

Zadatak 11 - No. 9 Ulijan Denis
 Vežbe - Rast i proizvodnost šuma 2023
 markokazimirovic.shinyapps.io/Zadatak11/

Na bazi premera dela sastojine crnog bora u Lipovici, površine p= 0.1 ha i poznate starosti od 55 godina:

| N | d[cm] | h [m] | ld [m] | r1 [m] | r2 [m] | r3 [m] | r4 [m] | B.P. | N | d[cm] | h [m] | ld [m] | r1 [m] | r2 [m] | r3 [m] | r4 [m] | B.P. |
|----|-------|-------|--------|--------|--------|--------|--------|------|------|--------|-------|--------|--------|--------|--------|--------|------|
| 1 | 26 | | | | | | | 1 | 45 | 21.1 | | | | | | | 3 |
| 2 | 26.5 | | | | | | | 1 | 46 | 26.1 | | | 1.1 | 1.8 | 2.2 | 2.1 | 1 |
| 3 | 22.4 | | | 1.6 | 2.7 | 1.8 | 1.7 | 1 | 47 | 25.4 | 18 | 13 | 1.4 | 1.7 | 1.7 | 3 | 2 |
| 4 | 17.9 | | | | | | | 1 | 48 | 29.5 | 18.6 | 13.2 | 3 | 2.2 | 1.7 | 2.1 | 2 |
| 5 | 27.6 | | | 1.8 | 2.4 | 1 | 2.9 | 1 | 49 | 22.6 | 18.1 | 14.1 | | | | | 1 |
| 6 | 32.5 | 23.3 | | 1.2 | 2.3 | 2 | 3.2 | 1 | 50 | / | | | | | | | / |
| 7 | 29.1 | 18.2 | | | | | | 1 | 51 | 22.6 | | | | | | | 3 |
| 8 | 21.7 | | | | | | | 2 | 52 | 18.8 | | | | | | | 3 |
| 9 | 19.2 | | | | | | | 1 | 53 | 18.9 | | | | | | | 2 |
| 10 | 18.9 | | | | | | | 2 | 54 | 17.5 | | | | | | | 1 |
| 11 | 22.7 | | | | | | | 2 | 55 | 22.7 | | | | | | | 3 |
| 12 | 22.3 | | | | | | | 1 | 56 | / | | | | | | | / |
| 13 | 22 | | | | | | | 2 | 57 | 25.4 | | | | | | | 1 |
| 14 | 27.8 | | | | | | | 1 | 58 | 30.2 | 20.7 | 14 | 3.1 | 1.8 | 1.4 | 3.6 | 2 |
| 15 | 30 | 19.3 | 13.8 | 1.7 | 1.6 | 2.9 | 3.4 | 1 | 59 | 26 | | | 2.4 | 1.7 | 1.7 | 1.9 | 2 |
| 16 | 20.1 | | | | | | | 2 | 60 | 30.4 | 22.1 | 14.7 | 1.8 | 2.3 | 2 | 2.9 | 1 |
| 17 | 30.5 | 20.9 | | 2.2 | 2 | 2.5 | 2.1 | 2 | 61 | 25.1 | 21 | 13.2 | 1.3 | 1.6 | 2.5 | 2.5 | 3 |
| 18 | 26.9 | 18.6 | 14.2 | 1.6 | 2.1 | 2.1 | 1.6 | 2 | 62 | 21.1 | | | 2.6 | 1.7 | 0.9 | 2 | 1 |
| 19 | 17 | 18.2 | 14.1 | | | | | 2 | 63 | 29 | 22.1 | 13.9 | 2.6 | 1.3 | 1.9 | 2.6 | 1 |
| 20 | 24.6 | | | 2 | 1.7 | 1.7 | 1.5 | 1 | 64 | 18 | | | | | | | 1 |
| 21 | 23 | | | | | | | 1 | 65 | 26.2 | 21.2 | 14.5 | | | | | 2 |
| 22 | 22.2 | | | | | | | 1 | 66 | 31 | 23.1 | 15.1 | 1.9 | 2.3 | 1.9 | 3.3 | 2 |
| 23 | 27.5 | | | 2 | 1.3 | 2.4 | 2.1 | 1 | 67 | 26.9 | 20.1 | 12.8 | 1.5 | 1.8 | 2.3 | 3.3 | 1 |
| 24 | 16.3 | | | | | | | 3 | 68 | 26.1 | 20.9 | 14.7 | | | | | 3 |
| 25 | 20.1 | | | | | | | 2 | 69 | 29.6 | 20.1 | 13.1 | | | | | 3 |
| 26 | 13.4 | | | | | | | 2 | 70 | 22 | 19.5 | 13.8 | | | | | 3 |
| 27 | 19.9 | | | | | | | 2 | 71 | 20.9 | 18.3 | 13 | | | | | 1 |
| 28 | 33.1 | 23.3 | | 2 | 1.8 | 2.6 | 3.9 | 1 | 72 | 24 | 19.7 | 13.3 | 2.2 | 1.9 | 2.8 | 1.8 | 2 |
| 29 | 22.2 | | | | | | | 1 | 73 | / | | | | | | | / |
| 30 | 37.3 | 23.7 | | | | | | 1 | 74 | 23.8 | 18.4 | 12.3 | | | | | 1 |
| 31 | 24.7 | 21.6 | 14.5 | | | | | 2 | 75 | 28.2 | 17.6 | | | | | | 2 |
| 32 | 24.2 | 21.7 | 14.8 | | | | | 1 | 76 | 35.8 | 23.4 | | | | | | 3 |
| 33 | 30.1 | 21.2 | 15 | | | | | 2 | 77 | 26.9 | | | | | | | 1 |
| 34 | 12.1 | 17.5 | 14.7 | | | | | 3 | 78 | / | | | | | | | / |
| 35 | 22.2 | | | | | | | 2 | 79 | 26.3 | | | | | | | 2 |
| 36 | 24.4 | | | | | | | 2 | 80 | 17 | | | | | | | 1 |
| 37 | 27.8 | | | | | | | 1 | 81 | 31.8 | 22.7 | | 2.9 | 2.7 | 2.2 | 3.8 | 1 |
| 38 | / | | | | | | | / | 82 | 23.8 | | | | | | | 1 |
| 39 | 19.1 | 16.1 | 12.3 | | | | | 1 | 83 | 22.3 | | | | | | | 3 |
| 40 | 27 | | | 2.6 | 0.9 | 2.2 | 2.7 | 1 | 84 | 23.6 | | | | | | | 3 |
| 41 | 24.8 | | | 1.9 | 1.8 | 1.5 | 2.6 | 1 | 85 | 29.1 | 19 | | 1.9 | 1.9 | 3.1 | 2.2 | 3 |
| 42 | 25.9 | | | 1.5 | 2.1 | 1.8 | 3.5 | 2 | 86 | 19.9 | 19 | 13 | | | | | 1 |
| 43 | 28.6 | 17.8 | | 2.9 | 2.3 | 1.6 | 3.1 | 2 | 87 | 23.4 | | | 1.2 | 1.3 | 1.4 | 2.5 | 1 |
| 44 | 24.5 | | | 1.7 | 1.5 | 2.5 | 2.6 | 2 | Suma | 2005.1 | | | | | | | |

Odrediti i analizirati sledeće elemente rasta i sastojinske izgrađenosti i po potrebi ih grafički predstaviti:

1. Srednje prečnike i visine;

. Aritmetički srednji prečnik:

$$\bar{d} = \frac{1}{n} \sum_1^n d =$$

. Srednji prečnik po temeljnici:

$$d_g = \sqrt{\frac{\sum_1^n d^2}{n}} = \sqrt{\frac{\sum_1^n 50881.87}{n}} =$$

. Srednji prečnik dominantnih stabala po temeljnici:

$$D_g = \sqrt{\frac{\sum_1^n D_{20\%}^2}{n_{20\%}}} =$$

. Aritmetička srednja visina:

$$\bar{h} = \frac{1}{n} \sum_1^n h =$$

. Srednja visina dominantnih stabala:

$$H_g = \sqrt{\frac{\sum_1^n H_{20\%}^2}{n_{20\%}}} =$$

. Visinsku krivu i krivu visina početka krošnje:

redova 60x65 kolona

