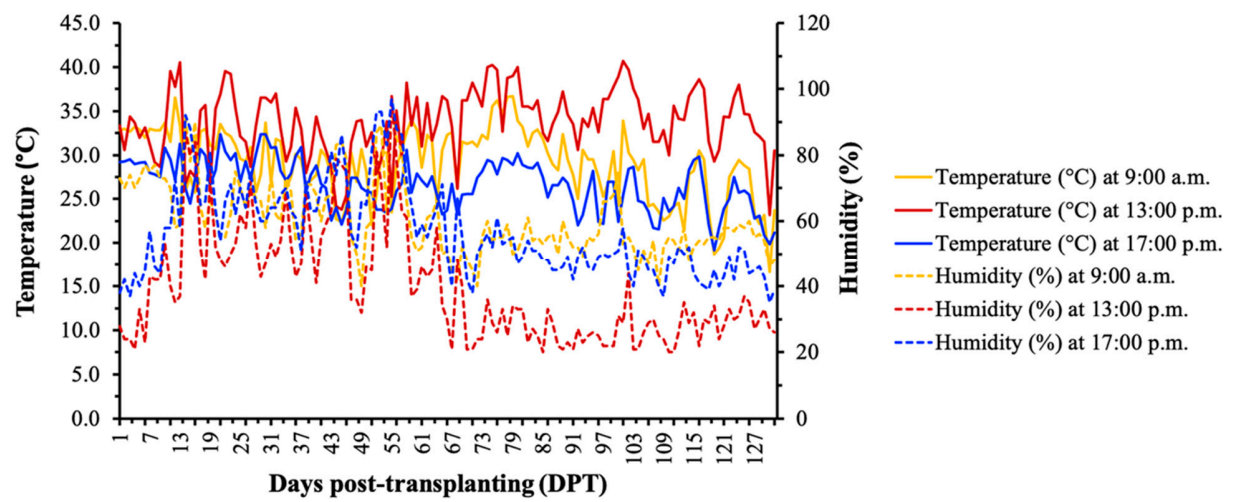
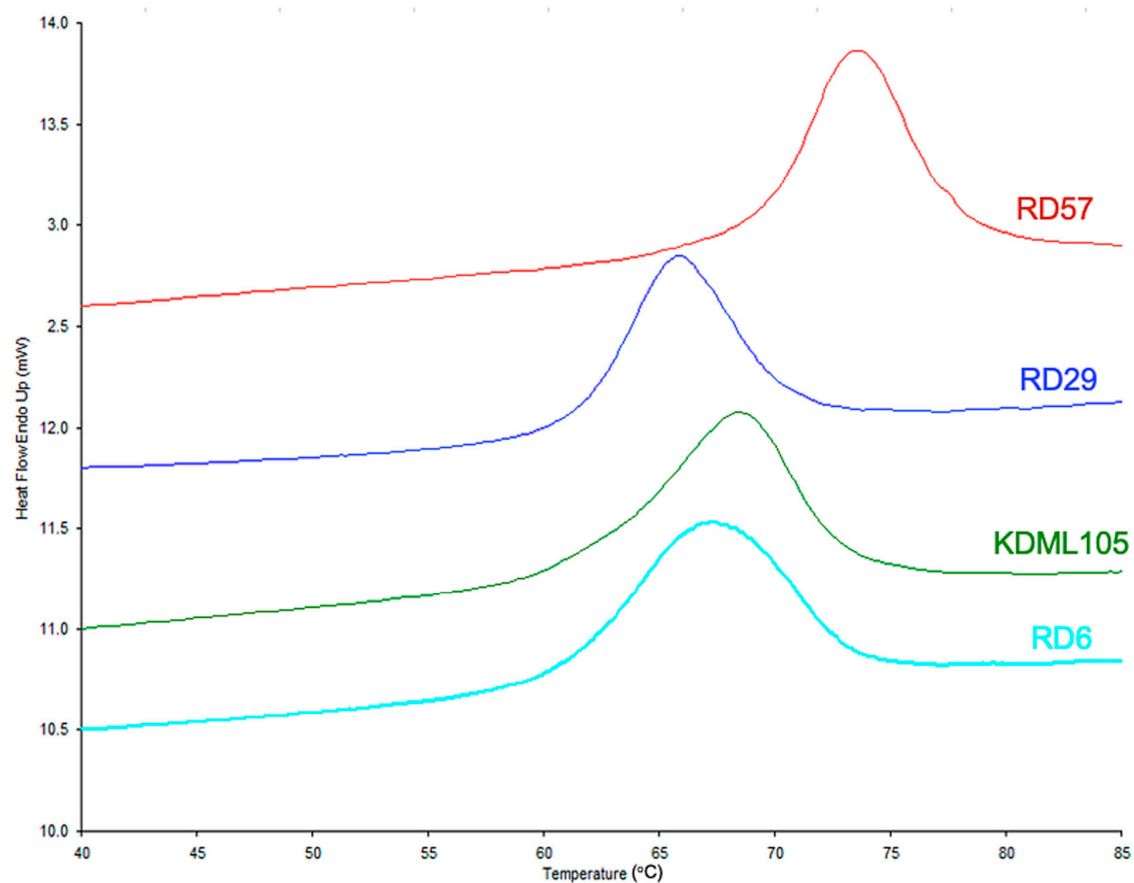


## Supplementary data

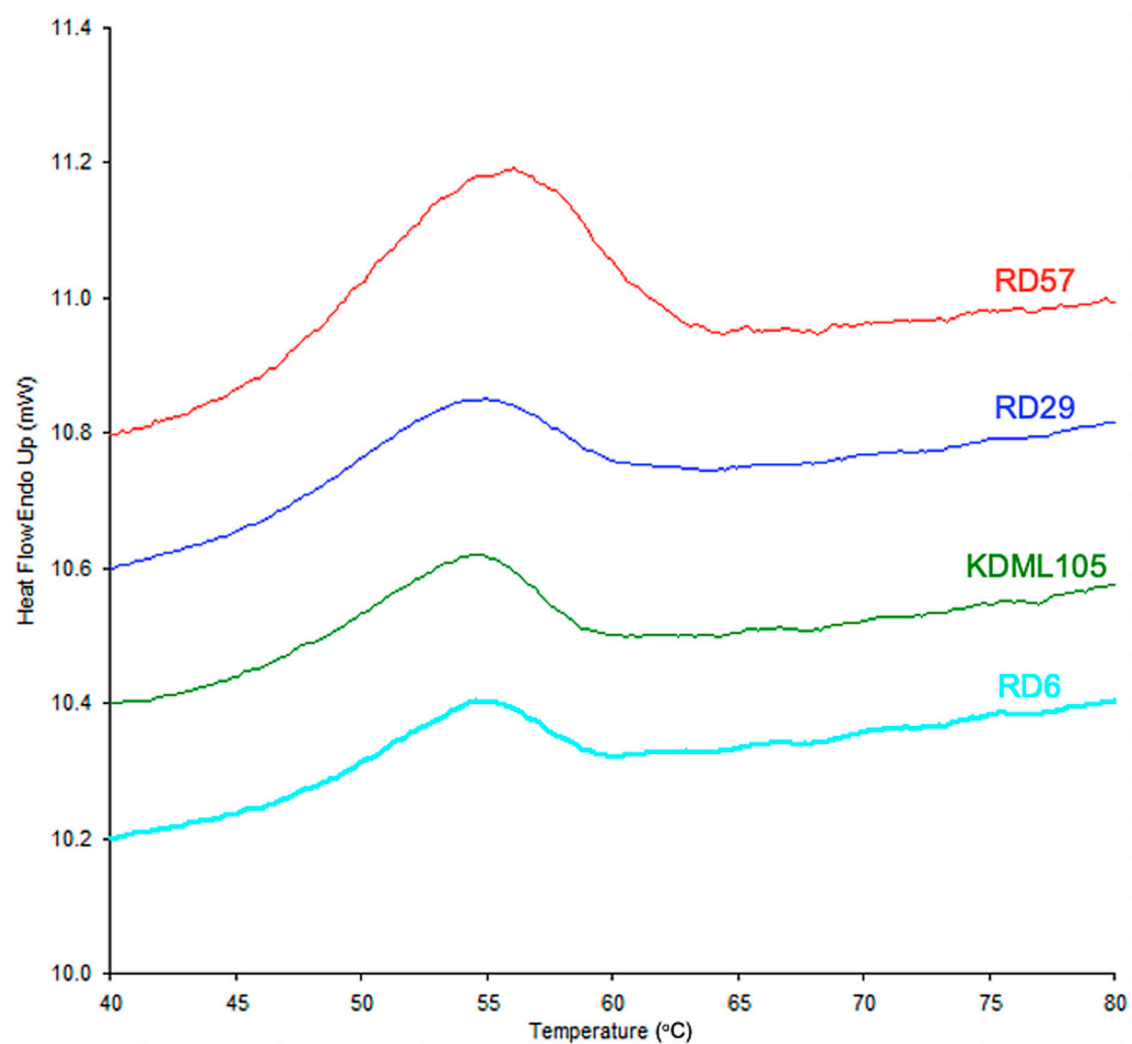
**Figure S1** Environmental temperature and relative humidity of the cultivation location of the tested rice cultivars.



**Figure S2** DSC thermogram displaying endosperm starch gelatinization properties of 4 Thai commercial rice cultivars.



**Figure S3** DSC thermogram displaying endosperm starch retrogradation properties of 4 Thai commercial rice cultivars.



**Table S1** The values of RVA parameters, amylose content, photosensitivity, and growth duration of 4 different groups of Thai certified rice starches.

Groups	Cultivars	RVA parameters			Amylose content (%)	Photosensitivity	Growth duration (Days)
		PT (°C)	PV (mPa.s)	SB (mPa.s)			
1	RD6	72.70±0.45 <sup>e</sup>	2269.33±81.06 <sup>b</sup>	270.67±8.98 <sup>f</sup>	2.08	✓	110-120
	KDML105	75.67±0.24 <sup>cde</sup>	3064.33±114.62 <sup>a</sup>	668.67±11.85 <sup>ef</sup>	14.38	✓	120
	PTT1	76.47±0.33 <sup>cd</sup>	3447.67±74.38 <sup>a</sup>	675.67±52.41 <sup>e</sup>	14-18.42		104-126
2	RD21	75.97±0.02 <sup>cde</sup>	3197.00±178.94 <sup>a</sup>	950.67±37.24 <sup>de</sup>	17-20		120-130
	PL80	73.50±0.48 <sup>de</sup>	3073.00±143.96 <sup>a</sup>	1159±73.23 <sup>d</sup>	17.3	✓	120
	RD43	75.57±0.73 <sup>cde</sup>	3016.33±82.57 <sup>a</sup>	1183.67±56.00 <sup>d</sup>	16-18.82		95
3	RD61	77.95±0.70 <sup>bc</sup>	1227.67±23.85 <sup>d</sup>	1214.00±3.79 <sup>d</sup>	26.82		87
	RD29	76.88±0.95 <sup>cd</sup>	1584.00±40.70 <sup>cd</sup>	1690.33±40.93 <sup>bc</sup>	26.6-29.4		103
	RD37	83.98±0.81 <sup>a</sup>	2176.33±53.27 <sup>b</sup>	1336.67±160.06 <sup>cd</sup>	21.6		108-118
4	RD41	81.45±1.28 <sup>ab</sup>	1642.33±53.27 <sup>cd</sup>	1765.33±167.69 <sup>ab</sup>	27.15-30		105
	RD57	82.37±0.78 <sup>a</sup>	1927.67±34.91 <sup>b</sup>	2115.33±68.13 <sup>a</sup>	27.33		110-120

Values are means ± SEM. Means within pasting temperature (PT), peak viscosity (PV), and setback (SB) columns with different superscripts are significantly different ( $p \leq 0.05$ ), and the means in each column indicate statistically significant difference at  $p \leq 0.05$  by Tukey's test ( $n = 3$ ).