

DATA DOCUMENTATION ON LIVING TREES

POPLAR GROVE PLOT – CAMPAIGNS 2009-2013

Preface

On the poplar grove plots, standing living poplars (with diameter at 1.30m over 7.5cm) are selected either following a specific tree selection process on the plantation lines (only when the inventory plot is inside the plantation grid), or on a 9m radius circular plot centered on the inventory point. The specific process consists on an estimation of the number of missing poplars on the 9 spots (of poplars initially planted) the closest of the inventory point and on a measure of the 4 closest standing living poplars. This process gives a better ponderation of the weight (selection probability) of the poplars within large-grid plantations.

All the other trees of other species with a diameter at 1.30m over 7.5cm, and all poplars in a different configuration, are selected on the same circular plots as a forest plot:

6m radius circular plot: selection of trees of "small diameter"	$(23.5 \leq C13^* < 70.5 \text{ cm} \rightarrow 7.5 \leq D13^* < 22.5 \text{ cm})$
9m radius circular plot: selection of trees of "medium diameter"	$(70.5 \leq C13^* < 117.5 \text{ cm} \rightarrow 22.5 \leq D13^* < 37.5 \text{ cm})$
15m radius circular plot: selection of trees of "large diameter"	$(C13^* \geq 117.5 \text{ cm} \rightarrow D13^* \geq 37.5 \text{ cm})$

*C13 is the circumference at 1.30m and *D13 is the diameter at 1.30m.

On each inventory plot, from 0 to n trees have been selected, strictly following the trees' selection process.
On each poplar grove plot, approximately 5 trees are inventoried, with $\frac{3}{4}$ being poplars.

Exhaustive listing of the raw data

Except if mentioned, all the raw data are collected in the field.

IDP: inventory plot ID
A: tree ID
VEGET: vegetation state
SIMPLIF: simplified tree indicator (new 2009)
ACCI: tree accident
ESPAR: tree species (modification 2009)
CLON: clone or poplar cultivar
ORI: tree origin
LIB: rate of free growing trees
FORME: shape of the tree canopy
TIGE: shape of the tree stem
MORTB: tree branches mortality into the canopy
SFGUI: presence of mistletoe
SFGELIV: presence of winter injury
SFPIED: injury or rot at the bottom of the tree
C13: circumference at 1.30m (cm)
HTOT: total height (m)
HDEC: height at the first timber (m)
DECOUPE: type of cut
Q1, Q2, Q3: rate of quality 1, 2 and 3 // R: scrap rate
LFSD: stem length without default (m)
AGE: age at 1.30m
V: Tree volume (calculated)
W: ponderation coefficient of the tree (calculated)

Q1, Q2, Q3: rate of quality 1, 2 and 3 // R: scrap rate

Q1, Q2, Q3 and R are categories of wood qualities, established according to the technically possible and the economically advisable use of the wood, and not to its real use by local customs.

The distribution of the tree volume (second logs included) is estimated in tenth, in each use category, according to the presumed quality of the wood (consequently, $Q1 + Q2 + Q3 + R = 10$).

Q1, Q2, Q3 and R are given in tenth in the data table.

Conditions of application

The wood quality estimation is realized on all the trees, included small diameter trees. Nevertheless, in this diameter class, qualities Q1 and Q2 are almost absent from the data bases.

List and definition of the modalities

Categories	Minimal top diameter	Minimal length	Required criteria
Q1 (Slicing, peeling, woodworking, fine carpentry)	Merchantable cut at 20cm	2 m	<ul style="list-style-type: none"> - First log, or very nice stem second log, straight and without apparent defaults (winter injury, spiral grain, breaks) - Sound wood - Maximum wood knots admitted by linear meter: <ul style="list-style-type: none"> • Maritime pine: 4 sound and tight knots of diameter < 20mm or 2 knots of diameter < 25mm • Other species: 2 knots of one or the other category: <ul style="list-style-type: none"> * Sound and tight knots of diameter < 20mm * Black and not tight knots of diameter < 10mm (2 sound knots or 2 black knots or 1 sound knot + 1 black knot)
Q2 (Other sawing, day-to-day carpentry, framework, crates, formwork, ties)	Merchantable cut at 20cm	2 m	<ul style="list-style-type: none"> - Parts of the first and second logs (straight enough) following the instructions on the right and are not classified as Q1. - Sound and without apparent defaults wood (winter injury, breaks) prohibiting its implementation
Q3 (Industrial wood, firewood)	Terminal cut (7cm or more)	No limitation, except for second logs (1m)	<ul style="list-style-type: none"> - All or part of the stem (first + second log) not classified in Q1 or Q2 - Sound wood
R (Scrap)	No limitation		<ul style="list-style-type: none"> - Rotten, woodworms damaged, chipped wood, unusable even as firewood