Table 4. Mean ± standard error of potentially leachable nitrate by rotational system, treatment, and burial period at the Ramsey County site only. Cumulative sums are also presented for spring 2021 through each subsequent resin retrieval date. Parenthetical numbers represent the number of replicates represented. Similar letters indicate no differences in leaching between treatments within a rotational system and burial or summation period (α=0.05). Highlighted dates are currently estimations.

Potentially Leachable Nitrate in the Spring-Planted Cover Crop Rotation

	kg NO_3–N · ha^{-1} within each burial period							
Burial Period	Pea/oat	Cowpea/Sudex	Buckwheat	Crimson clover	Phacelia	Sunflower/oat	Weedy control	Weed-free control
2020-08-03 - 2020-10-29	29.5 ± 10.3 (4) ab	11.5 ± 1.6 (4) a	14.8 ± 2.9 (4) a	20.8 ± 1.8 (4) a	20.0 ± 10.9 (4) a	17.1 ± 6.2 (4) a	26.7 ± 5.0 (4) a	53.5 ± 8.9 (4) b
2021-04-30 - 2021-07-13	73.9 ± 17.0 (3) a	76.9 ± 25.0 (4) a	95.7 ± 11.6 (3) a	80.9 ± 25.0 (4) a	66.4 ± 14.4 (4) a	90.1 ± 6.1 (3) a	111.0 ± 5.6 (3) a	131.6 ± 13.0 (4) a
2021-07-23 - 2022-04-28	58.1 ± 4.3 (4) a	52.0 ± 14.3 (4) a	49.0 ± 12.5 (4) a	55.9 ± 8.9 (4) a	71.1 ± 24.1 (4) a	51.4 ± 13.3 (4) a	36.0 ± 6.3 (4) a	70.4 ± 5.9 (4) a
2022-05-04 - 2022-07-05	19.2 ± 3.0 (4) a	19.8 ± 5.0 (4) a	17.6 ± 7.6 (4) a	25.1 ± 6.9 (4) a	17.9 ± 3.9 (4) a	22.9 ± 5.7 (4) a	13.4 ± 4.4 (4) a	33.5 ± 1.7 (4) a
2022-07-18 - 2023-04-10								
	Cumulative sum of kg NO_3–N · ha^{-1} (First burial period excluded due to large discontinuity between first and second burials)							
Summation Period	Pea/oat	Cowpea/Sudex	Buckwheat	Crimson clover	Phacelia	Sunflower/oat	Weedy control	Weed-free control
2021-04-30 - 2021-07-13	109.3 ± 25.7 (3) AB	88.4 ± 25.8 (4) A	110.9 ± 15.3 (3) AB	101.7 ± 24.8 (4) A	86.4 ± 21.9 (4) A	109.1 ± 2.9 (3) AB	134.7 ± 1.5 (3) AB	185.1 ± 5.3 (4) B
2021-04-30 - 2022-04-28	143.0 ± 32.8 (4) A	140.4 ± 21.8 (4) A	135.6 ± 30.4 (4) A	157.6 ± 28.9 (4) A	157.5 ± 20.8 (4) A	136.1 ± 24.9 (4) A	146.0 ± 23.1 (4) A	255.6 ± 6.4 (4) B
2021-04-30 - 2022-07-05	162.2 ± 34.0 (4) A	160.1 ± 26.8 (4) A	153.2 ± 30.0 (4) A	182.7 ± 34.7 (4) A	175.5 ± 22.9 (4) A	159.0 ± 25.1 (4) A	159.3 ± 24.2 (4) A	289.1 ± 6.7 (4) B
2021-04-30 - 2023-04-10								

Potentially Leachable Nitrate in the Summer-Planted Cover Crop Rotation

	kg NO_3–N · ha^{-1} within each burial period							
Burial Period	Pea/oat	Cowpea/Sudex	Buckwheat	Crimson clover	Phacelia	Sunflower/oat	Weedy control	Weed-free control
2020-07-17 - 2020-10-29	76.1 ± 12.7 (2) a	51.7 ± 13.6 (4) a	27.6 ± 5.0 (3) a	66.7 ± 25.4 (3) a	31.7 ± 4.5 (4) a	9.3 ± 1.3 (2) a	64.4 ± 16.8 (2) a	51.2 ± 16.4 (4) a
2021-04-30 - 2021-07-01	79.7 ± 8.0 (4) ab	37.1 ± 8.2 (4) a	90.2 ± 13.3 (4) b	58.8 ± 14.3 (4) ab	78.4 ± 11.7 (4) ab	62.4 ± 12.8 (4) ab	60.3 ± 11.7 (4) ab	79.0 ± 15.8 (4) ab
2021-07-08 - 2022-04-28	72.5 ± 13.5 (3) a	66.7 ± 4.5 (2) a	99.5 ± 25.3 (4) a	59.1 ± 12.7 (4) a	42.4 ± 15.8 (3) a	62.5 ± 24.3 (2) a	76.5 ± 25.5 (4) a	80.0 ± 23.6 (4) a
2022-05-04 - 2022-06-20	33.4 ± 4.0 (4) ab	23.5 ± 8.9 (4) a	35.0 ± 9.1 (4) ab	34.2 ± 4.8 (4) ab	39.3 ± 14.0 (4) b	34.5 ± 11.7 (4) ab	28.5 ± 5.6 (4) ab	32.4 ± 7.6 (4) ab
2022-06-21 - 2023-04-10								
	Cumulative sum of kg NO_3–N · ha^{-1} (First burial period excluded due to large discontinuity between first and second burials)							
Summation Period	Pea/oat	Cowpea/Sudex	Buckwheat	Crimson clover	Phacelia	Sunflower/oat	Weedy control	Weed-free control
2021-04-30 - 2021-07-13	117.7 ± 15.1 (4) A	88.8 ± 18.9 (4) A	110.9 ± 17.3 (4) A	108.8 ± 11.0 (4) A	110.1 ± 9.8 (4) A	67.0 ± 13.2 (4) A	92.5 ± 20.3 (4) A	130.2 ± 24.3 (4) A
2021-04-30 - 2022-04-28	197.9 ± 30.9 (3) A	173.5 ± 43.1 (2) A	210.3 ± 30.0 (4) A	167.9 ± 17.2 (4) A	144.7 ± 15.2 (3) A	111.9 ± 37.8 (2) A	169.1 ± 36.0 (4) A	210.2 ± 25.3 (4) A
2021-04-30 - 2022-07-05	205.5 ± 37.2 (4) AB	145.7 ± 40.0 (4) A	245.3 ± 31.4 (4) B	202.1 ± 13.8 (4) AB	181.2 ± 21.8 (4) AB	132.7 ± 16.4 (4) A	197.5 ± 32.4 (4) AB	242.6 ± 27.6 (4) B
2021-04-30 - 2023-04-10								