



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

Work Package B: Evaluation of innovative and sustainable plantation techniques – Study of 6 weeding techniques

Solsona (Lleida) – March 2011

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Field trial aim: To study the effect of 6 different methods for mitigating weed competition on trees.

Experimental design: Randomized block design, 6 treatments: (1) 1 m² chips from urban pruning debris, 15-35 mm; (2) 1 m² chips of low quality, partially composted; 15-35 mm; (3) 1 m² bioplastic film (biodegradable); (4) 1 m² black polyethylene film 80 µ; (5) herbicide (glyphosate) applied in 1 m²; (6) control (unmulched). Each treatment is applied to 59 trees, organized in 3 repetitions, for totalling 354 trees.

Total area: 0,6 ha



Field trial at year 1



Field trial location in Catalonia

Vegetative materials

Main species:
Hybrid walnut (*Juglans x intermedia*)
MJ-209xRa 1+0 60/80 cm

Buffer species (perimeter)
- Pear tree (*Pyrus communis*), 3 clones:
Gott; IRTA 127; IRTA 80
- Narrow-leaved ash (*Fraxinus angustifolia*)
Provenance “Ribera Media del Ebro”

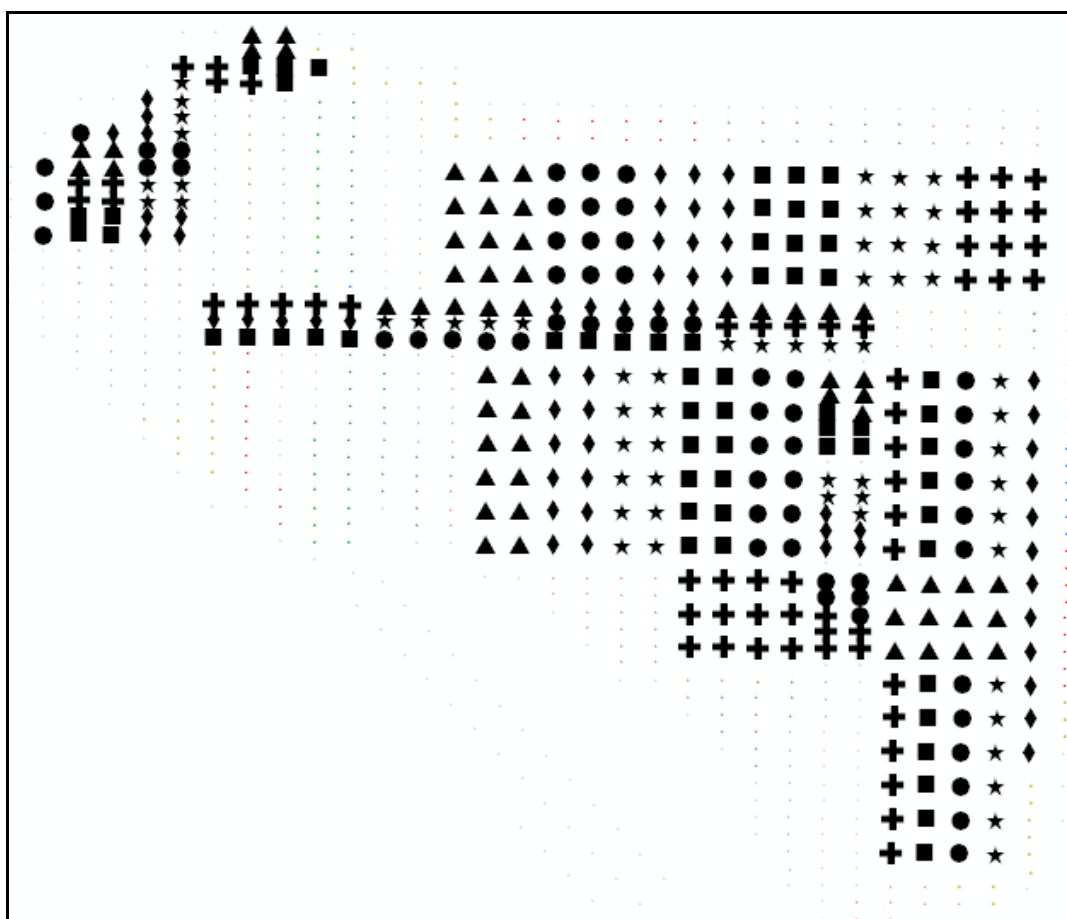
Site features

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

Soil preparation	Crossed sub-soiling (50 cm)
Planting scheme	4 x 2 m
Plantation techniques	6 different weeding techniques
Tending operations	-
Incidences	-



Treatments

- Diamond: chips from urban pruning debris mulch
- Star: 1 m² chips of low quality, partially composted
- Circle: bioplastic
- Square: black polyethylene film
- Triangle: herbicide
- Cross: control (unmulched)