

Supplementary Table S1: Gluten aggregation, mixing, extensional, and leavening properties of wheat and with increasing replacement level of cricket powder (5%, 10%, and 20% CP).

			Wheat flour	5% CP	10% CP	20% CP
GLUTEN AGGREGATION PROPERTIES (GlutoPeak Test)	Peak maximum time	(s)	186±10 ^d	131±4 ^c	99±6 ^b	71±2 ^a
	Maximum torque	(GPU)	52.3±0.6 ^a	56±0.2 ^b	57.0±1.0 ^b	63.5±0.7 ^c
	Total Energy	(cm ²)	3402±205 ^c	2882±16 ^b	2454±106 ^a	2294±31 ^a
MIXING PROPERTIES (Farinograph Test)	Water absorption	(%)	63.1±0.3 ^a	63.5±0.1 ^a	65.0±0.1 ^b	69.4±0.1 ^c
	Development time	(min)	9.5±0.4 ^c	7.6±0.4 ^b	5.9±0.1 ^a	6.2±0.2 ^a
	Stability	(min)	20.8±1.3 ^b	9.1±1.5 ^a	7.2±0.6 ^a	6.3±0.2 ^a
	Degree of softening	(FU)	27.5±6.4 ^a	59.0±7.1 ^b	59.0±2.8 ^b	70.0±4.2 ^b
EXTENSIONAL PROPERTIES (Extensograph Test)	Extensibility (E)_45	(mm)	210±13 ^c	169±9 ^b	147±1 ^b	111±1 ^a
	Resistance to extension (R)_45	(EU)	328±1 ^{ab}	323±16 ^{ab}	306±2 ^a	356±1 ^b
	R/E ratio45		1.6±0.1 ^a	1.9±0.1 ^b	2.1±0.1 ^b	3.2±0.1 ^c
	Energy_45 min	(cm ²)	161±11 ^c	103±11 ^b	73±1 ^{ab}	58±1 ^a
	Extensibility (E)_90	(mm)	202±9 ^d	172±3 ^c	144±6 ^b	107±4 ^a
	Resistance to extension (R)_90	(EU)	436±20 ^c	355±8 ^b	286±11 ^a	328±1 ^{ab}
	R/E ration_90		2.2±0.1 ^a	2.1±0.1 ^a	2.0±0.1 ^a	3.1±0.1 ^b
	Energy_90	(cm ²)	200±9 ^c	113±1 ^b	66±1 ^a	51±1 ^a
	Extensibility (E)_135	(mm)	199±4 ^d	172±1 ^c	141±6 ^b	94±3 ^a
	Resistance to extension (R)_135	(EU)	434±4 ^c	332±4 ^b	296±9 ^a	334±13 ^b
	R/E ratio_135		2.2±0.1 ^a	1.9±0.1 ^a	2.1±0.1 ^a	3.5±0.1 ^b
	Energy_135	(cm ²)	202±12 ^c	108±3 ^b	67±1 ^a	46±3 ^a
EXTENSIONAL PROPERTIES (Alveograph Test)	Tenacity (P)	(mmH ₂ O)	108±6 ^a	114±5 ^a	141±4 ^b	n.d.
	Extensibility (L)	(mm)	83±9 ^c	49±5 ^b	28±4 ^a	n.d.
	P/L		1.3±0.2 ^a	2.4±0.3 ^b	5±1 ^c	n.d.
	Force (W)	(10 ⁻⁴ J)	347±18 ^c	224±15 ^b	174±21 ^a	n.d.
LEAVENING PROPERTIES (Rheofermentograph Test)	Maximum dough height	(mm)	52.6±2.1 ^c	-	40.9±1.0 ^b	30.4±0.2 ^a
	Time of maximum dough development	(min)	160±25 ^b	-	138±9 ^a	140±1 ^a
	Dough height at 360 min	(mm)	43.6±0.6 ^c	-	32.8±1.1 ^b	27.0±0.1 ^a
	Total CO ₂	(mL)	1797±22 ^b	-	1602±86 ^{ab}	1298±21 ^a
	Retained CO ₂	(mL)	1402±11 ^b	-	1315±63 ^a	1126±11 ^a
	Released CO ₂	(mL)	395±11 ^c	-	286±23 ^b	172±8 ^a
	CO ₂ retention coefficient	(%)	78.1±0.4 ^a	-	82.2±0.5 ^b	86.8±0.5 ^c

Different letters in the same row correspond to significant differences (one-way ANOVA, Tukey test HSD, p

≤ 0.05). EU: Extensograph Units; FU: Farinograph Units; GPU: GlutoPeak Unit; n.d. not determined.