



FIELD TRIALS NETWORK – PIRINOBLE PROJECT (www.pirinoble.eu)

Work Package B: Evaluation of innovative and sustainable plantation techniques – Study of shelters and weeding techniques

Solsona (Lleida) – March 2011

J. COELLO, M. PIQUÉ, Sustainable Forest Management Unit, CTFC, 2011

Field trial aim: To study the effect of 4 different 120 cm high tree shelter models with variable greenhouse effect; each shelter is combined with 3 different mulching methods.

Experimental design: Randomized block design, 12 treatments: 4 tree shelters: (1) Tubex L® unvented; (2) Tubex Equilibrio® vented; (3) Nortène Mixed Mesh 3*® ; (4) Nortène Wide Mesh; and three mulching methods: (a) 1 m² chips from urban pruning debris, 15-35 mm; (b) 1 m² black polyethylene 80 µ; (c) control (unmulched). Each treatment is applied to 36 trees, organized in 3 repetitions, for totalling 432 trees.

Total area: 0,4 ha



Field trial at year 1



Field trial location in Catalonia

Vegetative materials

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|---|--|
| <p>Main species: Hybrid walnut (<i>Juglans x intermedia</i>) MJ-209xRa 1+0 60/80 cm</p> | <p>Buffer species (perimeter) - Peer tree (<i>Pyrus communis</i>), 3 clones: Gott; IRTA 127; IRTA 80 - Narrow-leaved ash (<i>Fraxinus angustifolia</i>) Provenance “Ribera Media del Ebro”</p> |
|---|--|

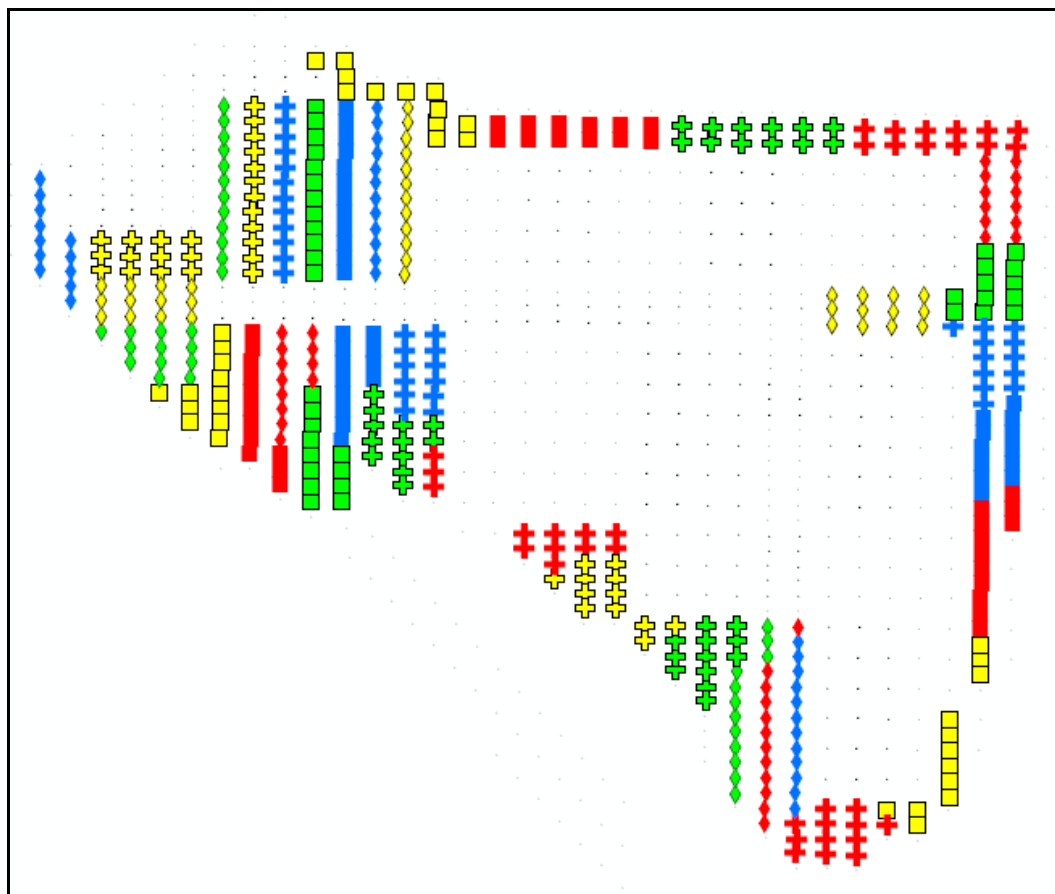
Site features

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|-----------------------|----------|--|----------------------|
| UTM coordinates (N31) | Altitude | Temperatures: coldest month / annual / warmest month | Annual precipitation |
| 377 010; 4 649 560 | 670 m | 5.8 °C / 12.0 °C / 18.2 °C | 670 mm |

| | |
|---|-------------------|
| Soil type | Previous land use |
| Loamy texture / pH 8,24 / O.M.: 2.32%; electric conductivity: 0.158 dS/m (non limiting) / N: 0.177% / C: 1.35% / Insufficient elements: Mg (0.99 meq/100gr) | Agriculture |

Plantation techniques and tending operations

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|-----------------------|---|
| Soil preparation | Crossed sub-soiling (50 cm) |
| Planting scheme | 4 x 2 m |
| Plantation techniques | 4 different shelters, 3 different mulches |
| Tending operations | - |
| Incidences | - |



Treatments:

- Yellow: Tubex L® unvented
- Red: Tubex Equilibrio® vented
- Green: Nortène Mixed Mesh 3*
- Blue: Nortène Wide Mesh®
- Diamond: chips from urban pruning debris mulch
- Square: black polyethylene mulch
- Cross: control (unmulched)