

HERBS IN GERMANY

THIS SERIES OF CASE STUDIES TAKES A CLOSER LOOK AT ALTERNATIVES TO TOBACCO GROWING WITH AN EMPHASIS ON SUSTAINABILITY. THE AUTHOR DESCRIBES THE ECONOMIC, ECOLOGICAL, AND SOCIAL ASPECTS OF REPLACING TOBACCO WITH HERBS IN GERMANY.

Germany is the world's largest cigarette exporter.¹ But the domestic production of leaf tobacco contributes only a small portion to the manufacturing of tobacco products.² Regarding the crop yield, Germany is a rather negligible tobacco location of the world market, even though tobacco is cultivated in several regions of the country.³

German tobacco cultivation originates in the Palatinate in the south-west of the country. Until a couple of years ago, this region has been the largest contiguous tobacco growing area in Germany.⁴ For a long time, particularly the cultivation of dark air-cured Geudertheimer tobacco used to manufacture cigars has been of great importance in the southern Palatinate. Furthermore, since the 1980s, farmers in the Palatinate have been increasingly growing tobacco for cigarette production, above all Burley and Virginia tobacco.

In the past years, the area under tobacco cultivation as well as the volumes of tobacco harvested in Germany have been continuously declining. According to statistics of the European Commission, merely 105 farmers in Germany have been harvesting a total of 4,720 tonnes of raw tobacco using 1,779 hectares of land in 2014.⁵ Eight years earlier, in 2006, tobacco harvested in Germany still amounted to 8,524 tonnes. The decline is attributed primarily to the end of tobacco subsidies which were paid by the European Union until 2010.

Intentionally, these subsidies were not linked to the acreage dedicated to tobacco. Instead, the premium was paid for every kilo of tobacco harvested and supplied to a processing company. Thus it should be prevented that farmers only cultivate tobacco to receive subsidies without harvesting the crop or supplying the harvest to a processing plant. Therefore, the subsidies were provided to companies fermenting tobacco leaves after harvest and preparing them for the manufacturing of cigars and cigarettes. The processing companies passed the subsidy payments on to the farmers when buying the tobacco crop. Hence those were the actual recipients of the subsidies, because the payments from Brussels enabled the farmers to sell their tobacco for a reasonable price on the world market. Without this price support, tobacco from Germany in fact would not have been competitive due to the comparatively high production costs, in particular labour costs.

Without European Union's subsidies most farmers in Germany would have been forced to abandon tobacco cultivation much earlier. It would not have been sustainable for them to offer their tobacco crop for a higher price appropriate to labour and production costs given the comparatively low price level on the world market for tobacco of similar quality from other tobacco growing regions.



Parsley instead of tobacco in the Palatinate

HERB CULTIVATION IN THE PALATINATE

In the past, more than one hundred farmers have been cultivating tobacco in the region, but today only few remain. Many have switched completely or to a large extent to alternative crops: some are cultivating herbs, others grow vegetables. But many sold their farms as soon as they retired. Others again had sold their agricultural crop land even earlier, because the switch from tobacco to alternative crops appeared to them too complicated and financially risky after so many years of tobacco growing and shortly before their retirement.

Already before the termination of EU subsidies a working group of the federal state of Rhineland-Palatinate examined potential options for the tobacco farmers in the region. But it was rather by coincidence that Palatine farmers came across the potential alternative to tobacco growing in 2007: A processing plant for herbs located in Bavaria had placed its advertisement in an agricultural magazine and was looking for new farming land in order to meet the growing demand for herbs. The tobacco farmers of the Palatinate got alert and decided to send a delegation to Bavaria to investigate this option. Quickly, they came to a conclusion: instead of tobacco, farmers in the southern Palatinate should start cultivating parsley, dill, coriander, chervil, spring onion, lovage and spinach. The first herb season started in spring 2008.

Since herbs are a perishable commodity and the transport of freshly harvested herbs to Bavaria would have taken too long, a plant for drying the herbs in the Palatinate was needed. Hence Metz company, which has been fermenting and processing tobacco until then, took the opportunity to also switch from tobacco to herbs. Simply because processing companies also had to look for alternatives to the tobacco business just like the farmers.

Benefiting from an investment promotion program of the federal state Rhineland-Palatinate, which compensated a part of the costs for the construction of the new production facilities, Metz company shifted its business model. Hence, the according to their own statement oldest surviving tobacco fermentation factory in Germany became a herb processing plant. In 2016, Metz and the herb processing factory Steinicke established a limited company. Since then, Metz is responsible for the southern cultivation areas of Steinicke Metz GmbH.

The processing plant is supplied with herbs by twenty farmers from the area who jointly formed the producer group Erzeugergemeinschaft Pfalzkräuter e.V.⁶

The following information has been gathered in interviews with the director of Metz company and a herb supplying farmer who formerly has been growing tobacco.⁷

ECOLOGICAL ASPECTS

Many of the originally small scale family farms in the Palatinate that have been cultivating on average an area of about 60 hectares disappeared in the past few years. On the one hand, their crop area has been bought out and pooled by a few, ever larger agricultural holdings. On the other hand, much land which was formerly used for agriculture has been converted to housing and industrial estates.

The remaining farms which have been growing tobacco in the past have mostly set up their businesses differently. Many switched to the cultivation of vegetables which is very distinct there anyway, for instance to asparagus, pumpkins or radish. In radish cultivation, for example, farmers are able to bring in seven harvests a year. But such an intensive agriculture depletes the soil and requires a high use of fertilizers and pesticides.

Just like tobacco these cultivated herbs are annual crops. Nevertheless, herbs in the Palatinate, for example parsley, can be harvested five to six times per year. The farmers use for the cultivation of herbs approximately one third less pesticides than in tobacco growing, because the fields are usually „cleaned up“ which means that the entire field is cleared of weeds and fungi once before sowing.

Also just like in tobacco growing, the plant remains after harvest are simply plowed in. The rotting plant remains create a new layer of humus beneath the ground surface. This is particularly favorable in parsley cultivation, because its large root mass loosens the soil.

Compared to tobacco, herbs need approximately 2.5 times more fertilizer due to the repeated harvests per season. Additionally, more water might be needed for herb cultivation. For tobacco, irrigation was not necessarily needed. But herbs like parsley have to be supplied with about 20 to 25 liter of water per squaremeter per cut (i.e. per harvest), depending on weather conditions.

Since 2017, the herb processing company Metz has the highest food certificate provided by the EU. Therefore, the company is able to directly market its herbs – without need for the intermediate step of transporting the herbs to the site of Steinicke which is some hundred kilometers away. Thus, the reduced transport input saves money, uses less fuel and improves the carbon footprint of the company.



At harvest, parsley is cut and the roots remain in the ground

ECONOMIC ASPECTS

A key message from the interviewed farmer was: „Today, a farmer also needs to be an entrepreneur.“ Until 2010, he grew Geudertheimer tobacco on 8 to 9 hectares land annually. Additionally, he and his wife cultivated grain and sugar beet on about 30 hectares of land. The bigger part of their financial income was generated by tobacco despite the smaller crop area. From 2008, they partly switched to the cultivation of herbs. At the beginning they devoted a part of the crop area formerly dedicated to grain and sugar beet. Only when the cultivation of herbs proved to be successful, they gradually abandoned tobacco in favor of the herbs. Today, they are the only farmers in the Palatinate who earn their living almost entirely from growing

herbs. However, it is important to them to consider a certain crop rotation. This requires exchange areas on which grain is being grown in the meantime, because most herbs can only be cultivated on the same field once in five years. In contrast, tobacco could be grown several successive years on the same field. This is a limiting factor in cultivating herbs.

All other farmers in the region have only partly switched to growing herbs and continue to cultivate tobacco. Even though the subsidies have been terminated, cultivating tobacco on a smaller area is still economically more viable for them than replacing tobacco completely.

The interview partner sums up his decision for herbs as follows: „Herbs bring more [financial return] than maize, but less than vegetables. However, prices for vegetables are fluctuating. Therefore, rather a low but stable profit than put up with fluctuations and uncertainty.“

In concrete terms, this implies for the interviewed farmer the following calculation: Previously, he was able to generate EUR 10,000 (USD 13,250) to EUR 12,000 (USD 15,900) in revenue for one hectare of tobacco. After deducting all costs (fertilizer, pesticides, payment of labourers, etc), on average about EUR 3,000 (USD 4,000) to EUR 3,500 (USD 4,600) remained as profit for him.

Today, he generates a revenue amounting to EUR 3,500 (USD 4,200) to EUR 4,000 (USD 4,800) for one hectare of parsley, of which about EUR 1,500 (USD 1,800) to EUR 2,000 (USD 2,400) remain in profit. Nevertheless, yields vary depending on the season and the farmer. Depending on the quality, the price for one kilo of parsley varies from EUR 0.75 (USD 0.90) to EUR 1.05 (USD 1.26) and the harvest is between 2.5 and 5 tonnes per hectare.

These factors can significantly change the above calculation. Although other herbs like dill or chervil fetch better prices per kilo, they are only harvested once or twice per season as intermediate crops to parsley and thus generate a lower income. Therefore, the interviewed farmer and the director of the processing plant both estimate, that cultivating herbs requires on average four times the area of tobacco production to achieve the same profit. Financially, herb cultivation is only worthwhile, if a farm has sufficiently large acreage at its disposal.

Labour input in herb cultivation is also very different from tobacco. Tobacco needed additional labourers primarily during the harvest season. In contrast, the farmer and his wife can manage the cultivation and harvest of herbs alone. Furthermore, they are occupied with herb cultivation only from sowing in March until processing the harvest in November, whereas they were busy all year round with tobacco growing and the elaborate drying of the leaves.

The processed herbs of the Erzeugergemeinschaft Pfalzkräuter e.V. are supplied to major customers of the food industry through the Metz (Steinicke) company. The interview partners criticized their customers' practice to deal with the farmers: „The buying agents of the large companies in the food industry handle agricultural products just like industrial products.“ In contrast, the buyers of the tobacco industry usually dealt with the origin of their raw products – the companies' representatives were well versed with the tobacco fields. For this they earned retrospectively recognition from the interview partners.

Usually, major customers of the food industry publicly put their herb demand out to tender and subsequently wait for the offers of the herb producers. The call for tenders is carried out in early summer only, whilst the herbs need to be sown already in March. If the herb processing plants and farmers do not obtain the desired orders, they are in risk to be stuck with (parts of) their forecasted crop.

It was different with tobacco: the required delivery quantities were agreed in advance between the tobacco industry and the Federal Association of Tobacco Producers (and their regional associations). Correspondingly, the interviewed farmer offers a positive opinion: „We had great planning reliability when growing tobacco.“ Simultaneously, Metz company is also aware of the profitability of the old core product tobacco: „What is subsidized is actually not profitable.“

SOCIAL ASPECTS

According to the farmer interviewed the lower labour intensity in herb cultivation has a significant impact on his quality of life. This also means that he no longer has to take care of acquisition, instruction, and accommodation of the additional harvest workers originating mostly from Eastern European countries.

Occupational safety has no great importance for both interview partners. They only pointed out that today the potential danger of falling down in the multi-storey drying facilities for tobacco leaves is no more.

Both interviewees are skeptical as to whether raw tobacco really poses a health threat during the harvest season. They were not aware of diseases such as the Green Tobacco Sickness which are observed in other tobacco growing regions in the world, although for years they have been exposed to tobacco leaves at harvest, usually without particular protective clothing.

CONCLUSION

For the Palatine farmers who used to grow tobacco the profitability of the alternative crop is most important. The cultivation of herbs is only profitable for them if they have sufficient agricultural land at their disposal. Ecologically, herbs have the advantage that they require less pesticides. However, herbs in monoculture require more fertilizer than tobacco. Farmers who have switched from tobacco to herbs are happy about their improved quality of life, particularly due to the reduced workload. In summary, herb cultivation is a potential alternative to tobacco growing under favorable conditions like those found in some parts of the Palatinate.

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- 7 The interviews were conducted on 16th November 2017. One previously agreed interview with another farmer from the region was canceled at short notice. The reason given was that the issue of tobacco growing (and its potential alternatives) had been covered „very one-sided“ in the past, especially in the media. Therefore, the farmer did not want to comment on this, in his opinion, „sensitive“ issue.