



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

Work Package C: Innovation on valuable broadleaves plantation management – Combinations of walnut, ash, cherry and pear tree

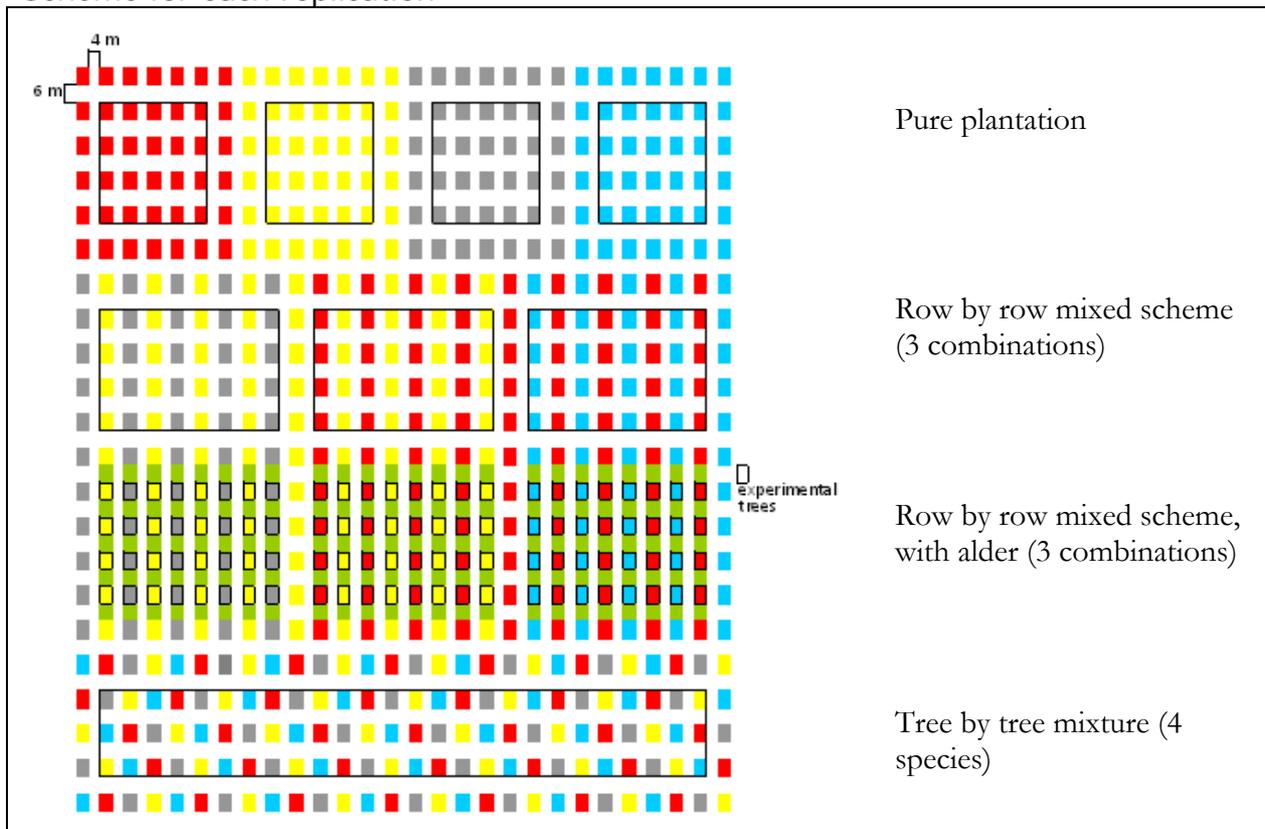
Bellver de Cerdanya (Girone) – March 2012

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Field trial aim: To study the functioning and productivity of pure and mixed plantations (different modalities) with 4 valuable broadleaved species: hybrid walnut, wild cherry, mountain ash and pear tree.

Experimental design: Randomized block design, 20 treatments: pure plantations of walnut, cherry, ash and pear tree (4 in total), combination row-by-row of walnut + cherry, walnut + pear tree and cherry + ash (6 in total), the same 6 treatments interplanted with alder (3 in total) and mixed plantations with 4 species where each tree is surrounded by the other 3 species (4 in total); 30 trees per treatment, organized in 2 repetitions. Total: 1327 trees, from which 600 are experimental.

Scheme for each replication



Total area: 2.7 ha



Field trial at planting time



Field trial location in Catalonia

Vegetative material

- Hybrid walnut (*Juglans x intermedia*)
NG-23xRa 1+0 40/60 cm, bare root (yellow)
- Wild cherry (*Prunus avium*) 20/40 cm,
containerized 500 cm³; France South,
Selected - Cabrerets (orange)
- Mountain ash (*Fraxinus excelsior*) 20/25
cm, containerized 300 cm³; Spanish Central
Pyrenees RP8 (pink)
- Pear tree (*Pyrus communis*); 1+0, 30/50
cm, bare root (blue)
- Accompanying species: alder (*Alnus
cordata*) 30/50, bare root, Italy (green)



Site features

UTM coordinates (N31)	Altitude	Temperatures: coldest month / annual / warmest month	Annual precipitation
X: 399 331 Y: 4 688 798	1230 m	1,4 °C / 8,7 °C / 17,5 °C	847 mm

Soil type	Previous land use
Loam; o.m. 5.0 %; pH 8.1; not saline	Abandoned pasture

Plantation techniques and tending operations

Soil preparation	Backhoe excavator hole digging(50x30x30cm), stone removal
Planting scheme	6x4 m (with alder interplanted at 3 m, when present)
Plantation techniques	Plastic mulching (1 m ²), electric fencing (3 lines)
Tending operations	Grass cutting between rows, emergency watering during summer 2012, due to severe drought