

| Variable | Fixed effects | | | | Random effects | |
|------------|---------------|------------------------|-------------|------------------------|------------------------|----------|
| | Thies | | Parsivel | | Mast | Residual |
| | coefficient | p value | coefficient | p value | SD | SD |
| NP | 311 | $< 2 \times 10^{-16}$ | 192 | $< 2 \times 10^{-16}$ | 1.130×10^{-8} | 1.027 |
| <i>D10</i> | 0.2409 | $< 2 \times 10^{-16}$ | 0.5010 | $< 2 \times 10^{-16}$ | 8.726×10^{-4} | 0.2493 |
| <i>D50</i> | 0.5302 | $< 2 \times 10^{-16}$ | 0.8040 | $< 2 \times 10^{-16}$ | 0.000 | 0.2420 |
| <i>D90</i> | 1.126 | $< 2 \times 10^{-16}$ | 1.254 | $< 2 \times 10^{-16}$ | 0.000 | 0.2320 |
| <i>V10</i> | 1.199 | $< 2 \times 10^{-16}$ | 1.972 | $< 2 \times 10^{-16}$ | 3.062×10^{-2} | 0.2420 |
| <i>V50</i> | 2.392 | $< 2 \times 10^{-16}$ | 3.085 | $< 2 \times 10^{-16}$ | 0.000 | 0.1760 |
| <i>V90</i> | 4.215 | $< 2 \times 10^{-16}$ | 4.203 | $< 2 \times 10^{-16}$ | 0.000 | 0.1641 |
| <i>R</i> | 1.326 | 1.130×10^{-4} | 1.183 | 8.77×10^{-11} | 0.000 | 1.660 |
| ND | 33,370 | $< 2 \times 10^{-16}$ | 17,750 | $< 2 \times 10^{-16}$ | 1.246×10^{-7} | 0.6232 |
| <i>Z</i> | 24.00 | $< 2 \times 10^{-16}$ | 22.45 | $< 2 \times 10^{-16}$ | 0.000 | 0.2968 |
| <i>E</i> | 10.370 | $< 2 \times 10^{-16}$ | 8.968 | $< 2 \times 10^{-16}$ | 0.000 | 0.4733 |