Research Summary Sheet

SWOT analysis on valorisation routes of agricultural waste

Introduction

The NoAW project aims to develop methods for cross-sectorial implementation of valorisation of agro-wastes, which requires cooperation between the different stakeholders in the agro-food value chain. It is important to understand the potential of the utilisation of agro-waste from agricultural chains, both in a quantitative and qualitative way. Stakeholder surveys were designed and carried out, including 62 different participants from Europe and the Chinese region. A SWOT analysis was prepared based on comments from different stakeholders in order to evaluate the new proposed valorisation routes.

Methodology

Approximately 60 interviews have been analysed in order to derive the SWOT for different valorisation routes. We analysed the answers collected in some of the questions of the interview guide, more precisely those questions which asked for rankings of actual and possible valorisation routes and for the justifications of these rankings

We proceeded by regrouping the answer items and by according them to the preferences that interviewees had expressed, by using the following steps:

1. *Preferred valorisation route*
2. *Linked answer items : related arguments/justifications, positive or negative, or open answers*
3. *Subdivision of positive answer items in "Strengths" and "Opportunities"*
4. *Subdivision negative answer items in "Weaknesses" and "Threats"*

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Synthesis on SWOT

The SWOT confirms the orientation of the work in the NoAW project. The valorisation routes that are considered as being the most promising ones (biogas, bio materials, bio refineries, bio fertilizers) are in the focus of NoAW. The SWOT confirms as well the pertinence of the cascading principle.

The results suggest some transversal conclusions.

*The **topic of logistics and appropriate scale of the sites** is for sure one of these transversal challenges. Solutions for identifying, sorting, stocking and storing, transporting of as well feedstock as of products have to be found. The necessity of, at least in part of the domains, industrial scale of the processing plants becomes evident. On the other hand, as we're working in a context of rural economics, collecting and transporting heterogeneous low-value feedstock over long distances and from a large number of sites has evident limits. Re-distributing organic matter back to the agricultural land where they origin constitutes a further challenge. The ecological footprint being one of the key requirements to be fulfilled by future solutions, the transport issue has to be considered critically. Consequently, the research and development work has to take into account that not only big industrial sites are to be conceived, but as well medium or smaller solutions for local scopes. The NoAW work on GIS-based evaluation of production and consumption hot spots is all the more pertinent.*

*The **equilibrium of organic matter in soils** was as well raised transversally by the experts. Soil fertility depends in crucial manner on the content of organic matter. Modern agriculture has brought about an important reduction of organic matter, rendering soils vulnerable to erosion and incapable of maintaining nutriments and water. NoAW solutions must consider this and organic matter (from manure and straw) must be fed back into soils. This is particularly important for organic agriculture which, following consumer demand, occupies rising surfaces all over Europe.*

*Another transversal issue is the question of **investments**: even in well-established valorisation routes, the economic equilibrium is often fragile and depends on the competitiveness with fossil material flows. It is difficult to get private funds for bigger and long-term investments under these conditions.*

***Research and development** is the next transversal issue. All valorisation routes evoked here, even the well-established ones, need still more and new research and development input, on technical questions as well as on logistics and socio-economics.*

*The **availability of skilled and trained personnel** is another transversal topic, and often mentioned as a significant barrier. The young researchers and farmers engaged in the NoAW*

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project are for sure in line with the demand of the sector, but broader and large-scale efforts have to be made, integrating schools and universities of all levels.

A final transversal issue raised cross-country wise and across many sectors, are ***political and bureaucratic framework conditions****. Market actors and investors ask for more stability and higher support with regard to political programs and for easier handling of administrative procedures.*

The overall perception of the SWOT is that we're in a face of a very dynamic, future-oriented domain where highly dynamic and committed actors develop, on different scales and geographic levels, future solutions for agriculture and other economic domains.

Further information on NoAW project: *http://noaw2020.eu*

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