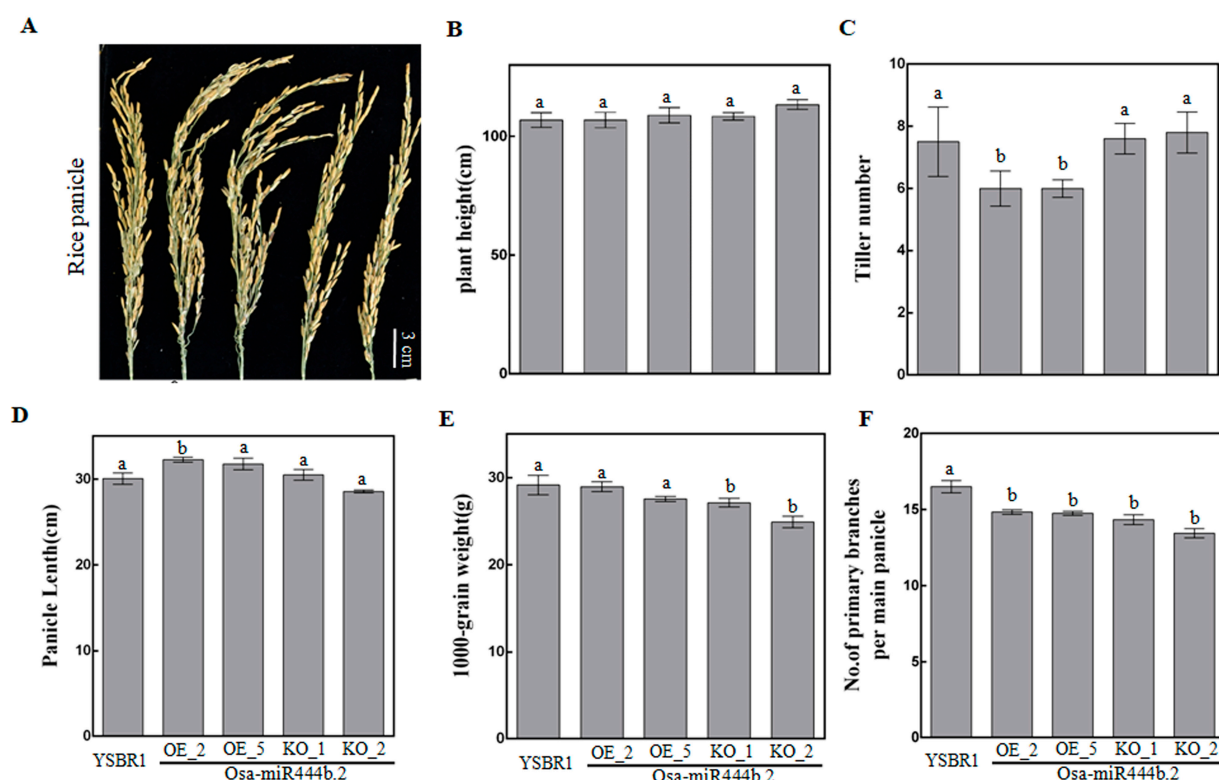


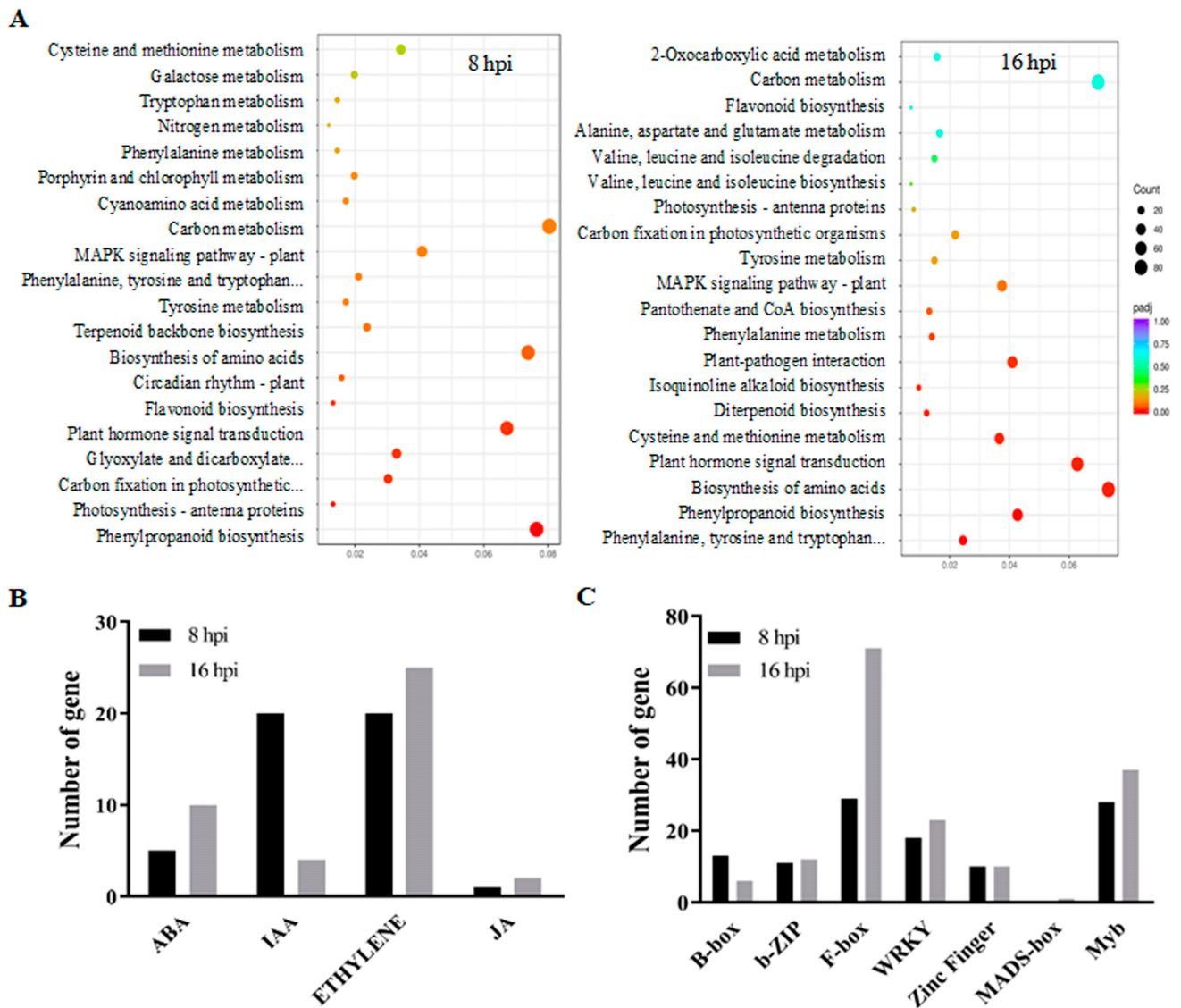
**Figure S1** Osa-miR444b.2 enhanced rice susceptibility to sheath blight in YSBR1.

**A** Disease phenotypes at different time points after infected by *R. solani*. Scale bar, 10 cm. **B** The lesion length of knockout materials at different time points after infected by *R. solani*. The lesion length of overexpression materials at different time points after infected by *R. solani*. a presents the largest average, bcd present significance ( $P < 0.01$ ).



**Figure S2** Osa-miR444b.2 expression level affects the agronomic traits in YSBR1.

**A** Panicle morphology of Osa-miR444b.2 knockout and overexpression materials. **B** Statistics of the plant height. **C** Statistics of the tiller number. **D** Statistics of the panicle length. **E** Statistics of the 1000-grains weight. **F** Statistics of the number of primary branches per main panicle. a presents the largest average, b present significance ( $P < 0.01$ ).



**Figure S3** Osa-miR444b.2 participates in the response to *R. solani* infection by regulating plant hormone signal transduction pathway and transcription factors.

**A** Top 20 enriched KEGG pathways of differentially expressed genes in differential time.

**B** The number of differentially expressed genes in plant hormone signal transduction.

**C** The number of differentially expressed genes of TFs.

**Table S1** Table Primers used in this study.

Purpose	ID	Sequence (5'→3')
Reverse	miR444- stemloop	GTCGTATCCAGTGCAGGGTCCGAGGTA
Transcription	primer	TTCGCACTGGATACGACAAGCTT
qRT-PCR	miR444-RT-F	GCGGCGGTGCAGTTGTTGTCTC
	Universal reverse	GTGCAGGGTCCGAGGT
	primer	
	Os18s RNA-F	CTACGTCCCTGCCCTTTGTACA

---

<i>Os18s</i> RNA-R	ACACTTCACCGGACCATTCAA
<i>Os12g26290</i> RT-F	GACCTCCGTGATGTTTTCTC
<i>Os12g26290</i> RT-R	CAGCATTATGGGGGTCGTTG
<i>Os07g03730</i> RT-F	CGGAGAAGCAGTGGTACGAC
<i>Os07g03730</i> RT-R	GCGAGTAGTTGCAGGTGATG
<i>Os08g38990</i> RT-F	GTGCCAACCAGAAATCAAGC
<i>Os08g38990</i> RT-R	CAGTGGTAGGAGAAGGTTGT
<i>Os12g36850</i> RT-F	GCTGTGGAAGGTCTGCTTGG
<i>Os12g36850</i> RT-R	CCAACACCTCAACCTTTAGC
<i>Os11g37950</i> RT-F	CTACGTGGGACGCTAACAAG
<i>Os11g37950</i> RT-R	CTTGGTGAAGACGGTGTCCC
<i>Os09g25070</i> RT-F	CGTGACAACCCCTACCCTAG
<i>Os09g25070</i> RT-R	CCGACGAGTTGATGGAGATG
<i>Os02g33820</i> RT-F	GCGTGGTGGACTACGACAAG
<i>Os02g33820</i> RT-R	CGTGCTTCTTGGCGTCCTTC
<i>Os01g72910</i> RT-F	GCAAGGAGGAGAAGCACCAC
<i>Os01g72910</i> RT-R	GTGCTTCTTGGCTTCCTTCT
<i>Os01g32380</i> RT-F	GACGTGGACAGGTTCTACGC
<i>Os01g32380</i> RT-R	GCTGTCCACCTTCTTCTCCG
<i>Os03g18850</i> RT-F	TCAACTTCACCTCAGCCATG
<i>Os03g18850</i> RT-R	GTGATCTCGTCCTTCACCTC

---