

ICT4D EFFECTS

## Youth, ICTs and Agriculture

Exploring how digital tools and skills influence the motivation of young farmers

NOVEMBER 2013





## CONTENT

ABOUT THIS PUBLICATION	3
ICT4D and Agriculture: who will feed the world?	3
The importance of attracting youth into farming	4
<b>ICCD'S ECONOMIC DEVELOPMENT PROGRAMME IN KENYA</b>	4
<b>PROFILE OF ICT USE</b>	5
“Who are the young farmers?”	5
<b>DYNAMICS OF ICT UPTAKE BY YOUTHS</b>	6
Current market situation	6
ICT access: entering the digital world	7
Education and skills	9
A Youth's ICT-enabled journey into profitable farming	10
Opportunities, status and social norms	11
Gender	12
Challenges	13
<b>CONCLUSIONS AND RECOMMENDATIONS</b>	14

## INTRODUCTION

**Attracting the youth into agriculture. Changing the perspective of farming: from a back breaking, hardly remunerative, labour consuming task to a much more profitable and honest source of income. Information and Communication Technology (ICT) not only improves the status of young persons using it, but also of the farming sector in general. Youngsters who used to see farming as a type of last resort source of income without much perspective now see it as a potentially strong source of rewarding business. The chairman of the association of potato farmers in Eldoret saw a great increase in clients and stated: “Before, we had to look for buyers to sell our potatoes too. Now, demand has increased so much, we are actually looking for potatoes to satisfy the buyers.”**

### About C4C

Connect4Change is a consortium of five Dutch development organisations (Akvo, Cordaid, Edukans, ICCO, IICD and preferred partner Text to Change) who joined hands to accelerate the development of people by using Information and Communication Technology (ICT). The consortium focuses on the integration of ICT to increase the quality, effectiveness and relevance of development interventions in economic development, agriculture, education and healthcare in 11 countries in Africa and Latin America.

### About ICCO

ICCO's Fair Economic Development (FED) partners in Kenya formed a consortium in 2011, aiming to harmonise interventions and monitoring. The consortium works on value chains, and focuses on constraints at the producers level: low production capacities, poor marketing systems, weak producer organisations, limited access to finance and limited entrepreneurship. By focusing on specific chains and bottlenecks, the FED programme aims at realising higher incomes for the producers that have improved their market responsiveness.

### About IICD

In Kenya, IICD leads the C4C programme. Together with local private sector partners, we train and coach the Fair Economic Development partners and farmers to be able to use ICTs effectively. IICD links farmer organisations and local service providers, ICT advisors and research institutes to provide appropriate information and strengthen their capacities. Production and market-related information is made available and enhanced by improving access to ICTs and relevant content, and linking farmers with buyers.



## ABOUT THIS PUBLICATION

This publication is informed by the findings from recent research<sup>1</sup> focused on three projects under the Connect4Change (C4C) Economic Development programme located in western Kenya (Kisumu, Kakamega and Eldoret), which focus on enhancing agricultural productivity and access to markets. The research investigated the linkages between the introduction and use of ICT in farming and the interest of youth in farming and value chain development. Aiming to surface the motivations and underlying dynamics, the research was conducted using open interviews with individuals and in small focus groups, with participation from diverse stakeholders including young and older farmers, NGO staff, village leaders, private sector actors and local government.

### Key questions explored:

- What is the role of ICT in young farmers' engagement in farming, farmer groups, and value chain development?
- How do they appropriate ICT in their farming operations and/or value chain development?
- Has the role of young farmers changed as a result of the introduction of ICT?

## ICT4D AND AGRICULTURE: WHO WILL FEED THE WORLD?

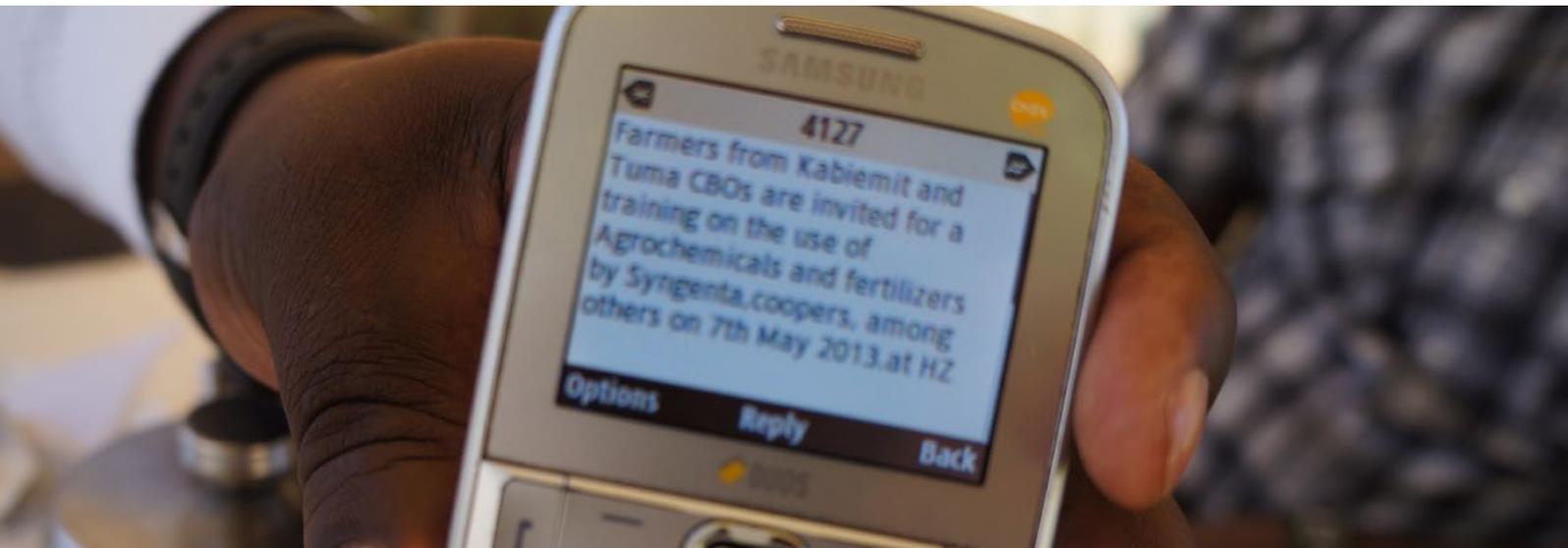
*"Feeding a global population of just over 9 billion in 2050 will require a 70 per cent increase in global food production. This will require that agriculture – particularly smallholder agriculture – plays a much more effective role"<sup>2</sup> IFAD*

Smallholdings in developing countries, which have been long associated with poor farm practices, low productivity, low income, intensive labour, lack of training, gender inequalities and financial risks, have made the sector particularly unattractive to a new generation of farmers.

Better production techniques and market-oriented strategies will help generate a sustainable source of income while contributing to the supply of agricultural produce to satisfy the world's increasing food demands. To ensure the future viability of the agricultural sector, tackle rural poverty and generate employment opportunities, it is crucial to equip the farmers of tomorrow with the right tools. Efforts to increase youth participation and boost economic development in the agricultural sector are amplified when an integrated approach to ICTs and capacity development is put in place.

<sup>1</sup> Conducted in July 2013 by Fair & Sustainable, <http://www.fairandsustainable.nl>

<sup>2</sup> Rural Poverty Report 2011 – IFAD <http://www.ifad.org/rpr2011/report/e/rpr2011.pdf>



## THE IMPORTANCE OF ATTRACTING YOUTH INTO FARMING

*“23.5 per cent of the working poor are young people (ILO 2012) and the majority of these poor youth live in rural areas. Because of limited job prospects, many young people leave rural areas to seek employment opportunities elsewhere. However, agriculture and the rural economy have much potential as an engine of inclusive growth and youth employment.”<sup>3</sup>*

ICTs can play a role in countering youth migration to urban areas by enhancing access to market information, production techniques, new technologies and financing opportunities.

The use of ICTs enables choice, the option to stay on farms and take full advantage of new technologies and farming techniques, while incorporating valuable traditional practices and knowledge.

Efforts should be aimed at further fostering youth involvement in agricultural activities and decision-making processes. These efforts can seize on the youth's affinity for using ICTs, their capacity to innovate and their propensity for taking higher entrepreneurial risks.

**“...farmer representatives mentioned that more young persons had shown their interest in investing in farming. In their view this surprising change was linked with the various ICT applications that had just been introduced in the previous period.”**

ICCO FED partners workshop on results of ICT applications in Value Chain Development (Kisumu, Kenya, June 2012)

## IICD'S ECONOMIC DEVELOPMENT PROGRAMME IN KENYA

In order to improve livelihoods of farmers in their respective regions, IICD and local private sector partners train and coach implementing partners and farmers in the use of text or voice messages to receive and use market price information and short messages with production information on their mobile phones. IICD links farmer organisations and local service providers, ICT advisors and research institutes to provide accurate and timely information. Mobile phones are also used to collect productivity information in the field and to link up farmers with buyers – both increase the efficiency of the value chain and improve communication between the different players in that chain.

The main advantage of IICD's approach is that it integrates various types of information in one comprehensive programme, building on partners' skills step-by-step. Market price information is therefore complemented by other types of information and other media. IICD has enabled partners to select media most appropriate to their context: sometimes this involves radio or feature phones, other times the focus is on more elaborate systems like Interactive Voice Response systems, which also allow illiterate farmers to benefit from the information. IICD and partner organisations develop relevant content and training materials jointly with the farmers involved.

<sup>3</sup> FAO Statistical Yearbook 2013: <http://www.fao.org/docrep/018/i3107e/i3107e01.pdf>

## PROFILE OF ICT USE

The organisations implementing the programme in western Kenya have set up five farmer-ICT-hubs between them, located near existing markets or collection centres frequented by the farmers. The centres are open to farmers and community members and are used to provide training, internet access and a variety of support and information services to the farmers. The centres train farmer group members on generic and applied ICT skills, such as ICT for financial management, thus improving transparency and management of the farmer groups. All three projects provide ICT training to support farmers in obtaining information about good farming practices and market price information, and use multimedia and video for participatory recording and screening of production techniques.

### MULTIMEDIA TRAINING

In order to facilitate exchange and learning with farmers on production techniques, IICD supported partners in capacity development on multimedia and the use of video for recording and screening of production techniques in the field. Practices are coming from both the farmers (peer-to-peer) and from the Kenyan Agriculture Research Institute. The videos are edited into short, 10-minute clips to be screened at the ICT Hubs, in schools, churches or existing farmer meetings, facilitated by extension officers to improve learning.<sup>4</sup>

### MOST USED TOOLS

- MS Office (Excel and Word)
- Internet (also available on their mobile phones) and social media (i.e. Facebook)
- FrontlineSMS
- Videos, Radio and TV
- (Online) newspapers, magazines and brochures

## WESTERN KENYA YOUNG FARMERS

Profile of young farmers who participated in this research:

### AGE RANGE

24 – 38

### GENDER

male 80 % / Female 20 %

### EDUCATION LEVELS

65% have attained secondary education

15% have attained tertiary college or university education

### YOUTH USING ICT IN THEIR FARMS

90% use ICTs in their farms

### LAND SIZE & OWNERSHIP

Average size: 1 acre / average ownership: 70%

### MAIN CROPS

Potatoes, tomatoes, maize, cabbages, onions, beans, sukuma wiki and carrots.

## WHO ARE THE YOUNG FARMERS?

### YOUNG MAN



### YOUNG WOMAN



### YOUNG FAMILY



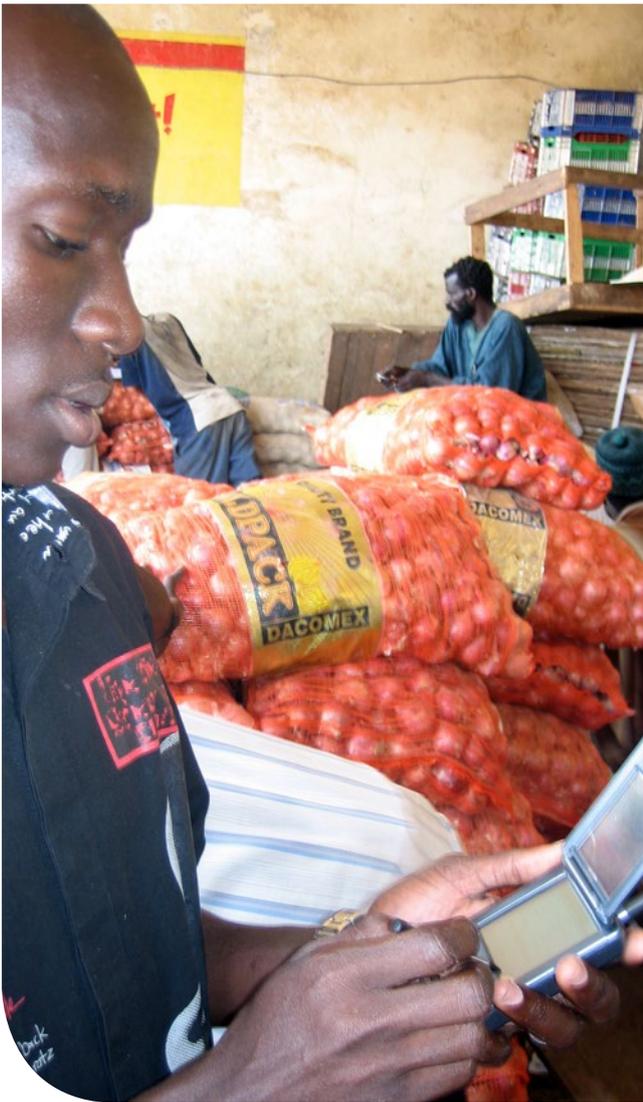
Gender, marital and family status, education level and land ownership are all factors that influence the extent, purpose and use of ICT tools and applications. The research points to distinctions for instance, between single men or women in their early and mid-twenties, and young married farmers, often with young children.

The first group initially approaches ICT as a gateway to better jobs and employment outside or next to farming. Young persons with access or rights to land, often men, use ICT skills in farm planning, production and marketing.

The second group, being more tied to their household and land, appear to focus on applying ICT to improving the productivity and profitability of their farming activities from the outset. They use ICT to obtain more reliable market and modern production information for their existing crops, and gain better access to markets.

\*GENERAL PROFILES OF RESPONDENTS TAKING PART IN THE RESEARCH

<sup>4</sup> <http://www.iicd.org/articles/video-screenings-are-starting-point-for-better-crops-in-kenya>



## DYNAMICS OF ICT UPTAKE BY YOUTHS

Individual's personal motivations and drivers, in combination with resources they have available to them, are key factors in determining how individuals can act and bring about change – for themselves as well as in relation to their communities. Efforts of individuals are often aided or constrained by (social) structures that surround them, such as organisations, policies, laws and customs. The research conducted provides an insight into some of these motivations, structural constraints and opportunities that play an important role in the adoption of ICT by young farmers in western Kenya. Overall, the current context - in terms of market situation, access to ICTs, and social norms – appears to offer favourable external conditions for the application of ICT in farming by young farmers.

## CURRENT MARKET SITUATION

The current context in which farmers in western Kenya operate is characterised by a strong urban demand for an increasingly diverse range of products and crops. The transformation and strengthening of agricultural activities and processes, such as those induced by the various value chain development initiatives funded by development agencies, have resulted in a recognition of smallholder farmers and grassroots organisations as being essential links in any agricultural value chain. This recognition of their role and added value, and the support provided through targeted programmes, offers farmers opportunities to develop their farms and professionalise their farming activities. Such initiatives have already led to a gradual increase of younger persons' interest and involvement in farming, and has provided a structural basis for farming-as-business. This context of positive market conditions and potential profitability, in combination with being recognised and approached as important actors in the chain, has made access to reliable market-related data and information on improved production technologies more relevant and desirable than in contexts characterised by poor market access for agricultural goods.



### ICT ACCESS: ENTERING THE DIGITAL WORLD

Whether or not individual young farmers are able to act on the opportunities provided by the current market situation depends largely on the extent to which ICTs are available to them, whether they can afford their use, and whether they have the prerequisite skills to use the tools and services.

The five ICT centres have drastically increased the physical presence and accessibility of ICT in the communities where the organisations work. Tools and resources mentioned by the respondents show that they use a combination of resources, accessed both via computers at the centres as well as via mobile phones. The increasing presence and relevance of Kenyan agricultural resources available via the web, as well as reliable market price information services via SMS, also allow young farmers to make constructive use of the tools available to them.

Interestingly, the original focus was on supporting farmers working with selected value chain crops (potatoes, sweet potatoes, and tomatoes), by producing digital videos with them on relevant farming practices to subsequently screen them in cooperative or collection centres to stimulate peer learning. Participants in these activities were existing members of agricultural cooperatives, consisting mainly of older farmers with longer-standing relationships with the cooperative structures. However, repeated requests for basic ICT training from young persons led to the provision of skills training in basic productivity applications (word processing, spreadsheets) and use of the internet. Many young persons had heard and talked about ICTs, but often it remained a vague concept. They wanted to belong to this 'digital world': "If you do not belong to it, you feel as if you are missing an important means of improving your situation and achieving a dream for a better world", said one of the respondents. The initial motivation for many youths who attended ICT training was the dream of using ICT literacy as a door to a better job elsewhere.

The current approach of encouraging ICT use in specific value chain crops leads to a situation where farmers working with other crops obtain less support and encouragement to use the ICTs in their work, potentially leading to ICT haves and have-nots within the same community and triggering social tension. Suggestions have been made to further increase the

number and capacity of ICT centres as well as expanding the ICT training to other collection centres and cooperatives in order further decentralise access and make it available to wider groups of persons in different geographic locations.

Beyond physical access, the opening times, location and character of the centres also determine how accessible the ICTs are to different groups of young persons. An interesting finding that came out of the research is that the ICT centres develop into meeting places for the youth where they meet to exchange their experiences and information with each other. The centres have become informal learning platforms and knowledge centres, providing access to peer support, advice and encouragement. The majority of youth convening at the centres to use the computers are male, however, and further insights need to be gained as to how the centres can be rendered more accessible for (young) women.

Experiences with 'Mobile ICT clinics' have shown that bringing equipment out to places where it is easier for the ever-busy women to gather, has a large impact on the number of women that participate. Instead of expecting women to come to the centre to watch production videos, teams now venture out at times of the day more convenient to women and at locations within a closer proximity to them. The women are generally experienced as the most curious and motivated to learn.

In the current context of these programmes, affordability of ICT use also does not appear to be a limiting factor to access for the young farmers interviewed. Many were willing and able to pay small sums of money to participate in ICT training. Farmers, community leaders and cooperative members sometimes also paid the fees required for their children to participate in ICT centre related activities. The research indicates that the use of ICTs has shown clear value by making their users' engagement in the value chain more profitable, motivating them to continue to invest in using ICTs. More research would provide insights into whether the relative affordability, that is the affordability of ICT use in context of other living costs, differs for diverse profiles and groups of young farmers, influencing their ability to make use of the ICT services.

# MOTIVATION AND DRIVERS

After their first contact with ICTs through training, young farmers are triggered to think how they could apply their ICT skills to their work and lives.

*“I could use this to better manage my farm and increase my yields”*

*“I needed a faster and efficient way of keeping my farm records for future reference and I found it at the ICT Centre through my training in Excel”*

*“This could help me get a job in town”*

*“If I use ICTs to connect directly with the markets I won’t need to rely on the services of exploitative middlemen anymore”*

*“I can look up for information on new farming techniques such as greenhouse technology, I want to try out growing tomatoes in my farm”*

*“The farmers cooperative is looking for staff to support their new programme”*

*“I can communicate, ask for advice and share my experiences with other farmers using Facebook, I have already posted a video!”*

*“I hear a lot about ‘revolving loan funds’ but I am not sure how it works and if I am eligible for credit. Maybe I can find information online”*

*“Now that I’m about to start using this pesticide I want to know more about potential consequences and risks”*

## MOST USED RESOURCES

### SITE

[www.mkulimambunifu.org](http://www.mkulimambunifu.org)  
[www.mfarm.co.ke](http://www.mfarm.co.ke)

[www.icipe.org](http://www.icipe.org)  
[www.infonet-biovision.org](http://www.infonet-biovision.org)  
[www.theorganicfarmer.org](http://www.theorganicfarmer.org)  
[www.icow.co.ke](http://www.icow.co.ke)  
<http://cropnuts.com/our-services/small-holder-services>

### DESCRIPTION

Swahili bimonthly online magazine on sustainable agriculture  
SMS-based tool for farmers to obtain retail price information of their products, buy farm inputs and find buyers  
Research site on food security, sustainable livelihoods and use of natural resources  
Kenyan information tool with resources on agricultural and health technologies  
Publication about ecologically sound agricultural practices for African farmers  
SMS-based subscription service to help farmers enhance productivity  
‘Daktari wa Udongo’ (Soil Doctor) gives farmers advice via SMS to improve crop yields

## NEW WAYS OF 'HARVESTING' INFORMATION YOUNG FARMERS USE ICTS TO:

1. Obtain the best market prices

2. Keep records

3. Find crops in high demand

4. Get information on pest and disease control

5. Access to new farming practices and agricultural technologies\*

6. Communicate with other farmers and awareness raising

\*When using ICT tools to access production information they mention looking for the correct use of fertilisers and high yielding certified seeds. They now have access to several information sources apart from extension workers, so they can cross-check information. This enables them to take farming to a higher level – by making bigger investments, and venturing into greater and technically more complex farming activities. Examples range from use of tissue culture for bananas, to tomato growing using greenhouses, to artificial insemination to improve breeding standards.

### EDUCATION AND SKILLS

Low levels of formal education and low levels of literacy are often cited as barriers to access for rural youth. The study explored this question with the participating young farmers and the stakeholders surrounding them, asking them what they saw as minimum conditions to be able to use ICTs successfully in farming. In their opinion and experience, formal education was not a prerequisite. Rather they saw the below three conditions as key:

1. a keen interest in computers and ICT
2. the ability to read
3. the ability to write

These conditions point to basic literacy education as being essential, and has triggered local government programmes to reinvigorate their adult literacy activities in order for larger numbers of adult farmers to benefit from the ICT training activities being provided. Next to basic literacy, similar more extensive research has shown that confidence in one's own abilities is also required to meaningfully make use of the tools and services. Confidence in one's own abilities, and the beliefs a person holds regarding his or her power to affect situations, are influenced by the prevailing social norms and the social opportunities afforded by the cultural milieu that

“There is a lot of enthusiasm among the youth to embrace the latest farming techniques such as greenhouse technology and use of certified improved planting material and I believed this is being triggered by the recent wave of ICT platforms emerging that are making free information which is of a high quality available to them even in their mobile phones” **Eric Sirengo, Syngenta**

dictates the way that we think about things. Interest in computers and ICTs is likely to be higher among persons who have been encouraged to believe that these tools are relevant for them, and who have a certain degree of confidence that they will be able to use them for their own benefit.

# A YOUTH'S ICT-ENABLED JOURNEY INTO PROFITABLE FARMING



Other community members, inspired by early adopters and their success, follow suit.



Due to their increased technical knowledge and higher incomes, increased recognition comes from parents, family and community members. These young farmers are approached by extension workers, private sector companies and farmer organisations, where they take new roles at different levels.



Early adopters of ICT for farm management see benefits and return on investment (ROI), increased access to expert advice services and higher incomes, which in turn act as motivation to continue applying ICT tools on farming.



Young farmers start applying ICTs to obtain the best market prices, keep records, find crops in high demand, get information on pest and disease control, access new farming practices and agricultural technologies, and communicate with other farmers. The ICT used is often introduced in the context of the use of a particular value chain and product but the skills and insights are quickly applied to other crops and chains.



Young farmers are introduced to the digital world through general ICT skills, basic office productivity applications and Internet use trainings in the ICT centre. During training youth identify the potential of ICT to render their farming activities profitable.



Young farmers struggle to make ends meet: low productivity, low income and intensive labour render farming activities unprofitable. Youths hear about the 'digital world': an appealing call that they do not want to miss out on. Some of the entry points: previous basic computer literacy – presence of an ICT Centre – need to access markets or increase production – to ease communication – as a doorway to a better job – as an alternative to long- distance travels for consultations.





### OPPORTUNITIES, STATUS AND SOCIAL NORMS

ICTs are socially embedded tools, their use is strongly influenced by social norms and specific circumstances, in not always obvious or expected ways. Contextual factors can affect inclusive access, by increasing or exacerbating inequalities between the rich and the poor, women and men, urban and rural dwellers, and/or among generations. Exploration of the social and cultural context in which ICTs are embedded is therefore key to gaining more insight into the dynamics underlying their introduction and use by young farmers.

In general, the farming communities' social norms towards supporting youth to engage with ICTs are positive and encouraging. Since ICT was introduced in farmer organisations and collection centres as the initial focus of the programmes, parents and community leaders have become acquainted with ICT and were able to encourage the youth to participate in ICT-related activities and training from an informed position. They often undertook concrete action to encourage their children's participation in trainings, sometimes even paying for entrance fees to enable them to attend.

One effect highlighted by the study is that those young farmers who applied the ICT tools and skills to their farms increased their social status and generated higher yields and income. This in itself is mentioned as a motivating factor for them to continue to apply ICT to farming. Increased recognition comes from parents, farmer organisations, peers and other community members, and these youngsters, who were often seen as idling away in their communities, are now generally regarded with more respect and approached as technical resource persons by other farmers.

As Esther Chebus, an 18 year old farmer in Kakamega remarked: "The people in my village now look up to me as the source of the latest farming information. This makes me feel important and it gives me a sense of responsibility in my community. They come to me whenever they want to know the latest prices of tomatoes or just new farming technologies."

The effect on their status and role in relation to external actors like government extension officers and private sector players is especially noteworthy. They regard these young persons as more entrepreneurial and eager to adopt innovations and agricultural technologies than older farmers. They have noted the greater interest of the youth in technical information and have seen them turn up in greater numbers at farmer field schools and other extension activities. This has caused shifts in the networks of relationships in the local agricultural knowledge systems. Public and private extension workers now start to consider the young persons as their main entry point through which they introduce modern extension practices and new ideas. Previously, the extension officers used to work mainly with older farmers, who generally were hesitant towards the adoption of new technical innovations. Young persons are now approached as a means to add to the coverage of government extension, an important aspect as the number of extension officers stationed in rural areas is decreasing. Johnah Rono, Crop Development Officer in Eldoret asserted: "I foresee the youth being the main farmers in five years' time."

Older community members saw the use of ICTs in farming as benefitting the communities and creating a more



favourable picture of farming in general, thus creating a positive and supporting environment that encouraged the youth's engagement. Older farmers also did not see the prospect of some young farmers trained in ICT to potentially leave farming as a risk or threat, instead regarding these youngsters as potential instruments for identifying niche markets for their agricultural products in town.

The study found the majority of the young farmers that applied their newly acquired information and skills to farming to be male, a fact that begs the question of whether the introduction and use of ICT contributes to increased discrepancies in social status and recognition between a community's young men and women. The study has shown the social fabric of the communities to be transformed by the increased access and use of ICT-enabled informational resources by youth. This increase in returns, in terms of income as well as in recognition and social status, and its influence on the communities' economic and political power relations, might be replicating, and potentially exacerbating, existing gender biases, albeit unintentionally.

“ICT technologies such as mFarm are helping us connect directly with the markets. We no longer entirely rely on the services of the exploitative middlemen and because of this we have more money for the same products we have been farming at a seemingly low price because we believed the prices the brokers quoted to us” Hillary Kiplagat, 30-year-old potato farmer in Nyaru

## GENDER

A significant finding that arose from the study was the difference in space and freedom provided to young men and women to experiment with ICTs in farming, and benefit from the opportunities it provides. The ability to profit from the same set-up of internet and ICT access opportunities offered by the programmes varied considerably depending on gender, exemplified by the low number of young women participating in the ICT training activities, and a dominant presence of young men in the ICT centres. A large influence was assigned to the tradition for young men to receive plots of land from their fathers to establish their own field for farming, whereas the expectation for girls is to look for paid employment off-farm. From the outset then, young women have less social opportunity to apply the learned skills back into farming, to apply ICT to selected value chain crops, and to quickly see the ensuing benefits as young men do. The respondents propose positive prospects for girls that have followed ICT training in applying their skills in less land-based operations such as high value low volume products (e.g. medicinal and aromatic plants (MAPs) and honey bee products), employment in the collection centres or cooperatives, or an office-job in town.

The fact that the ICT centres are evolving into vibrant knowledge and learning hubs, but are to a large extent frequented by young men, will likely also contribute to differences in the abilities of young women and men to appropriate the tools and resources, and their role in shaping the way in which ICT is used in their communities. The findings warrant relooking at how the gendered social norms and expectations around ICT are established in these communities or can be transformed.



## CHALLENGES

- Irregular attendance of ICT training by youths, making tracking of progress difficult
- Higher levels of participation from young men than young women
- Persons residing far away from the centres unable to attend frequently
- Uncritical use of internet-based information on modern production techniques for short term gains, leading to increased use of fertilizers and pesticides, and devaluing of local traditional knowledge
- Social tensions between farmers groups who have access to ICTs and others who do not, as well as between youth and local brokers who no longer profit from the community's ignorance of true market prices

## REAPING THE BENEFITS OF SOCIAL MEDIA

Trainings in the use of ICT include the use of Facebook and Twitter, which they can access on their mobile phones. The Youth Farmer Group in Eldoret, Kenya, uses Facebook to engage with each other, share experiences and information. The Facebook group named “Chepkorio Youth Farmers” has reached over 80 members and has become an active hub for youth farmers to promote ICT adoption and application in agriculture by exposing youngsters who are keen on farming, farming as a business and all kind of agriculture-related information. The shared information includes tips about farming, latest prices of crops, new sales opportunities, and even representation at conferences. “Take a step from today and look for some farming information, entrepreneurship, or something away from your email and social networks, you will love it, it is a sweet experience” reads the group’s introduction.





## CONCLUSIONS AND RECOMMENDATIONS

The perceptions of young farmers in western Kenya, and the stakeholders that surround them, show that ICT-for-Agriculture interventions extend the opportunities, motivations and capabilities of young farmers to engage in farming. With value chain development interventions already creating a positive context, the introduction of ICTs provides youth with a perspective of profitability that is worth investing their time, effort and financial resources.

Youths benefit from the impact of ICT in:

- Enhancing the performance of the collection centres: better and more timely marketing services to members, higher and more stable prices, as well as
- Strengthening farmer organisations: forging unity among members, bringing more producers together to acquire a better position in the value chain, better information on prices and markets to inform production planning.

As such, ICT has been found to catalyse and accelerate organisational development and value chain work, especially in relation to involvement, motivation and commitment of youth to improved management and development of their farms.

The findings in the study point to a number of recommendations that can further encourage young farmers' uptake and use of ICTs to support their agricultural activities. Although the list is not exhaustive, the below points should be considered when designing or implementing youth, ICTs and agriculture activities:

- Focus on young smallholder families who already made a conscious choice for farming and are likely to apply ICTs to their farming activities
- Differentiate and tailor ICT training approaches and user support on the basis age, marital status, gender, and ownership of or access to land
- Pay attention to removing obstacles that prohibit young women from fully participating in, and taking advantage of, ICT-related activities
- Furnish ICT centres as learning spaces to support informal exchanges and networking by young farmers (male and female)
- Encourage the emergence of diverse early adopters and role models to inspire diverse profiles and groups of youths to follow suit
- Consider strategies to diffuse integration of ICT from specific value chain crops to diverse crops and activities
- Include ongoing monitoring, evaluation and learning activities as part of the programmes to identify unintended negative effects and undertake corrective action when necessary.

## IMPACT ON YOUTH IN A NUTSHELL

- youths are seen as more serious players for private sector actors to engage with and are better able to capitalise on linkages to private sector actors
- obtaining market information has enhanced youth's negotiation basis and position vis-à-vis local traders, businesses, and other value chain players
- the role of youths stands out more strongly – internally towards their parents and externally to extension agents, community stakeholders, elders
- young persons trained in ICT are appointed to more responsible roles in the producer groups and collection centres, where they also serve as trainers to other coop members
- youths have started to rent or buy land, in addition to obtaining land from their parents, thus also offering employment to other youths

## FURTHER READING

- *ICT for rural economic development: five years of learning*  
<http://www.iicd.org/about/publications/ict-for-rural-economic-development-five-years-of-learning/>
- *The IICD Approach: from need to sustainability*  
<http://www.iicd.org/about/publications/the-iicd-approach-from-need-to-sustainability/>
- *Mobile on the move – Mobile learning*  
<http://www.iicd.org/about/publications/mobile-on-the-move-mobile-learning-publication/>
- *Learning Brief: Youth Promotion through ICT*  
<http://www.iicd.org/articles/youth-promotion-through-ict>
- *ICTUpdate: Youth and ICTs – Issue no. 65 (April 2012)*  
[http://ictupdate.cta.int/content/download/29814/207168/file/ICTU65\\_Youth\\_ENG\\_LR.pdf](http://ictupdate.cta.int/content/download/29814/207168/file/ICTU65_Youth_ENG_LR.pdf)
- *'Technologies of Choice? – ICTs, Development, and the Capabilities Approach [Dorothea Kleine]*  
<http://mitpress.mit.edu/books/technologies-choice-o>
- *MIJARC/IFAD/FAO: 'Facilitating access of rural youth to agricultural activities'* <http://www.ifad.org/farmer/2012/youth/report.pdf>
- *Rural Poverty Report 2011 – IFAD*  
<http://www.ifad.org/rpr2011/report/e/rpr2011.pdf>
- *FAO Statistical Yearbook 2013 – World food and agriculture*  
<http://www.fao.org/docrep/018/i3107e/i3107e00.htm>
- *Video Screenings Are Starting Points for Better Crops in Kenya*  
<http://www.iicd.org/articles/video-screenings-are-starting-point-for-better-crops-in-kenya>
- *IICD – Economic Development (video)* (<http://www.iicd.org/about/publications/iicd-economic-development-video/>)

## IICD AND THE YOUTH PROMOTING ICT FOR ENTREPRENEURSHIP AND YOUTH DEVELOPMENT

Highlights:

### YOUNG ENTREPRENEURS AND DIGITAL SKILLS – GHANA

Young entrepreneurs are trained in business and financial management to assist them to establish viable enterprises and earn a living through sustainable self-employment. Young tailors and carpenters use the ICT facilities to create designs, keep track of materials in stock, and communicate with clients.

### PROMOTING AGRO-ECOLOGICAL FARMING – PERU

ICTs are used to raise awareness about the benefits of agro-ecological farming and products. The youth involved in these projects collect and disseminate information at fairs, on television, and through radio programmes and social media.

### INTEGRATING ICTS IN VOCATIONAL TRAINING – KENYA

ICTs are used to enhance instructional design and course delivery. Instructors develop student-centres and interactive lesson materials for motor vehicle technology and fashion design and garment making technology classes. ICT-enabled learning activities include entrepreneurship and business management skills.



### MUSIC AND VOCATIONAL SKILLS – ZAMBIA

Entrepreneurship and job creation programmes make use of ICTs to improve teaching and learning in vocational training and skills development work. One of the projects has set up a digital music recording studio for urban youth.

To learn more about our projects go to: [www.iicd.org](http://www.iicd.org)

**IICD's vision is a world in which people are fully able to use information and technology to better their own future and that of their society.**

**IICD's mission is to enable 15 million low-income people in developing countries to access and use ICTs to address the challenges that they face, understanding that ICT offers opportunities for increased well-being and sustainable economic development in all sectors.**

*IICD leads the Connect4Change consortium in which five Dutch NGOs have joined hands to set up and support ICT4Development programmes. Our consortium partners are Akvo, Cordaid, Edukans and ICCO. Text to Change is a preferred partner.*



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Photos: Roel Burgler (cover, p. 2, 3, 7, 12, 14), Kunststoff (p. 11), Anne-Marijke Podt, Maurizio Bricola

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