







**Additional file 1**: Dendrogram visualization based on means  $F_{ST}$ . The dendrograms illustrate the divergence that exists between JYD-34 isolate and Missouri, Susceptible and LOE isolates, where FST = 0 means no divergence between two population and FST = 1 means complete divergence. In this analysis, for each SNP out of the total 1,602,137 SNPs, the  $F_{ST}$  corresponding to each of the different comparisons LOE/Susceptible; LOE/TRS; LOE/JYD; Susceptible/TRS; Susceptible/JYD; and TRS/JYD were calculated. If at least one of these comparisons had an  $F_{ST}$  value of 0.1 or greater, the corresponding SNP and the  $F_{ST}$  for each population comparison were retained in the analysis. Based on this criterion, 137,454 SNPs were kept to calculate the mean  $F_{ST}$  used in the distance matrix that allowed the construction of the dendrogram. Thresholds were progressively increased from 0 to 0.9.