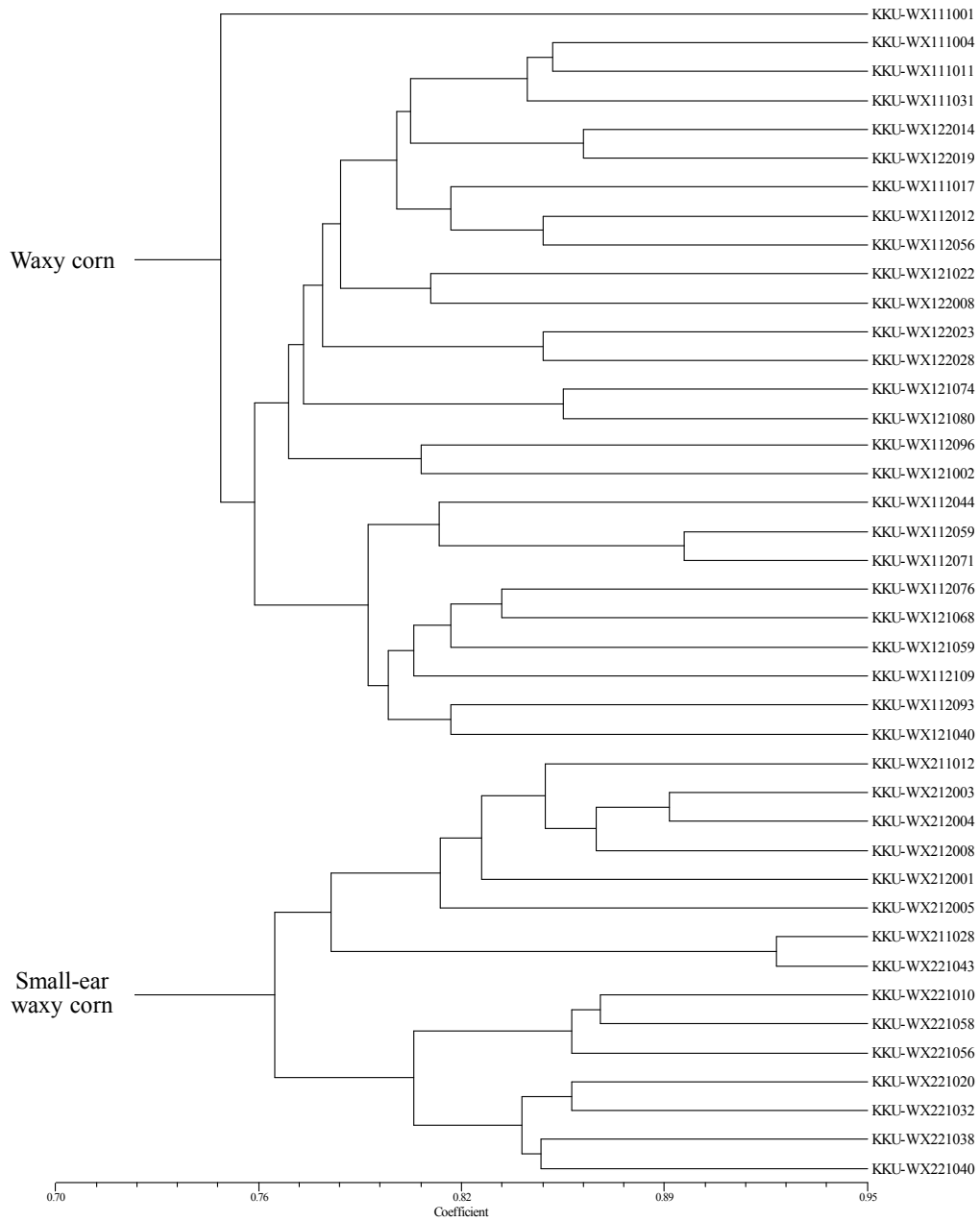


1 **Appendix A. Supplementary data**



2

3 **Figure S1.** Dendrogram of genetic relationship among 41 corn genotypes based on 13 RAPD
4 markers including OPA-01, OPA-05, OPA-06, OPA-07, OPA-08, OPA-09, OPA-10, OPA-12,
5 OPA-16, OPB-08, OPB-13, OPB-15 and OPB-20.

6 **Table S1.** List of waxy corn genotypes, origin, tassel color and phytochemical characters including total anthocyanin content (TAC),
 7 total phenolic content (TPC) and antioxidant capacity determined by DPPH and TEAC methods evaluated across two seasons.

Genotypes	Origin	Color		Phytochemicals		Antioxidant capacity	
		Glumes	Anthers	TAC	TPC	DPPH	TEAC
				($\mu\text{g CGE g}^{-1}$ DW)	(mg GAE g^{-1} DW)	($\mu\text{mol TE g}^{-1}$ DW)	($\mu\text{mol TE g}^{-1}$ DW)
Cluster A							
KKU-WX111001	Thailand	Green-purple	Yellow	60.5 \pm 8.5 q-y	27.5 \pm 4.2 yz	10.1 \pm 0.6 d'	66.4 \pm 10.1 v
KKU-WX111017	Thailand	Green	Yellow	79.6 \pm 18.0 o-w	26.1 \pm 7.5 z	11.7 \pm 3.7 b'	66.5 \pm 18.2 v
KKU-WX112059	Thailand	Green	Light green	45.8 \pm 12.1 v-y	31.6 \pm 9.8 q-t	13.9 \pm 3.0 y	93.1 \pm 32.8 pq
Cluster B							
KKU-WX111004	Thailand	Green-purple	Yellow-pink	89.6 \pm 15.4 m-v	32.1 \pm 7.5 p-s	13.2 \pm 2.5 za'	75.3 \pm 17.3 u
KKU-WX111011	Thailand	Green-purple	Green	100.9 \pm 15.7 k-q	30.8 \pm 4.5 s-v	12.0 \pm 1.5 b'	74.2 \pm 11.8 u
KKU-WX112012	Thailand	Green	Yellow	80.8 \pm 18.3 o-w	29.1 \pm 5.7 wx	14.4 \pm 2.6 x	81.7 \pm 21.5 t
KKU-WX112044	Thailand	Green-purple	Light green	90.7 \pm 6.3 m-u	30.9 \pm 3.0 s-v	16.0 \pm 1.8 r-t	88.3 \pm 16.3 r
KKU-WX112056	Thailand	Green-purple	Yellow	93.7 \pm 18.7 m-t	26.2 \pm 4.3 z	10.8 \pm 1.3 c'	74.5 \pm 16.9 u
KKU-WX112109	Thailand	Green-purple	Light green	70.6 \pm 22.9 p-y	29.8 \pm 2.6 v-x	15.6 \pm 0.5 tu	93.5 \pm 19.0 p
KKU-WX121080	China	Light green	Yellow	52.1 \pm 4.8 s-y	30.5 \pm 6.5 t-w	9.9 \pm 2.7 d'	88.9 \pm 10.9 r
KKU-WX122014	Philippines	Light green	Yellow	100.1 \pm 51.5 k-q	30.3 \pm 3.3 t-x	12.0 \pm 1.3 b'	89.2 \pm 5.4 r
KKU-WX122023	Vietnam	Green-purple	Pink	157.9 \pm 50.0 ij	30.2 \pm 1.3 t-x	12.8 \pm 1.9 a'	93.0 \pm 3.9 pq

KKU-SLE	Thailand	Green-purple	Light green	90.1±14.5 m-v	28.8±1.1 xy	15.3±0.8 uv	99.7±5.6 lm
KKU-Tein bi-color	Thailand	Green-purple	Yellow	85.7±43.4 n-w	29.1±3.1 wx	15.4±2.4 u	86.1±2.4 s
Cluster C							
KKU-WX111031	Thailand	Purple-green	Purple	791.6±63.5 e	35.4±3.3 f-i	17.7±1.4 mn	88.6±6.2 r
KKU-WX112071	Thailand	Green-purple	Light green	115.4±40.0 j-o	33.7±6.5 j-o	15.5±1.9 u	93.1±22.5 pq
KKU-WX112076	Thailand	Green-purple	Yellow-pink	128.1±12.1 i-n	34.7±1.6 g-l	17.1±0.9 op	95.9±10.6 o
KKU-WX112093	Thailand	Green-purple	Yellow	77.1±38.0 o-w	37.1±0.8 b-e	16.2±0.6 rs	103.1±9.8 ij
KKU-WX112096	Thailand	Green-purple	Yellow	73.8±35.3 o-x	33.6±2.3 j-p	14.5±2.0 wx	98.3±7.6 mn
KKU-WX121022	Laos	Green-purple	Green	139.7±21.5 i-l	34.8±5.1 g-k	16.7±1.9 pq	91.9±6.8 pq
KKU-WX121040	China	Green	Light green	97.5±42.0 l-r	37.3±1.2 b-d	15.9±1.4 st	97.2±1.4 no
KKU-WX121068	Taiwan	Green	Green	56.8±8.8 q-y	36.8±4.8 c-f	13.2±1.6 z	97.6±7.6 no
KKU-WX121074	Myanmar	Green	Yellow	215.4±28.7 g	33.3±2.8 k-p	18.0±2.2 lm	98.7±6.5 mn
KKU-WX122028	Vietnam	Green-purple	Light green	44.2±14.2 w-y	33.6±2.3 j-p	16.3±1.8 qr	102.6±5.4 jk
KKU-WX212004	Korea	Green	Light green	27.6±7.9 y	33.2±4.1 l-p	15.4±1.2 u	92.9±10.7 pq
KKU-WX212005	China	Green	Light green	98.1±7.2 k-r	35.0±0.9 g-j	13.5±0.6 yz	96.1±6.3 o
KKU-WX212008	Korea	Green	Light green	31.2±6.2 xy	34.4±2.5 h-m	16.9±2.2 op	100.8±10.3 kl
KKU-WX221032	Thailand	Green-purple	Green	142.2±35.8 i-k	35.0±1.2 g-j	17.1±1.5 o	102.0±7.1 jk
KKU-WX221038	Thailand	Green-purple	Green	54.1±36.7 r-y	34.1±0.9 i-n	14.9±1.5 vw	98.8±8.1 mn
KKU-Tein yellow	Thailand	Green-purple	Green	77.6±61.6 o-w	34.7±6.8 g-l	17.6±4.2 n	91.5±4.2 q

Cluster D

KKU-WX211012	Thailand	Green	Green	77.1±48.9 o-w	33.1±3.5 m-q	17.9±1.9 mn	102.7±6.5 j
KKU-WX211028	Thailand	Green	Yellow	50.5±7.3 t-y	33.7±1.0 j-o	18.7±1.4 k	105.8±2.2 gh
KKU-WX212001	Laos	Green	Green	68.4±14.5 p-y	32.9±0.9 n-r	18.3±1.1 kl	104.7±3.4 hi
KKU-WX221040	Thailand	Green-purple	Green	343.0±193.9 f	30.1±3.5 u-x	20.9±2.3 gh	102.5±2.3 jk
KKU-WX221056	Thailand	Green-purple	Green	96.0±19.2 l-s	34.2±1.0 h-n	19.3±3.6 j	106.1±2.7 f-h
KKU-WX221058	Thailand	Green-purple	Green	324.3±282.1 f	34.1±6.1 i-n	21.1±4.6 fg	111.9±5.5 d
KKU-Tein composite	Thailand	Green-purple	Yellow	80.1±33.5 o-w	32.3±1.5 o-s	17.5±1.8 n	106.8±5.6 e-g
KKU-Tein white	Thailand	Green-purple	Green-pink	78.2±43.2 o-w	33.6±5.5 j-p	18.1±3.3 lm	110.4±4.7 d

Cluster E

KKU-WX121002	Korea	Green-purple	Yellow-pink	130.8±37.0 i-m	37.3±1.5 b-d	19.3±2.2 j	108.0±5.6 e
KKU-WX121059	Japan	Green-purple	green	170.9±13.8 hi	36.7±1.5 c-f	20.2±2.6 i	107.9±8.2 ef
KKU-WX122008	Philippines	Green-purple	Yellow-pink	210.5±56.1 gh	36.1±0.8 d-g	18.3±1.0 kl	102.3±2.5 jk
KKU-WX122019	Vietnam	Green-purple	Green	132.0±38.1 i-m	37.9±1.6 bc	20.6±0.7 h	110.1±3.4 d
KKU-WX212003	Laos	Green	Light green	80.6±10.4 o-w	39.6±0.7 a	22.9±0.8 e	118.8±2.4 b
KKU-WX221010	Thailand	Green-purple	Green	111.9±16.4 k-p	37.5±1.3 b-d	23.7±1.5 d	110.4±5.6 d
KKU-WX221020	Thailand	Green	Light green	47.6±10.0 u-y	35.5±0.8 f-i	20.0±0.7 i	105.7±5.0 gh
KKU-WX221043	Thailand	Purple-green	Purple	798.1±185.8 e	38.5±1.7 ab	21.3±0.9 f	111.1±7.1 d

Cluster F

KKU-KND	Thailand	Purple-green	Purple	1,870.4±198.0 d	35.7±0.8 e-h	23.4±3.8 d	115.0±6.9 c
KKU-PFC1	Thailand	Blackish-purple	Blackish-purple	2,854.6±185.7 b	35.5±0.8 f-i	28.2±3.8 b	111.1±3.0 d

KKU-PFC3	Thailand	Blackish-purple	Blackish-purple	2,808.3±178.9 c	31.4±0.6 r-u	24.9±0.9 c	106.5±7.4 e-g
Cluster G							
KKU-PFC2	Thailand	Blackish-purple	Blackish-purple	4,050.5±180.7 a	39.6±2.1 a	33.5±3.2 a	124.8±3.0 a

- 8 *TAC*: total anthocyanin content, *TPC*: total phenolic content, *DPPH*: 2,2-diphenyl-1-picrylhydrazyl radical scavenging capacity, *TEAC*:
- 9 Trolox equivalent antioxidant capacity. Data are expressed as the mean±SD of three replicates across two seasons. Means with the same
- 10 letter (s) in the same column are not significantly different ($p \leq 0.05$) determined by LSD.