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## Very Good Agricultural Practice Guideline for Promoting Agro-Biodiversity

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## 1 Introduction

The LIFE Food & Biodiversity project supports food standards and food companies to develop efficient biodiversity measures and to implement them in their pool of criteria or sourcing guidelines.

In this guideline, we provide information on the current situation on agro-biodiversity, the challenges and opportunities of promoting a more diverse food variety on the European Food market, as well as backgrounds for the measure of very good agricultural practice described in the “Recommendations to improve biodiversity protection in policy and criteria of food standards and sourcing requirements of food companies and retailers”.

## 2 Agro-Biodiversity?

According to the Food and Agriculture Organisation of the United Nations (FAO) Agro-biodiversity is:

*“The variety and variability of animals, plants and micro-organisms that are used directly or indirectly for food and agriculture, including crops, livestock, forestry and fisheries. It comprises the diversity of genetic resources (varieties, breeds) and species used for food, fodder, fibre, fuel and pharmaceuticals. It also includes the diversity of non-harvested species that support production (soil micro-organisms, predators, pollinators), and those in the wider environment that support agro-ecosystems (agricultural, pastoral, forest and aquatic) as well as the diversity of the agro-ecosystems.” (FAO, 1999a).*

Within the EU-LIFE project the focus lies on plant and animal resources (varieties, breeds) and species used for food.

### 2.1 Agro-biodiversity in agriculture

Biodiversity is the basis of agriculture. It has enabled farming systems to evolve ever since agriculture evolved some 10,000 years ago. Biodiversity is the origin of all species of crops and domesticated livestock and the variety within them. It is also the foundation of ecosystem services essential to sustain agriculture and human well-being.

Today's crop and livestock diversity is the result of human intervention over thousands of years. Under breeding influences, varieties and breeds were conserved and diversified to a seemingly unending pool of cultures that created our food supply ever since. That way, the diversity of domestic varieties and breeds was driven forward by agricultural ideas.

Globally, between 300,000 – 500,000 plant species exist, out of which 250,000 are scientifically described and 30,000 are assumed to be edible. About 7,000 of these are used for human nutrition and cultivated. However, due to the vast development of agricultural intensification in Europe and other parts of the world, the abundance of crops that once made up our diet was significantly reduced to nine species, that provide more than 75 % of our plant based food.

The situation is similar with animal genetic resources: Around 1.4 million animal *species* are scientifically described today, from which 52,000 belong to the taxonomic group of vertebrates. For human nutrition and global agriculture, only 30 *species* (16 mammal and 14 bird species) play a major role. According to the FAO, 7,616 animal *breeds* are registered, from which 1,491 breeds (~20 %) have to be considered as endangered.

Today 75 % of the world's food comes from just twelve plant and five animal species, and more than 50 % of total worldwide caloric income comes from just three plants: rice, wheat and maize (FAO, 1997).

### 2.2 The role of Agro-Biodiversity in society

- **Nutritional safety:** Agro-biodiversity is of significant relevance for today's and future global food supply. Already today, agro-biodiversity forms for the livelihood of smallholder farmers - that are 1.3 billion people – an outstanding role. About 75 % of the poorest 1.2 billion people on this planet live in rural areas and are dependent on traditional agriculture and varieties. For poverty reduction in these regions, agro-biodiversity represents a strategic resource.



- **Economic relevance:** Within the EU-28, utilised agricultural area accounted for two fifths or 40 % of the total land area in 2013 (Eurostat 2018). The European food and drink industry provides 4.24 million jobs throughout the EU, over €1 trillion turnover and a positive trade balance of €30 billion. In half of the Member States, the food and drink industry is the biggest employer in manufacturing. 99 % of food and drink companies are Small and Medium-Sized Enterprises (SMEs). They generate almost 50 % of the food and drink industry turnover and value added, and provide more than 60 % of the employment of the sector (FoodDrink Europe 2017). Beyond the economic value, the diversity of utilised and utilisable plant and animal species displays an important resource for future use, forming the basis of innovation and extended economic activities.
- **Cultural heritage:** The diversity of today's crop species is a result of continuous selection, breeding, propagation and preservation by humans over the course of the past 10,000 years. The gained knowledge and the variety of cultural species that have evolved from their wild ancestors by human intervention are our cultural heritage. Many of these cultural species are also locally adapted to the prevailing environmental conditions, and show many characteristics that are beneficial for providing human nutrition.
- **Ecological services:** Many different crops and breeds mean a diversity of genetic material. This heterogeneity represents insurance for future needs and threats. A rich intraspecific genetic variability entails a potential ability for adaptation to different growing conditions and pressures such as pests or diseases. Hence, the spectrum of agrobiodiversity describes well the resilience of our food system to be able to cope with and recover from impacts originating from fast changing environmental conditions, which we currently encounter on this planet in an accelerated manner.
- **Recreational value:** Traditional forms of agricultural, forest and coastal landscapes have a special recreational value that is also of regional economic importance.



**Graphic 1:** Tomatoes are only one example for a common vegetable crop where more than 3,000 varieties exist as a result of human cultivation: a cultural heritage.

## 2.3 Barriers to promote Agro-Biodiversity

In Europe there are multiple barriers for promoting and propagating agro-biodiversity. In every EU country each plant variety needs admission by the respective registration office in order to market the corresponding seed material. The value characteristics, by which requested new variety admissions are



**Graphic 2: Heck cattle, a hardy breed of domestic cattle with a feral population of 2000 individuals spread over Belgium, the Netherlands and Germany.**

assessed, is predominantly based on its economic value and capacity, to serve the highly intensified conventional agricultural production: yield, reproducible quality, resistance against pests, ease of cultivation, multiple use feature. Characteristics such as taste, adaptability to changing environmental conditions and cultural value are not considered or only under very urgent circumstances i.e. severe drought periods or a quick and broad spread of pest species when the lack of drought or pest resistant species poses an imminent danger. Despite these regulatory constraints, traditional species and varieties are being preserved and promoted by National authorities through

different strategies. One example here is the Protected Designation of Origin (PDO); a European recognition for an agricultural product where every part of the production, processing and preparation process must take place in the

specific region. Citizen initiatives and associations are also becoming more popular, working hand in hand with farmers and amateur gardeners to preserve and promote traditional varieties to the public for example on local farmer's markets.

Although positive examples do exist where traditional species and varieties are promoted in the commercial food market, the potential to propagate agro-biodiversity to reach a significant scale is rather limited. This is due to the fact that industrial agriculture has reached a stage where product specifications and the low cost argument outpace the conservation value of a crop or livestock species. In addition, even if large retailers show willingness to integrate traditional varieties into their assortment, producers often are not able to provide the adequate product amounts and qualities that such retail companies require. Lastly, consumers often buy what they are used to, which has lead to a low uptake of traditional variety offerings in supermarkets and hence to a reluctance of retailers to keep and promote traditional varieties of vegetables, fruit and meat in their stores.

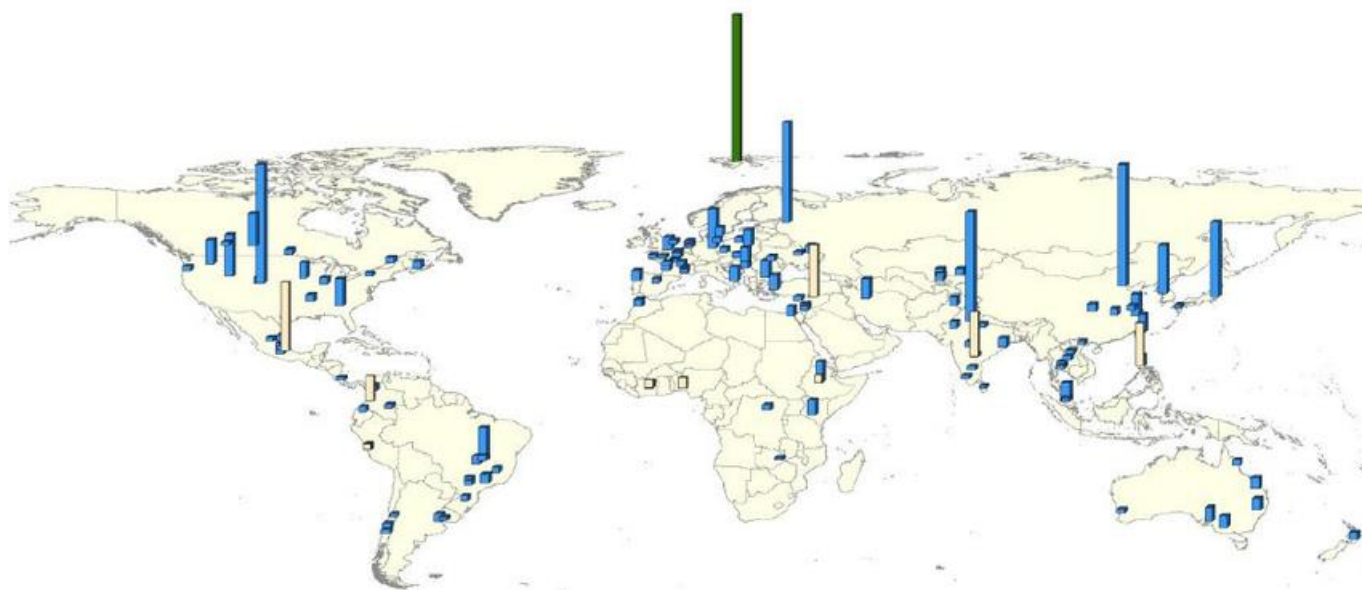
## 3 Two ways of preserving Agro-Biodiversity

For the preservation of the diversity of plant and animal genetic resources, two way of conservation are generally followed.

### 3.1 Ex-situ conservation

Ex-situ conservation is the preservation of seed material outside of its natural range in a gene-bank. In order to preserve endangered varieties and breeds, at least in small inventories, timely action was needed in view of the vast erosion of genetic resources. Plant breeders hence started more then 100 years ago to point to the loss of cultural varieties and provided scientific arguments for the establishment of gene-banks. In 2010, more than 1,750 individual gene banks existed worldwide with an estimated total of 7.4 million accessions, wherefrom 25-30 % are distinct holdings. Of this total, 6.6 million accessions are conserved in national government gene banks, of which 45 % are held in only seven countries (Brazil, China, India, Japan, Mexico, Russian Federation and the United States). Among the largest ex-situ gene banks for plant genetic material that also serves as a global safety backup is the Svalbard Global Seed Vault (SGSV) located on the Spitzbergen archipelago (Norway) and comprising more than 800,000 accessions. Most EU countries have germoplasm collections for crops and living collections of animal breeds, usually supported by national or regional authorities but sometimes also in cooperation with social organizations.





Graphic 3: Geographic distribution of genebanks with holdings of >10,000 accessions; national and regional genebanks in blue, CGIAR centres genebanks in beige, SGSV in green (Source: FAO, 2010).

## 3.2 In-situ conservation

The conservation of plant genetic material in-situ comprises the preservation of ecosystems and natural habitats as well as the preservation and re-establishment of viable populations of species in their natural habitat (e.g. in the field or in protected areas).

### *A special form of In-situ conservation: On-farm conservation*

According to the Convention of Biological Diversity (CBD), on-farm conservation is a special form of in-situ conservation where genetic material is preserved through cultivation in its natural habitat range. Through on-farm cultivation and utilisation of species, their agricultural and horticultural use can be further developed, and the respective species thereby be preserved. In addition, an intensive engagement with the respective variety on the farm enables a strong relation to location and cultivation technique, adaptation to regional conditions and a changing environment.

### *The necessity and value opportunities of On-farm conservation*

Especially in horticulture, global cultivation is more and more limited to a few crop types, most importantly due to prevalent market competition, low demand for traditional varieties and breeds and hence missing value opportunities. In addition, breeding programmes put their focus on economically viable species. However, if breeding programmes for traditional species are not continued and cultivated on-farm then a loss of agro-biodiversity is inevitable.

On-farm conservation can preserve and valorise such cultural species that are not included in breeding programmes and that are not cultivated for the conventional market. Thereby on-farm conservation can provide an important contribution to agro-biodiversity protection. A direct relation can be made here with a potential extension of the offered food supply and an associated diverse nutrition or the innovative use of plant species e.g. for technical or energetic purposes.

In addition, there is a good chance to establish new niche markets through on-farm conservation if consumer demand for traditional and endangered cultural species can be triggered, forming the cultivation of these traditional species for farmers into an attractive alternative.

Furthermore, in times of climate change we will come to the point when we have to refer back to these traditional species, as they are, with a much larger gene pool, better vested to adjust to weather extremes like droughts and floods, compared to the common high performance varieties.

### Positive examples of On-farm conservation

- Switzerland: A success story of on-farm conservation is the rediscovery of the white Swiss emmer, a grain that belongs to the group of spelt cereals. Taken up by a Swiss association that promotes the preservation of old cereal varieties, the Swiss emmer has been integrated in a project to raise people's awareness on the relationship between agriculture and biological diversity. Due to its characteristics of low nutritional requirements, robustness against common pests and high stocking capacity (one grain is capable to develop up to 60 stalks), it was soon obvious to bring this cereal into cultivation again, especially for extensive and ecological farming on dry and poor soils. Today, 70 farms are contracted to again cultivate the Swiss emmer, which is processed to flour, bread, beer and liquor.

More information can be found here: [www.emmer-einkorn.ch](http://www.emmer-einkorn.ch)

- Germany: The WWF-Auen Institute together with the Karlsruhe Institute of Technology implemented a project for the preservation of wild wine in Germany. The aim of the project was to preserve the remaining diversity of wild wine in its natural habitat area as well as to re-establish a population that is viable and genetically diverse. The preservation of the genetic resource of wild vine has a double meaning in the frame of biodiversity protection. On the one hand, an endangered and rare wild plant is protected. On the other hand, a genetic resource is maintained that is of high relevance for future use regarding resistance against changing environmental conditions and quality of conventional wine breeding. Within the project, the last remaining habitats where wild vine can be found in Germany have been identified and characterised. In total 326 wild vine plants have been recorded, out of which 85 individuals originated from natural regeneration and 241 from plantings.

More information can be found here: [pgrdeu.genres.de/insitu](http://pgrdeu.genres.de/insitu)

- Spain: The Regional Government of Valencia has approved a plan for preserving agro-biodiversity that includes seed banks but also a strategy for bringing back varieties to the fields and markets. This is an important change, as traditional varieties are not kept anymore as museum pieces, but are being widely promoted among amateur and professional farmers that want to use them with or without a profit orientation. Actions are also put in place for involving citizenship to search for new varieties (associations devoted to agro-biodiversity conservation) and in continuous renovations of seed bank material. An agronomic characterization of the traditional varieties has also been performed in order to ease consumer's identification and to support the producers and food businesses that opt for these varieties. For the moment, a catalogue of around 40 vegetables has been published but a catalogue on fruit varieties will follow.

More information can be found here:

[www.agroambient.gva.es/documents/163228750/166686337/Catàleg+valencià%20de+varietats+tradicionals.pdf/176e1583-5a6e-40c2-9aa9-c8fa1134c2d3](http://www.agroambient.gva.es/documents/163228750/166686337/Catàleg+valencià%20de+varietats+tradicionals.pdf/176e1583-5a6e-40c2-9aa9-c8fa1134c2d3)

#### Seedfast (non-hybrid) varieties

Seedfast plant varieties are varieties that produce seed material from which plants with the same characteristics and shape as the parent generation germinate. Only for these varieties a natural propagation and therewith preservation by wind, insects and birds is possible. Seedfast varieties possess a wide generic variability, which enables them to react to changing environmental conditions and further develop during subsequent vegetation periods. Seedfast varieties are best suitable for on-farm preservation as well as for further breeding activities.

### Advocates of on-farm Agro-Biodiversity

- Since the 1980s several smaller initiatives have been established that work for the conservation of plant and animal genetic resources. One prominent example in Switzerland and Germany is the non-profit foundation Pro Specie Rara, founded in 1982 with the aim to protect endangered farm animal breeds and crop plants from extinction. In Switzerland Pro Specie Rara developed into an umbrella organisation from which several breeding associations

developed and with whom they closely collaborate besides individual breeders and cultivators. Pro Specie Rara is seen as one of the pioneers in conserving and promoting traditional animal breeds and crop plants.

For more information see: [www.prospecierara.ch/de/home](http://www.prospecierara.ch/de/home) and [www.prospecierara.de/de/home](http://www.prospecierara.de/de/home)

- The Slow Food Foundation for Biodiversity started an initiative nearly 20 years ago, called the 'Ark of Taste'. The main output of this initiative is an online catalogue that lists products from all over the world, which include domestic species, wild species and processed products. The aim therewith is to point out to the existence of small-scale quality productions that belong to the cultures, history and traditions of people, drawing attention to the risk of their extinction within a few generations and invite everyone to take action to help protect them.

For more information see: [www.fondazione Slow Food.com/en/](http://www.fondazione Slow Food.com/en/)

- The follow-up of the 'Ark of Taste' is the Slow Food Presidia project. Its focus lies on the production process of Slow Food's catalogued products (Ark of Taste). In particular the aim is to sustain traditional meal preparation that is at risk of extinction, protect unique regions and ecosystems, recover traditional processing methods, safeguard native breeds and local plant varieties. Today, the Presidia project has formed into a label to accompany, identify, protect and promote Italian Slow Food Presidia products. In 2012, Switzerland was authorized to also use the label for producers who commit to Slow Food's policy and biodiversity guidelines.

For more information and Presidia guidelines see: [www.fondazione Slow Food.com/en/what-we-do/slow-food-presidia/](http://www.fondazione Slow Food.com/en/what-we-do/slow-food-presidia/)

- The CAPSELLA Project develops innovative ICT solutions tailored to the needs of food, field and seed related actors engaging in agro-biodiversity. It established also a participative map where networks and organisations active in Europe in the domain of biodiversity based agriculture are shown, including networks, institutions and research projects that are engaged in promoting genetic resources of agro-biodiversity.

For more information see: [www.capsella.eu/](http://www.capsella.eu/)

- Another example for an institution that promotes the on-farm conservation approach is the SAVE Foundation network. SAVE stands for 'Safeguard for Agricultural Varieties in Europe' and collaborates with a broad group of local actors, in order to characterise the endangered agro-biodiversity, to strengthen capacities and networks, to support on-farm conservation and knowledge and to provide practical knowledge and support.

For more information see: [www.save-foundation.net/de/](http://www.save-foundation.net/de/)

The SAVE Foundation also hosts a website where it lists existing European Networks on Agro-Biodiversity, which can be found here: [agrobiodiversity.net/european/index.htm](http://agrobiodiversity.net/european/index.htm)

- An example of an individual advocate who is dedicated to cultivate and promote agro-biodiversity on his own is the private seed bank of Manfred Hahm-Hartmann. On his website he presents a pool of more than 1000 tomato varieties and other vegetables.

Seed material can be ordered directly on this website: [tomaten.bplaced.net/tomatenhahm.html](http://tomaten.bplaced.net/tomatenhahm.html)

- Llavors d'ací is an association in Valencia devoted to agro-biodiversity. Every year a "Fair of the cultivated biodiversity" is organized for disseminating the topic, increasing the network of seed exchangers and agro-biodiversity explorers, and of course for exchanging seeds. Regular training is also organized around topics such as seed preservation, adaptation to climate change, tasting of traditional varieties, etc. Llavors d'ací has also its own seed bank and is coordinated with a regional strategy for agro-biodiversity conservation.

For more information see: [llavorsdaci.org/es/a-mi-pagina-de-inicio/](http://llavorsdaci.org/es/a-mi-pagina-de-inicio/)



## 4 Opportunities to overcome barriers for promoting Agro-Biodiversity

In the following section some opportunities to promote agro-biodiversity by various target groups are described, for advisors, auditors and product managers respectively.

### 4.1 Farm advisors

The second pillar of the common agricultural policy (CAP) describes the EU's rural development policy and is designed to support rural areas of the Member States and meet the wide range of economic, environmental and societal challenges of the 21st century. Compared to the first pillar, there is more flexibility in enabling regional, national and local authorities to formulate their individual seven-year rural development programmes; based on a European compilation of measures from which Member States can choose. Contrary to the first pillar, which is entirely financed by the EU, the second pillar programmes are co-financed by EU funds, in addition to regional, national or local funds.

The second pillar funds are provided through the European Agricultural Fund for Rural Development (EAFRD) worth €100 billion from 2014-2020 (compared to the first pillar budget of €252 billion for the period 2015-2020), with each EU country receiving a financial allocation for the 7-year period. This EU funding of the second pillar leverages a further €61 billion of public funding in the Member States. In total, there are 118 different rural development programmes in the 28 Member States for this period, with 20 single national programmes and eight Member States choosing to have two or more (regional) programmes. An overview of the 118 rural development programmes can be found here:

[https://ec.europa.eu/agriculture/rural-development-2014-2020/country-files\\_en](https://ec.europa.eu/agriculture/rural-development-2014-2020/country-files_en)

Within these national programmes, the possibilities to gain public funding for the preservation, cultivation and promotion of rare, endangered species or species with special cultural value are specified. Farm advisors may refer to the respective rural development programme within a country or region of the EU-28 Member States in order to identify which crops and breeds are eligible to be funded under the second pillar of the CAP.

Further information: [www.business-biodiversity.eu/en/biodiversity-training/advisors](http://www.business-biodiversity.eu/en/biodiversity-training/advisors)

- Action Fact Sheet Old Crop Varieties
- Action Fact Sheet Protected Plots for Wild Herbs

### 4.2 Auditors

Although auditors are not the main target group of this publication, the information in chapter 4.1 may as well be relevant for their work, if they find themselves in the position to deal with a standard that promotes traditional varieties. Besides this, the links below direct to the 1) European Cooperative Programme for Plant Genetic Resources (ECPGR), and 2) European Regional Focal Point for Animal Genetic Resources (ERFP). Both host and provide access to European data bases on plant and animal genetic resources to support the in situ and ex situ conservation and sustainable use of agro-biodiversity. Hence, these references can provide information on whether a species is considered as rare, endangered or has a cultural value that is in support of agro-biodiversity.

- 1) [www.ecpgr.cgiar.org/resources/germplasm-databases/](http://www.ecpgr.cgiar.org/resources/germplasm-databases/)
- 2) [www.rfp-europe.org/about-erfp/](http://www.rfp-europe.org/about-erfp/)

This information may help advisors, when they have to make a distinction between endangered/rare species and those that have a high value for agro-biodiversity.

Even if the respective standard criterion is not aimed at identifying or promoting such species, the detection of them by the auditor and reporting to the standard could be used to:

- a. trigger the development of such a criterion within the respective standard and reward the presence of such traditional species that promote agro-biodiversity through a bonus point system or other incentives (see here also the publication).
- b. identify the number of unreported cases where traditional species are promoted voluntarily by the farmer and create an overview on farmers promoting agro-biodiversity (in foresight to potential new criteria that might come up in this regard).

Further information: [www.business-biodiversity.eu/en/recommendations-biodiversity-in-standards](http://www.business-biodiversity.eu/en/recommendations-biodiversity-in-standards)

## 4.3 Product quality managers

Product quality managers of food companies can trigger the development of a concept that takes up the promotion of a product that is processed from a traditional breed or crop, even if limited to a season e.g. during summer. The following questions thereby arise and shall be answered in order to assess the feasibility of such a promotion:

- Are there (enough) producers in a region who are willing to cultivate a certain traditional species for that programme and in the required quantities and quality?
- Is there an infrastructure through which these products (or a single product) can be marketed in a certain region?
- Are there signs of consumer behaviour that show demand for such products made of traditional species?
- If yes to the above, is there a chance to trigger broader consumer demand for such products?

The procurement section of a food company would further need to accept certain challenges that are associated with the procurement of products made from traditional species such as lower available quantities (→ limitation to a season can be meaningful), varied commercial quality aspects such as form and shape, compliance with legal requirements market admissions of traditional species.

Despite these challenges and barriers, there are national examples for cases where products have been marketed that partially not even fulfil current market obligations (see example Carrefour), but which meet regional or wider customer demand and trigger consumer and business awareness on the need to change our behaviour. Such initiatives are shown below, also if they do not promote traditional species or agro-biodiversity explicitly, they reveal new (niche) market opportunities and ways to support the development of a more varied and healthy nutrition, which also affects and promotes agro-biodiversity.

### *Positive examples for promoting agro-biodiversity in the market*

- The French retail giant Carrefour shows courage by giving ‘forbidden vegetables’ a second chance. In 40 stores in Paris metropolitan area and in Brittany, Carrefour offered traditional varieties of artichoke, pumpkin, onions and beans that have no market permission for their seed material. Carrefour thereby wants to raise attention on the unduly legal situation on the seed market that benefit the large seed manufacturers in Europe and restricts the product variety of fruits and vegetables to a minimum.  
[www.welt.de/wirtschaft/article169287504/Eine-zweite-Chance-fuer-verbotenes-Gemuese.html](http://www.welt.de/wirtschaft/article169287504/Eine-zweite-Chance-fuer-verbotenes-Gemuese.html)
- C’est qui le patron?! is a French initiative and excellent example for a new and innovative product manufacturer that designs and develops high quality, healthy and responsibly produced food products from a consumer’s perspective. The initiative thereby intends to take a stand for consumer power that is able to alter the product offer in retail stores.  
<https://lamarqueduconsommateur.com>
- REWE, a German retailer, already supports actively the promotion of agro-biodiversity by seasonally offering traditional varieties of fruit and vegetables in their stores. The decision by REWE was triggered by the demand for locally and organically produced products from the consumer. Further support in this regard came from prominent TV chefs.  
[www.rewe.de/ernaehrung/rueben/alte-gemuesesorten/](http://www.rewe.de/ernaehrung/rueben/alte-gemuesesorten/)

- Since 2016 two of the biggest discount food retailers in Germany offer fruits and vegetables (conventional and organic) with form defects that normally would be sorted out before they reach stores. Although this market action is rather aimed at reducing food waste, it is a very good example for how the market is able to trigger consumer demand.

[www.penny.de/unternehmen/presse/presse-detail/article/die-naturgut-bio-helden-kommen/](http://www.penny.de/unternehmen/presse/presse-detail/article/die-naturgut-bio-helden-kommen/) [unternehmen.aldi-sued.de/de/presse/pressemitteilungen/verantwortung/2017/pressemitteilung-aldi-sued-krumme-dinger/](http://unternehmen.aldi-sued.de/de/presse/pressemitteilungen/verantwortung/2017/pressemitteilung-aldi-sued-krumme-dinger/)

A conclusion by Penny on form defect fruit and vegetables one year after market introduction shows: High consumer demand triggers extension of product range; benefits for local producers and the environment.

<https://utopia.de/penny-krumm-es-gemuese-bilanz-27446/>

- The Swiss Coop Sustainability fund promotes agro-biodiversity through awareness-raising projects. Most notably Coop, the largest Swiss food retailer, partners since 2003 with Pro Specie Rara to promote traditional Swiss crops and livestock as well as showing consumers how to contribute to preserving old varieties.

[www.coop.ch/content/act/en/principles-and-topics/coop-sustainability-fund/project-overview/awareness-raising-projects.html](http://www.coop.ch/content/act/en/principles-and-topics/coop-sustainability-fund/project-overview/awareness-raising-projects.html)

- Migros, the second largest Swiss retailer, promotes agro-biodiversity by offering traditional species of fruit trees in their home gardening section. Currently, a traditional variety of plum called “President”. Since 1998 the Federal Plant Variety Office in Germany also lists this variety on their list of old plum varieties. Migros also has other examples from the past where they promoted traditional apple varieties that were produced regionally and then offered in selected stores.

[produkte.migros.ch/pflaume-president](http://produkte.migros.ch/pflaume-president)

- A traditional spelt grain that has been preserved in Switzerland through on-farm conservation (see positive example for on-farm conservation in chapter 5 above) and brought into the market 40 years after its re-discovery is the white Swiss emmer.

[www.emmer-einkorn.ch/bauernkultur/entdeckung.html](http://www.emmer-einkorn.ch/bauernkultur/entdeckung.html)



## Overview of the Project EU LIFE Food & Biodiversity

Food producers and retailers are highly dependent on biodiversity and ecosystem services but also have a huge environmental impact. This is a well-known fact in the food sector. Standards and sourcing requirements can help to reduce this negative impact with effective, transparent and verifiable criteria for the production process and the supply chain. They provide consumers with information about the quality of products, environmental and social footprints, the impact on nature caused by the product.

The LIFE Food & Biodiversity Project “Biodiversity in Standards and Labels for the Food Industry” aims at improving the biodiversity performance of standards and sourcing requirements within the food industry by:

- A) Supporting standard-setting organisations to include efficient biodiversity criteria into existing schemes; and encouraging food processing companies and retailers to include biodiversity criteria into respective sourcing guidelines;
- B) Training of advisors and certifiers of standards as well as product and quality manager of companies;
- C) Implementation of a cross-standard monitoring system on biodiversity;
- D) Establishment of a European-wide sector initiative.

Within the EU-LIFE Project Food & Biodiversity, a Knowledge-Pool with background information linked to agriculture and biodiversity is provided. You can access the Knowledge Pool under the following link:

[www.business-biodiversity.eu/en/knowledge-pool](http://www.business-biodiversity.eu/en/knowledge-pool)

**Editor:** LIFE Food & Biodiversity; Lake Constance Foundation

**Photo credit:** © Pixabay, [www.pixabay.com](http://www.pixabay.com)

### European Project Team



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[www.food-biodiversity.eu](http://www.food-biodiversity.eu)