

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

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Table 3 in this paper contains an error. The fertilizer rate for the zero-N treatment in the second year (2017) should be 0 kg N ha⁻¹, not 172 kg N ha⁻¹. The corrected Table 3 is given below.

Table 3. Nitrous oxide emissions as affected by N management in subsurface drip-irrigated 'DP 1549 B2XF' cotton, Maricopa, AZ, 2016 and 2017.

Nitrogen treatment	Irrigation level		Fertilizer rate		Seasonal N ₂ O flux		N ₂ O emission factor	
	2016	2017	2016	2017	2016	2017	2016	2017
	mm		kg N ha ⁻¹		g N ₂ O-N ha ⁻¹ 117 d ⁻¹ g N ₂ O-N ha ⁻¹ 113 d ⁻¹		%	
1. Zero-N	582	608	0	0	170 a†	6 b	–	–
2. Soil test-based N‡	838	851	175	172	290 a	196 a	0	0.08 a
3. Reflectance-based N§	838	851	158	125	173 a	135 a	0	0.006 a
4. Zero-N	838	851	0	0	298 a	59 b	0	–
5. Soil test-based N	582	608	175	172	230 a	218 a	0	0.12 a
SE					68	66	–	0.05

† Means 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 (increased to 252 kg N ha⁻¹ N requirement in 2017) 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).

§ Initial N fertigation rate equals 50% treatment 2; rate was increased when normalized difference vegetation index (NDVI) was significantly less than treatment 2 NDVI.