

GOING ORGANIC

Supporting African farmers
to feed themselves





Authors: Richie Alford, Send a Cow UK; Sheila Taylor, Kulika Uganda
Contributors: Alice Kinengyere-Mango , Dr. John Wibberley
Editor: Kirstine Dunhill
Graphic design: Designbull.co.uk
Cover photo: Wayne Hutchinson

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BACKGROUND:

Farmers helping farmers

The defining moment came when we gave cows to a group that had received training in organic farming from a lady called Josephine Kizza. When we gave this group cows we monitored and saw transformation happening at a faster rate than we had ever seen before. When we looked at why, we realised that the whole farm was producing more and that it wasn't just the milk that was making a difference to the group's income and livelihood.

DAVID BRAGG (SEND A COW PROGRAMME COORDINATOR AND FOUNDING FARMER), 20TH ANNIVERSARY REPORT, SEND A COW, 2008

Send a Cow started in 1988 when British dairy farmers responded to an urgent request from Ugandan subsistence farmers for practical support to help them produce sufficient food to feed their families. Their ability to produce adequate food had been lost as a result of civil war in their country, leading to shattered communities and an enormous reduction in the cattle population.

Rather than food handouts, access to a long-term supply of food and fertiliser was given. In other words: cows. Today's needs were met with the milk, whilst manure became crucial to guaranteeing food tomorrow.

The founding farmers, accustomed to a system where all necessary inputs were readily available for purchase, had to adapt their thinking to the on-the-ground reality of post war Uganda.

The potential of an organic based system became apparent when they met Anasumagira Women's Association, a dynamic group of women farmers from central Uganda. These women, who could not afford external inputs such as chemical fertilisers

and pesticides, were experimenting with organic farming methods they had learnt from Josephine Kizza at St. Jude's organic farming training centre in Busense, Masaka.

However, whilst they now had the knowledge to utilise the resources they had available to them, by composting food waste for instance, they were frustrated that they didn't have the cows, and therefore the manure, they needed to really maximise food production on their farms.

The success these women had when uniting the cow with an organic farming system was truly spectacular, and contributed to the transformation of how Send a Cow delivered its programmes in the country.

Throughout the years Send a Cow has continued to work in partnership with African farmers to develop and refine the training it provides in organic farming as it enters new countries and experiences different environments. The Foundation Series plays an essential role in documenting this process and the lessons learnt along the way.



INTRODUCTION:

What is the Foundation Series?

The Foundation Series is a collection of research papers introduced to share 20 years of Send a Cow's learning in Africa, and set out the foundations for a best practice approach to agricultural development that has small-scale farmers at its heart.

The series will look at the core components of the Send a Cow programme: social development, climate proofing, animal wellbeing and sustainable organic agriculture. It will also illustrate how each of the components is intrinsically linked.

In addition, the series will use evaluations from a number of independent researchers to identify the elements of our programmes that have been responsible for transforming the lives of so many poor communities in rural Africa, whilst using the lessons learnt along the way to develop recommendations, based on practical advice, for policy makers.

Importantly, the series will also illustrate how Send a Cow's 'pass-on' system – a system by which livestock and knowledge are shared throughout communities – has resulted in the widespread implementation of best practices beyond the communities involved directly in Send a Cow projects. This includes those associated with activities such as animal care, gender positive behaviour, environmental awareness and, crucially, sustainable food production.

by Martin Long, Head of Programmes, Send a Cow

GOING ORGANIC:

Supporting African farmers to feed themselves

When we use the term 'organic' we are talking about a pragmatic approach to agriculture that helps poor farmers meet their needs – increasing productivity by using the resources they have access to, rather than expensive inputs such as chemical fertilisers. This means a focus on livestock, land and labour – with the primary objective of generating a sustainable source of food.

CHRIS KYESWA, PROGRAMME MANAGER, SEND A COW UGANDA.

In this Foundation Series paper we will be looking at the role of organic farming and how it can provide long-term food security for Africa's rural poor.

This is an issue that has become increasingly critical as rising food costs and reduced supply has led, not only to increasing numbers of people living with malnutrition, but more recently to food riots in countries as diverse as Haiti and Cameroon.

In rural Africa, we have seen people react by moving to cities to become workers in modern industrial factories, with all the urban problems this causes. We have also seen food aid delivered to those who remain on their land when the latest environmental crisis hits. But these actions aren't viable for the long-term.

Throughout this paper we will therefore be putting forward a case for support for organic agriculture as a viable solution for Africa's rural poor – in part evaluating current industry research in the context of what Send a Cow is already providing. We will also be dispelling a few myths along the way.

The world currently produces enough food to feed all people, but the processes of distribution are either inefficient or hampered by bad infrastructure or governance issues. And, as the global population is set to increase, there is therefore an urgent need for improving methods of food production.

The question is where and how? We could try to increase production in the areas that are already efficient with ever more successful but exploitative systems. Or we could increase the production in those areas where yields are low, but where natural resources, such as land, labour, water and sun, are available to be made use of.

Send a Cow believes that supporting and strengthening traditional systems results in the development of practices that are accessible, and understandable, to poor farming communities. As new knowledge is embraced, both land and dignity are restored. Farmers' confidence increases as they start to produce enough food to feed their families – but also to generate a surplus for sharing and trading. Knowledge and savings, in turn, lead to families that are better prepared for environmental disasters and fluctuations in global food costs.

When Send a Cow started up 20 years ago, we commissioned research to identify an approach that would help farmers feed themselves without imposing too many techniques that were alien to them. The resulting report "Forage in Uganda," illustrates the point – the introduction stating:

"Too many schemes have failed because we try and introduce practices without appreciation of the existing farming system: any improvements must build on what is there."

These are words that Send a Cow has never forgotten.

by Martin Geake, Chief Executive, Send a Cow

Organic and near-organic agricultural methods and technologies are ideally suited for many poor, marginalised smallholder farmers in Africa, as they require minimal or no external inputs, use locally and naturally available materials to produce high-quality products, and encourage a whole systemic approach to farming that is more diverse and resistant to stress.

UNEP REPORT 'ORGANIC AGRICULTURE AND FOOD SECURITY IN AFRICA', 2008 ¹

SETTING THE SCENE:

Rejuvenating land and lives

The most important thing about training is that we have been able to use locally available materials. I compost because I saw what could be achieved at training. My neighbours compost because they have seen what I have achieved. Now, because of Send a Cow, the whole community is using manure.

MARY ODENGO, UGANDA.

*'Farmers in Africa are scratching out their living on ever decreasing fragments of infertile soil'; 'Poverty and hunger could worsen in Africa because its farmland and soils have been severely degraded.'*²

This is the picture so often presented in the international media, and it contains truth: there is less land to go around with populations still increasing, and there is a problem with declining soil fertility too.

Africa is a vast continent and home to over 940 million people. It has snowy mountains, sun baked deserts and lush rainforests. And on the edges of these and in every other imaginable environment there are people living directly off the land, farming what and where they can. The agriculture is often based on tradition, is on fragmented land and is at subsistence level, dependent entirely on natural resources. Having less cropland per person not only threatens livelihoods; in largely subsistence societies with nutrient depleted soils, it threatens survival itself.

But there is also good news from Africa. Organic farming is working. Achieving higher crop yields than traditional or even modern farming methods it is, in fact, rejuvenating not only land but also lives.

In the UK, the perception of organic farming is often of high cost vegetables. Within Africa, however, organic agriculture encompasses not only the certified product that might be exported or destined for city shops, but also the farming systems that use few purchased inputs or non renewable items from outside the local environment – and no synthetic fertilisers or pesticides.

The principles Send a Cow shares with farmers are concerned with processes of using, replenishing and improving natural resources to counteract the diminishing returns of an unprotected environment. It works within and towards healthy biological systems and also tries to minimise energy waste by prioritising proper use of renewable sources.

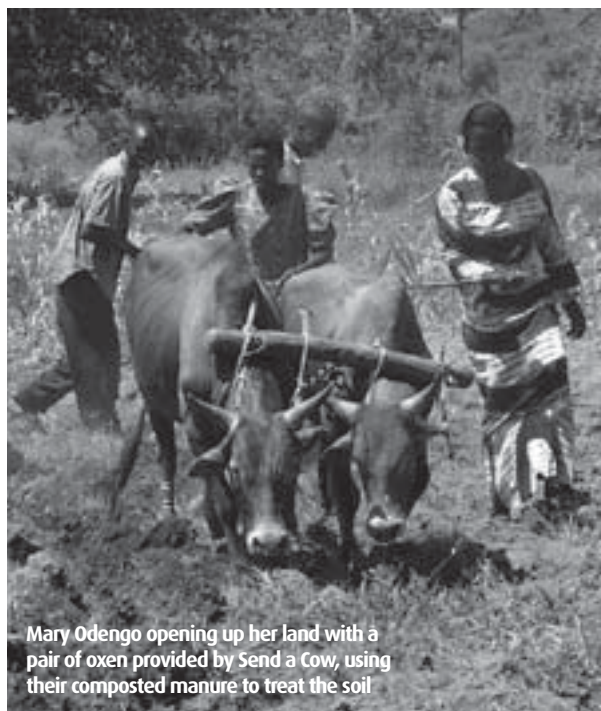
This report therefore aims to dispel the myths spread about organic farming. It will demonstrate that yields from organic farming systems are equal to, if not greater than those available using alternative, chemical based, agriculture; that it is more sustainable for the longer term and benefits the natural environment; that, as well as improving food availability and family income, it strengthens communities and local markets; and that, far from being too expensive for African farmers to make the change, it is often the only viable option.

Increasingly studies into the implementation of organic agriculture for development have concluded that '*organic agriculture could be an important part of increased food security in sub-Saharan Africa,*³' and that '*organic agriculture needs to be part of an effective response strategy to escalating food prices.*⁴' It is therefore vital that UK donors, international policy makers and African governments start to take the issue seriously.

by Sheila Taylor, Kulika Uganda

Kulika Uganda is an organisation committed to spreading the principles of sustainable organic agriculture. Kulika works in many areas of Uganda, educating and training local people towards a more sustainable and harmonious relationship with their land and environment in order to improve health, food security and family incomes for rural farming communities. For more information visit:

www.kulika.org



Mary Odengo opening up her land with a pair of oxen provided by Send a Cow, using their composted manure to treat the soil

A ROLE MODEL:

Building the foundations

A harsh landscape

Over 70% of the population of Africa are subsistence farmers, dependent on what they can grow from their land for survival. For centuries they successfully farmed this land. However, factors such as war, disease, population growth and, increasingly, climate change, are making this ever more difficult.

Plots are getting smaller, livestock quality is in decline and in many areas soils have become seriously deteriorated. Deforestation, over-farming and the use of chemical fertilisers, which were once actively encouraged by governments and development agencies, are all to blame – and have resulted in reinforcing the levels of poverty experienced by rural communities.

Furthermore, parents often die before they have passed on their age-old knowledge to their children. HIV/AIDS, in particular, is debilitating the economically active generation – adults who would also normally be bringing up children and caring for the elderly.

Over the past 20 years, Send a Cow has built a best practice model of development that addresses these issues head on. The following outlines the work that Send a Cow does in terms of laying the foundations required to ensure the long term success of its programmes, providing an overview of the work it does in strengthening vulnerable groups, ensuring animal wellbeing and, crucially, introducing sustainable farming systems.

Strong communities – a vital resource

Send a Cow works through local community organisations, primarily women, who have come together to find solutions to the problems they face. Strengthening these groups is fundamental to the support that Send a Cow provides. Locally recruited members of staff decide which groups to work with and then help them define their own criteria for poverty within their local context – such as lack of land, disability or widowhood. The group will then decide who amongst them is in most need of help.

Furthermore, alongside courses in animal wellbeing, organic farming practices and natural resource management, Send a Cow also provides training in subjects such as gender equality, group dynamics and HIV/AIDS awareness – as well as ongoing support from qualified staff and peer farmers (farmers who have become trainers themselves). Peer farmers play a vital role in helping Send a Cow enter new regions. Peer farmer exchange trips are organised whereby promising farmers from the new project area are chosen to travel to existing programmes where they will see Send a Cow's work in action. They will then return to both encourage and train their own groups.

As peer farmers take an increasingly active role, appropriate support networks are put in place and, over time, communities become self-sufficient with groups managing the process of passing on livestock and knowledge themselves.

Balancing people, livestock and the environment

Animal wellbeing is fundamental to Send a Cow's programmes. All recipients need to build a spacious shelter and grow a crop of fodder grass in preparation for their animal. The shelters protect animals from disease and extreme weather, whilst ensuring they receive a healthy, well-balanced diet. They also help protect the environment by preventing animals roaming free, and facilitating the collection of manure and urine – vital ingredients for sustainable farming. By converting these by-products into compost, and therefore a natural fertiliser, it is possible for the resulting vegetation to absorb more carbon than is released by the livestock themselves (Preparing to Climate Proof, Send a Cow Foundation Series Report, 2008).

This whole process can take as long as 18 months; a big commitment for a poor farmer. However, for those who have seen Send a Cow projects in action, and appreciate the impact being part of the programme will have on their lives, it appears to be an investment they are happy to make.

Importantly, the livestock packages Send a Cow provides are adapted depending on local conditions and recipients circumstances. For young orphan families, for instance, goats or beehives may be more suitable than a cow. In others countries, improving local livestock might be the answer – such as introducing a village bull scheme by providing a local farmer with a good quality breeding bull.

Send a Cow sources all its livestock in Africa.

By providing livestock and training to poor families in Africa, Send a Cow is providing many people with a dignified and self-sustaining opportunity to reduce, and indeed, in many cases escape the pressures that extreme poverty can bring.

SIMON PENNEY, PROMISE CONSULTING (PREPARING TO CLIMATE PROOF, SEND A COW FOUNDATION SERIES REPORT 2008)

A ROLE MODEL:

Send a Cow's principles of sustainable organic agriculture

Organic agriculture is underpinned by principles that apply to the whole farming system. Based on these, Send a Cow encourages farmers to choose and use practices appropriate to the climatic zone, resources available and the produce desired.

For Send a Cow organic agriculture is not simply going back to 'the old ways', although there is much to benefit from including indigenous and pre-industrialised agricultural knowledge. Instead, it continually researches the impact of its work on fertility building, water and soil management, plant nutrition, and disease control methods.

Practices can improve as new research is available, and in the field they are adapted and modified, changed and refined when used by farmers as they implement organic principles on their land. Entering new regions with a different set of social and environmental issues is

often where the most important developments happen. Moving into new areas has helped the organisation adapt various elements of its training which have then gone on to benefit other regions.

Different organisations have stated their own understanding of organic agriculture, for example the International Federation of Organic Agriculture Movements (IFOAM) has four principles: health, ecology, fairness and care, and describes these as the roots from which agriculture grows and develops.

Send a Cow has also developed its own sustainable organic agriculture principles, drawn up and agreed by field workers from across the African continent and based on feedback from the farmers it is working with (see box).

Sustainable management of soil fertility

Conserve soil, water and other environmental resources

Physical conservation of soils, water resources, landscape, trees (vegetation), biodiversity and other culturally important resources, are essential for the purpose of maintaining ecosystem services, energy, and nutrients for productivity. This in turn means food security for people.

Sustainable health of soil, plants, animals and humans

Using appropriate sustainable organic agriculture and practices to provide the sustainable health of soil, plants, animals and people. This includes maintaining animal/crop diversity, crop rotations and cultural and biological control methods and reducing the incidence of pests and disease.

Working with natural systems

Working with natural systems allows ecosystems to operate in a balanced manner, providing services through biological processes. It also involves appropriate management of the resources and systems to maintain their natural form or type as far as possible without depleting or degrading them; this includes keeping animals in line with their natural behaviour or needs.

Sustainable management of soil fertility

Maintaining soil fertility by ensuring there is enough of the right proportions of available nutrients for the agriculture suited to the area. This may depend on the climate, topography, soil type, parent rock and pH. Sustainable management practices such as building the structure and balancing soil nutrients, correct spacing of the crop, crop rotation, intercropping, residue management, manuring coupled with other appropriate agricultural practices, will enable the soil to remain fertile and boost yields.

Proper management of available renewable energy sources

In order to properly use bio, hydro and radiant/solar energy sources, there is a need to employ simple, locally available, affordable and relevant systems and technologies. This contributes to minimise the use of non-renewable energy sources.

Send a Cow International Sustainable Organic Agriculture Workshop, Mbale, Uganda, October 2007

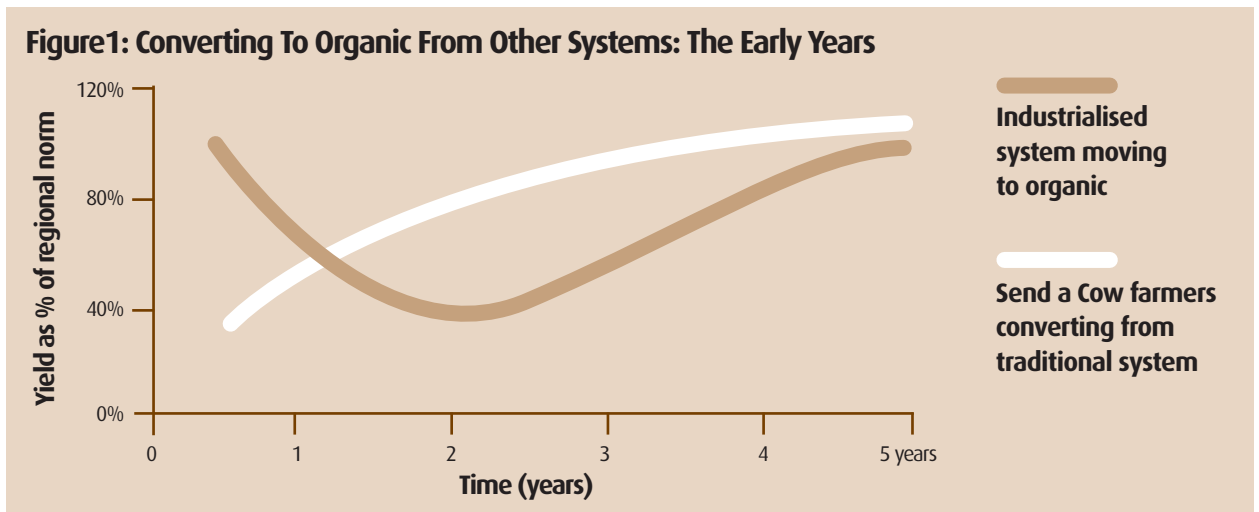


Patrick Wangao from Tanzania with maize he has treated with compost (right) and maize he has left to grow naturally (left).

RESEARCH:

Dispelling the myths

Figure 1: Comparison between an industrialised system moving to organic (as per figures from G Rundgren³) and an average Send a Cow programme following the introduction of organic farming techniques that utilise composted manure (data collected during interviews with farmers)



MYTH 1: Surely the yield is not high enough – especially when organic farming needs so much land?

The yield of a small farm in Africa has to provide enough food for the family throughout the year by growing staples and vegetables – or through trading part of the harvest for cash or other foods if the farmer has specialised. The reduction in available land, however, has meant that replenishment of natural resources, such as replacing organic matter in soil through the traditional practice of leaving land fallow for a set period of time, is therefore less common. As a result, alternatives now have to be found.

There are different solutions to this problem: one is to invest in higher yielding plant varieties, mechanisation, irrigation, access to fertilisers and chemical pesticides. For smallholder farmers, however, there are many risks and drawbacks to this route: credit is needed, inputs and extension services have to be nearby, and high-yielding plant varieties may only perform very well if all other variables are controlled. Furthermore, although artificial nutrients can boost crop growth in the current growing season, long term yield gains are more effective if soil structure and fertility is built up naturally.

So rather than adding artificial elements, an alternative strategy is to look at natural processes and systems that consider the whole farm habitat; in other words, an approach that identifies how agriculture can actually become an 'agro-ecosystem'. Keeping many of the natural species, resources and processes will work towards optimising total production in harmony with, and at low cost to, the environment.

Industry research

The perception that 'going organic' means an inevitable lowering of yield is based on modelling developed in Europe or USA which compares highly industrialised production with a change to organic methods. In these cases a yield drop is predicted along with gloomy forecasts of a shortage of animal manure making it hard to even consider this way of farming. However, all organic systems take time to rebuild degraded soil structure and fertility and such reported yield drops are not being seen in Africa where systems are being built on natural processes rather than converting from artificial ones. In fact, recent studies from the field indicate that 'yield increases from shifting to organic farming are highest and most consistent in exactly those poor, dry, remote areas where hunger is most severe.'⁶

As you will see in Figure 1, yields in Send a Cow programmes increase with added organic matter and replenishment of nutrients – the improved soil structure enhancing both fertility and water retention. Such systems that integrate with the natural biodiversity also provide other services, such as natural pest control, and enable processes such as inter-planting, which can boost plant growth.⁷ These benefits are long lasting, the increased fertility building up in the soil rather than directly feeding the plant as is the case with chemical fertilisers.

Further comparisons were made by a team of natural resource researchers in 2006 when they compiled the yield data of 293 different organic and non-organic farms from around the world into a single study. They found that in developed countries organic systems gave, on average, 92% of the yield produced by conventional or non-organic agriculture.

Interestingly, the examples from the developing world included comparisons with subsistence resource-poor farms as well as more 'industrialised' systems. The incorporation of intensive agro-ecological techniques, such as crop rotation, cover cropping, agro-forestry, addition of organic fertilisers or more efficient water management was considered to be the reason for the consistently high yield ratios reported. Small farms were found to produce more per hectare⁸, and although organic production can have higher labour demands, these are spread more evenly throughout the growing season. There is also probably more precise management of the land.⁹

Research on organic systems in the developing world suggests that organic systems are, on average, approximately 1.8 times more productive than other farms.¹⁰ Certainly for farmers supported by Send a Cow five-fold increases in crop yields, and the ability to introduce vegetables previously unable to be grown, are frequently reported as farmers introduce the organic techniques taught by the organisation on their land. It is therefore clear that, for Africa's smallholder farmers there are proven yield benefits from using organic farming systems – and long term soil fertility and structure losses from choosing high input alternatives.

RESEARCH:

Dispelling the myths

MYTH 2: Does it pay?

African smallholder farmers need not only enough food to get through the year, but also cash for essentials at home: soap, paraffin, clothes and shoes, school fees, oil and money for health care. These are the first things farmers spend their money on. The emphasis on locally sourced materials therefore provides systems that are appropriate for low income farmers in Africa.

The economics of using naturally available resources and building up soil with organic methods such as composting, green manuring, crop rotations and agro-forestry both lower the financial risk to the farmer, and with improved productivity increase income levels and profitability. There is no need to find cash for fertilisers or pesticides, or to be indebted to agricultural dealers or companies.

Using external inputs requires a good transportation network, bringing access to seed, fertiliser and pesticides for which the farmers need either 'up-front' cash or credit facilities. Some expansion of rural credit has taken place through micro-finance schemes, but increasing the investment in this type of agro-production cannot be relied on for the majority of Africa's farmers.¹¹

The very poorest cannot afford to take risks or make investments. Until a basic level of security of food and essentials is reached, the farmer is in the so called 'poverty trap', and at this point the risk of change, even if a farmer has knowledge and resources, can include too many factors that are hard for the farmer to assess. Organic farming can assist the farmer to reach this level of security by working with resources that are already there and building them up using targeted natural processes. By critical analysis the farmer can identify particular gaps in the system, such as the need for livestock to provide good quality manure. This is where 'investment in agriculture' through external sources can be appropriate.

Organic farming in Africa reduces the cost of buying inputs, and by increasing yields can bring added income into the home. It also mitigates the risks farmers are exposed to by reducing the reliance on timely delivery of fertilisers and planting material and other external items. Climbing oil prices will make synthetic fertilisers, pesticides and the manufacturing and transporting of these products even less affordable.

It was after we began getting enough food to eat and money for household essentials that we thought about the market. Now we want a permanent building where we can bring produce to sell. When we work together we are strong. MATSELISO MOJI, FARMER, LESOTHO

Now farmers don't want chemical fertilizers. They say, "Why should we pay for something we can get for free?"

DR. TEWOLDE BERHAN, ENVIRONMENTAL PROTECTION AUTHORITY OF ETHIOPIA¹³

Health costs are a major consideration for low income families. The improvement of a family diet contributes to the household economy. Farmers appreciate the low cost benefits provided by organic farming systems and the lack of exposure to pesticides.

Sadly direct chemical poisoning happens in rural communities in Africa where storage containers may be hard to come by and thus drums and bottles are reused, and appropriate protection for proper use of chemicals is not easily available. Many of the organic movements in Africa started through a wish to reduce deaths through accident or exposure to agro-chemicals and are crucial in addressing this.¹²

Organic production may not be more expensive than the alternatives, but it does take skill and knowledge to use and manage biologically based agricultural practices. Understanding the principles on which organic agriculture works, and knowing which practices might be appropriate, needs to be communicated among farmers and researchers. Access to information, training in some techniques and opportunities to learn from other farmers are essential to the continual development and productivity of the farm.

By ensuring such processes are put in place, Send a Cow has seen how organic farming lowers costs of inputs and gives Africa's smallholder farmers a chance to generate much needed cash for their home needs.



Matseliso Moji, selling her vegetables at the Saturday Market run by Send a Cow Lesotho groups

RESEARCH:

Dispelling the myths

Organic farming is a more management and knowledge intensive system. It necessitates building a learning and cooperative culture – requires investment in developing social capital of people and community.

UNEP REPORT 'ORGANIC AGRICULTURE AND FOOD SECURITY IN AFRICA', OCTOBER 2008

MYTH 3: How replicable can this system be?

Send a Cow has found that farmers find it easier to learn new skills when they are closely associated with existing knowledge. Its principles for sustainable organic agriculture are therefore well adopted because they are seen as simple and comprehensible techniques to learn.

Because input costs are very low, with all necessary components of an organic system available locally and a limited need for external inputs, it is very affordable for smallholder farmers. Copying the techniques therefore becomes very attractive to other group members and neighbours who want to achieve the same results.

Send a Cow has knowledge sharing processes built into its programmes (see box) enabling farmers to experience the incredibly empowering process of not only improving their own crop yields, but also being able to give something to their community by spreading their knowledge to others.

Ultimately, learning and applying sustainable organic principles increases the knowledge base of farmers. Community cohesion and local partnerships are improved and farmers are better able to adapt and change their farming system when faced with new challenges. This, in turn, strengthens the resilience of the system and the community to environmental and external stress.

Adoption of new techniques: An independent view.

By Alice Kinengyere-Mango and John Wibberley.

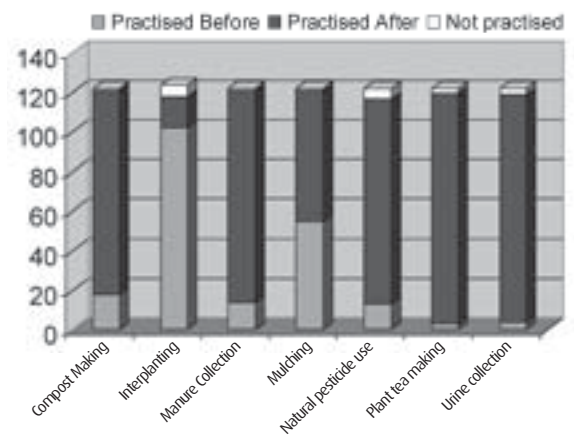
"Following an impact study of Farmers' Associations supported by Send a Cow perhaps the greatest categories impacted positively

by Send a Cow's inputs involved confidence, influence of women, learning from each other, sharing new practices and adopting new techniques."

"Group impacts recorded, and confirmed during subsequent discussions were all positive with the following increased by Send a Cow's intervention: savings capacity, wealth of production, capacity to pay school fees, nutrition and home improvements."

"The following chart demonstrates the impact of the programme among the 120 participants. The darker areas indicate those farmers who adopted the practices after training, while the lighter areas indicates those who were already doing them before receiving training from Send a Cow. The white parts indicate those group members who did not adopt the practice."

Farmer uptake of sustainable organic agriculture:



Passing on Learning

Over the past 20 years, Send a Cow has helped thousands of families work their way out of poverty through the provision of livestock, training and advice. And through pass-on, a system by which livestock and knowledge is passed on to others within the community, we have reached thousands more. Bright World Consult recently interviewed farmers in Uganda about this multiplier effect. Their research suggested that for every one farmer trained in sustainable organic farming, those practices are then adopted by:

- an average of 2 children, when leaving the family home to set up on their own
- an average of 7 community members, when they see increased productivity on their neighbours' land, including (see next bullet point):

- an average of 6 community members who specifically introduce the technique of growing vegetables in bag gardens

Secondary benefits include:

- Increased employment for local labour (an average of 6 people are employed for farm labour by every practising Send a Cow farmer)
- Increased demand for animal feed, seeds, veterinary services and agricultural tools (an average of 12 businesses providing goods and services to each Send a Cow farmer)
- Increased diversity and availability of human food at local food markets

RESEARCH:

Dispelling the myths

MYTH 4: But is it really sustainable?

The question of sustainability is always in the minds of those looking at community development. It works for now, but can it continue? Sustainability is at the very core of organic agriculture principles. Replenishing, improving, and building soil is about looking forward. This is not a band wagon to jump off when the going is bumpy, but an investment in long term on-going productivity. The end outputs are not solely crops, but people – healthy, educated, resource managers with life choices available to them. For this reason the acronym of SOA (Sustainable Organic Agriculture) is often applied to non-certified organic agriculture which is being promoted as a poverty reduction strategy and not just targeting one or two specific market products. For Send a Cow, this represents an approach that incorporates the development of self-perpetuating processes of knowledge sharing, believing that knowledge should not be some secret kept by development agencies, but something to be shared amongst the community so it becomes embedded within it.

Lack of affordability of inputs such as agrochemicals or drugs for animals is sometimes identified as a production constraint by smallholder farmers. However, in a study in sub-Saharan Africa 60% of farmers said that the reason they didn't practise organic methods was due to a lack of knowledge.¹⁴ This situation is often termed 'organic by default' but if there is no intentional use of organic methods and principles, it is likely to be unsustainable. A far more sustainable strategy than input provision would be to assist farmers to access knowledge on organic farming, which is what Send a Cow does so effectively through the training it provides and the peer farmer networks it helps develop (see 'Strong Communities – a vital resource' page 5).

Building up the soils with organic matter increases their long term fertility and water holding capacity. Crops on composted soils wilt two weeks later than those on chemically fertilised soils¹⁵ and this extends the growing season.

Growing your own food is a fact of life for many people in Africa. This foundation of their whole livelihoods has to be sustainable and dependable if other developments and opportunities are to be explored. Organic agriculture provides a sustainable way of working within the natural established ecology.

Agriculture is the foundation block of rural society. It underpins other aspects of the whole rural context. For this reason its principles also extend out to health, community, and social development sectors to contribute to a holistic sustainable way of living. Organic agriculture ultimately leads to more and stronger social organisations at local level.

Part of the sustainability of any farming system is the sharing, learning, refining, improving and adapting of its methods. These techniques have to actually work, and be productive, and then there are opportunities for them to spread. As the understanding of how and why they work reaches to other parts of the community, this will contribute to stability and security.

Organic farming incorporates sustainability in its principles and practices. It is also spread informally in the African setting which ensures that it remains appropriate and relevant to the farmers needs, and can adapt to changing conditions.

Dispelling the myths

YIELD

"Before I used manure, I would harvest two bags of maize from this land. Now I get six bags. I am planning to send my children to school, and build a new house." **Benedict Odipo, Kenya**

COST

"Although growing vegetables according to organic principle requires more work, it will help us save money on expensive chemicals," **Elizabeth Mensah, Ghana**

REPLICATION

"Once it's made, a keyhole garden is easy to maintain. Our community group helped us make this keyhole garden. We helped each other." **Jacob Duby Bereng, Lesotho**

SUSTAINABILITY

"The money raised from selling milk and vegetables is for educating children, and improving our housing; we can also buy medicine or take a child to hospital." **Women at Choisiyana Group, Kenya**



RESEARCH:

Now I am somebody

"Look at that hillside," says Debissa Kustie. "I used to have no idea how to cultivate such a steep hill, so I just tilled it as usual. That could have caused a landslide and damaged my house. Now I am trying to make the hill productive while at the same time protecting it. Thanks to the training I received, I have terraced it and planted it with grasses to feed my animals and protect the soil."

Debissa lives in Boreda, in the southern highlands of Ethiopia. In just three years, this enterprising farmer has built a sustainable livelihood for his young family, based on the techniques he learned from Send a Cow.

Since marrying in 2002, Debissa has lived on a small plot of land given by his father, on which he and his wife built a thatched home. Despite intense efforts, the young couple at first struggled to produce enough food for their growing family.

Their experience was a common one: most poor farmers in this area will endure three 'hungry months' per year, even when the rains are good. Farmlands are under increasing pressure from the growing population, poor agricultural practices, and environmental degradation. Climate change is leading to lengthy spells of drought, followed by heavy downpours in which valuable topsoils are washed down the mountainsides.

When Debissa heard about the Send a Cow Highlands Community Development Project (HiCoDep) in 2005, he was eager to join. HiCoDep's focus is on natural resource management: training farmers in how to integrate crops and livestock into a sustainable farming system.

As Send a Cow Ethiopia Country Director Aklilu Dogisso says: *"Traditionally, people use land for many years without putting anything back in. When the land becomes useless, they encroach on the surrounding forests, damaging the environment. We are helping farmers to understand their potential, and the potential of their land."*

Chief among the skills taught is making better use of manure. Most farmers in the area believe the only way to improve soil quality is to buy commercial fertiliser – which is beyond their means. Yet livestock is plentiful, although generally allowed to roam freely, degrading the land. Animal manure is left to waste, or burned as fuel.

By learning controlled grazing techniques and building fuel-saving stoves, farmers can collect the manure to make compost.

That, says Debissa, has improved his yields of staple crops and *"brought new life to my farm"*. By implementing manure-based techniques such as double dug beds and keyhole gardens, he is also able to grow vegetables – a novelty for the area.



"Last year, I cultivated onions, cabbages, tomatoes and spices that have a high value at market. I earned more than 6,500 birr (£431). My family also eats a lot of vegetables, which has improved our nutrition greatly, and we give some to neighbours in need."

"I used part of my income to rebuild my house, with a metal roof. My family is really happy to be in a better house."

Debissa was also able to save some money: vital when the spring rains failed across much of east Africa in 2008, leading to widespread hunger.

"I used my savings to buy extra food for my family, in addition to my crops and vegetables."

Debissa's success has won him great admiration in his community. Six neighbouring farmers now come to him to seek technical advice on vegetable gardening, compost making and the other skills he has learned.

"You know, now I am somebody," he says. "I have bought more land from my father to expand my farm. I aspire to do better and better."

As Aklilu Dogisso says: *"We believe that farmers in HiCoDep will be self-reliant four or five years down the line. They will be counting on themselves, not looking for outside help like food aid."*

CONCLUSION:

Can organic feed Africa?

Organic agriculture can be more conducive to food security in Africa than most conventional production systems, and... is more sustainable for the long term.

ACHIM STEINER, UN UNDER-SECRETARY GENERAL AND UNEP EXECUTIVE DIRECTOR, AND SUPACHAI PANITCHPAKDI, SECRETARY-GENERAL OF UNCTAD (UN CONFERENCE ON TRADE AND DEVELOPMENT)¹⁶

Conclusion

"The way the world grows its food will have to change radically to better serve the poor and hungry if the world is to cope with growing population and climate change while avoiding social breakdown and environmental collapse," IAASTD: International Assessment of Agricultural Knowledge, Science and Technology for Development, April 2008.

Recent events have highlighted the imbalances in the current food production system and its impact on the climate. Send a Cow believes that investment in the people currently least able to feed themselves, through a transition to an organic farming system, would see an increase in the availability of food to people in areas where it is most needed. Importantly, in addition to stimulating food production this would also minimise the environmental impact of the associated farming practices and increase the sense of worth and value of marginalised people as knowledge and income is accumulated.

In terms of the long term sustainability of such an approach, reports into sub-Saharan agriculture and our own experience have highlighted the tremendous potential for yield improvement if a sustainable organic approach is applied. As the resources needed for a sustainable organic system are found locally, and within reach of rural communities, there is little doubt that this will result in increased profitability for each farmer. Send a Cow's multiplier research has shown how easily these natural systems are transferred from one farmer to another. Our experience therefore shows that there is ample evidence that an organic approach is indeed sustainable.



RECOMMENDATIONS:

Practical advice

Send a Cow recommends that Agricultural Policy at a national and international level should:

- Change to reflect the enormous economic contribution of smallholder farmers to a nation's food production – promoting small-scale agro-processing rather than larger, and sometimes exploitative, farming businesses
- Acknowledge the yields possible through the adoption of sustainable organic agriculture, providing funding for research into organic agriculture so governments are not solely influenced by research produced by organisations with commercial interests, such as those from the fertiliser and oil industries
- Encourage replication by training Ministry of Agriculture staff in sustainable organic agriculture suitable to local environments (rather than training them in Western farming practices)
- Invest in women agricultural support officers. Currently 70% of rural farmers are women, yet only a small percentage of agricultural support officers are women
- Explore the adoption of a Peer Farmer approach for transferring knowledge to the rural areas
- Begin a transition away from an industrialised agricultural system and adopt a more long-term and sustainable approach to food production, stimulating production that is reliant upon the existing resources available and suitable techniques that build upon these resources – whilst empowering individuals and strengthening social networks



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Send a Cow
The Old Estate Yard, Newton St Loe
Bath, BA2 9BR

Registered charity number: 299717

Tel: 01225 874 222
info@sendacow.org.uk
www.sendacow.org.uk

To find out more about Send a Cow's work or to discuss the findings of this report in more details, please contact:

**Martin Long, Head of Programmes on
01225 874 222.**

