Table 1S – List of assemblies characteristics

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| **Accession** | **Assembly length, Mb** | **N50, Kb** | **Largest contig, Kb** |
| *B. spatifolia*(Alvarado1\_2) | 132,8 | 2,3 | 23,4 |
| *B. spatifolia*(Alvarado1\_3) | 132,4 | 3,2 | 27,7 |
| *B. spatifolia*(Alvarado2\_1) | 97,6 | 1,05 | 11,8 |
| *B. spatifolia*(Alvarado2\_2) | 129,7 | 2,02 | 19,3 |
| *B. spatifolia*(Chicago2) | 137,9 | 8,3 | 72,8 |
| *B. spatifolia*(Chicago4) | 146,0 | 2,6 | 22,9 |
| *B. spatifolia*(Chiquito4) | 150,6 | 3,9 | 35,4 |
| *B. spatifolia*(Chiquito7) | 133,5 | 1,9 | 16,4 |
| *B. spatifolia*(Cripple6) | 158,9 | 13,8 | 139,8 |
| *B. spatifolia*(Cripple7) | 146,5 | 3,1 | 23,7 |
| *B. spatifolia*(Rosita3) | 140,9 | 15,5 | 137,8 |
| *B. spatifolia*(Rosita4) | 146,7 | 3,2 | 27,6 |
| *B. spatifolia*(Royal1) | 146,4 | 2,8 | 23,8 |
| *B. spatifolia*(Royal2) | 155,7 | 13,0 | 123,6 |
| *B. spatifolia*(Tiesiding2) | 144,7 | 6,1 | 70,8 |
| *B. spatifolia*(Tiesiding7) | 146,8 | 1,5 | 15,2 |
| *B. perrenas* | 510,0 | 3,6 | 157,6 |
| *B. divaricarpa* | 299,1 | 7,0 | 113,5 |

Table 2S Expression levels of *APOLLO* and *CENH3* genes

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| Apollo |
| Group |   |   | Average | SD | SE |
| B. Stricta | Anter | Before Meiosis | 1,06178793 | 0,452492064 | 0,261246415 |
| B. Divaricarpa | Anter | Before Meiosis | 2,365524195 | 2,116483771 | 1,221952475 |
| B. Stricta | Gynoecium | Before Meiosis | 1,425238685 | 0,753266601 | 0,434898675 |
| B. Divaricarpa | Gynoecium | Before Meiosis | 1,188318887 | 0,150263754 | 0,086754819 |
| B. Stricta | Anter | After Meiosis | 0,00354283 | 0,000446664 | 0,000257882 |
| B. Divaricarpa | Anter | After Meiosis | 0,017233733 | 0,008926632 | 0,005153793 |
| B. Stricta | Gynoecium | Pollination/After Meiosis | 0,20739819 | 0,031192065 | 0,018008747 |
| B. Divaricarpa | Gynoecium | Pollination/After Meiosis | 0,272542023 | 0,05610264 | 0,032390875 |
| B. Stricta | Gynoecium | 1 Days after Pollination | 1,682995719 | 0,502721686 | 0,290246501 |
| B. Divaricarpa | Gynoecium | 1 Days after Pollination | 1,787222654 | 0,650731523 | 0,37570002 |
| B. Stricta | Gynoecium | 3 Days after Pollination | 1,902687586 | 0,295941198 | 0,17086173 |
| B. Divaricarpa | Gynoecium | 3 Days after Pollination | 2,71351912 | 0,431543247 | 0,24915161 |

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| --- |
| Cenh3 |
| Group |   |   | Average | SD | SE |
| B. Stricta | Anter | Before Meiosis | 1,000814649 | 0,049905221 | 0,028812793 |
| B. Divaricarpa | Anter | Before Meiosis | 1,515409743 | 0,711132588 | 0,410572591 |
| B. Stricta | Gynoecium | Before Meiosis | 1,801382912 | 0,495786196 | 0,286242294 |
| B. Divaricarpa | Gynoecium | Before Meiosis | 0,769266999 | 0,564399444 | 0,325856171 |
| B. Stricta | Anter | After Meiosis | 0,008224832 | 0,003412372 | 0,001970134 |
| B. Divaricarpa | Anter | After Meiosis | 0,022724523 | 0,003392663 | 0,001958755 |
| B. Stricta | Gynoecium | Pollination/After Meiosis | 0,441339115 | 0,08054791 | 0,046504358 |
| B. Divaricarpa | Gynoecium | Pollination/After Meiosis | 0,138358872 | 0,003751564 | 0,002165966 |
| B. Stricta | Gynoecium | 1 Days after Pollination | 2,343634876 | 0,783267158 | 0,452219505 |
| B. Divaricarpa | Gynoecium | 1 Days after Pollination | 1,315657836 | 0,439333288 | 0,253649192 |
| B. Stricta | Gynoecium | 3 Days after Pollination | 2,171585569 | 0,991993178 | 0,572727528 |
| B. Divaricarpa | Gynoecium | 3 Days after Pollination | 2,20313231 | 0,225869529 | 0,130405833 |