

Supplementary materials

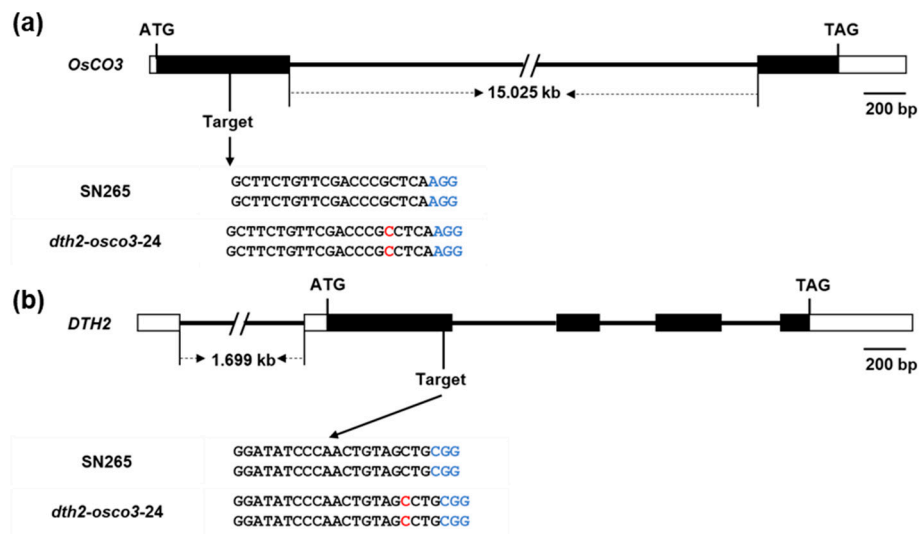


Figure S1. Schematic diagram and the position of the editing target site of the *OsCO3* and *DTH2*. Black boxes and lines in between represent exons and introns, respectively. The target sequence is shown in black and the PAM sequence (NGG) in blue. Underneath the target sequence is the sequence alignment to show the 1-bp insertion (highlighted in red) induced by gene editing in an independent transgenic line (*dth2-osco3-24*) (a and b).

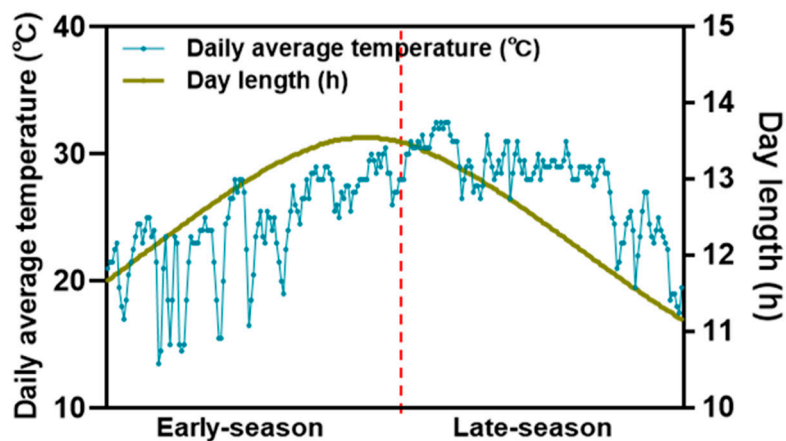


Figure S2. Relationship between day-length and the daily average temperature in two seasons.

Table S1. Amplification primers for expression cassettes.

Primer Names	Sequences (5'-3')
<i>DTH2</i> -gRT1	GATATCCCAACTGTAGCTGGTTTCAGAGCTAGAAAT
<i>DTH2</i> -OsU6bT1	CAGCTACAGTTGGGATATCCAACACAAGCGGCAGC
<i>OsCO3</i> -gRT1	GCTTCTGTTCGACCCGCTCAGTTTCAGAGCTAGAAAT
<i>OsCO3</i> -OsU3T1	TGAGCGGGTCGAACAGAAGCTGCCACGGATCATCTGC
<i>OsLFL1</i> -gRT1	TACAGCGACGTAAGCCAGCTGTTTCAGAGCTAGAAAT
<i>OsLFL1</i> -OsU6aT1	AGCTGGCTTACGTCGCTGTACGGCAGCCAAGCCAGCA
<i>SDG725</i> -gRT1	CTGTACCACCAGCACCTGCTGTTTCAGAGCTAGAAAT
<i>SDG725</i> -OsU6aT1	AGCAGGTGCTGGTGGTACAGCGGCAGCCAAGCCAGCA
<i>OsGS1</i> -gRT1	AGAGTACACCCTCCTCCAGAGTTTCAGAGCTAGAAAT
<i>OsGS1</i> -OsU6bT1	TCTGGAGGAGGGTGTACTCTCAACACAAGCGGCAGC
<i>OsDof12</i> -gRT1	ACAAGATCCTGCCGTGCCCCGTTTCAGAGCTAGAAAT
<i>OsDof12</i> -OsU6cT1	GGGGCACGGCAGGATCTTGTCTGAGCCTCAGCGCAG
<i>OsNF-YC2</i> -gRT1	GCGTGCGAGCTCTTCATCCGTTTCAGAGCTAGAAAT
<i>OsNF-YC2</i> - OsU6cT1	GGATGAAGAGCTCGCACGCCTGAGCCTCAGCGCAG
<i>OsPUP7</i> -gRT1	TCGTCATCGGCGCCCTGATGGTTTCAGAGCTAGAAAT
<i>OsPUP7</i> -OsU3T1	CATCAGGGCGCCGATGACGATGCCACGGATCATCTGC
<i>DTH2</i> -gRT1	GATATCCCAACTGTAGCTGGTTTCAGAGCTAGAAAT

Table S2. Detection primers for target sites mutation.

Primer Names	Sequences (5'-3')
NGS- <i>DTH2</i> -F	CTCGGAGTGATCGCACGGCAGACCATAAACTGTTAC
NGS- <i>DTH2</i> -R	CTGAGAGGCTGGATGGGCTGTGCTAGCTATATCCAAC
NGS- <i>OsCO3</i> -F	CTCGGAGTGATCGCACGTGTCAACTCCTCCTGGCCA
NGS- <i>OsCO3</i> -R	CTGAGAGGCTGGATGGTTCGACGACGCTCCTCCTTCT
NGS- <i>OsLFL1</i> -F	CTCGGAGTGATCGCACGGGCAGATTTATTCTGAACGT
NGS- <i>OsLFL1</i> -R	CTGAGAGGCTGGATGGGGTGTACTGAAGCAAATACCC
NGS- <i>SDG725</i> -F	CTCGGAGTGATCGCACCCCTGCTGCTGAACTTGTATTC
NGS- <i>SDG725</i> -R	CTGAGAGGCTGGATGGGGCAGGATGGAAATCAATACC
NGS- <i>OsGS1</i> -F	CTCGGAGTGATCGCACGTCACAGCCATCTCAGCATAA
NGS- <i>OsGS1</i> -R	CTGAGAGGCTGGATGGAAGCCACAATCAAACAGAC
NGS- <i>OsDof12</i> -F	CTCGGAGTGATCGCACAGAGGTCGTCGACACCGAGGA
NGS- <i>OsDof12</i> -R	CTGAGAGGCTGGATGGTCCAGTACCTCTGGCAGTTC
NGS- <i>OsNF-YC2</i> - F	CTCGGAGTGATCGCACTGGCGCGGATCAAGAAGATCAT
NGS- <i>OsNF-YC2</i> - R	CTGAGAGGCTGGATGGCGACGAGGAAGTCGAACACGTC
NGS- <i>OsPUP7</i> -F	CTCGGAGTGATCGCACTGGTGACGCTGGTGCAGTC
NGS- <i>OsPUP7</i> -R	CTGAGAGGCTGGATGGTGAACGCGAGCTGCGTCGACA

Table S3. Primers for qRT-PCR reaction.

Primer Names	Sequences (5'-3')
qRT- <i>DTH2</i> -F	GAGATGGGATGAATCTTCTGC
qRT- <i>DTH2</i> -R	GTCTCCATATACGCTCCCATCA
qRT- <i>OsCO3</i> -F	CAATTCAGGCGCGGGTACA
qRT- <i>OsCO3</i> -R	GAGGTGGTGATGTCTGGCAC
qRT- <i>Hd3a</i> -F	GTCTACCCCTAGCTAACGATGA
qRT- <i>Hd3a</i> -R	CACCATCATATATATGTTGTGTGTCG
qRT- <i>OsMADS14</i> -F	CGGTTGCGAGACGAGGAA
qRT- <i>OsMADS14</i> -R	GAAAGACGGTGCTGGACGAA
<i>Actin1</i> -3A	ACCACAGGTAGCAATAGGTA
<i>Actin1</i> -5B	CACATTCCAGCAGATGTGG