

**Table S1. Statistics for genome assemblies.**

Strain*	Read length (# channels) <sup>†</sup>	# of PE reads <sup>‡</sup>	# of Contigs <sup>§</sup>	Size (Mb) <sup>¶</sup>	N50 (kb) <sup>  </sup>	Predicted # CDSs <sup>**</sup>
<i>S. fredii</i> NGR234*	-	-	-	6.9	-	6322
<i>S. fredii</i> USDA207	32mer (2)	22,136,363	291	6.5	27.8	6995
<i>S. fredii</i> USDA257	32mer (2)	27,603,487	384	7.0	26.7	6723
<i>B. japonicum</i> USDA6	32mer (3)	20,995,355	788	8.7	19.6	7960
<i>B. japonicum</i> USDA110*	-	-	-	9.1	-	8317
<i>B. japonicum</i> USDA122	72mer (0.5)	19,430,723	186	8.9	31	8107
<i>B. japonicum</i> USDA123	32mer (3)	27,393,134	815	9.1	21.6	8361
<i>B. japonicum</i> USDA124	32mer (3)	14,219,973	1285	8.9	19.3	7943