

Biovision

Newsletter June 2018

Sustainability for all!

Fair and environmentally-friendly consumption goes to school



20
YEARS
REAL HELP  biovision

A future for all, naturally

Martin Reichlin

Teacher at the Canton School Kollegium Schwyz



“The pupils learn that the price of a product is not the only thing to consider. They also need to know how it is made and transported.”

Project “Sustainable consumption” (started 2011)

The CLEVER exhibition, the associated project weeks, exhibition stands and the online shop demonstrate in a fun way how our personal shopping habits affect the health of the environment, humans and animals. Biovision provides concrete tips that encourage sustainable shopping.

- Objectives of current project phase:
 - CLEVER exhibition touring in German-speaking Switzerland
 - CLEVER stand present at events
 - Project days at schools
 - More products added to the online shop

- Project budget 2018: CHF 430,000

- Account for donations: PC 87-193093-4

Sustainable Development Goals (Agenda 2030):

The project makes a direct or indirect contribution to three of the 17 Sustainable Development Goals (SDGs):



Sustainability for all

We can all make a contribution to the UN Sustainable Development Goals if we shop fairly and sustainably! Biovision shows us how.

Sabine Lerch, Biovision

A group of 16 pupils from Class 1b at the Canton School Kollegium Schwyz eagerly enter the classroom, where instead of the normal tables and chairs, they find a small shop stocked with a range of basic foodstuffs: vegetables, fruit, bread, cheese and much more. The products are not real but are there as part of an exercise in sustainable shopping. Lea grabs a shopping basket and Tamara reads out what they have to do: “Shop for an evening sleepover with friends followed by breakfast the next morning”. The three of them quickly decide the menu for the evening meal, opting for vegetable sticks and dips, penne pasta with tomato sauce and as dessert bananas with chocolate sauce. For breakfast, there is bread, butter, cheese and honey. They then look for the products on the shelves and discuss what to buy. Which are the more sustainable: organic tomatoes from Spain or non-organic from Switzerland? When are cucumbers in season? Does margarine contain palm oil? To what extent do milk and cheese harm the environment?

CLEVER provides the answers and shows the true cost. Cindy scans the purchases at the checkout and is immediately given the results for each product. A spider chart is displayed on screen, showing the impact of their choices on humans, animals and the environment. Dairy products come out worse than expected: They are wasteful in terms of resources and the production of animal feed, caring for the animals and food processing damage the environment. Almost all margarine contains palm oil. The cucumber season lasts from mid-April to the end of October and conventional tomatoes from Switzerland score almost the same as the

Spanish organic tomatoes because the latter incur food miles and are irrigated artificially.

Simple rules for sustainable shopping

Since 2014, the Canton School Kollegium Schwyz has run project days on sustainable consumption for its first year pupils; Biovision provides it with a smaller version of its mobile exhibition CLEVER. “The exhibition, together with the fun online shop at www.clever-konsumieren.ch, the CLEVER stand for events and school visits are practical ways of discovering what each of us can contribute to the Sustainable Development Goals,” says Marcel Anderegg, who manages the CLEVER exhibition for Biovision. He explains what that means in practice: “Buy regional fruit and vegetables when they are in season, if possible from the market or direct from local farmers. Enjoy dairy products, eggs and meat but regard them as a delicacy. Look for labels that denote that a product is ecological or fair trade and wherever possible avoid food waste and palm oil.”

Check the label!

Labels identify products that are produced in accordance with defined criteria and standards. However, there are innumerable quality labels out there and it is often difficult to sort the wood from the trees. The website labelinfo.ch can help here: It provides detailed information on environmental and social labels, including assessments of more than 120 quality seals (only in French and German) and so provides a helpful guide through the label jungle. The most important labels in Switzerland include Demeter, the “Bud” symbol of Bio Suisse, Fairtrade (Max Havelaar, Gebana, Claro), Coop Naturaplan and Migros Bio.

More information: www.labelinfo.ch



The Biovision CLEVER shop visits Class 1b at the Canton School Kollegium Schwyz. To make sure their choices are ecological and fair, the pupils have to look closely at the small print (middle left). The products are scanned at the checkout. A spider chart displayed on screen shows how sustainable or damaging the products are (right): Margarine for example is made from palm oil; the production of palm oil has resulted in the mass clearance of valuable rainforests in countries such as Indonesia and Malaysia.

Space Invaders

Biovision has always had a special relationship with invasive species and in fact our story began with one of them: the cassava mealybug. In 1979, the International Institute of Tropical Agriculture (IITA) in Nigeria started an unprecedented programme designed to control a pest that had been imported from South America. The Institute bred parasitic wasps that laid their eggs in the mealybugs and so killed them. Central to this programme was the subsequent founder of Biovision Hans Rudolf Herren.

The problem was solved with a relatively modest investment of US\$ 20 million, an investment that benefited African agriculture to the tune of US\$14 billion! In 1995, Hans Herren was awarded the World Food Prize for his work and he used his prize money as start-up capital for Biovision. Even today, it still provides active support for projects that control the negative impact of invasive pests.

For example, as part of the project to control the destructive mango fruit fly a large number of parasitic wasps were released. The success of this project significantly increased the quality of the mangoes and their retail value. Similarly, in 2017, the Push-Pull method promoted by Biovision was found to be effective against the fall armyworm; it provides smallholders with a method to control this extremely aggressive pest in a way that is not only cost effective but also conserves resources.



Stefan Diener
Programme Officer at Biovision



The larvae of the fall armyworm imported from South America are causing massive damage to maize and other cereal crops in Africa (left).

The prickly pear cactus (*opuntia stricta*) from North America is now rampant, having spread to 75% of grazing land in some areas (right).

Current study:
www.biovision.ch/armyworm

Diversity as opportunity

For the last two years, the fall armyworm has been on the march through the fields of Africa devouring the crops. The invasive species from South America has not only decimated harvests but has triggered a general discussion on how to deal with such alien pests.

Stefan Diener, Biovision

The more diverse a landscape, biotope or garden, the easier it is for a habitat to respond to problems. We can see this from the following example! Wasps may well be valuable for nature but they can also spoil our enjoyment when eating outdoors. If I am sat on the terrace or in my garden, the apple sauce accompanying my traditional Swiss Älplermagronen is also a welcome source of food for wasps. However, if I surround the area with fruit trees and berries, they entice many of the wasps away from my apple sauce. In addition, the shrubs and trees are also home to a range of predators such as birds, spiders and dragonflies that keep the wasp population in check.

Free rein to invasive pests

It is exactly same with agro-ecological farming. Monoculture systems are a paradise for pests; food in abundance and no predators

to be seen. In order to avoid the total destruction of the harvest, farmers often resort to artificial insecticides if pests attack their crops. Even more devastating is what happens if an alien species from a different country or continent hitches a ride with imported goods or in luggage. Plants, insects and mammals that end up a long way from their normal habitat have an easy ride of it. Their new home has none of the natural competitors, predators or pathogens with which they have co-existed in an equilibrium developed over thousands of years. This allows invasive species to spread unimpeded.

Fall armyworm conquers Africa

The same applies to the fall armyworm. The larvae of the moth (*spodoptera frugiperda*) imported into Africa from South America was able to spread throughout the entire continent in just two years and totally destroy maize and millet harvests. Invasive plants can also cause huge problems. For



Spreading throughout Africa – larvae of the fall armyworm.

example, the spread of the prickly pear cactus (*opuntia stricta*) has had a massive impact on African livestock farmers. Originally imported as an ornamental shrub, the opuntia soon became common in Africa covering as much as 75% of grazing land in some areas. It blinded the domestic animals that grazed on the prickles of the now dominant plant. Goats, cows and sheep also suffered serious and often fatal digestive problems if they consumed the prickly parts of the cactus.

Belated realisation

Shocked by the invasion of the fall armyworm, experts from 27 countries met in Nairobi in February 2018 in order to plan the next steps in the fight against the pest. The conference agreed to draw up a range of possible scenarios for Africa designed to identify potential trouble spots and the transport routes used by the invasive species. Ideally, the invaders would be captured

before they reached land but if new pests do arrive in Africa, countries need action plans that allow them to respond quickly to prevent them spreading further. In the case of the fall armyworm, the alarm had not been raised until the pest had already eaten its way through six African countries. Admittedly, farmers will still be left to their own devices until effective monitoring and response mechanisms can be put in place.

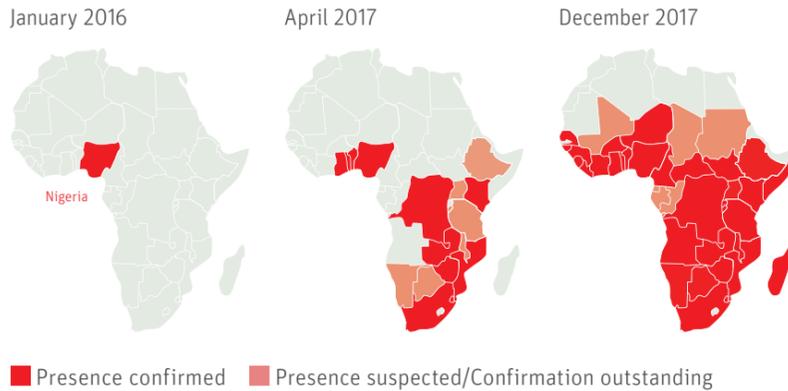
Ecological cultivation systems are more robust

However, this in itself creates a problem for small-scale farmers already dealing with the effects of drought and flooding. The additional pressure from an invasive species can be the last straw. In countries south of the Sahara, 80% of farms are smaller than two hectares. This means that useable land areas and herd sizes are often very small and so cannot absorb the reductions in output caused by the pests or animal diseases.

Similar to what was suggested above for wasps and apple sauce, the smallholders can control pests by adopting agro-ecological systems that increase diversity, are more flexible and more resilient to an invasion. The richer the diversity of plants, animals and agricultural systems, the easier it is for farmers to slow down or even stop the spread of the pests. For example, this can be achieved with mixed-cropping systems such as the Push-Pull method that Biovision has supported for many years. Other ways include the creation of terraced banks planted with shrubs or fruit trees, which provide an important habitat for large numbers of beneficial insects. Such methods make a valuable contribution to food security in rural areas.

SPREAD OF THE FALL ARMYWORM IN AFRICA 2016–2017

(Diagram based on data from CABI/FAO)



Dr. Stefan Diener
Programme Officer at Biovision, biologist and ETH graduate (Ecology and Entomology). He lives in Toggenburg.
Photo: Stefan Diener on a project visit to Kenya with *icipe* staff looking at the goats – they are Toggenburgs, a breed that originated where he lives in Switzerland.

“Lima” in Kenya

Just under 20 years ago, a group of 12 widows and 3 family men set up a farming group in South-Eastern Kenya at the foot of the Shimba Hills and bordering the coastal forest reserve with the same name. They called their group “Lima”, which in English simply means “to farm”. Lipi Malumbo, now 51 years of age, was the original driving force and his entrepreneurial spirit and innovative ideas still motivate the group. Since 2005, Biovision and its Kenyan partner *icipi* have been supporting Lima with the cultivation and marketing of medicinal plants such as aloe vera and neem. The project also has the secondary aim of protecting the forest. A small library has also been established in the village containing information on environmental conservation and agriculture.

“We have developed new sources of income,” says Lipi Malumbo. The group members are now working on their own to expand their activities. For example, they are keeping bees and providing the government forestry service and private companies with saplings of indigenous tree species. “We now earn money by selling honey, saplings and medicinal plants,” explains Malumbo with obvious pride in his voice. We use the profit to buy more chickens, school materials and even motor-cycles. “This encourages others to diversify their activities as well,” says the energetic entrepreneur with satisfaction. | ls



Lipi Malumbo in the community library; it contains copies of the Biovision farmer magazine “The Organic Farmer”, information on ecology, the importance of the forests and healthcare.



Then and now

Some 12 years ago, Biovision concluded a project in Ethiopia that controlled the tsetse fly and deadly sleeping sickness affecting livestock used biological methods. What has happened since then?

Peter Lüthi, Biovision

23 February 2003: In the village of Luke in the Gurage Region of Ethiopia, the mood is sombre. Many people are sick and food is in short supply. The reason for the emergency is the deadly sleeping sickness afflicting the animals and from which most will die. Without oxen or mules the farmers have no animals to pull the ploughs and despite hard manual work with hoes, the farmers can only turn over a fraction of the soil. The disease is transmitted by the tsetse flies that have flown upstream and proliferated.

In 2003, the Ethiopian offshoot of *icipi*, the international insect research institute started work on the “Stop Tsetse Fly” project in cooperation with Biovision and local farmers in Luke: Using biological methods, the farmers vastly reduced the numbers of tsetse flies (photo right) and within two years, the incidence of the disease had declined to tolerable levels. By 2006, the cattle were back in Luke and the area under plough had increased twelvefold. The crisis had been overcome and the project was concluded.

Fast forward to 31 January 2016 and there is a surprise visitor in Luke; the farmers happily pose for souvenir photos. One looks particularly dapper – he is Teshiga Gebrewold. I remember him well from 2003. It was he who sorted the plastic sacks containing the insects collected from each of the traps. The contents of each trap were stored separately so that the species and sex of the tsetse flies and the gestation status of the females could be determined. Using this data, the researchers from *icipi* were able to calculate the time and location of the next invasion of flies. This allowed the farmers to set up a large number of traps at the right time and in the right place and so catch huge numbers of the freshly hatched disease carriers. Having successfully overcome the crisis, Teshiga was able to save some money, which he invested in a simple hotel in a nearby town. Today, he is both a successful farmer and a hotel owner.

More photos:
www.biovision.ch/luke-en



The farmers attract the tsetse flies using bottled cattle urine and a bright blue piece of material. The flies land on the soil, try to escape through the white gauze and end up caught in the trap.

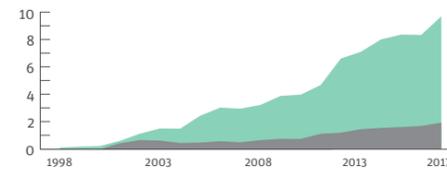
Biovision continues to grow

Biovision began life as a small foundation 20 years ago on 3 June 1998 with an idea and funding from a few donors. Hans Rudolf Herren used the money from his World Food Prize as start-up capital. Since the foundation launched its first fundraising campaign in autumn 2000, it has continued to grow.

Our sincere thanks to all those who have contributed to our shared success!

GROWTH 1998–2017

In million Swiss francs



■ Project investment
■ Fundraising and administration

In the last Financial Year 2017 we invested a total of 7,755,600 Swiss Francs in 33 projects – a new record.

www.biovision.ch/ar17

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Cover photo Students from Class 1b of the Canton School Kollegium Schwyz enjoy discovering how to shop in an environmentally sound and fair way. Photo: Peter Lüthi/Biovision

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The Biovision Advocacy team seeks to improve the general environment for smallholders and in turn bring about a change in the course of global agriculture in favour of genuine sustainability

Advocacy on the global stage

The Biovision “Political Dialogue and Advocacy” team is active internationally calling for changes to the political framework in favour of smallholders and sustainable food systems.

Sonja Tschirren, Biovision

The role of the Advocacy Team is to promote sustainable agriculture throughout the world. Since 2012 and as part of the project “Changing Course in Global Agriculture”, it has championed the interests of smallholders in Africa at international conferences and in discussions with politicians and government officials. Supported by the Swiss Agency for Development and Cooperation (SDC), the UN organisation IFAD and several other foundations, the team first had to make African governments more aware of the need for sustainable food systems. Subsequently, Biovision helped governments, who had expressed an interest, identify whether their agricultural policies were sustainable or not. It was then a case of adapting those policies to take greater account of ecological, social and economic factors. It sounds easier than it actually was. “We had to find countries and government

departments who actually planned for the longer term and wanted to demonstrate their resilience to fluctuating political and financial conditions,” says Stefanie Pondini from the Advocacy Team.

Initial success in Senegal and Kenya

The Senegalese Ministry for Finance and Policy Planning and the Kenyan Ministry for Agriculture together with representatives from civil society and farmers in both countries have been working with Biovision for several years and both government departments have made financial contributions to the project “Changing Course in Global Agriculture”. They have also allowed their specialists to be trained in systematic and sustainable policy planning. Of particular importance has been the democratic process adopted by the project; this has allowed the very diverse opinions on the direction of future food systems to be aired openly. The smallholders involved appreciate this involvement. They see it as a mark of respect and treat official invitations to meetings like precious commodities – evidence that things will not be decided in future without the involvement of farmers.



Fruitful cooperation: Alain Mbaye (middle) with Azadeh Jassemi (right) and Michael Bergöo from the Biovision Advocacy Team.



Story from the life of Alain Mbaye, Dakar (Senegal)

“I always had a concern for the wellbeing of my fellow humans”

Peter Lüthi, Biovision

When Alain Mbaye comes in through the door, he lights up the room. His irresistible laugh and the warmth of his personality make you feel as if you have known him a long time even if this is your first meeting. Both are ideal attributes for the demanding role performed by Alain on behalf of Biovision in Senegal: He brought together a wide range of very different people for the project “Changing Course in Global Agriculture”. Working with the Biovision Team, he achieved something that was no mean feat; he persuaded the General Secretary of the Ministry of Agriculture to sit down at the same table with smallholders, representatives from NGOs, business and international donors, in order to investigate ways in which they could achieve a sustainable agriculture policy and food security (see Page 7).

Alain Mbaye lives in Dakar, where he grew up and started his medical degree. “I have always had a concern for the wellbeing of mankind,” says Alain. However, he realised

“I was so embarrassed...”

that that he could do more for human wellbeing if he became an agronomist. “A good diet helps to prevent disease and is crucial for good health,” says Alain. He, therefore, changed courses and studied agronomy. “A key event in determining my professional focus was probably the day on which I planted cassava in my godmother’s vegetable garden,” he says with the benefit of hindsight. As a child, he had spent his school holidays with her. “I was so embarrassed when she laughed at me because I had placed the root tuber upside down in the hole,” he recalls with a grin.

Today, Alain Mbaye knows all there is to know about cassava – and much more as well. After graduating, he spent 13 years as a researcher at the “Institut Sénégalais de Recherches Agricoles” for pulses and tuber vegetables. This was followed by 10 years as Programme Officer at the “Bureau d’appuis à la Coopération Sénégalais – Suisse”, where he devoted his energies to

training and supporting a very wide range of players in rural areas. Since 2009, Alain has worked for “L’Initiative Prospective Agricole et Rurale” (IPAR), a well-regarded, independent think-tank in Dakar, of which he was one of the founders.

With his charisma, in-depth knowledge, broad experience and network of good contacts, Alain Mbaye is an ideal project partner for Biovision. He is comfortable at any level – from practical field work right through to the political stage. He can open doors wherever he goes. Alain supplies the team in Switzerland with current information of relevance and helps it do the right thing in Senegal at the right time, in the right place and with the right people. “Without Alain, we would often flounder and would not be where we are now,” says Azadeh Jassemi, Project Manager for Senegal and a member of the Biovision Advocacy Team.

