

Supplementary Table I

Correlation [r] matrix between the pasting properties and water absorption of the non-fermented sorghum batters and the physico-chemical characteristics of the sorghum varieties,

	Final viscosity	Peak viscosity	WAI 96	Protein content	Total starch	TC	FC	MC	AC	Damaged starch	Endosperm Texture			Seatback	TDF	SDF
											Floury	Intermediate	Corneous			
Peak viscosity	0,983															
WAI 96	0,002	0,144														
Protein content	-0,741	-0,852	-0,547													
Total starch	-0,289	-0,280	-0,306	0,226												
TC	0,709	0,580	-0,479	-0,110	-0,058											
FC	0,220	0,293	0,436	-0,428	-0,290	-0,347										
MC	0,790	0,866	0,443	-0,912	0,018	0,317	0,372									
Ash content	0,695	0,698	0,251	-0,565	-0,208	0,328	0,738	0,713								
DS	0,579	0,685	0,644	-0,852	-0,554	-0,125	0,757	0,682	0,666							
Floury	0,378	0,328	0,286	-0,155	-0,071	0,484	0,159	0,455	0,644	0,138						
Intermediate	-0,377	-0,325	-0,274	0,146	0,070	-0,489	-0,160	-0,448	-0,646	-0,132	-1,000					
Corneous	-0,381	-0,365	-0,454	0,286	0,078	-0,401	-0,141	-0,549	-0,600	-0,225	-0,975	0,971				
Seatback	-0,322	-0,363	-0,098	0,389	-0,691	-0,185	-0,205	-0,681	-0,507	-0,093	-0,432	0,430	0,453			
TDF	-0,126	-0,257	-0,213	0,539	-0,017	0,504	-0,559	-0,302	-0,145	-0,584	0,594	-0,598	-0,526	0,134		
SDF	0,519	0,616	0,840	-0,803	-0,539	-0,001	0,439	0,714	0,535	0,838	0,445	-0,435	-0,584	-0,109	0,165	
ISDF	-0,242	-0,387	-0,386	0,691	0,097	0,466	-0,624	-0,452	-0,263	-0,736	0,451	-0,457	-0,356	0,163	0,975	-0,380

Tc: Tannin content; FC: Fat content; MC: Moisture content; DS: Damaged starch; TDF: Total dietary fiber; SDF: Soluble dietary fiber; ISDF; Insoluble dietary fiber; WAI: water absorption index.

Supplementary Table II

Correlation [r] matrix between the pasting, functional and chemical parameters of fermented sorghum batter at 40 h

	Final viscosity	Peak viscosity	WAI96	Setback	pH	Acidity	FAN	Total starch
Peak viscosity	0,967							
WAI96	0,633	0,729						
Setback	0,639	0,535	0,502					
pH	-0,665	-0,761	-0,736	-0,024				
Acidity	0,211	0,317	0,518	-0,363	-0,848			
FAN	0,149	0,157	0,453	-0,176	-0,656	0,885		
Total starch	-0,507	-0,631	-0,883	-0,111	0,916	-0,831	-0,691	
Reducing sugar	-0,608	-0,397	-0,173	-0,691	0,109	0,101	-0,223	0,005

Supplementary Table III

Effect of fermentation on peak, final viscosity and pasting time of different Sorghum batters

Cultivar	Peak viscosity				Final viscosity				Pasting temp.			
	Time of incubation											
	0H	16H	24 H	40H	0H	16H	24 H	40 H	0H	16H	24H	40H
Tabat	379.1 ^{Ah} ± 4.1	738.4 ^{Ch} ± 1.4	857.6 ^{Dd} ± 6.7	516 ^{Bh} ± 2.3	392 ^{Ad} ± 3.6	751.9 ^{Ch} ± 6.1	887 ^{Dd} ± 2.6	528 ^{Bh} ± 4.2	77.24 ^{Ac} ± 0.3	74.37 ^{Bc} ± 0.8	72.15 ^{Cc} ± 0.5	73.50 ^{Ce} ± 0.4
Wadahmed	550.8 ^{Ad} ± 2.0	910 ^{Cd} ± 1.9	985 ^{Dc} ± 4.3	780 ^{Bd} ± 2.5	613 ^{Ab} ± 1.7	1038.3 ^{Cb} ± 1.5	1080 ^{Db} ± 1.5	787 ^{Bc} ± 1.6	77.03 ^{Ac} ± 0.1	66.98 ^{Bc} ± 0.01	65.40 ^{Be} ± 0.4	76.29 ^{Ad} ± 0.6
Wafer	419.7 ^{Ac} ± 1.9	780.6 ^{De} ± 1.5	764 ^{Ce} ± 2.6	589 ^{Be} ± 1.0	537 ^{Ac} ± 2.8	857.8 ^{Bd} ± 2.9	820 ^{De} ± 1.2	668 ^{Ce} ± 1.2	77.16 ^{Ac} ± 0.2	71.85 ^{Cd} ± 0.2	70.44 ^{Cd} ± 0.03	73.65 ^{Be} ± 0.4
Gadam	1669.7 ^{Ca} ± 1.5	2241 ^{Da} ± 6.1	1654 ^{Ba} ± 2.0	1555 ^{Aa} ± 2.5	1587 ^{Ba} ± 3.0	2170 ^{Da} ± 1.8	1620 ^{Ca} ± 3.0	1520 ^{Aa} ± 2.1	85.51 ^{Aa} ± 0.5	74.54 ^{Cc} ± 0.03	67.57 ^{De} ± 0.1	82.29 ^{Ba} ± 0.4
Lek	640.5 ^{Ac} ± 1.5	952 ^{Cc} ± 1.9	978 ^{Dc} ± 3.5	860 ^{Bc} ± 9.6	615.2 ^{Ab} ± 2.6	793.2 ^{De} ± 0.9	778 ^{Ch} ± 5.5	719 ^{Bd} ± 1.1	86.57 ^{Aa} ± 0.5	77.45 ^{Bb} ± 0.03	76.85 ^{Bb} ± 0.1	78.64 ^{Bc} ± 0.2
Macia	750.8 ^{Ab} ± 2.2	1246 ^{Db} ± 6.7	1272 ^{Cb} ± 4.2	1040.7 ^{Bb} ± 3.7	612 ^{Ab} ± 1.3	991.9 ^{Cc} ± 3.5	1061 ^{Dc} ± 2.9	850 ^{Bb} ± 2.4	83.20 ^{Ab} ± 0.8	79.60 ^{Ca} ± 0.6	79.04 ^{Ca} ± 0.5	80.20 ^{Bb} ± 0.5