

Viticulture on steep slopes creates diversity in the Moselle valley

Measures promoting species diversity in viticulture on steep and extremely steep slopes have been developed in collaboration with winegrowers. At the same time these measures contribute to the preservation of the traditional cultural landscape along the river Moselle.



Summary

The Moselle project was initiated by the farmers' and winegrowers' organisation "Bauern- und Winzerverband Rheinland-Nassau e.V."



in collaboration with local winegrowers. Winegrowers having first experiences with spontaneous vegetation in their vineyards played an important role to motivate participation of colleagues. During the four years since the start of the measure implementation in 2015, 35 winegrowers participated in biodiversity promoting measures. Interrows and field borders of vineyards are valorised and botanical hotspots with native flora and fauna are established. The winegrowers get a financial compensation for the propagation of wild plants inside and along their vineyards. But also abandonment of vineyards threatens plants and animals which thrive in warm habitats. Measures avoiding scrub encroachment are therefore tested. An intensive ecological support by contracted consultants and an individual adjustment of the measures allow to align the nature protection aspects with the production needs.

Objectives

The preservation and promotion of biodiversity by winegrowers in cultivated steep and extremely steep slopes stays in the foreground. This is done by:

- seeding wild plants for greening the interrows of vineyards and field borders
 - establishment of floristic and faunistic hotspots
 - clearance of shrubs of abandoned vineyards
- as well as safeguarding the attractive landscape for tourism of the Moselle valley.



Problem statement

The project has been initiated as a reaction to the loss of flora and fauna typical for the Moselle vineyards and the need of specific protection measures, especially for endemic species like the Apollo butterfly.

Data and Facts

Participation: 35 winegrowers with approx. 25 hectares. The greening of the interrows with wild plants is done on about 14 ha as well as on small areas of adjacent field borders and over 10 ha of shrubs were cleared on abandoned vineyards (March 2019).

Further participation: 3 local municipalities and one parish are participating in the shrub clearance. In addition, contact persons from 5 local associations are serving as 'local heroes', they substantially support the coordination and implementation of the measures on abandoned vineyards. Biologists carry out the monitoring. A public service center responsible for technical training of winegrowers supports the knowledge exchange. The Moselle project is one of the three components of the project "Lebendige Agrarlandschaften - Lively agriculture landscapes" with the German farmers' association DBV as lead.

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Result-oriented and cooperation

Greening of interrows and field borders



Scrub clearance in cooperation with associations

PUBLIC GOODS

Biodiversity



In addition: erosion control and improvement of the soil fertility



Further public goods

Landscape and scenery



Recreational access



Rural viability and vitality



LOCATION

GERMANY



The project area is located in the southwest of Germany, in Rhineland-Palatinate along the river Moselle. Productive and abandoned vineyards on steep or extremely steep slopes (> 30%; 17° up to 68°) are targeted.

CONTRACT

The written contracts concluded with the winegrowers are practice-based, but freedom is given about timing and the exact practices to be applied.



The initial length of each contract is one vegetation period (until 31.12.); can be extended until project end.

Payment: The payment of cost incurred at the end of the calendar year is based on the proof of performance (seeds are provided for free).

Project financing:

German Federal Agency for Nature Conservation (BfN) with funding from the Federal Ministry for the Environment and Nature Conservation (BMU), the Landwirtschaftliche Rentenbank complemented by own funds of the regional farmers' and winegrowers' organization

Duration of contract:

Maximum from 2015 until project end

Start: 1st May 2015

End: December 2020

Farming requirements:

The greening of the interrows and the field borders: individual adjustment of location and measure(s) to be implemented before conclusion of contract; seeds are provided to the wine-growers to establish wild plants on every second interrow. When carrying out care measures in the vineyards to ensure the performance the participants promote the high ecological value at the same time.

Floristical hotspots: propagation of seeds and plants of selected locally adapted wild plants and reestablishment on selected steep slopes or handing out of seeds based on oral agreement with a winegrower. A beneficial side effect of these 20 m² large sites with name tags, also called "letter case" is public relation work.

Scrub clearance from abandoned vineyards: The removal of scrub and the valorisation of dry-stone walls is done with involvement of local/ regional associations. Different techniques are applied: manual as well as mechanical manipulation or grazing. The land is either in public or in church ownership and licensing agreements are concluded while the associations are contracted for the work undertaken.

Controls / monitoring: The contracts contain an access right to check the proper implementation of the measures agreed as well as for the monitoring. The on-the spot checks take place at least once a year. Those sites chosen for monitoring are assessed four times a year during the vegetation period. Some winegrowers take advantage from the monitoring to get the local flora and fauna in and near their vineyards better known. The identification of rare plant and animal species or high number of individuals makes the participating winegrowers proud.

Conditions of participation: The contracts are concluded individually with the winegrowers. Two contracts are needed for the scrub clearance, one with the landowner and a second one with the association or enterprise in charge of implementing the measure.

Risks / uncertainties for participants: It is important to cut dominant plants to avoid that they spread their seeds at the end of the flowering period or grow into vine plants. All in all, a vineyard with wild plants for interrow greening requires increased attention. On the other side the permanent soil cover reduces considerably the risk of erosion. Dependent on site and timing of the seeding approximately half of the plants from the seed mixtures were successfully established. Because of the spring drought in 2017 it was necessary to repeat seeding the following year in some vineyards.

Contract features combination: The contracts concluded under the Moselle project built upon the rural development programme of Rhineland-Palatinate called ELER-EULLE, more specifically the scheme named „environmental friendly cultivation on steep and very steep slopes“. The participants have to respect the requirements of this scheme. Participation is possible on own land as well as on rented land for the greening of interrows and the field borders. If land is rented, the participating winegrowers have to guarantee that they have a right of use.



RESULTS

On the monitoring plots have been identified (2016/2018):

- 398 different plants
- 155 species of wild bees
- 49 butterfly species
- 20 grasshopper species
- 5 reptile species

Framework conditions

Landscape and climate: The river Moselle carved deep meanders into the landscape and shaped the steep valley slopes now covered by vineyards. Those vineyards dominate the scenery. The climate in the Moselle valley and on the slopes is mild, very sunny and characterised by hot, dry summers in the last years and temperate, humid winters.

Farm system: The primary focus is put on viticulture on steep slopes. The area managed by the winegrowers is limited by generally difficult conditions, the vineyards are labour intensive and require a lot of handwork, especially those on steepest slopes. All in all wine is grown on 5.200 ha of steep slopes in Rhineland-Palatinate.

Information / contact:

<http://lebendige-agrarlandschaften.de/moselprojekt/>



SUCCESSFUL CONTRACT SOLUTION



All three measures have been well received. First results of the monitoring are documenting the positive effects of the measures on wild plants and animals. The demand for participation by the winegrowers is higher than the possibilities to fund measures due to limited project funds. There was shortage of seeds in 2019 as only seed propagated regionally is used and the dry summer 2018 had led to losses in yields in seed production. Experiences from the project will be used to promote biodiversity and a sustainable cultivation of the vineyards that characterize the landscape along the river Moselle within the agri-environmental programmes.

Reasons for success:

- The winegrowers make suggestions for the area and possible measures, the exact contract details are negotiated individually.
- The winegrowers get the seeds for free, with 24 indigenous wild plants for the greening of the interrows and 15 species for the field borders.
- Wild plants are established at every second interrow, therefore a profitable viticulture remains possible without restriction.



SWOT analysis

