

**Table S1.** Effect of sorghum genotype on sourdough fermentation pH and titratable acidity

Sorghum genotype	pH				TA (%)			
	Fermentation time				Fermentation time			
	0 h	24 h	48 h	72 h	0 h	24 h	48 h	72 h
NWND	6.41 <sup>c</sup>	4.79 <sup>ab</sup>	4.29 <sup>bcd</sup>	3.81 <sup>ab</sup>	0.018 <sup>c</sup>	0.027 <sup>bc</sup>	0.038 <sup>bc</sup>	0.086 <sup>bc</sup>
NWHD	6.32 <sup>bc</sup>	5.15 <sup>d</sup>	4.28 <sup>abcd</sup>	3.89 <sup>ab</sup>	0.014 <sup>abc</sup>	0.030 <sup>bcd</sup>	0.040 <sup>bc</sup>	0.077 <sup>b</sup>
hWND	6.31 <sup>bc</sup>	4.74 <sup>ab</sup>	4.14 <sup>ab</sup>	3.88 <sup>ab</sup>	0.013 <sup>abc</sup>	0.023 <sup>ab</sup>	0.040 <sup>bc</sup>	0.086 <sup>bc</sup>
WHD1	6.30 <sup>bc</sup>	5.18 <sup>d</sup>	4.19 <sup>abc</sup>	3.92 <sup>ab</sup>	0.016 <sup>bc</sup>	0.033 <sup>cd</sup>	0.044 <sup>bc</sup>	0.090 <sup>bc</sup>
WND1	6.30 <sup>bc</sup>	4.70 <sup>ab</sup>	4.34 <sup>cd</sup>	3.89 <sup>ab</sup>	0.012 <sup>abc</sup>	0.038 <sup>d</sup>	0.049 <sup>c</sup>	0.096 <sup>cd</sup>
WND2	6.23 <sup>b</sup>	4.89 <sup>bc</sup>	4.22 <sup>abcd</sup>	3.92 <sup>ab</sup>	0.014 <sup>abc</sup>	0.032 <sup>bcd</sup>	0.044 <sup>bc</sup>	0.086 <sup>bc</sup>
WHD2	6.28 <sup>bc</sup>	5.10 <sup>cd</sup>	4.38 <sup>d</sup>	3.70 <sup>a</sup>	0.011 <sup>ab</sup>	0.029 <sup>bc</sup>	0.048 <sup>c</sup>	0.099 <sup>cd</sup>
WND3	6.29 <sup>bc</sup>	4.63 <sup>a</sup>	4.13 <sup>ab</sup>	3.85 <sup>ab</sup>	0.014 <sup>abc</sup>	0.030 <sup>bcd</sup>	0.048 <sup>c</sup>	0.109 <sup>d</sup>
WNTS	6.25 <sup>b</sup>	4.66 <sup>ab</sup>	4.09 <sup>a</sup>	3.72 <sup>a</sup>	0.014 <sup>abc</sup>	0.026 <sup>bc</sup>	0.045 <sup>c</sup>	0.090 <sup>bc</sup>
RNTS	6.22 <sup>b</sup>	5.09 <sup>cd</sup>	4.21 <sup>abcd</sup>	3.96 <sup>b</sup>	0.012 <sup>abc</sup>	0.025 <sup>bc</sup>	0.033 <sup>ab</sup>	0.077 <sup>b</sup>
RTS	6.16 <sup>b</sup>	5.92 <sup>e</sup>	5.87 <sup>e</sup>	5.89 <sup>c</sup>	0.010 <sup>a</sup>	0.016 <sup>a</sup>	0.023 <sup>a</sup>	0.032 <sup>a</sup>
Teff	5.87 <sup>a</sup>	5.71 <sup>e</sup>	4.13 <sup>ab</sup>	3.80 <sup>ab</sup>	0.016 <sup>bc</sup>	0.029 <sup>bc</sup>	0.083 <sup>d</sup>	0.129 <sup>e</sup>

Values are Mean  $\pm$  standard deviation (n=2). Values in a column with different letters significantly different ( $p < 0.05$ ). NWND (Non-waxy-normal protein digestibility); NWHD (Non-waxy - high protein digestibility), hWND (heterowaxy- normal protein digestibility), WHD (waxy-high protein digestibility), WND (waxy-normal protein digestibility), WNTS (white non-tannin sorghum), RNTS (red non-tannin sorghum), RTS (red tannin sorghum).

**Table S2.** Starch amylose contents and in-vitro protein digestibility (IVPD) of the sorghum genotypes

Sorghum genotypes	Starch amylose (g/100 g dry basis) *	IVPD (cooked flour) (%) **
NWND	20.1 <sup>e</sup> ± 1.6	55.0 <sup>bc</sup> ± 1.8
NWHD	18.9 <sup>de</sup> ± 1.4	65.9 <sup>d</sup> ± 1.9
hWND	14.6 <sup>cd</sup> ± 0.1	52.5 <sup>ab</sup> ± 1.6
WHD1	12.1 <sup>c</sup> ± 1.0	62.5 <sup>d</sup> ± 1.9
WND1	11.3 <sup>bc</sup> ± 1.3	48.9 <sup>ab</sup> ± 1.9
WND2	10.9 <sup>abc</sup> ± 2.3	56.4 <sup>bc</sup> ± 1.7
WHD2	6.4 <sup>ab</sup> ± 2.0	57.1 <sup>c</sup> ± 1.7
WND3	5.9 <sup>a</sup> ± 0.6	49.1 <sup>ab</sup> ± 1.8
wNTS	24.4 <sup>e</sup> ± 1.8	55.6 <sup>bc</sup> ± 1.4
RNTS	22.8 <sup>e</sup> ± 1.1	61.2 <sup>d</sup> ± 2.3
RTS	20.9 <sup>e</sup> ± 1.7	42.5 <sup>a</sup> ± 1.6

Values are Mean ± one standard deviation (n=2). Values in a column with different letters in superscript are significantly different (p < 0.05). NWND (Non-waxy-normal protein digestibility); NWHD (Non-waxy - high protein digestibility), hWND (heterowaxy- normal protein digestibility), WHD (waxy-high protein digestibility), WND (waxy-normal protein digestibility), WNTS (white non-tannin sorghum), RNTS (red non-tannin sorghum), RTS (red tannin sorghum), IVPD (In-vitro protein digestibility). \* Sorghum starch amylose data (Mezgebe et al., 2020), \*\* Cooked flour in-vitro protein digestibility data (Mezgebe et al., 2018).

**Table S3.** Correlation matrix of flour starch amylose, in-vitro-protein digestibility (IVPD), injera batter pH and titratable acidity (TA) of the sorghum genotypes the at end of the first phase fermentation

	pH	TA	Starch amylose
TA	-0.901 <sup>***</sup>		
Starch amylose	0.290ns	- 0.588ns	
In-vitro-protein digestibility	0.594ns	0.291ns	0.120ns

\*\*\*Significant at  $p < 0.001$ , ns – not significant ( $p \geq 0.05$ )