

Table S5 Numbers of artificial bins associated with traits detected under genome-wide Type I error of 0.05 and proportions of the phenotypic variance explained by the associated bins.

Trait	Number of bins ^a	Associated bins ^b	Phenotypic variance	Genetic variance	Heritability ^c
Yield (YD)	3729	6	19.8324	1.4276	0.0719
Tiller number (TP)	1869	39	1.4845	0.6393	0.4306
Grain number (GN)	501	32	374.4867	184.4399	0.4925
K grain weight (KGW)	7451	49	6.4193	4.4327	0.6905
Grain length (GL)	750	49	0.3095	0.2459	0.7944
Grain width (GW)	191	40	0.0479	0.0367	0.7656
Heading date (HD)	1247	4	63.7318	10.5615	0.1657
Apicule color (OsC1)	1869	1	0.2467	0.2409	0.9765

^a Number of bins: This is the optimal number of bins with the smallest cross-validation generated mean squared error.

^b Associated bins: This is the number bins significantly associated with the trait.

^c Heritability: Defined as the ratio of the genetic variance to the phenotypic variance.