**Work package 7 Reporting Period 1 - Summary**

**LegValue: Fostering sustainable legume-based farming systems and agri-feed and food chains in the EU**

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**Abstract:**

1. **Summary of the context and overall objectives of the project**

The goal of LegValue is to pave the road to develop sustainable and competitive legume-based farming systems and agri-feed and food chains in the EU.

Today legumes are scarce in European cropping systems, despite that the literature demonstrates numerous benefits of systems based on legume cropping and food systems. The aim of LegValue is to gather and provide information for stakeholders and decision-makers, on the performance and services achievable by several species of legumes when grown in cropping systems, for several crop management systems, and on the way those legumes could be valued in different feed and food chains.

This target will be reached through various combined approaches: (1) the quantification of services, (2) the description of quantitative and qualitative benefits gained by farmers already growing legumes (3) the yield achievable by several species across countries in Europe, (4) the agronomic, environmental and economic performance that could be reached if innovative legume-based cropping systems were conducted across Europe, based on realistic scenarios of implementation.

To increase the cultivation of legumes, new outlets with higher added value based on these crops, need to be identified. LegValue will analyse markets and the organisational design of legume-based supply chains and will also help to define with the stakeholders the institutional framework (collective rules, norms and standards) which impact on the innovation capacity of legume sector actors, to create new sources of value (coming from process or product innovations).

LegValue will identify bottlenecks and opportunities in food and feed value chains based on legume production. It will increase the understanding of sustainable legume-based food and feed value chains by exchanging best practices for scaling up, and will design successful transition pathways identifying the role of stakeholders and the enabling environment.

There is also a need to increase market transparency in order to overcome local and regional lock-ins, thereby lifting constraints in the development of legumes in the EU. LegValue will enable those in legume production, trading, processing and consumption as well as policy-makers to understand price setting mechanisms and gain access to specific and up-to date market information about European legume markets.

LegValue will produce and promote innovative policy models, policy design and implementation of solutions and tools to policy makers. It will especially develop innovative ways of ensuring consistency between policy and market, as well as cross-sector considerations. Innovative solutions to ensure consistency across different policy areas (*e.g.* CAP, including livestock chain measures, water framework directive and nitrate directive) will be targeted.

Finally, the project aims to link information at farmer, end-user and policy level, allowing exchange of information for a more holistic approach to European legume production and marketing. This is carried out via the website portal (<http://www.legvalue.eu/>) and through the development and organisation of workshops to disseminate the information from the project more thoroughly.

**Detailed report:**

1. **Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far**

The agrosystems services to be analysed have been identified and their quantitative analysis has begun through a literature review. Moreover, quantitative data and qualitative information on the reasons why farmers grow legumes with satisfaction, and the benefits they gain, have been identified through an on-farm survey.

A niche-modelling approach based on the use of several global databases has been tested and adapted, to simulate achievable yields for soybean across Europe, resulting in a realistic estimation. The literature has also been analysed in order to gather data on yield for several legume species across Europe, filling a direct database on achievable yields. Current dominant crop sequences across countries in Europe have been identified and will serve as a baseline to design and assess new crop sequences including legumes.

LegValue relies on a comprehensive analysis of 31 legume-based supply chains to compare the technological and organizational obstacles and levers in the different streams of the feed and food sector supply chains, within several European countries. This analysis continues and uses the expertise of key stakeholders through research institute networks and inter-professional organisations. Outcomes will feed many tasks of the project.

A report has been published on the LegValue website that brings together different macro-developments that influence the increase of protein crops in EU cropping systems. Another report also published on the LegValue website describes four future scenarios based on two dimensions of macro developments: one on economics and one on EU cohesion. Interventions were described and assessed according to their possible success in each of these future scenarios. It was concluded that knowledge based interventions were the most robust and therefore the least depending on macro developments.

A report on “The Market of grain legumes in Germany” also available on the LegValue web site, as well as a German-language publication on price settings, in an open access journal of the Federal Ministry of Food and Agriculture, provides information to the public and actors in the subject area of European legumes. These reports constitute a model for market reports in other main EU countries which are in progress.

An exploration of the current role of policies has begun, starting with selected Countries and a wide stakeholder involvement.

A public internet portal to the project has been created [www.legvalue.eu](http://www.legvalue.eu) where the activities of the project are described, and where stakeholders can interact with the project partners. There is also outreach through social media over the Twitter platform @LEGumeValue. The website reports and promotes project events, news, activities, outcomes, and videos, as well as related topics of interest around the industry.

1. **Progress beyond the state of the art and expected potential impact (including socio-economic impact and the wider societal implications of the WP so far)**

The first analyses coming from farms to supply chains must lead to useful information for various stakeholders and policy makers, in order to foster the development of legume value chains that could overcome the brakes that have reduced legume production in the past. In particular, the development of legumes-based feed and food products will lead to more sustainable diets and make the EU less depend on soya imports.

It was also found in the first period of the project that the foreseen opacity of the European legume value chain and markets are indeed a hindrance to increased European legume production, trade, processing and use in feed or in food. LegValue, in providing insights to the structural problems of European legume growth and use, has already contributed to a better understanding of the obstacles and consequentially facilitates the implementation of measures to overcome these hindrances. This will influence policy making on a European, national and regional level as well a supporting market development resulting in the reaping of benefits of legume production in Europe for the soil, climate and society.

**References:**

Public communications can be found on the project

Web site: [www.legvalue.eu](http://www.legvalue.eu)

Twitter Account: @LEGumeValue