

**Supplementary Table 1.** QTL detected in F<sub>2</sub> generation for traits for morphological traits from the cross of IR-44595 and 318 in the presence of 30 mM NaCl in hydroponics at the seedling stage based on interval mapping

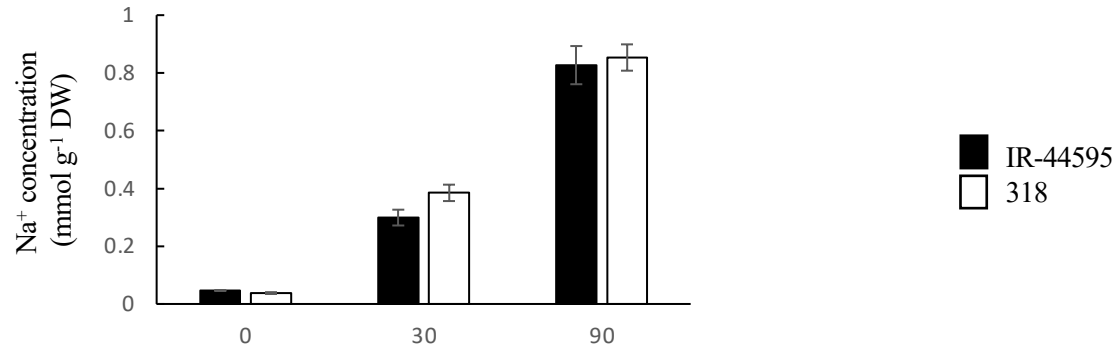
QTL	Chr <sup>a</sup>	Trait	Marker	Position (Mb)	LOD	AE <sup>b</sup>	PVE <sup>c</sup> (%)
<i>qSDW1</i>	1	Shoot dry weight	S01_37831300	27.8	4.96	17.59	12.71
<i>qSHDW1</i>	1	Leaf sheath dry weight	S01_37831300	37.8	8.03	9.23	19.76
<i>qDWSBR1</i>	1	Sheath-blade ratio of dry weight	S01_37831300	37.8	6.16	0.048	15.54
<i>qSDW2</i>	2	Shoot dry weight	S02_26511771	26.5	5.19	16.48	13.26
<i>qBDW2</i>	2	Leaf blade dry weight	S02_26501890	26.5	5.75	10.92	14.58
<i>qSDW5</i>	5	Shoot dry weight	S05_18531122	18.5	6.73	-20.74	16.85
<i>qBDW5</i>	5	Leaf blade dry weight	S05_18531122	18.5	5.74	-12.07	14.56
<i>qSHDW5</i>	5	Leaf sheath dry weight	S05_18531122	18.5	6.87	-8.66	17.16
<i>qDWSBR12</i>	12	Sheath-blade ratio of dry weight	S12_26666562	26.7	4.04	-0.038	10.48

<sup>a</sup>Chromosome

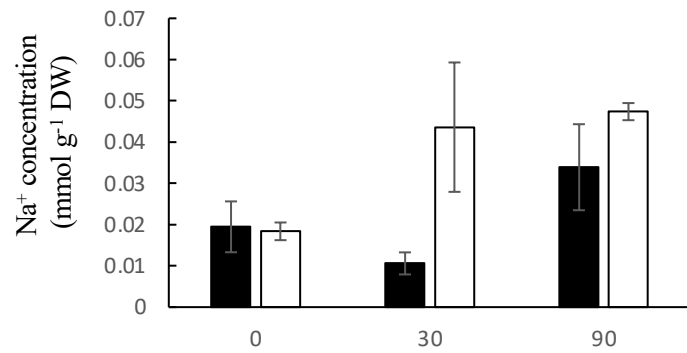
<sup>b</sup>Additive effects of the marker calculated as ((average of 318) – (average of IR-44595))/2. Positive values mean that the IR-44595 allele decreased the trait value..

<sup>c</sup>Percentage of variance explained by the QTL

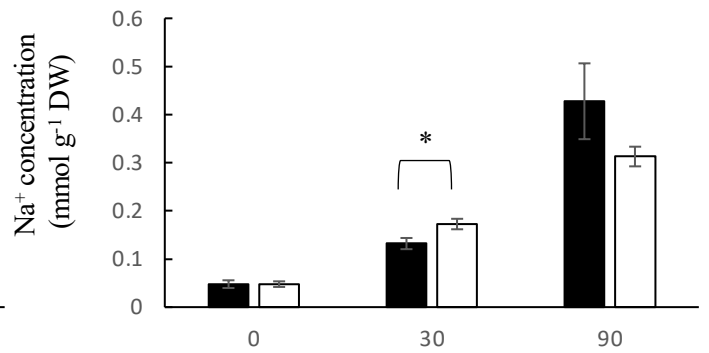
Na<sup>+</sup> concentration in the whole shoots



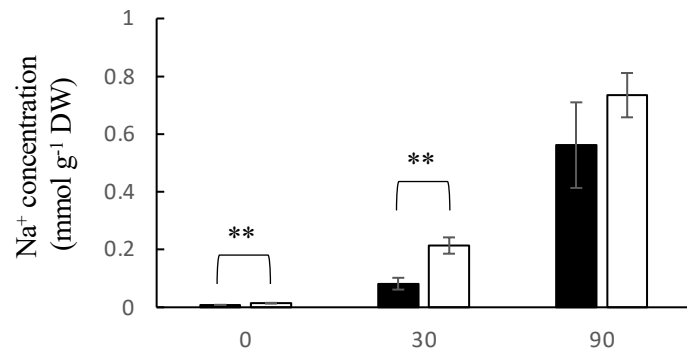
Na<sup>+</sup> concentration in the younger leaf blades



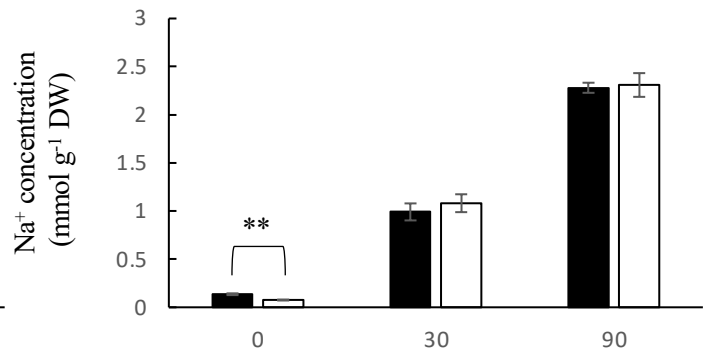
Na<sup>+</sup> concentration in the younger leaf sheaths



Na<sup>+</sup> concentration in the older leaf blades

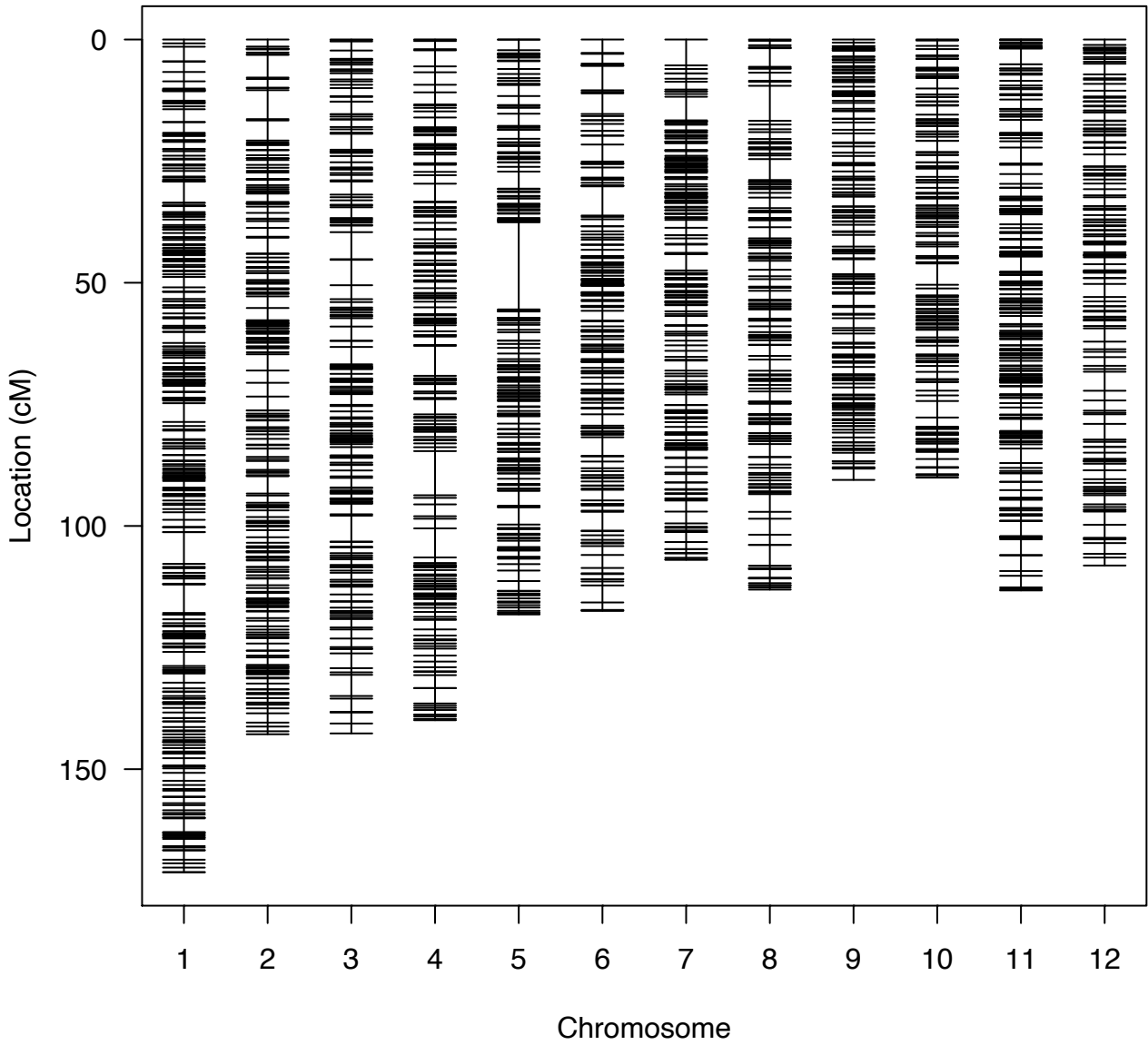


Na<sup>+</sup> concentration in the older leaf sheaths



**Supplementary Figure 1.** Na<sup>+</sup> concentration in the shoots of IR-44595 and 318 plants grown in soil culture. Plants were grown for 19 days then treated with low (30 mM) and high (90 mM) NaCl concentration for further 3 weeks. Non-etiolated leaves were harvested and divide into younger and older parts. Data are mean of three replications  $\pm$  the standard error. \* and \*\* indicate significant difference at  $P < 0.05$  and  $0.1$  between IR-44595 and 318 under each treatment (Student's *t*-test).

## Genetic map



**Supplemental Figure 2.** A linkage map showing the locations of single nucleotide polymorphism markers (SNPs) in the population used in this study.

**Supplemental Figure 3.**

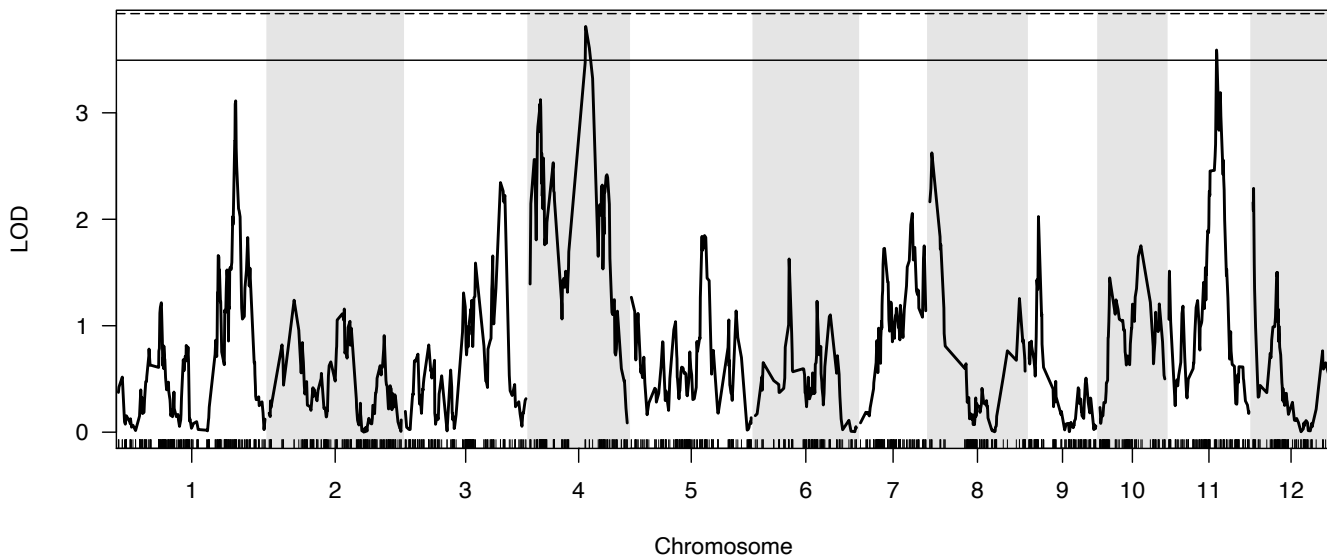
Results of QTL analysis. Results of a trait are shown in each page.

Top panels show the results of interval mapping for the trait. Dotted and solid lines indicate the threshold at 5 and 10% levels, respectively.

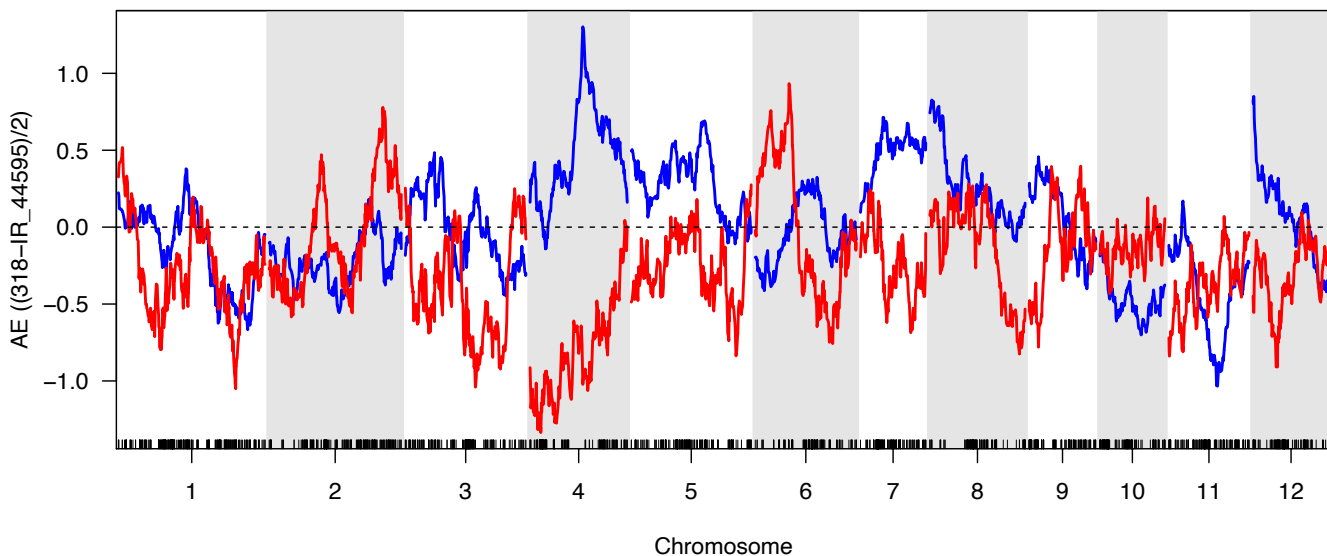
Middle panels show a scan of additive effects corresponding to the top panel. The values were calculated as follows:  $((\text{Average of 318}) - (\text{average of IR-44595}))/2$ .

Bottom panels show dot plots of trait values in each variety at the marker shown on the top of each panel. For example, a marker name "S04\_24088589" means a single nucleotide polymorphism marker at 24088689 bp position on chromosome 4 based on IRGSP1 rice reference sequence. AA: IR-44595 and BB: 318 varieties. Red dots are imputed trait values. Significant and suggestive QTLs are shown.

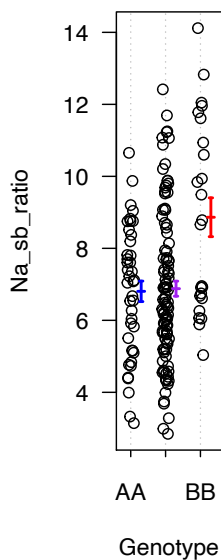
### Na<sup>+</sup> sheath-blade ratio



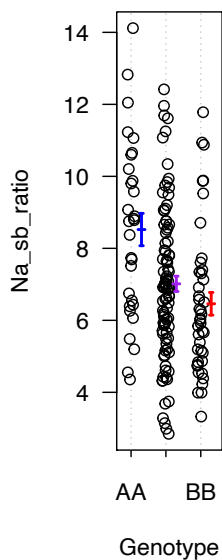
### Additive effect for Na<sup>+</sup> sheath-blade ratio



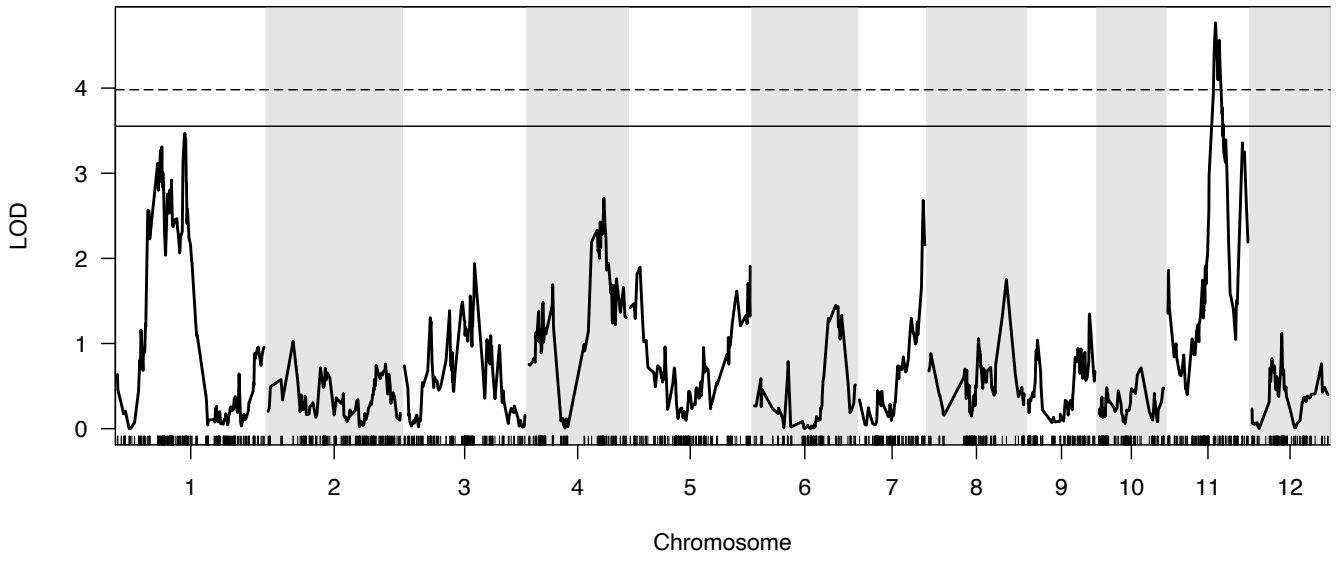
S04\_24088589



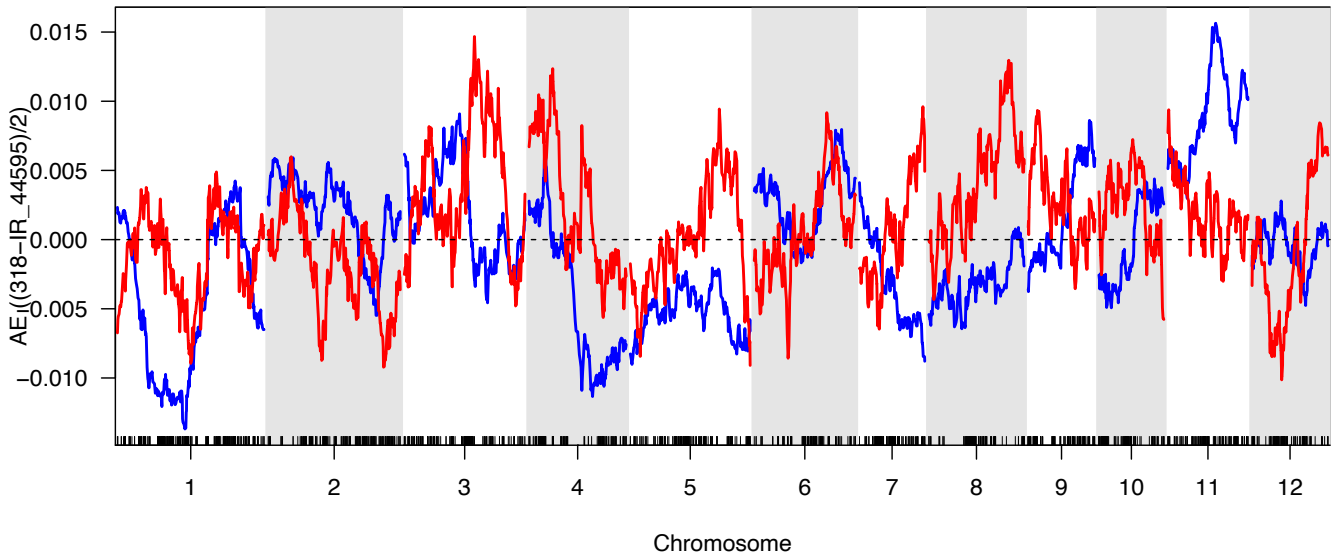
S11\_19375230



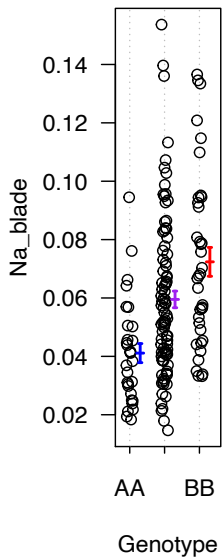
### Na<sup>+</sup> concentration in leaf blades



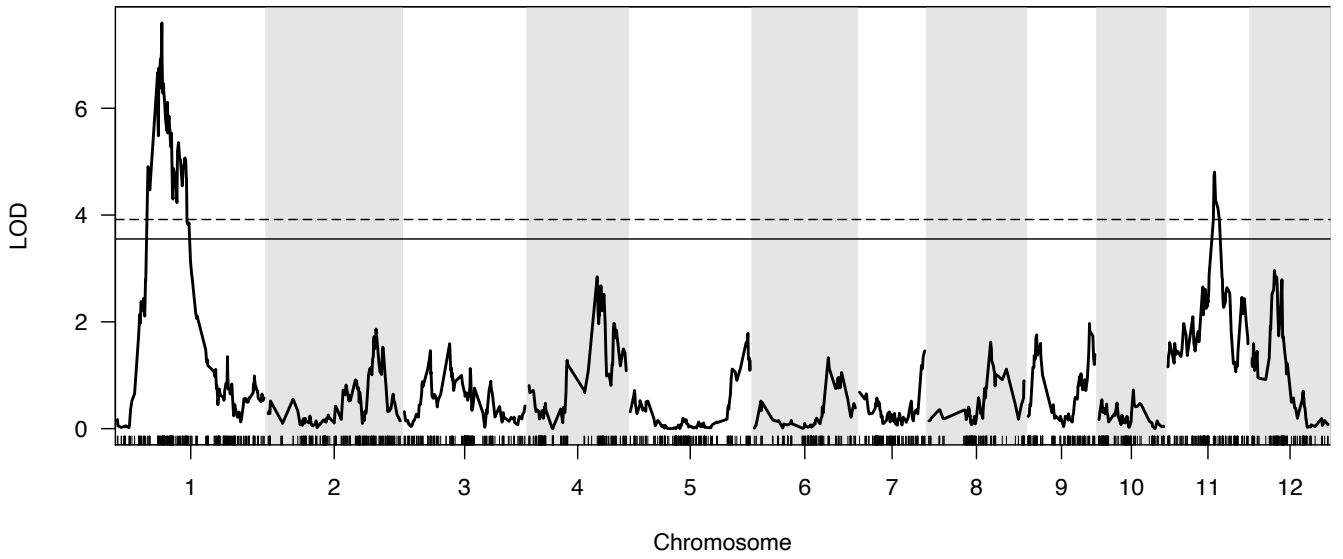
### Additive effect for Na<sup>+</sup> concentration in leaf blades



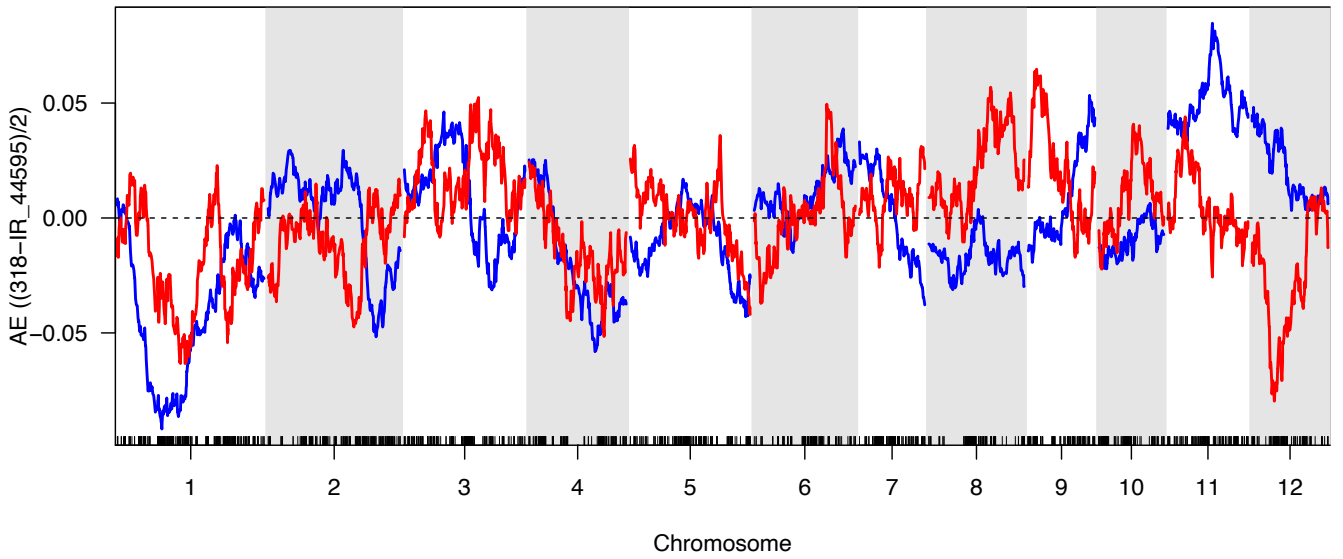
### S11\_19375230



# Na<sup>+</sup> concentration in leaf sheaths

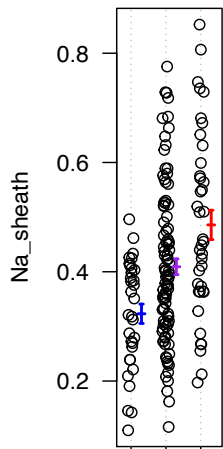
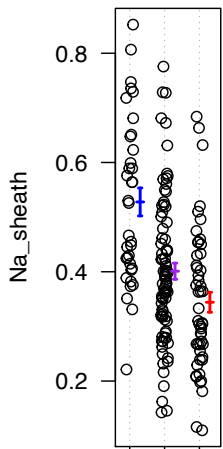


## Additive effect for Na<sup>+</sup> concentration in leaf sheaths



S01\_10115872

S11\_19094522



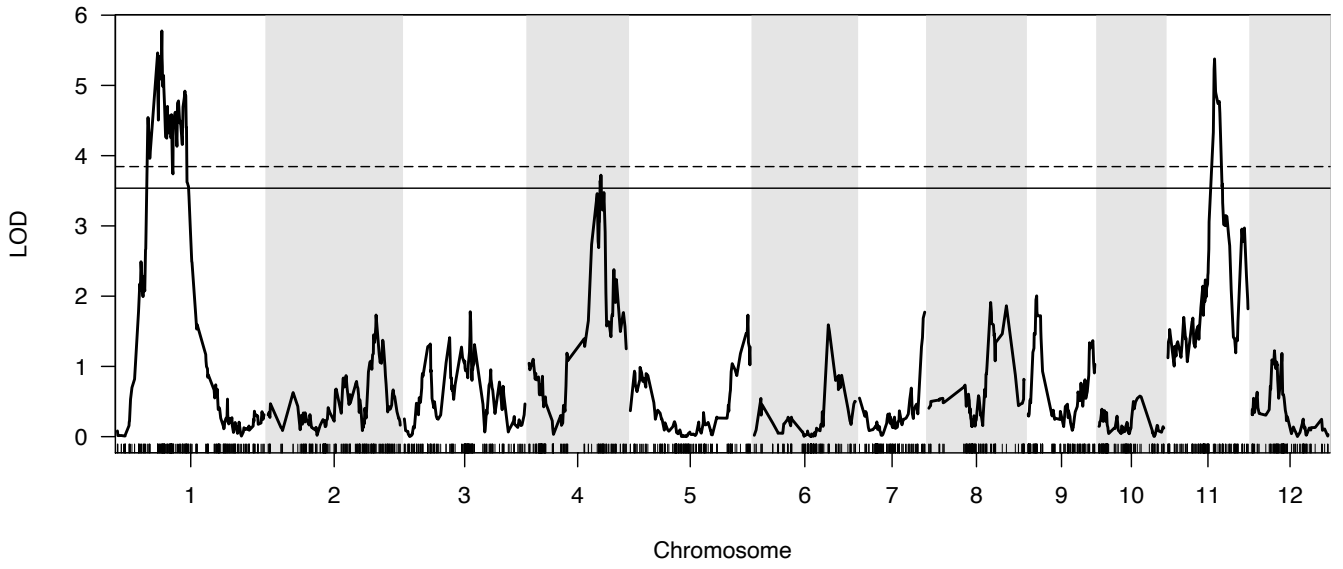
AA BB

AA BB

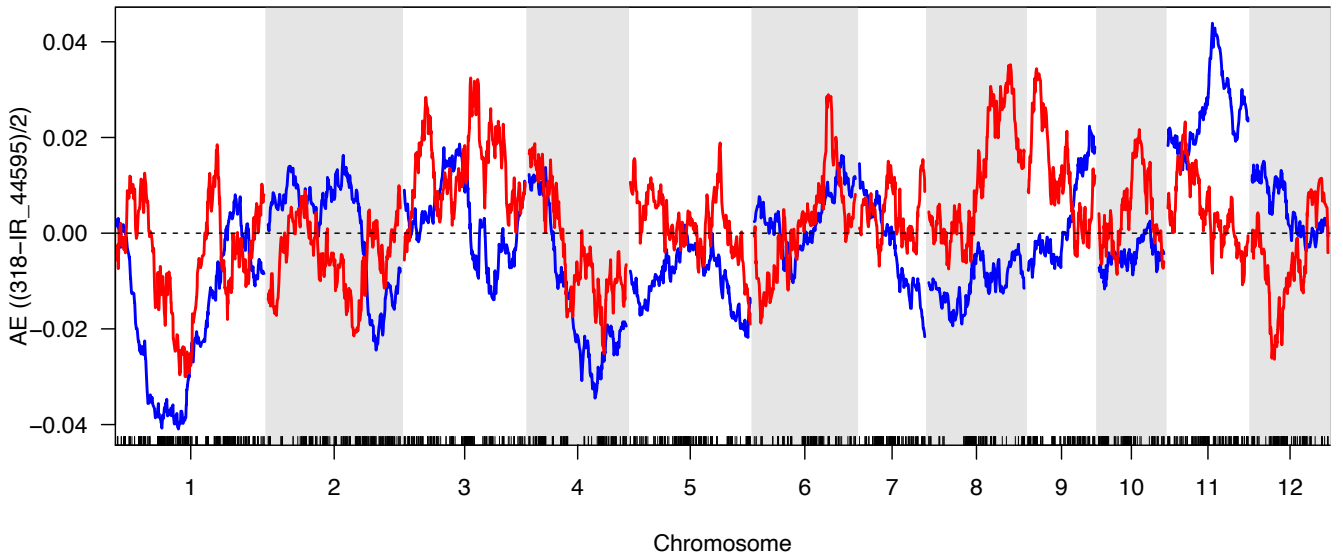
Genotype

Genotype

### Na<sup>+</sup> concentration in shoots



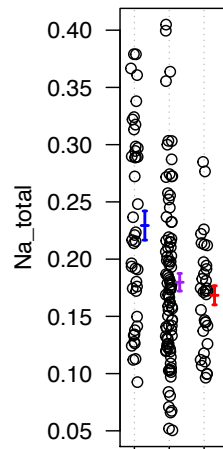
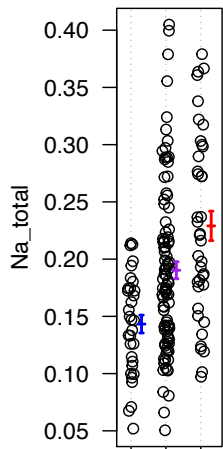
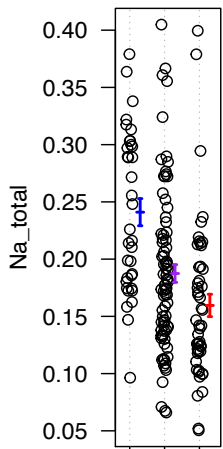
### Additive effect for Na<sup>+</sup> concentration in shoots



S01\_10115872

S11\_19094522

S04\_27915871



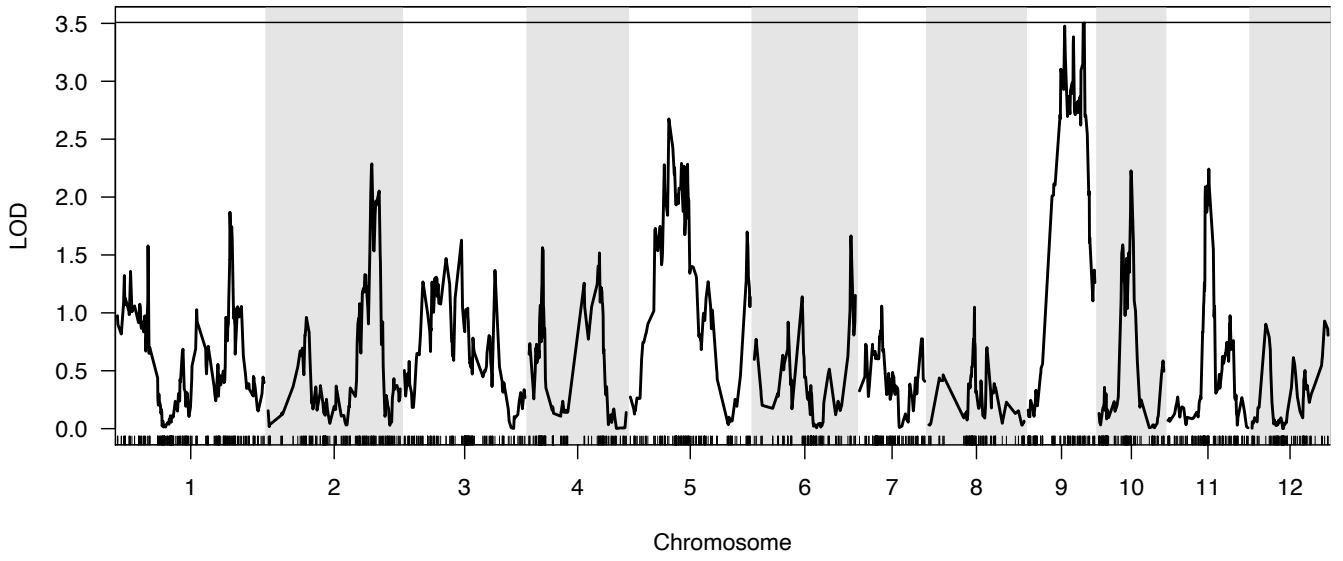
Genotype

Genotype

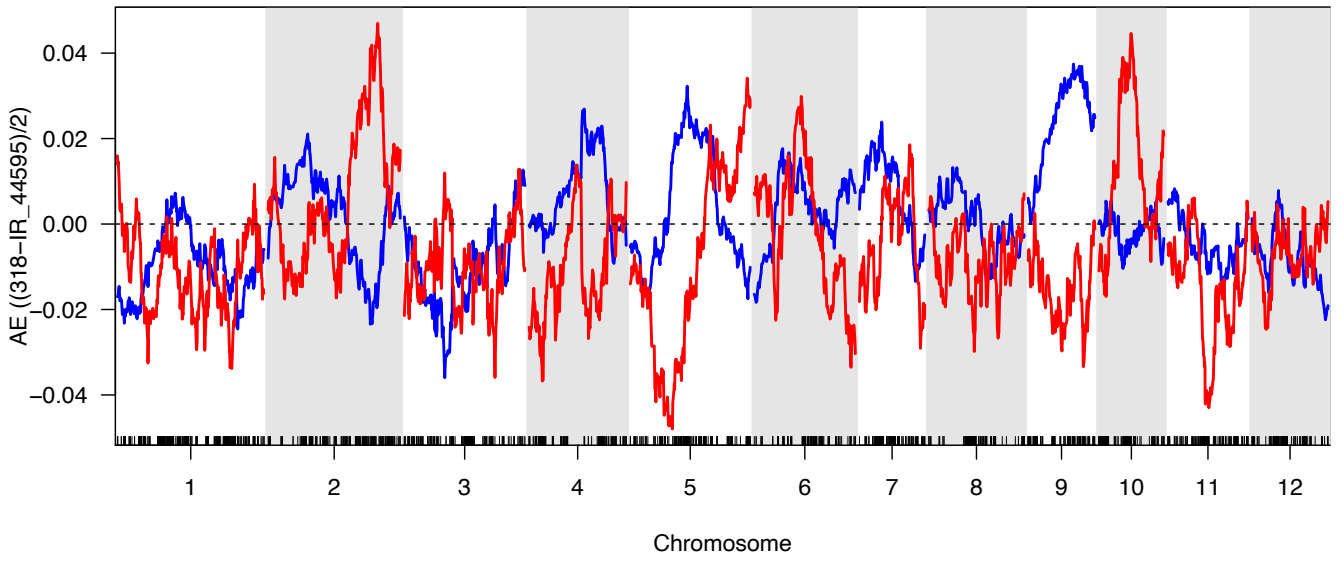
Genotype



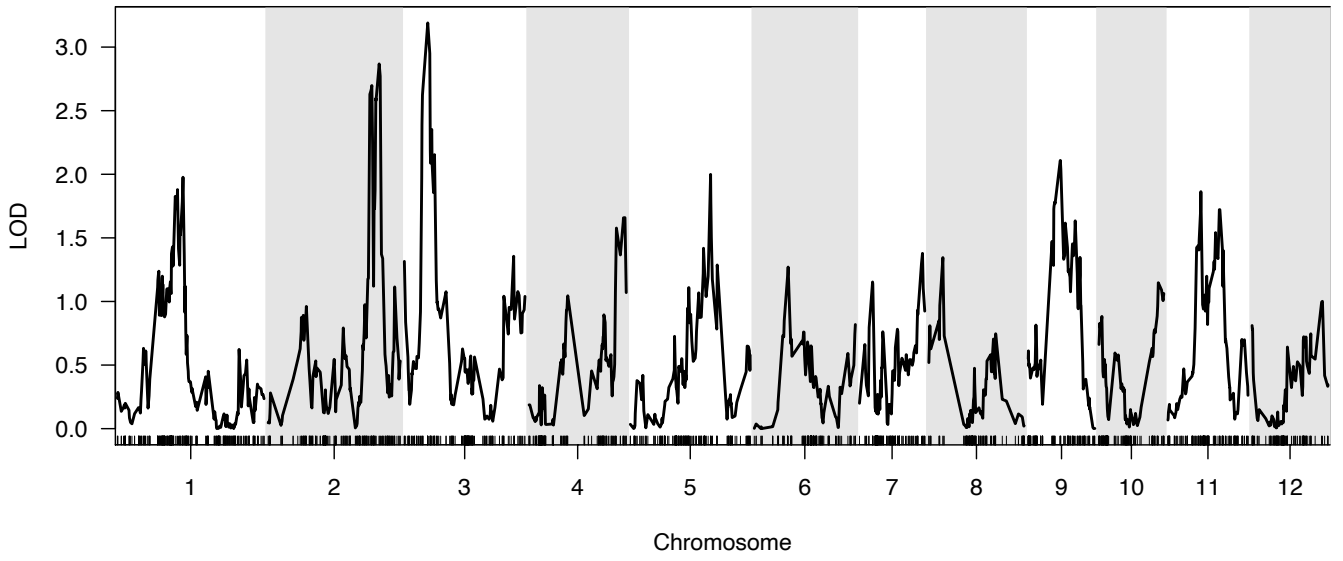
### K<sup>+</sup> concentration in leaf blades



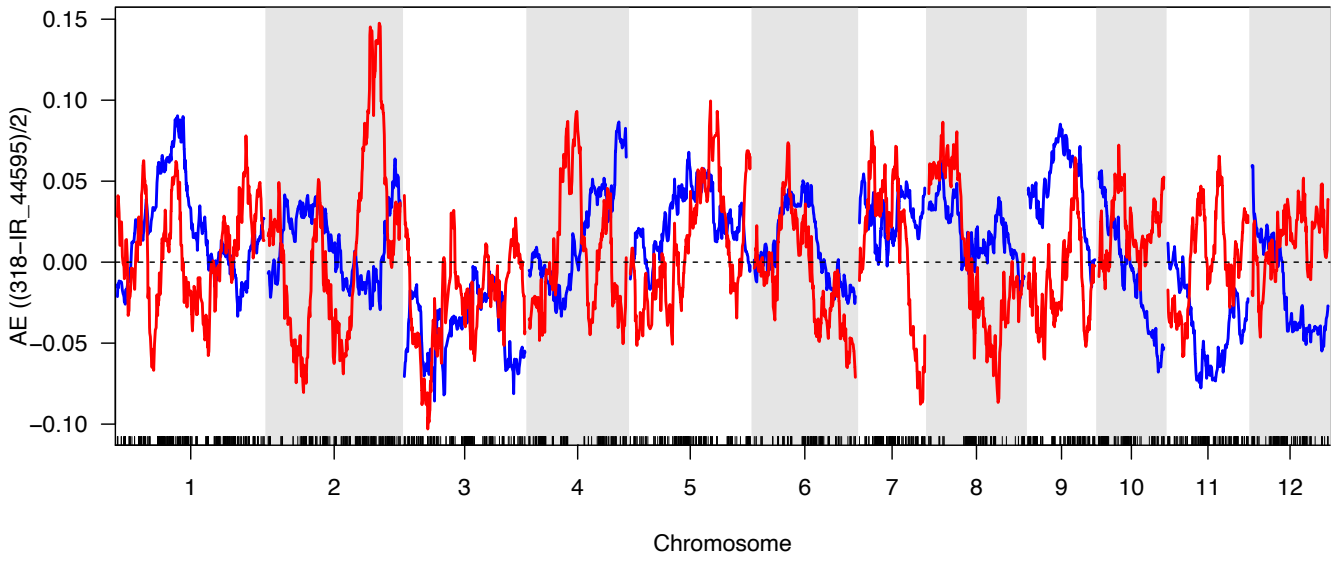
### Additive effect for K<sup>+</sup> concentration in leaf blades



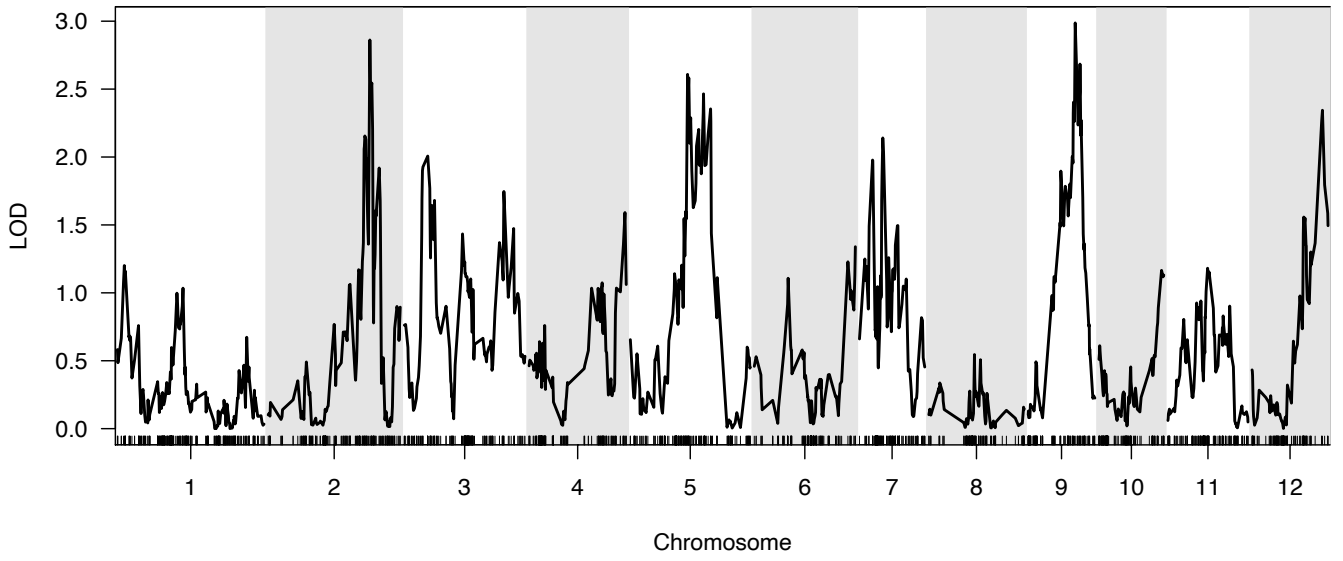
### K<sup>+</sup> concentration in leaf sheaths



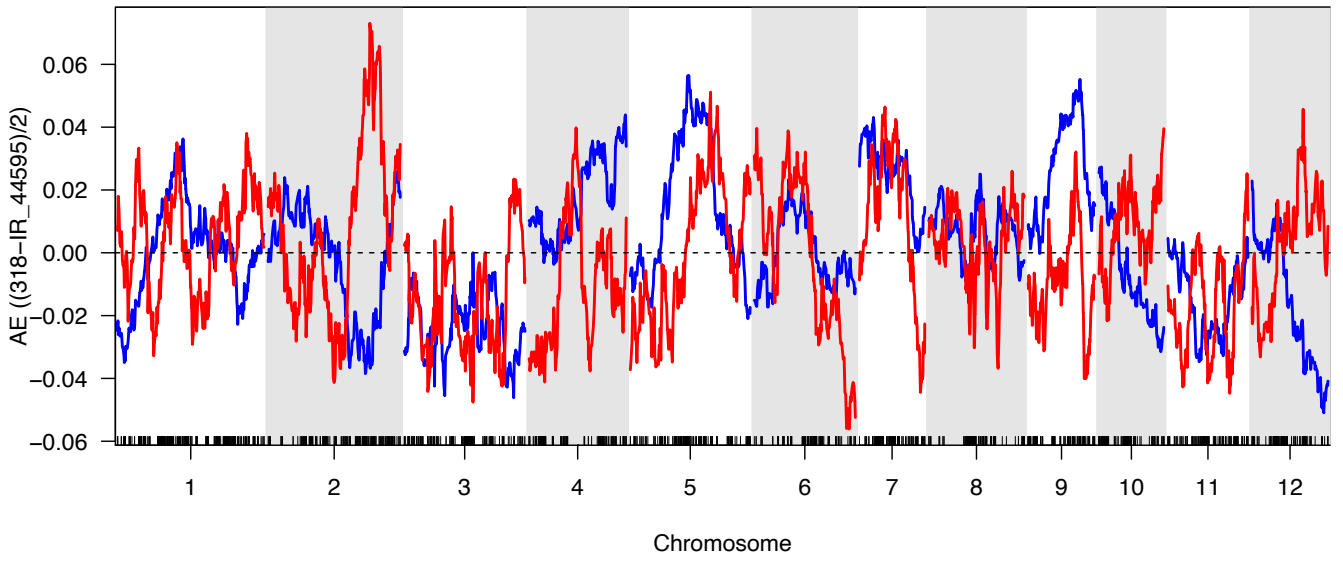
### Additive effect for K<sup>+</sup> concentration in leaf sheaths



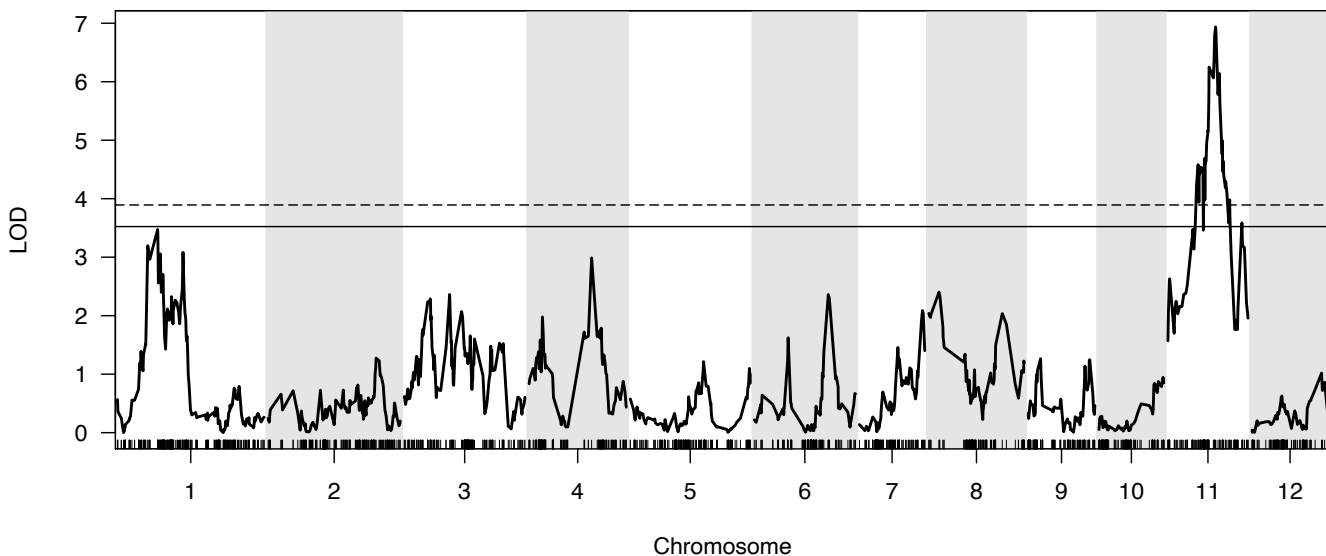
K<sup>+</sup> concentration in shoots



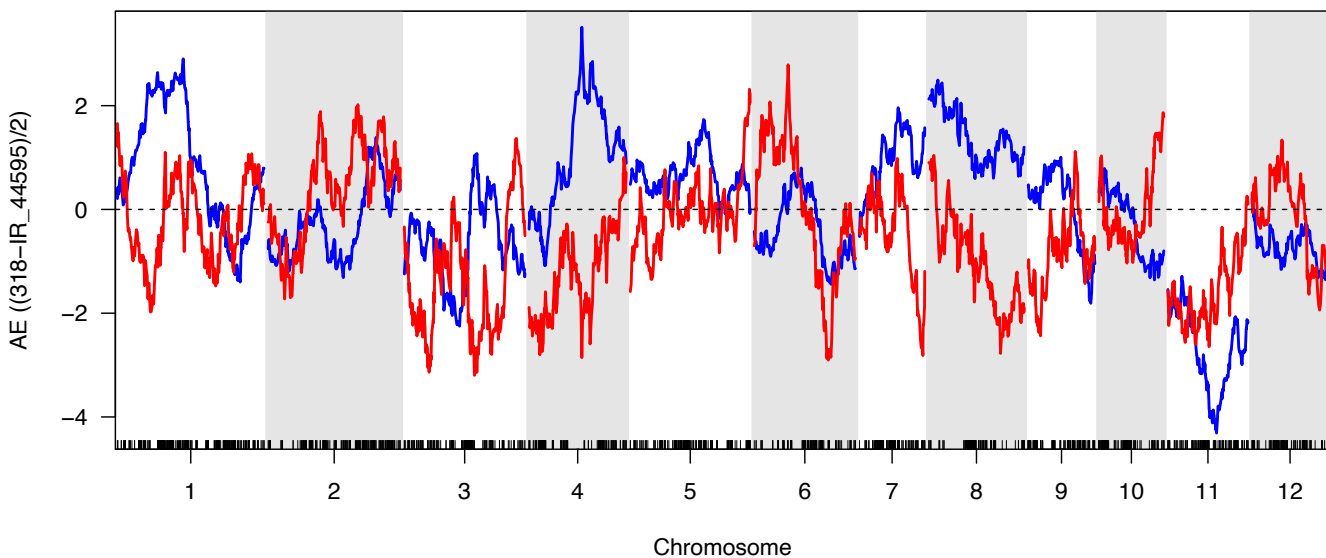
Additive effect for K<sup>+</sup> concentration in shoots



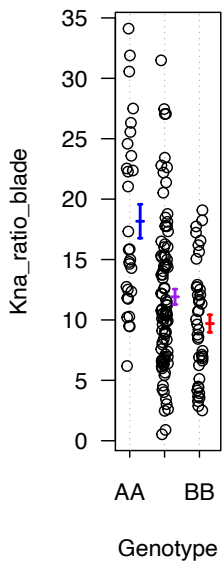
### K<sup>+</sup>/Na<sup>+</sup> ratio in leaf blades



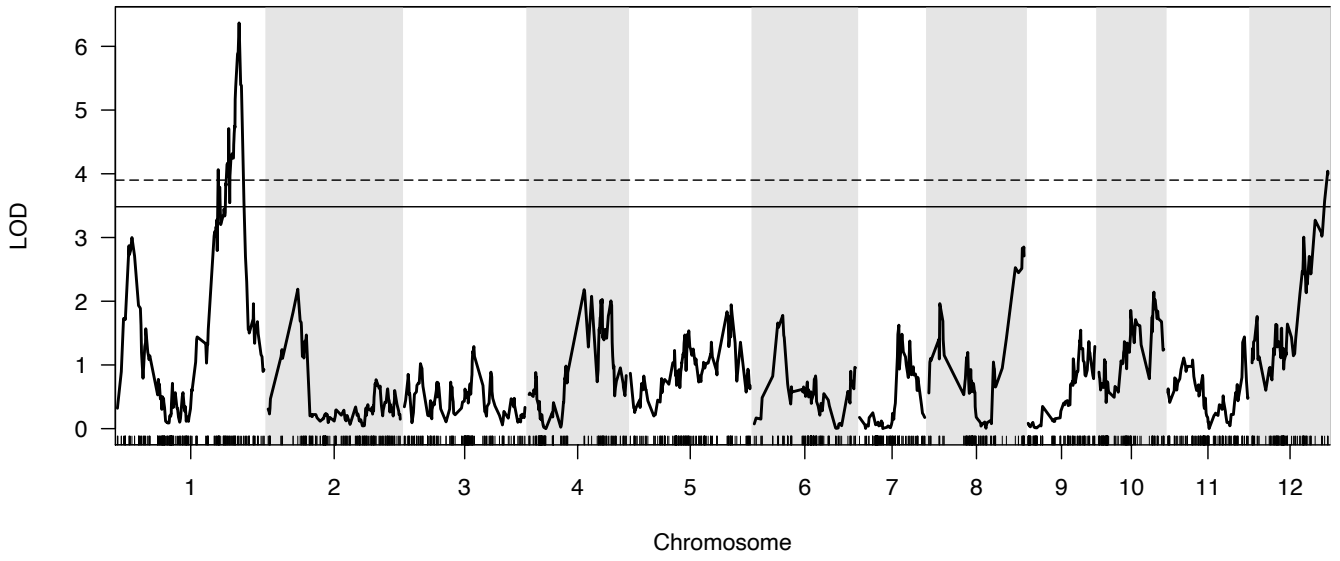
### Additive effect for K<sup>+</sup>/Na<sup>+</sup> ratio in leaf blades



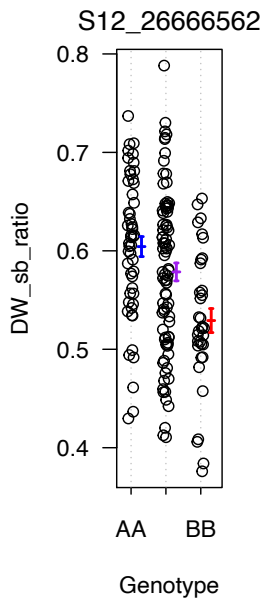
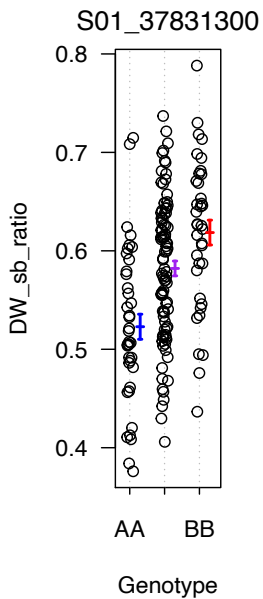
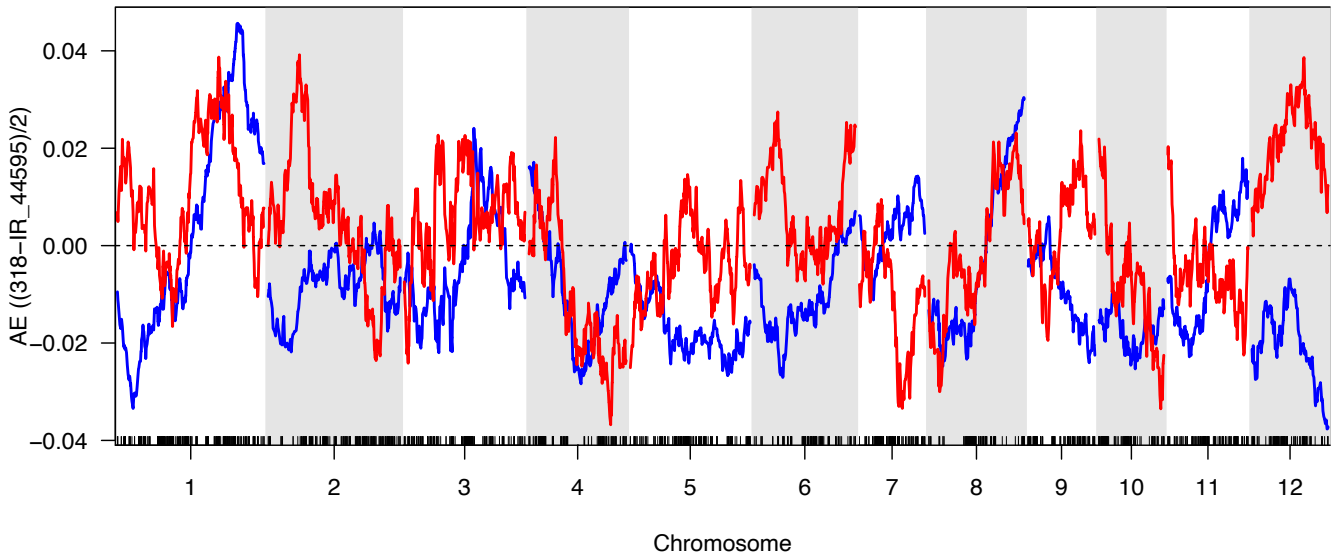
### S11\_19375230



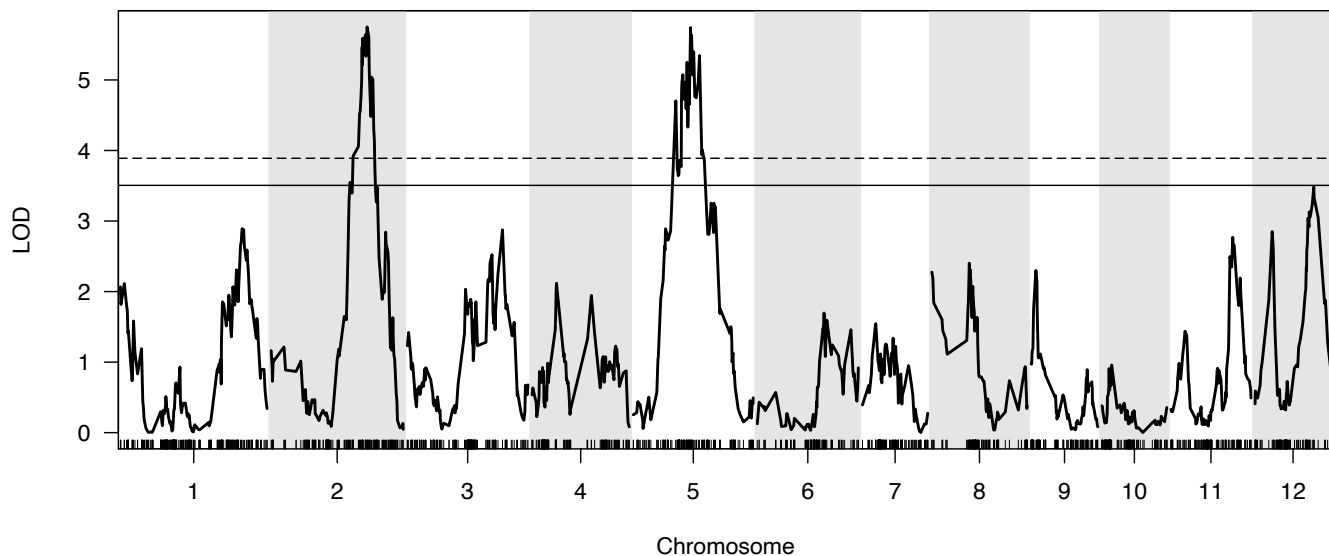
### Sheath-blade ratio of dry weight



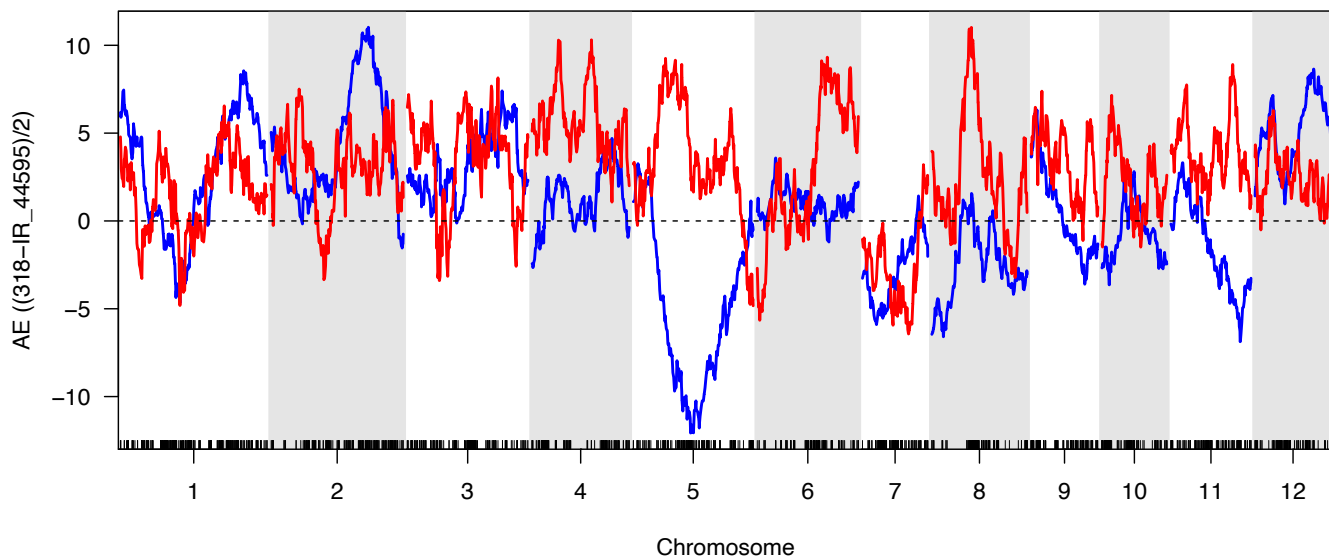
### Additive effect for sheath-blade ratio of dry weight



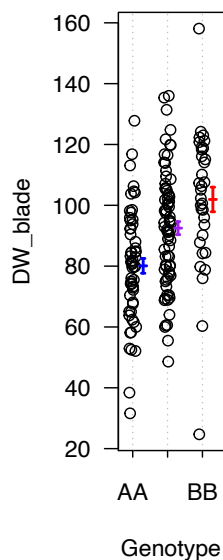
### Dry weight of leaf blades



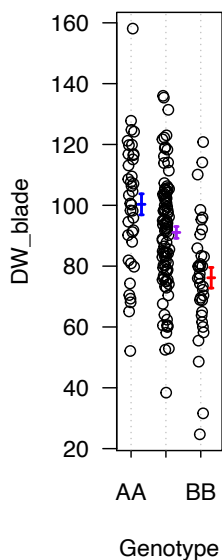
### Additive effect for dry weight of leaf blades



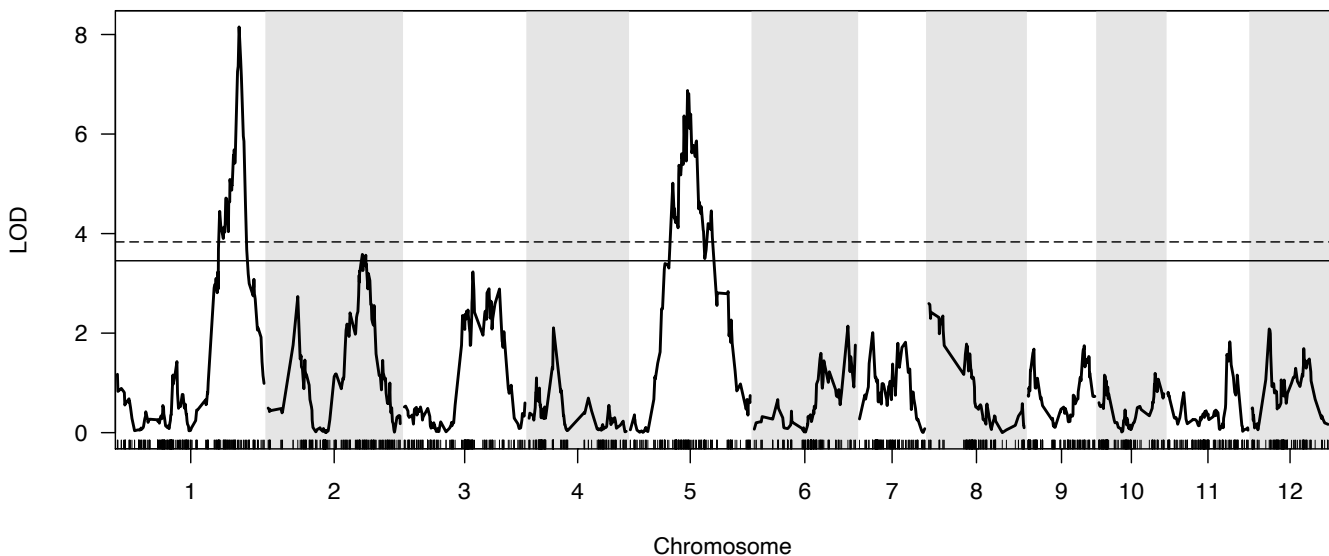
S02\_26501890



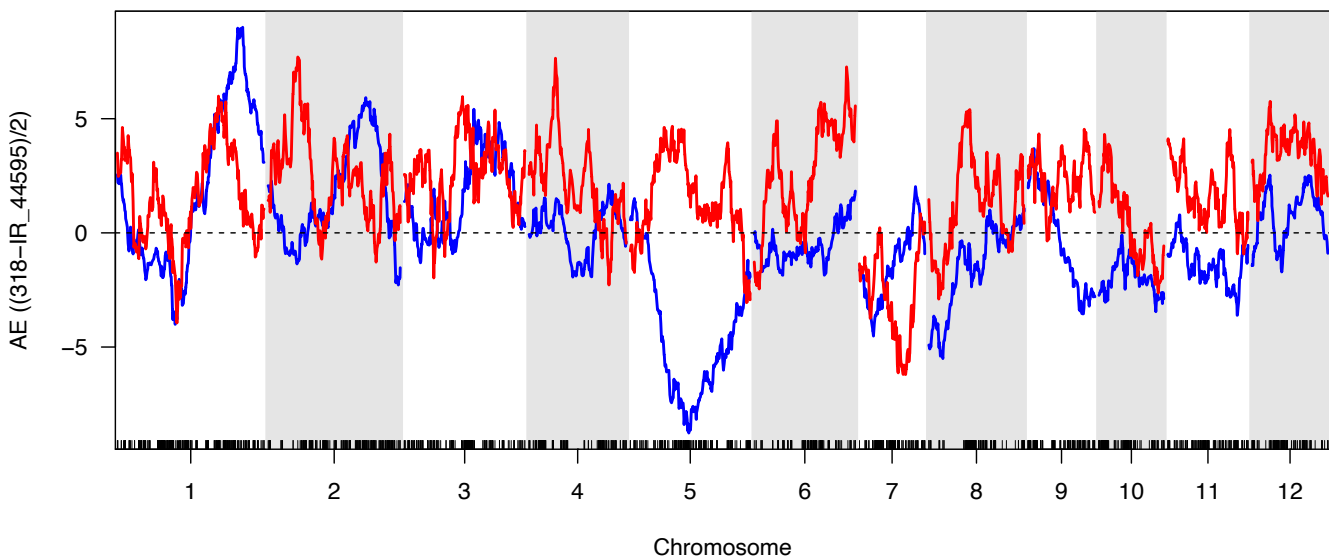
S05\_18531122



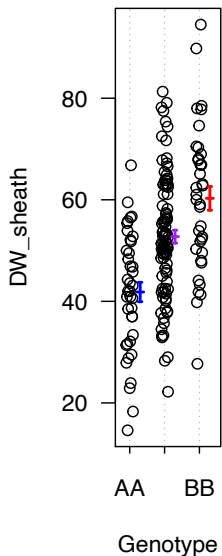
### Dry weight of leaf sheaths



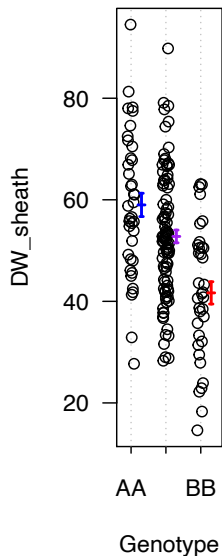
### Additive effect for dry weight of leaf sheaths



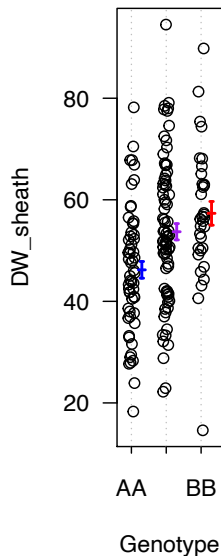
S01\_37831300



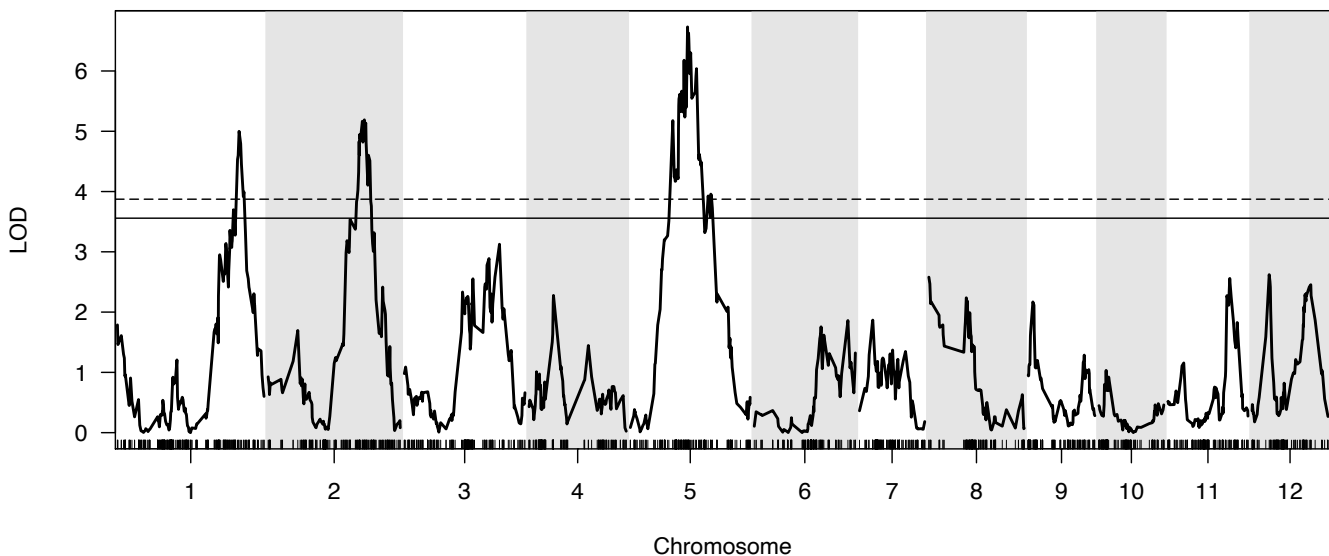
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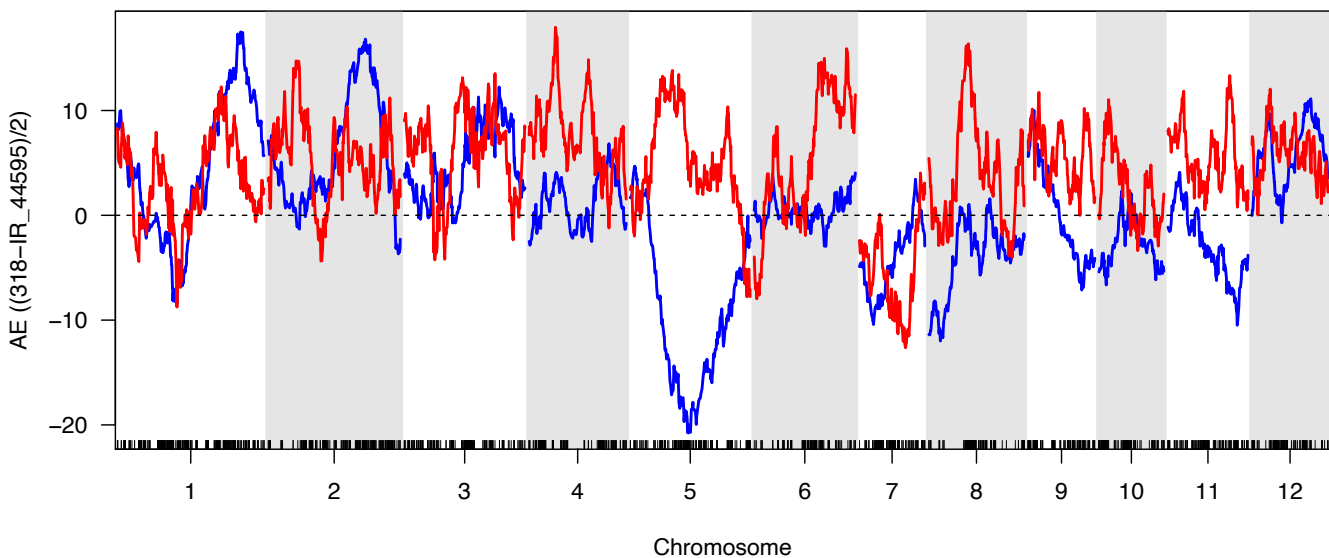
S02\_25776844



### Dry weight of shoots



### Additive effect for dry weight of shoots



S05\_18531122

S02\_26511771

S01\_37831300

