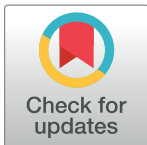CORRECTION

# Correction: Single Marker and Haplotype-Based Association Analysis of Semolina and Pasta Colour in Elite Durum Wheat Breeding Lines Using a High-Density Consensus Map

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There is an error in Table 3. The effect of marker Tdurum_contig51688_681 for pigment loss should be 2.9 instead of 3.7. Please see the corrected Table 3 here.

**Table 3. Individual SNP and haplotype loci significantly associated with colour traits.**

| Trait | Haplotype-based analysis | | | | | | Single SNP-based analysis | | | | | Comparison | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trait | Haplotype | Position | nbM[1] | P-value | $R^2$(%) | Effect | Marker | Position | P-value | $R^2$(%) | Effect | IVE[2](%) | IAE[3](%) |
| Pasta a* | hap_2A_12 | 2A (74.6–78) | 4 | 3.69E-04 | 15.1 | 1.6 | | | | | | | |
| | hap_3B_32 | 3B (201.5–205.5) | 3 | 1.04E-03 | 13.4 | 1.0 | | | | | | | |
| | hap_4B_6 | 4B (28.5–30.8) | 9 | 8.65E-04 | 35.7 | 1.6 | Tdurum_contig51688_681 | 4B (28.8) | 1.27E-07 | 19.0 | 1.6 | 87.9 | 0.0 |
| | hap_4B_8 | 4B (37.4–41.7) | 9 | 1.04E-03 | 27.6 | 1.7 | | | | | | | |
| Pasta b* | hap_2A_5 | 2A (22.8–24.7) | 4 | 8.08E-04 | 16.4 | 3.3 | Tdurum_contig54634_815 | 2A (22.8) | 1.37E-04 | 9.5 | 3.2 | 72.6 | 3.1 |
| | hap_4B_6 | 4B (28.5–30.8) | 9 | 1.62E-04 | 40.2 | 5.6 | Tdurum_contig51688_681 | 4B (28.8) | 9.66E-10 | 26.2 | 5.3 | 53.4 | 5.7 |
| | hap_4B_7 | 4B (32.7–35.2) | 7 | 1.51E-03 | 25.6 | 4.9 | | | | | | | |
| | hap_4B_12 | 4B (58.7–60.4) | 6 | 6.88E-04 | 14.1 | 4.5 | Tdurum_contig37811_134 | 4B (60) | 4.48E-05 | 10.9 | 3.4 | 29.4 | 32.4 |
| | hap_5B_25 | 5B (129.7–131.2) | 4 | 6.80E-04 | 14.1 | 3.1 | | | | | | | |
| | hap_7B_36 | 7B (202.9–206.3) | 2 | 2.48E-03 | 9.3 | 2.3 | | | | | | | |
| Pigment loss | hap_2A_5 | 2A (22.8–24.7) | 4 | 4.65E-04 | 17.6 | 3.5 | Tdurum_contig54634_815 | 2A (22.8) | 2.34E-05 | 11.9 | 2.4 | 47.9 | 79.2 |
| | hap_3B_33 | 3B (208–209.6) | 3 | 5.42E-04 | 14.6 | 5.4 | | | | | | | |
| | hap_4B_6 | 4B (28.5–30.8) | 9 | 2.03E-03 | 33.6 | 3.7 | Tdurum_contig51688_681 | 4B (28.8) | 1.17E-09 | 26.2 | 2.9 | 28.2 | 27.0 |
| | hap_4B_7 | 4B (32.7–35.2) | 7 | 4.01E-04 | 28.9 | 4.3 | | | | | | | |
| | hap_4B_12 | 4B (58.7–60.4) | 6 | 9.15E-05 | 17.5 | 3.3 | Tdurum_contig37811_134 | 4B (60) | 1.02E-05 | 13.0 | 2.6 | 34.6 | 26.9 |
| | hap_5B_25 | 5B (129.7–131.2) | 4 | 1.06E-03 | 13.5 | 2.1 | | | | | | | |
| Semolina b* | hap_2A_18 | 2A (117.6–121.3) | 9 | 8.63E-03 | 24.5 | 2.5 | BobWhite_c41527_201 | 2A (117.7) | 8.88E-08 | 19.2 | 1.9 | 27.6 | 31.6 |
| | hap_7A_32 | 7A (180.2–181.8) | 10 | 5.65E-03 | 34.6 | 3.3 | Tdurum_contig54832_139 | 7A (181.4) | 5.53E-08 | 19.8 | 2.0 | 74.7 | 65.0 |
| | hap_7B_36 | 7B (202.9–206.3) | 2 | 3.92E-03 | 8.5 | 1.3 | | | | | | | |
| Semolina pigment | hap_2A_18 | 2A (117.6–121.3) | 9 | 4.17E-03 | 27.5 | 1.9 | BobWhite_c41527_201 | 2A (117.7) | 2.00E-08 | 21.4 | 1.4 | 28.5 | 35.7 |
| | hap_7A_32 | 7A (180.2–181.8) | 10 | 4.42E-03 | 35.6 | 2.3 | Tdurum_contig54832_139 | 7A (181.4) | 2.67E-08 | 21.0 | 1.4 | 69.5 | 64.3 |
| | hap_7B_36 | 7B (202.9–206.3) | 2 | 2.94E-03 | 8.9 | 1.0 | | | | | | | |

[1]nbM: Number of markers in the haplotype

[2]IVE: Increase in variance explained obtained from haplotype-based analysis compared to single SNP-based analysis

[3]IAE: Increase in allelic effect obtained from haplotype-based analysis compared to single SNP-based analysis

* Should be read as star (e.g., Pasta a* is 'Pasta a star'

## Reference

1. N'Diaye A, Haile JK, Cory AT, Clarke FR, Clarke JM, Knox RE, et al. (2017) Single Marker and Haplotype-Based Association Analysis of Semolina and Pasta Colour in Elite Durum Wheat Breeding Lines Using a High-Density Consensus Map. PLoS ONE 12(1): e0170941. https://doi.org/10.1371/journal.pone.0170941 PMID: 28135299