

Supplementary Table 2

Environments	Year	Season	Management	Statistics	Traits	
					Zn	Fe
CIMMYT	2019	Summer	Optimum	Mean	30.7	29.7
				Range	12.9–46.7	11.3–55.1
				SD	6.4	8.2
ART Farm	2019	Summer	Optimum	Mean	29.9	30.1
				Range	16.4–49.2	12.2–54.9
				SD	5.8	7.91
DR&SS	2019	Summer	Managed Low N	Mean	24.8	20.4
				Range	13.9–39.5	7.81–34.9
				SD	5.2	6.1
CHISUMBANJE	2020	Summer	Heat and Drought	Mean	26.2	23.0
				Range	10.7–39.4	7.1–37.6
				SD	5.1	4.9
RARS	2019	Summer	Optimum	Mean	30.5	29.9
				Range	17.3–45.3	12.6–58.4
				SD	5.9	8.1
GWEBI	2019	Summer	Optimum	Mean	30.4	30.8
				Range	15.6–57.8	12.5–54.4
				SD	6.3	7.7
CHISUMBANJE	2020	Winter	Well-Watered	Mean	25.2	23.1
				Range	12.4–36.6	9.2–37.1
				SD	4.9	6.1
CHIREDDZI	2020	Winter	Heat and Drought	Mean	25.1	21.1
				Range	12.1–36.8	7.9–42.8
				SD	5.2	6.1
CHIREDDZI	2020	Winter	Well-Watered	Mean	28.3	31.5
				Range	13.3–38.5	10.5–34.9
				SD	4.7	6.5
CIMMYT	2019	Summer	Managed Low N	Mean	23.5	22.6
				Range	16.4–34.8	9.7–33.8
				SD	3.5	4.4

Zn = grain zinc concentration (mg kg⁻¹); Fe = Grain iron concentration (mg kg⁻¹), SD = Standard deviation.