.3\*\* |  | 246\*\* | 212\*\* |
|  |  | (41.3) | (23.9) |  | (6.6) | (1.6) | (14.6) |  | (19.2) | (1.3) | (7.0) |  | (3.4) | (6.3) |
| Varieties (V) | 7 | 96.73\*\* | 13.97\*\* |  | 64.09\*\* | 3,385,556\*\* | 2,459\*\* |  | 17.68\*\* | 776,941\*\* | 635.1\*\* |  | 2,184\*\* | 827\*\* |
|  |  | (36.7) | (51.9) |  | (62.2) | (95.0) | (69.5) |  | (52.2) | (93.7) | (71.2) |  | (69.3) | (57.1) |
| S\*V | 21 | 3.58ns | 0.62ns |  | 2.96ns | 39,989\*\* | 68\*\* |  | 1.01ns | 11,539\*\* | 26.9\*\* |  | 114\*\* | 36ns |
|  |  | (4.1) | (6.9) |  | (8.6) | (3.4) | (5.8) |  | (9.0) | (4.2) | (9.1) |  | (10.8) | (7.4) |
| Error | 62 | 5.16 | 0.52 |  | 1.98 | 364 | 25 |  | 0.59 | 735 | 10.5 |  | 35 | 36 |
|  |  | (17.3) | (17.0) |  | (17.0) | (0.1) | 6.25 |  | (15.4) | (0.8) | (10.2) |  | (9.9) | (22.1) |
| C.V. (%) |  | 8.54 | 8.43 |  | 11.70 | 6.78 | 10.67 |  | 14.81 | 21.30 | 16.24 |  | 10.15 | 7.56 |

*df* degree of freedom, *C.V.* coefficient of variation, *TEAC* Trolox equivalent antioxidant capacity, *DPPH* 2,2-diphenyl-1-picrylhydrazyl radical scavenging capacity

a Number in parentheses is percentage of sum square.

*ns* non-significant, \*\* significant at *P≤ 0.01*



**Figure S1.** Effect of corn tassel development stages on tassel fresh weight (a) and tassel dry weight (b).



**Figure S2.** Effect of corn tassel development stages on total phenolic content (a), total phenolic yield (b), total anthocyanin content (c), total anthocyanin yield (d), total carotenoids content (e) and total carotenoids yield (f).



**Figure S3.** Effect of corn tassel development stages on antioxidant capacity determination by TEAC radical scavenging capacity assay (a) and DPPH radical scavenging capacity assay (b).



**Figure S4.** Mean for DPPH radical scavenging capacity in tassel of eight corn varieties.