



Supplementary Figure 1. *K. sacchari* PBC6.1 colonizes the surface of corn roots. PBC6.1 harboring a plasmid with an RFP expression cassette was inoculated onto a corn seed planted on agar in a growth chamber. After seven days of plant growth, the roots were harvested and analyzed via fluorescence microscopy. PBC6.1 can be observed colonizing the perimeters of plant root cells.

Supplementary Table 1. Primers used for colonization studies

Target	Forward	Reverse	Probe
<i>nifH-por2</i> intergenic region	GCTTCCGACTGCATCTCCAT	CAAGGCTGCGATATTCGTTCGC	/56-FAM/TTCATCTTC/ZEN/ ACGGTCTGGTCTGGC/3IABkFQ/
AniL::Prm1	TAAACTGGTACTGGGCCAACT	CAAATCGAAGGCCAGACGGTAT	/56-FAM/AAGGTTGCC/ZEN/ GACCCTACGATCCCC/3IABkFQ/
AniL::Prm5	GGTGCACTCTTGCATGGTT	GCGCAGTCTCGTAATTGCC	/56-FAM/CAGGAGTGT/ZEN/ GCGATGACCCCTGAATT/3IABkFQ/

Supplementary Table 2. Primers used in the study for genotypic detection.

Primer Set	Description	Forward	Reverse
Ueda19f/407r	Degenerate primers to screen for the presence of <i>nifH</i> in isolated strains.	GCIWIYTA YGGIAARGGCCG G	AAICCRCCRCAIA CIA CRTC
Δ nifL::Prm confirmation	Primers flank the nifL gene. WT nifL yields a 2260bp amplicon; Δ nifL::Prm1 yields a 1234bp amplicon; Δ nifL::Prm5 yields a 1198bp amplicon.	GGATCTGT TGGCGATTTG	CAAGAAAAGCGCTGATCGTC
Δ glnEAR confirmation	Primers flank the glnE gene. WT nifL yields a 2444bp amplicon; Δ glnEAR1 yields a 800bp amplicon; Δ nifL::Prm5 yields a 443bp amplicon.	GCTCACCCGAGTGGCTAGTGT	CAGCTGACTGGCAAACCAC
Δ glnD confirmation	Primers flank the glnD gene. WT nifL yields a 3703bp amplicon; Δ glnD yields a 1029bp amplicon.	GTGCCATATCACGCAGGAGA	ATCAACCATGGTGCCTTCGT
Δ amtB confirmation	Primers flank the amtB gene. WT nifL yields a 1850bp amplicon; Δ amtB yields a 759bp amplicon.	CAGTGTGGAAAGCACGTCAG	TGAAGCTGGTTACCGGTGGTG
Δ nifH confirmation	Primers flank the nifH gene. WT nifL yields a 2200bp amplicon; Δ nifH yields a 958bp amplicon.	TTTATCGCCGCAAAACACG	GCTTCCGACTGCATCTCCCAT