

Figure S1. Plot of Linkage disequilibrium LD with  $r^2$  values plotted against physical distances in Kbp.

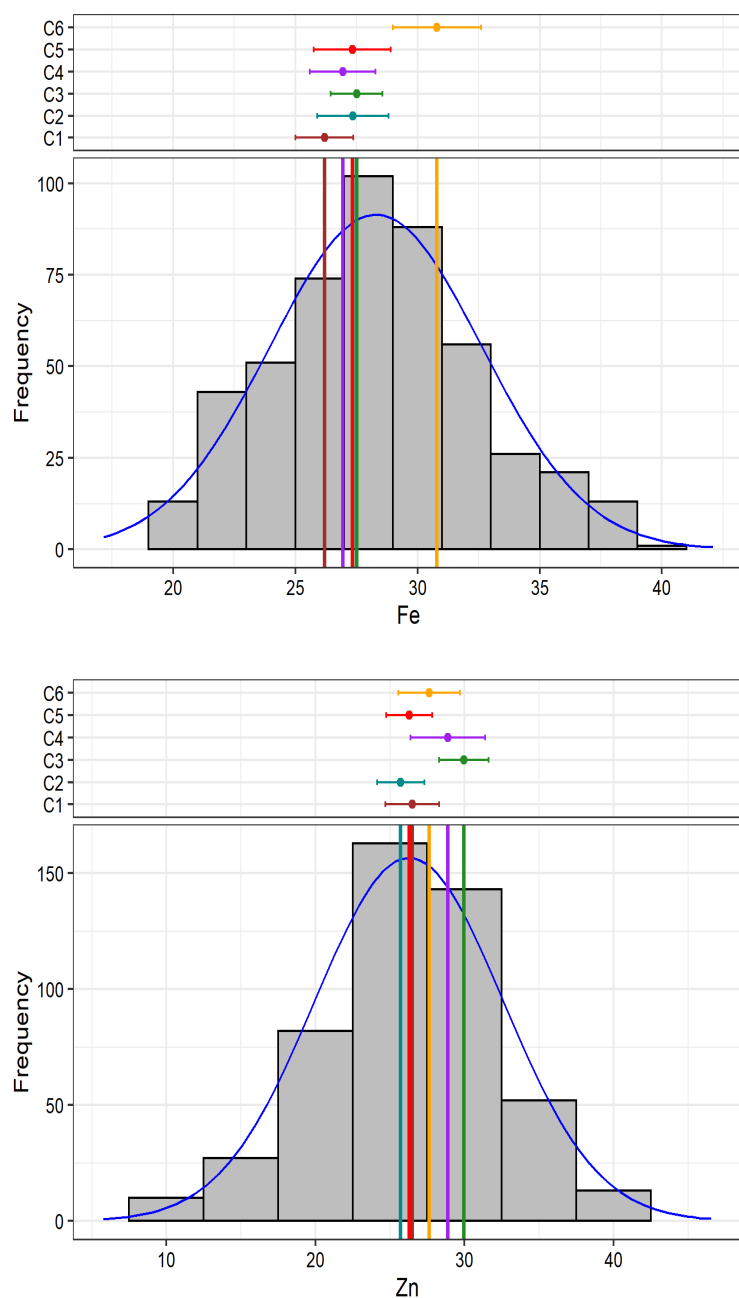


Figure S2. Frequency distribution with checks for Zn and Fe from the 2017-2018 crop season. C1, C2, C3, C4, C5 and C6 are checks (controls) accessions Alanda 01, Rihane, Moralis, Carre 42, Djebali and Marocaine 280, respectively, that are replicated in each blocks, in an Augmented design (see texts for details).

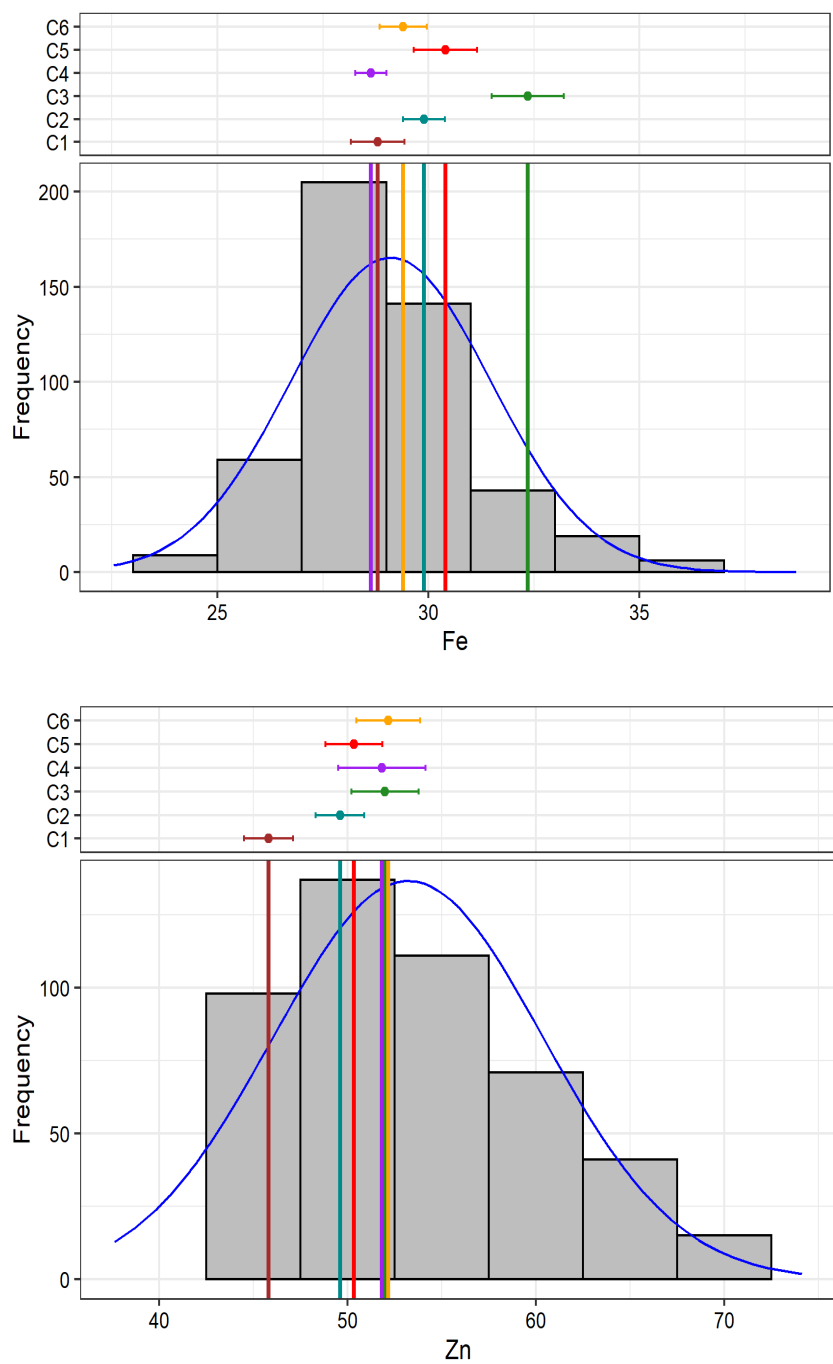


Figure S3. Frequency distribution with checks for Zn and Fe from the 2018-2019 crop season. C1, C2, C3, C4, C5 and C6 are checks (controls) accessions Alanda 01, Rihane, Moralis, Carre 42, Djebali and Marocaine 280, respectively, that are replicated in each blocks, in an Augmented design (see texts for details).

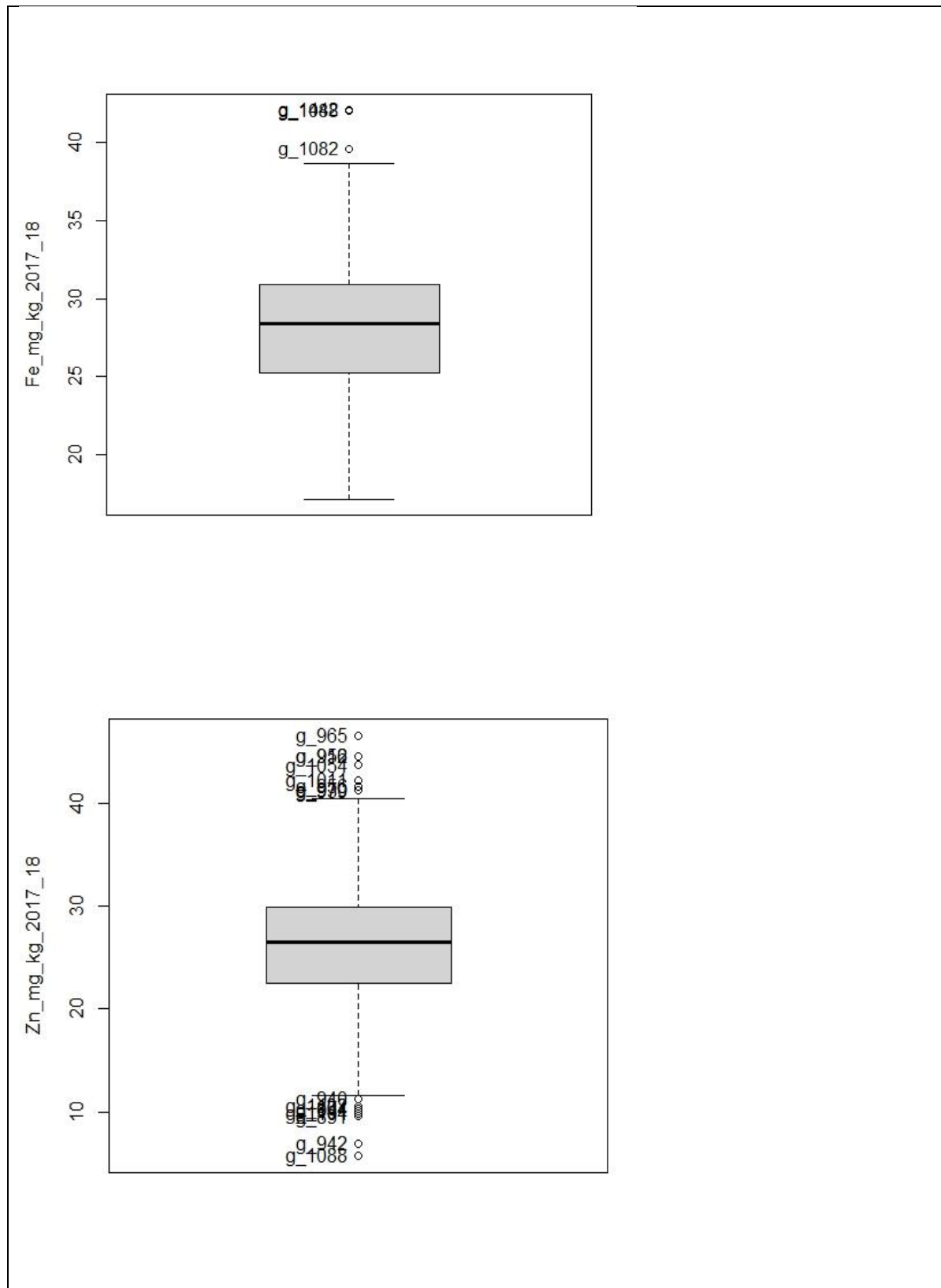


Figure S4. Box plot for Zn and Fe from the 2017-2018 crop season



