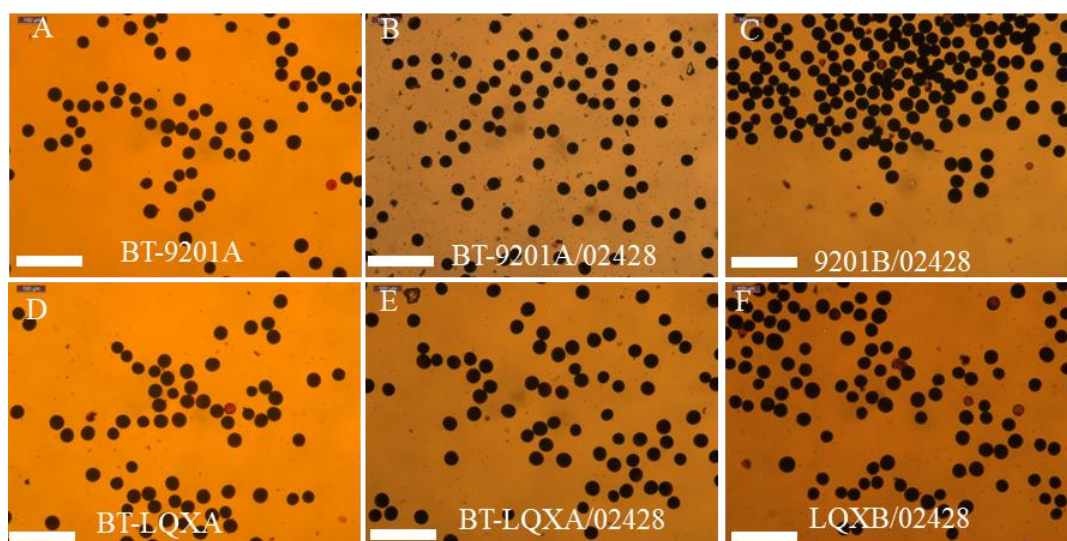
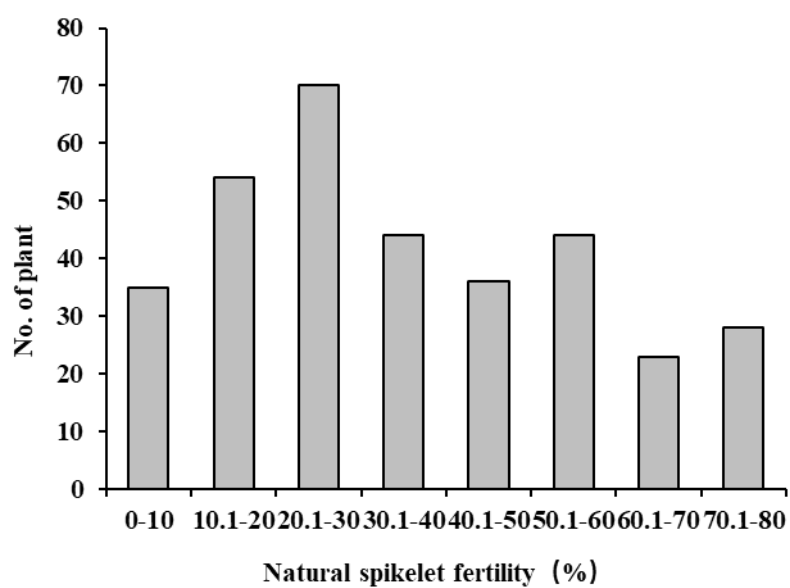
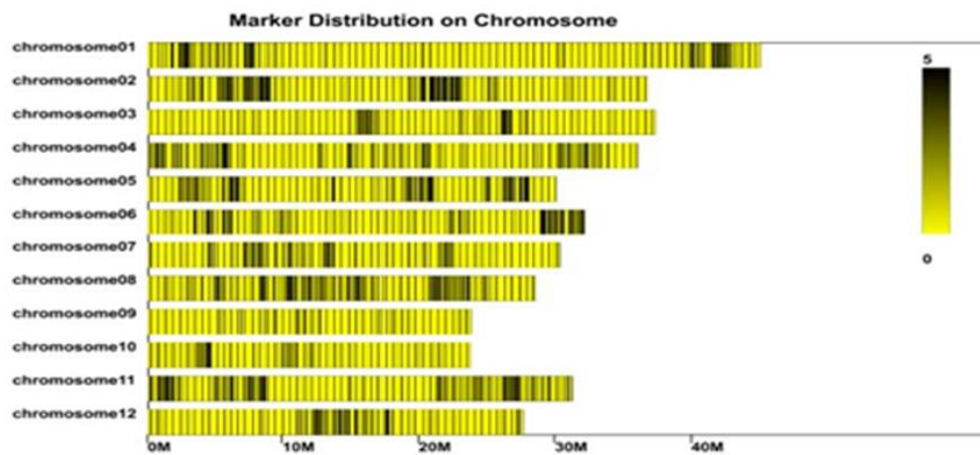




Supplemental Fig.1 Pollen grains of BT-9201A and BT-LiuqianxinA and corresponding testcross F₁. Scale bars=50 μ m in A-F



Supplemental Fig.2 Frequency distribution of Natural spikelet fertility



Supplemental Fig. 3 Distribution of SLAF markers on the genome. The horizontal coordinate is the length of the chromosome, and each yellow band represents a chromosome. The genome is divided according to the size of 1M. The more SLAF tags in each window, the color is darker.

Table S1. Primer sequences used in this study

	Forward primer (5'-3')	Reverse primer (5'-3')
RM12906	CATGCTCTTCGTACACCATCG	GTGTGATGTGGATAATTGGCATCC
RM12914	CGGAGGGAGTAGTGGTGTATTGG	CACAATGGAGGAGCAGATGAGG
RM6639	ACCGGAAGGGATACTTATCAGC	CTTCCTGTGAAATAGTAGAGGTAGGC
RM12921	TCGTATTTCCCGGTGTCTCAGG	ACTAGTACTCGGTGCAGGGAATCG
RM6375	CGAATGGAACGACAAGAGATGC	ATAGATCGACAACGTAGATCCACAGG
RM12941	TTATGCCATGTGGTCCAATCAGC	ATTTGAACCATTGTTGGGCCTTGG
RM12938	CCATCTGTCTCTCCTCCTTATCTCC	CTCCCACCAAATCTAGTGAATGG
STS-2-39.6	TGCTGATGTTAATCTGTGGGTG	TGGCGGCTTGAGAGTGTGTTGTAG
STS2-55.4	TGACTATGTAAGGTTGCTGCTG	ACAGCTCCACAGCAAAGAACC
RM1347	AACAAATTAACTGCCAAG	GTCTTATCATCAGAACTGGA
STS2-31	TTAACTGGTAACGTGAAT	CAGCAAGGCAACAACAAT
STS2-39	TGCTGATGTTAATCTGTGGGTG	TGGCGGCTTGAGAGTGTGTTGTAG
STS2-101	ATGGGTTTACAGACCTTAGGCG	AGGGAAGGGTTTATGTTGTTCT
STS2-12	AAGTCAAGCTCCTGTAAGATTC	TGTTGATGTGATGAAAAAAGT
STS2-13	TAGCGTTTTACGGAGAGATTTT	GATTAGGAGTGTGACGTGGACT
STS2-20	CATGTATGACAAAAACAGAGCC	TTTAGTAGTTTGAAAAGCGTGC
STS2-21	CTTCTTCTTCGTTGCGATT	CGTGTGGAGGTTAGGCTGT
RM1358	GATCGATGCAGCAGCATATG	ACGTGTGGCTGCTTTTGC
17360ce-1	CGGTGTTCAATGTTCACTTGTT	ATGCCTCCTCCTTGCTCAG
17360ce-2	TGAGCAAGGAGGAGGCATT	AGTTCTTACAGCGTGTGAATCA
17360ce-3	CCAGTGAGATGTCGGTTATGC	AGACCTGAAGAGCCTGAGTTG
17360ce-4	TCTCCAACCTCAGGCTCTTCAG	TTCGTTCCCTCCTCCTCATCTC
OsActin	GGAAGTACAGTGTCTGGATTGGAG	TCTTGGCTTAGCATTCTTGGGT
qRT-02g17360	AATGCCTCCTCCTTGCTCAG	GTCCTTCTCTAGTGAACCTTCCT
KO-Identified 12159	TCGGCAAAAGAAACGAAAAG	GGGGTGGAGGAGGAGATGGG
GP15924-12323	TACTCTGGCATCTCCCCGAA	CAGCCACCACCTCATCATCC

Table S2 Number of polymorphic markers on 12 chromosomes

Chromosome	Number of polymorphic markers	Chromosome	Number of polymorphic markers
Chromosome 1	261	Chromosome 7	188
Chromosome 2	326	Chromosome 8	346
Chromosome 3	132	Chromosome 9	77
Chromosome 4	296	chromosome10	120
Chromosome 5	273	chromosome11	325
Chromosome 6	249	chromosome12	182

Table S3 Distribution of different markers

Chromosome	No. of different markers	Chromosome	No. of different markers
Chromosome 2	45	Chromosome 6	2
Chromosome 4	1	Chromosome 8	1
Chromosome 5	2	chromosome11	1
Total			52

Table S4. Predicted genes in the 77 kb target region

Locus Name	Gene Product Name
<i>LOC_Os02g17360</i>	PPR repeat domain-containing protein, putative, expressed
<i>LOC_Os02g17370</i>	expressed protein
<i>LOC_Os02g17380</i>	EMB1303, putative, expressed
<i>LOC_Os02g17390</i>	3-hydroxy acyl-CoA dehydrogenase, putative, expressed
<i>LOC_Os02g17400</i>	leucine-rich repeat protein, putative, expressed
<i>LOC_Os02g17410</i>	hypothetical protein
<i>LOC_Os02g17420</i>	retrotransposon protein, putative, unclassified, expressed
<i>LOC_Os02g17430</i>	retrotransposon protein, putative, unclassified, expressed
<i>LOC_Os02g17440</i>	retrotransposon protein, putative, unclassified, expressed
<i>LOC_Os02g17450</i>	retrotransposon protein, putative, unclassified, expressed
<i>LOC_Os02g17460</i>	tesmin/TSO1-like CXC domain-containing protein, expressed
<i>LOC_Os02g17470</i>	RNA-binding protein-related, putative, expressed