NUMERICAL DATA

Nitrogen Management Affects Nitrous Oxide Emissions under Varying Cotton Irrigation Systems in the Desert Southwest, USA (2018)

Table 1. Nitrous oxide emissions as affected by N management in overhead sprinkler–irrigated ‘DP 1044 RR F’ cotton, Maricopa, AZ, 2014 and 2015.

Nitrogen treatment	Fertilizer source	Fertilizer rate		Seasonal N_2O flux		N_2O emission factor	
		2014	2015	2014	2015	2014	2015
		kg N ha^{-1}		gN_2O-N ha^{-1} $91d^{-1}$	gN_2O-N ha^{-1} $113d^{-1}$	——— % ———	
1. Zero-N		0	0	75 b†	285 c	–	–
2. Soil test-based N‡	UAN§	179	131	1123 a	1620 b	0.58 a	1.01 a
3. 1.3*soil test-based N‡	UAN	233	170	1240 a	2830 a	0.53 a	1.05 a
4. Soil test-based N‡	UAN + Agrotain Plus	179	131	269 b	856 bc	0.15 a	0.44 a
5. Reflectance-based N-1	UAN	90	66	1013 ab	783 c	1.11 a	0.77 a
6. Reflectance-based N-2#	UAN	116	85	705 ab	1099 bc	0.60 a	0.95 a
7. Reflectance-based N-1	UAN + Agrotain Plus	90	66	646 ab	761 c	0.71 a	0.72 a
8. Reflectance-based N-2#	UAN + Agrotain Plus	116	85	532 b	935 bc	0.45 a	0.72 a
SE				269	332	0.3	0.4

† Means in a column followed by a similar letter are not statistically different at P = 0.05.
‡ Based on lint yield goal of 2240 kg ha−1 and a 224 kg N ha−1 N requirement minus 0- to 90-cm soil NO3–N and estimated irrigation input of 22 kg N ha−1 (estimated 100-cm irrigation of 2 mg L−1 NO3–N water). § UAN, urea ammonium nitrate.
First split equals 50% treatment 2; second and third splits based on normalized difference vegetation index (NDVI) relative to treatment 2.
First split equals 50% treatment 2, second and third splits based on NDVI relative to treatment 3.

Source: https://www.researchgate.net/publication/322459549_Nitrogen_Management_Affects_Nitrous_Oxide_Emissions_under_Varying_Cotton_Irrigation_Systems_in_the_Desert_Southwest_USA

Nitrous Oxide Emissions from Turfgrass Receiving Different Irrigation Amounts and Nitrogen Fertilizer Forms (2018)

Table 1: Analysis of fertilizer main effect, irrigation main effect, and fertilizer ´ irrigation interaction on cumulative N2O emissions during the summer periods (June–August) in Year 1 (2015), Year 2 (2016), and both summers combined.

	Cumulative summer N_2O emissions		
Source of variation	Year 1	Year 2	Total
	———————— N_2	O-N kg ha^{-1}	————————
Fertilizer			
Urea	1.82a†	1.77a†	3.59a†
Polymer-coated urea (PCU)	1.18b	1.35b	2.53b
Unfertilized (UF)	0.974c	1.31b	2.28c
Irrigation‡			
Medium	1.36a§	1.53a¶	2.88a#
Low	1.29b	1.42 b	2.71b
Fertilizer ´ irrigation			
Urea ´ medium	1.84	1.84	3.68a§
Urea ´ low	1.80	1.70	3.50b
PCU ´ medium	1.26	1.42	2.68c
PCU ´ low	1.10	1.27	2.37d
UF ´ medium	0.975	1.32	2.29d
UF ´ low	0.973	1.29	2.27d
	ANOVA		
Source		*p*-value††	
Fertilizer	**<0.0001**	**<0.0001**	**<0.0001**
Irrigation	**0.0289**	**0.0027**	**0.0006**
Fertilizer x Irrigation	0.0901	0.2046	**0.0437**

† Within fertilizer main effect, means in column with different letters are significantly different according Fisher's LSD (P £ 0.0001).

‡ Medium irrigation level was at 72% reference evapotranspiration (ET0) replacement in 2014, at 68% ET0 replacement from 1 June to 19 July in 2015, and then at 66% ET0 replacement from 20 July to 1 September in 2015 and entire summer period in 2016. The low irrigation level was at 54% ET0 replacement in 2014, at 45% ET0 replacement from 1 June to 19 July in 2015, and then at 33% ET0 replacement from 20 July to 1 September in 2015 and entire summer period in 2016.

§ Within the source of variation, means in columns with different letters are significantly different according to Fisher's LSD (P £ 0.05).

¶ Within the source of variation, means in columns with different letters are significantly different according to Fisher's LSD (P £ 0.01).

Within the source of variation, means in columns with different letters are significantly different according to Fisher's LSD (P £ 0.001).

†† Bolded p-values are significant at either the 0.05, 0.01, or 0.001 probability level.

Nitrous Oxide Emissions from Turfgrass Receiving Different Irrigation Amounts and Nitrogen Fertilizer Forms (2018)

Table 1:Analysis of fertilizer main effect, irrigation main effect, and fertilizer ´ irrigation interaction on 2-yr total cumulative N_2O emissions for the summer periods (June– August), offseason period (September–May), and the combined total of the entire 2-yr period.

	Cumulative N_2O emissions		
Source of variation	**Total summer**	**Total offseason**	**Combined total for enti period**
	---------------------N	**ON_2 kg ha^{-1}**	---
Fertilizer			
Urea	3.59a†	2.03a‡	5.62a‡
Polymer-coated urea (PCU)	2.53b	1.97a	4.50b
Unfertilized (UF)	2.28c	1.78b	4.06c
Irrigation			
Medium	2.88a§	1.89	4.77
Low	2.71b	1.97	4.68
Fertilizer ´ irrigation			
Urea ´ medium	3.68a¶	1.95	5.63
Urea ´ low	3.50b	2.11	5.61
PCU ´ medium	2.68c	1.96	4.64
PCU ´ low	2.37d	1.99	4.36
UF ´ medium	2.29d	1.75	4.04
UF ´ low	2.27d	1.80	4.07
ANOVA			
Source	p-value#		
Fertilizer	**<0.0001**	**0.0011**	**<0.0001**
Irrigation	**0.0006**	0.1404	0.2180
Fertilizer x Irrigation	**0.0437**	0.5550	0.2093

† Within a source of variation, means in columns with different letters are significantly different according to Fisher's LSD (P £ 0.0001).
‡ Within a source of variation, means in columns with different letters are significantly different according to Fisher's LSD (P £ 0.01).
§ Within a source of variation, means in columns with different letters are significantly different according to Fisher's LSD (P £ 0.001).
¶ Within a source of variation, means in columns with different letters are significantly different according to Fisher's LSD (P £ 0.05).
# Bolded p-values are significant at either the 0.05, 0.01, or 0.001 probability level.

Management of pig manure to mitigate NO and yield-scaled N_2O emissions in an irrigated Mediterranean crop (2017)

Table 1: Cumulative N_2O-N emissions over the different periods of field experiment and total cumulative NO-N, CH_4-C and, CO_2-C fluxes in the different fertilizer (C, control, U, urea, COM, compost, LFPS, liquid fraction of pig slurry, LFPSI, liquid fraction of pig slurry + DMPP) and irrigation (S, sprinkler, D, drip) treatments.

Effect	**N_2O cumulative emission (g N_2O-N ha ^{1})**			**Total N_2O-N**	**NO cumulative emission**	**CH_4 cumulative emission**	**CO_2 cumulative emission**
	Period I	Period II	Period III	(g N_2O-N ha ^{1} y ^{1})	(kg NO-N ha ^{1} y ^{1})	(g CH_4-C ha ^{1} y ^{1})	(Mg CO_2-C ha ^{1} y ^{1})
Irrigation x fertilizer	P = 0.200	P = 0.042	P = 0.238	P = 0.026	P = 0.03	P = 0.652	P = 0.32
S.E.	13.7	80.8	31.0	91.1	0.3	102.6	0.1
Irrigation	P = 0.867	P = 0.000	P = 0.032	P = 0.000	P = 0.000	P = 0.000	P = 0.000
S	69.5	517.7 b	123.7 b	710.8 b	2.4 a	358.3 a	0.69 b
D	53.9	130.6 a	65.5 a	261.2 a	3.8 b	96.0 b	0.25 a
S.E.	6.2	36.1	13.8	40.7	0.1	45.9	0.03
Fertilizer	P = 0.000	P = 0.001	P = 0.157	P = 0.000	P = 0.000	P = 0.070	P = 0.006
C	21.5 a	53.3 a	60.9	138.6 a	2.4 a	163.8 ab	0.44 a
U	20.6 a	634.1 c	126.6	781.9 c	3.1 bc	332.1 a	0.43 a
COM	122.7 c	421.1 bc	113.9	664.7 bc	3.5 c	112.1 b	0.61 b
LFPS	95.3 c	327.2 bc	104.7	529.1 b	3.9 c	163.1 ab	0.37 a
LFPSI	48.2 b	198.7 ab	66.8	315.9 a	2.6 ab	365.1 a	0.50 a
S.E.	9.7	57.1	21.9	64.4	0.2	72.5	0.04

Different letters within columns indicate significant differences by applying the Tukey's honest significance test at $P < 0.05$.
Standard Error (S.E.) is given for each effect.
The variables N_2O (Period II), total N_2O, NO and CO_2 were log-transformed before the ANOVA.

Source: https://www.sciencedirect.com/science/article/pii/S016788091630473X