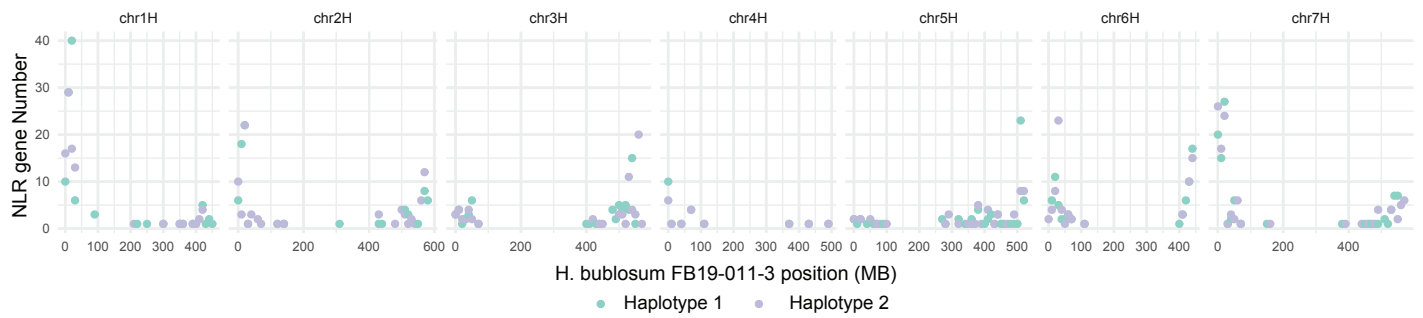
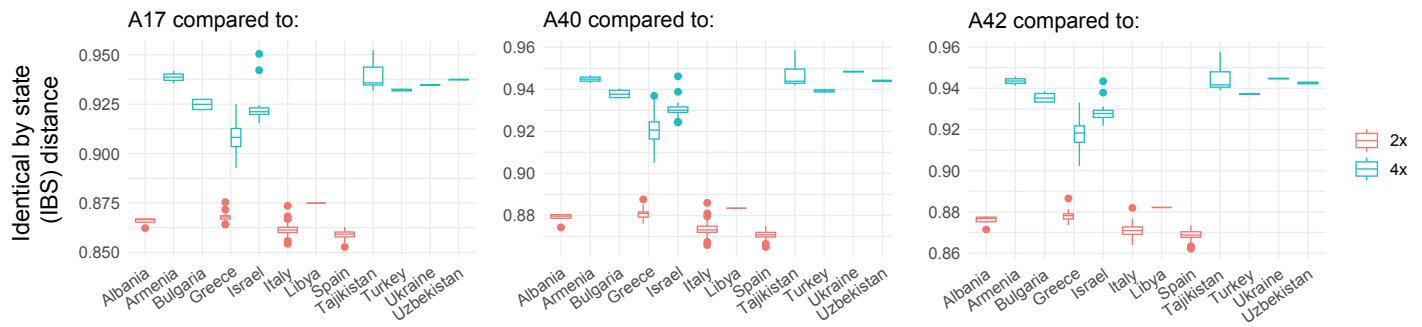


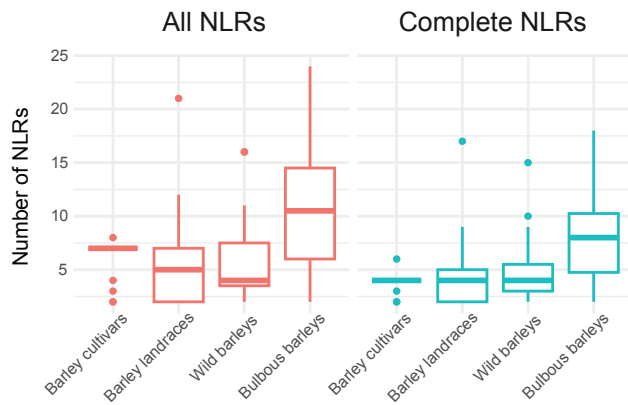
a



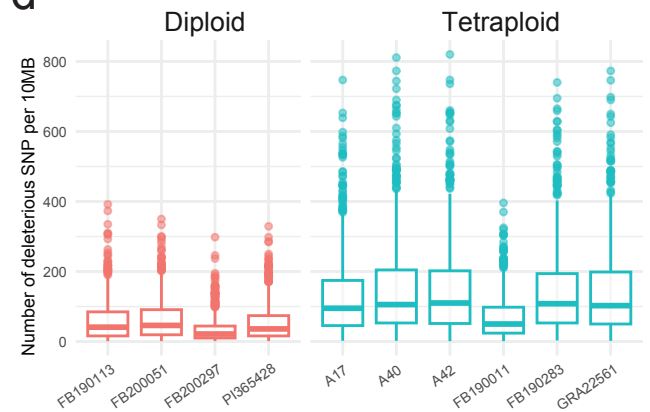
b



c



d



Extended Data Figure 10: Genomic characterization of *H. vulgare*-*H. bulbosum* introgression lines and their *H. bulbosum* parents. (a) Genome-wide distribution of resistance genes homolog of the NLR family in FB19-011-3. NLR numbers were tabulated in 1 Mb windows along the genome. **(b)** Genetic distances between the three donor genotypes A17, A40 and A42 and other populations point to a central Asian origin. **(c)** NLR numbers in the *Ryd4^{Hb}* interval in *H. bulbosum* haplotypes and selected *H. vulgare* genomes. **(d)** Distribution of putative deleterious SNPs in *H. bulbosum* genomes.