

Table 4. Individual trial agronomic performance: cover crop biomass, grain yield and response ratio.

Resp. crop/ Site ID				Reps.	Cover crop AGB (lb./a)			Yield (bu./a)**				Response ratio	
Year	Comparison*	(n)	Cover 1	Cover 2	p>f	No cover	Cover 1	Cover 2	p>f	Cover 1	Cover 2		
Corn													
JF01	2022	C. rye	C vs. NC, Usual N	3	107		165.1	167.7		0.260	1.016		
JF02	2022	C. rye	C vs. NC, High N	3	98		174.4	175.2		0.563	1.005		
JF11	2022	C. rye	C vs. NC	3	210		199.8	196.1		0.080	0.981		
RC01	2022	C. rye	Rate: 50 vs. 80	3	2,182	2,707	0.121	188.5	190.0	180.3	0.343	1.008	0.956
RC02	2022	C. rye	Term. Timing	4	229	1,899	0.002	190.5	193.5	186.7	0.724	1.016	0.980
RC03	2022	C. rye	Term. Timing	4	258	2,286	0.010	189.8	197.5	172.4	0.002	1.041	0.908
RK03	2022	C. rye	Rate: 50 vs. 80	3	621	487	0.448	223.1	213.9	215.5	0.001	0.959	0.966
WW03	2022	C. rye	Term. Timing	4	98	1,091	0.008	222.8	224.5	212.9	0.251	1.008	0.956
WW04	2022	C. rye	Term. Timing	4	127	1,226	0.001	222.8	219.0	212.8	0.505	0.983	0.955
JF17	2023	Mix	N rate: 100 vs. 140	3	(1)		153.0	168.2	180.7	0.040	1.099	1.181	
JF18	2023	Mix	N rate: 100 vs. 140	3	(1)		153.0	143.2	136.6	0.326	0.936	0.893	
JF19	2023	C. rye	C vs. NC	3	176		180.5	174.8		0.082	0.968		
RC11	2023	C. rye	Rate: 40 vs. 80	4	(2)		215.9	206.7	208.9	0.057	0.957	0.968	
RC12	2023	C. rye	Rate: 40 vs. 80	4	(2)		225.0	213.5	215.1	0.235	0.949	0.956	
WW07	2023	C. rye	Term. Timing	4	323	641	0.042	183.9	179.6	168.1	0.464	0.977	0.914
WW08	2023	C. rye	Term. Timing	4	391	841	0.005	183.9	152.9	169.9	0.188	0.831	0.924
JF25	2024	Mix	N rate: 80 vs. 120	3	1,731		n/a	196.3	195.8	193.7	0.964	0.997	0.987
JF26	2024	Mix	N rate: 80 vs. 120	3	1,897		n/a	196.3	222.8	231.9	0.060	1.135	1.181
JF29	2024	C. rye	Rate: 28 vs. 56	4	(1)		167.9	171.1	178.7	0.122	1.019	1.064	
JF30	2024	C. rye	C vs NC, High N	3	331		n/a	207.8	217.2		0.071	1.045	
JF32	2024	C. rye	C vs NC, Usual N	3	331		n/a	205.6	212.9		0.011	1.036	
WW11	2024	C. rye	Term. Timing	4	695	2,351	<0.001	192.0	199.9	178.6	0.009	1.041	0.930
WW12	2024	C. rye	Term. Timing	4	804	2,285	0.055	192.4	190.7	178.9	0.117	0.991	0.930
WW17	2024	C. rye	N rate (+ 40 lb.)	4	670		n/a	203.8	191.6	217.3	0.087	0.940	1.066
WW18	2024	C. rye	N rate (+ 40 lb.)	4	1,772		n/a	203.8	181.0	203.8	0.062	0.888	1.000
WW21	2024	C. rye	Rate: 28 vs. 56	4	1,060	1,043	0.922	205.8	203.1	205.0	0.847	0.987	0.996
Soybean													
DG01	2022	C. rye	Rate: 50 vs.80	4	96	144	0.097	62.9	63.3	63.7	0.742	1.006	1.013
DG02	2022	C. rye	Rate: 31 vs. 62	4	584	747	0.317	62.4	63.6	63.2	0.259	1.019	1.013
DG03	2022	C. rye	Placement	4	649	665	0.768	62.4	63.2	63.4	0.409	1.013	1.016
DG04	2022	C. rye	Rate: 30 vs. 60	4	259	306	0.414	75.1	77.8	78.1	0.080	1.036	1.040
DG05	2022	C. rye	Placement	4	248	231	0.608	75.1	76.4	76.0	0.279	1.017	1.012
JF03	2022	C. rye	Term. Timing	4	201	2,139	0.015	56.7	62.6	50.8	0.024	1.104	0.896
JF04	2022	C. rye	Term. Timing	4	236	2,526	0.007	59.2	57.1	48.2	0.016	0.965	0.814
JF05	2022	C. rye	Rate: 40 vs. 80	4	271	480	0.035	62.9	63.0	65.2	0.519	1.002	1.037
JF06	2022	C. rye	Rate: 40 vs. 80	4	3,451	3,633	0.522	61.9	53.5	49.9	0.001	0.864	0.806
JF07	2022	C. rye	Rate: 40 vs. 80	4	118	136	0.454	61.3	63.5	65.3	0.316	1.036	1.065
JF08	2022	C. rye	Rate: 40 vs. 80	4	2,296	1,824	0.177	64.3	58.4	60.6	0.276	0.908	0.942

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Table 4. Cont.

Resp. crop/				Reps. (n)	Cover crop AGB (lb./a)			Yield (bu./a)*				Response ratio	
Site ID	Year	Comparison			Cover 1	Cover 2	p>f	No cover	Cover 1	Cover 2	p>f	Cover 1	Cover 2
JF10	2022	C. rye	Rate: 30 vs. 150	3	944	1,146	0.451	62.7	60.8	60.3	0.184	0.970	0.962
RC04	2022	C. rye	Rate: 40 vs. 80	3	454	616	0.180	61.7	63.8	63.7	0.423	1.034	1.032
RC05	2022	C. rye	Rate: 40 vs. 80	4	2,353	2,539	0.593	61.0	57.5	61.6	0.234	0.943	1.010
RC06	2022	C. rye	Rate: 40 vs. 80	4	2,353	2,539	0.593	68.2	62.5	60.2	0.037	0.916	0.883
WW01	2022	C. rye	Term. Timing	4	50	2,370	0.012	63.3	61.8	53.0	0.075	0.976	0.837
WW02	2022	C. rye	Term. Timing	4	76	2,450	<0.001	60.3	62.2	49.6	0.029	1.032	0.823
JF13	2023	C. rye	Term. Timing	4	155	589	0.012	57.2	60.4	56.4	0.076	1.056	0.986
JF14	2023	C. rye	Term. Timing	4	155	412	0.002	59.5	60.5	55.0	0.137	1.017	0.924
JF15	2023	C. rye	Term. Timing	4	343	1,090	0.006	59.5	58.5	55.0	0.070	0.983	0.924
JF16	2023	C. rye	Term. Timing	4	343	1,791	0.001	58.9	58.4	46.8	0.004	0.992	0.795
JF20	2023	C. rye	C vs. NC	3	148		n/a	49.9	50.3	49.9	0.794	1.008	1.000
RC07	2023	C. rye	Rate: 50 vs. 100	3	2,150	2,052	0.785	53.0	47.7	45.0	0.015	0.900	0.849
RC08	2023	C. rye	Term. Timing	4	906	1,006	0.713	37.7	41.8	40.5	0.330	1.109	1.074
RC09	2023	C. rye	Term. Timing	4	894	803	0.492	38.4	44.8	41.3	0.003	1.167	1.076
RC10	2023	C. rye	Rate: 50 vs. 80	4	1,039	1,447	0.318	58.2	59.7	57.7	0.513	1.026	0.991
WW05	2023	C. rye	Term. Timing	4	105	1,688	0.002	45.0	47.8	41.5	0.025	1.062	0.922
WW06	2023	C. rye	Term. Timing	4	142	1,778	<0.001	45.0	46.5	39.9	0.015	1.033	0.887
WW09	2023	C. rye	Term. Timing	4	107	920	0.001	43.7	46.2	45.2	0.673	1.057	1.034
WW10	2023	C. rye	Term. Timing	4	107	1,295	<0.001	45.4	46.2	42.0	0.431	1.018	0.925
DG10	2024	C. rye	Rate: 28 vs. 56	3	535	721	0.072	64.4	66.3	67.5	0.449	1.030	1.048
JF21	2024	C. rye	Term. Timing	4	549	986	0.033	54.2	51.9	52.1	0.266	0.958	0.961
JF22	2024	C. rye	Term. Timing	4	548	1,749	0.005	52.4	52.5	52.5	0.996	1.002	1.002
JF23	2024	C. rye	Term. Timing	4	751	1,173	0.031	72.5	73.3	69.2	0.255	1.011	0.954
JF24	2024	C. rye	Term. Timing	4	757	1,424	0.039	71.4	73.2	68.5	0.125	1.025	0.959
JF31	2024	C. rye	C vs. NC	3	105		n/a	54.3	55.4		0.356	1.020	
JF33	2024	C. rye	Term. Timing	4	143	409	0.007	60.1	63.6	62.3	0.292	1.058	1.037
JF34	2024	C. rye	Term. Timing	4	142	629	0.002	60.0	63.5	60.1	0.267	1.058	1.002
RC16	2024	C. rye	Rate: 28 vs. 56	4	(1)			55.1	57.2	55.6	0.252	1.038	1.009
WW13	2024	C. rye	Term. Timing	4	374	603	<0.001	57.1	55.5	54.8	0.630	0.972	0.960
WW14	2024	C. rye	Term. Timing	4	366	730	0.021	57.2	54.2	57.4	0.125	0.948	1.003
WW15	2024	C. rye	Term. Timing	4	285	1,003	0.007	53.9	55.9	55.1	0.832	1.037	1.022
WW16	2024	C. rye	Term. Timing	4	285	1,613	0.006	55.3	54.0	52.2	0.737	0.976	0.944
WW19	2024	C. rye	Rate: 28 vs. 56	3	(1)			37.5	34.1	33.9	0.029	0.910	0.903
WW22	2024	C. rye	Rate: 28 vs. 56	4	361	552	0.043	35.9	39.2	38.4	0.350	1.092	1.070
RC13	2024	C. rye	Rate: 50 vs. 80	3	3,950	4,047	0.765	46.5	45.5	48.0	0.876	0.978	1.032
RC14	2024	C. rye	Rate: 50 vs. 80	4	4,445	4,136	0.690	53.7	49.8	51.7	0.040	0.927	0.963
RC20	2024	C. rye	Rate: 28 vs. 56	4	5,204	4,964	0.438	48.3	46.5	49.0	0.319	0.963	1.014

*Rates expressed in lb./acre.

**Yield reported at standard market moisture: corn, 15%; soybean, 13%

C vs. NC, cover vs. no cover, no cover management treatment comparison.

1). Unsampled, stand terminated without sampling.

2). Unsampled, stand too variable to get a representative sample.