Table S2: PCR mixture and cycling conditions for PCR-DGGE analysis and real time quantification of bacterial 16S rRNA and *nif*H genes.

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| **Primers DGGE (5’-3’)** | **PCR mixture** | **Thermal conditions** |
| **Total bacterial community***F968-GC**(\*AACGCGAAGAACCTTAC)**R1401.1b*(CGGTGTGTACAAGAC CCGGGAACG)  | 0.2mM dNTPs, 3.75mM MgCl2, 1x buffer (Bioline), 1% formamide, 0.2µM each primer, 2.5U Taq polymerase (Bioline) | 95ºC 5 min 60ºC 1’ ( - 1º /cycle, until 55ºC); 72ºC 2 min 10 cycles94ºC 1 min, 55ºC 1 min, 72ºC 2 min 20 cycles Final extension of 72ºC 10 min |
| **N-fixing community***FPGH19* (TACGGCAARGGTGGNATHG)*PolR* (ATSGCCATCATYTCRCCGGA) *PolF-GC* \* (TGCGAYCCSAARGCBGACTC) *AQER* (GCCATCCATCTGTATGTCCA) | 0.20mM dNTPs, 1x buffer (Roche), 0.01mg BSA (20mg/ml), 0.5µM each primer, 0.5U Taq polymerase (Roche)0.25mM dNTPs, 1x buffer (Roche), 0.01mg BSA (20mg/ml), 0.5µM each primer, 0.8U Taq polymerase (Roche) | 94°C, 5 min94°C 60s, 56°C 1 min, 72°C 2min 30 cyclesFinal extension of 72ºC 30 min94°C, 5 min94°C 60s, 48°C 1 min, 72°C 2min 30 cyclesFinal extension of 72ºC 30 min  |
| **Primers qPCR (5’-3’)** | **PCR mixtures** | **Thermal conditions** |
| **Bacterial 16S rRNA gene***16SFP*(GGTAGTCYAYGCMSTAAACG)(Bach *et al*., 2002***)****16SRP* (GACARCCATGCASCACCTG) | 12.5µl Power Sybr Green PCR Master mix (Applied Biosystems), 0.5ul BSA (20mg/ml), 0.8µM each primer and 2ul DNA template  | 95°C 10 min, 1 cycle95°C for 27s, 62°C for 1 min, 72°C for 30s, 39 cycle |
| ***nif*H gene***FPGH19* (TACGGCAARGGTGGNATHG)*PolR* (ATSGCCATCATYTCRCCGGA) | 12.5µl Power Sybr Green PCR Master mix (Applied Biosystems), 0.5ul BSA (20mg/ml), 0.25µM each primer and 2ul DNA template  | 95°C 10 min, 1 cycle94°C for 60s, 55°C for 27s, 72°C for 60s, 39 cycle |

\*GC-clamp according to Muyzer et al., 1999