

Table S1. Statistics of male and female reproductive output in different clones

| Clone | Gender | N | Mean | SD | Median | Trimmed | Mad | Min | Max | Range | Skew | Kurtosis | SE |
|-------|--------|-----|-------|-------|--------|---------|-------|-----|-----|-------|--------|----------|-------|
| 51 | Male | 3 | 5.000 | 2.646 | 4 | 5.000 | 1.483 | 3 | 8 | 5 | 0.324 | -2.333 | 1.528 |
| | Female | 3 | 2.333 | 1.155 | 3 | 2.333 | 0.000 | 1 | 3 | 2 | -0.385 | -2.333 | 0.667 |
| 52 | Male | 3 | 3.000 | 1.000 | 3 | 3.000 | 1.483 | 2 | 4 | 2 | 0.000 | -2.333 | 0.577 |
| | Female | 3 | 1.667 | 0.577 | 2 | 1.667 | 0.000 | 1 | 2 | 1 | -0.385 | -2.333 | 0.333 |
| 54 | Male | 312 | 4.176 | 1.658 | 4 | 4.148 | 1.483 | 1 | 8 | 7 | 0.095 | -0.468 | 0.094 |
| | Female | 312 | 2.958 | 1.594 | 3 | 2.864 | 1.483 | 0 | 8 | 8 | 0.500 | -0.243 | 0.090 |
| 55 | Male | 288 | 4.181 | 1.895 | 4 | 4.073 | 1.483 | 0 | 9 | 9 | 0.466 | -0.222 | 0.112 |
| | Female | 288 | 2.813 | 1.715 | 3 | 2.711 | 1.483 | 0 | 8 | 8 | 0.423 | -0.654 | 0.101 |
| 56 | Male | 228 | 4.351 | 1.834 | 4 | 4.266 | 1.483 | 0 | 10 | 10 | 0.267 | -0.222 | 0.121 |
| | Female | 228 | 2.583 | 1.410 | 2 | 2.484 | 1.483 | 0 | 6 | 6 | 0.441 | -0.467 | 0.093 |
| 57 | Male | 315 | 3.917 | 1.887 | 4 | 3.838 | 1.483 | 1 | 9 | 8 | 0.311 | -0.446 | 0.106 |
| | Female | 315 | 2.800 | 1.576 | 3 | 2.684 | 1.483 | 0 | 8 | 8 | 0.593 | -0.143 | 0.089 |
| 58 | Male | 306 | 4.307 | 1.909 | 4 | 4.272 | 1.483 | 1 | 10 | 9 | 0.159 | -0.487 | 0.109 |
| | Female | 306 | 2.709 | 1.542 | 3 | 2.602 | 1.483 | 0 | 8 | 8 | 0.561 | 0.009 | 0.088 |
| 59 | Male | 276 | 4.312 | 1.774 | 4 | 4.275 | 1.483 | 1 | 9 | 8 | 0.152 | -0.274 | 0.107 |
| | Female | 276 | 2.746 | 1.526 | 2 | 2.622 | 1.483 | 0 | 8 | 8 | 0.650 | -0.176 | 0.092 |
| 60 | Male | 177 | 3.960 | 1.791 | 4 | 3.881 | 1.483 | 0 | 9 | 9 | 0.301 | -0.513 | 0.135 |
| | Female | 177 | 2.819 | 1.578 | 3 | 2.748 | 1.483 | 0 | 7 | 7 | 0.332 | -0.663 | 0.119 |
| 61 | Male | 249 | 4.181 | 1.774 | 4 | 4.149 | 1.483 | 1 | 10 | 9 | 0.171 | -0.309 | 0.112 |
| | Female | 249 | 2.871 | 1.555 | 3 | 2.821 | 1.483 | 0 | 8 | 8 | 0.373 | -0.122 | 0.099 |
| 62 | Male | 195 | 4.021 | 1.799 | 4 | 3.955 | 1.483 | 0 | 10 | 10 | 0.318 | 0.217 | 0.129 |
| | Female | 195 | 2.646 | 1.567 | 2 | 2.510 | 1.483 | 0 | 8 | 8 | 0.689 | -0.117 | 0.112 |
| 63 | Male | 192 | 4.547 | 1.801 | 5 | 4.500 | 1.483 | 1 | 9 | 8 | 0.090 | -0.518 | 0.130 |
| | Female | 192 | 2.703 | 1.647 | 2 | 2.571 | 1.483 | 0 | 8 | 8 | 0.673 | -0.037 | 0.119 |
| 64 | Male | 216 | 4.144 | 1.820 | 4 | 4.057 | 1.483 | 1 | 9 | 8 | 0.290 | -0.434 | 0.124 |
| | Female | 216 | 2.713 | 1.424 | 3 | 2.638 | 1.483 | 0 | 6 | 6 | 0.395 | -0.309 | 0.097 |
| 65 | Male | 177 | 4.107 | 2.046 | 4 | 4.035 | 2.965 | 0 | 9 | 9 | 0.244 | -0.765 | 0.154 |
| | Female | 177 | 2.847 | 1.375 | 3 | 2.776 | 1.483 | 0 | 6 | 6 | 0.287 | -0.500 | 0.103 |
| 66 | Male | 168 | 4.006 | 1.725 | 4 | 3.963 | 1.483 | 0 | 9 | 9 | 0.193 | -0.161 | 0.133 |
| | Female | 168 | 2.738 | 1.513 | 3 | 2.610 | 1.483 | 0 | 8 | 8 | 0.714 | 0.322 | 0.117 |
| 67 | Male | 183 | 4.306 | 1.885 | 4 | 4.224 | 1.483 | 1 | 9 | 8 | 0.271 | -0.659 | 0.139 |
| | Female | 183 | 2.503 | 1.511 | 2 | 2.395 | 1.483 | 0 | 7 | 7 | 0.550 | -0.365 | 0.112 |
| 68 | Male | 336 | 4.318 | 1.723 | 4 | 4.252 | 1.483 | 1 | 10 | 9 | 0.274 | -0.150 | 0.094 |
| | Female | 336 | 2.801 | 1.617 | 2 | 2.693 | 1.483 | 0 | 8 | 8 | 0.526 | -0.416 | 0.088 |
| 69 | Male | 93 | 4.247 | 1.828 | 4 | 4.213 | 1.483 | 1 | 9 | 8 | 0.165 | -0.052 | 0.190 |
| | Female | 93 | 2.613 | 1.622 | 2 | 2.440 | 1.483 | 0 | 7 | 7 | 0.782 | 0.002 | 0.168 |

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|----|--------|-----|-------|-------|-----|-------|-------|---|----|---|--------|--------|-------|
| 70 | Male | 87 | 4.356 | 1.823 | 4 | 4.296 | 1.483 | 1 | 9 | 8 | 0.245 | -0.291 | 0.195 |
| | Female | 87 | 2.333 | 1.387 | 2 | 2.169 | 1.483 | 0 | 7 | 7 | 1.183 | 1.770 | 0.149 |
| 71 | Male | 18 | 4.167 | 1.295 | 4 | 4.063 | 1.483 | 2 | 8 | 6 | 1.092 | 1.898 | 0.305 |
| | Female | 18 | 3.944 | 1.305 | 4 | 3.875 | 1.483 | 2 | 7 | 5 | 0.546 | -0.292 | 0.308 |
| 72 | Male | 39 | 3.103 | 1.861 | 3 | 2.970 | 1.483 | 0 | 8 | 8 | 0.714 | -0.224 | 0.298 |
| | Female | 39 | 2.872 | 1.380 | 3 | 2.788 | 1.483 | 1 | 6 | 5 | 0.575 | -0.454 | 0.221 |
| 74 | Male | 21 | 3.714 | 2.369 | 4 | 3.588 | 2.965 | 0 | 9 | 9 | 0.325 | -0.833 | 0.517 |
| | Female | 21 | 2.952 | 1.465 | 3 | 2.824 | 1.483 | 1 | 7 | 6 | 0.804 | 0.516 | 0.320 |
| 75 | Male | 87 | 4.023 | 1.555 | 4 | 3.930 | 1.483 | 1 | 8 | 7 | 0.402 | -0.163 | 0.167 |
| | Female | 87 | 2.437 | 1.530 | 2 | 2.296 | 1.483 | 0 | 6 | 6 | 0.657 | -0.287 | 0.164 |
| 76 | Male | 69 | 4.130 | 1.757 | 4 | 4.105 | 1.483 | 1 | 8 | 7 | 0.061 | -0.538 | 0.211 |
| | Female | 69 | 2.652 | 1.523 | 2 | 2.544 | 1.483 | 0 | 6 | 6 | 0.564 | -0.504 | 0.183 |
| 77 | Male | 78 | 4.513 | 1.741 | 5 | 4.484 | 1.483 | 1 | 9 | 8 | 0.117 | -0.076 | 0.197 |
| | Female | 78 | 2.846 | 1.433 | 3 | 2.750 | 1.483 | 0 | 7 | 7 | 0.476 | -0.044 | 0.162 |
| 78 | Male | 9 | 2.778 | 1.394 | 3 | 2.778 | 1.483 | 1 | 5 | 4 | 0.101 | -1.543 | 0.465 |
| | Female | 9 | 4.778 | 1.716 | 4 | 4.778 | 1.483 | 2 | 8 | 6 | 0.304 | -0.779 | 0.572 |
| 79 | Male | 48 | 4.042 | 1.856 | 4 | 4.050 | 1.483 | 0 | 9 | 9 | -0.020 | 0.401 | 0.268 |
| | Female | 48 | 2.500 | 1.368 | 2 | 2.400 | 1.483 | 0 | 6 | 6 | 0.439 | -0.569 | 0.198 |
| 80 | Male | 51 | 4.863 | 1.980 | 5 | 4.902 | 1.483 | 1 | 8 | 7 | -0.253 | -0.842 | 0.277 |
| | Female | 51 | 2.804 | 1.662 | 3 | 2.756 | 1.483 | 0 | 6 | 6 | 0.126 | -1.026 | 0.233 |
| 81 | Male | 21 | 4.905 | 1.841 | 5 | 4.882 | 1.483 | 2 | 8 | 6 | 0.041 | -1.234 | 0.402 |
| | Female | 21 | 2.619 | 1.596 | 2 | 2.412 | 1.483 | 1 | 6 | 5 | 0.813 | -0.484 | 0.348 |
| 82 | Male | 81 | 3.926 | 1.730 | 4 | 3.862 | 1.483 | 0 | 8 | 8 | 0.241 | -0.673 | 0.192 |
| | Female | 81 | 2.136 | 1.349 | 2 | 1.985 | 1.483 | 0 | 6 | 6 | 0.843 | 0.104 | 0.150 |
| 83 | Male | 84 | 4.452 | 1.806 | 4 | 4.397 | 1.483 | 1 | 10 | 9 | 0.325 | 0.097 | 0.197 |
| | Female | 84 | 2.560 | 1.492 | 2 | 2.412 | 1.483 | 0 | 6 | 6 | 0.639 | -0.267 | 0.163 |
| 84 | Male | 39 | 3.974 | 2.277 | 4 | 3.939 | 2.965 | 0 | 8 | 8 | 0.174 | -0.915 | 0.365 |
| | Female | 39 | 2.590 | 1.618 | 3 | 2.576 | 1.483 | 0 | 6 | 6 | 0.152 | -1.122 | 0.259 |
| 85 | Male | 36 | 4.722 | 2.119 | 5 | 4.667 | 2.965 | 1 | 9 | 8 | 0.163 | -0.796 | 0.353 |
| | Female | 36 | 2.639 | 1.791 | 2 | 2.567 | 1.483 | 0 | 7 | 7 | 0.446 | -0.718 | 0.299 |
| 86 | Male | 51 | 4.490 | 1.815 | 4 | 4.415 | 1.483 | 1 | 10 | 9 | 0.429 | 0.215 | 0.254 |
| | Female | 51 | 2.843 | 1.713 | 3 | 2.732 | 1.483 | 0 | 7 | 7 | 0.496 | -0.482 | 0.240 |
| 87 | Male | 24 | 4.750 | 1.939 | 4.5 | 4.750 | 2.224 | 1 | 8 | 7 | 0.064 | -0.895 | 0.396 |
| | Female | 24 | 2.292 | 1.681 | 2 | 2.250 | 1.483 | 0 | 5 | 5 | 0.453 | -1.321 | 0.343 |
| 88 | Male | 30 | 4.933 | 1.760 | 5 | 4.917 | 1.483 | 2 | 9 | 7 | 0.171 | -0.504 | 0.321 |
| | Female | 30 | 2.500 | 1.196 | 2 | 2.417 | 1.483 | 1 | 5 | 4 | 0.409 | -0.805 | 0.218 |
| 89 | Male | 102 | 4.382 | 2.044 | 4 | 4.305 | 1.483 | 0 | 9 | 9 | 0.268 | -0.362 | 0.202 |
| | Female | 102 | 2.216 | 1.460 | 2 | 2.049 | 1.483 | 0 | 7 | 7 | 0.951 | 0.616 | 0.145 |
| 90 | Male | 45 | 3.600 | 1.827 | 4 | 3.459 | 1.483 | 1 | 8 | 7 | 0.456 | -0.181 | 0.272 |
| | Female | 45 | 2.667 | 1.758 | 2 | 2.432 | 1.483 | 0 | 8 | 8 | 1.091 | 0.790 | 0.262 |

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|-----|--------|-----|-------|-------|-----|-------|-------|---|----|---|--------|--------|-------|
| 91 | Male | 51 | 3.882 | 1.796 | 4 | 3.902 | 1.483 | 1 | 7 | 6 | -0.091 | -1.184 | 0.252 |
| | Female | 51 | 2.608 | 1.710 | 2 | 2.561 | 1.483 | 0 | 6 | 6 | 0.279 | -0.941 | 0.239 |
| 92 | Male | 48 | 4.125 | 1.709 | 4 | 4.175 | 1.483 | 0 | 8 | 8 | -0.391 | -0.117 | 0.247 |
| | Female | 48 | 2.604 | 1.685 | 2 | 2.550 | 1.483 | 0 | 6 | 6 | 0.333 | -0.759 | 0.243 |
| 93 | Male | 30 | 4.067 | 1.388 | 4 | 4.167 | 1.483 | 1 | 6 | 5 | -0.563 | -0.462 | 0.253 |
| | Female | 30 | 2.967 | 1.771 | 3 | 2.833 | 2.965 | 1 | 7 | 6 | 0.337 | -1.042 | 0.323 |
| 94 | Male | 18 | 4.444 | 1.790 | 5 | 4.438 | 1.483 | 2 | 7 | 5 | -0.234 | -1.441 | 0.422 |
| | Female | 18 | 2.389 | 1.944 | 2 | 2.313 | 1.483 | 0 | 6 | 6 | 0.385 | -1.317 | 0.458 |
| 95 | Male | 36 | 4.361 | 1.885 | 4 | 4.367 | 1.483 | 1 | 8 | 7 | 0.086 | -0.989 | 0.314 |
| | Female | 36 | 3.139 | 1.570 | 3 | 3.033 | 1.483 | 1 | 7 | 6 | 0.681 | -0.642 | 0.262 |
| 96 | Male | 45 | 4.756 | 1.811 | 5 | 4.703 | 1.483 | 1 | 9 | 8 | 0.290 | -0.391 | 0.270 |
| | Female | 45 | 2.489 | 1.424 | 2 | 2.378 | 1.483 | 0 | 6 | 6 | 0.599 | -0.487 | 0.212 |
| 97 | Male | 189 | 4.296 | 1.856 | 4 | 4.248 | 1.483 | 1 | 9 | 8 | 0.177 | -0.608 | 0.135 |
| | Female | 189 | 2.788 | 1.640 | 2 | 2.647 | 1.483 | 0 | 8 | 8 | 0.714 | -0.019 | 0.119 |
| 98 | Male | 84 | 4.286 | 1.807 | 4 | 4.250 | 1.483 | 1 | 9 | 8 | 0.205 | -0.505 | 0.197 |
| | Female | 84 | 2.250 | 1.307 | 2 | 2.088 | 1.483 | 0 | 6 | 6 | 1.042 | 0.845 | 0.143 |
| 99 | Male | 102 | 4.225 | 1.829 | 4 | 4.244 | 1.483 | 0 | 9 | 9 | -0.100 | -0.406 | 0.181 |
| | Female | 102 | 2.451 | 1.432 | 2 | 2.305 | 1.483 | 0 | 7 | 7 | 0.728 | 0.123 | 0.142 |
| 100 | Male | 96 | 4.396 | 1.786 | 4.5 | 4.346 | 2.224 | 1 | 8 | 7 | 0.136 | -0.545 | 0.182 |
| | Female | 96 | 2.750 | 1.487 | 3 | 2.705 | 1.483 | 0 | 6 | 6 | 0.238 | -0.758 | 0.152 |
| 101 | Male | 87 | 4.287 | 1.778 | 5 | 4.296 | 1.483 | 1 | 9 | 8 | -0.003 | -0.030 | 0.191 |
| | Female | 87 | 2.529 | 1.606 | 2 | 2.437 | 1.483 | 0 | 6 | 6 | 0.565 | -0.507 | 0.172 |
| 102 | Male | 87 | 4.506 | 1.916 | 5 | 4.493 | 1.483 | 1 | 10 | 9 | 0.065 | -0.446 | 0.205 |
| | Female | 87 | 2.609 | 1.602 | 2 | 2.437 | 1.483 | 0 | 7 | 7 | 0.760 | -0.175 | 0.172 |
| 103 | Male | 54 | 4.500 | 1.799 | 5 | 4.477 | 1.483 | 1 | 9 | 8 | 0.029 | -0.810 | 0.245 |
| | Female | 54 | 2.630 | 1.378 | 3 | 2.523 | 1.483 | 1 | 6 | 5 | 0.329 | -0.917 | 0.187 |
| 104 | Male | 81 | 4.432 | 1.695 | 4 | 4.415 | 1.483 | 1 | 8 | 7 | 0.016 | -0.564 | 0.188 |
| | Female | 81 | 2.654 | 1.682 | 2 | 2.492 | 1.483 | 0 | 7 | 7 | 0.623 | -0.617 | 0.187 |
| 105 | Male | 168 | 3.917 | 1.693 | 4 | 3.919 | 1.483 | 0 | 9 | 9 | 0.064 | -0.439 | 0.131 |
| | Female | 168 | 2.786 | 1.469 | 3 | 2.743 | 1.483 | 0 | 6 | 6 | 0.235 | -0.616 | 0.113 |
| 106 | Male | 264 | 4.019 | 1.797 | 4 | 3.939 | 1.483 | 0 | 9 | 9 | 0.332 | -0.359 | 0.111 |
| | Female | 264 | 2.871 | 1.626 | 3 | 2.807 | 1.483 | 0 | 7 | 7 | 0.302 | -0.912 | 0.100 |
| 107 | Male | 123 | 4.480 | 1.738 | 4 | 4.434 | 1.483 | 1 | 9 | 8 | 0.150 | -0.440 | 0.157 |
| | Female | 123 | 2.520 | 1.570 | 2 | 2.424 | 1.483 | 0 | 6 | 6 | 0.524 | -0.509 | 0.142 |
| 108 | Male | 207 | 3.995 | 1.736 | 4 | 3.958 | 1.483 | 1 | 9 | 8 | 0.268 | -0.262 | 0.121 |
| | Female | 207 | 2.778 | 1.598 | 3 | 2.641 | 1.483 | 0 | 8 | 8 | 0.690 | 0.015 | 0.111 |
| 109 | Male | 108 | 4.509 | 1.842 | 4 | 4.500 | 1.483 | 1 | 9 | 8 | 0.145 | -0.700 | 0.177 |
| | Female | 108 | 2.750 | 1.607 | 3 | 2.648 | 1.483 | 0 | 8 | 8 | 0.553 | 0.043 | 0.155 |
| 110 | Male | 96 | 4.365 | 1.947 | 4.5 | 4.346 | 2.224 | 0 | 8 | 8 | 0.020 | -0.685 | 0.199 |
| | Female | 96 | 2.677 | 1.720 | 2 | 2.538 | 1.483 | 0 | 7 | 7 | 0.636 | -0.315 | 0.176 |

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|-----|--------|-----|-------|-------|-----|-------|-------|---|----|----|--------|--------|-------|
| 111 | Male | 102 | 4.706 | 1.761 | 5 | 4.695 | 1.483 | 0 | 9 | 9 | 0.038 | -0.170 | 0.174 |
| | Female | 102 | 2.549 | 1.526 | 2 | 2.415 | 1.483 | 0 | 7 | 7 | 0.611 | -0.129 | 0.151 |
| 112 | Male | 63 | 4.286 | 1.570 | 4 | 4.333 | 1.483 | 1 | 8 | 7 | -0.051 | -0.334 | 0.198 |
| | Female | 63 | 2.571 | 1.682 | 2 | 2.471 | 1.483 | 0 | 7 | 7 | 0.479 | -0.626 | 0.212 |
| 113 | Male | 135 | 4.000 | 1.873 | 4 | 3.917 | 1.483 | 0 | 9 | 9 | 0.352 | -0.535 | 0.161 |
| | Female | 135 | 2.793 | 1.630 | 2 | 2.697 | 1.483 | 0 | 8 | 8 | 0.610 | -0.029 | 0.140 |
| 114 | Male | 327 | 4.015 | 1.843 | 4 | 3.973 | 1.483 | 0 | 9 | 9 | 0.159 | -0.560 | 0.102 |
| | Female | 327 | 2.945 | 1.487 | 3 | 2.867 | 1.483 | 0 | 8 | 8 | 0.445 | -0.398 | 0.082 |
| 115 | Male | 42 | 4.619 | 1.975 | 4 | 4.559 | 1.483 | 1 | 9 | 8 | 0.337 | -0.596 | 0.305 |
| | Female | 42 | 2.952 | 1.577 | 3 | 2.794 | 1.483 | 1 | 7 | 6 | 0.733 | -0.304 | 0.243 |
| 116 | Male | 69 | 4.507 | 1.852 | 5 | 4.439 | 1.483 | 1 | 9 | 8 | 0.153 | -0.617 | 0.223 |
| | Female | 69 | 2.290 | 1.415 | 2 | 2.158 | 1.483 | 0 | 8 | 8 | 1.175 | 2.326 | 0.170 |
| 117 | Male | 102 | 4.422 | 1.859 | 5 | 4.354 | 1.483 | 1 | 9 | 8 | 0.205 | -0.412 | 0.184 |
| | Female | 102 | 2.706 | 1.633 | 2.5 | 2.634 | 2.224 | 0 | 7 | 7 | 0.433 | -0.362 | 0.162 |
| 118 | Male | 150 | 4.400 | 1.757 | 4 | 4.367 | 1.483 | 0 | 9 | 9 | 0.077 | -0.072 | 0.143 |
| | Female | 150 | 2.693 | 1.593 | 2 | 2.508 | 1.483 | 0 | 10 | 10 | 1.208 | 2.206 | 0.130 |
| 119 | Male | 204 | 4.647 | 1.679 | 5 | 4.591 | 1.483 | 1 | 9 | 8 | 0.308 | -0.280 | 0.118 |
| | Female | 204 | 3.000 | 1.637 | 3 | 2.921 | 1.483 | 0 | 8 | 8 | 0.396 | -0.376 | 0.115 |
| 120 | Male | 87 | 4.103 | 1.941 | 4 | 4.085 | 1.483 | 0 | 8 | 8 | 0.026 | -0.603 | 0.208 |
| | Female | 87 | 2.713 | 1.791 | 2 | 2.577 | 1.483 | 0 | 8 | 8 | 0.790 | 0.245 | 0.192 |
| 121 | Male | 255 | 4.094 | 1.792 | 4 | 4.020 | 1.483 | 0 | 10 | 10 | 0.325 | -0.036 | 0.112 |
| | Female | 255 | 2.659 | 1.572 | 2 | 2.580 | 1.483 | 0 | 8 | 8 | 0.456 | -0.298 | 0.098 |
| 122 | Male | 159 | 4.201 | 1.534 | 4 | 4.186 | 1.483 | 1 | 8 | 7 | 0.091 | -0.169 | 0.122 |
| | Female | 159 | 3.113 | 1.547 | 3 | 3.078 | 1.483 | 0 | 8 | 8 | 0.230 | -0.664 | 0.123 |
| 123 | Male | 162 | 4.191 | 1.732 | 4 | 4.131 | 1.483 | 1 | 9 | 8 | 0.276 | -0.029 | 0.136 |
| | Female | 162 | 3.148 | 1.752 | 3 | 3.100 | 2.965 | 0 | 8 | 8 | 0.208 | -0.784 | 0.138 |
| 124 | Male | 159 | 3.786 | 1.870 | 4 | 3.643 | 1.483 | 1 | 9 | 8 | 0.731 | 0.214 | 0.148 |
| | Female | 159 | 2.975 | 1.530 | 3 | 2.946 | 1.483 | 0 | 6 | 6 | 0.084 | -0.836 | 0.121 |
| 125 | Male | 174 | 4.149 | 1.875 | 4 | 4.036 | 1.483 | 1 | 10 | 9 | 0.533 | -0.127 | 0.142 |
| | Female | 174 | 3.011 | 1.620 | 3 | 2.964 | 1.483 | 0 | 7 | 7 | 0.176 | -0.804 | 0.123 |
| 126 | Male | 42 | 3.476 | 2.003 | 3.5 | 3.412 | 2.224 | 0 | 8 | 8 | 0.203 | -1.104 | 0.309 |
| | Female | 42 | 2.238 | 1.206 | 2 | 2.118 | 1.483 | 0 | 5 | 5 | 0.690 | -0.104 | 0.186 |
| 127 | Male | 132 | 4.311 | 2.259 | 5 | 4.283 | 2.965 | 0 | 9 | 9 | 0.033 | -0.865 | 0.197 |
| | Female | 132 | 2.705 | 1.547 | 2 | 2.604 | 1.483 | 0 | 6 | 6 | 0.447 | -0.828 | 0.135 |
| 128 | Male | 84 | 4.381 | 1.620 | 5 | 4.368 | 1.483 | 1 | 8 | 7 | -0.100 | -0.786 | 0.177 |
| | Female | 84 | 2.952 | 1.671 | 3 | 2.853 | 1.483 | 0 | 7 | 7 | 0.457 | -0.273 | 0.182 |
| 129 | Male | 252 | 4.171 | 1.744 | 4 | 4.129 | 1.483 | 1 | 8 | 7 | 0.017 | -0.737 | 0.110 |
| | Female | 252 | 2.730 | 1.543 | 3 | 2.634 | 1.483 | 0 | 8 | 8 | 0.487 | -0.035 | 0.097 |
| 130 | Male | 81 | 4.321 | 1.856 | 5 | 4.354 | 1.483 | 0 | 8 | 8 | -0.236 | -0.424 | 0.206 |
| | Female | 81 | 3.012 | 1.270 | 3 | 2.969 | 1.483 | 0 | 6 | 6 | 0.303 | -0.291 | 0.141 |

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|-----|--------|-----|-------|-------|-----|-------|-------|---|----|----|--------|--------|-------|
| 131 | Male | 126 | 4.444 | 1.773 | 5 | 4.510 | 1.483 | 0 | 8 | 8 | -0.375 | -0.587 | 0.158 |
| | Female | 126 | 2.746 | 1.654 | 2 | 2.598 | 1.483 | 0 | 7 | 7 | 0.626 | -0.514 | 0.147 |
| 133 | Male | 135 | 4.230 | 1.799 | 4 | 4.248 | 1.483 | 0 | 9 | 9 | -0.129 | -0.363 | 0.155 |
| | Female | 135 | 2.570 | 1.646 | 3 | 2.514 | 1.483 | 0 | 7 | 7 | 0.340 | -0.630 | 0.142 |
| 134 | Male | 105 | 4.095 | 1.650 | 4 | 4.035 | 1.483 | 1 | 9 | 8 | 0.308 | -0.164 | 0.161 |
| | Female | 105 | 2.857 | 1.751 | 3 | 2.753 | 1.483 | 0 | 8 | 8 | 0.589 | -0.030 | 0.171 |
| 135 | Male | 45 | 4.178 | 2.037 | 4 | 4.108 | 1.483 | 1 | 9 | 8 | 0.364 | -0.642 | 0.304 |
| | Female | 45 | 2.622 | 1.655 | 2 | 2.378 | 1.483 | 1 | 7 | 6 | 1.098 | 0.449 | 0.247 |
| 136 | Male | 123 | 4.366 | 1.626 | 4 | 4.374 | 1.483 | 1 | 8 | 7 | -0.131 | -0.573 | 0.147 |
| | Female | 123 | 2.862 | 1.626 | 3 | 2.747 | 1.483 | 0 | 8 | 8 | 0.664 | 0.252 | 0.147 |
| 137 | Male | 51 | 3.961 | 1.886 | 4 | 3.927 | 1.483 | 1 | 8 | 7 | 0.090 | -0.824 | 0.264 |
| | Female | 51 | 2.294 | 1.346 | 2 | 2.268 | 1.483 | 0 | 6 | 6 | 0.384 | 0.031 | 0.188 |
| 138 | Male | 111 | 4.189 | 1.665 | 4 | 4.169 | 1.483 | 1 | 9 | 8 | 0.158 | 0.011 | 0.158 |
| | Female | 111 | 2.964 | 1.612 | 3 | 2.910 | 1.483 | 0 | 8 | 8 | 0.329 | -0.335 | 0.153 |
| 139 | Male | 153 | 4.333 | 1.799 | 4 | 4.260 | 1.483 | 1 | 8 | 7 | 0.212 | -0.575 | 0.145 |
| | Female | 153 | 2.699 | 1.610 | 2 | 2.610 | 1.483 | 0 | 8 | 8 | 0.575 | 0.172 | 0.130 |
| 140 | Male | 111 | 4.117 | 1.920 | 4 | 4.101 | 2.965 | 1 | 9 | 8 | 0.064 | -0.763 | 0.182 |
| | Female | 111 | 2.523 | 1.367 | 2 | 2.371 | 1.483 | 1 | 6 | 5 | 0.746 | -0.341 | 0.130 |
| 141 | Male | 93 | 4.215 | 2.032 | 4 | 4.120 | 1.483 | 0 | 9 | 9 | 0.310 | -0.592 | 0.211 |
| | Female | 93 | 2.774 | 1.603 | 3 | 2.640 | 1.483 | 0 | 7 | 7 | 0.633 | -0.158 | 0.166 |
| 142 | Male | 54 | 3.741 | 1.532 | 4 | 3.636 | 1.483 | 1 | 7 | 6 | 0.277 | -0.897 | 0.208 |
| | Female | 54 | 3.148 | 1.459 | 3 | 3.068 | 1.483 | 1 | 6 | 5 | 0.356 | -0.729 | 0.199 |
| 143 | Male | 165 | 4.261 | 2.075 | 4 | 4.188 | 2.965 | 0 | 9 | 9 | 0.227 | -0.669 | 0.162 |
| | Female | 165 | 2.539 | 1.560 | 2 | 2.474 | 1.483 | 0 | 8 | 8 | 0.478 | -0.061 | 0.121 |
| 144 | Male | 141 | 4.383 | 1.933 | 4 | 4.345 | 1.483 | 0 | 9 | 9 | 0.062 | -0.419 | 0.163 |
| | Female | 141 | 2.759 | 1.483 | 3 | 2.655 | 1.483 | 0 | 7 | 7 | 0.597 | 0.265 | 0.125 |
| 145 | Male | 69 | 4.319 | 1.819 | 4 | 4.351 | 1.483 | 1 | 8 | 7 | -0.008 | -0.709 | 0.219 |
| | Female | 69 | 3.000 | 1.465 | 3 | 2.912 | 1.483 | 1 | 6 | 5 | 0.249 | -0.692 | 0.176 |
| 146 | Male | 117 | 3.744 | 1.801 | 4 | 3.663 | 1.483 | 0 | 10 | 10 | 0.461 | 0.212 | 0.167 |
| | Female | 117 | 3.034 | 1.833 | 3 | 2.842 | 1.483 | 0 | 8 | 8 | 0.807 | -0.052 | 0.169 |
| 147 | Male | 12 | 4.167 | 1.749 | 4 | 4.200 | 1.483 | 1 | 7 | 6 | -0.138 | -1.093 | 0.505 |
| | Female | 12 | 3.167 | 1.403 | 3 | 3.100 | 1.483 | 1 | 6 | 5 | 0.456 | -0.760 | 0.405 |
| 148 | Male | 12 | 3.833 | 1.586 | 3.5 | 3.700 | 2.224 | 2 | 7 | 5 | 0.374 | -1.112 | 0.458 |
| | Female | 12 | 2.583 | 1.311 | 3 | 2.700 | 1.483 | 0 | 4 | 4 | -0.609 | -1.043 | 0.379 |
| 149 | Male | 27 | 3.889 | 2.100 | 4 | 3.783 | 2.965 | 1 | 8 | 7 | 0.213 | -1.084 | 0.404 |
| | Female | 27 | 2.741 | 1.259 | 2 | 2.652 | 1.483 | 1 | 6 | 5 | 0.808 | 0.002 | 0.242 |
| 150 | Male | 51 | 3.627 | 1.897 | 3 | 3.610 | 1.483 | 1 | 8 | 7 | 0.255 | -1.182 | 0.266 |
| | Female | 51 | 3.118 | 1.351 | 3 | 3.122 | 1.483 | 1 | 6 | 5 | -0.114 | -1.052 | 0.189 |
| 151 | Male | 162 | 3.914 | 1.658 | 4 | 3.885 | 1.483 | 0 | 8 | 8 | 0.202 | -0.261 | 0.130 |
| | Female | 162 | 3.142 | 1.524 | 3 | 3.123 | 1.483 | 0 | 6 | 6 | 0.076 | -0.889 | 0.120 |

| | | | | | | | | | | | | | |
|-----|--------|-----|-------|-------|-----|-------|-------|---|----|----|--------|--------|-------|
| 153 | Male | 177 | 4.119 | 1.649 | 4 | 4.070 | 1.483 | 1 | 9 | 8 | 0.333 | -0.072 | 0.124 |
| | Female | 177 | 3.051 | 1.628 | 3 | 3.014 | 1.483 | 0 | 8 | 8 | 0.241 | -0.451 | 0.122 |
| 154 | Male | 138 | 4.138 | 1.797 | 4 | 4.045 | 1.483 | 1 | 9 | 8 | 0.424 | -0.070 | 0.153 |
| | Female | 138 | 3.333 | 1.834 | 3 | 3.196 | 1.483 | 0 | 10 | 10 | 0.924 | 1.196 | 0.156 |
| 155 | Male | 165 | 4.242 | 1.690 | 4 | 4.263 | 1.483 | 0 | 9 | 9 | -0.041 | -0.309 | 0.132 |
| | Female | 165 | 3.170 | 1.545 | 3 | 3.128 | 1.483 | 0 | 6 | 6 | 0.122 | -0.928 | 0.120 |
| 156 | Male | 21 | 4.333 | 1.713 | 4 | 4.294 | 1.483 | 1 | 8 | 7 | 0.128 | -0.523 | 0.374 |
| | Female | 21 | 3.190 | 2.462 | 2 | 3.059 | 2.965 | 0 | 8 | 8 | 0.442 | -1.209 | 0.537 |
| 157 | Male | 138 | 4.203 | 1.805 | 4 | 4.179 | 1.483 | 0 | 8 | 8 | 0.001 | -0.596 | 0.154 |
| | Female | 138 | 3.304 | 1.659 | 3 | 3.313 | 1.483 | 0 | 7 | 7 | -0.096 | -0.958 | 0.141 |
| 158 | Male | 54 | 4.833 | 1.809 | 5 | 4.932 | 1.483 | 1 | 8 | 7 | -0.450 | -0.404 | 0.246 |
| | Female | 54 | 2.704 | 1.586 | 2.5 | 2.614 | 0.741 | 0 | 7 | 7 | 0.538 | -0.151 | 0.216 |
| 159 | Male | 84 | 4.190 | 1.639 | 4 | 4.118 | 1.483 | 1 | 8 | 7 | 0.314 | -0.359 | 0.179 |
| | Female | 84 | 3.226 | 1.426 | 3 | 3.235 | 1.483 | 0 | 6 | 6 | -0.002 | -0.575 | 0.156 |
| 160 | Male | 72 | 3.958 | 1.732 | 4 | 3.897 | 1.483 | 1 | 9 | 8 | 0.432 | 0.204 | 0.204 |
| | Female | 72 | 2.333 | 1.556 | 2 | 2.138 | 1.483 | 0 | 9 | 9 | 1.456 | 3.260 | 0.183 |
| 161 | Male | 84 | 4.107 | 1.658 | 4 | 4.015 | 1.483 | 1 | 8 | 7 | 0.381 | -0.586 | 0.181 |
| | Female | 84 | 3.274 | 1.645 | 3 | 3.279 | 1.483 | 0 | 7 | 7 | -0.020 | -0.906 | 0.180 |
| 163 | Male | 12 | 2.833 | 1.992 | 2 | 2.700 | 1.483 | 1 | 6 | 5 | 0.336 | -1.805 | 0.575 |
| | Female | 12 | 2.417 | 0.996 | 2 | 2.300 | 0.000 | 1 | 5 | 4 | 1.221 | 1.156 | 0.288 |
| 164 | Male | 33 | 4.364 | 1.617 | 4 | 4.407 | 1.483 | 1 | 8 | 7 | -0.149 | -0.323 | 0.281 |
| | Female | 33 | 2.848 | 1.395 | 3 | 2.741 | 1.483 | 1 | 6 | 5 | 0.530 | -0.412 | 0.243 |
| 165 | Male | 27 | 3.630 | 2.115 | 3 | 3.522 | 2.965 | 1 | 8 | 7 | 0.331 | -1.080 | 0.407 |
| | Female | 27 | 2.963 | 1.581 | 3 | 2.957 | 1.483 | 0 | 6 | 6 | 0.002 | -1.122 | 0.304 |
| 177 | Male | 3 | 5.000 | 2.000 | 5 | 5.000 | 2.965 | 3 | 7 | 4 | 0.000 | -2.333 | 1.155 |
| | Female | 3 | 3.667 | 2.082 | 3 | 3.667 | 1.483 | 2 | 6 | 4 | 0.287 | -2.333 | 1.202 |
| 178 | Male | 9 | 3.778 | 1.563 | 4 | 3.778 | 1.483 | 2 | 7 | 5 | 0.673 | -0.569 | 0.521 |
| | Female | 9 | 3.222 | 1.481 | 4 | 3.222 | 1.483 | 1 | 5 | 4 | -0.130 | -1.797 | 0.494 |
| 179 | Male | 12 | 2.833 | 1.697 | 2 | 2.800 | 1.483 | 1 | 5 | 4 | 0.339 | -1.753 | 0.490 |
| | Female | 12 | 2.083 | 0.996 | 2 | 2.000 | 1.483 | 1 | 4 | 3 | 0.359 | -1.213 | 0.288 |
| 188 | Male | 3 | 2.000 | 0.000 | 2 | 2.000 | 0.000 | 2 | 2 | 0 | NA | NA | 0.000 |
| | Female | 3 | 2.667 | 1.528 | 3 | 2.667 | 1.483 | 1 | 4 | 3 | -0.208 | -2.333 | 0.882 |
| 189 | Male | 213 | 4.329 | 1.985 | 4 | 4.333 | 2.965 | 0 | 9 | 9 | -0.061 | -0.780 | 0.136 |
| | Female | 213 | 2.920 | 1.541 | 3 | 2.848 | 1.483 | 0 | 8 | 8 | 0.371 | -0.273 | 0.106 |
| 190 | Male | 45 | 3.933 | 1.864 | 4 | 3.865 | 1.483 | 1 | 8 | 7 | 0.198 | -0.597 | 0.278 |
| | Female | 45 | 2.800 | 1.561 | 3 | 2.784 | 1.483 | 0 | 6 | 6 | 0.150 | -0.770 | 0.233 |
| 191 | Male | 78 | 4.205 | 1.819 | 4.5 | 4.266 | 2.224 | 0 | 8 | 8 | -0.340 | -0.469 | 0.206 |
| | Female | 78 | 2.731 | 1.560 | 3 | 2.641 | 1.483 | 0 | 7 | 7 | 0.466 | -0.021 | 0.177 |
| 193 | Male | 45 | 4.156 | 1.637 | 4 | 4.108 | 1.483 | 1 | 9 | 8 | 0.425 | 0.273 | 0.244 |
| | Female | 45 | 3.022 | 1.422 | 3 | 3.027 | 1.483 | 0 | 6 | 6 | 0.101 | -0.894 | 0.212 |

| | | | | | | | | | | | | | |
|-----|--------|-----|-------|-------|-----|-------|-------|---|----|---|--------|--------|-------|
| 196 | Male | 81 | 4.395 | 1.538 | 4 | 4.338 | 1.483 | 1 | 9 | 8 | 0.327 | 0.072 | 0.171 |
| | Female | 81 | 2.840 | 1.608 | 3 | 2.708 | 1.483 | 0 | 8 | 8 | 0.757 | 0.508 | 0.179 |
| 197 | Male | 108 | 3.731 | 1.941 | 4 | 3.670 | 2.965 | 0 | 8 | 8 | 0.195 | -1.080 | 0.187 |
| | Female | 108 | 2.620 | 1.690 | 2 | 2.455 | 1.483 | 0 | 8 | 8 | 0.773 | 0.034 | 0.163 |
| 198 | Male | 75 | 4.240 | 1.859 | 5 | 4.246 | 1.483 | 1 | 8 | 7 | -0.085 | -0.955 | 0.215 |
| | Female | 75 | 2.747 | 1.357 | 3 | 2.639 | 1.483 | 1 | 6 | 5 | 0.586 | -0.420 | 0.157 |
| 199 | Male | 105 | 4.533 | 2.038 | 5 | 4.471 | 1.483 | 0 | 9 | 9 | 0.091 | -0.511 | 0.199 |
| | Female | 105 | 2.886 | 1.619 | 3 | 2.894 | 1.483 | 0 | 6 | 6 | 0.022 | -0.848 | 0.158 |
| 200 | Male | 96 | 4.198 | 1.945 | 5 | 4.205 | 1.483 | 1 | 9 | 8 | -0.064 | -0.892 | 0.198 |
| | Female | 96 | 2.979 | 1.686 | 3 | 2.987 | 1.483 | 0 | 6 | 6 | 0.006 | -0.857 | 0.172 |
| 202 | Male | 24 | 4.792 | 1.615 | 4.5 | 4.750 | 2.224 | 2 | 8 | 6 | 0.205 | -1.145 | 0.330 |
| | Female | 24 | 2.875 | 1.262 | 3 | 2.900 | 1.483 | 0 | 5 | 5 | -0.399 | -0.437 | 0.258 |
| 204 | Male | 33 | 4.758 | 2.236 | 4 | 4.704 | 2.965 | 1 | 9 | 8 | 0.230 | -0.912 | 0.389 |
| | Female | 33 | 2.394 | 1.413 | 2 | 2.185 | 1.483 | 1 | 7 | 6 | 1.241 | 1.523 | 0.246 |
| 212 | Male | 3 | 3.667 | 0.577 | 4 | 3.667 | 0.000 | 3 | 4 | 1 | -0.385 | -2.333 | 0.333 |
| | Female | 3 | 4.000 | 2.646 | 3 | 4.000 | 1.483 | 2 | 7 | 5 | 0.324 | -2.333 | 1.528 |
| 215 | Male | 171 | 4.152 | 1.838 | 4 | 4.117 | 1.483 | 0 | 9 | 9 | 0.207 | -0.191 | 0.141 |
| | Female | 171 | 2.684 | 1.600 | 2 | 2.599 | 1.483 | 0 | 8 | 8 | 0.588 | 0.143 | 0.122 |
| 216 | Male | 81 | 4.049 | 1.863 | 4 | 3.969 | 1.483 | 0 | 8 | 8 | 0.238 | -0.619 | 0.207 |
| | Female | 81 | 2.914 | 1.598 | 3 | 2.892 | 1.483 | 0 | 6 | 6 | 0.121 | -0.901 | 0.178 |
| 217 | Male | 75 | 4.320 | 2.021 | 5 | 4.361 | 1.483 | 0 | 8 | 8 | -0.279 | -0.788 | 0.233 |
| | Female | 75 | 3.067 | 1.742 | 3 | 3.000 | 1.483 | 0 | 7 | 7 | 0.262 | -0.467 | 0.201 |
| 218 | Male | 114 | 4.123 | 1.830 | 4 | 4.022 | 1.483 | 1 | 8 | 7 | 0.276 | -0.728 | 0.171 |
| | Female | 114 | 2.912 | 1.600 | 3 | 2.793 | 1.483 | 0 | 7 | 7 | 0.656 | 0.055 | 0.150 |
| 219 | Male | 84 | 4.179 | 1.971 | 4 | 4.088 | 2.965 | 1 | 9 | 8 | 0.295 | -0.872 | 0.215 |
| | Female | 84 | 2.762 | 1.640 | 3 | 2.706 | 1.483 | 0 | 8 | 8 | 0.460 | 0.025 | 0.179 |
| 220 | Male | 93 | 4.172 | 1.711 | 4 | 4.080 | 1.483 | 1 | 9 | 8 | 0.405 | -0.230 | 0.177 |
| | Female | 93 | 2.925 | 1.569 | 3 | 2.880 | 1.483 | 0 | 7 | 7 | 0.273 | -0.536 | 0.163 |
| 221 | Male | 129 | 4.264 | 1.835 | 4 | 4.238 | 1.483 | 1 | 10 | 9 | 0.079 | -0.489 | 0.162 |
| | Female | 129 | 2.915 | 1.596 | 3 | 2.829 | 1.483 | 0 | 7 | 7 | 0.310 | -0.883 | 0.141 |
| 222 | Male | 87 | 4.356 | 1.725 | 5 | 4.437 | 1.483 | 1 | 9 | 8 | -0.256 | -0.330 | 0.185 |
| | Female | 87 | 3.195 | 1.508 | 3 | 3.127 | 1.483 | 1 | 7 | 6 | 0.414 | -0.555 | 0.162 |
| 223 | Male | 96 | 4.198 | 1.708 | 4 | 4.141 | 1.483 | 1 | 9 | 8 | 0.183 | -0.223 | 0.174 |
| | Female | 96 | 2.750 | 1.609 | 3 | 2.641 | 1.483 | 0 | 7 | 7 | 0.450 | -0.590 | 0.164 |
| 224 | Male | 84 | 3.905 | 1.821 | 4 | 3.926 | 1.483 | 0 | 7 | 7 | -0.156 | -0.970 | 0.199 |
| | Female | 84 | 2.583 | 1.622 | 2 | 2.382 | 1.483 | 0 | 8 | 8 | 1.049 | 0.971 | 0.177 |
| 225 | Male | 102 | 4.412 | 1.987 | 5 | 4.390 | 1.483 | 1 | 8 | 7 | 0.035 | -0.798 | 0.197 |
| | Female | 102 | 2.980 | 1.496 | 3 | 2.927 | 1.483 | 0 | 7 | 7 | 0.332 | -0.214 | 0.148 |
| 226 | Male | 36 | 4.528 | 1.630 | 5 | 4.567 | 1.483 | 1 | 7 | 6 | -0.318 | -0.822 | 0.272 |
| | Female | 36 | 2.917 | 1.251 | 3 | 2.833 | 1.483 | 1 | 6 | 5 | 0.748 | 0.114 | 0.208 |

| | | | | | | | | | | | | | |
|-----|--------|-----|-------|-------|-----|-------|-------|---|----|----|--------|--------|-------|
| 227 | Male | 57 | 4.860 | 1.827 | 5 | 4.936 | 1.483 | 0 | 8 | 8 | -0.435 | 0.171 | 0.242 |
| | Female | 57 | 2.614 | 1.473 | 2 | 2.511 | 1.483 | 0 | 7 | 7 | 0.670 | 0.191 | 0.195 |
| 228 | Male | 36 | 4.389 | 1.856 | 4 | 4.400 | 1.483 | 1 | 8 | 7 | -0.012 | -0.621 | 0.309 |
| | Female | 36 | 2.750 | 1.317 | 2.5 | 2.633 | 0.741 | 1 | 6 | 5 | 0.815 | 0.091 | 0.220 |
| 229 | Male | 60 | 4.100 | 1.911 | 4 | 4.083 | 1.483 | 0 | 8 | 8 | 0.003 | -0.856 | 0.247 |
| | Female | 60 | 2.650 | 1.471 | 2 | 2.521 | 1.483 | 0 | 6 | 6 | 0.700 | -0.353 | 0.190 |
| 230 | Male | 165 | 4.006 | 2.105 | 4 | 3.902 | 2.965 | 0 | 10 | 10 | 0.405 | -0.656 | 0.164 |
| | Female | 165 | 2.818 | 1.628 | 3 | 2.714 | 1.483 | 0 | 8 | 8 | 0.655 | 0.281 | 0.127 |
| 231 | Male | 39 | 4.282 | 1.863 | 5 | 4.212 | 1.483 | 1 | 9 | 8 | 0.216 | -0.628 | 0.298 |
| | Female | 39 | 2.538 | 1.714 | 2 | 2.394 | 1.483 | 0 | 8 | 8 | 0.990 | 1.163 | 0.275 |
| 232 | Male | 24 | 4.333 | 1.659 | 4.5 | 4.350 | 2.224 | 1 | 7 | 6 | -0.130 | -1.118 | 0.339 |
| | Female | 24 | 2.958 | 1.334 | 3 | 2.950 | 1.483 | 0 | 6 | 6 | 0.072 | -0.251 | 0.272 |
| 233 | Male | 33 | 4.424 | 1.678 | 5 | 4.481 | 1.483 | 1 | 8 | 7 | -0.277 | -0.525 | 0.292 |
| | Female | 33 | 2.576 | 1.370 | 2 | 2.556 | 1.483 | 0 | 5 | 5 | 0.058 | -1.275 | 0.238 |
| 234 | Male | 87 | 4.310 | 1.780 | 5 | 4.380 | 1.483 | 0 | 8 | 8 | -0.443 | -0.437 | 0.191 |
| | Female | 87 | 2.586 | 1.552 | 3 | 2.521 | 1.483 | 0 | 7 | 7 | 0.385 | -0.174 | 0.166 |
| 235 | Male | 90 | 4.400 | 1.976 | 4 | 4.333 | 1.483 | 0 | 10 | 10 | 0.238 | -0.411 | 0.208 |
| | Female | 90 | 2.644 | 1.538 | 2 | 2.528 | 1.483 | 0 | 7 | 7 | 0.545 | -0.352 | 0.162 |
| 236 | Male | 102 | 4.392 | 1.719 | 5 | 4.390 | 1.483 | 1 | 9 | 8 | -0.056 | -0.211 | 0.170 |
| | Female | 102 | 2.422 | 1.465 | 2 | 2.317 | 1.483 | 0 | 8 | 8 | 0.770 | 0.989 | 0.145 |
| 237 | Male | 54 | 3.963 | 1.671 | 4 | 3.909 | 1.483 | 1 | 7 | 6 | 0.153 | -1.097 | 0.227 |
| | Female | 54 | 2.963 | 1.517 | 3 | 2.864 | 1.483 | 0 | 7 | 7 | 0.603 | 0.548 | 0.206 |
| 238 | Male | 3 | 4.667 | 1.155 | 4 | 4.667 | 0.000 | 4 | 6 | 2 | 0.385 | -2.333 | 0.667 |
| | Female | 3 | 1.667 | 1.155 | 1 | 1.667 | 0.000 | 1 | 3 | 2 | 0.385 | -2.333 | 0.667 |
| 239 | Male | 96 | 4.260 | 2.058 | 4 | 4.205 | 1.483 | 0 | 9 | 9 | 0.204 | -0.656 | 0.210 |
| | Female | 96 | 2.469 | 1.458 | 2 | 2.410 | 1.483 | 0 | 6 | 6 | 0.273 | -0.722 | 0.149 |
| 240 | Male | 126 | 4.183 | 1.727 | 4.5 | 4.167 | 2.224 | 0 | 8 | 8 | -0.114 | -0.905 | 0.154 |
| | Female | 126 | 2.651 | 1.466 | 3 | 2.627 | 1.483 | 0 | 6 | 6 | 0.158 | -0.599 | 0.131 |
| 241 | Male | 30 | 3.300 | 1.664 | 3 | 3.333 | 1.483 | 0 | 6 | 6 | -0.073 | -1.263 | 0.304 |
| | Female | 30 | 3.333 | 2.106 | 3 | 3.208 | 2.965 | 0 | 8 | 8 | 0.450 | -0.992 | 0.385 |
| 242 | Male | 99 | 4.596 | 2.055 | 5 | 4.630 | 2.965 | 1 | 8 | 7 | -0.133 | -1.005 | 0.207 |
| | Female | 99 | 2.485 | 1.541 | 2 | 2.346 | 1.483 | 0 | 7 | 7 | 0.724 | -0.224 | 0.155 |
| 243 | Male | 57 | 4.421 | 1.908 | 5 | 4.383 | 1.483 | 1 | 8 | 7 | 0.021 | -0.881 | 0.253 |
| | Female | 57 | 2.614 | 1.740 | 2 | 2.489 | 1.483 | 0 | 7 | 7 | 0.691 | 0.166 | 0.230 |
| 244 | Male | 96 | 4.052 | 1.855 | 4 | 3.962 | 1.483 | 1 | 9 | 8 | 0.473 | -0.192 | 0.189 |
| | Female | 96 | 2.354 | 1.522 | 2 | 2.231 | 1.483 | 0 | 7 | 7 | 0.692 | 0.050 | 0.155 |
| 245 | Male | 132 | 4.121 | 1.778 | 4 | 4.170 | 1.483 | 0 | 8 | 8 | -0.214 | -0.452 | 0.155 |
| | Female | 132 | 2.576 | 1.331 | 2 | 2.472 | 1.483 | 0 | 6 | 6 | 0.532 | -0.295 | 0.116 |
| 246 | Male | 51 | 4.431 | 1.640 | 5 | 4.512 | 1.483 | 0 | 9 | 9 | -0.321 | 0.762 | 0.230 |
| | Female | 51 | 2.569 | 1.487 | 2 | 2.415 | 1.483 | 0 | 7 | 7 | 0.747 | 0.158 | 0.208 |

| | | | | | | | | | | | | | |
|------------|--------|----|-------|-------|-----|-------|-------|---|----|----|--------|--------|-------|
| 247 | Male | 48 | 4.104 | 1.666 | 4 | 4.075 | 1.483 | 1 | 8 | 7 | 0.109 | -0.490 | 0.240 |
| | Female | 48 | 2.854 | 1.557 | 3 | 2.775 | 1.483 | 0 | 6 | 6 | 0.502 | -0.331 | 0.225 |
| 248 | Male | 9 | 3.556 | 1.509 | 4 | 3.556 | 1.483 | 1 | 6 | 5 | -0.094 | -1.097 | 0.503 |
| | Female | 9 | 2.556 | 1.509 | 2 | 2.556 | 2.965 | 0 | 4 | 4 | -0.288 | -1.582 | 0.503 |
| 250 | Male | 33 | 3.636 | 1.558 | 3 | 3.630 | 1.483 | 1 | 7 | 6 | 0.259 | -0.741 | 0.271 |
| | Female | 33 | 2.606 | 1.321 | 3 | 2.593 | 1.483 | 0 | 5 | 5 | 0.014 | -0.636 | 0.230 |
| 251 | Male | 42 | 4.095 | 1.832 | 4 | 4.000 | 1.483 | 1 | 9 | 8 | 0.304 | -0.429 | 0.283 |
| | Female | 42 | 2.690 | 1.316 | 2 | 2.647 | 1.483 | 0 | 5 | 5 | 0.441 | -0.601 | 0.203 |
| 252 | Male | 12 | 3.750 | 1.865 | 4 | 3.700 | 2.965 | 1 | 7 | 6 | 0.255 | -1.287 | 0.538 |
| | Female | 12 | 3.667 | 1.969 | 3.5 | 3.500 | 2.224 | 1 | 8 | 7 | 0.492 | -0.388 | 0.569 |
| 253 | Male | 57 | 4.246 | 2.262 | 4 | 4.213 | 2.965 | 0 | 8 | 8 | 0.055 | -1.267 | 0.300 |
| | Female | 57 | 2.491 | 1.465 | 2 | 2.468 | 1.483 | 0 | 5 | 5 | 0.201 | -0.969 | 0.194 |
| 274 | Male | 84 | 4.488 | 1.973 | 4 | 4.441 | 1.483 | 0 | 10 | 10 | 0.227 | -0.303 | 0.215 |
| | Female | 84 | 2.690 | 1.362 | 3 | 2.603 | 1.483 | 0 | 6 | 6 | 0.308 | -0.682 | 0.149 |
| 275 | Male | 27 | 4.370 | 1.644 | 4 | 4.304 | 1.483 | 2 | 8 | 6 | 0.221 | -0.688 | 0.316 |
| | Female | 27 | 2.444 | 1.672 | 2 | 2.391 | 1.483 | 0 | 6 | 6 | 0.117 | -1.063 | 0.322 |

N = No. of individuals; SD = Standard deviation; Trimmed = The mean of the de-extremum; Mad = Median absolute deviation; SE = Standard error.

Table S2. Coefficient of variation (CV_f) and sibling coefficient (ψ_f) for female cones production in the *P. orientalis* clonal seed orchard (N = 5398)

| Clone | 2017 | | 2018 | | 2020 | | Pooled | |
|-------|--------|----------|--------|----------|--------|----------|--------|----------|
| | CV_f | ψ_f | CV_f | ψ_f | CV_f | ψ_f | CV_f | ψ_f |
| 51 | - | - | - | - | - | - | 0.693 | 1.480 |
| 52 | - | - | - | - | - | - | 0.433 | 1.187 |
| 54 | 0.618 | 1.382 | 0.424 | 1.180 | 0.541 | 1.293 | 0.617 | 1.381 |
| 55 | 0.705 | 1.497 | 0.456 | 1.208 | 0.627 | 1.393 | 0.632 | 1.399 |
| 56 | 0.585 | 1.342 | 0.460 | 1.212 | 0.472 | 1.223 | 0.573 | 1.328 |
| 57 | 0.484 | 1.234 | 0.507 | 1.257 | 0.668 | 1.446 | 0.603 | 1.364 |
| 58 | 0.534 | 1.285 | 0.436 | 1.190 | 0.606 | 1.367 | 0.601 | 1.361 |
| 59 | 0.584 | 1.341 | 0.459 | 1.211 | 0.541 | 1.293 | 0.585 | 1.342 |
| 60 | 0.594 | 1.353 | 0.425 | 1.181 | 0.603 | 1.364 | 0.615 | 1.378 |
| 61 | 0.599 | 1.359 | 0.420 | 1.176 | 0.596 | 1.355 | 0.602 | 1.362 |
| 62 | 0.531 | 1.282 | 0.509 | 1.259 | 0.604 | 1.365 | 0.591 | 1.349 |
| 63 | 0.666 | 1.444 | 0.475 | 1.226 | 0.595 | 1.354 | 0.605 | 1.366 |
| 64 | 0.540 | 1.292 | 0.440 | 1.194 | 0.557 | 1.310 | 0.571 | 1.326 |
| 65 | 0.500 | 1.250 | 0.392 | 1.154 | 0.509 | 1.259 | 0.604 | 1.365 |
| 66 | 0.505 | 1.255 | 0.455 | 1.207 | 0.576 | 1.332 | 0.586 | 1.343 |
| 67 | 0.623 | 1.388 | 0.519 | 1.269 | 0.612 | 1.375 | 0.579 | 1.335 |
| 68 | 0.563 | 1.317 | 0.461 | 1.213 | 0.641 | 1.411 | 0.603 | 1.364 |
| 69 | 0.486 | 1.236 | 0.532 | 1.283 | 0.496 | 1.246 | 0.589 | 1.347 |
| 70 | 0.415 | 1.172 | 0.507 | 1.257 | 0.508 | 1.258 | 0.515 | 1.265 |
| 71 | 0.350 | 1.123 | 0.196 | 1.038 | 0.363 | 1.132 | 0.352 | 1.124 |
| 72 | 0.385 | 1.148 | 0.499 | 1.249 | 0.565 | 1.319 | 0.576 | 1.332 |
| 73 | 0.385 | 1.148 | 0.460 | 1.212 | 0.408 | 1.166 | 0.588 | 1.346 |
| 75 | 0.580 | 1.336 | 0.553 | 1.306 | 0.635 | 1.403 | 0.574 | 1.329 |
| 76 | 0.543 | 1.295 | 0.395 | 1.156 | 0.668 | 1.446 | 0.583 | 1.340 |
| 77 | 0.508 | 1.258 | 0.352 | 1.124 | 0.642 | 1.412 | 0.609 | 1.371 |
| 78 | 0.495 | 1.245 | 0.000 | 1.000 | 0.367 | 1.135 | 0.451 | 1.203 |
| 79 | 0.593 | 1.352 | 0.466 | 1.217 | 0.516 | 1.266 | 0.578 | 1.334 |
| 80 | 0.711 | 1.506 | 0.358 | 1.128 | 0.653 | 1.426 | 0.660 | 1.436 |
| 81 | 0.623 | 1.388 | 0.533 | 1.284 | 0.484 | 1.234 | 0.586 | 1.343 |
| 82 | 0.548 | 1.300 | 0.498 | 1.248 | 0.684 | 1.468 | 0.511 | 1.261 |
| 83 | 0.487 | 1.237 | 0.507 | 1.257 | 0.714 | 1.510 | 0.586 | 1.343 |
| 84 | 0.595 | 1.354 | 0.557 | 1.310 | 0.619 | 1.383 | 0.636 | 1.404 |
| 85 | 0.925 | 1.856 | 0.501 | 1.251 | 0.642 | 1.412 | 0.637 | 1.406 |
| 86 | 0.572 | 1.327 | 0.426 | 1.181 | 0.735 | 1.540 | 0.631 | 1.398 |
| 87 | 0.653 | 1.426 | 0.488 | 1.238 | 0.866 | 1.750 | 0.589 | 1.347 |
| 88 | 0.527 | 1.278 | 0.323 | 1.104 | 0.523 | 1.274 | 0.553 | 1.306 |
| 89 | 0.605 | 1.366 | 0.635 | 1.403 | 0.569 | 1.324 | 0.535 | 1.286 |

| | | | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 90 | 0.624 | 1.389 | 0.463 | 1.214 | 0.771 | 1.594 | 0.591 | 1.349 |
| 91 | 0.697 | 1.486 | 0.637 | 1.406 | 0.672 | 1.452 | 0.630 | 1.397 |
| 92 | 0.839 | 1.704 | 0.426 | 1.181 | 0.640 | 1.410 | 0.603 | 1.364 |
| 93 | 0.451 | 1.203 | 0.333 | 1.111 | 0.964 | 1.929 | 0.676 | 1.457 |
| 94 | 0.938 | 1.880 | 0.867 | 1.752 | 0.739 | 1.546 | 0.663 | 1.440 |
| 95 | 0.351 | 1.123 | 0.334 | 1.112 | 0.302 | 1.091 | 0.542 | 1.294 |
| 96 | 0.461 | 1.213 | 0.477 | 1.228 | 0.662 | 1.438 | 0.569 | 1.324 |
| 97 | 0.617 | 1.381 | 0.475 | 1.226 | 0.596 | 1.355 | 0.598 | 1.358 |
| 98 | 0.646 | 1.417 | 0.546 | 1.298 | 0.451 | 1.203 | 0.507 | 1.257 |
| 99 | 0.640 | 1.410 | 0.512 | 1.262 | 0.529 | 1.280 | 0.559 | 1.312 |
| 100 | 0.618 | 1.382 | 0.506 | 1.256 | 0.482 | 1.232 | 0.596 | 1.355 |
| 101 | 0.663 | 1.440 | 0.520 | 1.270 | 0.630 | 1.397 | 0.574 | 1.329 |
| 102 | 0.621 | 1.386 | 0.481 | 1.231 | 0.506 | 1.256 | 0.589 | 1.347 |
| 103 | 0.694 | 1.482 | 0.396 | 1.157 | 0.473 | 1.224 | 0.604 | 1.365 |
| 104 | 0.654 | 1.428 | 0.448 | 1.201 | 0.631 | 1.398 | 0.609 | 1.371 |
| 105 | 0.472 | 1.223 | 0.449 | 1.202 | 0.656 | 1.430 | 0.591 | 1.349 |
| 106 | 0.610 | 1.372 | 0.468 | 1.219 | 0.600 | 1.360 | 0.626 | 1.392 |
| 107 | 0.537 | 1.288 | 0.537 | 1.288 | 0.589 | 1.347 | 0.578 | 1.334 |
| 108 | 0.665 | 1.442 | 0.504 | 1.254 | 0.513 | 1.263 | 0.604 | 1.365 |
| 109 | 0.682 | 1.465 | 0.448 | 1.201 | 0.457 | 1.209 | 0.620 | 1.384 |
| 110 | 0.581 | 1.338 | 0.482 | 1.232 | 0.626 | 1.392 | 0.601 | 1.361 |
| 111 | 0.581 | 1.338 | 0.468 | 1.219 | 0.588 | 1.346 | 0.591 | 1.349 |
| 112 | 0.693 | 1.480 | 0.490 | 1.240 | 0.598 | 1.358 | 0.619 | 1.383 |
| 113 | 0.613 | 1.376 | 0.413 | 1.171 | 0.657 | 1.432 | 0.573 | 1.328 |
| 114 | 0.556 | 1.309 | 0.404 | 1.163 | 0.512 | 1.262 | 0.597 | 1.356 |
| 115 | 0.394 | 1.155 | 0.467 | 1.218 | 0.443 | 1.196 | 0.594 | 1.353 |
| 116 | 0.580 | 1.336 | 0.569 | 1.324 | 0.466 | 1.217 | 0.527 | 1.278 |
| 117 | 0.693 | 1.480 | 0.452 | 1.204 | 0.627 | 1.393 | 0.601 | 1.361 |
| 118 | 0.556 | 1.309 | 0.492 | 1.242 | 0.519 | 1.269 | 0.574 | 1.329 |
| 119 | 0.579 | 1.335 | 0.436 | 1.190 | 0.568 | 1.323 | 0.621 | 1.386 |
| 120 | 0.667 | 1.445 | 0.496 | 1.246 | 0.650 | 1.423 | 0.606 | 1.367 |
| 121 | 0.623 | 1.388 | 0.454 | 1.206 | 0.651 | 1.424 | 0.596 | 1.355 |
| 122 | 0.433 | 1.187 | 0.393 | 1.154 | 0.505 | 1.255 | 0.654 | 1.428 |
| 123 | 0.450 | 1.203 | 0.463 | 1.214 | 0.658 | 1.433 | 0.674 | 1.454 |
| 124 | 0.345 | 1.119 | 0.417 | 1.174 | 0.653 | 1.426 | 0.638 | 1.407 |
| 125 | 0.514 | 1.264 | 0.395 | 1.156 | 0.643 | 1.413 | 0.666 | 1.444 |
| 126 | 0.403 | 1.162 | 0.477 | 1.228 | 0.745 | 1.555 | 0.510 | 1.260 |
| 127 | 0.595 | 1.354 | 0.451 | 1.203 | 0.619 | 1.383 | 0.601 | 1.361 |
| 128 | 0.607 | 1.368 | 0.466 | 1.217 | 0.612 | 1.375 | 0.610 | 1.372 |
| 129 | 0.558 | 1.311 | 0.437 | 1.191 | 0.645 | 1.416 | 0.605 | 1.366 |

| | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 130 | 0.470 | 1.221 | 0.387 | 1.150 | 0.401 | 1.161 | 0.516 | 1.266 |
| 131 | 0.651 | 1.424 | 0.459 | 1.211 | 0.688 | 1.473 | 0.595 | 1.354 |
| 133 | 0.731 | 1.534 | 0.503 | 1.253 | 0.656 | 1.430 | 0.627 | 1.393 |
| 134 | 0.623 | 1.388 | 0.482 | 1.232 | 0.716 | 1.513 | 0.633 | 1.401 |
| 135 | 0.701 | 1.491 | 0.499 | 1.249 | 0.696 | 1.484 | 0.575 | 1.331 |
| 136 | 0.597 | 1.356 | 0.431 | 1.186 | 0.628 | 1.394 | 0.610 | 1.372 |
| 137 | 0.488 | 1.238 | 0.547 | 1.299 | 0.738 | 1.545 | 0.502 | 1.252 |
| 138 | 0.604 | 1.365 | 0.410 | 1.168 | 0.586 | 1.343 | 0.650 | 1.423 |
| 139 | 0.624 | 1.389 | 0.514 | 1.264 | 0.637 | 1.406 | 0.602 | 1.362 |
| 140 | 0.579 | 1.335 | 0.500 | 1.250 | 0.532 | 1.283 | 0.553 | 1.306 |
| 141 | 0.563 | 1.317 | 0.530 | 1.281 | 0.635 | 1.403 | 0.596 | 1.355 |
| 142 | 0.473 | 1.224 | 0.370 | 1.137 | 0.555 | 1.308 | 0.608 | 1.370 |
| 143 | 0.611 | 1.373 | 0.494 | 1.244 | 0.684 | 1.468 | 0.583 | 1.340 |
| 144 | 0.569 | 1.324 | 0.389 | 1.151 | 0.652 | 1.425 | 0.573 | 1.328 |
| 145 | 0.525 | 1.276 | 0.466 | 1.217 | 0.421 | 1.177 | 0.651 | 1.424 |
| 146 | 0.695 | 1.483 | 0.510 | 1.260 | 0.608 | 1.370 | 0.631 | 1.398 |
| 147 | 0.609 | 1.371 | 0.348 | 1.121 | 0.400 | 1.160 | 0.569 | 1.324 |
| 148 | 0.667 | 1.445 | 0.545 | 1.297 | 0.458 | 1.210 | 0.631 | 1.398 |
| 149 | 0.617 | 1.381 | 0.373 | 1.139 | 0.397 | 1.158 | 0.507 | 1.257 |
| 150 | 0.500 | 1.250 | 0.249 | 1.062 | 0.506 | 1.256 | 0.639 | 1.408 |
| 151 | 0.503 | 1.253 | 0.370 | 1.137 | 0.550 | 1.303 | 0.638 | 1.407 |
| 153 | 0.573 | 1.328 | 0.414 | 1.171 | 0.612 | 1.375 | 0.637 | 1.406 |
| 154 | 0.541 | 1.293 | 0.505 | 1.255 | 0.585 | 1.342 | 0.603 | 1.364 |
| 155 | 0.549 | 1.301 | 0.407 | 1.166 | 0.491 | 1.241 | 0.646 | 1.417 |
| 156 | 0.843 | 1.711 | 0.549 | 1.301 | 1.036 | 2.073 | 0.732 | 1.536 |
| 157 | 0.579 | 1.335 | 0.385 | 1.148 | 0.543 | 1.295 | 0.667 | 1.445 |
| 158 | 0.407 | 1.166 | 0.476 | 1.227 | 0.777 | 1.604 | 0.585 | 1.342 |
| 159 | 0.501 | 1.251 | 0.389 | 1.151 | 0.442 | 1.195 | 0.581 | 1.338 |
| 160 | 0.568 | 1.323 | 0.713 | 1.508 | 0.647 | 1.419 | 0.544 | 1.296 |
| 161 | 0.477 | 1.228 | 0.404 | 1.163 | 0.573 | 1.328 | 0.648 | 1.420 |
| 163 | 0.231 | 1.053 | 0.222 | 1.049 | 0.693 | 1.480 | 0.409 | 1.167 |
| 164 | 0.457 | 1.209 | 0.431 | 1.186 | 0.486 | 1.236 | 0.596 | 1.355 |
| 165 | 0.563 | 1.317 | 0.413 | 1.171 | 0.668 | 1.446 | 0.657 | 1.432 |
| 177 | - | - | - | - | - | - | 0.500 | 1.250 |
| 178 | 0.346 | 1.120 | 0.417 | 1.174 | 0.781 | 1.610 | 0.639 | 1.408 |
| 179 | 0.231 | 1.053 | 0.707 | 1.500 | 0.547 | 1.299 | 0.503 | 1.253 |
| 188 | - | - | - | - | - | - | 0.779 | 1.607 |
| 189 | 0.537 | 1.288 | 0.482 | 1.232 | 0.561 | 1.315 | 0.618 | 1.382 |
| 190 | 0.544 | 1.296 | 0.507 | 1.257 | 0.589 | 1.347 | 0.594 | 1.353 |
| 191 | 0.543 | 1.295 | 0.414 | 1.171 | 0.612 | 1.375 | 0.577 | 1.333 |

| | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 193 | 0.399 | 1.159 | 0.375 | 1.141 | 0.549 | 1.301 | 0.583 | 1.340 |
| 196 | 0.351 | 1.123 | 0.544 | 1.296 | 0.755 | 1.570 | 0.581 | 1.338 |
| 197 | 0.666 | 1.444 | 0.550 | 1.303 | 0.676 | 1.457 | 0.598 | 1.358 |
| 198 | 0.514 | 1.264 | 0.418 | 1.175 | 0.530 | 1.281 | 0.570 | 1.325 |
| 199 | 0.605 | 1.366 | 0.440 | 1.194 | 0.619 | 1.383 | 0.628 | 1.394 |
| 200 | 0.531 | 1.282 | 0.411 | 1.169 | 0.769 | 1.591 | 0.634 | 1.402 |
| 202 | 0.352 | 1.124 | 0.466 | 1.217 | 0.524 | 1.275 | 0.599 | 1.359 |
| 204 | 0.547 | 1.299 | 0.548 | 1.300 | 0.447 | 1.200 | 0.541 | 1.293 |
| 212 | - | - | - | - | - | - | 0.549 | 1.301 |
| 215 | 0.554 | 1.307 | 0.518 | 1.268 | 0.660 | 1.436 | 0.596 | 1.355 |
| 216 | 0.598 | 1.358 | 0.429 | 1.184 | 0.629 | 1.396 | 0.636 | 1.404 |
| 217 | 0.629 | 1.396 | 0.525 | 1.276 | 0.561 | 1.315 | 0.629 | 1.396 |
| 218 | 0.482 | 1.232 | 0.483 | 1.233 | 0.634 | 1.402 | 0.569 | 1.324 |
| 219 | 0.638 | 1.407 | 0.538 | 1.289 | 0.583 | 1.340 | 0.619 | 1.383 |
| 220 | 0.485 | 1.235 | 0.427 | 1.182 | 0.674 | 1.454 | 0.631 | 1.398 |
| 221 | 0.572 | 1.327 | 0.452 | 1.204 | 0.554 | 1.307 | 0.635 | 1.403 |
| 222 | 0.513 | 1.263 | 0.353 | 1.125 | 0.536 | 1.287 | 0.610 | 1.372 |
| 223 | 0.634 | 1.402 | 0.431 | 1.186 | 0.655 | 1.429 | 0.623 | 1.388 |
| 224 | 0.610 | 1.372 | 0.635 | 1.403 | 0.535 | 1.286 | 0.568 | 1.323 |
| 225 | 0.572 | 1.327 | 0.374 | 1.140 | 0.439 | 1.193 | 0.592 | 1.350 |
| 226 | 0.276 | 1.076 | 0.346 | 1.120 | 0.501 | 1.251 | 0.505 | 1.255 |
| 227 | 0.622 | 1.387 | 0.536 | 1.287 | 0.490 | 1.240 | 0.568 | 1.323 |
| 228 | 0.553 | 1.306 | 0.526 | 1.277 | 0.333 | 1.111 | 0.535 | 1.286 |
| 229 | 0.491 | 1.241 | 0.452 | 1.204 | 0.659 | 1.434 | 0.563 | 1.317 |
| 230 | 0.680 | 1.462 | 0.481 | 1.231 | 0.532 | 1.283 | 0.597 | 1.356 |
| 231 | 0.959 | 1.920 | 0.472 | 1.223 | 0.634 | 1.402 | 0.584 | 1.341 |
| 232 | 0.575 | 1.331 | 0.311 | 1.097 | 0.386 | 1.149 | 0.469 | 1.220 |
| 233 | 0.524 | 1.275 | 0.537 | 1.288 | 0.527 | 1.278 | 0.598 | 1.358 |
| 234 | 0.640 | 1.410 | 0.506 | 1.256 | 0.612 | 1.375 | 0.594 | 1.353 |
| 235 | 0.567 | 1.321 | 0.484 | 1.234 | 0.637 | 1.406 | 0.593 | 1.352 |
| 236 | 0.552 | 1.305 | 0.536 | 1.287 | 0.664 | 1.441 | 0.541 | 1.293 |
| 237 | 0.605 | 1.366 | 0.448 | 1.201 | 0.402 | 1.162 | 0.575 | 1.331 |
| 238 | - | - | - | - | - | - | 0.495 | 1.245 |
| 239 | 0.590 | 1.348 | 0.449 | 1.202 | 0.701 | 1.491 | 0.590 | 1.348 |
| 240 | 0.578 | 1.334 | 0.415 | 1.172 | 0.644 | 1.415 | 0.571 | 1.326 |
| 241 | 0.703 | 1.494 | 0.536 | 1.287 | 0.633 | 1.401 | 0.680 | 1.462 |
| 242 | 0.573 | 1.328 | 0.494 | 1.244 | 0.731 | 1.534 | 0.572 | 1.327 |
| 243 | 0.757 | 1.573 | 0.536 | 1.287 | 0.735 | 1.540 | 0.603 | 1.364 |
| 244 | 0.662 | 1.438 | 0.522 | 1.272 | 0.662 | 1.438 | 0.568 | 1.323 |
| 245 | 0.460 | 1.212 | 0.538 | 1.289 | 0.544 | 1.296 | 0.543 | 1.295 |

| | | | | | | | | |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 246 | 0.466 | 1.217 | 0.570 | 1.325 | 0.642 | 1.412 | 0.578 | 1.334 |
| 247 | 0.615 | 1.378 | 0.552 | 1.305 | 0.395 | 1.156 | 0.570 | 1.325 |
| 248 | 1.000 | 2.000 | 0.000 | 1.000 | 0.433 | 1.187 | 0.591 | 1.349 |
| 250 | 0.606 | 1.367 | 0.417 | 1.174 | 0.486 | 1.236 | 0.540 | 1.292 |
| 251 | 0.527 | 1.278 | 0.374 | 1.140 | 0.516 | 1.266 | 0.520 | 1.270 |
| 252 | 0.609 | 1.371 | 0.497 | 1.247 | 0.525 | 1.276 | 0.759 | 1.576 |
| 253 | 0.553 | 1.306 | 0.529 | 1.280 | 0.712 | 1.507 | 0.583 | 1.340 |
| 274 | 0.510 | 1.260 | 0.309 | 1.095 | 0.536 | 1.287 | 0.595 | 1.354 |
| 275 | 0.681 | 1.464 | 0.802 | 1.643 | 0.650 | 1.423 | 0.631 | 1.398 |
| Total | 0.584 | 1.341 | 0.464 | 1.215 | 0.606 | 1.367 | 0.603 | 1.364 |

Table S3. Coefficient of variation (CV_m) and sibling coefficient (ψ_m) for male strobili production in the *P. orientalis* clonal seed orchard ($N = 5398$).

| Clone | 2017 | | 2019 | | 2021 | | Pooled | |
|-------|--------|----------|--------|----------|--------|----------|--------|----------|
| | CV_m | ψ_m | CV_m | ψ_m | CV_m | ψ_m | CV_m | ψ_m |
| 51 | - | - | - | - | - | - | 0.444 | 1.197 |
| 52 | - | - | - | - | - | - | 0.353 | 1.125 |
| 54 | 0.430 | 1.185 | 0.337 | 1.114 | 0.398 | 1.158 | 0.640 | 1.410 |
| 55 | 0.470 | 1.221 | 0.344 | 1.118 | 0.482 | 1.232 | 0.639 | 1.408 |
| 56 | 0.420 | 1.176 | 0.345 | 1.119 | 0.440 | 1.194 | 0.601 | 1.361 |
| 57 | 0.561 | 1.315 | 0.417 | 1.174 | 0.421 | 1.177 | 0.722 | 1.521 |
| 58 | 0.487 | 1.237 | 0.372 | 1.138 | 0.423 | 1.179 | 0.724 | 1.524 |
| 59 | 0.461 | 1.213 | 0.324 | 1.105 | 0.411 | 1.169 | 0.688 | 1.473 |
| 60 | 0.493 | 1.243 | 0.353 | 1.125 | 0.475 | 1.226 | 0.627 | 1.393 |
| 61 | 0.437 | 1.191 | 0.374 | 1.140 | 0.421 | 1.177 | 0.685 | 1.469 |
| 62 | 0.407 | 1.166 | 0.370 | 1.137 | 0.499 | 1.249 | 0.666 | 1.444 |
| 63 | 0.451 | 1.203 | 0.288 | 1.083 | 0.404 | 1.163 | 0.625 | 1.391 |
| 64 | 0.454 | 1.206 | 0.373 | 1.139 | 0.432 | 1.187 | 0.649 | 1.421 |
| 65 | 0.525 | 1.276 | 0.409 | 1.167 | 0.481 | 1.231 | 0.704 | 1.496 |
| 66 | 0.423 | 1.179 | 0.376 | 1.141 | 0.461 | 1.213 | 0.616 | 1.379 |
| 67 | 0.460 | 1.212 | 0.320 | 1.102 | 0.472 | 1.223 | 0.650 | 1.423 |
| 68 | 0.450 | 1.203 | 0.339 | 1.115 | 0.383 | 1.147 | 0.626 | 1.392 |
| 69 | 0.452 | 1.204 | 0.297 | 1.088 | 0.496 | 1.246 | 0.738 | 1.545 |
| 70 | 0.453 | 1.205 | 0.262 | 1.069 | 0.417 | 1.174 | 0.653 | 1.426 |
| 71 | 0.119 | 1.014 | 0.224 | 1.050 | 0.513 | 1.263 | 0.316 | 1.100 |
| 72 | 0.585 | 1.342 | 0.500 | 1.250 | 0.638 | 1.407 | 0.625 | 1.391 |
| 73 | 0.839 | 1.704 | 0.382 | 1.146 | 0.730 | 1.533 | 0.793 | 1.629 |
| 75 | 0.381 | 1.145 | 0.283 | 1.080 | 0.433 | 1.187 | 0.524 | 1.275 |
| 76 | 0.469 | 1.220 | 0.422 | 1.178 | 0.293 | 1.086 | 0.694 | 1.482 |
| 77 | 0.457 | 1.209 | 0.294 | 1.086 | 0.359 | 1.129 | 0.689 | 1.475 |
| 78 | 0.433 | 1.187 | 0.315 | 1.099 | 0.866 | 1.750 | 0.639 | 1.408 |
| 79 | 0.405 | 1.164 | 0.279 | 1.078 | 0.623 | 1.388 | 0.422 | 1.178 |
| 80 | 0.464 | 1.215 | 0.406 | 1.165 | 0.328 | 1.108 | 0.769 | 1.591 |
| 81 | 0.380 | 1.144 | 0.324 | 1.105 | 0.470 | 1.221 | 0.462 | 1.213 |
| 82 | 0.457 | 1.209 | 0.321 | 1.103 | 0.457 | 1.209 | 0.572 | 1.327 |
| 83 | 0.422 | 1.178 | 0.312 | 1.097 | 0.398 | 1.158 | 0.666 | 1.444 |
| 84 | 0.519 | 1.269 | 0.468 | 1.219 | 0.553 | 1.306 | 0.753 | 1.567 |
| 85 | 0.510 | 1.260 | 0.306 | 1.094 | 0.468 | 1.219 | 0.733 | 1.537 |
| 86 | 0.337 | 1.114 | 0.342 | 1.117 | 0.454 | 1.206 | 0.571 | 1.326 |
| 87 | 0.444 | 1.197 | 0.209 | 1.044 | 0.466 | 1.217 | 0.694 | 1.482 |
| 88 | 0.425 | 1.181 | 0.291 | 1.085 | 0.362 | 1.131 | 0.457 | 1.209 |
| 89 | 0.560 | 1.314 | 0.324 | 1.105 | 0.440 | 1.194 | 0.720 | 1.518 |

| | | | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 90 | 0.574 | 1.329 | 0.472 | 1.223 | 0.498 | 1.248 | 0.715 | 1.511 |
| 91 | 0.531 | 1.282 | 0.364 | 1.132 | 0.495 | 1.245 | 0.727 | 1.529 |
| 92 | 0.440 | 1.194 | 0.240 | 1.058 | 0.538 | 1.289 | 0.744 | 1.554 |
| 93 | 0.508 | 1.258 | 0.243 | 1.059 | 0.270 | 1.073 | 0.681 | 1.464 |
| 94 | 0.576 | 1.332 | 0.350 | 1.123 | 0.144 | 1.021 | 0.523 | 1.274 |
| 95 | 0.565 | 1.319 | 0.331 | 1.110 | 0.364 | 1.132 | 0.687 | 1.472 |
| 96 | 0.417 | 1.174 | 0.242 | 1.059 | 0.407 | 1.166 | 0.587 | 1.345 |
| 97 | 0.451 | 1.203 | 0.339 | 1.115 | 0.457 | 1.209 | 0.688 | 1.473 |
| 98 | 0.536 | 1.287 | 0.249 | 1.062 | 0.431 | 1.186 | 0.678 | 1.460 |
| 99 | 0.385 | 1.148 | 0.384 | 1.147 | 0.485 | 1.235 | 0.662 | 1.438 |
| 100 | 0.428 | 1.183 | 0.325 | 1.106 | 0.401 | 1.161 | 0.645 | 1.416 |
| 101 | 0.441 | 1.194 | 0.295 | 1.087 | 0.479 | 1.229 | 0.738 | 1.545 |
| 102 | 0.491 | 1.241 | 0.353 | 1.125 | 0.394 | 1.155 | 0.709 | 1.503 |
| 103 | 0.414 | 1.171 | 0.263 | 1.069 | 0.490 | 1.240 | 0.575 | 1.331 |
| 104 | 0.480 | 1.230 | 0.265 | 1.070 | 0.364 | 1.132 | 0.633 | 1.401 |
| 105 | 0.461 | 1.213 | 0.372 | 1.138 | 0.451 | 1.203 | 0.671 | 1.450 |
| 106 | 0.443 | 1.196 | 0.373 | 1.139 | 0.496 | 1.246 | 0.659 | 1.434 |
| 107 | 0.401 | 1.161 | 0.339 | 1.115 | 0.405 | 1.164 | 0.614 | 1.377 |
| 108 | 0.474 | 1.225 | 0.351 | 1.123 | 0.461 | 1.213 | 0.675 | 1.456 |
| 109 | 0.470 | 1.221 | 0.335 | 1.112 | 0.412 | 1.170 | 0.665 | 1.442 |
| 110 | 0.497 | 1.247 | 0.290 | 1.084 | 0.484 | 1.234 | 0.708 | 1.501 |
| 111 | 0.422 | 1.178 | 0.263 | 1.069 | 0.405 | 1.164 | 0.565 | 1.319 |
| 112 | 0.459 | 1.211 | 0.302 | 1.091 | 0.334 | 1.112 | 0.645 | 1.416 |
| 113 | 0.503 | 1.253 | 0.353 | 1.125 | 0.443 | 1.196 | 0.639 | 1.408 |
| 114 | 0.482 | 1.232 | 0.385 | 1.148 | 0.488 | 1.238 | 0.682 | 1.465 |
| 115 | 0.490 | 1.240 | 0.307 | 1.094 | 0.457 | 1.209 | 0.685 | 1.469 |
| 116 | 0.471 | 1.222 | 0.287 | 1.082 | 0.404 | 1.163 | 0.614 | 1.377 |
| 117 | 0.459 | 1.211 | 0.335 | 1.112 | 0.446 | 1.199 | 0.668 | 1.446 |
| 118 | 0.358 | 1.128 | 0.324 | 1.105 | 0.477 | 1.228 | 0.611 | 1.373 |
| 119 | 0.373 | 1.139 | 0.316 | 1.100 | 0.364 | 1.132 | 0.467 | 1.218 |
| 120 | 0.497 | 1.247 | 0.346 | 1.120 | 0.562 | 1.316 | 0.718 | 1.516 |
| 121 | 0.474 | 1.225 | 0.351 | 1.123 | 0.447 | 1.200 | 0.643 | 1.413 |
| 122 | 0.400 | 1.160 | 0.340 | 1.116 | 0.306 | 1.094 | 0.598 | 1.358 |
| 123 | 0.489 | 1.239 | 0.300 | 1.090 | 0.387 | 1.150 | 0.672 | 1.452 |
| 124 | 0.534 | 1.285 | 0.421 | 1.177 | 0.449 | 1.202 | 0.662 | 1.438 |
| 125 | 0.530 | 1.281 | 0.421 | 1.177 | 0.357 | 1.127 | 0.632 | 1.399 |
| 126 | 0.669 | 1.448 | 0.405 | 1.164 | 0.640 | 1.410 | 0.708 | 1.501 |
| 127 | 0.545 | 1.297 | 0.428 | 1.183 | 0.585 | 1.342 | 0.780 | 1.608 |
| 128 | 0.360 | 1.130 | 0.354 | 1.125 | 0.388 | 1.151 | 0.576 | 1.332 |
| 129 | 0.473 | 1.224 | 0.364 | 1.132 | 0.412 | 1.170 | 0.648 | 1.420 |

| | | | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 130 | 0.576 | 1.332 | 0.319 | 1.102 | 0.337 | 1.114 | 0.766 | 1.587 |
| 131 | 0.489 | 1.239 | 0.302 | 1.091 | 0.400 | 1.160 | 0.728 | 1.530 |
| 133 | 0.473 | 1.224 | 0.321 | 1.103 | 0.477 | 1.228 | 0.689 | 1.475 |
| 134 | 0.464 | 1.215 | 0.269 | 1.072 | 0.440 | 1.194 | 0.590 | 1.348 |
| 135 | 0.459 | 1.211 | 0.480 | 1.230 | 0.528 | 1.279 | 0.723 | 1.523 |
| 136 | 0.397 | 1.158 | 0.357 | 1.127 | 0.362 | 1.131 | 0.638 | 1.407 |
| 137 | 0.519 | 1.269 | 0.387 | 1.150 | 0.494 | 1.244 | 0.738 | 1.545 |
| 138 | 0.456 | 1.208 | 0.283 | 1.080 | 0.415 | 1.172 | 0.677 | 1.458 |
| 139 | 0.502 | 1.252 | 0.351 | 1.123 | 0.377 | 1.142 | 0.627 | 1.393 |
| 140 | 0.555 | 1.308 | 0.343 | 1.118 | 0.493 | 1.243 | 0.747 | 1.558 |
| 141 | 0.552 | 1.305 | 0.342 | 1.117 | 0.552 | 1.305 | 0.684 | 1.468 |
| 142 | 0.356 | 1.127 | 0.340 | 1.116 | 0.504 | 1.254 | 0.492 | 1.242 |
| 143 | 0.591 | 1.349 | 0.387 | 1.150 | 0.466 | 1.217 | 0.729 | 1.531 |
| 144 | 0.455 | 1.207 | 0.330 | 1.109 | 0.523 | 1.274 | 0.714 | 1.510 |
| 145 | 0.569 | 1.324 | 0.345 | 1.119 | 0.325 | 1.106 | 0.749 | 1.561 |
| 146 | 0.473 | 1.224 | 0.380 | 1.144 | 0.558 | 1.311 | 0.593 | 1.352 |
| 147 | 0.516 | 1.266 | 0.163 | 1.027 | 0.365 | 1.133 | 0.749 | 1.561 |
| 148 | 0.272 | 1.074 | 0.222 | 1.049 | 0.612 | 1.375 | 0.427 | 1.182 |
| 149 | 0.645 | 1.416 | 0.374 | 1.140 | 0.542 | 1.294 | 0.751 | 1.564 |
| 150 | 0.512 | 1.262 | 0.540 | 1.292 | 0.495 | 1.245 | 0.692 | 1.479 |
| 151 | 0.441 | 1.194 | 0.337 | 1.114 | 0.485 | 1.235 | 0.648 | 1.420 |
| 153 | 0.413 | 1.171 | 0.350 | 1.123 | 0.424 | 1.180 | 0.593 | 1.352 |
| 154 | 0.417 | 1.174 | 0.383 | 1.147 | 0.482 | 1.232 | 0.650 | 1.423 |
| 155 | 0.422 | 1.178 | 0.305 | 1.093 | 0.455 | 1.207 | 0.607 | 1.368 |
| 156 | 0.453 | 1.205 | 0.217 | 1.047 | 0.405 | 1.164 | 0.663 | 1.440 |
| 157 | 0.396 | 1.157 | 0.317 | 1.100 | 0.547 | 1.299 | 0.673 | 1.453 |
| 158 | 0.472 | 1.223 | 0.252 | 1.064 | 0.337 | 1.114 | 0.809 | 1.654 |
| 159 | 0.389 | 1.151 | 0.399 | 1.159 | 0.395 | 1.156 | 0.586 | 1.343 |
| 160 | 0.536 | 1.287 | 0.291 | 1.085 | 0.427 | 1.182 | 0.626 | 1.392 |
| 161 | 0.337 | 1.114 | 0.360 | 1.130 | 0.503 | 1.253 | 0.535 | 1.286 |
| 163 | 1.000 | 2.000 | 0.634 | 1.402 | 0.682 | 1.465 | 0.654 | 1.428 |
| 164 | 0.451 | 1.203 | 0.299 | 1.089 | 0.334 | 1.112 | 0.704 | 1.496 |
| 165 | 0.492 | 1.242 | 0.597 | 1.356 | 0.673 | 1.453 | 0.754 | 1.569 |
| 177 | - | - | - | - | - | - | 0.434 | 1.188 |
| 178 | 0.333 | 1.111 | 0.333 | 1.111 | 0.286 | 1.082 | 0.406 | 1.165 |
| 179 | 0.408 | 1.166 | 0.634 | 1.402 | 0.634 | 1.402 | 0.629 | 1.396 |
| 188 | - | - | - | - | - | - | 0.000 | 1.000 |
| 189 | 0.549 | 1.301 | 0.325 | 1.106 | 0.474 | 1.225 | 0.714 | 1.510 |
| 190 | 0.508 | 1.258 | 0.327 | 1.107 | 0.443 | 1.196 | 0.755 | 1.570 |
| 191 | 0.379 | 1.144 | 0.396 | 1.157 | 0.496 | 1.246 | 0.738 | 1.545 |

| | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 193 | 0.471 | 1.222 | 0.359 | 1.129 | 0.269 | 1.072 | 0.613 | 1.376 |
| 196 | 0.355 | 1.126 | 0.312 | 1.097 | 0.333 | 1.111 | 0.545 | 1.297 |
| 197 | 0.598 | 1.358 | 0.391 | 1.153 | 0.578 | 1.334 | 0.697 | 1.486 |
| 198 | 0.494 | 1.244 | 0.393 | 1.154 | 0.442 | 1.195 | 0.724 | 1.524 |
| 199 | 0.506 | 1.256 | 0.291 | 1.085 | 0.494 | 1.244 | 0.627 | 1.393 |
| 200 | 0.482 | 1.232 | 0.381 | 1.145 | 0.530 | 1.281 | 0.755 | 1.570 |
| 202 | 0.423 | 1.179 | 0.270 | 1.073 | 0.284 | 1.081 | 0.380 | 1.144 |
| 204 | 0.600 | 1.360 | 0.433 | 1.187 | 0.402 | 1.162 | 0.750 | 1.563 |
| 212 | - | - | - | - | - | - | 0.173 | 1.030 |
| 215 | 0.420 | 1.176 | 0.297 | 1.088 | 0.575 | 1.331 | 0.689 | 1.475 |
| 216 | 0.529 | 1.280 | 0.374 | 1.140 | 0.481 | 1.231 | 0.628 | 1.394 |
| 217 | 0.562 | 1.316 | 0.328 | 1.108 | 0.465 | 1.216 | 0.762 | 1.581 |
| 218 | 0.475 | 1.226 | 0.404 | 1.163 | 0.453 | 1.205 | 0.617 | 1.381 |
| 219 | 0.518 | 1.268 | 0.409 | 1.167 | 0.469 | 1.220 | 0.637 | 1.406 |
| 220 | 0.505 | 1.255 | 0.337 | 1.114 | 0.388 | 1.151 | 0.576 | 1.332 |
| 221 | 0.422 | 1.178 | 0.370 | 1.137 | 0.494 | 1.244 | 0.686 | 1.471 |
| 222 | 0.519 | 1.269 | 0.249 | 1.062 | 0.380 | 1.144 | 0.750 | 1.563 |
| 223 | 0.431 | 1.186 | 0.322 | 1.104 | 0.425 | 1.181 | 0.650 | 1.423 |
| 224 | 0.486 | 1.236 | 0.411 | 1.169 | 0.495 | 1.245 | 0.743 | 1.552 |
| 225 | 0.567 | 1.321 | 0.332 | 1.110 | 0.441 | 1.194 | 0.761 | 1.579 |
| 226 | 0.380 | 1.144 | 0.283 | 1.080 | 0.432 | 1.187 | 0.620 | 1.384 |
| 227 | 0.475 | 1.226 | 0.214 | 1.046 | 0.390 | 1.152 | 0.761 | 1.579 |
| 228 | 0.584 | 1.341 | 0.369 | 1.136 | 0.296 | 1.088 | 0.761 | 1.579 |
| 229 | 0.493 | 1.243 | 0.316 | 1.100 | 0.543 | 1.295 | 0.685 | 1.469 |
| 230 | 0.631 | 1.398 | 0.425 | 1.181 | 0.509 | 1.259 | 0.701 | 1.491 |
| 231 | 0.341 | 1.116 | 0.290 | 1.084 | 0.669 | 1.448 | 0.592 | 1.350 |
| 232 | 0.483 | 1.233 | 0.304 | 1.092 | 0.354 | 1.125 | 0.638 | 1.407 |
| 233 | 0.433 | 1.187 | 0.294 | 1.086 | 0.423 | 1.179 | 0.718 | 1.516 |
| 234 | 0.445 | 1.198 | 0.268 | 1.072 | 0.514 | 1.264 | 0.706 | 1.498 |
| 235 | 0.448 | 1.201 | 0.358 | 1.128 | 0.534 | 1.285 | 0.623 | 1.388 |
| 236 | 0.462 | 1.213 | 0.292 | 1.085 | 0.382 | 1.146 | 0.700 | 1.490 |
| 237 | 0.494 | 1.244 | 0.284 | 1.081 | 0.416 | 1.173 | 0.577 | 1.333 |
| 238 | - | - | - | - | - | - | 0.217 | 1.047 |
| 239 | 0.546 | 1.298 | 0.394 | 1.155 | 0.504 | 1.254 | 0.733 | 1.537 |
| 240 | 0.449 | 1.202 | 0.326 | 1.106 | 0.448 | 1.201 | 0.596 | 1.355 |
| 241 | 0.760 | 1.578 | 0.409 | 1.167 | 0.363 | 1.132 | 0.633 | 1.401 |
| 242 | 0.431 | 1.186 | 0.410 | 1.168 | 0.504 | 1.254 | 0.793 | 1.629 |
| 243 | 0.461 | 1.213 | 0.279 | 1.078 | 0.528 | 1.279 | 0.687 | 1.472 |
| 244 | 0.418 | 1.175 | 0.358 | 1.128 | 0.488 | 1.238 | 0.670 | 1.449 |
| 245 | 0.533 | 1.284 | 0.365 | 1.133 | 0.395 | 1.156 | 0.742 | 1.551 |

| | | | | | | | | |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 246 | 0.404 | 1.163 | 0.244 | 1.060 | 0.414 | 1.171 | 0.655 | 1.429 |
| 247 | 0.463 | 1.214 | 0.314 | 1.099 | 0.416 | 1.173 | 0.615 | 1.378 |
| 248 | 0.495 | 1.245 | 0.133 | 1.018 | 0.500 | 1.250 | 0.705 | 1.497 |
| 250 | 0.551 | 1.304 | 0.270 | 1.073 | 0.434 | 1.188 | 0.647 | 1.419 |
| 251 | 0.446 | 1.199 | 0.371 | 1.138 | 0.551 | 1.304 | 0.631 | 1.398 |
| 252 | 0.756 | 1.572 | 0.455 | 1.207 | 0.408 | 1.166 | 0.671 | 1.450 |
| 253 | 0.623 | 1.388 | 0.331 | 1.110 | 0.615 | 1.378 | 0.739 | 1.546 |
| 274 | 0.435 | 1.189 | 0.326 | 1.106 | 0.514 | 1.264 | 0.636 | 1.404 |
| 275 | 0.476 | 1.227 | 0.258 | 1.067 | 0.407 | 1.166 | 0.455 | 1.207 |
| Total | 0.472 | 1.223 | 0.349 | 1.122 | 0.451 | 1.203 | 0.674 | 1.454 |

Table S4. Maleness index of 166 clones in 2017.

| Clone | Genetic contribution | Reproductive output | Clone | Genetic contribution | Reproductive output |
|--------------|-----------------------------|----------------------------|--------------|-----------------------------|----------------------------|
| 238 | 0.796 | 0.857 | 199 | 0.502 | 0.608 |
| 51 | 0.723 | 0.800 | 114 | 0.502 | 0.607 |
| 87 | 0.643 | 0.735 | 69 | 0.502 | 0.607 |
| 111 | 0.604 | 0.701 | 106 | 0.499 | 0.604 |
| 248 | 0.603 | 0.700 | 159 | 0.497 | 0.603 |
| 242 | 0.602 | 0.699 | 64 | 0.497 | 0.603 |
| 99 | 0.601 | 0.698 | 62 | 0.497 | 0.603 |
| 109 | 0.600 | 0.697 | 90 | 0.497 | 0.602 |
| 204 | 0.598 | 0.696 | 52 | 0.494 | 0.600 |
| 102 | 0.586 | 0.685 | 193 | 0.494 | 0.600 |
| 112 | 0.585 | 0.684 | 229 | 0.494 | 0.600 |
| 110 | 0.585 | 0.684 | 54 | 0.493 | 0.599 |
| 107 | 0.583 | 0.682 | 76 | 0.493 | 0.598 |
| 103 | 0.583 | 0.682 | 113 | 0.493 | 0.598 |
| 81 | 0.580 | 0.679 | 218 | 0.491 | 0.597 |
| 96 | 0.577 | 0.676 | 158 | 0.491 | 0.597 |
| 70 | 0.570 | 0.671 | 60 | 0.488 | 0.594 |
| 231 | 0.570 | 0.670 | 93 | 0.488 | 0.594 |
| 212 | 0.566 | 0.667 | 160 | 0.487 | 0.593 |
| 82 | 0.566 | 0.667 | 128 | 0.487 | 0.593 |
| 118 | 0.561 | 0.663 | 197 | 0.486 | 0.592 |
| 226 | 0.561 | 0.663 | 223 | 0.486 | 0.592 |
| 89 | 0.561 | 0.662 | 164 | 0.486 | 0.592 |
| 234 | 0.558 | 0.659 | 137 | 0.485 | 0.591 |
| 104 | 0.557 | 0.659 | 61 | 0.484 | 0.590 |
| 88 | 0.555 | 0.657 | 155 | 0.484 | 0.590 |

| | | | | | |
|------------|-------|-------|------------|-------|-------|
| 63 | 0.553 | 0.655 | 141 | 0.482 | 0.588 |
| 56 | 0.551 | 0.653 | 225 | 0.478 | 0.584 |
| 86 | 0.550 | 0.652 | 240 | 0.477 | 0.583 |
| 246 | 0.549 | 0.651 | 216 | 0.476 | 0.582 |
| 244 | 0.549 | 0.651 | 224 | 0.476 | 0.582 |
| 239 | 0.547 | 0.650 | 153 | 0.475 | 0.581 |
| 116 | 0.547 | 0.649 | 157 | 0.475 | 0.581 |
| 127 | 0.544 | 0.647 | 165 | 0.473 | 0.579 |
| 235 | 0.543 | 0.646 | 75 | 0.472 | 0.579 |
| 133 | 0.542 | 0.645 | 245 | 0.472 | 0.579 |
| 98 | 0.542 | 0.645 | 253 | 0.471 | 0.578 |
| 135 | 0.541 | 0.644 | 91 | 0.471 | 0.577 |
| 120 | 0.539 | 0.642 | 196 | 0.470 | 0.576 |
| 92 | 0.538 | 0.641 | 134 | 0.470 | 0.576 |
| 251 | 0.537 | 0.640 | 130 | 0.466 | 0.572 |
| 233 | 0.534 | 0.638 | 151 | 0.466 | 0.572 |
| 100 | 0.533 | 0.636 | 154 | 0.465 | 0.572 |
| 119 | 0.533 | 0.636 | 148 | 0.465 | 0.571 |
| 68 | 0.528 | 0.632 | 105 | 0.462 | 0.568 |
| 243 | 0.528 | 0.632 | 156 | 0.462 | 0.568 |
| 117 | 0.527 | 0.631 | 145 | 0.460 | 0.567 |
| 101 | 0.527 | 0.631 | 84 | 0.458 | 0.564 |
| 131 | 0.527 | 0.631 | 200 | 0.456 | 0.563 |
| 191 | 0.527 | 0.631 | 138 | 0.455 | 0.561 |
| 275 | 0.525 | 0.629 | 189 | 0.455 | 0.561 |
| 66 | 0.522 | 0.627 | 232 | 0.453 | 0.560 |
| 143 | 0.522 | 0.627 | 95 | 0.453 | 0.560 |
| 58 | 0.522 | 0.626 | 65 | 0.452 | 0.558 |
| 94 | 0.521 | 0.625 | 220 | 0.450 | 0.557 |
| 80 | 0.520 | 0.624 | 217 | 0.446 | 0.553 |
| 97 | 0.519 | 0.624 | 150 | 0.446 | 0.553 |
| 221 | 0.519 | 0.624 | 230 | 0.446 | 0.553 |
| 144 | 0.519 | 0.623 | 149 | 0.444 | 0.551 |
| 83 | 0.519 | 0.623 | 126 | 0.444 | 0.551 |
| 198 | 0.518 | 0.623 | 57 | 0.439 | 0.546 |
| 136 | 0.518 | 0.622 | 202 | 0.436 | 0.542 |
| 77 | 0.515 | 0.620 | 247 | 0.433 | 0.539 |
| 236 | 0.514 | 0.619 | 252 | 0.432 | 0.538 |
| 121 | 0.514 | 0.618 | 142 | 0.425 | 0.531 |
| 219 | 0.513 | 0.618 | 123 | 0.419 | 0.525 |

| | | | | | |
|------------|-------|-------|------------|-------|-------|
| 129 | 0.512 | 0.616 | 122 | 0.417 | 0.523 |
| 115 | 0.511 | 0.616 | 125 | 0.414 | 0.520 |
| 67 | 0.511 | 0.616 | 237 | 0.412 | 0.518 |
| 228 | 0.510 | 0.615 | 222 | 0.409 | 0.515 |
| 59 | 0.510 | 0.615 | 190 | 0.406 | 0.512 |
| 227 | 0.509 | 0.614 | 124 | 0.405 | 0.511 |
| 161 | 0.508 | 0.613 | 72 | 0.401 | 0.506 |
| 140 | 0.507 | 0.612 | 177 | 0.395 | 0.500 |
| 250 | 0.507 | 0.612 | 73 | 0.395 | 0.500 |
| 139 | 0.507 | 0.612 | 71 | 0.377 | 0.481 |
| 108 | 0.506 | 0.612 | 178 | 0.370 | 0.474 |
| 55 | 0.504 | 0.610 | 147 | 0.352 | 0.455 |
| 146 | 0.504 | 0.610 | 163 | 0.343 | 0.444 |
| 215 | 0.504 | 0.610 | 179 | 0.343 | 0.444 |
| 79 | 0.503 | 0.608 | 241 | 0.337 | 0.439 |
| 274 | 0.503 | 0.608 | 188 | 0.303 | 0.400 |
| 85 | 0.503 | 0.608 | 78 | 0.271 | 0.364 |

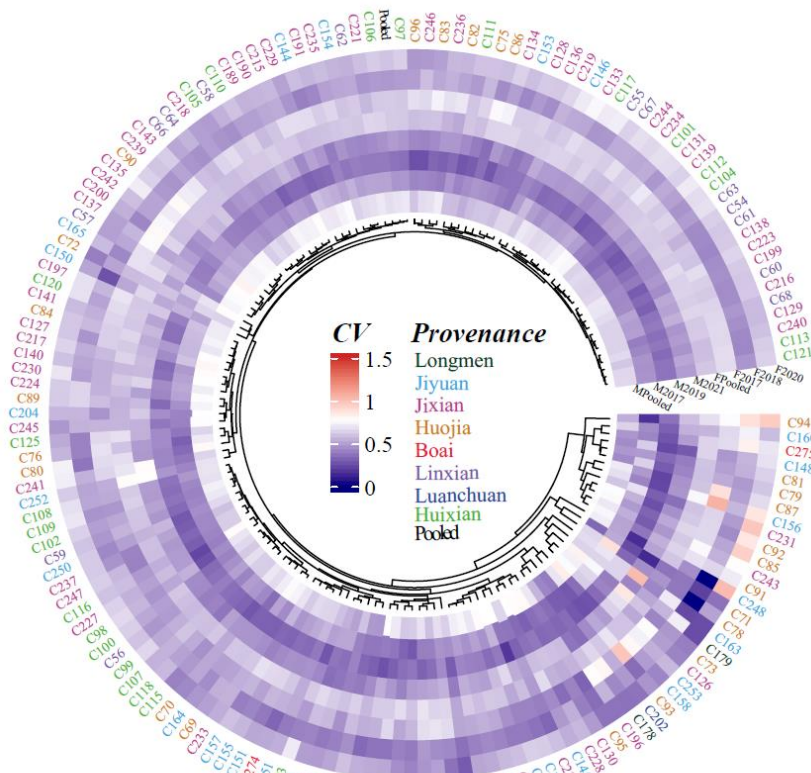


Figure S1. Coefficient of variation (CV) of female and male strobili productions for different years in the *P. orientalis* clonal seed orchard. Different colors of labels correspond to different provenances.

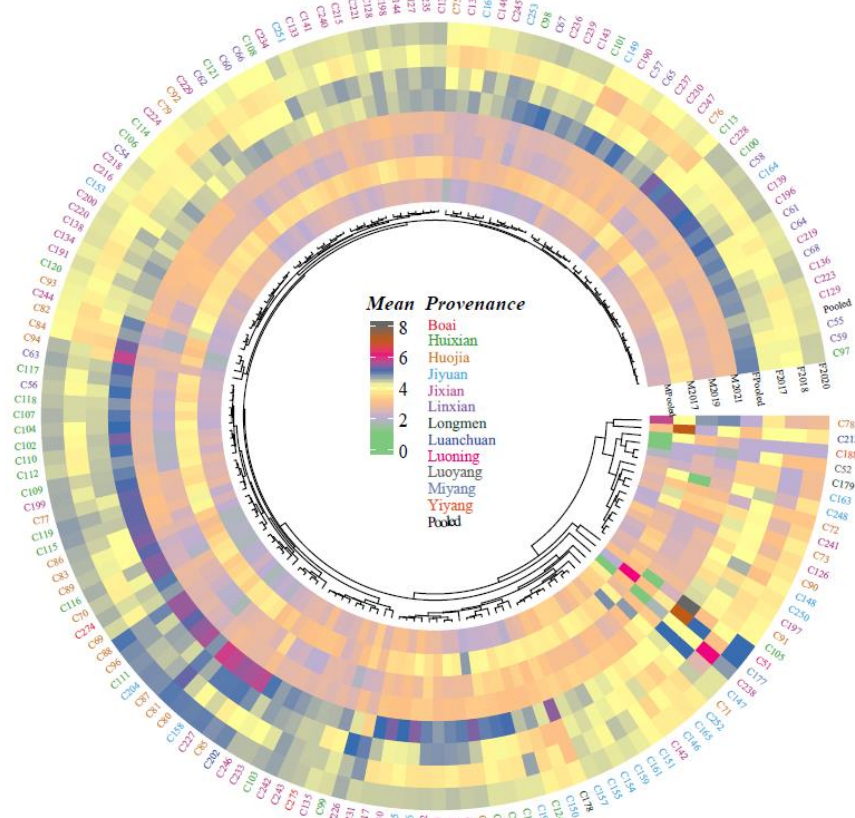


Figure S2. The mean value of female and male strobili productions for different years in the *P. orientalis* clonal seed orchard.

