

BIOVISION

Newsletter Nr. 20

AFRICA – NATURE'S TREASURE CHEST

Biodiversity lies in the
hands of the farmer
Page 2

www.biovision.ch/biodiversity

A future for all, naturally

TOF: High-flier with staying power | **Page 4**

Tsetse control and organic farming: Two birds with one stone | **Page 5**

Ban Ki-moon visits Biovision's project partner | **Page 8**



A high level of biodiversity provides the foundation for our nutrition. If it continues to disintegrate all of us lose out, not just the people of the Southern Hemisphere.

Photo: Market in Assosa, Ethiopia, Biovision / Verena Albertin



BIODIVERSITY IN DANGER

Narrow organic basis for human nutrition

Africa is rich: the continent is home to a large part of the biodiversity of our planet, but this wealth is disappearing rapidly. To halt this trend, we need nothing less than a fundamental change of course in agriculture.

By Hansjakob Baumgartner

The organic basis for our nutrition has become narrow. Over the millennia, humanity has made use of over 10 000 types of food plant; now we use around 150. 12 species account for 80 percent of plant food production, and farmed crops are becoming increasingly similar. The enormous wealth of species produced by the world's farmers through cultivation under varying circumstances has diminished in parallel to the advance of fewer, globally-cultivated high-yield species. Approximately 75 percent of all agricultural crop species have already vanished from the Earth's fields. It is not only plant diversity that is an essential foundation for our nutritional needs, animals are also necessary to help with the harvest. 90 percent of pest species have natural enemies – predatory insects or parasitic organisms that use the pest as a host, for example. And 100 000 species of pollinating insects are of service to agriculture. The World Food Organisation FAO values their contribution at more than 153 billion dollars per year.

The Poor North

Like all wealth, organic riches are very unevenly divided between North and South. But in this instance it is the South that is rich: more than 90 percent of all plant species are native to tropical and subtropical

developing countries. The environmental protection organisation, Conservation International, has identified 34 so-called biodiversity hotspots worldwide – exclusively areas where a minimum of a half a percent of all plant species are found. Combined they encompass barely 2.3 percent of global land area, yet house one in two plant species and 42 percent of all land vertebrates. Just three of these areas of concentrated species diversity are to be found in industrial nations. Eight of them are in Africa: for example the tropical lowland forests along the west coast, which contain a quarter of all the continent's mammal species; the Horn of Africa with its unique arid-environment biocoenosis; the mountainous area along the east African fracture zone, or the Cape containing the highest floristic diversity of the moderate zones.

Intact ecosystems are more stable and more adaptive to outside influences such as climate change. The basis of survival for all creatures is greatly impacted by human intervention, consequently natural processes are thrown out of kilter. In this way forest floors are eroded after they are exposed by deforestation. Without protective leaf cover and stabilising root systems soil dries out and is washed away by rainfall. In extreme cases all that is left behind is an ecological desert.



ITY

BIOVISION AND BIODIVERSITY

Ecological development only has a chance when a decent life is possible for the people. Through its concrete projects, Biovision commits itself to the conservation of the natural basis for life and to opening up new sources of income for the people affected.

An example of this is the “Cabesi” project in semi-arid northwestern Kenya, where sustainable sources of income have been established through the production of honey and wild silk. But all agricultural projects in East Africa are part of this, since ecological farming contributes to conservation of biodiversity and improved nutrition for people by avoiding pesticides and artificial fertilisers.

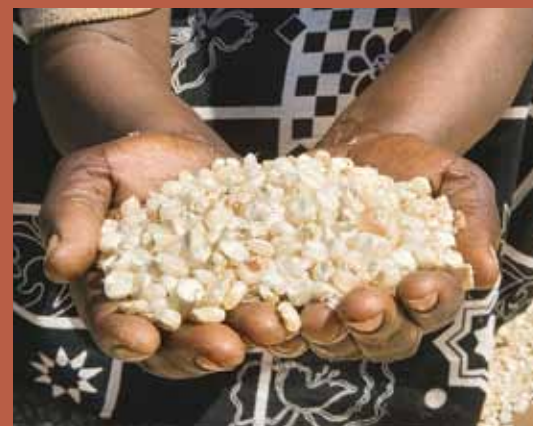
In agriculture, pest numbers quickly increase and cause considerable crop losses once their natural predators are absent.

Biodiversity lies in the hands of the farmer

The significance of biodiversity for agriculture will continue to grow into the future. Climate change presents agricultural crop breeding with a new set of challenges. New species will be needed that can withstand drought and disease vectors. Depletion of the sources of crude oil will increase the price of agrochemicals, making crop yields more dependent on natural soil fertility and on the ability of natural beneficial organisms to keep the pests in check.

The number of plant and animal species on Earth is still unknown. Perhaps it's three, perhaps one hundred million. Up to now around 1.75 million animals, plants and microorganisms have been scientifically classified.

At present 10 000 to 25 000 plant and animal species become extinct every year – much more than naturally come into existence. Halting this trend is now one of the most urgent tasks for humankind. Farmers can play a key role in this. The variety of agricultural plant species and also the survival of many wild types of agroecosystems lie in their hands. But the many small farmers of the South cannot achieve this protection without support. This is ultimately about the foundations of nutrition for the whole global population. In order to conserve this foundation, an agro-political change is needed, such as that called for by the world



www.biovision.ch/projects

agricultural council IAASTD: turning away from the industrialisation of food production at any cost towards ecological agriculture based on natural soil fertility, conserving and encouraging biodiversity and appropriate pricing. Only in this way can further erosion of the foundation of our nutrition be avoided.

Hansjakob Baumgartner is a freelance journalist in Bern.

Biovision congratulates the TOF Team on their tour de force and thanks them for their great dedication!



4

Currently TOF Magazine reaches about 160 000 readers

Peter Kamau, editor and farmer during an interview with a farmer

The TOF editorial team (l to r): Peter Baumgartner, Lucy Macharia, Peter Kamau and John Cheburet.

Photo: Biovision / Sonia Fontana

5 years of the farmers' newspaper TOF

High flier with staying power

Most African farmers have no actual training. They receive traditional knowledge from their parents and pass it on to their children. This is no longer sufficient for today's world. A lack of knowledge contributes significantly to the fact that millions of Africa's small farmers remain trapped in the vicious circle of poverty despite much hard work. Peter Baumgartner, long term African correspondent for the Zuercher Tages-Anzeiger, was already well aware of this when he came to Biovision at the end of 2004 with an idea called "The Organic Farmer" (TOF). He explains the aim: "TOF is a practical monthly newspaper about organic agriculture for Kenya's small farmers, which will contribute to their economic development. They should be able to increase their yields by conserving the environment as much as possible and through optimal use of available resources." Biovision financed the pilot project. As soon as April 2005, 10 000 copies of the first edition of the agricultural newspaper were causing a stir among farmers.

Today 20 000 copies are circulated, the paper reaches around 160 000 readers, is used in many schools as a teaching aid and capacity still does not cover demand. TOF is valued because it focuses on the daily routine of the small farmer, and accompanies him or her through the farming year with concrete recommendations and workable solutions. The SMS, phone and email advisory service is a big hit, which receives on average sixty communications from farmers every week.

Lifblood and the power of innovation

Besides Peter Baumgartner, the editorial team is made up of journalist and farmer Peter Kamau, assistant Lucy Macharia and external experts. John Cheburet, who supervises TOF Radio (founded in 2008) is also a valued member. His weekly programmes in Kiswahili and three local languages reach around three million people and contain the same practice-oriented guidance as the newspaper.

The TOF Team commands great expertise, creativity and the necessary energy to help small farmers achieve higher income with organic agriculture. The latest project consists of the four iTOF, four small advice centres where farmers have access to knowledge and resources for organic farming. The "i" stands for "information" and "inputs". The iTOF agricultural advisers are equipped with solar-powered laptops and have the complete Infonet at their fingertips (see page 6). Farmers apply for a course on one of 25 topics. What is special about iTOF is that the advisers come to the farmers' groups, not the other way around, which also enables women with children to receive further training. In the first six months over 1500 men and women farmers were trained and demand continues. All editions of TOF are available worldwide at www.biovision.ch/TOF



Small farmer Dawa Ahmed from Kushmangul, Ethiopia: "I want to bring vegetables of the best quality to the market to get a good price. The training on the Biofarm helps me do this, because I have learned how to improve my cultivation methods to produce more from a little piece of land."

Photo: Biovision / Flurina Wartmann

Tsetse Control and Organic Farming

Two birds with one stone

The way to Kushmangul, a small village close to Assosa in western Ethiopia, is lined with grass as tall as a man. It's hard to believe that a lack of food prevails in this green landscape. Dr. Hailu Gebru, head of the Biovision project "Tsetse Control and Organic Farming" explains: "Here farming is dependent on ploughing oxen. When they die because they have been infected with sleeping sickness by tsetse flies, the people have to work their fields with hoes." Dawa Ahmed experienced exactly that two years ago when she lost three oxen and a cow. Since then this single mother has scarcely been able to cultivate a small field with vegetables for the local market. Plant diseases and small harvests give her much to deal with. Here the Biovision project steps in by complementing organic tsetse fly control with training in organic farming. At present Assosa houses the region's first Biofarm – a model enterprise and training centre for farmers. Mrs Ahmed has already received initial training, which has renewed her hope: "I want to learn how to make compost so I can grow bigger onions", she says confidently.

Commentary

Cooperation on the ground

The "Tsetse Control and Organic Farming" project has been running since 2009. Through this, Biovision supports the initiative of local partner organisation Bio-Economy Africa (BEA) which continues environmentally-friendly tsetse control from an earlier project and combines it with organic farming. At the heart of this project is a new "Biofarm" that operates as an education and training centre. Here the local population can benefit from courses in agriculture. I am convinced that the Biofarm will provide the impetus for further initiatives of this type, as Assosa is located at an intersection in the border region with Sudan and lies in the middle of the habitation belt of the tsetse fly. The new Biofarm is strategically in the right place to disseminate the combined approach to neighbouring regions.

In Assosa we are working in a complex situation, as different sections of the population and ethnicities are involved. For this reason the inclusion of local government administrators, such as the agricultural authorities, is essential for the success of the project. At times some administrative formalities are necessary, but the expense is worth it: for example the Assosa authorities have officially assigned the land for the Biofarm to the project. This network is assured by the reliable local organisation BEA, with whom Biovision has had a long and fruitful history of cooperation. We regularly visit the site and carry out assessments with project participants. In this way we investigate if the collectively defined goals have been reached and plan the next steps. In so doing we ensure that funds are used in an effective and targeted way.



Flurina Wartmann

The geographer and GIS-specialist Flurina Wartmann is a member of the Program Coordination team at the Biovision Foundation in Zurich.

Photo: Biovision / Verena Albertin

www.infonet-biovision.org

Biovision provides information on ecological agriculture on the internet. The main target groups in Africa are primarily “multipliers” such as state agricultural advisors, experts from goal-related organisations and farmers’ groups.



Careful ploughing and crop rotation maintain soil biodiversity.

6

Ploughing with oxen

Careful treatment of the soil and covering with plants or mulch protects against erosion.

Photo: infonet-biovision

Vegetable garden

Using mixed cultivation and crop rotation instead of monocultures enables higher yields and reduces effort in the long term.

Photo: Biovision / Peter Lüthi

Click on Infonet-Biovision

Less is more

Cultivation and use of fields too intensively, such as through repeated farming of monocultures in the same areas or unnecessary ploughing can damage soil, causing the disappearance of the variety of soil flora and fauna. Numbers of microorganisms and worms shrink, which among other things aid humus enrichment and good soil structure. In this way, nature’s self-regulatory processes are hindered. The fertility of the fields diminishes, increasing effort required from the farmers and the need for fertilisers.

The term “Conservation Agriculture” denotes various measures with which the natural condition of the soil can be conserved as much as possible in order to avoid the problems outlined. They are targeted towards sustainable cultivation and are essentially made up of three components: firstly, earth should be carefully tilled and subsequently covered up, so that moisture in the soil is conserved. Secondly, plant leavings are to be left in the fields, as they give the earth nourishment and introduce air into the soil. Roots and small plants keep the soil of the fields intact and protect it from erosion. Thirdly, use of monocultures is to be avoided, rather mixed cultivation is to be utilised and cultures are to be regularly rotated. Through these simple measures farming can be made more sustainable and successful.

These measures also mean less work in the long term for farmers. With the conservation of natural soil con-

Protagonists in Biovision’s projects

Silkworms

Preparation for the nuptials lasts a year. This length of time elapses between the pupation of the African silkworm *Epiphora bauhiniae* and its rebirth as a colourful moth of up to 7cm size. After a few days the party is over: the moth has mated, the female has laid her 300 eggs and dies in beauty. The caterpillars hatch in good timing with the rainy season, when the main food plant – a spiny bush of the family *Zizyphus* – starts to blush green. They feed for scarcely four weeks if they are not eaten themselves, thereby fulfilling their ecological function as nutrition for predatory insects, ants or birds. They provide a service to humans through pupation by producing silk, with which they encase themselves for metamorphosis. Unlike the traditional silk producer, the mulberry tree silkworm (*Bombyx mori*), *Epiphora bauhiniae* has never been domesticated, rather it is bred in semi-freedom on its food plant – a form of sustainable, rural use of wild species in Biovision’s projects.



Caterpillar, moth and cocoons of the African silk moth *Epiphora bauhiniae*, which are kept for silk production under nets on wild acacias.

Photos: Biovision / Peter Lüthi und Christof Sonderegger

dition, biodiversity can be protected. The more freedom nature is given, the richer its diversity remains and the higher its natural self-regulation.

Visit Infonet-Biovision online:
www.infonet-biovision.org



Widows and single mothers made their dreams come true in 2002 with the help of Dr. Getachew Tikubet and Biovision. They transformed devastated land into a blooming vegetable garden, where today they harvest healthy vegetables for their own use and to sell at market. Photo: Biovision / Peter Lüthi

From the life of Getachew Tikubet

A visionary with drive

Yes we can! This familiar quote from the incumbent US president could just as easily have come from Getachew Tikubet of Addis Ababa. His version “Let’s do it” is older than Obama’s and applies to Ethiopia and the whole African continent. Getachew has a big vision, which he has striven for for years with inexhaustible innovation and real action. He believes that Ethiopia can free itself from poverty and that Africa’s people can have worthy and dignified lives. “Africa has 37% of the world’s resources, 16.5% of the world’s population and yet this continent accounts for only 1% of the global economy” he calculates. “Small farmers and their families can change this world, we only have to give them the chance and the necessary knowledge!” – this is how Getachew’s credo runs, and it is one he realises with specific projects. In 2003 he founded the BioEconomy Association (BEA) with his wife. BEA’s aim is to implement scientific findings and demonstrate that the suffering population can benefit from this application. With BEA in 2002 he led 200 widows and single mothers from Addis Ababa in transforming 2 hectares of leached soil into an abundant vegetable garden using organic methods. This enterprise, supported by Biovision, is now practically self-sufficient and serves as an exemplary project. In 1996, Getachew had already set up a model enterprise under the name ‘Biofarm’ in Addis Ababa for practice-oriented training in ecological farming. In Ethiopia today nine such training centres are in existence. His latest coup is the Yeha Institute, a training site with associated biofarm as an education

Everything has its time

A legacy for Biovision

All life must come to an end. That’s why it makes sense to put things in order in good time. Perhaps you would like to leave a legacy behind and continue to do good beyond your lifespan. You have the opportunity to include organisations such as the Biovision Foundation in your will. With a bequest you can ensure that your will is carried out according to your wishes.

If you have any questions or you would like to order our free advice booklet on leaving a bequest, please contact Reto Urech on +41 44 341 97 19 or r.urech@biovision.ch



www.biovision.ch/legacy Photo: Photocase

and research garden, where farmers, prospective agricultural advisers and students receive education and exchange knowledge in an interdisciplinary manner.

Getachew Tikubet has first-hand knowledge of the rural population’s hard existence. Born and raised in Tigray in northern Ethiopia, in his youth he attended the University of Addis Ababa, where he completed his foundation course in science and in 1980 then completed his doctorate with a thesis on the tsetse fly. After further study in Sierra Leone and the USA he returned to Ethiopia to use his knowledge to serve his countrymen. Since then he has been supported by Biovision, together with a strong project team and farmers’ groups in proving again and again that the tsetse plague and deadly sleeping sickness can be controlled with ecological insect traps. Dr. Getachew Tikubet will shortly be assigned to Mozambique and the Ivory Coast to implement the successful Biofarm concept in these countries. In this way the small BioEconomy Association has developed into BioEconomy Africa, setting out to realise Getachew’s vision all over the continent.



Getachew Tikubet (right) shows UN Secretary General Ban Ki-moon, his wife Yoo Soon-taek and top-level UN functionaries his Biofarm in Addis Ababa. Dr. Getachew heads many Biovision-supported projects in Ethiopia. Photo: © UN Photo / Eskinder Debebe

UN Secretary General visits BEA Ban Ki-moon visits Biovision's project partner

At the end of January Getachew Tikubet, Biovision Project Leader and head of BioEconomy Africa, received UN Secretary General Ban Ki-moon at the Yeha Institute (farmers' academy) and Integrated Biofarm Center. The visit followed the 14th Summit of the African Union in Addis Ababa (Ethiopia). "The integrated Bio Economy System is a very impressive and pragmatic solution for mitigating the effects of climate change and conserving the basis of life in Africa", said an impressed Ban Ki-moon after the tour. The farmers' academy and associated biofarm aim to be an example for all of Africa, in accordance with the principle of BEA.

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Welcome to Zofingen

Biovision at Bio-Marché

From the 18th to the 20th of June, Zofingen's old quarter will be transformed into the largest Swiss Organic Fair – Bio-Marché, with around 150 exhibitors from home and abroad. Biovision will be present here for the first time, with articles from the online shop and information on projects in East Africa.
www.biomarche.ch

John Cheburet wins FAO competition

Honour for TOF Radio Reporter

John Cheburet, head of project and editor of TOF Radio has won first prize in "Radio Farm International", a competition of the World Food Organisation FAO, for his radio programme. His programme reports on a resourceful farmer in Kenya who noticed that his potatoes stayed fresher longer when stored in sawdust. 'My contribution shows that farmers are innovative and that they try to find solutions to their problems. It is my job as a radio journalist to see that such instructive stories reach as many listeners as possible,' says the happy winner. John Cheburet is expected to make a presentation at Biovision's Member Event on 26th April 2010 in Bern.

NATUR Convention in Basel

'Biodiversity- our future'

The fifth NATUR Convention on 12th February in Basel fell during a heated phase of biodiversity discussions in Switzerland, on the eve of the parliamentary debate on this topic. In the concluding presentation, Dr. Hans Rudolf Herren emphasised to over 1000 convention participants that biodiversity makes an essential contribution to the survival and wellbeing of humanity. The president of the Biovision Foundation warned that further depletion of biodiversity would exacerbate global poverty and place a massive burden on future generations.

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