

Table 2. Influence of gypsum on select corn variables.

Treatment	Emergence and related measurements						Tissue nutrient and yield measurements							
	Stand				Peepers ⁽²⁾	Torvane ⁽³⁾	Tissue nutrient content ⁽⁴⁾			Grain	Test			
	3 DAE ⁽¹⁾ (plants/a)	6 DAE (plants/a)	30 DAE (plants/a)	Harvest (plants/a)	30 DAE (%)	Shear Force	N (%)	Ca (%)	S (%)	Moisture (%)	Weight (lb/bu)	Yield (Bu/a)		
No gypsum	26,000	30,625	30,563	29,125	2.0	2.65	2.59	0.47	0.13	17.6	54.7	160.0		
Gypsum, half-rate	26,312	30,500	30,000	30,019	2.7	2.73	2.44	0.50	0.11	17.2	55.6	159.7		
Gypsum, full-rate	26,937	30,375	30,063	30,063	1.9	2.63	2.71	0.52	0.14	16.8	56.0	169.4		
Sulfur, unlimited							2.76	0.52	0.13	17.2	55.2	163.8		
ANOVA														
Source	df	----- p > f -----						df	----- p > f -----					
Year	1	<0.001	<0.001	0.049	0.933	0.268	0.028	1	<0.001	0.229	0.017	<0.001	<0.001	<0.001
Tmt	2	0.568	0.956	0.687	0.421	0.759	0.848	3	0.006	0.541	0.086	0.422	0.141	0.356
Tmt x Year	2	0.655	0.874	0.895	0.748	0.972	0.109	3	0.031	0.533	0.086	0.404	0.033	0.052
cv(%)		6.6	5.5	4.6	5.2	100.6	13.5		5.1	13.1	12.7	4.8	2.0	7.2
2021														
Mean		30,167	31,256	29,583	29,708	1.7	2.85	2.34	0.52	0.12	18.5	54.3	133.5	
No gypsum		30,100	31,333	29,900	28,900	1.7	3.0	2.25	0.46	0.11	19.1	52.8	123.7	
Gypsum, half-rate		30,100	31,500	29,300	29,900	2.1	3.0	2.03	0.55	0.10	18.6	54.6	124.1	
Gypsum, full-rate		30,300	31,000	29,625	30,400	1.3	2.6	2.44	0.54	0.14	17.7	55.8	147.6	
Sulfur, unlimited								2.62	0.53	0.12	18.5	53.8	138.8	
p>f	2	0.981	0.796	0.654	0.386	0.862	0.234	3	0.011	0.621	0.093	0.427	0.097	0.090
cv(%)		3.3	2.9	3.1	4.9	126.4	115.2		10.1	22.3	21.5	8.6	3.8	11.3
2022														
Mean		22,667	29,750	30,833	29,763	2.7	2.48	2.91	0.49	0.14	15.9	56.5	192.9	
No gypsum		21,875	30,000	31,250	29,375	2.4	2.3	2.93	0.48	0.15	16.0	56.6	196.4	
Gypsum, half-rate		22,500	29,750	30,750	30,164	3.3	2.5	2.84	0.46	0.13	15.8	56.6	195.3	
Gypsum, full-rate		23,625	29,500	30,500	29,750	2.5	2.7	2.98	0.49	0.14	16.0	56.1	191.2	
Sulfur, unlimited								2.90	0.51	0.13	15.9	56.6	188.7	
p>f	2	0.569	0.946	0.831	0.803	0.857	0.412	3	0.595	0.226	0.302	0.598	0.106	0.667
cv(%)		9.9	7.1	5.7	5.6	85.0	14.9		4.3	6.1	9.7	1.6	0.5	5.1

(1) DAE: days after emergence

(2) Defined as late-emerging plants whose size and developmental stage are less than one-half of the population average, expressed as percent of population.

(3) Direct reading of Torvane Shear Penetrometer using the large (0.2 ratio) disk. Readings are considered relative so not converted to units. A reading of 1.0 has a calculated shear force of 0.02 kg/cm³, an applied force leading to rupture of soil crust indicating crust strength.

(4) Tissue nutrient concentration (dry matter basis) measured at silking.

Grain yield reported at 15% moisture.