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Abstracts of talks and posters

Fostering legume presence in cropping systems: co-evaluation of agroecosystem services

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Agroecosystem services linked to legume presence in cropping systems can be better valued and fostered through a participatory approach.

LEGVALUE is a brand new research project (start: 1 June 2017) funded by the EU Horizon 2020 Framework Programme, aiming to foster sustainable legume-based farming systems and agri-feed and food chains in the EU. LEGVALUE includes 24 on-farm networks across Europe, where an assessment of legume yields and production-related agroecosystem services supplied by legume-based cropping systems will be performed. This assessment will take into account the diversity of species (grain and forage legumes), crop management and rotations, and will be based both on previously available data and on new data generated in the project. The agroecosystem services assessed will e.g. include improved soil fertility and biological pest control, which will result in reduced fertiliser and pesticide use on the legume crops and on the following crops. Simple quantitative indicators linking legume presence in cropping systems with the provision of targeted production-related agroecosystem services will be used. Other relevant indicators prioritized by local actors (farmers, advisors, food processors, consumers) will be identified through surveys and collective testing throughout the project. This will result in specific indicators to assess ecosystem services that will be gathered in a fine-tuned locally-adapted assessment tool. Every on-farm network will have their own local multi-actor group, which will be engaged in participatory work with scientists according to a four-step methodology: (i) co-definition of hierarchized targeted agroecosystem services expected from legumes, (ii) co-definition of a set of indicators to assess the provision of agroecosystem services, (iii) collection of data from past and on-going experiences, (iv) joint analysis of results and synthesis through SWOT analysis. This approach will be common to all on-farm networks but the set of indicators may differ among them depending on the priorities established. These information will feed a database linking agronomic, technical, economic and environmental indicators, calculated in farm networks, with overall system performance as to the provision of agroecosystem services.

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