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Supplementary Information

Table S1. Quantification of extracted metagenomic DNA samples on NanoDrop.

Sr. No.	Sample ID	NanoDrop Readings (ng/μl)	NanoDrop OD A260/280	NanoDrop OD A260/230	QC Status
1.	SA4	20.90	1.80	1.47	Pass
2.	SA5	60.8	1.79	1.34	Pass
3.	SA6	107.0	1.80	1.19	Pass

7 **Table S2:** Soil Physiochemical analysis of SA4, SA5 and SA6 sample.

Parameters	SA4	SA5	SA6
pH	7.55pH	8.48pH	7.83pH
Conductivity	420.0uS/cm	569.3uS/cm	905.4uS/cm
Moisture	36.1%	29.24%	24.31%
Water Holding capacity	53.33%	52.75%	43.21%
Organic Matter	4.48%	2.40%	2.29%
Organic C	2.60%	1.39%	1.33%
Available S	0.71mg/Kg	1.33mg/Kg	1.39mg/Kg
Cl	7.09mg/Kg	7.09mg/Kg	21.27mg/Kg
N ₂	0.05%	0.06%	0.05%
P	207.5mg/Kg	72.5mg/Kg	95.0 mg/Kg
Total Soluble solids	0.48%	0.48%	0.52%
B	BLQ, (LOQ-0.05)mg/100g	BLQ, (LOQ-0.05)mg/100g	BLQ, (LOQ-0.05)mg/100g
Ca	51.42mg/Kg	70.35mg/Kg	72.31mg/kg
Co	BLQ, (LOQ-0.2)mg/Kg	BLQ, (LOQ-0.2)mg/Kg	BLQ, (LOQ-0.2)mg/Kg
Cu	0.13mg/Kg	0.2mg/Kg	0.33mg/Kg
Mg	14.17mg/Kg	15.77mg/Kg	19.16mg/Kg
Mn	1.72mg/Kg	1.34mg/Kg	1.84mg/Kg
Mb	BLQ, (LOQ-0.2)mg/L	BLQ, (LOQ-0.2)mg/L	BLQ, (LOQ-0.2)mg/L
K	10.18mg/Kg	15.13mg/Kg	14.45mg/Kg
Fe	95.69mg/Kg	114.11mg/Kg	121.77mg/Kg
COD	350 mg/Kg	350mg/Kg	400mg/Kg
BOD	170 mg/Kg	160 mg/Kg	220mg/Kg
Petroleum and other Aromatic (GCMS)			
Propanamide, 2-hydroxy-	22.327%		14.571%
Acetone	37.473%	16.587%	38.640%
Acetonitrile	29.332%	26.412%	31.818%

1,4'-Bipiperidine	3.569%		
Malonamic acid	3.530%		
2-Chloro-L-phenylalanine	3.768%	11.651%	
Propanoic acid, 2-oxo-		24.788%	
Ethanolamine		9.443%	10.156%
Ethoxy ethanol <2->		6.191%	
Pentanal		4.929%	
Formic acid, ethenyl ester			2.123%
Ethene, ethoxy-			2.693%

Note :**LOQ**= Limit of Quantification; **BLQ**= Below Limit of Quantification.

12 **Table S3.** Statistics of assembly.

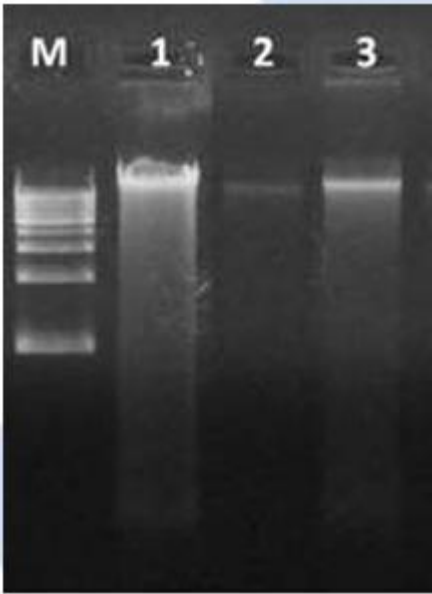
Sample Name	Number of Scaffolds	Total Length of the assembly (bp)	Average Length of Scaffolds (bp)	Scaffolds N50 (bp)	Maximum Length of Scaffolds (bp)
1. SA4	4,126	7,350,479	1,782	1,767	38,142
2. SA5	12,654	22,291,096	1,762	1,671	33,604
3. SA6	7,275	10,623,992	1,460	1,389	16,443

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15 **Table S4.** Gene Prediction Statistics

Sample Name	Number of genes	Average gene length (bp)	Maximum gene length (bp)	Minimum gene length (bp)
1. SA4	10,705	553	5,148	47
2. SA5	32,083	557	7,257	57
3. SA6	16,347	515	3,663	57



32 **Figure S1.** QC of extracted metagenomic DNA samples on Agarose gel: M: Lader, 1: SA4, 2:SA5 and 3:SA6.

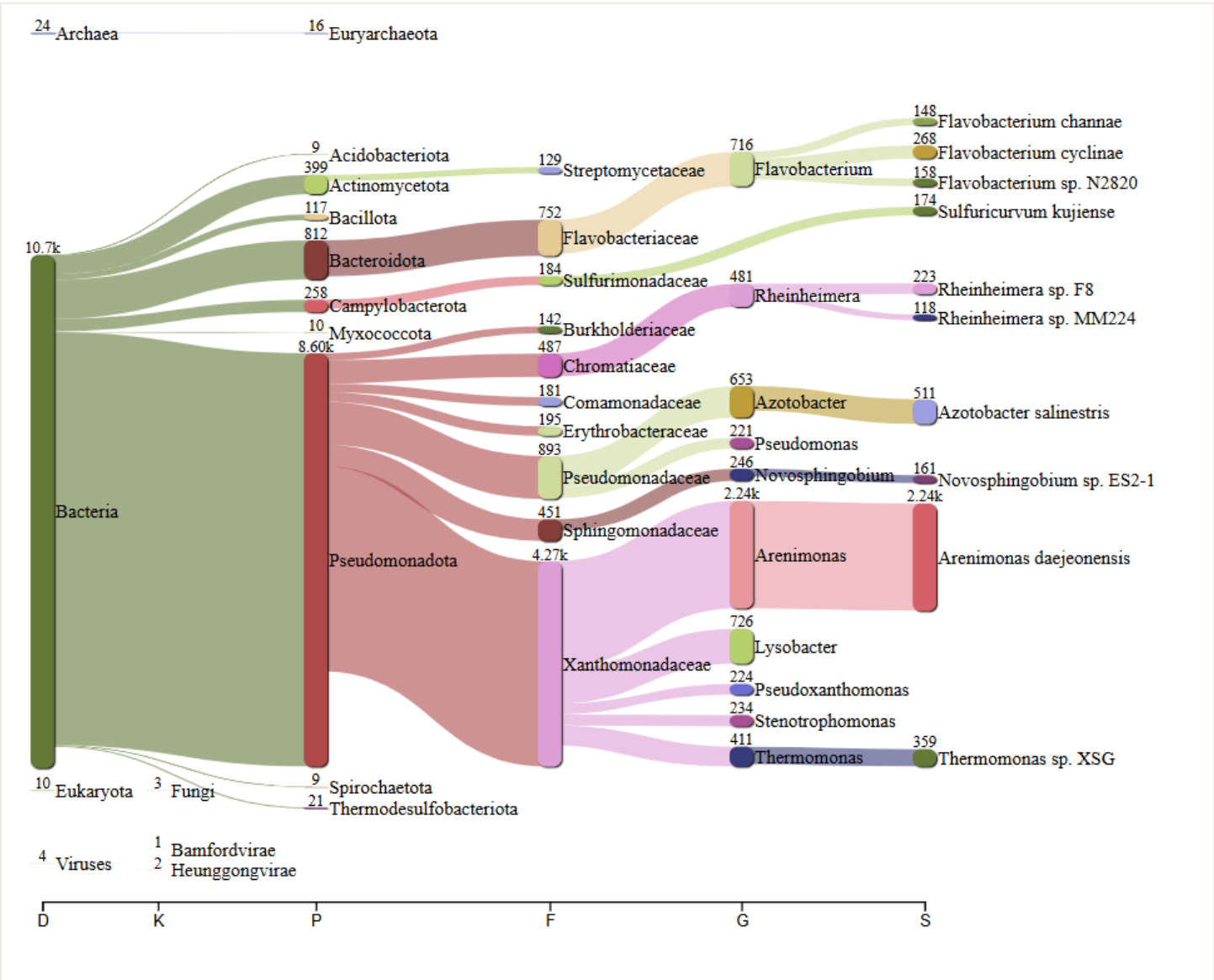


Figure S2. Sankey Representation of major microbial communities dominating in SA5 soil sample.

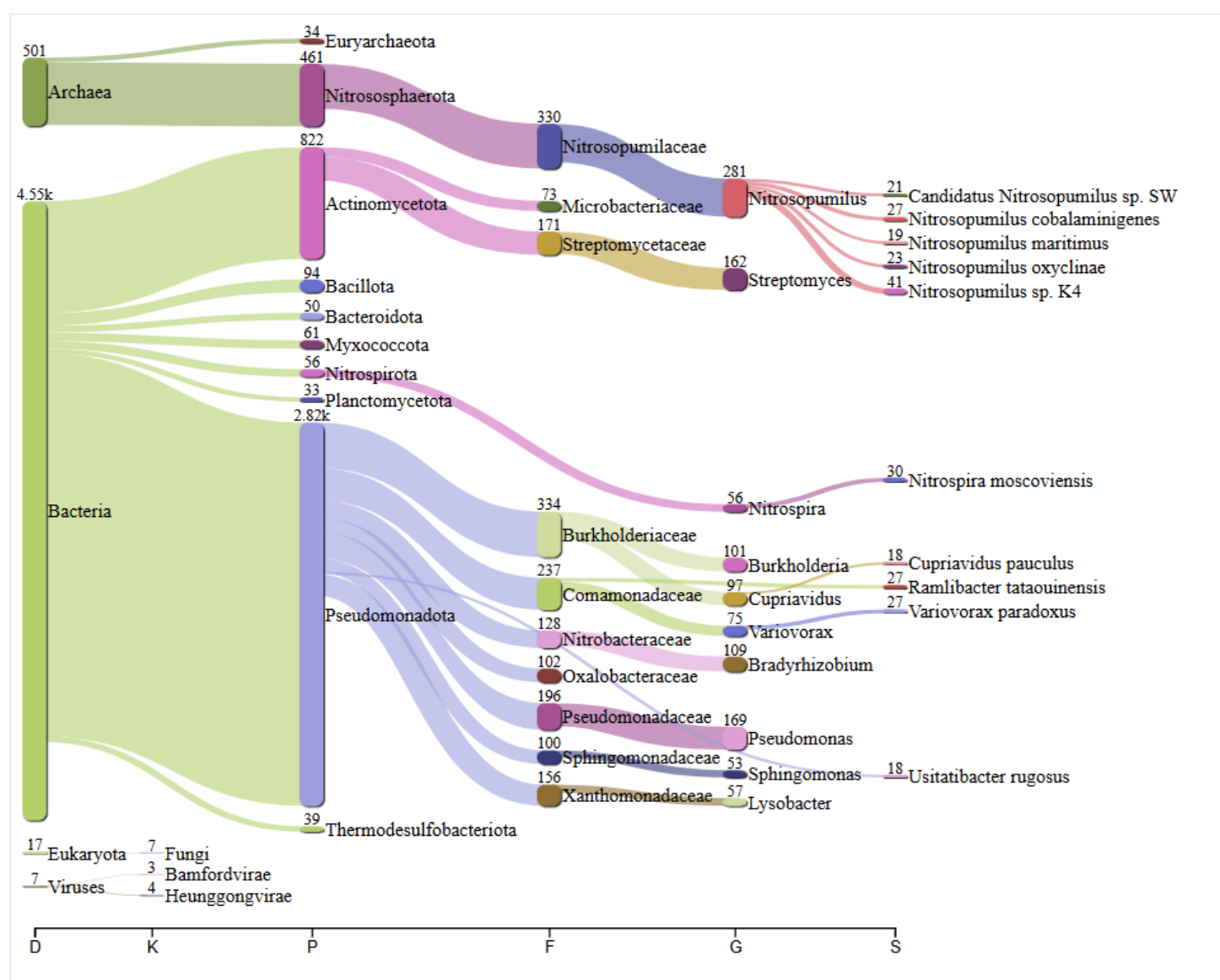


Figure S3. Sankey Representation of major microbial communities dominating in SA6 soil sample.