

Supplementary Material

Table S1. Mean grain yield and other agronomic parameters of 40 hybrids comprising 32 topcrosses and 8 commercial checks evaluated under Striga-infested conditions across four environments in Nigeria.

Genotype	GY	DA	DS	ASI	PLTH	STRRAT2	STRCOT2	EASP
FAWSYN-1/TZISTR2014	3104	58.45	64.77	1.76	132.76	3.70	18.14	2.16
FAWSYN-1/TZISTR2042-1	1840	60.22	66.42	1.92	121.51	4.51	13.36	2.47
FAWSYN-1/ IITATZI2300	2216	60.55	66.03	1.8	120.88	4.76	17.21	2.36
FAWSYN-1/ IITAZI2305	2417	61.58	66.69	1.92	126.06	4.69	13.23	2.45
FAWSYN-1/TZISTR1121	1824	58.59	64.38	1.98	115.28	4.16	22.72	2.65
FAWSYN-1/TZISTR1129	2076	61.13	67.02	2.06	123.70	4.03	17.83	2.59
FAWSYN-1/TZISTR1305	1776	62.73	68.10	2.08	109.45	4.83	10.01	2.67
FAWSYN-1/TZISTR1318	1655	59.27	65.13	0.85	109.90	4.67	13.39	2.82
FAWSYN-1/TZISTR1320	1580	60.96	66.93	1.6	109.00	5.30	24.94	2.83
FAWSYN-1/TZISTR1869	1817	58.10	64.26	2.47	113.79	4.61	22.02	2.39
FAWSYN-1/TZISTR1872	1788	58.79	64.38	2.22	109.02	4.86	9.91	2.68
FAWSYN-1/TZISTR1878	2277	62.30	67.79	2.21	128.54	5.00	15.40	2.44
FAWSYN-1/TZISTR2024	2082	60.78	66.16	2.04	124.07	3.69	12.09	2.49
FAWSYN-1/TZISTR2042-2	2285	59.28	65.49	2.16	121.47	4.56	25.60	2.50
FAWSYN-1/TZISTR2129-1	1922	61.54	66.08	2.01	108.65	4.50	16.19	2.51
FAWSYN-1/TZISTR2129-2	2035	61.01	66.77	1.77	115.75	4.68	12.29	2.68
FAWSYN-2/TZISTR2014	3008	59.91	65.22	2.15	129.33	4.37	20.73	2.39
FAWSYN-2/TZISTR2042-1	2244	61.53	65.76	1.9	119.66	3.93	18.09	2.93
FAWSYN-2/IITATZI2300	1591	59.93	65.61	1.9	127.01	4.92	22.28	2.54
FAWSYN-2/IITAZI2305	1861	62.60	67.76	2.08	118.62	5.29	16.91	2.72
FAWSYN-2/TZISTR1121	1152	59.88	66.21	2.12	110.67	5.78	6.29	3.53
FAWSYN-2/TZISTR1129	2064	61.64	66.42	2	115.96	3.93	15.24	2.66
FAWSYN-2/TZISTR1305	1708	63.27	69.41	2.2	109.77	4.13	14.16	2.76
FAWSYN-2/TZISTR1318	2251	58.89	65.40	1.74	116.90	3.78	16.57	2.39
FAWSYN-2/TZISTR1320	1931	59.79	64.99	2.13	112.02	4.72	13.73	2.79
FAWSYN-2/TZISTR1869	2161	58.01	63.50	2.11	118.29	4.34	16.96	2.52
FAWSYN-2/TZISTR1872	2158	58.77	66.59	2.67	111.46	4.48	10.42	2.83
FAWSYN-2/TZISTR1878	1821	62.28	68.39	1.94	124.78	4.81	13.59	2.59
FAWSYN-2/TZISTR2024	1740	61.87	67.13	1.91	122.46	4.52	19.43	2.69
FAWSYN-2/TZISTR2042-2	2515	61.04	66.63	2.06	123.13	4.61	15.26	2.48
FAWSYN-2/TZISTR2129-1	1932	60.81	67.61	1.76	112.03	4.48	10.64	2.50
FAWSYN-2/TZISTR2129-2	1852	61.42	66.51	1.79	126.07	4.61	15.30	2.48
Check 1-FAWSYN-3	1721	62.13	67.97	2.97	104.10	4.49	14.45	2.77
Check 2-FAWSYN-1	1924	63.37	69.83	2.23	121.99	4.75	17.66	2.72
Check 3-FAWSYN-2	1542	62.27	67.19	1.99	111.31	4.93	9.65	2.93
Check 4- SAMMAZ 51	2290	57.72	62.66	1.78	124.92	4.26	12.98	2.59
Check 5-Oba Super 11	2626	58.27	64.87	1.73	128.09	3.36	16.13	2.42
Check 6-Sammaz 24	1738	58.29	63.61	1.76	121.08	5.86	29.41	3.11
Check 7-ZMS 301	1519	56.49	63.15	2.28	115.98	6.21	44.23	3.15
Check 8-Oba Super 9	3250	59.90	64.43	1.93	121.66	3.21	6.56	2.07
overall mean	2032	60.38	66.08	2.00	118.43	4.56	16.52	2.63
SE	276	1.03	1.07	0.35	4.94	0.39	3.74	0.16
LSD	765	2.85	2.96	0.97	13.68	1.08	10.36	0.44

Table S2. Mean grain yield and other agronomic parameters of 40 hybrids comprising 32 topcrosses and 8 commercial checks evaluated under non-infested conditions across four environments in Nigeria.

Genotype	GY	DA	DS	ASI	PLTH	EH	HC	EASP
FAWSYN-1/TZISTR2014	3853	59.07	60.77	1.87	145.51	54.30	2.29	1.87
FAWSYN-2/TZISTR2014	3308	60.46	62.26	1.75	139.58	63.45	2.22	2.17
FAWSYN-1/IITATZI2300	3292	58.95	60.61	1.75	143.64	42.56	2.11	1.86
Check 5-Oba Super 11	3152	58.40	60.35	1.88	131.29	52.38	2.53	2.20
FAWSYN-2/IITATZI2300	3135	60.12	62.00	1.88	143.86	52.35	2.37	2.28
Check 8-Oba Super 9	3096	60.97	62.74	1.75	143.77	67.45	2.22	2.13
Check 4- SAMMAZ 51	2953	56.49	58.27	1.75	141.53	51.74	2.28	2.32
FAWSYN-1/ IITAZI2305	2917	60.55	62.42	2.00	133.34	58.22	2.28	2.11
FAWSYN-2/TZISTR1129	2897	61.10	62.66	1.75	128.99	51.57	2.26	2.52
FAWSYN-1/TZISTR2024	2870	58.93	60.48	1.75	139.18	58.91	1.99	2.40
FAWSYN-2/TZISTR1869	2806	57.28	59.29	2.00	133.39	52.34	2.06	2.33
FAWSYN-2/TZISTR2129-2	2783	59.84	61.52	1.88	127.69	65.56	2.37	2.09
Check 6-Sammaz 24	2755	57.11	58.79	1.75	121.18	54.60	2.29	2.25
FAWSYN-2/IITAZI2305	2737	60.06	61.75	1.87	132.90	44.94	2.10	2.34
FAWSYN-1/TZISTR1869	2725	57.36	59.25	2.00	126.16	49.65	2.60	2.35
FAWSYN-2/TZISTR1878	2713	62.48	64.27	2.12	139.60	59.50	2.30	2.66
FAWSYN-2/TZISTR2024	2700	61.56	63.33	1.75	132.68	59.78	2.45	2.72
FAWSYN-1/TZISTR1129	2699	60.74	62.80	2.00	132.88	57.09	2.28	2.39
FAWSYN-2/TZISTR1318	2636	59.47	60.87	1.62	126.52	62.52	2.30	2.18
FAWSYN-1/TZISTR2042-2	2602	60.03	61.94	1.88	130.75	50.39	2.36	2.28
FAWSYN-2/TZISTR2042-2	2597	61.20	63.05	1.88	137.60	57.83	2.19	2.40
FAWSYN-2/TZISTR2042-1	2522	61.95	63.63	1.75	132.01	57.87	2.44	2.51
Check 7-ZMS 301	2480	56.73	58.89	2.12	131.28	41.66	2.33	2.34
FAWSYN-1/TZISTR1878	2432	62.75	64.50	1.87	136.98	60.51	2.23	2.28
FAWSYN-2/TZISTR1872	2392	59.31	61.33	2.00	132.88	48.84	2.33	2.45
FAWSYN-1/TZISTR1872	2379	58.93	60.51	1.75	121.25	53.84	2.61	2.67
FAWSYN-1/TZISTR2129-1	2313	61.08	63.13	2.00	118.61	50.43	2.42	2.29
FAWSYN-1/TZISTR1121	2287	58.82	60.55	2.00	131.24	45.19	2.76	2.52
FAWSYN-2/TZISTR2129-1	2202	61.05	62.72	1.75	124.92	48.75	2.44	2.49
FAWSYN-2/TZISTR1320	2167	59.95	61.71	1.88	119.71	58.66	2.32	2.90
Check 2-FAWSYN-1	2158	59.64	61.43	2.37	137.61	49.16	2.66	2.56
FAWSYN-1/TZISTR2129-2	2137	63.35	65.08	1.75	127.62	57.84	2.39	2.40
FAWSYN-1/TZISTR1305	2120	63.81	66.02	2.12	128.91	71.48	2.39	2.54
FAWSYN-1/TZISTR2042-1	1997	60.36	62.14	1.75	133.16	59.30	2.19	2.15
FAWSYN-1/TZISTR1318	1972	60.36	62.50	2.00	124.53	66.19	3.00	2.77
FAWSYN-2/TZISTR1305	1936	63.55	65.92	2.25	124.13	49.36	2.59	2.58
Check 1-FAWSYN-3	1842	61.75	63.67	1.88	117.16	53.49	2.35	2.76
FAWSYN-1/TZISTR1320	1813	60.39	62.37	2.00	129.45	51.69	2.47	2.52
Check 3-FAWSYN-2	1669	62.37	64.13	1.88	120.59	50.42	2.51	2.90
FAWSYN-2/TZISTR1121	1616	59.38	60.98	1.75	130.77	48.36	2.63	3.34
overall mean	3853	59.07	60.77	1.87	145.51	54.30	2.29	1.87
SE	327	1.22	1.27	0.18	6.66	5.42	0.19	0.20
LSD	906	3.3794	3.5179	0.4986	18.4482	15.0134	0.5263	0.554