

# Vineyard in Germany

## Case Study 9

### Experimenting crop diversification and low input farming



Experimentation plot of 0,3 ha with 1500 grapevine plants in Wawern (Germany)

2 TYPES OF INTERCROPS WERE TESTED AND COMPARED WITH MONOCROP

**1** Vineyard + *origanum vulgare*

**2** Vineyard + *Thymus vulgaris*

#### AGRONOMIC BENEFITS

1. **Reduction of undesired vegetation** underneath grapevines
2. Reduction of soil erosion
3. Preservation of fine soil and the nutrients it contains

#### ENVIRONMENTAL BENEFITS

1. **Stabilisation of soil**
2. **Insects attraction** and higher soil microbial activity
3. Stepping-stone-function for linking biotope cross-linking

#### SOCIOECONOMIC BENEFITS

1. **Additional crop: additional income**
2. Enhancement of the recreation potential and the attractiveness of a tourist landscape, breaking down of a pronounced monoculture
3. Contribution to the **improving the image of agriculture**





## FINAL CONCLUSION

*Is it beneficial to adopt these sustainable practices?*

There are two options to handle the planted aromatic herbs in the vineyard:

**1. If there is no economic use for the herbs**, they could be managed with very low input of resources: establishment of the herb-culture for 2 years and with a cut once a year, with no further use for the plants. The non-marked values will outweigh the costs for the establishment phase the longer the herb plants in the vineyard survive (estimated 10-12 years).

**2. Harvest and use of herbs:** it is necessary to pack and ship the dried plants to a processor. After processing (e.g., to essential oil), the herbproduct must be sold or again processed (e.g., oil for cosmeticproducts...) and then, the final product must be sold. For adequate working of all the steps described the amount harvested is too low.

Cooperation between diversified farms seems very sensible in this case. Labour in the field and after harvest can be organised more economically, machinery can be shared, selling can be organised together.



## AGRONOMICS DRAWBACKS

- 1. Sowing of herbs not successful:** no alternative to the labor-intensive planting of herbs
- 2. In very dry seasons and not fully established grapevines it can cause water competition between grape and herb**
- 3. Peak work periods in the vineyard management are at the same time as the peak work periods for the herbs**

## ENVIRONMENTAL DRAWBACKS

- 1. For best herb quality, fully flowering herbs are harvested: problem for insects which gather pollen and nectar**
- 2. Management of herbs needs more energy and other resources in contrast to wild vegetation**

## SOCIOECONOMIC DRAWBACKS

- 1. Not all marketing channels are possible**
- 2. Herbs require processing**
- 3. For some wine consumers, the combination of wine and herbs in one field is not accepted**

