



Figure S6. A regional Manhattan plot of locus 11. Scatter plot of association results from a mixed model analysis of Mn grain concentration and linkage disequilibrium (LD) estimates (r^2) for a genomic region that contains the peak SNP (3-184559931) at locus 11. Each vertical line represents the $-\log_{10}$ P-value of a SNP. Triangles are the r^2 values of each SNP relative to the peak SNP (indicated in red) at 184,559,931 bp (B73 RefGen_v4) on chromosome 3. The red horizontal dashed line indicates the $-\log_{10}$ P-value of the least statistically significant SNP at a genome-wide false discovery rate of 5%. The yellow vertical line indicates the genomic position of the gene Zm00001d042939 that encodes a protein sharing amino acid sequence similarity with METAL TOLERANCE PROTEINS (MTPs) in rice and Arabidopsis (Table S5). The open triangles indicate SNPs that are within the candidate gene. The light blue rectangle demarcates the ± 100 kb candidate gene search space surrounding the peak SNP.