

Table S2 The basic parameters and Shannon index of the phenotypic traits in *E. sibiricus*

Traits		Mean±SD		Range		CV (%)		Shannon index	
		2019	2020	2019	2020	2019	2020	2019	2020
Leaf	Flag leaf length (FL) /mm	116.41±21.64	77.59±13.04	52-256	44.70-121.60	19.01	16.89	1.75	1.45
	Flag leaf width (FW) /mm	7.21±1.07	4.86±0.96	2.86-12.24	2.09-9.09	15.06	19.96	1.74	2.04
	Second leaf length (SLL) /mm	161.56±21.93	121.80±16.89	91-319	71.33-186.67	13.58	13.97	1.34	1.61
	Second leaf width (SLW) /mm	7.78±1.03	5.58±0.90	4.63-11.82	2.74-9.85	13.16	16.63	1.71	1.84
Stem	Stem diameter (SD) /mm	2.13±0.31	1.21±0.23	1.19-4.51	0.69-3.40	14.55	18.65	1.68	1.67
	Internodes number (IN)	3.65±0.38	3.25±0.22	2.50-5.33	2.67-4.50	10.36	6.55	1.65	1.54
Spike	Spikelet number per branches (SN)	28.47±4.41	39.36±5.19	14.67-45	15.33-57	15.71	13.62	1.47	1.92
	Florets number per spikelet (FN)	6.42±1.26	3.79±0.51	3-11.67	2.50-8	19.55	12.89	1.55	1.89
	Ear length (EL) /cm	16.21±2.43	14.74±1.78	9.90-22.93	9.03-22.05	15.03	12.12	1.67	1.2
Plant type	Plant height (PH) /cm	60.49±10.09	49.36±7.30	26-100	31.33-76	16.49	14.84	1.77	1.49
	Tiller number (TN)	36.94±12.35	51.35±16.76	7-103	3.50-109.33	33.09	33.29	1.36	1.72
Seed	Breaking tensile strength (BTS) /gf	31.23±16.65	23.22±8.21	5.25-119.80	7.50-59.30	55.13	35.24	1.17	1.32
	Seed length (SL) /mm	8.79±1.24	8.73±0.62	5.04-14.04	6.41-11.20	14.08	7.03	1.39	1.85
	Seed width (SW) /mm	1.51±0.20	1.53±0.11	0.91-2.05	1.21-1.81	13.49	7.18	1.01	1.24
	Awn length (AL) /mm	10.89±2.01	10.65±1.50	3.44-21.24	2.21-19.65	18.96	15.11	1.41	1.64
	Thousand kernel Weight (TKW) /g	2.53±0.56	2.53±0.43	0.90-5.65	1.36-3.84	23.32	17.1	1.81	1.69
Flowering	Booting time (BT) /d	192.01±9.79	157.1±4.69	158.67-236.50	142.67-187.30	5.1	2.97	1.81	1.75
	Heading time (HT) /d	198.82±9.37	161.22±5.35	166.67-243	147-195.67	4.71	3.3	1.71	1.75
	Flowering time (FT) /d	206.64±8.85	166.97±5.05	181-247	151-209.50	4.29	3	1.71	1.82
Average						17.09	14.23	1.56	1.65