**Supplemental Table 2: Data availability**

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| --- | --- | --- |
| **Experimental Assembly name** | **Published assembly name** | **Availability** |
| Hifiasm-HDA149.5 | Capsicum\_annuum\_HDA149v1.0 | NCBI: PRJNA944648Genome: JAVHYQ000000000SolGenomics: https://solgenomics.net/ftp/genomes/Capsicum\_annuum/C.annuum\_F1\_HDA149\_x\_HDA330 |
| Hifiasm-HDA330.5 | Capsicum\_annuum\_HDA330v1.0 | NCBI: PRJNA987740Genome: JAVHYR000000000SolGenomics: https://solgenomics.net/ftp/genomes/Capsicum\_annuum/C.annuum\_F1\_HDA149\_x\_HDA330  |
| TrioCanu-HDA149.5 | Capsicum\_annuum\_HDA149alt-v1.0 | USDA Ag Data Commons: https://data.nal.usda.gov/dataset/triobinning-capsicum-annuum-genome-assemblies |
| TrioCanu-HDA330.5 | Capsicum\_annuum\_HDA330alt-v1.0 | USDA Ag Data Commons: https://data.nal.usda.gov/dataset/triobinning-capsicum-annuum-genome-assemblies |
| **raw data** | **Availability** |
| PacBio HiFi sequences for F1 (HDA149 x HDA330) | NCBI BioProject PRJNA884326 |
| Illumina 150 bp paired-end sequencing data for HDA149 | NCBI SRA SRR21710630 |
| Illumina 150 bp paired-end sequencing data for HDA330 | NCBI SRA SRR21710629 |