

Average normalized response of wheat and triticale varieties to terminal drought and nitrogen (N) stress in trials conducted in Yolo and Fresno Counties of California during the 2016-2017 and 2017-2018 seasons. Terminal drought and N stress responses are based on averages of 3 and 4 site-years of data, respectively. The normalized stress response is calculated as: $[A_i / \text{mean}(A)] + [(\text{mean}(A) - \text{mean}(B)) / \text{mean}(A)] - ((A_i - B_i) / \text{mean}(A))$, where A is a fully watered/fertilized control, B is a managed stress trial grown at the same location, and i is an individual variety. Stress trials are managed identically except for the exclusion of irrigation after the vegetative growth period (terminal drought) or the exclusion of N fertilizer additions throughout the season (N stress).

Variety Name	Terminal Drought Stress Response									Nitrogen Stress Response										
	Yield				Protein Yield			Protein			Yield				Protein Yield			Protein		
	Rank	Response (%)	SE Response	p-value	Response (%)	SE Response	p-value	Response (%)	SE Response	p-value	Rank	Response (%)	SE Response	p-value	Response (%)	SE Response	p-value	Response (%)	SE Response	p-value
ASSL TAM 204	30	-10	4.4	0.027	-12	4.9	0.018	0.5	4.3	0.908	23	-2.4	2.5	0.342	-0.5	2.3	0.815	-0.2	1.7	0.917
BAG NEW DIRKWIN	32	-20	4.4	0.000	-22.4	4.9	0.000	2.4	4.3	0.582	19	-1.4	2.5	0.584	0.5	2.3	0.818	0.6	1.7	0.701
LCS 12SB0197	8	4.7	4.4	0.291	4.2	4.9	0.403	2.9	4.3	0.497	2	8.4	2.5	0.001	-1.6	2.3	0.471	-6.2	1.7	0.000
LCS 12SB0224	4	6.1	4.4	0.175	0	4.9	0.996	-4.6	4.3	0.282	7	3.7	2.5	0.146	0.9	2.3	0.697	-1.5	1.7	0.374
LCS ATOMO	3	7.7	4.4	0.086	5.6	4.9	0.261	-5.3	4.3	0.219	4	5.8	2.5	0.023	2.1	2.3	0.350	-3.2	1.7	0.056
LCS STAR	28	-5.6	4.4	0.212	-3	4.9	0.543	7.7	4.3	0.078	5	4.4	2.5	0.087	3.2	2.3	0.161	-1.3	1.7	0.437
NS CAMELOT	21	-1.7	4.4	0.705	-1.1	4.9	0.830	-2.8	4.3	0.515	3	6.3	2.5	0.014	5.2	2.3	0.023	1	1.7	0.541
NS TRICAL 105	25	-3.8	4.4	0.395	-7.2	4.9	0.153	-6.9	4.3	0.113	14	1.3	2.5	0.618	-2.5	2.3	0.267	-4.9	1.7	0.004
NS TRICAL 115T	18	0.7	4.4	0.867	-7.9	4.9	0.117	-4.8	4.3	0.268	6	3.9	2.5	0.128	-1	2.3	0.649	-8.2	1.7	0.000
NS TRICAL 158EP	14	3	4.4	0.498	-7	4.9	0.163	-10.3	4.3	0.019	1	10.3	2.5	0.000	2.1	2.3	0.358	-9.8	1.7	0.000
SY BLANCA GRANDE 515	16	1.1	4.4	0.803	9.1	4.9	0.069	-0.8	4.3	0.852	30	-5.9	2.5	0.021	-1.6	2.3	0.485	6	1.7	0.000
SY BLANCA ROYALE	12	3.6	4.4	0.418	6.6	4.9	0.186	4.1	4.3	0.338	16	0.2	2.5	0.935	2.2	2.3	0.335	2.4	1.7	0.156
SY CAL ROJO	15	2	4.4	0.659	-3.3	4.9	0.511	-8.1	4.3	0.063	20	-1.4	2.5	0.581	-1.6	2.3	0.484	-1	1.7	0.560
SY REDWING	7	5.2	4.4	0.246	9.8	4.9	0.051	5.7	4.3	0.186	10	3.3	2.5	0.193	1.4	2.3	0.551	-2.4	1.7	0.155
SY SIENNA	9	4.6	4.4	0.297	7.8	4.9	0.118	2.1	4.3	0.630	27	-4.8	2.5	0.059	-2.7	2.3	0.229	2.4	1.7	0.144
SY SUMMIT 515	20	-0.6	4.4	0.892	-1.5	4.9	0.758	1	4.3	0.807	26	-4.6	2.5	0.068	-4.6	2.3	0.044	-0.9	1.7	0.607
UC 15010 27	2	8.3	4.4	0.066	7	4.9	0.161	-4.1	4.3	0.343	8	3.6	2.5	0.151	1.7	2.3	0.462	-1.7	1.7	0.306
UC CENTRAL RED	11	3.7	4.4	0.402	5.1	4.9	0.302	4.6	4.3	0.283	29	-5.3	2.5	0.039	-1.5	2.3	0.499	4.4	1.7	0.010
UC LASSIK	19	0	4.4	0.994	-3.6	4.9	0.473	-1.9	4.3	0.664	12	1.9	2.5	0.443	1.7	2.3	0.459	0.6	1.7	0.705
UC PATWIN 515	1	9.8	4.4	0.031	13.5	4.9	0.008	0.7	4.3	0.875	17	-0.1	2.5	0.972	0	2.3	0.990	-1.5	1.7	0.357
UC PATWIN 515HP	24	-3.7	4.4	0.405	4.2	4.9	0.400	12.6	4.3	0.005	28	-4.9	2.5	0.053	-1.3	2.3	0.580	4.1	1.7	0.015
UC YUOK	17	1	4.4	0.826	0.9	4.9	0.861	-1.1	4.3	0.791	15	1.1	2.5	0.652	3	2.3	0.180	4	1.7	0.017
WB 7566	10	4.3	4.4	0.337	4.5	4.9	0.361	-0.4	4.3	0.930	25	-4.6	2.5	0.071	-4.8	2.3	0.035	-4.5	1.7	0.007
WB 9112	26	-3.9	4.4	0.380	-2.1	4.9	0.673	3.8	4.3	0.373	22	-2.2	2.5	0.387	1.8	2.3	0.432	5.5	1.7	0.001
WB 9229	29	-9.4	4.4	0.038	-1.9	4.9	0.698	3.1	4.3	0.470	24	-3.9	2.5	0.120	2.5	2.3	0.270	8.9	1.7	0.000
WB 9350	6	5.7	4.4	0.206	4	4.9	0.424	-1.7	4.3	0.698	18	-1	2.5	0.700	-1.7	2.3	0.450	-3.9	1.7	0.021
WB 9433	5	5.9	4.4	0.187	8.9	4.9	0.078	-0.6	4.3	0.896	9	3.5	2.5	0.168	1.1	2.3	0.632	-2.3	1.7	0.176
WB 9904	22	-2.7	4.4	0.537	-3	4.9	0.545	1.6	4.3	0.709	11	2.8	2.5	0.267	2.3	2.3	0.300	-0.5	1.7	0.752
WB JOAQUIN ORO	31	-11	4.4	0.016	-6.2	4.9	0.216	7.1	4.3	0.100	32	-11.6	2.5	0.000	-3.6	2.3	0.113	12.1	1.7	0.000
WB PACHECO	13	3.4	4.4	0.446	1.5	4.9	0.759	-6.4	4.3	0.138	21	-2	2.5	0.421	-2.5	2.3	0.262	-2.5	1.7	0.137
WB PATRON	23	-3	4.4	0.498	-5.7	4.9	0.254	-4	4.3	0.354	13	1.7	2.5	0.499	0.9	2.3	0.707	-1.5	1.7	0.357
YECORA ROJO	27	-5.4	4.4	0.224	-5.1	4.9	0.303	3.7	4.3	0.384	31	-6.1	2.5	0.018	-0.8	2.3	0.708	5.8	1.7	0.001