

Natural Capital Germany – TEEB DE case study

People who drink this fruit juice are conservationists

The Bodensee-Oberschwaben Apple Juice Project

Since the 1950s there has been a steady decline in traditional orchards not only in the Bodensee-Oberschwaben region, but also in Baden-Württemberg as a whole. This has also led to a decline in the diversity of species and varieties in this special cultural landscape, and a change in the appearance of the countryside. The Bodensee-Oberschwaben Apple Juice Project is designed to counteract this process. This cooperative venture between producers, distributors and nature conservation associations aims to conserve traditional orchards and increase their number. It will also improve regional added value and safeguard jobs in production, distribution and the trade sector. Consumers value this engagement and are prepared to pay higher prices for it. Drinking fruit juice from traditional orchards makes them conservationists.

Location:

Baden-Württemberg, region Bodensee-Oberschwaben

Actors:

Associations, Federal state, Business, Citizens

Project description:

The apple juice project in the Bodensee-Oberschwaben region started in Markdorf and Ravensburg in 1988 and was merged into a regional project in 1992. The aim of the project partners is to conserve traditional orchards in the region. This is achieved through higher producer prices for traditional orchard fruit and an undertaking by farmers to maintain their traditional orchard trees and manage them in accordance with organic criteria. The fruit is processed by four fruit pressing plants and marketed regionally through specialist retailers and beverage stores as traditional orchard fruit juice.

What was the problem?

From the 1950s onwards there was a steady decline in traditional orchards in the Bodensee-Oberschwaben region – up to 80% of the original orchards disappeared. In Baden-Württemberg their numbers decreased by around 50% from 1965 to 2005.[1] The reasons are plausible: because of falling juice fruit prices, there was no longer a reasonable return on the time and effort involved in managing and maintaining the orchards. It had become uneconomic to grow fruit in traditional orchards. The trees were pulled up or left unpruned, the meadows were mowed more often, ploughed up or even used for building. This led to a decline in the diversity of species and varieties in this cultural landscape, and a change in the appearance of the countryside.[2]

What solutions were adopted and what role did decision makers play?

To deal with this problem, regional groups of the nature conservation associations BUND and NABU devised the following idea: farmers receive a fixed price of €17.90 per quintal (100 kg) of ripe fruit, regardless of the season. It is thus decoupled from the regional market price. The regional market price depends on the world market price, and therefore fluctuates from one year to another and also within the season. This decoupling results in greater reliability for the project partners and thereby stabilises the project. The fixed price is financed by a surcharge of 10 to 15 cents per litre, which is borne by the consumer. This is roughly equivalent to double the market price.

In return for the promise of a fixed income, the farmers undertake not to use synthetic chemical sprays and not to apply mineral fertilisers. Old and diseased trees are replaced by planting new ones and the existing healthy high-stem trees are maintained. The juice undergoes particularly gentle heating in the pressing plants, and is then sold as naturally cloudy direct juice in returnable bottles or bag-in-box containers. The juices are regularly checked by an independent laboratory. Nature conservation associations support the pressing plants with marketing and the internal controls in the project.

That this idea became reality is also due to kick-off finance from the state of Baden-Württemberg and a number of rural districts and cities. In 1994 this made it possible to finance a marketing study, individual juice campaigns at municipal level and the merger to form a regional project. Today the project is an economic proposition without public assistance. The only funding that the pressing facilities receive is paid by the state of Baden-Württemberg for the controls.

What has been achieved?

Today the project involves 150 farmers and four juice pressing plants. It safeguards a total of 250 hectares of traditional fruit orchards with 18,000 high-stem fruit trees. Producer prices for traditional orchard fruit have also shown a marked increase outside the project. Today the pressing plants are competing for traditional orchard fruit, and this has resulted in a separate market price for organic traditional fruit. In the last two years the pressing plants in the region have been paying approximately €15 to 19 per quintal for organic traditional fruit. Conventional traditional fruit and plantation fruit have only fetched €11 to 13 per quintal.

The apple juice project sells 300,000 to 500,000 litres a year, depending on crop yield. The retail counter price for the juice is between €1.25 and €1.50 per litre. For the necessary 400 to 700 tonnes of apples, farmers receive between €70,000 and €125,000 (instead of €45,000 to €80,000). This has improved regional added value and helped to safeguard jobs in production, distribution and the trade sector. Consumer surveys by our marketing study have revealed the reasons why people buy the juice: it is made from 100% fruit; it is not a concentrate; it is naturally cloudy; it comes from the region, and it does not contain any pesticides. Consumers know and value the project as a means of both funding nature conservation and promoting the regional economy.

Traditional orchards not only increase the diversity of species and provide a variety of habitats for large numbers of endangered animal and plant species. They also improve erosion control by conserving grassland. More humus is formed, which also improves drinking water conservation, because plant cover reduces nutrient leaching and increases the filtration effect of the soil. Orchards also increase fresh air production and reduce wind speeds. They thus perform important climate functions. Traditional fruit orchards give rise to visually interesting landscapes, creating "rural idylls" that attract tourists. They are an important recreational space for a wide range of leisure activities by the regional population. The project can also raise public awareness of environmental matters – traditional fruit orchards are excellent places for learning about nature.

[1] MLR - MINISTERIUM FÜR ERNÄHRUNG UND LÄNDLICHEN RAUM BADEN-WÜRTTEMBERG, (2009): Streuobstwiesen in Baden-Württemberg - Daten, Handlungsfelder, Maßnahmen, Förderung.

[2] See also: Rösler, S. (2003): Natur- und Sozialverträglichkeit des Obstbaus. Pages 286 onwards describe and discuss surveys in the Bodensee-Oberschwaben region about the landscape and about the impact of fruit growing on nature and the environment.

Ecosystems:

Grassland

Ecosystem services:

Provisioning service:	food
Provisioning service:	raw materials
Provisioning service:	freshwater
Regulating service: :	local climate
Regulating service:	carbon storage
Regulating service:	moderation of extreme events
Regulating service:	erosion control and preservation of soil fertility
Regulating service:	pollination
Regulating service:	biological pest control
Habitats:	for animal and plant species
Habitats:	conservation of genetic diversity
Cultural service:	recreation
Cultural service:	tourism
Cultural service:	aesthetic pleasure
Cultural service:	spiritual value

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More Information

Literature, references:

RÖSLER, S. (2003): Die Natur- und Sozialverträglichkeit des Integrierten Obstbaus - Ein Vergleich des integrierten und des ökologischen Niederstammobstbaus sowie des Streuobstbaus im Bodenseekreis, unter besonderer Berücksichtigung ihrer historischen Entwicklung sowie von Fauna und Flora; Diss. Univ. Kassel, 431 S.

MLR - MINISTERIUM FÜR ERNÄHRUNG UND LÄNDLICHEN RAUM BADEN-WÜRTTEMBERG, (2009): Streuobstwiesen in Baden-Württemberg - Daten, Handlungsfelder, Maßnahmen, Förderung.

Miller, U. (2010): Apfelsaft aus Streuobst. Tagungsband "Landwirtschaft - Kulturlandschaft - Regionale Esskultur". Herausgeber: Bund Heimat und Umwelt Deutschland (BHU), Bonn.

Internet links:

www.bund-ravensburg.de

www.reginet.de

www.streuobst-ravensburg.de

„Natural Capital Germany – TEEB DE“ is the national follow-up project to the international TEEB initiative (The Economics of Ecosystems and Biodiversity). It was commissioned by the Federal Agency for Nature Conservation (BfN) with funding from the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) in order to analyze the manifold values of nature and of the so called ecosystem services in Germany as well as the consequences of species loss also in economic terms and to make them visible. The project is coordinated at the Helmholtz Centre for Environmental Research (UFZ) within the period 2012-2015. More information can be found at: www.naturkapital-teeb.de
