**MODELAÇÃO DOS RECURSOS FLORESTAIS 2019/20**

***FOREST MODELS 2019/20***

***Continuous evaluation – Topic 2***

***Data for growth studies***

Table 1 contains data obtained during a forest inventory carried out this spring (2019): Diameter distribution and current annual increment.

|  |  |  |  |
| --- | --- | --- | --- |
| Diameter classes | Diameter  (cm) | N  (mortality discounted) | Increment  (10 yrs) |
| [5 - 7[ | 6 | 313 | 2.2 |
| [7 - 9[ | 8 | 229 | 2.3 |
| [9 - 11[ | 10 | 134 | 2.4 |
| [11 - 13[ | 12 | 70 | 2.2 |
| [13 - 15[ | 14 | 34 | 2.4 |
| [15 - 17[ | 16 | 10 | 2.6 |
| [17 - 19[ | 18 | 9 | 2.1 |
| [19 - 21[ | 20 | 6 | 1.8 |
| [21 - 23[ | 22 | 0 |  |
|  |  | 805 |  |

1. Assuming there is no ingrowth, compute the stand table for the year 2029
2. Using the equations below, estimate the volume at the time of measurement and in 2029 and, from those, the current annual increment in volume for the 10 years period

|  |  |
| --- | --- |
| Height-diameter curve | h=d/(0.64212+0.01874\*d)  (units: d – cm; h-m) |
| |  |  | | --- | --- | | Volume equation | v = 0.00005126 d2.0507 h0.8428 (units: d – cm; h-m; v – m3) | | v = 0.00005126 d2.0507 h0.8428  (units: d – cm; h-m; v – m3) |