

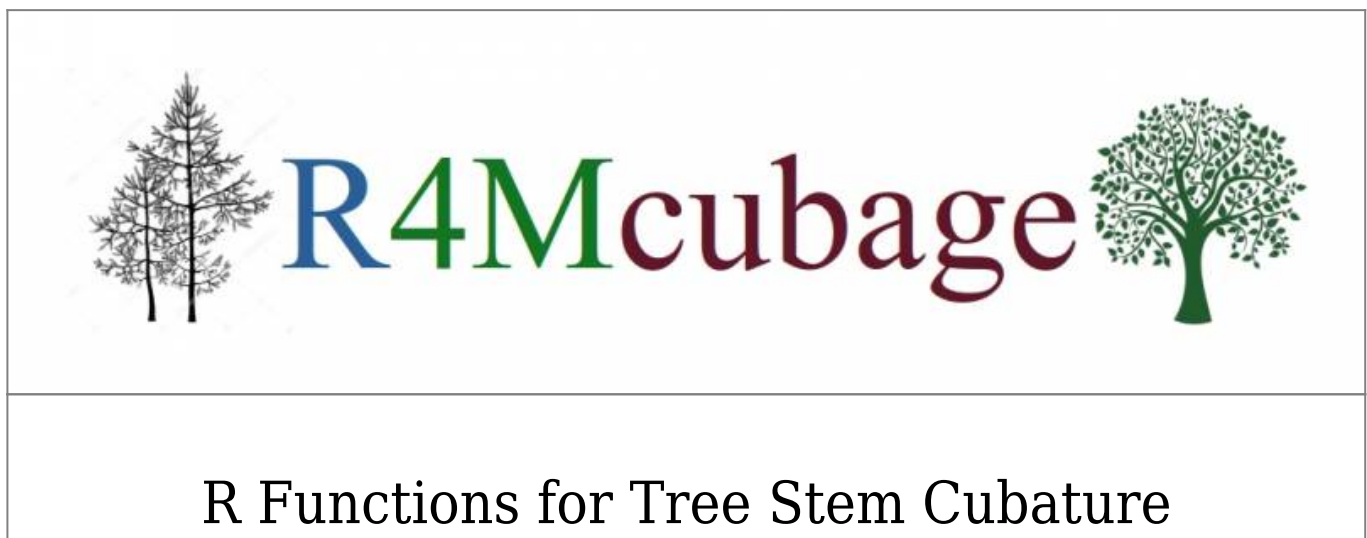
```

R4Mcubeage @ 5.5 - tutorial-script.R
# cubage(d = h[5, 10] + dp[0.333, 0.5], cron.ssd)
# cubage(d = h[5, 10] + hp[0.1, 0.333, 0.5], flor.ssd)

# stem.10 from h h d e f g h i j k l m n o p q r s t u v w x y z
1 1-024 1-024 5.9 11.1 15 88967 4.4 0.8841157 5.945 4.78111 4.255
2 1-034 1-034 10.7 18.0 67 28265 7.9 0.2088000 9.730 7.46750 8.380
3 1-074 1-074 12.5 22.2 151 84203 11.5 10.0000000 12.776 10.45400 9.880
4 1-183 1-183 22.2 31.1 591 53600 20.4 10.0000000 21.846 18.80000 15.285
5 2-088 2-088 10.5 19.8 72 38204 8.5 6.6000000 18.020 9.28570 8.880
6 3-018 3-018 10.1 18.7 64 44805 8.2 5.9000000 9.731 7.81645 8.460
7 3-021 3-021 17.1 25.8 271 88179 15.2 12.2000000 18.880 13.10500 11.800
8 4-087 4-087 14.1 24.1 109 41208 12.8 10.7000000 13.777 11.43755 9.865
9 5-009 5-009 14.6 23.1 173 49501 13.8 10.5000000 13.660 11.46154 9.580
10 5-050 5-050 10.3 18.6 79 81065 9.1 6.6000000 18.504 9.78310 7.300
11 6-087 6-087 19.9 27.5 64 84137 8.2 6.0000000 9.825 7.85175 8.925
12 6-028 6-028 15.5 28.9 171 48400 13.1 10.2000000 14.010 11.52015 9.930

# cubage(d = h[5, 10] + hp[0.1, 0.333, 0.5], Flor.ssd)
# stem.10 from h h d e f g h i j k l m n o p q r s t u v w x y z
1 0148 0148 21 23 0 342 3832 10 359 19 185 10 2518 15 0088 12 958
2 0285 0285 22 27 3 405 3802 10 385 16 178 20 9279 16 92546 13 825
3 0233 0233 31 34 1 1063 3118 20 688 23 858 28 1988 22 97235 19 123
4 0557 0557 22 23 0 200 8139 10 858 9 658 20 4388 13 05835 0 888
5 0882 0882 22 29 8 463 4199 20 818 10 585 21 8988 17 42388 14 138
6 0823 0823 22 25 2 365 8988 17 875 15 788 28 6588 16 83588 12 358
7 0889 0889 23 28 1 513 8788 20 285 17 438 21 7928 18 13887 15 088
8 0989 0989 22 27 6 450 1887 18 385 16 848 20 1758 16 66552 13 758
9 0918 0918 26 29 1 675 4381 23 225 19 588 24 7925 19 93184 16 375
10 0928 0928 31 31 5 995 3848 26 985 24 275 27 7825 23 41837 18 558
11 1048 1048 24 23 5 453 8627 20 435 15 918 22 5388 18 46438 14 775
12 1222 1222 22 27 7 517 8084 19 885 17 845 21 5788 18 34182 16 825
13 1227 1227 32 32 8 1175 8577 20 888 20 638 30 7138 24 45378 20 988
14 1247 1247 22 25 3 400 1746 18 738 15 388 20 7885 16 61257 12 658
15 1328 1328 24 30 8 606 8472 20 648 18 848 22 3888 18 04888 15 158
16 1484 1484 22 31 9 510 2782 20 285 15 325 21 4138 15 10933 14 088
17 1487 1487 24 28 1 495 9410 18 718 16 288 21 2375 16 58281 14 088
18 1415 1415 30 35 2 1611 2182 21 678 20 658 35 0820 20 57848 23 858
19 1417 1417 33 36 2 1225 2745 20 555 25 888 32 1888 22 62278 19 088
20 1428 1428 21 31 4 440 9410 19 188 15 918 20 2848 15 59888 12 088
21 1423 1423 27 29 4 806 8447 24 335 21 788 26 1888 21 98388 10 088
22 1448 1448 28 32 7 770 1139 24 688 21 388 25 0458 20 41888 10 938

```



About R4Mcubeage

The **R** package **R4Mcubeage** is a set of functions (**S3** language) to treat data from the measurement of the stem/branch sections of trees. It deals with excurrent and decurrent trees and can compute the

tree wood contain in terms of following stem volume:

- total volume;
- merchantable volume for a given set of minimum merchantable stem diameters;
- merchantable volume for a given set of merchantable heights; and
- merchantable volume for a given set of combinations of log diameter-length.

For excurrent trees, it also interpolates stem measurements (for individual stems) based on the relationship of diameter-height along the stem to generate:

- the stem diameter for a given height along the stem (absolute or relative to tree's total height); and
- the height along the stem for a given diameter (absolute or relative to tree's DBH).

R4Mcube computes the merchantable volume ratio for:

- excurrent trees as the cumulative volume along the stem as function of diameter-height; and
- decurrent trees as the cumulative volume for the whole stem as a function of diameter.

Two functions for plotting make easy to plot:

- stem profile (excurrent trees) as absolute values of diameter-height or as taper equation data;
- branch profile (decurrent trees) as absolute values of diameter-height;
- merchantable volume ratio as function of diameter (excurrent/decurrent) or as function of height (excurrent only).

A interactive argument of the function for profile plotting allows the visual inspection of individual stems one-by-one for checking problematic data.

R4Mcube's Objective

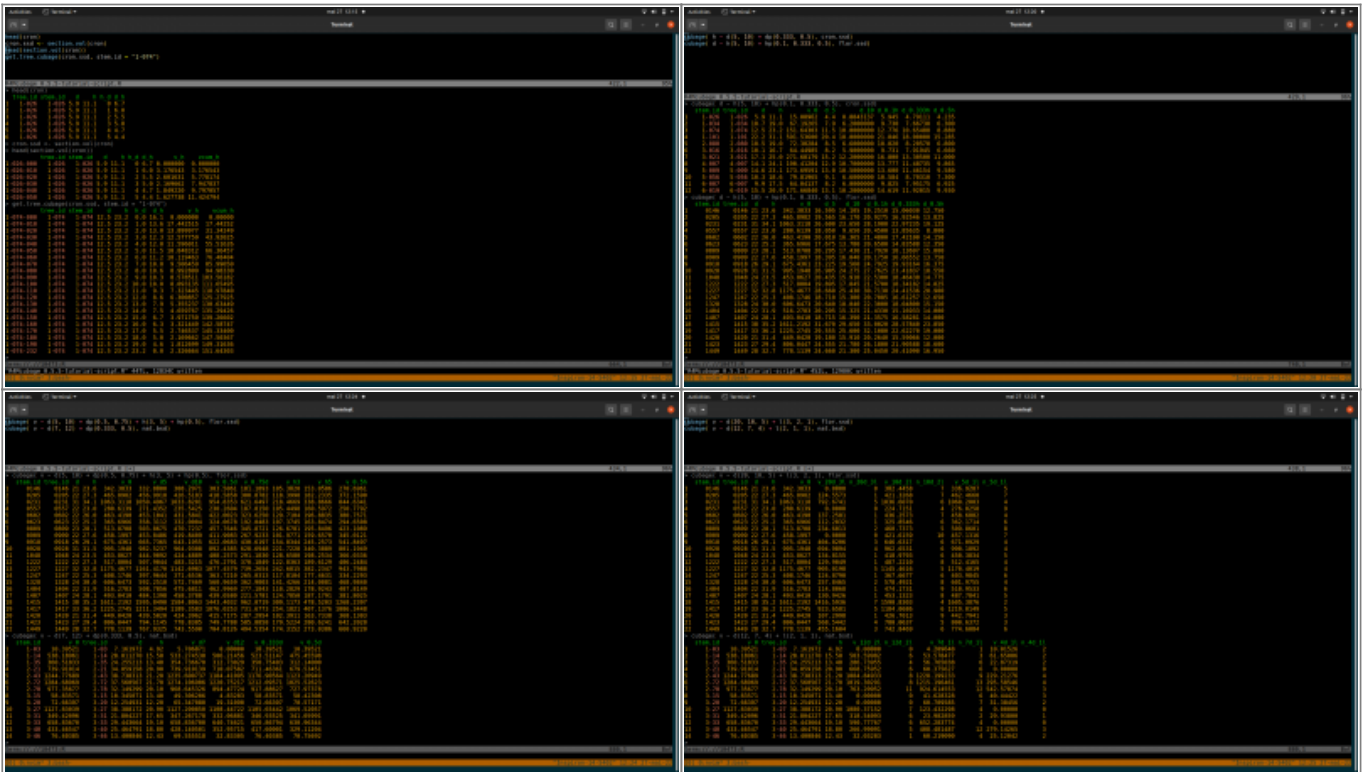
The objective of **R4Mcube** is to make easy the computation of tree stem measurements in order to obtain data tables needed for the Forest Biometrics modelling of the trees. Particularly, the package's goal is to turn raw field measurements into proper data tables of

- any diameter and/or height along the stem;
- stem volume for given diameters and/or heights along the stem; and
- volume and number of logs for given combinations of log diameter-length.

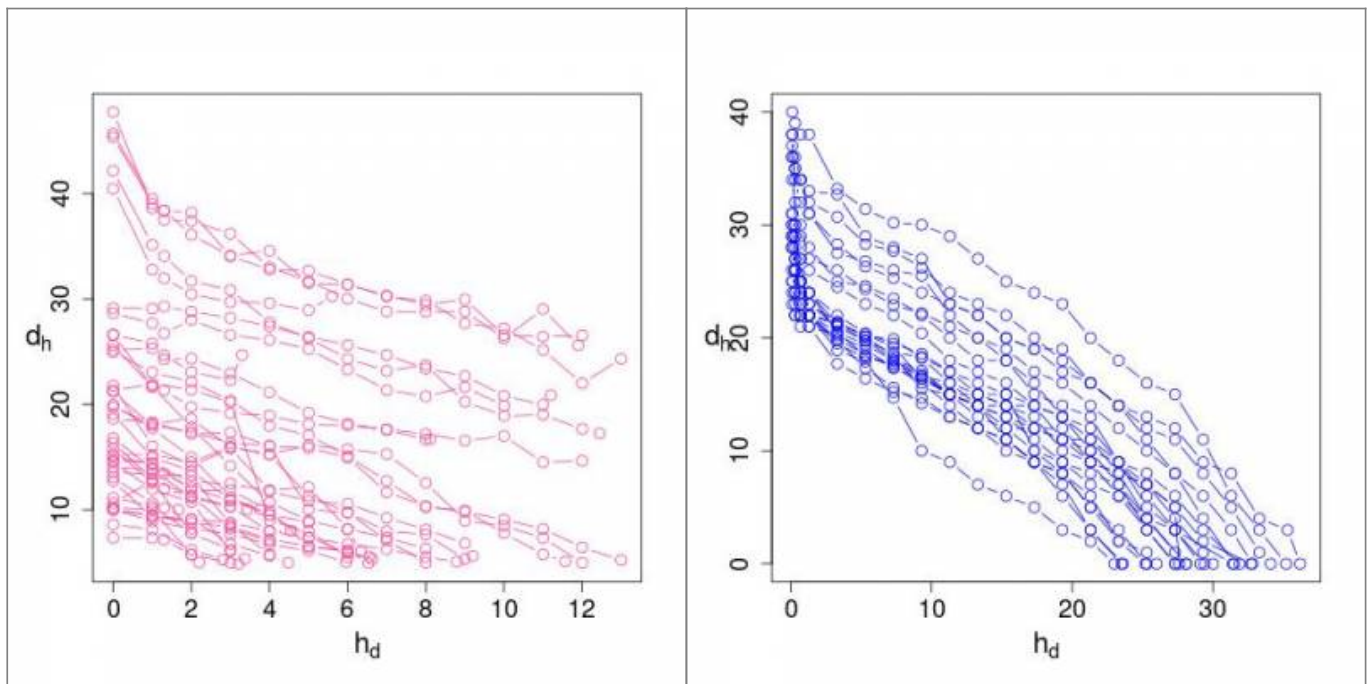
Which are the basic data needed for fitting models of:

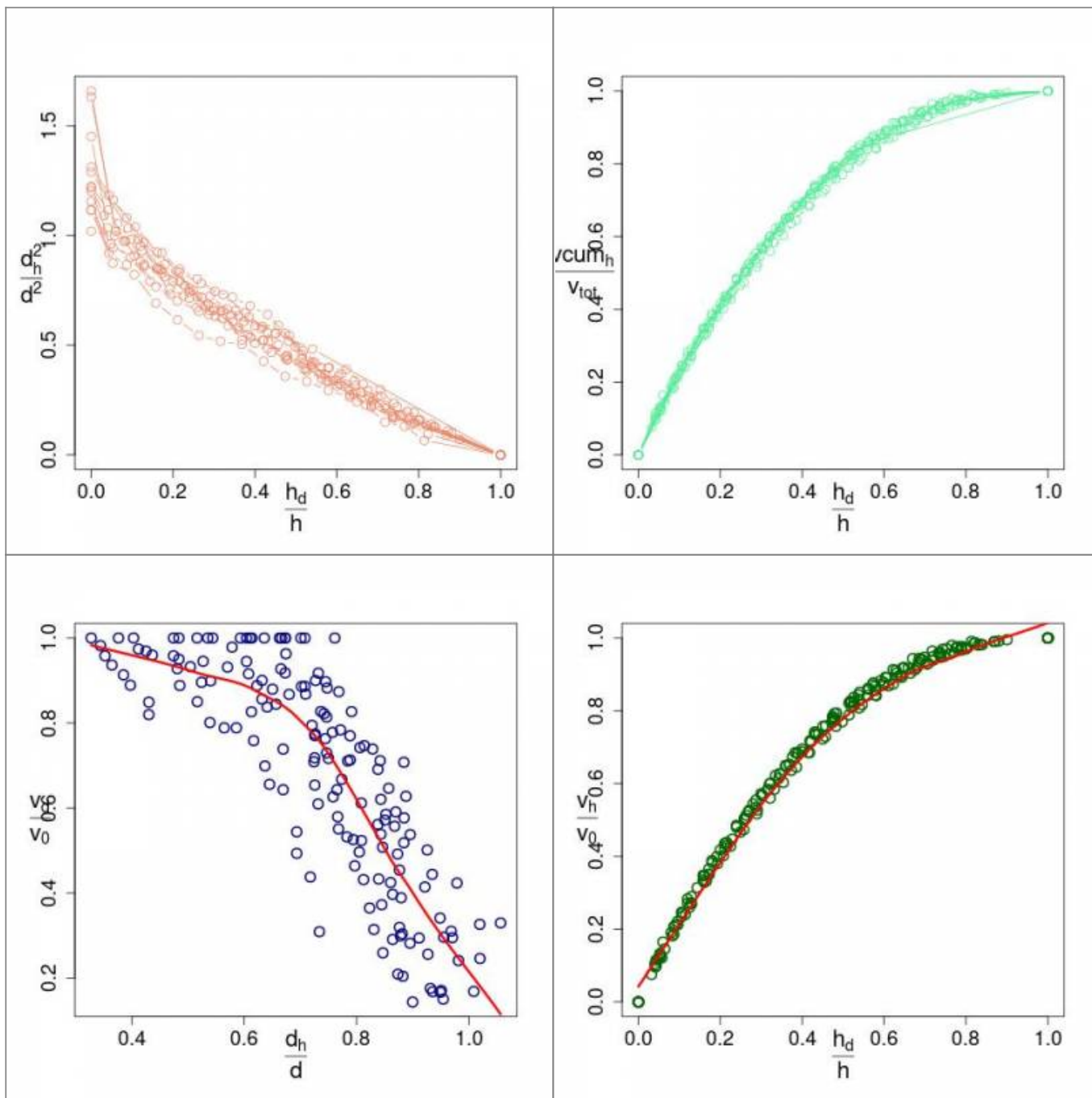
- volume equations (total and merchantable);
- taper equations; and
- merchantable volume ratio index equations.

Screen Shots



Example Plots





Download

R4Mcube is provided under [GNU General Public License](#) in a **as-it-is basis**, with **NO support** and **NO service** included.

Download, install and use **at your own risk**:

- **Pacote em desenvolvimento** as a **.tar.gz** file.
- Tutorial PDF.

Contact

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