

## 4.4 Biomass strategies and policies towards a bioeconomy

### **Strategies and Technologies to achieve a European Fossil-Energy-Free Agriculture AgroFossilFree**

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#### **AIM AND APPROACH**

AgroFossilFree is an H2020 research project aiming to create a framework under which critical stakeholders will cooperate to evaluate and promote the currently available Fossil-Energy-Free Technologies and Strategies (FEFTS) in EU agriculture. The AgroFossilFree project will contribute to the High Level EU Strategies (*i.e.* [EU Green Deal](#) and [Farm to Fork strategy](#)) as it aims to decrease the use of fossil energy in any farming process from cradle-to-farm gate, while maintaining yield and quality of the end-product. It will also contribute to closing the gap between available FEFTS and EU agricultural practices by promoting effective exchange of novel ideas and information between research, industry, extension and the farming community. If this gap closes, European agriculture becomes more sustainable due to minimum energy, environmental and socioeconomic impact. In order to integrate all available tools and practices that were already developed by R&I and industry, it is important to adequately train the professionals involved in the agricultural process. Consequently, only when agricultural stakeholders gain knowledge of existing and future technological advancements in energy sector and adequate training is provided, the EU agriculture can fully align with the fossil energy use reduction policies, the related legal and regulatory frameworks and sustainable food production practices.

#### **SCIENTIFIC INNOVATION AND RELEVANCE**

AgroFossilFree is directly related to biomass strategies and policies towards a bioeconomy, as it explores de-fossilization activities that lead to GHG emissions reduction in the EU agriculture. AgroFossilFree will facilitate the development of interactive innovation processes in national and regional agricultural value chains, by bringing together farmers, advisors, researchers, industrial stakeholders and other actors in physical and virtual interactive innovation workshops. A conceptual framework will be implemented, by which the inventoried FEFTS will be adapted to the regional contexts for an effective and targeted dissemination. Grassroots-level ideas will be captured and channelled using the same approach, resulting in concrete future innovation-based projects. These projects will be developed in response to practical needs of end-users, which will be more quickly put into practice thanks to the empowerment of the actors and the co-ownership generated during the collaborations. This process will be widened to the EU level for generating cross-border collaborations in the area of FEFTS. To the best of the authors' knowledge this is the first effort to create an innovative FEFTS inventory.

#### **EXPECTED RESULTS AND CONCLUSION**

- Assessment and evaluation of the current energy use status in EU agriculture and assess existing needs and interests for the future farm energy profile by identifying factors influencing adoption in view of regional specificities.
- Identification and registration of available and directly applicable FEFTS from applied research results to market solutions and explore existing financing tools for de-fossilizing activities.
- Production of community-based ideas for FEFTS integration in agricultural systems in a regional and EU-basis.
- Creation of an online platform with all available FEFTS to be assessed by stakeholders, together with a Decision Support Toolkit to propose interventions and financing tools.
- Creation of policy guidelines on EU, regional and national basis and communication of them to increase visibility and promote the proposed FEFTS in real agricultural activity in the near future.

When all these results are achieved the project will provide a clear research roadmap for FEFTS and important policy guidelines to be implemented in the next period.