

DEVELOPMENT OF GUAYULE (*PARTHENIUM ARGENTATUM* A. GRAY) IN THE SOUTH OF FRANCE AFTER THE EU-PEARLS PROJECT

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Research activities on guayule started in France and Morocco in the 1980's and again in 2008 with the European project, EU-PEARLS. Guayule research activities continued in France with the implementation of several experimental fields supervised by CIRAD starting in 2012, in the Languedoc-Roussillon region (LR) near Montpellier and in the Oriental Pyrenees near Perpignan. The aim of the French research on guayule was: (i) to produce sufficient quantities of biomass to develop a latex extraction process; (ii) to study the growth and yields of plants based on rubber and resin content measured by ASE and NIRS methods; (iii) to produce quantities of seeds to test guayule as an innovative crop on abandoned vineyards; (iv) to interest farmers in guayule plantation. An experimental plot of 0.25 ha with 2000 plants of five former USDA varieties used for the EU-PEARLS project, was planted in May 2014 and May 2015 in Lansargues, near Montpellier, and in 2017 in five more sites were planted for a total of 1,25 ha of guayule in the south of France. The mortality, growth of plants and rubber and resin content were monitored for four years. The behavior of the five selected lines was compared, depending on the type of soils and climate conditions of the region, considering mainly the dry and cold resistance of the plant. At that stage, there was enough biomass accessible to study the development of a latex extraction process which resulted in an international patent in 2018. This paper summarizes results found at the Lansargues experimental field and at several other guayule plots in the region.

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