

Bodenkoffer - healthy soil assessment toolbox with App

Developing a practical tool kit for improved soil health.

EAFRD-funded projects

Location: Oberinnviertel-Mattigtal, Austria

Programming period: 2014-2020

Priority: P6 - Social inclusion and local development

Focus Area: Local development

Measures: M19 - LEADER CLLD

Funding:	Total budget	28 575 (EUR)
	RDP contribution	22 860 (EUR)
	Private/own	5 715 (LAG) (EUR)

Timeframe: 04.2019 to 04.2022

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natural resources and cultural heritage, thereby maintaining small-scale agriculture.

- The developed toolbox has already been used widely. It has been adopted by other LEADER regions and organisations in the field of regional development and nature-climate protection. In addition, it is used by many agricultural schools for classes, thereby inspiring students. For example, a graduate of an agricultural school brought a soil toolbox to South America for her voluntary social year in 2022.
- In autumn 2022, the project was awarded as the winning project in the category of nature, environment and climate protection by the Minister of Agriculture, Mag. Norbert Totschnig.



Summary

Soil health and sustainable land use are important factors that can positively influence the quality of agricultural products and the environment. The healthier the soil is, the less fertiliser is needed to achieve large harvests.

Across Europe, there is a high demand for tools and opportunities that raise awareness about healthy soil and sustainable soil management. Therefore, as part of the Bodenkoffer project, a professional tool for analysing agricultural land and green areas was developed for farmers to analyse their farm and grassland easily and independently. The soil suitcase is an assessment toolbox with an App. It applies various analytic methods and provides the user with instant evaluations of the state of the soil.

Project results

- The interest in the Bodenkoffer toolbox exceeded expectations. Soon after the project was developed, 240 soil suitcases were utilised in Austria, Germany, Luxembourg and El Salvador.
- The project has increased awareness of soil health.
- The toolbox has shown that it had positive effects in dealing with

Key lessons and recommendations

- The project was very well received not only in the LEADER region Oberinnviertel-Mattigtal but also in other LEADER regions, including Mitten im Innviertel and Sauwald-Pramtal.
- There was an intensive exchange and good cooperation between farmers, which helped the project to raise awareness.
- Many interested parties are looking for support on the topic of soil health and the developed tool can be used by them from now on.
- Involving agricultural schools and universities was an effective way of disseminating the 'Bodenkoffer' toolbox and inspiring students to use the tool themselves in future.

Context

Soil health and the sustainable use of soils are becoming increasingly important issues for the production of regional, high-quality products. The soil's capacity to store carbon and water has a positive impact on nature and climate. The healthier, looser and more revitalised



agricultural land is, the less fertiliser is needed. As a result, a higher harvest output is also achieved.

Across Europe, there is high demand for means and tools to raise awareness about soil and its sustainable management. Farmers who pay close attention to their soil are better able to cope with weather fluctuations and long periods of drought. It is important to inform the general population about these kind of agricultural issues in an accessible manner.

A team of soil experts and practitioners in the LEADER region of Oberinnviertel-Mattigtal set out to help farmers and the general public to learn more about their soil in a practical and hands-on manner. The project idea was to develop a toolbox with an App for raising awareness about soil health and for building the capacities of farmers to test, analyse and understand their soils better.

The project worked on the basis that the better farmers know their soil, the better they are able to respond to environmental extremes and reduce pesticides and fertilisers while maintaining high crop outputs.



LEADER Oberinnviertel-Mattigtal

Objectives

The overall aim was to strengthen sustainable and soil-friendly farming in future. It aimed to raise awareness about the importance of sustainable farming and soil among the general public. It also aimed to develop a range of useful and user-friendly tools that would help build the capacities of farmers to independently carry out analysis of their agricultural soils and green areas.

The specific target groups of the project were farmers who wanted to improve their agricultural land and green areas, as well as individuals who were interested in becoming soil ambassadors in their region.

Activities

The project featured the following activities:

- Developing an assessment toolkit with App, the Bodenkoffer (soil suitcase). The toolkit contains all the necessary tools to collect information about the quality of soil surfaces.
- Conducting a training programme and courses in small groups involving 15 to 20 soil ambassadors in the LEADER region. In these training sessions (also called 'soil conversations') the content of the soil-toolbox was explained and tested jointly with the participants.
- Carrying out chemical, biological and technical analyses across 10 field stations / testing sites.
- Piloting the process whereby the data from the soil analyses were recorded digitally via a smartphone App or written down in an instruction handbook enclosed in the toolbox. Each App user received the evaluations of the analyses digitally as a PDF that was sent to their email address immediately after the data was transmitted.

Main results

- The interest in the Bodenkoffer toolbox exceeded expectations. Soon after the project, 240 soil suitcases were used in Austria, Bavaria, South Tyrol, Luxembourg and El Salvador.
- The project has increased awareness of soil health.
- The toolbox has shown positive effects in dealing with natural resources and cultural heritage in a small-scale agriculture context. This is important for the preservation of diversity in production and the responsible use of resources.
- The toolbox is utilised widely. For example, it has been adopted by other LEADER regions, including the LEADER region Mitten im Innviertel, Sauwald-Pramtal and Mühlviertler Alm. Other organisations, for example 'REGIS Raeticon' (regional development) and 'KLAR Gölsental' (nature-climate protection) are using the toolbox as well.
- The Bodenkoffer is also used in many agricultural schools in Upper Austria, Carinthia, Lower Austria, Tyrol and Bavaria to teach and inspire students. For example, a graduate of an agricultural school brought the toolbox to South America for her voluntary social year there in 2022.
- In autumn 2022, the project was awarded as the winning project in the category of nature, environment and climate protection by the Minister of Agriculture, Mag. Norbert Totschnig.

