

Supplementary file 8

A comparison of a transferred general diameter/height model and locally constructed models that are calibrated with local field measurements and used for the prediction of diameter at breast height. The accuracy of the predictions is estimated based on the basal area median tree diameter, tree-level volume and plot level total volume.

S8 Prediction of diameter at breast height (DBH) with newly constructed diameter/height models, calibration, calculation of tree volume and comparison of the results with field measurements: absolute (RMSE) and relative root-mean-square error (%RMSE) and absolute and relative bias (%BIAS) values with no false trees are shown for the entire dataset and by development class.

The fixed part of the model describes the results without calibration.

| | | With no false trees | | | |
|---------------------|----------|---------------------|-------|-------|-------|
| The number of trees | Class | RMSE | RMSE% | BIAS | %BIAS |
| Fixed part | | | | | |
| | All | 165.5 | 35.57 | 33.61 | 5.95 |
| 2 | Young | 69.15 | 40.38 | 8.26 | 3.57 |
| | Advanced | 103.68 | 34.28 | 19.28 | 7.38 |
| | Mature | 275.94 | 33.62 | 61.09 | 6.28 |
| 4 | All | 164.84 | 35.55 | 33.2 | 6.24 |
| | Young | 69.24 | 40.41 | 9.83 | 4.5 |
| | Advanced | 103.77 | 34.36 | 20.41 | 7.87 |
| | Mature | 274.21 | 33.49 | 58.19 | 5.99 |
| 6 | All | 164.34 | 35.62 | 31.53 | 6.38 |
| | Young | 69.56 | 40.59 | 11.44 | 5.46 |
| | Advanced | 104.06 | 34.52 | 21.21 | 8.31 |
| | Mature | 272.55 | 33.39 | 52.48 | 5.39 |
| 8 | All | 164.16 | 35.68 | 31.02 | 6.62 |
| | Young | 69.83 | 40.73 | 12.84 | 6.3 |
| | Advanced | 104.36 | 34.67 | 22.22 | 8.75 |
| | Mature | 271.7 | 33.35 | 49.52 | 5.1 |
| 10 | All | 164.25 | 35.72 | 31.78 | 6.84 |
| | Young | 69.94 | 40.79 | 13.43 | 6.64 |
| | Advanced | 104.54 | 34.73 | 22.97 | 9.01 |
| | Mature | 271.71 | 33.36 | 50.4 | 5.21 |
| Calibrated | | | | | |
| 2 | All | 154.24 | 33.14 | 34.04 | 6.77 |
| | Young | 65.78 | 37.83 | 13.05 | 6.5 |
| | Advanced | 97.77 | 32.22 | 21 | 7.58 |
| | Mature | 255.42 | 30.95 | 57.74 | 6.28 |
| 4 | All | 147.17 | 31.77 | 33.55 | 7.13 |
| | Young | 63.88 | 36.54 | 15.5 | 8.06 |
| | Advanced | 94 | 31 | 20.93 | 7.62 |
| | Mature | 242.43 | 29.42 | 55.08 | 6.15 |
| 6 | All | 143.26 | 31.02 | 33.14 | 7.35 |
| | Young | 62.86 | 35.82 | 17.11 | 9 |
| | Advanced | 91.91 | 30.33 | 21.68 | 7.79 |
| | Mature | 235.23 | 28.57 | 52.48 | 5.96 |
| 8 | All | 141.5 | 30.66 | 33.1 | 7.44 |
| | Young | 62.26 | 35.43 | 17.65 | 9.37 |
| | Advanced | 90.87 | 30.02 | 21.6 | 7.78 |
| | Mature | 232.17 | 28.2 | 52.1 | 5.96 |
| 10 | All | 139.67 | 30.33 | 32.7 | 7.5 |
| | Young | 61.93 | 35.2 | 18.24 | 9.68 |
| | Advanced | 89.93 | 29.71 | 21.84 | 7.83 |
| | Mature | 228.68 | 27.81 | 50.57 | 5.88 |