

TOSCANAPA - Hemp for the textile and the paper pulp market: realisation of a demonstration plant for hemp retting in Western Tuscany.

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The Project TOSCANAPA aims at the realisation of a demonstration plant for the retting of decorticated hemp fibre to provide the textile and paper industry with locally grown hemp fibre.

The retting system will be completely innovative: tank retting will substitute the traditional dew and pond retting; moreover the retting plant will be connected to a cogeneration plant that produces energy from biomass in order to guarantee maximum sustainability and minimal environmental impact.

All stakeholders of the hemp production chain, from farmers until end users, are directly involved in the realisation of the Project. In fact the hemp production chain is not complete and functional in Tuscany and within TOSCANAPA the major drawbacks hampering the success of the production chain will be investigated. A general business plan for the production chain will be drafted from primary production until end use, in order to determine the repartition of added value and evaluate the general economical sustainability. I.e. primary producers will evaluate the economical convenience in building their own decortication plant. Textile industries will evaluate the quality and will give a market price to the fibre samples obtained during the project. A private society will evaluate the fibre quality for paper making before and after the treatment with “steam explosion”.

Main objective of the project are:

- 1) to design and realise a pilot plant for the retting (microbiological or enzymatic) of decorticated hemp fibre on the basis of the results obtained by the University of Florence.
- 2) to verify the quality and the price of fibre samples produced during the project;
- 3) to identify and evaluate the possibility to integrate hemp retting with another ongoing activity in the area of Western Tuscany regarding the production of energy from biomass;
- 4) to demonstrate the economic sustainability of the technologies developed along the whole production chain;
- 5) to involve and inform the local farmers on hemp cultivation and on the possibility to build a local decortication plant in order to bring added value toward primary production.

Status of the project:: TOSCANAPA started officially on September 2002.

After the first phase devoted to the study and the designing of the pilot plant, the pilot plant is being constructed in order to proceed with fibre retting in the next months.

Participants to TOSCANAPA:

Gruppo Fibranova (Coordinator);
Department of animal biology and genetics “Leo Pardi”, University of Florence;
Department of energetics “Sergio Stecco”, University of Florence;
ETA Renewable energies;
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Cooperativa Valdiserchio,

Subcontractors:

ISCI (Experimental Institute for Industrial Crops – Ministry of Agriculture)
ENEA (Society for the New technologies the Energy and the Environment)