

Goal of the project: The main objective of the project is to provide the newest development in SRC harvest technology. The ROD - PICKER system will be developed as an automatically working harvest, sorting and packaging system, thus greatly reducing the needed manpower and costs for harvesting SRC cutting in tree nursery quarters.

Short description of the project: Biomass is increasingly being seen as an important energy resource for Europe. However, due to sustainability requirements the biomass which can be harvested from European forests has only a limited growth potential.



Short-Rotation-Plantations are a very promising alternative source of income by cultivating fast growing tree-species as a source for bioenergy or other purposes with multifunctional characteristics. SRCs are highly efficient biomass production systems with additional environmental contributions such as biodiversity, soil protection and local climate.

Based on this background the SME proposers are planning to develop, construct and test an automatic harvesting and sorting system for SRC cuttings.

Research centre for Thermal Machines and Equipments, Transportation and Environmental Pollution Control

Implementation period: 2012 - 2014

Project implemented by: The department for Mechanic Machines, Equipment and Transportation from UPT in partnership with EGEDAL MASKINFABRIK A/S from Denmark (project coordinator), Salix Energi (Sweden), Lempe GbR (Germany), TU Dresden (Germany), TTZ Bremerhaven from Germany.

Main activities: Determination of technical and economic requirements for the ROD-PICKER system; Development and design of the ROD-PICKER prototype; Construction and testing of the ROD-PICKER prototype; On-site testing and optimization of the ROD-PICKER prototype at tree nursery farm, monitoring and evaluation; Assessment the effects on environmental, social and economic sustainability of the developed ROD-PICKER system.

Results:

- ROD-PICKER modules and units development;
- Prototype of new ROD-PICKER system;
- Prototype automatization and control unit;
- Testing results and final prototype.

Financed through/by:

European Union's Seventh Framework Programme managed by RES – Research Executive Agency.

Research team:

UPT team: Prof. Dr. Eng. Ioana IONEL, Prof. Dr. Eng. Dumitru TUCU, Prof. Dr. Eng. Sorin NANU, Assoc. Dr. Eng. Daniel DAN, and others.

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"Energy and persistence conquer all things."

Benjamin Franklin