**Gypsy test with SLS data**

This document summarizes the results of tests on SLS stands using 1) Gypsy excel version (this is the Alberta govt version), 2) Gypsy with correction factor until the end (simulation\_choice = ‘no’), and 3) Gypsy with correction factor until data when data was taken (simulation\_choice = ‘yes).

The main variable assessed will be basal area over 250 years (stand age). Basal area is the main variable to calculate other important variables such as merchantable variables. If the basal area behavior is acceptable, the behavior of other variables will be too.

Test:

Observations:

1. Very young plots (tage<25) are not reliable. Shongming’s warning
2. Simulation\_choice = “no” only works reasonably when plots passed tage >>50 years
3. Aspen is the most complicated species because its density varies a lot along the plot’s lifetime and basal area is a function of the density and growth (Although some model functions do not consider density in the computation of basal area)
4. The step in the beginning of each simulation results from the fact that the basal area is only calculated on breast height age. Some of these plots show a very large number of individuals at this age (sometimes >20000). As we add the individual basal areas, even if small, the plot basal area starts with a basal area already large. This is a point to discuss. Perhaps an alternative is to set the initial basal area very small for all plots.
5. For Aspen, the shape of the curve changes using the factor. As a result, when the plot is old, the curve may underestimate the maximum aspen basal area. Should we set the code to use the fact up to the end for older plots?
6. Double check Aspen equations. Why do we get different results when the plot is very young (even though the results are not reliable).
7. Check plot 763406. Convergence problems?
8. Check plot 1613773 (typo ?).
9. Check Aspen in plot 1614424 (typo?)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 200510 | 0.79 | 22.69 |  |  |  |  | 12.33 | 17 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 108.13 | 108.13 |  |  |  |  | 1693.99 | 1723.48 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 200863 | 1.83 | 37.59 |  |  |  |  | 14.78 | 24 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 160 | 160.07 |  |  |  |  | 1294.21 | 1322.41 |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 359668 |  |  |  |  |  |  | 16.38 | 22 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  |  |  |  |  | 1085.01 | 1097.0 |  |

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| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 587494 | 6.22 | 120 | 2.66 | 87 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 102 | 115 | 44 | 44 |  |  |  |  |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 508159 | 28.88 | 120 | 14.44 | 81 |  |  | 14.44 | 105 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 730 | 42143 | 365 | 534 |  |  | 365 | 5688 |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 587653 | 3.51 | 11 | 2.49 | 16.9 |  |  | 3.23 | 12.3 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 252 | 252 | 180 | 180 |  |  | 232 | 233 |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 587675 | 3.43 | 14 | 3.34 | 20 |  |  | 2.50 | 14.6 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 207 | 207 |  | 201 | 201 |  | 151 | 151 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 612945 |  |  | 0.77 | 77 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 8.88 | 8.88 |  |  |  |  |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 613015 |  |  | 27.94 | 148 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 483 | 523 |  |  |  |  |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 613223 |  |  | 17 | 70 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 485 | 494 |  |  |  |  |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 613550 |  |  | 8.55 | 45 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 537 | 541 |  |  |  |  |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 673537 | 11.15 | 74 | 3.71 | 65 |  |  | 2.83 | 56 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 979 | 4316 | 326 | 342 |  |  | 248 | 251 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 763406 | 2.60 | 33 | 1.77 | 39 |  |  | 1.54 | 27 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 167 | 167 | 114 | 114 |  |  | 99 | 99 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 888936 | 10.42 | 50 | 3.58 | 50 |  |  | 2.3 | 39 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 1162 | 2045 | 400 | 412 |  |  | 254 | 255 |  |

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| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 894583 | 7.03 | 75 | 3.67 | 64 |  |  | 0.8 | 59 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 299 | 387 | 157 | 158 |  |  | 34 | 34 |  |

|  |  |
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| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 942300 | 29 | 120 | 2 | 83 |  |  | 8.85 | 105 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 651 | 27701 | 44 | 45 |  |  | 196 | 257 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 965296 |  |  |  |  |  |  | 42 | 159 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  |  |  |  |  | 1031 | 13661 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1008174 |  |  | 17.78 | 100 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 733 | 769 |  |  |  |  |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1008198 |  |  | 3.26 | 38 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 1664 | 1694 |  |  |  |  |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1049300 | 0.85 | 56 | 2.21 | 45 |  |  | 14 | 37 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 161 | 162 | 418 | 423 |  |  | 2638 | 3435 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1082523 | 1.27 | 45 | 2.02 | 38 |  |  | 9.37 | 31 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 106 | 106 | 170 | 170 |  |  | 786 | 798 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1124920 |  |  | 21 | 127 |  |  | 30 | 250 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 304 | 317 |  |  | 438 | 14673 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1124928 |  |  | 15.4 | 125 |  |  | 25 | 250 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 212.5 | 217.5 |  |  | 346 | 11234 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1168535 |  |  | 2.48 | 57 |  |  | 13.02 | 50 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 237 | 238 |  |  | 1244 | 1473 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1168551 |  |  |  |  |  |  | 14.31 | 33 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  |  |  |  |  | 895 | 914 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1168775 |  |  |  |  |  |  | 12.6 | 19 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  |  |  |  |  | 813 | 816 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1168955 |  |  |  |  |  |  | 3.45 | 250 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  |  |  |  |  | 26 | 106 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1275880 | 1.72 | 21 |  |  |  |  | 0.43 | 20 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 106 | 106 |  |  |  |  | 26.5 | 26.5 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1300922 |  |  | 4.78 | 57 |  |  | 16 | 51 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 332 | 334 |  |  | 1112 | 1313 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1379023 | 40 | 120 |  |  |  |  | 18.8 | 99 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 865 | 29669 |  |  |  |  | 407 | 3992 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1379036 | 7.95 | 156 | 7.45 | 102 |  |  | 34.27 | 145 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 134 | 315 | 126 | 128 |  |  | 578 | 6265 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1469517 |  | 41 | 0.55 |  |  |  | 1.66 | 35 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 63 | 63 |  |  | 190 | 190 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1503518 |  |  |  |  |  |  | 15.17 | 108 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  |  |  |  |  | 339 | 388 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1530588 |  |  | 1.84 | 38 |  |  | 7.38 | 30 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 99 | 99 |  |  | 397 | 398 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1541972 |  |  |  |  |  |  | 4.52 | 26 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  |  |  |  |  | 892 | 905 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1542128 |  |  | 0.4 | 21 |  |  | 5.34 | 17 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 36 | 36 |  |  | 482 | 483 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1594749 |  |  | 16.15 | 222 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
|  |  | 250 | 266 |  |  |  |  |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1613773 | 1.85 | 110 | 10.5 | 78 |  |  | 18.54 | 86 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 49 | 290 | 279 | 51 |  |  | 493 | 608 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1614385 | 15.14 | 53 |  |  |  |  | 2.46 | 41 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 922 | 1527 |  |  |  |  | 150 | 150 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1614424 | 7.2 | 41 | 1.09 | 45 |  |  | 2.6 | 32 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 817 | 964 | 124 | 124 |  |  | 297 | 298 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1614860 | 23.49 | 89 | 3.1 | 70 |  |  | 4.32 | 72 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 496 | 2859 | 65 | 65 |  |  | 91 | 92 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plot ID | BA\_Aw | Tage\_Aw | BA\_Sw | Tage\_Sw | BA\_Sb | Tage\_Sb | BA\_Pl | Tage\_Pl |
| 1841096 | 5.25 | 119 | 4.45 | 84 |  |  | 31 | 99 |
|  |  |  |  |  |  |  |  |  |
| N\_Aw | N0\_Aw | N\_Sw | N0\_Sw | N\_Sb | N0\_Sb | N\_Pl | N0\_Pl |  |
| 114 | 131 | 97 | 98 |  |  | 671 | 1886 |  |

|  |  |
| --- | --- |
| Simulation type | Growth curve |
| Excel |  |
| ‘no’ |  |
| ‘yes’ |  |