

**Table S1. 15 plant mt genomes used in this study.**

| Classification     | Scientific Name              | Common Name         | Accession Number | Reference  |
|--------------------|------------------------------|---------------------|------------------|------------|
| <b>Algae</b>       |                              |                     |                  |            |
| Charophyta         | <i>Chara vulgaris</i>        | Green algae         | NC_005255        | [1]        |
| <b>Land plants</b> |                              |                     |                  |            |
| Bryophyta          | <i>Marchantia polymorpha</i> | Liverwort           | NC_001660        | [2]        |
| <b>Seed plants</b> |                              |                     |                  |            |
| Gymnosperm         |                              |                     |                  |            |
| Cycads             | <i>Cycas taitungensis</i>    | Emperor sago        | NC_010303        | [3]        |
| Angiosperm         |                              |                     |                  |            |
| Monocots           | <i>Phoenix dactylifera</i>   | Date palm           | NC_016740        | This study |
|                    | <i>Bambusa oldhamii</i>      | Giant timber bamboo | EU365401         | NA         |
|                    | <i>Triticum aestivum</i>     | Wheat               | NC_007579        | [4]        |
|                    | <i>Oryza sativa</i>          | Rice                | NC_011033        | [5]        |
|                    | <i>Sorghum bicolor</i>       | Sorghum             | NC_008360        | NA         |
|                    | <i>Tripsacum dactyloides</i> | Gama grass          | NC_008362        | NA         |
|                    | <i>Zea mays</i>              | Maize               | NC_007982        | [6]        |
| Dicots             | <i>Beta vulgaris</i>         | Sugar beet          | NC_002511        | [7]        |
|                    | <i>Brassica napus</i>        | Oilseed rape        | NC_008285        | [8]        |
|                    | <i>Arabidopsis thaliana</i>  | Mouse-ear cress     | NC_001284        | [9]        |
|                    | <i>Nicotiana tabacum</i>     | Tobacco             | NC_006581        | [10]       |
|                    | <i>Vitis vinifera</i>        | Grape               | NC_012119        | [11]       |

NA: no published papers are available.