

## **CONGRESS: NATURALfiberEXTRACTION**

### ***Water retting process innovation for a circular and sustainable hemp-based bioeconomy***

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In the context of Italian hemp farming, thanks to the European Structural Funds for Rural Development, two EIP-AGRI Operational Groups: SCARABEO and CATERPILLAR have developed on a pilot scale, an innovative and sustainable industrial hemp chain, providing the basis for a concrete hemp-based bioeconomy. Products diversification, process innovation, co-products and processing waste valorization, have been the fundamental pillars of the developed supply chain, allowing to make the most of the crop potential, increasing profitability and sustainability. Based on a patented process, a prototype bioreactor has been developed for the fast and useful water retting of hemp fiber, leading to the production of retted fiber ready for a wide range of textil and technical applications. Retted fibers have been further processed until the production of a 100% italian hemp yarn. The pilot supply chain, built up at the experimental farm Stuard (Parma - ITALY) is already in the phase of scaling up, thanks to the European Structural Funds for Rural Development and the funding of farmers, strongly interested in hemp straws valorization to increase crop profitability.