SUPPLEMENTARY DOCUMENTS

Heterogeneous Australian pigeonpea [*Cajanus cajan* (L.) Millsp.] genotypes with homogeneous *in-vitro* proteolysis

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Supplementary Table S1: Mineral content of the Australian pigeonpea genotypes

Parameter	ICPL 14425		ICPL 86022		ICPL 88039		ICPL 90048		ICPL 91039		ICPL 98011	
Aluminium (Al, mg/kg solids)	12.3 ± 1.8	a	8.0 ± 0.6	ab	3.3 ± 0.5	a	5.5 ± 2.2	ab	23.0 ± 7.4	a	7.7 ± 2.2	abc
Boron (B, mg/kg solids)	9.0 ± 1.3	a	8.8 ± 1.2	a	9.4 ± 0.4	a	11.4 ± 1.2	a	8.8 ± 0.0	a	10.9 ± 2.2	a
Calcium (Ca, mg/kg solids)	1025.1 ± 33.3	ab	1044.1 ± 119.9	a	829.6 ± 36.4	ac	764.2 ± 19.3	acd	736.7 ± 7.7	acd	462.0 ± 56.2	ad
Copper (Cu, mg/kg solids)	9.8 ± 1.2	a	7.7 ± 0.7	a	7.6 ± 0.7	a	9.1 ± 0.4	a	10.0 ± 0.8	a	8.8 ± 1.8	a
Iron (Fe, mg/kg solids)	56.0 ± 19.0	a	24.6 ± 2.3	a	19.6 ± 0.7	a	30.7 ± 4.2	a	25.8 ± 2.6	a	36.6 ± 7.8	a
Potassium (K, g/100 g solids)	1.0 ± 0.0	a	0.9 ± 0.1	a	1.0 ± 0.1	a	1.1 ± 0.0	a	1.1 ± 0.1	a	1.0 ± 0.2	a
Magnesium (Mg, g/100 g solids)	0.1 ± 0.0	a	0.1 ± 0.0	a	0.1 ± 0.0	a	0.1 ± 0.0	a	0.1 ± 0.0	a	0.1 ± 0.0	a
Manganese (Mn, mg/kg solids)	9.8 ± 0.2	a	10.4 ± 1.2	a	7.9 ± 0.1	a	9.1 ± 0.5	a	9.7 ± 0.6	a	9.8 ± 0.4	a
Sodium (Na, mg/kg solids)	10.5 ± 2.0	a	5.7 ± 6.8	a	9.2 ± 3.3	a	1.1 ± 0.7	a	12.2 ± 0.4	a	8.2 ± 7.3	a
Phosphorus (P, g/100 g solids)	0.3 ± 0.0	a	0.3 ± 0.0	a	0.2 ± 0.0	a	0.3 ± 0.0	a	0.3 ± 0.0	a	0.3 ± 0.1	a
Sulphur (S, g/100g solids)	0.2 ± 0.0	a	0.1 ± 0.0	a	0.1 ± 0.0	a	0.1 ± 0.0	a	0.2 ± 0.0	a	0.1 ± 0.0	a
Zinc (Zn, mg/kg solids)	25.3 ± 1.9	a	20.1 ± 2.3	abcd	16.3 ± 1.5	d	23.6 ± 0.2	abc	22.8 ± 3.7	abcd	24.3 ± 2.3	ab

Values are means ± standard deviations ($n \geq 2$), and in each row values with the same letters are non-significant ($p > 0.05$).

ICPL14425

ICPL86022

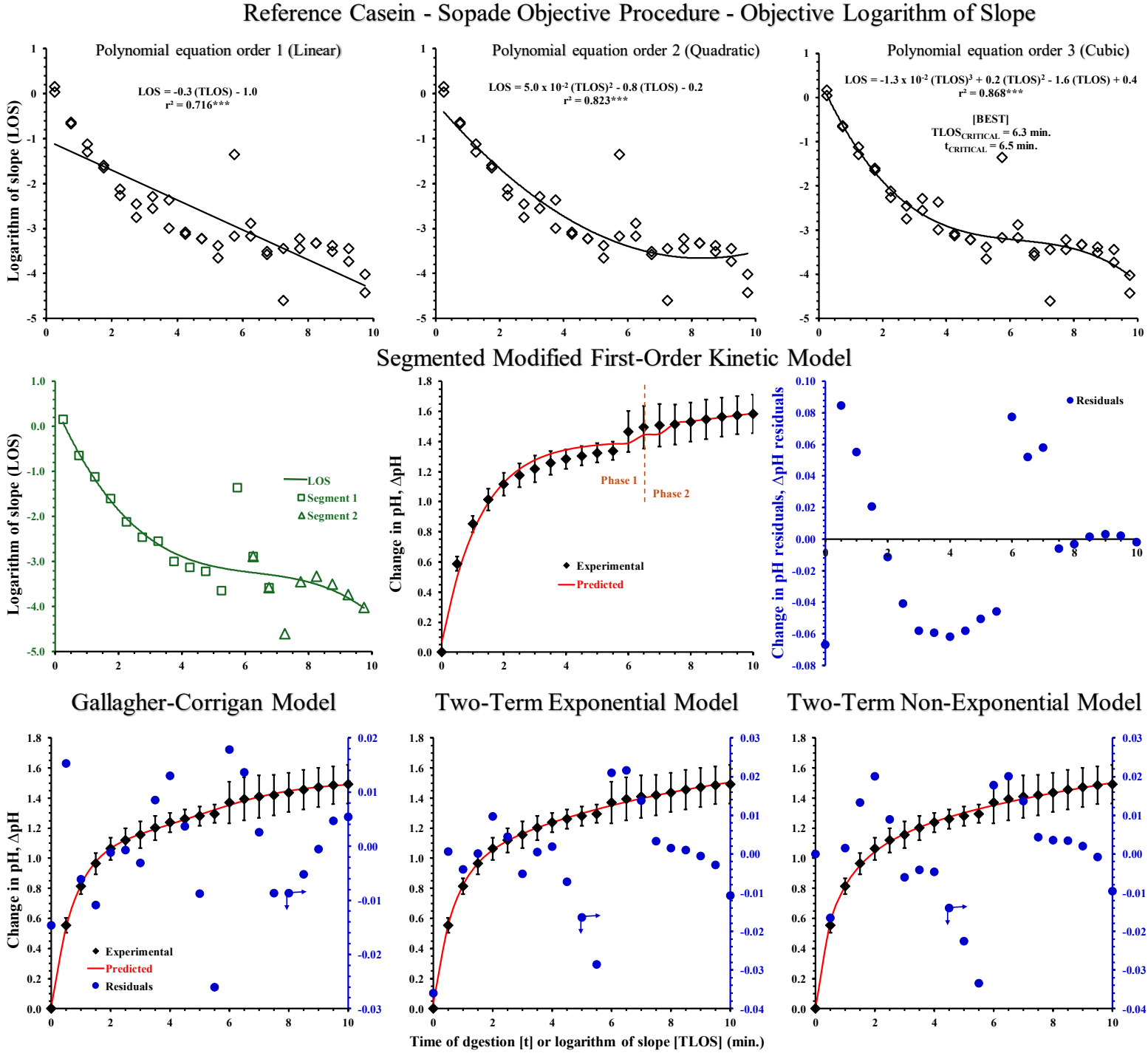
ICPL88039

ICPL90048

ICPL91039

ICPL98011

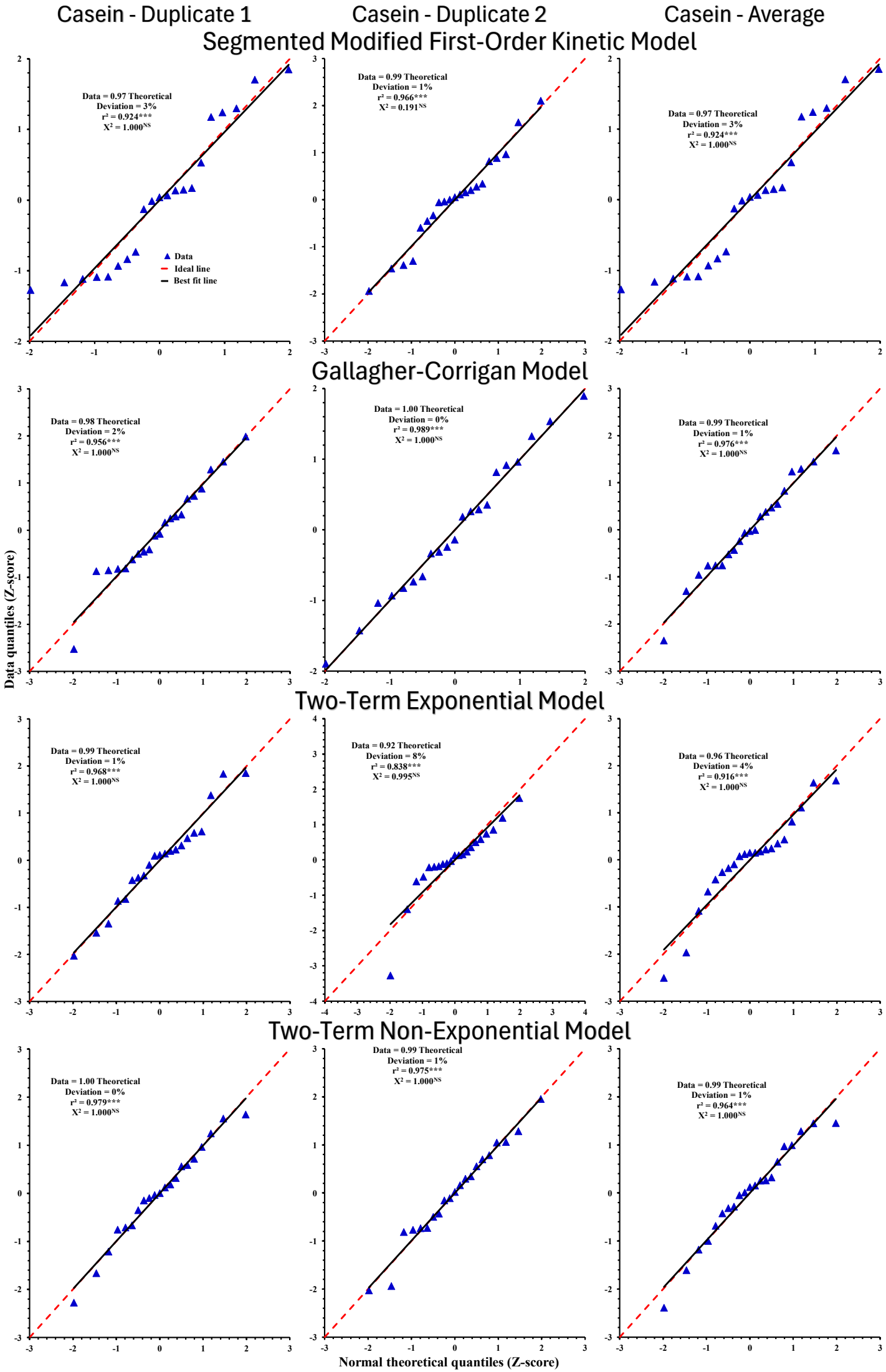
Supplementary Figure S1: The photos of the Australian pigeonpea genotypes



Parameter	Segmented Modified First-Order Kinetic Model	Gallagher-Corrigan Model	2-Term Exponential Model	**2-Term Non-Exponential Model**
ΔpH_0	0.06 ± 0.01	0.02 ± 0.01	0.04 ± 0.01	**0.00 ± 0.00**
ΔpH_1	0.06 ± 0.01	0.00 ± 0.01	0.80 ± 0.16	**1.34 ± 0.02**
ΔpH_2	1.39 ± 0.14	1.13 ± 0.12	0.93 ± 0.13	**4.66 ± 0.02**
ΔpH_3	na	0.36 ± 0.01	na	**na**
ΔpH_∞	2.57 ± 1.28	1.50 ± 0.11	1.76 ± 0.30	**6.00 ± 0.00**
$IVPD_{10min}$	92.7 ± 2.3	92.5 ± 2.3	92.9 ± 2.6	**92.9 ± 2.6**
K_{PR1} x 10^{-3}	810.7 ± 26.1	1,211.3 ± 3.3	856.9 ± 997.9	**1,917.5 ± 234.1**
K_{PR2} x 10^{-3}	59.0 ± 64.1	775.7 ± 340.2	791.6 ± 976.0	**27.1 ± 13.1**
True digestion mode	Biphasic			**Biphasic**
$t_{CRITICAL}$; t_{MAX} (min.)	6.5	5.4 ± 0.4	na	**na**
Area (pH.min.)	nd	nd	nd	**12.1 ± 0.9**
r^2	> 0.984	> 0.998	> 0.996	**> 0.995**
SUMSQ	< 0.0	< 0.0	< 0.0	**< 0.0**
MRDM	< 3.4	< 1.2	< 1.3	**< 1.6**

na = not applicable; nd = not determined; the Two-Term Non-Exponential Model (bolded) recommended for the casein digestogram.

Supplementary Figure S2: Modelling the digestogram of the reference casein



Supplementary Figure S3: The Quantile-Quantile plot of the reference casein (No patterned residuals)