SUDOE

Programa de Cooperación Territorial
Programme de Coopération Territoriale
Programa de Cooperação Territorial
Territorial Cooperation Programme

Interreg IV B
www.interreg-sudoe.eu

Experiências de cooperação / Testimonios de la cooperación / Témoignages de la coopération

Bruxelas / Bruselas / Bruxelles 30/11/2010

SUDOE
Interreg IV B

UE/EU - FEDER/ERDF

FIBNATEX Project

FIBNATEX

www.fibnatex.eu

Objectivo / Objetivo / Objectif :

(PT) Colocar em rede centros de competências complementares do espaço SUDOE para criar têxteis inovadores, preparados a partir de fibras naturais de cânhamo, produtos mais respeitadores do meio ambiente que os têxteis preparados a partir de fibras sintéticas.

(ES) Poner en red a centros de competencias complementarias del Espacio SUDOE para crear textiles técnicos innovadores preparados a partir de fibras naturales de cáñamo, más respetuosas con el medio ambiente que los preparados a partir de fibras sintéticas.

(FR) Mettre en réseau des centres de compétences complémentaires de l'espace SUDOE pour créer des textiles innovantes à partir de fibres naturelles de chanvre, produits plus respectueux de l'environnement que les préparations textiles de fibres synthétiques.

(EN) Networking complementar centres of competencies in the SUDOE region in order to create innovative textiles, prepared from hemp natural fibres, which are more environment friendly than those made of synthetic fibres.

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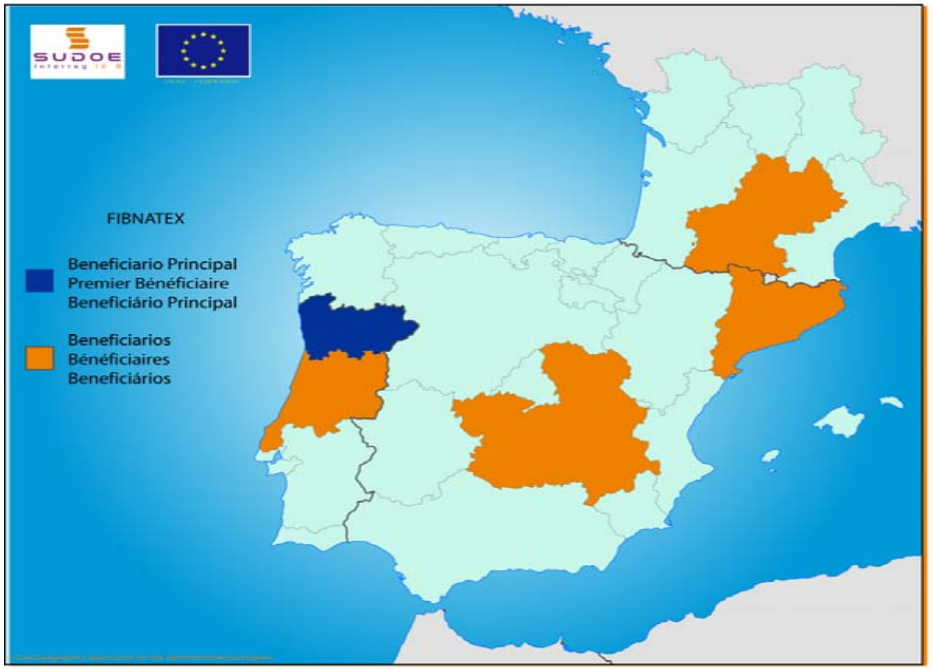


BENEFICIÁRIO PRINCIPAL / BENEFICIARIO PRINCIPAL / PREMIER BÉNÉFICIAIRE

1. CITEVE - Centro Tecnológico das Indústrias Têxtil e do Vestuário de Portugal (PT)

BENEFICIÁRIOS / BENEFICIARIOS / BÉNÉFICIAIRES

2. Instituto Pedro Nunes (PT)
3. LEITAT Technological Center (ES)
4. ASINTEC – Centro Tecnológico de la Confección (ES)
5. GIH - Groupement des industries de l'habillement (FR)
6. ICAM - Institut Catholique d'Arts et Métiers (FR)

Coste total / Coût total / Custo total: 839.246,00 €

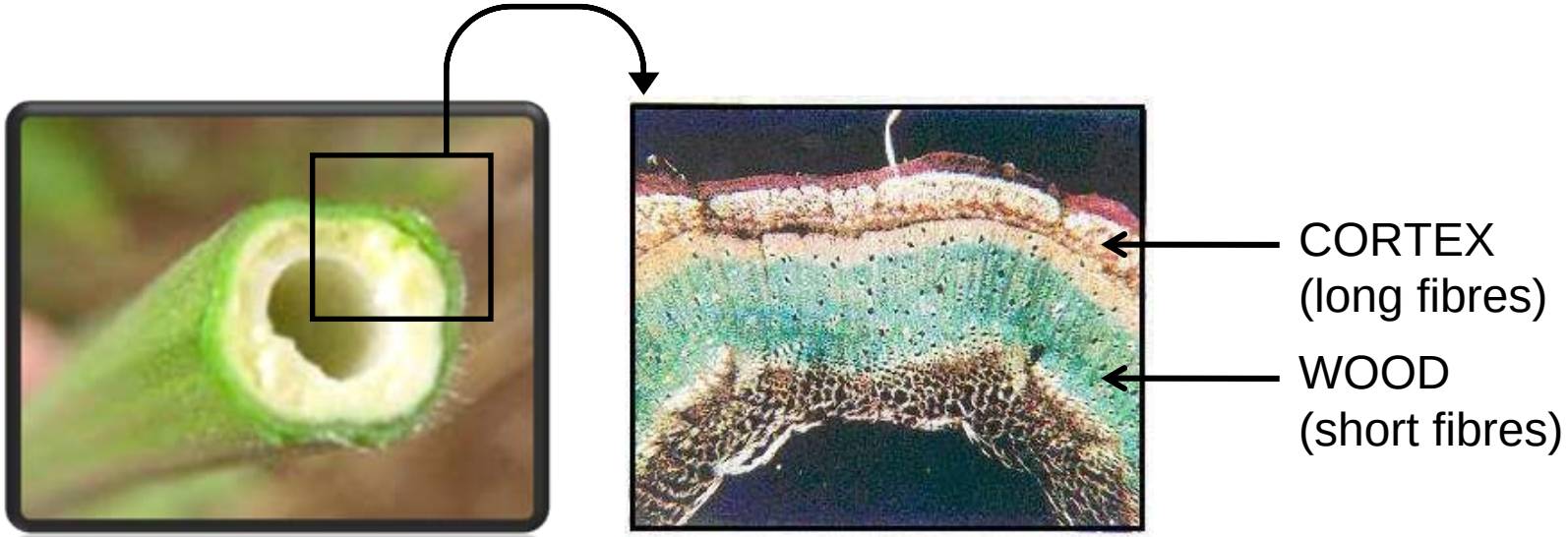
FEDER: 629.434,50 €

Início / Inicio / Début : 04/2009

Fim / Fin / Finalisation : 12/2011

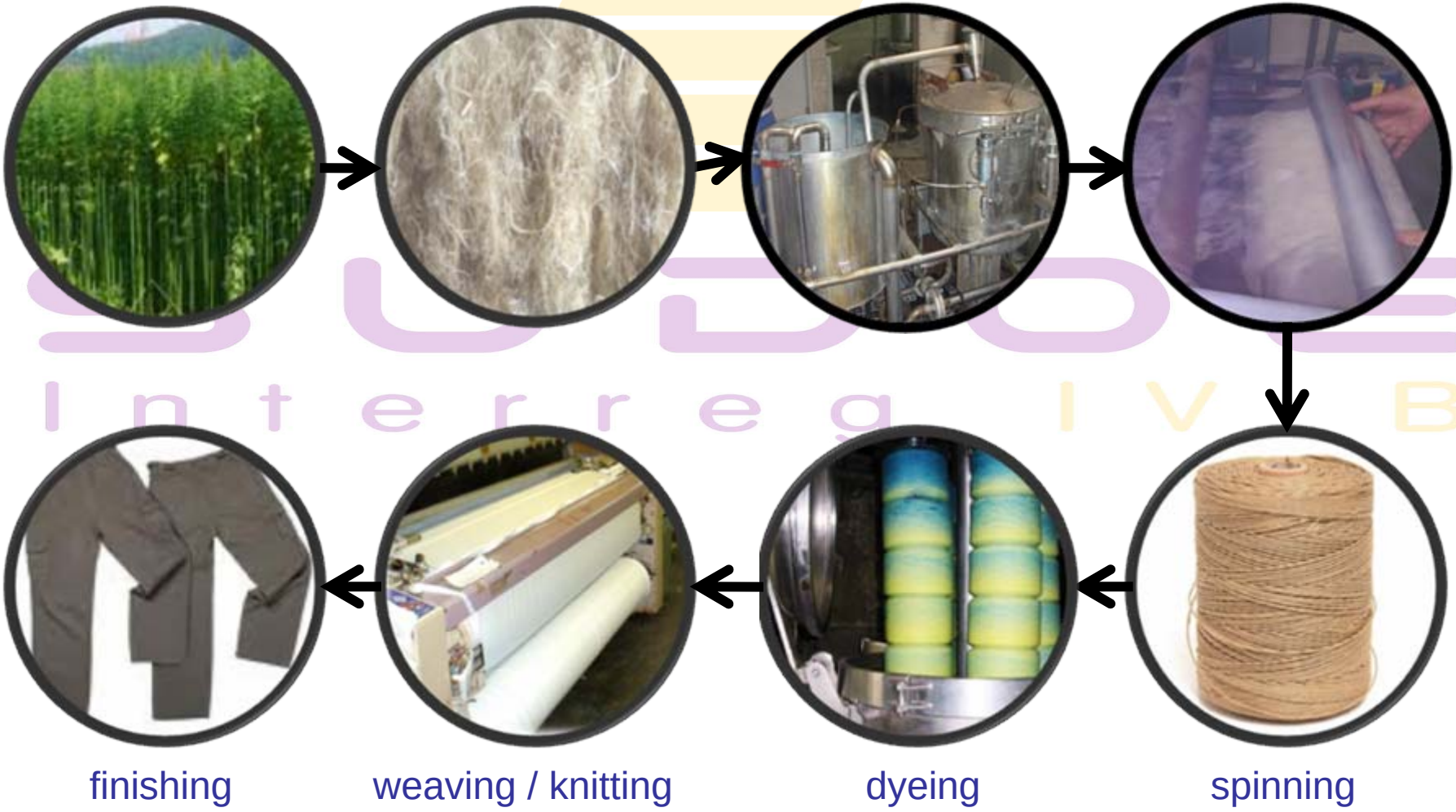
PRESENTATION OF HEMP

Hemp is made of several parts (*see section presented below*), the most interesting one is the long fibres part (CORTEX), representing 15-20% of the whole plant.



These long fibres are the strongest natural fibres (half **mechanical** resistance with reference to glass fibres), with half density. Moreover, they have **intrinsicaly anti-bacterian** behaviour and they protect efficiently from the UV.

GLOBAL PROCESS
FROM THE PLANT TO THE YARN



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Work programme:

GT0 – Preparation

GT1 – Project Management

GT2 – Network creation and enlargement

GT3 – Production and characterization of hemp textiles

GT4 – Collection development

GT5 – Technological Transfer

GT6 – Evaluation of the project (by external entities)

GT7 – Publicity and project capitalization

WHERE WE ARE…


hemp
mechanical
chemical / enzhimatic
carding
spinning
dyeing
weaving / knitting
finishing

MAIN RESULTS (Technical work)

Efficient process of separation of the fibres one from each other by :

- chemical way (ICAM)
- enzymatic way (CITEVE, LEITAT).

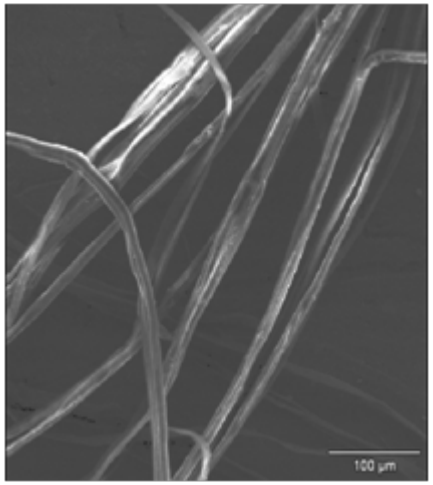
Mechanically separated hemp long fibres

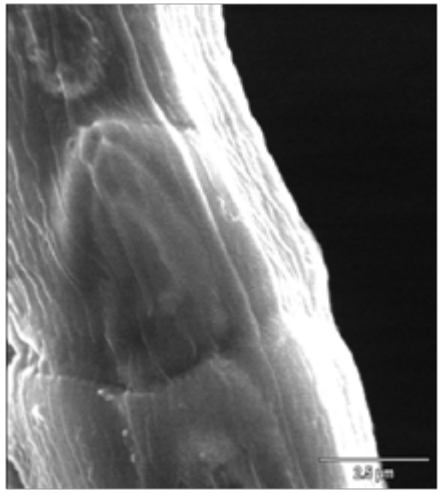
Sample to be chemically treated

Chemically treatment

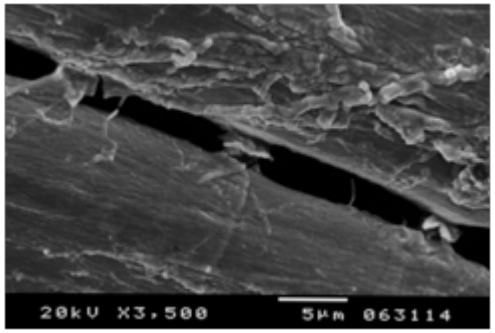
MAIN RESULTS (Technical work)

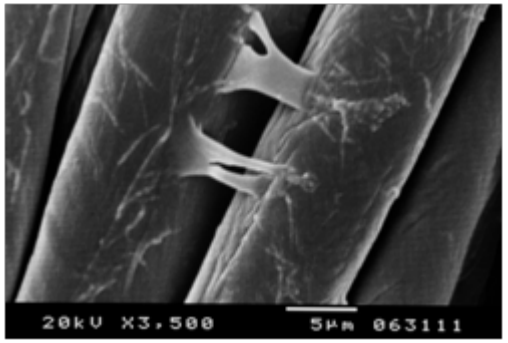
Hemp SEM Analyses





Coating SEM Analyses
Flax and Cotton

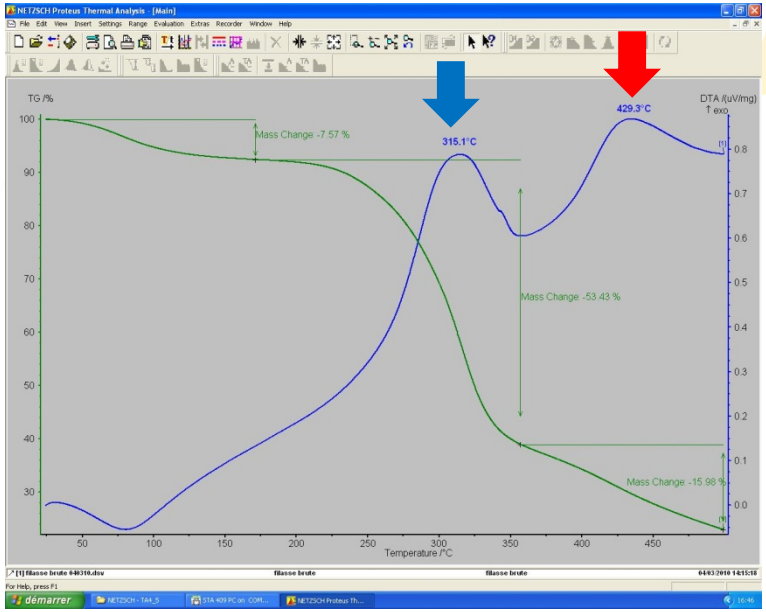




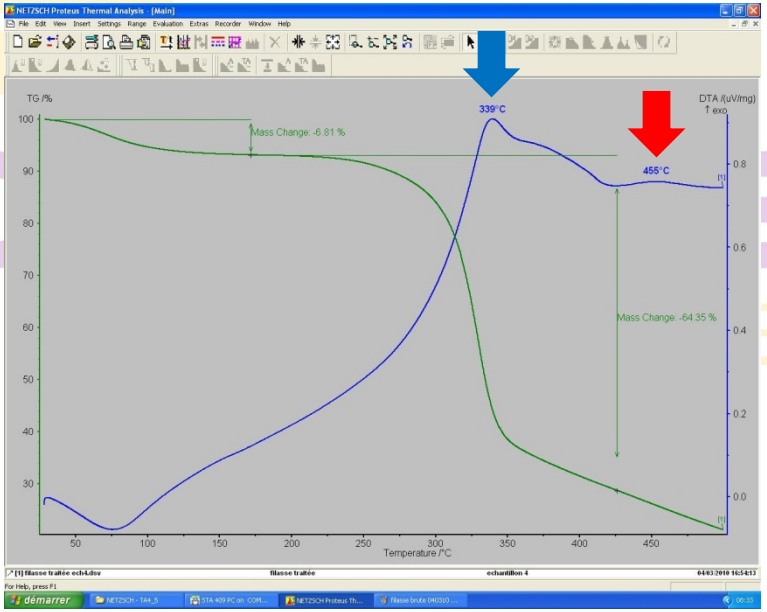
MAIN RESULTS (Technical work)

Characterization of the obtaining products after chemical/enzymatic treatment and carding step.

Raw material



After chemical treatment



- First peak : remains and increases in terms of T → **FIBRES**
- Second peak : disappears (almost) → **MATRIX**

MAIN RESULTS (Technical work)

Quality of the separation allows good carding results, leading soon to manufacturing of the **first 100%** hemp yarn in SUDOE.

First yarn tests already done

TECHNOLOGICAL TRANSFER

Scheduled for 2011, the Technological Transfer **is already started** for the separation of the fibres and for the carding step.

Yarn manufacturing is scheduled for Décembre 2010.

Chemical treatment of 400 kg of hemp fibres (PLO S.A.S.) – Nov 2010

Carding of the treated hemp (DREUILHE) – July 2010

INDICATORES (September 2010)

3.616 Companies contacted by the partnership
350 French hemp producers

We have many involved and interested companies
72 associated companies to FIBNATEX network
37 PT
24 FR
11 SP

Profile:
- fibres producers
- spinning SME
- weaving and knitting SME
- dyeing finishing and printing SME
- tailoring and designing SME

20 textiles companies that were beneficiaries
4 clothing companies

2 new techniques to obtain long fibres from hemp
1 new technology

EVALUATION OF THE PROJECT

Both partners of each country, organized a specific committee for the **Evaluation of the project**, composed of :

- institutions (technological centres, universities, …);
- industrial responsibles (companies);
- textile and/or clothing federations/associations.

A specific **Evaluation Grid** has been established to present, for each WP, the progresses and results, and compared with the expected results.

During each of our “international partners meeting”, the Committee is invited, the results are presented, and after discussion and questions/answers, the Evaluation is performed, and recommendations can be underlined.

Pictures of committees

Evaluation Grid

THE FUTURE

Dec 2010 :

- Manufacturing the first SUDOE hemp yarn

2011:

- Production of textiles fabrics based on hemp yarn developed;
  - weaving / kniting / dyeing / finishing / surface treatment

- Design and Clothing Manufacturing;

- Characterization of products;
- Follow the enhancement of the process by correcting the potential defects detected during each of the steps

and finally

START INDUSTRIAL PRODUCTION AND OPEN THE MARKET OF HEMP TEXTILES IN THE SUDOE REGION

to create employment or at least to avoid employment decreasing in the SUDOE textile and clothing sector

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THANK YOU
FOR YOUR ATTENTION

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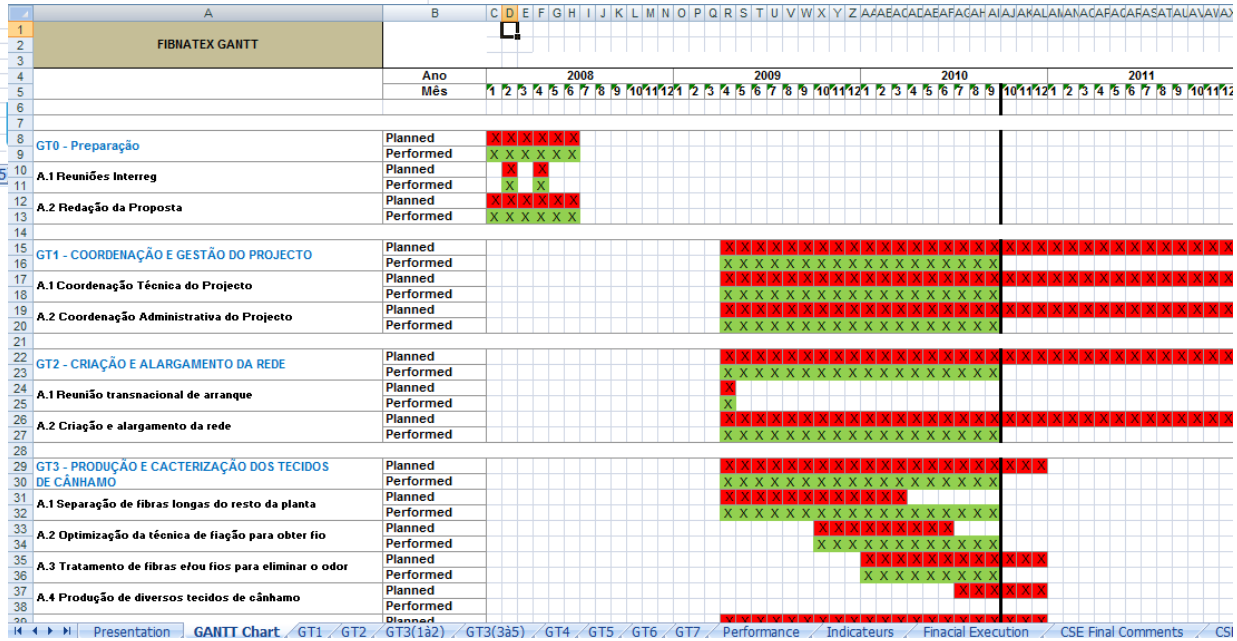
EVALUATION GRID



EVALUATION GRID

GT 3	**PRODUÇÃO E CARACTERIZAÇÃO DOS TECIDOS DE CÂNHAMO**						
Abril 2009 until Dezembro 2010	**A1** Abril 2009 ~ Fevereiro 2010	**Separação das fibras longas**					
		Performed		**In Progress**		**Not Performed**	
		JUSTIFICAÇÃO					
		Levantamento do estado de arte (análise bibliográfica, consulta na Web, consulta de entidades); Recolha de 500kg da planta de cânhamo para realização de I&D (França) - Portugal e Espanha não têm produção de cânhamo; Análise e levantamento de enzimas e químicos adequados ao processo; Investigação e desenvolvimento de processos de aplicação d processo de transformação da planta em fibra e separação e de desagregação e individualização das fibras (ambiente labo Investigação e desenvolvimento da combinação de processo de optimizar o período de tempo de processo e o nível de indi					
	A2 Abril 2009 ~ Junho	**Optimização da técnica para obtenção**					
		Performed		**In Progress**			
		JUSTIFICAÇÃO					
		Realizados diversos contatos com empresas de fiação no se possibilidade de trabalharem fibras de cânhamo, quer ao níve nível da preparação e fiação; Levantamento dos parâmetros técnicos das fibras de cânhar fiação (Sistema algodoeiro e sistema laneiro);					

Posicionamento dos parceiros

Reajustamento de actividades

Notas

EVALUATION PICTURES