

Supplementary Materials

Table S1. Thermal time from sowing to harvest for rice grown in Year 1 and Year 2 (base temperature = 10 °C)

Variety	Heat Sums (°Cd)		
	Year 1	Year 2	Difference
Doongara	2047	2421	373
Koshihikari	1779	1976	197
Langi	1906	2170	264
Reiziq	1783	1964	181
Sherpa	1854	2100	246
Tachiminori	1910	2036	126
TDK8	2384	2684	300
YRW4	1770	1982	212
Mean	1929	2167	237

Table S2. Dates of flowering and maturity harvests in Year 1 environments

Growing Condition	Variety	Planting	50% Flowering	Harvesting
a. Well-watered	Doongara	15/11/2017	16/02/2018	31/03/2018
	Koshihikari	15/11/2017	29/01/2018	13/03/2018
	Langi	15/11/2017	5/02/2018	20/03/2018
	Reiziq	15/11/2017	29/01/2018	13/03/2018
	Sherpa	15/11/2017	3/02/2018	18/03/2018
	Tachiminori	15/11/2017	7/02/2018	22/03/2018
	TDK8	15/11/2017	19/03/2018	2/05/2018
	YRW4	15/11/2017	29/01/2018	13/03/2018
b. Water deficit	Doongara	23/11/2017	28/02/2018	22/04/2018
	Sherpa	23/11/2017	15/02/2018	30/03/2018
	Tachiminori	23/11/2017	13/02/2018	28/03/2018
	TDK8	23/11/2017	28/03/2018	10/05/2018

Table S3. Dates of flowering and maturity harvests in Year 2 season

Variety	Planting	50% Flowering	Harvesting
Doongara	1/11/2018	18/02/2019	30/03/2019
Koshihikari	1/11/2018	25/01/2019	6/03/2019
Langi	1/11/2018	3/02/2019	15/03/2019
Reiziq	1/11/2018	24/01/2019	5/03/2019
Sherpa	1/11/2018	31/01/2019	12/03/2019
Tachiminori	1/11/2018	27/01/2019	8/03/2019
TDK8	1/11/2018	19/03/2019	28/04/2019
YRW4	1/11/2018	23/01/2019	4/03/2019

Table S4. Yield of green rice (GR) by days after flowering (DAF), percentage of GR in paddy at respective DAF and percentage of GR in mature paddy (Year 1)

Variety	GR Yield (t/ha)					Percentage GR in Paddy at Respective DAF (%)					Percentage GR in Mature paddy (%)				
	15 DAF	20 DAF	25 DAF	30 DAF	35 DAF	15 DAF	20 DAF	25 DAF	30 DAF	35 DAF	15 DAF	20 DAF	25 DAF	30 DAF	35 DAF
a) Well-watered															
Doongara	2.3	3.5	3.8	1.8	0.7	66.9	67.3	51.6	23.5	8.5	27.6	42.5	45.9	22.5	8.5
Koshihikari	2.2	3.3	2.5	2.7	1.0	71.3	72.7	47.4	32.2	10.9	24.5	36.1	27.7	30.6	10.9
Langi	2.4	3.6	4.6	3.7	2.3	63.4	72.2	64.2	49.0	25.3	28.0	41.2	53.8	42.8	25.3
Reiziq	2.3	3.4	2.9	1.5	0.4	67.8	69.9	54.9	23.6	4.3	28.5	43.0	35.0	18.4	4.3
Sherpa	2.3	4.0	3.6	2.4	0.6	60.3	68.1	49.8	29.9	6.0	21.8	37.3	33.5	22.0	6.0
Tachiminori	2.7	3.9	2.7	1.5	1.1	63.4	73.0	45.9	22.1	14.9	36.3	53.1	35.6	20.4	14.9
TDK8	1.9	3.0	2.9	2.0	1.1	58.9	57.7	52.5	35.4	18.4	32.9	51.6	48.9	35.1	18.4
YRW4	2.3	3.2	4.3	2.5	0.4	70.0	74.4	67.2	38.7	5.3	30.0	41.9	55.6	32.8	5.3
Mean	2.3	3.5	3.4	2.3	1.0	65.3	69.4	54.2	31.8	11.7	28.7	43.3	42.0	28.1	11.7
LSD5% (Var)					0.54***					5.08***					6.48***
LSD5% (DAF)					0.43***					4.02***					5.20***
LSD5% (Var x DAF)					1.22ns					11.36**					14.48ns
b) Water-deficit															
Doongara	1.6	2.2	1.8	0.6	0.5	65.1	50.2	29.7	8.7	6.5	22.4	30.1	25.8	7.5	6.5
Sherpa	2.1	4.0	3.6	2.3	1.5	67.1	70.5	57.6	32.2	16.5	23.9	45.2	41.3	26.1	16.5
Tachiminori	1.7	3.4	2.9	1.5	1.0	60.5	69.4	55.0	25.0	14.5	24.2	47.1	39.7	21.3	14.5
TDK8	1.2	1.1	0.8	0.4	0.1	61.9	47.5	36.9	15.2	3.9	47.8	42.1	33.4	14.6	3.9
Mean	1.7	2.7	2.3	1.2	0.8	63.6	59.4	44.8	20.3	10.3	29.6	41.1	35.1	17.4	10.3
LSD5% (Var)					0.34***					5.17***					5.80***
LSD5% (DAF)					0.38***					5.78***					6.48***
LSD5% (Var x DAF)					0.75**					11.57*					12.96**

* Significant difference at P = 0.05; ** Significant difference at P = 0.01; *** Significant difference at P < 0.001; ns = No significant difference at P = 0.05

Table S5. Yield of paddy harvested at different days after flowering (DAF) and percentage of yield in mature paddy (Year 1)

Variety	Paddy Yield (t/ha)					Percentage in Mature Paddy (%)				
	15 DAF	20 DAF	25 DAF	30 DAF	35 DAF	15 DAF	20 DAF	25 DAF	30 DAF	35 DAF
a) Well-watered										
Doongara	3.4	5.2	7.4	7.9	8.3	41.0	63.1	89.6	95.7	100
Koshihikari	3.1	4.6	5.3	8.5	9.2	34.4	49.7	57.8	93.0	100
Langi	3.8	5.0	7.2	7.6	8.8	43.2	57.0	83.1	86.8	100
Reiziq	3.3	5.0	5.1	6.2	8.3	42.0	61.7	64.3	77.4	100
Sherpa	3.8	5.7	7.3	8.1	10.6	36.0	53.9	68.4	76.8	100
Tachiminori	4.2	5.3	5.8	7.2	9.1	46.2	59.0	63.8	79.5	100
TDK8	3.2	5.2	5.4	5.7	5.9	56.1	89.5	93.1	98.0	100
YRW4	3.3	4.3	6.3	6.5	7.7	42.4	56.4	82.2	84.4	100
Mean	3.5	5.0	6.2	7.2	8.5	42.7	61.3	75.3	86.4	100
LSD5% (Var)					0.72***					8.45***
LSD5% (DAF)					0.57***					6.68***
LSD5% (Var x DAF)					1.62ns					18.90ns
b) Water-deficit										
Doongara	2.4	4.3	5.1	5.6	6.4	37.3	66.4	80.0	87.2	100
Sherpa	3.1	5.6	6.3	7.2	8.9	35.6	62.7	71.2	81.4	100
Tachiminori	2.9	4.9	5.2	5.9	6.9	42.3	71.1	75.8	85.5	100
TDK8	2.0	2.2	2.3	2.4	3.0	65.3	74.3	76.9	78.5	100
Mean	2.6	4.3	4.7	5.3	6.3	45.1	68.6	76.0	83.2	100
LSD5% (Var)					0.44***					6.77*
LSD5% (DAF)					0.50***					7.57***
LSD5% (Var x DAF)					0.99***					15.13ns

* Significant difference at P = 0.05; ** Significant difference at P = 0.01; *** Significant difference at P < 0.001; ns = No significant difference at P = 0.05