

Table S1 Primers used in qRT-PCR

Gene	Primer	Base sequence
<i>Os02g0765600</i>	AMY1-F	TCTTGTCCCTTTCGGTCCTC
	AMY1-R	ACTTAGACGCGTCCAGATCG
<i>Os09g0457400</i>	AMY3A-F	TCAAGCAAGAGATCAACGCG
	AMY3A-R	ACTCTAAGGCCGCTCTTCTC
<i>Os08g0473600</i>	AMY3E-F	CTACGTCGACAACACCAACC
	AMY3E-R	CTTGGTGGTGAAGTCGAACG
<i>Os01t0715400-02</i>	AMY4A-F	AGCCTGCTTGTTCTGGTACT
	AMY4A-R	TCAGGCGACACAGAATCAGT
<i>Os01g0357400</i>	AMYIC-F	TTCAACTGGGAGTCGTGGAA
	AMYIC-R	GAACGCCTCGATGATTGGAC
<i>OsActin-1</i>	Actin-F	GAACTGGTATGGTCAAGGCTG
	Actin-R	ACACGGAGCTCGTTGTAGAAG

Notes: “F” means forward primer; “R” means reverse primer.

Table S2 The value of RC, R_{1047/1022} and FWHH of germinated brown rice.

Variety	Germination time	RC (%)	R _{1047/1022}	FWHH
DH	0 h	9.715 ± 0.205 ^a	1.068 ± 0.051	18.498 ± 0.601 ^b
	24 h	6.055 ± 0.870 ^b	1.060 ± 0.001	19.450 ± 0.346 ^{ab}
	48 h	5.265 ± 0.417 ^b	0.970 ± 0.066	19.972 ± 0.904 ^a
YG	0 h	18.625 ± 0.106 ^a	1.185 ± 0.085	16.904 ± 0.603 ^c
	24 h	13.870 ± 0.269 ^b	1.080 ± 0.088	19.202 ± 0.745 ^b
	48 h	12.915 ± 0.212 ^c	0.957 ± 0.067	20.960 ± 0.223 ^a
SN	0 h	19.265 ± 1.563 ^a	1.032 ± 0.032	19.267 ± 0.460 ^{ns}
	24 h	14.925 ± 0.672 ^b	1.057 ± 0.007	19.163 ± 0.316 ^{ns}
	48 h	9.540 ± 0.523 ^c	0.979 ± 0.071	19.672 ± 0.986 ^{ns}
ZB	0 h	21.390 ± 0.863 ^a	1.324 ± 0.480	15.909 ± 0.465 ^b
	24 h	19.450 ± 0.750 ^a	1.113 ± 0.057	17.260 ± 0.968 ^b
	48 h	15.220 ± 0.849 ^b	0.963 ± 0.067	18.878 ± 0.700 ^a
HD	0 h	9.530 ± 0.693 ^a	0.952 ± 0.130	21.115 ± 0.724 ^b
	24 h	7.940 ± 0.311 ^b	1.047 ± 0.010	18.708 ± 0.294 ^c
	48 h	5.820 ± 0.495 ^c	0.942 ± 0.013	23.634 ± 0.543 ^a
HJ	0 h	18.130 ± 1.994 ^a	1.111 ± 0.050	19.831 ± 0.889 ^{ns}
	24 h	13.045 ± 0.629 ^b	1.065 ± 0.058	20.456 ± 0.531 ^{ns}
	48 h	12.575 ± 0.163 ^b	0.978 ± 0.102	20.030 ± 0.999 ^{ns}
Varieties		***	ns	***
Germination time		***	ns	***
Interaction		***	ns	***

Notes: Reported values correspond to the mean ± standard deviation. Different letters in the same line indicate significant differences ($P < 0.05$). Two-way ANOVA was performed for the linear model on raw data followed by Duncan's test (** $P < 0.01$ and *** $P < 0.001$), "ns" means no significant difference.

Table S3. The value of gelatinization parameters of germinated brown rice.

Variety	Germination time	T ₀ (°C)	T _p (°C)	T _c (°C)	ΔH (J/g)
DH	0 h	59.35 ± 0.349 ^{ns}	66.15 ± 0.600 ^a	74.79 ± 0.489 ^b	7.537 ± 1.305 ^a
	24 h	59.21 ± 0.439 ^{ns}	64.98 ± 0.241 ^b	75.73 ± 0.450 ^a	2.221 ± 0.501 ^b
	48 h	59.62 ± 0.552 ^{ns}	65.33 ± 0.165 ^b	75.32 ± 0.365 ^{ab}	2.849 ± 0.419 ^b
YG	0 h	60.18 ± 0.629 ^{ns}	66.37 ± 0.493 ^b	76.33 ± 0.531 ^b	5.047 ± 2.723 ^{ns}
	24 h	61.52 ± 0.607 ^{ns}	68.56 ± 0.593 ^a	78.28 ± 0.110 ^a	2.257 ± 0.442 ^{ns}
	48 h	61.80 ± 1.653 ^{ns}	68.01 ± 0.614 ^a	77.42 ± 1.233 ^{ab}	3.356 ± 2.207 ^{ns}
SN	0 h	59.98 ± 0.630 ^{ns}	66.09 ± 0.553 ^{ns}	75.90 ± 0.565 ^{ns}	1.476 ± 0.296 ^{ns}
	24 h	60.76 ± 0.195 ^{ns}	67.56 ± 1.962 ^{ns}	77.64 ± 1.205 ^{ns}	1.862 ± 0.475 ^{ns}
	48 h	61.69 ± 0.667 ^{ns}	67.59 ± 1.075 ^{ns}	78.24 ± 1.825 ^{ns}	1.813 ± 0.479 ^{ns}
ZB	0 h	58.98 ± 0.192 ^b	66.11 ± 0.594 ^b	74.79 ± 0.110 ^c	1.467 ± 0.037 ^b
	24 h	58.66 ± 0.117 ^c	66.43 ± 0.406 ^b	77.01 ± 0.266 ^b	2.233 ± 0.073 ^a
	48 h	61.88 ± 0.061 ^a	68.68 ± 0.818 ^a	78.52 ± 0.320 ^a	1.430 ± 0.132 ^b
HD	0 h	59.92 ± 0.350 ^{ns}	65.81 ± 0.773 ^{ns}	73.55 ± 0.684 ^c	0.948 ± 0.108 ^b
	24 h	59.56 ± 0.541 ^{ns}	66.78 ± 0.795 ^{ns}	75.88 ± 0.455 ^b	1.105 ± 0.222 ^b
	48 h	59.31 ± 0.565 ^{ns}	65.61 ± 0.392 ^{ns}	78.05 ± 0.301 ^a	1.769 ± 0.384 ^a
HJ	0 h	63.70 ± 0.331 ^{ns}	68.37 ± 0.547 ^{ns}	75.42 ± 0.410 ^b	1.202 ± 0.128 ^b
	24 h	62.79 ± 0.963 ^{ns}	67.75 ± 0.540 ^{ns}	76.67 ± 0.569 ^a	1.337 ± 0.165 ^b
	48 h	62.94 ± 0.991 ^{ns}	68.04 ± 0.839 ^{ns}	76.82 ± 0.280 ^a	1.733 ± 0.170 ^a
Varieties		***	***	***	***
Germination time		*	*	***	*
Interaction		ns	*	**	**

Notes: Reported values correspond to the mean ± standard deviation. Different letters in the same line indicate significant differences ($P < 0.05$). Two-way ANOVA was performed for the linear model on raw data followed by Duncan's test ($*P < 0.05$, $**P < 0.01$ and $***P < 0.001$), "ns" means no significant difference.

Table S4. Pasting parameters of the flour of germinated brown rice.

Variety	Germination time	Peak Viscosity (cP)	Trough viscosity (cP)	Breakdown viscosity (cP)	Final viscosity (cP)	Setback viscosity (cP)	Peak time (min)	Pasting temperature (°C)
DH	0 h	1627.33 ± 126.06 ^a	1024.33 ± 49.86 ^a	603.00 ± 77.27 ^{ns}	2146.67 ± 178.37 ^a	1122.33 ± 130.24 ^a	5.69 ± 0.035 ^a	86.73 ± 0.076 ^a
	24 h	1570.33 ± 30.27 ^a	950.33 ± 19.22 ^b	620.00 ± 13.00 ^{ns}	2046.67 ± 14.01 ^a	1096.33 ± 33.17 ^a	5.73 ± 0.00 ^a	85.87 ± 0.83 ^a
	48 h	1113.00 ± 28.79 ^b	567.00 ± 23.43 ^c	546.00 ± 7.21 ^{ns}	1286.67 ± 41.02 ^b	719.67 ± 17.90 ^b	5.51 ± 0.03 ^b	84.75 ± 0.48 ^b
YG	0 h	1383.33 ± 48.68 ^a	898.33 ± 39.50 ^a	485.00 ± 11.53 ^{ns}	1851.67 ± 104.89 ^a	953.33 ± 67.57 ^a	6.13 ± 0.07 ^a	90.27 ± 0.42 ^a
	24 h	1258.00 ± 34.51 ^b	760.67 ± 27.06 ^b	497.33 ± 11.93 ^{ns}	1579.00 ± 16.70 ^b	818.33 ± 25.70 ^b	6.00 ± 0.00 ^b	90.00 ± 0.83 ^a
	48 h	812.00 ± 25.36 ^c	315.33 ± 3.21 ^c	496.67 ± 24.83 ^{ns}	763.33 ± 10.69 ^c	448.00 ± 7.55 ^c	5.33 ± 0.00 ^c	87.20 ± 0.43 ^b
SN	0 h	900.33 ± 102.01 ^a	295.67 ± 1.15 ^a	604.67 ± 103.16 ^a	405.33 ± 13.80 ^a	109.67 ± 12.66 ^a	3.25 ± 0.04 ^a	68.75 ± 0.05 ^b
	24 h	486.33 ± 49.80 ^b	156.67 ± 14.84 ^b	329.67 ± 35.08 ^b	239.67 ± 19.14 ^b	83.00 ± 4.36 ^b	3.22 ± 0.04 ^a	69.52 ± 0.85 ^b
	48 h	174.00 ± 4.58 ^c	73.67 ± 5.69 ^c	100.33 ± 2.52 ^c	110.33 ± 4.51 ^c	36.67 ± 1.53 ^c	3.11 ± 0.03 ^b	71.18 ± 0.12 ^a
ZB	0 h	660.67 ± 84.65 ^a	247.33 ± 28.22 ^a	413.33 ± 56.58 ^a	350.00 ± 43.35 ^a	102.67 ± 15.37 ^a	3.33 ± 0.00 ^a	69.53 ± 0.03 ^c
	24 h	212.00 ± 3.61 ^b	71.67 ± 0.58 ^b	140.33 ± 3.21 ^b	108.33 ± 0.58 ^b	36.67 ± 1.15 ^b	3.20 ± 0.00 ^b	71.18 ± 0.03 ^b
	48 h	68.33 ± 4.16 ^c	36.33 ± 1.15 ^c	32.00 ± 5.29 ^c	54.33 ± 1.53 ^c	18.00 ± 2.65 ^c	3.05 ± 0.04 ^c	75.80 ± 0.48 ^a
HD	0 h	963.67 ± 127.88 ^a	720.33 ± 95.85 ^a	243.33 ± 33.31 ^b	1574.67 ± 134.82 ^a	847.67 ± 33.72 ^a	6.09 ± 0.08 ^a	92.92 ± 0.90 ^{ns}
	24 h	727.33 ± 12.06 ^b	407.33 ± 3.06 ^b	320.00 ± 15.10 ^a	1006.00 ± 23.07 ^b	598.67 ± 25.01 ^b	5.78 ± 0.04 ^b	91.60 ± 0.83 ^{ns}
	48 h	465.00 ± 10.82 ^c	189.33 ± 3.21 ^c	275.67 ± 9.24 ^b	509.67 ± 8.33 ^c	320.33 ± 5.51 ^c	5.42 ± 0.04 ^c	92.18 ± 0.51 ^{ns}
HJ	0 h	957.00 ± 55.07 ^b	467.33 ± 26.39 ^a	489.67 ± 28.73 ^b	1073.67 ± 37.21 ^a	606.33 ± 13.05 ^a	5.62 ± 0.04 ^a	89.67 ± 0.89 ^a
	24 h	1059.00 ± 40.15 ^a	494.67 ± 30.44 ^a	564.33 ± 14.01 ^a	1085.33 ± 41.00 ^a	590.67 ± 11.68 ^a	5.67 ± 0.07 ^a	88.62 ± 0.51 ^{ab}
	48 h	841.33 ± 32.87 ^c	326.33 ± 7.57 ^b	515.00 ± 27.07 ^b	737.00 ± 15.72 ^b	410.67 ± 8.50 ^b	5.49 ± 0.03 ^b	87.77 ± 0.51 ^b
Varieties		***	***	***	***	***	***	***
Germination time		***	***	***	***	***	***	***
Interaction		***	***	***	***	***	***	***

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