Nitrogen dynamics in an established alfalfa field under low biochar application rates

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Supplementary table 1: Primers and PCR conditions used for gene analysis (adapted from Trivedi et al., 2011).

Primers	*Sequence (5′-3′)*	*Thermal Conditions*	*Reference*
Total Bacteria		95˚C, 15 min, 1 cycle	
Eub338	ACT CCT ACG GGA GGC AGC AG	95˚C for 1 min, 53˚C for 30 s,	Fierer et
Eub518	ATT ACC GCG GCT GCT GG	72˚C for 1 min, 40 cycles	al. 2005
Total Fungi			
ITS1f	TCC GTA GGT GAA CCT GCG G	Same as for bacteria	Fierer et
5.8s	CGC TGC GTT CTT CAT CG		al. 2005
nirK		95 C, 15 min, 1 cycle 95	
nirK876	ATY GGC GGV CAY GGC GA	95 C for 15 s, 63 to 58 C for	
nirK1040	GCC TCG ATC AGR TTR TGG TT	30 s (-1 C by cycle), 72 C for 30 s, 80 C for 15 s, 6 cycles 95 C for 15 s, 60 C for 30 s, 72 C for 30 s, 80 C for 15 s, 40 cycles 95°C for 15 s, 60 to 95°C, 1 cycle	Hallin et al. 2009
nifH			
po1F	TGC GAT CCS AAT GCB GAC TC	Same as for nirK	Hallin et
po1R	ATS GCC ATC CTY TCR CCG GA		al. 2009
		95⁰C for 15 s, 1 cycle	
nosZ		95 C, 15 min, 1 cycle 95 C for	
nosZ2F	CGC RAC GGC AAS AAG GTS MSS GT	15 s, 65 to 60 C for 30 s (-1 C	
nosZ2R	CAK RTG CAK SGC RTG GCA GAA	by cycle), 72 C for 30 s, 80 C for 15 s, 6 cycles 95 C for 15 s, 60 C for 30 s, 72 C for 30 s, 80 C for 15 s, 40 cycles 95°C for 15 s, 60 to 95°C, 1 cycle	Hallin et al. 2009