1. **Experiment 4: Tree Architecture (TA Experiment)**

**Crown analysis:**

The crown analysis is used to estimate the growth parameters of the truck and branches.

**Tree selection**:

* All the HWT Experiment trees (20)
* From the IT and C&P experiments:
* 5 L2 shaded
* 5 L2 unshaded
* 5 L3 shaded
* 5 L3 unshaded
* Trees used for the first crown analysis during September-October 2022
* 10 L2 shaded
* 10 L2 unshaded
* 10 L3 shaded
* 10 L3 unshaded

**Assessment and data recording:**

When starting a measurement campaign, the file should be recorded as “Tree\_Architecture\_day\_month\_year”.

The branches at rank 16, 17 and 18 from the top are marked and measured:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tree ID | Trunk | | Number of phytomeres | Phytomere | TS1 | TS2 | TS3 | ... | TSn |
|  | Number of branches |  |  |  |  |  |
| Branches: | Rank |  | Number of leaves | Number of Cluster | Phytomeres | S1 | ... | Sn |
| 16 |  |  |  | Length (mm) |  |  |  |
| Width (mm) |  |  |  |
| 16 |  |  |  | Length (mm) |  |  |  |
| Width (mm) |  |  |  |
| 17 |  |  |  | Length (mm) |  |  |  |
| Width (mm) |  |  |  |
| 17 |  |  |  | Length (mm) |  |  |  |
| Width (mm) |  |  |  |
| 18 |  |  |  | Length (mm) |  |  |  |
|  |  |  | Width (mm) |  |  |  |
| 18 |  |  |  | Length (mm) |  |  |  |
|  |  |  | Width (mm) |  |  |  |

**Timing:**

* At every beginning and end of a dry seasons (around 3 month of interval).
* When selecting new trees for one of the experiments.