



BACKGROUND PAPER

Youth in Agribusiness within an African Agricultural Transformation Agenda

Youth in Agribusiness

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Executive Summary

Africa has the youngest population in the world and each year 10-12 million of its young people seek to enter the continent's workforce, too many without success. This highlights the great challenge of youth unemployment but can also be seen as an opportunity for them to become the engine driving new agriculture and agribusiness enterprises as well as rural transformation. But youth face many hurdles in trying to earn a livelihood from agriculture and agribusiness. Pressure on arable land is high making it difficult to start new farms by the youth interested in primary agricultural commodity production. Youth lack access to credit, improved technologies, practical skills and fair markets necessary as well as other logistics and services for agribusiness success.

Ironically, educational services have expanded considerably in Africa without due consideration of the quality of education offered, or the skills match with employment opportunities in rural areas. This has resulted in the paradox whereby a large number of graduates ill equipped to be absorbed into employment upon graduation co-exists with several unfilled vacancies and business opportunities in small- and medium-scale enterprises. Even with opportunities opening, most educated youth find imagined futures in farming difficult. Agriculture is labor-intensive, with difficult working conditions and high risks. Productivity gaps and market inefficiencies are also widespread.

Nonetheless, agribusiness can be profitable for youth with the right skills. Rural enterprise is being advanced along agricultural commodity value chains within the context of professionalized agriculture. As a result, training projects increasingly link youth with access to agricultural resources. In this way, the quality of training along agricultural value chains, terms of credit and the agricultural technologies, commodities and markets being advanced have a huge influence upon both the livelihoods of youth and the process of agricultural transformation.

Clearly opportunity exists for directing African youth toward agribusiness, and if done in an inclusive manner, to profound societal and economic benefit. Many mechanisms toward this goal are being examined by several research, development and investment interests. The next critical step is to develop a comprehensive program that forges widespread commitment and partnership, combining these approaches in an effective manner and delivering cost-effective opportunities to youth for profitable agribusiness development. This effort must extend well beyond reorientation within formal training settings, rather it must involve the development of detailed agri-business plans and creditworthy loan applications, leading to the establishment of efficient and effective networks of new agri-business ventures and services across the entire agricultural value chain. It must be built upon commitment at the national levels, close collaboration among and with regional development partners to support an enabling environment, and requires investment by the private sector and financial institutions. Equally important, the program must be attractive to youth, able to challenge counterproductive mindsets through building self-confidence, and local efforts must be led and owned by youth themselves. Overall, the interest of the youth must be aroused and kept sustainably.

The Youth in Agribusiness Program is about entrepreneurship development among the youth, including women. It will be implemented by dedicated national agencies with execution by specialized technical centers of excellence such as the International Institute of Tropical Agriculture (IITA), The Alliance for a Green Revolution in Africa (AGRA), The Forum for Agricultural Research in Africa (FARA), The Technology Center for Agriculture and Rural

Youth in Agribusiness: Challenges and Opportunity

There is 364 million Africans between the ages of 15-35

By 2045, the number of African youth is expected to double
10-12 million new young workers seek employment every year.

Urbanization with delayed industrialization led to "jobless growth"
60% of Africa's unemployed are young adults, this proportion is growing

Africa's youth are better educated but to many lack business skills
Rural transformation requires that new and profitable ventures be initiated

Proven models for rapid youth engagement with agribusiness are available

Source: AGRA 2015

Cooperation (CTA), Technoserve and others. It is founded in large part upon the ENABLE Program, and its youth-led experimental learning approach under development by IITA and the African Development Bank. Financial services will be provided by specialized national and regional institutions. Other important institutions such as Enspire Africa (EA), CommodAfric, SNV Development organizations of Netherlands, among others shall be involved in specialized areas such as modern internet solutions, agricultural journalism, and other necessary handholding practices. This Program is designed to reinforce the roles of disenfranchised young African adults through a comprehensive outreach effort by providing information, life-skills education, financial services, proven technologies and a menu of agribusiness information and opportunities to at least 800,000 young people in 20 Regional Member Countries (RMCs), largely through awareness campaigns and social media.

Program opportunities include at least 35,000 internships, 18,400 agribusiness startups and 154,000 new decent jobs and contract farmer marketing opportunities. Under the program, each of 20 RMCs are expected to invest at least US \$35 million over five years. This amounts to an overall investment of \$700 million across the African continent. Within each country, about 1,536 unemployed university and polytechnic graduates are trained under an 18-month long agribusiness incubation. The last three months of the incubation period are spent developing creditworthy agribusiness plans for presentation to financial institutions and funding and under the guidance of an established agribusiness mentor. It is expected that each of such proposals will aim at businesses requiring \$200,000 to \$250,000. Each is also expected to eventually employ 5 to 15 persons earning decent monthly incomes. Detailed examples of profitable youth-led agribusinesses are provided along with the investments required to launch them.

A projection of Youth in Agriculture indicates that significant benefits may be achieved through its \$700 million investment but their extent varies with economic climate. Net income gain ranges between \$964 million (benefit: cost 2.4) and \$2.2 billion (benefit: cost 4.1). Projections indicate that business slowdown has a greater impact upon these gains (-57%) than when intern livelihood outcomes are influenced by stronger employment opportunities (-19%). These returns are admittedly hypothetical as they are based upon estimates of outcomes extrapolated from a few pilot agribusiness incubations and best-guesses on incomes earned within different outcome categories. It is heavily influenced by the establishment of successful agribusinesses

Projected returns to a \$700 million investment in Youth in Agribusiness based upon different intern outcomes and economic scenarios.

Scenario and incubation outcome	Incubation incomes \$ over 36 mo	Program revenue x \$ million
Best information scenario		
investment cost	713,623	700.0
net economic gain	2,272,217	2,166.4
benefit: cost	4.2	4.1
Strong employment pull		
Investment cost	713,623	700.0
net economic gain	1,844,897	1,756.2
benefit: cost	3.6	3.5
Weak business environment		
Investment cost	713,623	700.0
net economic gain	1,001,417	946.4
benefit: cost	2.4	2.4

(44%) and the employment they generate (41%). These projections are most exciting in that a fully funded Agripreneur agribusiness incubation costing about \$713 k is able to generate between 103 and 175 decent jobs and \$1.7 and \$3.0 million net income revenues. Decent work is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men. Analysis and extrapolation of two highly successful IITA Agripreneur ventures; greenhouse vegetable farming and fish farming, suggests that the above projections may be conservative within stronger market settings.

The Program also offers individual internships through placement with successful agribusiness mentors and champions as well as other suitable private businesses. A suite of ICT tools that assist Youth in Agribusiness (available at CTA) and a comprehensive effort to reform and update the curricula of graduate's agribusiness skills (available under the Uni-BRAIN model of FARA) and the multiple option model of AGRA will be mobilized. Of the Program funds, 83% are directed to country youth agribusiness projects and the remainder (17%) allocated to regional development organizations. These interventions are conducted at a cost of \$22,786 per intern and 56% of this funding directed toward loan guarantees and start-up incentives. Through these interventions, the Youth in Agribusiness Program mobilizes the energies and ambitions of youth as engines for employment generation, reduced migration to urban areas, and improved image of youth among themselves, within their communities and across society, as well as contributing to the realization of agricultural transformation in Africa.

1. Background

Africa is experiencing rapid social and economic growth. Many economies are growing by more than 6% a year, however, large disparities in income distribution persist both within and among countries. As a result, rural households seek to escape poverty by engaging in market-oriented farming but with limited success due to lack of innovative solutions to production and marketing constraints. Ironically, educational services have expanded considerably in Africa without due consideration of the quality of education offered, or the skills match with employment opportunities in rural areas. This has resulted in the paradox whereby a large number of graduates ill equipped to be absorbed into employment upon graduation co-exists with unfilled vacancies and business opportunities in small- and medium-scale enterprises – an ugly duality. The formal sectors of employment where most graduates seek employment cannot absorb the large number of graduates, estimated to be between 10 to 12 million young persons per year (AGRA 2015; AEO, 2012?), resulting in a large number of educated yet unemployed youth, whose efforts are otherwise key to achieving rural transformation. As a result, high-potential rural youth remain idle across Africa because incentives to substantially better one's life through hard work are too scarce. In response, many youth migrate to urban centers in search of employment, but find only menial jobs at best, as well as exposure to a wide range of social ills at worst, depriving rural communities of their most energetic and best educated members.

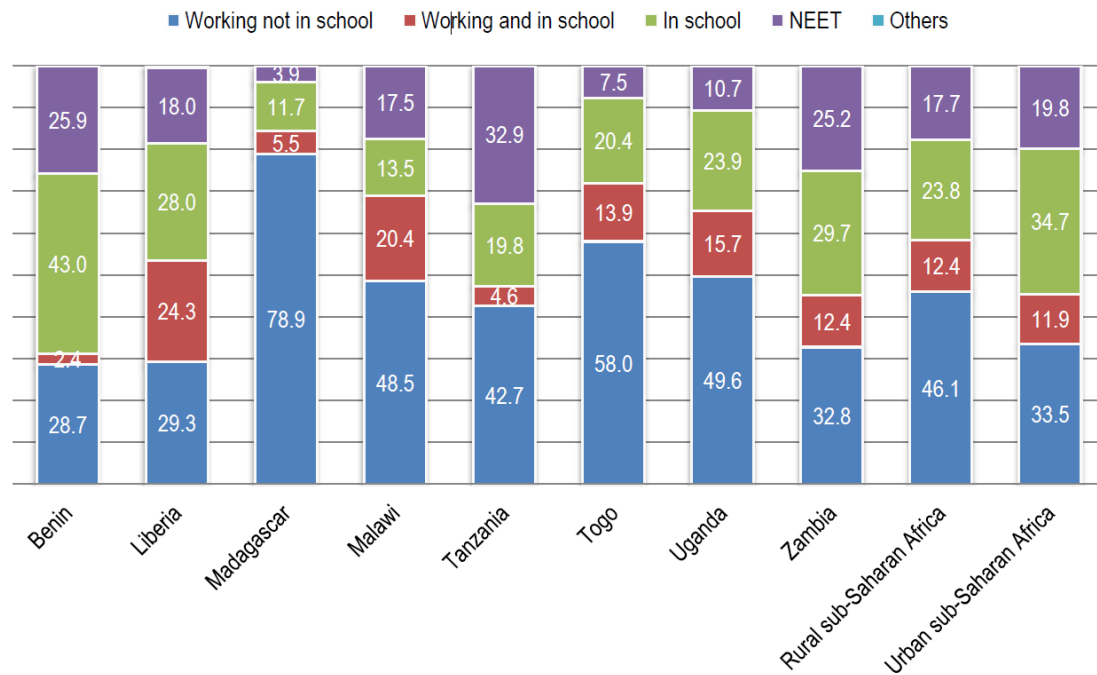
A recent ILO study (Elder, 2015), which analyzed trends in rural youth employment in Sub-Saharan Africa, found that youth working in agriculture mainly operate in small, unincorporated family businesses as self-employees or as contributing family workers without pay. In other words, in vulnerable employment.

The Plight of Africa's Youth

Based upon internal documents of the African Development Bank, youth attempt to migrate from Africa and the Middle East for several reasons. They flee the turmoil of civil wars fomented by extremists and those fighting for resource control. They seek to escape political, economic and social repression resulting in endemic joblessness, poverty, and lack of opportunities to earn a decent living. Too much of their country's economic growth is captured by the top of the society, while the majority of the population endure low and stagnating incomes as well as declining purchasing power. Despondency pushes too many youth into hopelessness, rebelliousness, lawlessness, prostitution, substance abuse and joining fanatical causes.

It is time to offer the youth a New Deal!

Main activity status of youth in rural sub-Saharan Africa (% of youth rural population)



Source: Authors' calculations using SWTS data in eight SSA countries. (NEET: Neither in employment nor in education or training)

The Good News

Attitudes towards entrepreneurship amongst young people are positive in Africa than the majority of the rest of the world. Of the ten (10) countries with the highest numbers of start-ups, five (5) are in Africa (Global Entrepreneurship Monitor). What does this say about Africa? It shows that Africa's innovators are hungry for the kind of success that makes a meaningful difference to their lives and the wider community. It is often the case, however, that the greatest hurdle to realizing ambition is access to capital. Despite the region's economic growth, its capital markets are not mature; banks are reluctant to lend to those without a credit history and whilst for VCs provide a solution they do so at a high price

agribusiness skills and creates a setting where youth can contribute to, become recognized and thrive within their rural communities.

Several smaller African Development Bank projects that reinforce the role of youth in rural transformation have been undertaken or are ongoing. These include: i) Project to support the

promotion of employment for youth and women in Senegal); ii) Social inclusion and cohesion enhancement support program in Ivory Coast; iii) Youth employability and insertion support program in Ivory Coast; iii) Rural Enterprises Program in Ghana, iv) Agriculture Sector Rehabilitation Project in Sierra Leone, v) Farmer-managed rice irrigation scheme in The Gambia, vi) the Nigeria Agricultural Transformation Agenda Support Program, and vii) the Multinational CGIAR Support to Agricultural Research for Development of Strategic Crops in Africa (SARD-SC). SARD-SC and AGRA co-funded the Youth Engagement Workshop that was held at IITA (28-30 May 2014), an event that was led by and featured uplifted youth. The Bank has valuable experience in building development-oriented coalitions of businesses and commercial banks as illustrated by the Tunisia Soukatamia Project through its innovative funding mechanism and the loan-based Cameroon Agriculture Value Chain Project.

The International Institute of Tropical Agriculture (IITA) and its partners have developed a potent mechanism for empowering rural youth and directing them to careers in agribusiness. Participating youth are termed "Agripreneurs" (Agricultural Entrepreneurs). Youth Agripreneur Groups are duly registered self-help groups that conduct agribusiness incubations leading to profitable rural enterprises with good returns to investment. These groups undertake several promising collective ventures and operate in a democratic, transparent and gender-responsive manner. The overall goal of the group is to stimulate agribusinesses benefiting the larger rural community through decent employment, contract farming opportunities and income generation. Interns do not remain permanently with the group, but rather gain practical experience sufficient to develop a business plan and loan application to launch their own private enterprise. Following this approach, these agribusiness incubations have established numerous profitable enterprises including intensive vegetable production, marketing of new varieties of cereal and legume seed, fish farming and associated activities, and value-added processing of soybean and cassava.

The Technical Centre for Agriculture and Rural Cooperation (CTA) implemented youth in agriculture activities for more than 20 years. As per its 2013 "Youth In Agriculture Strategy", CTA's interventions on youth are structured around four goals: strengthening engagement of young professionals in agricultural science and tertiary education; promoting coherent and inclusive, evidence-based policies on youth in agriculture and rural development; enhancing youth engagement in agriculture through ICT innovation and utilization and knowledge management; and enhancing the engagement of youth in agricultural value chains. Activities serving young agro-entrepreneurs are cross-cutting to these four goals and especially the last two. Due to its specific expertise on information, communication and knowledge management in the agricultural sector, and to the opportunities offered by ICTs to engage youth in agriculture, CTA has designed various ICT and youth in agriculture initiatives. This is achieved through the "Agriculture, Rural Development and Youth in the Information Society" (ARDYIS) project, a framework of actions which involves activities implemented directly by CTA or partners' projects supported through youth-focused calls for proposals.

2. Challenges to youth advancement

In the past, youth were too seldom considered as a separate and pivotal interest group within rural transformation. Rather it was assumed that what must be good for rural communities as a whole is necessarily beneficial to youth, and at best their interests were linked to those of women and other disadvantaged groups. This trend is now being challenged where youth, especially educated youth returning to rural areas, are viewed as a key entry point for new agribusiness and resulting employment creation. Indeed, rural youth are our future farmers, and

most likely to adopt modern farming and agribusiness methods, assume market orientation, and ready to fill the current vacuum in the provision of services and logistics that are essential in the overall development of agriculture and agribusiness. This results in the youth becoming increasingly recognized within the African development agendas. Nonetheless, widespread under- and unemployment among young people remains a major concern within rural transformation agendas.

One obvious, but still elusive, developmental approach is to engage rural youth in productive and profitable agriculture, including crops, livestock, and fisheries. Associated with this view is the assumption that rural young people would be better off if they did not migrate to urban areas, thus avoiding exposure to risky and illegal behavior. Underlying this agenda, however, is the "tension" between the futures that youth, their parents and rural planners imagine for them, and the 'entrepreneurial', agriculture-focused future as proposed is not always well received. Agriculture remains hard work, and risky, and the allure of middle class lives in urban areas remains strong. Education increases more than just skills or immediate employability, it changes who people are and what they expect from life, and for agribusiness to meet their aspirations it must be viewed as a viable livelihood option (Leavy and Smith, 2010).

There is also mounting concern among politicians, policy actors, and development professionals throughout Africa about youth unemployment. The paradox is that while many African economies have experienced strong economic growth, the creation of new jobs has not matched the number of new entrants to the labor market. As a result of this phenomenon of 'jobless growth', many youth find themselves with less rewarding informal sector jobs. In rural areas the turn toward entrepreneurship has been combined with renewed interest in the agricultural sector and agricultural value chains as sources of jobs for young people (FAO, CTA and IFAD, 2014). Brooks et al. (2012) captures this logic as 'African agriculture can absorb large numbers of new job seekers and offer meaningful work with public and private benefits', however she acknowledges that in order to fulfill its potential as the employment solution for young people in Africa, the agricultural sector must first become more profitable, competitive, and dynamic. It must also generate decent jobs for its workforce, thereby extending positive impacts to local communities. This observation reinforces the rationale for sponsoring youth-led agribusiness incubation.

Youth seeking rural opportunities experience several barriers. One relates to on-going processes of agrarian change, including scarcity of land that makes it increasingly difficult for young people to engage in modern farming. Another relates to educated youth themselves, whose expanded horizons find imagined futures in farming difficult (Okali and Sumberg, 2012). In response, rural enterprise is being advanced along value chains within the context of professionalized agriculture. As a result, training projects increasingly link youth to access to agricultural and financial resources. In this way, the quality of training, the terms of credit and the agricultural technologies being advanced are critical to their fusion within profitable new agribusiness.

A suite of challenges to youth in agriculture. In a seminal work addressing youth in agriculture, FAO, CTA, and IFAD (2014) identified six key challenges to their advancement.

1. *Insufficient access to knowledge, information and education.* Poor and inadequate education limits productivity and the acquisition of skills, while insufficient access to knowledge and information can hinder the development of entrepreneurial ventures. There is a distinct need to improve young rural women's access to education and entrepreneurial

skills development, and to better incorporate agricultural and entrepreneurial skills into rural education.

2. **Limited access to land.** Although access to land is fundamental to starting a farm, it can often be difficult for young people to attain. Inheritance laws and customs in developing countries too often make the transfer of land to young women prohibitive.
3. **Inadequate access to financial services.** Most financial service providers are reluctant to provide their services – including credit, savings and insurance – to rural youth due to their lack of collateral and financial literacy, among other reasons. Promoting financial products catered to youth, mentoring programmes and start-up funding opportunities can all help remedy this issue.
4. **Difficulties accessing green jobs.** Green jobs can provide more sustainable livelihoods in the long run, and can be more labor intensive and ultimately involve more value added. However, rural youth may not have the skills (or access to the necessary skills-upgrading opportunities) to partake in the green economy.
5. **Limited access to markets.** Without such access youth will not be able to engage in viable and sustainable agricultural ventures. Access to markets for youth is becoming even more difficult due to the growing international influence of supermarkets and the rigorous standards of their supply chains. Young rural women in developing countries face additional constraints in accessing markets, due in part to the fact that their freedom of movement is sometimes limited by cultural norms.
6. **Limited involvement in policy dialogue.** Too often young people's voices are not heard during the policy process, and so their complex and multifaceted needs are not met. Policies often fail to account for the heterogeneity of youth, and do not provide them with effective support. Policymakers themselves must actively engage youth.

Addressing these six principal challenges are vital to increasing youth's involvement in the agricultural sector, and ultimately addressing the significant untapped potential of this sizeable and growing demographic.

Special challenges to ICT support of rural youth in Africa. The greatest barrier to the adoption of ICTs by young farmers and agro-entrepreneurs in Africa is the associated costs. In an online survey conducted by CTA in 2015, cost of internet was the first constraint cited by farmers' organizations and organizations supporting young farmers and agro-entrepreneurs (65%). Other important constraints are the lack of technical ICT skills (62%), weak internet connectivity (56%), lack of a personal computer (54%) and unreliable electricity supply (52%). For many other young farmers and agro-entrepreneurs, the problem with ICT adoption is not lack of access but digital illiteracy. In general, there is also a low understanding of the relevance and benefit of ICTs applications for increased productivity and profitability by many stakeholders of the sector. Some successful agro-entrepreneurs, because they do not understand the additional benefit that ICTs can bring to their activities, do not see a reason to use or invest in them. Another constraint is gender related as young women have less opportunity to learn and benefit from ICT. These challenges constitute important hindrances to efficient recordkeeping, business management, access to markets and capitalizing upon emerging opportunities.

Developmental questions addressing youth in agribusiness. A workshop was convened by the CGIAR to consider challenges and opportunities for youth in agribusiness (8-9 September 2015, CGIAR Consortium Office, Montpellier, France) that led to formulating a series of key developmental questions. These questions address mindset change, skill sets, technical and

business opportunities, and access to credit and may greatly contribute to the design of projects promoting to youth in agribusiness.

1. What are the aspirations of youth and why do they consider themselves marginalized? How do these factors vary between young men and women, and within different cultural, economic and class settings?
2. Which technical breakthroughs in agriculture are best tailored for youth advancement and how are they best packaged within rural development projects, particularly those strengthening agricultural value chains?
3. What activities and incentives are required to best strengthen business skills among youth with competence in agriculture, and how may youth with business and needed ICT and social skills be better oriented toward agribusiness?
4. How do the yields and profits of accelerated youth agricultural ventures compare to more established commercial producers, and if different why? If less profitable, how can the returns of these nascent youth ventures become more competitive, and at what investment cost?
5. Why qualified youth are considered less creditworthy by commercial lenders, which mechanisms are available to improve the creditworthiness of youthful entrepreneurs and how may these opportunities become realized within different countries, enterprises and settings?

Enabling environment challenges facing rural youth.

Rural agribusinesses can thrive when they are well connected to local communities and markets. Adequate place-based development strategies that are reinforced through local policy and planning can address major binding constraints and help convey opportunities to the local population. In addition, member-based organizations have been found effective mechanisms for engaging young people in agriculture while increasing youth employment through on-farm and off-farm activities. (FAO, ILO)

Agriculture is one of the most difficult sectors of the economy. Africa's smaller agribusinesses frequently harbor decent work deficits, where work is too often for extremely low wages or returns, frequently hazardous, and can take unacceptable forms, such as child or forced labor. Young Agripreneurs lack the know-how and means to effectively address these situations. However, improving the quality of jobs by promoting rights at work, extending social protection, and strengthening rural organizations is at the core of agricultural transformation and crucial for achieving sustainable agricultural productivity. Targeted skills development in good practices and awareness-raising can go far to address these deficits, as can effective support through local public and private collaboration.

Young Agripreneurs often lack of access to affordable health care due to the lack of accessible health care facilities and adequate financial protection mechanisms. In many cases the lack of coverage is associated with the lack of appropriate mechanisms to cover young persons working in agriculture through existing social protection mechanisms, limited contributory capacities, or a lack of trust in the existing institutional framework. This contributes to a high level of informality among these young workers and entrepreneurs, which is often associated with high social and economic risks, low productivity and high levels of vulnerability.

3. Opportunity for Youth in Agribusiness

Mindset change and agribusiness reorientation. Education curricula that are oriented towards white collar employment rather than rural self-employment and jobs creation lead to reduced expansion of formal employment. Given opportunities and incentives, and mindset change, rural youth can profitably be redirected toward agribusiness, service provision and market-oriented agriculture, with a huge impact upon their rural communities. Different models developed by IITA (2015), AGRA (2015), FARA (2010?) and CTA offer stepwise approaches to strengthening the skills of youth in agribusiness and are ripe for expansion and integration. Backstopping these approaches are networks of internship opportunities, engagement by mentors and agribusiness champions, and incentives to raise the creditworthiness of youth through the development and execution of viable business plans and successful loan applications. Mechanisms leading to success vary from country-to-country, but a common feature is shared interests and collaboration between national planners and commercial and investment interests to support and mentor this process. As with most potent developmental efforts, diverse, complementary efforts are best and that the greatest challenges lie in the details of such collaboration.

IITA's approach to advancing youth in agriculture. IITA is exploring mechanisms that empower educated youth towards professional careers in agriculture and agribusiness. Participants are provided opportunity to conduct agribusiness incubations that explore options for income generation and then develop and implement business plans around the most promising ones. The IITA Youth Agripreneur Program approach was started at its Ibadan, Nigeria Headquarters in 2012, incorporating diverse but complementary skills of 32 individuals, leading to numerous profitable crop, livestock and fishery enterprises. Beyond their impressive agribusiness start-ups, the groups' perspectives have matured. They use social media, organize workshops on youth in agriculture and host youth from other groups in exchange visits. This initial effort was followed by the establishment of additional Youth Agripreneur Groups in DR Congo, Kenya, Tanzania and Uganda across a range of agroecological and socio-economic settings. These pilot agribusiness incubations led to the development of robust guidelines useful in the establishment, operations and training of youth elsewhere (Woomer et al. 2015). A summary of five IITA Agripreneur groups follows.

Need for Mindset Change

The importance of mindset change by educated rural youth must be understood within the context of their aspirations and frustrations. These youth were the best of their class throughout schooling and praised for their cleverness and potential. Their families sacrificed to pay for their education and they were often the first in their families and communities to earn a university degree. After graduation, their attempts to secure white collar employment failed, forcing them to accept menial employment or return to their family farms. On the farms they work in the garden every morning for a few hours and then socialize at local market centers in resigned idleness. Past praise and potential are replaced by humiliation and situational depression. The first step in mindset change is to position youth to convince one another that they have merely suffered a temporary setback and their brighter future rests in acquiring the skills and teamwork needed for successful agribusiness. *Based upon roundtable discussion with IYA, Ibadan, Nigeria.*

The IITA Kalambo Youth Agripreneurs (IKYA, DR Congo).

IITA-Kalambo Youth Agripreneurs (IKYA) was started in November 2013 as a youth-led venture in South Kivu to explore opportunities for self-employment through agribusiness. The group has 32 members (35% women) and three elected officers ranging in age from 25 to 33 years. Initially, the group was engaged in crop and seed production. Several baked products are produced and marketed that rely upon substitution with lower cost cassava flour, and protein fortification with soybean flour that meet industry standards. More recently, IKYA has entered fish farming of tilapia and catfish. It is also engaged in training of women and youth in agro-processing enterprises and nutrition with over 950 persons trained.



The Kibwezi Hortipreneur Youth Group (KHYG, Kenya).

KHYG was founded in March 2015 and conducts irrigated vegetable farming at the University of Nairobi Dryland Research Station in semi-arid east Kenya. It has 15 members (58% women) and four elected officers ranging in age from 23 to 29 years. Its location is remote, lacking mobile phone and internet coverage, and even potable water, but the drip-irrigated growing conditions at Kibwezi are excellent and the farm is near the Mombasa-Nairobi commercial corridor. The group grows mixed vegetable in its 2200 m² greenhouses and has started fish ponds and fish feed production as well. It has assembled a strong group of mentors from commercial interests, other commercial farms and researchers, and received training in marketing, greenhouse production and seedling operations.



The IITA Youth Agripreneurs (IYA, Nigeria).

IYA is the first youth agripreneur group formed by IITA in 2012. It conducts a wide range of production, marketing and value adding enterprises, notably maize and soybean seed production, fish and vegetable farming and the manufacture of protein-rich snacks and soymilk. IYA primarily operates from IITA HQ in Ibadan but has developed several outfield and outreach activities. It has 35 members (57% women) and five elected officers ranging in age from 24 to 33 years. Recently the group replicated by recruiting an additional 30 members into

a "IYA B" that will operate independently from the first group. The group has not only assembled a strong group of mentors from IITA staff and commercial partners, but also forged strong partnership with over 500 youth throughout Nigeria.

Tanzania Youth Agripreneurs (TYA, Tanzania).

The Tanzania Youth Agripreneurs (TYA) is a group of young graduates from different fields, aged between 18 and 29 years. The group was formed in March 2014 to set up and run successful agriculture businesses and become job creators rather than job seekers, to change the mindset and attitudes of young people towards agriculture and empowering them to be more productive. The group is engaged in different agribusinesses, including: packing of high quality cassava flour and selling under the brand 'Mpishi Mkuu', production of greenhouse tomatoes under drip irrigation, supply of clean cassava planting material, processing of soybean to products such as milk, yogurt, and tofu, providing pest and weed control services to other farmers using integrated management approaches.



Uganda Youth Agripreneurs (UYA):

UYA is the latest addition to the IITA Youth Agripreneur movement with their official launch taking place on 24 June 2015. The group consists of 18 members and is open to further recruitment. The group presently operates in different outfields and is looking for a central location where it may initiate additional enterprises. The group produces mixed vegetables and sweet potatoes and seeks to modernize production among themselves and affiliated youth groups in Uganda. With this strong start we can only expect good things in the future.



The challenge before IITA and its partners is how to best expand and replicate this approach and take it to next level, from collective, experiential management to individual, profitable entrepreneurship. The pioneer groups were successful in agribusiness exploration, but the incubation process was too long and costly. Conducting shorter-term orientation in larger groups derived from a wider geographic area, and then assisting component local groups to develop business plans and arrange initial funding can shorten the incubation period. Another option is to assist other organizations committed to youth empowerment to initiate agribusiness incubations as joint ventures. A fusion of internship and incubation is also possible. Yet another area to address is greater focus on the enabling environment for young entrepreneurs, as well as addressing work, market and value chain deficiencies, which erode profitability.

While several mechanisms for youth empowerment are available, they must be formulated and delivered in a manner that allows their costs, returns and rural impacts to be refined and compared. It is for this reason that we present a diverse range of development approaches within this work stream report.

AGRA's approach to youth in agriculture. AGRA recognizes that rural youth encounter serious constraints in accessing information, skills, land, technology, and markets and has formulated corrective strategies. Once empowered, youth readily engage in market-oriented farming and local agribusinesses as alternative livelihood strategies. AGRA's proposed multiple-options was based on the capacity of youth at several levels of education to profitably engage in activities along the agricultural value chain through basic agribusiness training, an intensive agribusiness entrepreneur program and a multi-track vocational program. AGRA incorporates these principles across its programs and projects. Through its farmer's organization program, AGRA provides training and skills enhancement on leadership and business management to rural youth groups that can better integrate them into the larger Program.

FARA-UniBRAIN's approach to youth in agriculture. FARA has explored the UniBRAIN model since 2012 in a collaborative effort between research, the private sector and universities and other tertiary institutions to commercialize technologies and innovations while incubating youth for employment and entrepreneurship. This is done by equipping young graduates with additional soft skills through internships and industrial apprenticeships to make them more readily employable and to also encourage them to become entrepreneurs. UniBRAIN works through ANAFE to reorient curricula of member universities to make their agribusiness offerings more relevant to industry needs.

CTA's activities on youth in agriculture. These activities include social media training for agricultural stakeholders with over 1620 youth trained in 42 countries including agribusiness stakeholders, mentors and champions. This social media training curriculum is customized when needed into a "Web 2.0 and social media for agribusiness and agri-marketing" module which target agro-entrepreneurs. Innovative uses of mobile applications that enhance productivity and strengthen market linkages for young agripreneurs are promoted. A novel ICT-based agro-entrepreneurship involving ICT services for agriculture by young innovators is promoted through the AgriHack Talent, YoBloCo Awards and Plug and Play initiatives. Interactions between young agripreneurs and ICT talents are arranged through the ENSPIRE Africa (EA) Project. Indeed, CTA's unique approach to agribusiness support and innovative access to agriculture finance and knowledge management will both "ENSPiRE" and "ENABLE" the Youth in Agribusiness Program.

AfDB engagement. The major rationale for the African Development Bank's involvement with Youth in Agribusiness is: (i) African governments are very concerned about the issue of youth unemployment and its societal consequences; (ii) African farming is increasingly practiced by older persons, undermining future growth and development of the sector; (iii) youth aspire for better rural livelihood to escape from poverty; (iv) enterprising youth often lack collateral to establish their own agribusinesses and are not considered creditworthy; (v) Empowering the youth to engage in market-oriented farming and agribusiness increases decent employment opportunities and stimulates rural economies as a whole; (vi) The Bank places highest priority on food security and poverty reduction through agricultural transformation, and works with member countries to do so, tapping upon regional integration resources; (vii) the Bank's goals and activities directly contribute toward the objectives of CAADP, the MDGs and SDGs, including food security, elimination of hunger, gender mainstreaming, and employment creation; (viii) the Bank believes that it is high time the widely acclaimed potential of African agriculture becomes a reality as 'it is not possible to eat potential'.

ILO engagement. The major rationale for the ILO's involvement relates to its mandate and expertise in supporting actions to include decent work principles and practices in policies, strategies and programs, including for agricultural and rural development. The ILO's work in the rural economy aims to promote decent work for sustainable livelihoods and food security, with an emphasis on extending social protection and rights at work and giving a voice to and improving the organization, working conditions, productivity and incomes of rural workers and entrepreneurs. To improve agriculture's effectiveness for development, upgrading the skill levels of rural people is of paramount importance.

The ILO's value-chain development initiatives link small, medium and large growers – primarily through their producer associations or through contracts – to markets and buyers, while establishing or strengthening channels for product- and market-specific technical support. These mechanisms can provide small agro-enterprises (including farmers) with reduced transaction costs, improved access to market information, and increased bargaining power.

4. Suggested Actions and Way Forward

Clearly opportunity exists for directing African youth toward agribusiness to profound societal and economic benefit, and many mechanisms toward this goal are being examined by several research, development and investment partners. The next critical step is to develop a comprehensive program that forges widespread commitment and partnership, combining these approaches in an effective manner and delivering cost-effective opportunities to youth for profitable agribusiness development. This effort must extend well beyond reorientation and formal training, rather it must involve the development of detailed agri-business plans and creditworthy loan applications, leading to the establishment of a massive network of new business ventures and services across the entire agricultural value chain. It must be built upon commitment at the national levels, close collaboration among and with regional development partners to improve the enabling environment, and requires investment by the private sector and financial institutions. Equally important, the program must be attractive to youth, able to challenge counterproductive mindsets through building self-confidence, and local efforts must be led and owned by them.

It is timely that the African Development Bank Group develop a special program on behalf of its Regional Member Countries (RMCs) designed to promote Youth in Agribusiness. That Program's overall goal will be to *"create gainful employment and income generation for the youth in Africa through agriculture and agribusiness"*. Its specific objects should include:

1. Providing opportunities to rural youth that promote innovative agricultural enterprise and agribusiness (Objective 1)
2. Raising agribusiness skill levels and economic opportunities to rural youth. (Objective 2)
3. Advancing youth-led agribusiness networks and provide interactive agricultural information service (Objective 3).
4. Raising awareness of gender issues among youth and providing equal opportunity for agribusiness advancement to young women (Objective 4).
5. Improving the practical agribusiness skill sets among future graduates of vocational schools and universities (Objective 5).

This Program of Youth in Agribusiness must be developed through participatory approaches and widespread consultations. It is about decent employment creation for youth and women through market-oriented agriculture and agribusiness ventures and must be operated and evaluated from this perspective. It is largely based upon the ENABLE Program under development by IITA and the African Development Bank (IITA 2015). The Program shall be organized into three Component Projects (Projects 1, 2, and 3) each with four interrelated components: i) Skills and Capacity Development, ii) Enterprise and Business Development, iii) Youth Networking), and iv) Program Management and Coordination. It targets two categories of youths and women in at least 20 RMCs. The distinction among the three projects contributing to the program is in the level of education of the target youth and women and its delivery methods and timeframe. Project 1 focuses on un- and under-employed university and polytechnics graduates, half of whom are young women. Project 2 focuses on existing rural youth groups consisting mostly of primary and secondary school graduates seeking greater impacts within their respective communities. Project 3 focuses on improved delivery of the Program objectives based on the M&E discoveries of outstanding investments from Projects 1 and 2, serving to better replicate and upscale successful agribusiness incubation approaches over time. Given the critical importance of greater gender equity within rural communities, its mainstreaming is integrated into each component. Gender equity includes fair access to Program and Project participation, mentoring and coaching, staffing and farm inputs and commodity markets. The Program design is such that each donor has the latitude to support a whole Project or activities within it. These components are described below.

Component 1: Skills and Capacity Development. Activities include: i) exploration and expansion of the novel approaches toward youth empowerment; ii) training on returns to agriculture and agribusiness investment; iii) introducing trained youth to new, profitable agricultural and agribusiness ventures that sustain decent work good practices; iv) assistance in business plan development, agribusiness proposal and loan application, including the development of departure incentives that interface with lending institutions; v) collaboration with national and local governments, and the private sector to stimulate profitable, sustainable and wealth-generating agribusinesses; vi) introduction to practical skills on market-oriented agriculture and agribusiness enterprises in curricula of educational institutions using readily available frameworks; vii) replicate and scale-up models of agribusiness incubation across Africa; viii) train journalists and youths to become specialized in agricultural affairs that document youth's entrepreneurial initiatives and promote their services; ix) training on the use of ICT and social media in agribusiness development; x) strengthen youth linkages with farmer organizations; and xi) train youth agripreneurs in financial services provisions and management linked to banking institutions.

Component 2: Agribusiness Development. Activities include: i) Establish agribusiness incubators and develop business incubation strategies; ii) explore promising technologies, innovations or ventures for commercialization; iii) track agribusiness startups to assess best practices, economic viability and expansion (Box 1); iv) establish demonstration farms and pilot agribusinesses as centers for profitable innovation; v) mainstream proven opportunities into financial institutions and government investments; vi) advocate for necessary policies to reinforce and support youth engagement and decent job creation; vii) develop a registry of youth agribusiness operators and facilitate their linkage with markets and finance; viii) convene and engage policymakers, financial institutions and mass media in support of agribusiness development, including the involvement of youth and women entrepreneurs; and ix) training on the use of video clips to document successful youth agribusiness for sharing to the wider public, particularly through social media and news coverage. Issues of risk mitigation

options such as crop insurance are critical under this component. Equally important, is the promotion of rural organizations that facilitate exchange and dialogue among key stakeholders.

As agribusiness incubations are initiated through the Program, it will explore and initiate a suite of actions assuring the success of its departing interns that prepare sound agribusiness plans, business proposals, and commercial loan applications. A system of mentorship, handholding, and bridging support is sufficient to launch completing youth into higher-value crop production using modern agriculture and agribusiness methods, provided they have access to land, fair markets, and enabling environment, including financial services and risk mitigation options such as insurance. In some cases, these ventures may rely upon market collection points developed during the agribusiness incubation itself, or be grouped into commercial youth agricultural parks organized with local authorities. In other cases, successful enterprises developed by interns during the agribusiness incubation itself may be privatized to them at the conclusion of their program. Other options for successful agribusiness spin-off shall also be considered.

Box 1. Five anticipated outcomes from youth agribusiness incubation.

Category 0. Youth are unwilling or unable to complete their training (about 3 to 5%)

Category 1. Youth are recruited by employers before or upon completion of the agribusiness incubation (about 5 to 8%).

Category 2. Youth become engaged as trainers within subsequent agribusiness incubations or recruited within rural development programs (about 8 to 12%).

Category 3. Youth return to their home communities to practice market-oriented agriculture and modernize their family farms (about 15 to 25%).

Category 4. Youth successfully complete their business plans and loan applications, both as individuals or in partnership, and launch agribusiness ventures (about 50 to 70%).

It is also critical that commercial lenders and their loan officers become aware of and develop confidence in the overall Youth in Agribusiness approach. Loan officers shall be invited to serve as mentors and encouraged to work closely with interns as they develop their detailed business plans and loan applications. In cases where departing interns seek to return to and modernize their family farms, in-kind departure packages may serve as collateral for a modest start-up loan. The task of raising creditworthiness of youth and women has a strong element of site specificity, so it is important that lessons learned be translated into successful solutions and policies. From its very outset, the Program shall convene a task force to identify and incorporate these opportunities for directing collateral and commercial loans for its departing interns. Enspire Africa (EA) has developed an alternative credit score system, customized to the informal sector especially for those not meeting the traditional requirements for loan application. This model shall be studied and important elements, such as building the capacity of relevant financial institutions and potential clients to ensure establishment of functional funding mechanisms incorporated into the Youth in Agribusiness Program.

A conceptual diagram of the establishment of youth-led agribusiness and their various operations and impacts upon the larger rural community based upon the Agripreneur model appears in Figure 1. First, the Program establishes a Coordination Office to provide administrative and technical support to host numerous youth groups and identifies local coordinators, trainers and mentors for core agribusiness development operations. An

agribusiness incubation is conducted among these youth that considers the best options for crop production, marketing and value addition, and pilot enterprises are established. The Agripreneurs contact other rural youth groups and solicit their involvement as potential contract farmers and satellite agribusinesses. As these youth develop expertise in various business operations, they are encouraged and assisted to develop detailed business plans and loan applications for submission to commercial lenders.

Agribusiness specialists and loan officers work closely with these youth to assure that planned ventures are viable and creditworthy. These spin-off agribusinesses generate employment and also link to contract farmers and markets forged by the core group, stimulating positive skills development and economic activity within the larger farming community. But enterprises need not be confined to commodity production and value-added processing alone, but rather expertise in agricultural service provision must also be developed as well (Figure 2). These services include farm planning, improved irrigation, pond construction and management, pest and disease control, operating market collection points, product branding for top-end sales, and others. These service enterprises align along the agricultural value chain in a manner that generates income from multiple services to the farming community throughout seasonal cropping cycles.

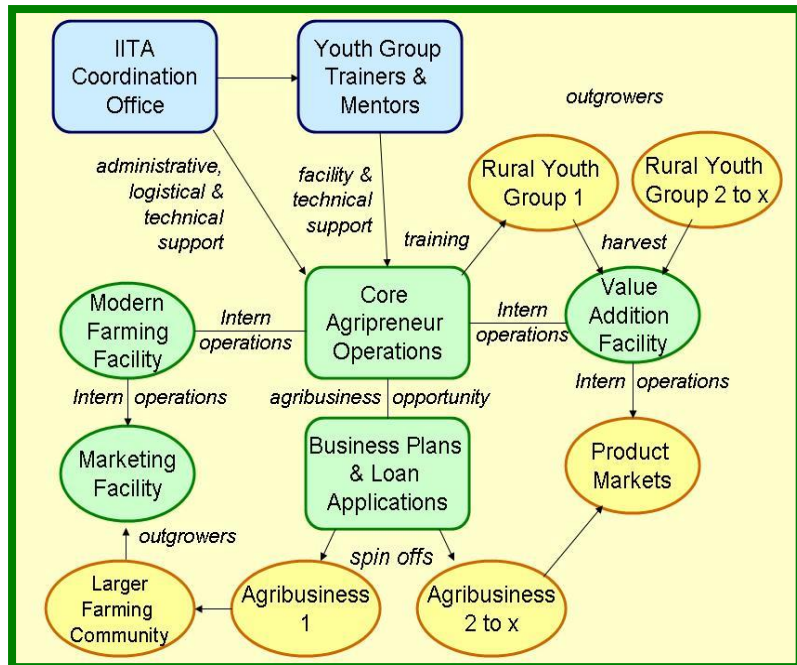


Figure 1. Conceptual diagram of Component 2 Activities where Agripreneur groups operate as a nucleus to stimulate improved crop production, marketing opportunities and value-added processing.

Component 3: Youth Networking. Activities include: i) establish country mechanisms through stakeholder consultation; ii) launch National Youth Agribusiness Centers; iii) place interns with private agribusinesses and incubators for on-the-job training and skills upgrading; iv) structure and offer incentives to attract trained youth into agribusiness entrepreneurship; v) offer young entrepreneurs incentives to expand existing ventures; vi) promote better networking among young agripreneurs; vii) develop a Program website and link it to other social media, and monitor user interests; viii) register and post a database of Youth in Agribusiness and other youth ventures; ix) conduct media events and grassroots actions that popularize and highlight youth achievements and emerging opportunities; x) promote the program within educational institutions; and xi) create of a network of specialized agricultural journalists able to exchange news, views and experiences on the empowerment of youth and women through innovative agribusiness start-ups, xii, promote skills transfer through the agriculture value chain to improve productivity and profitability of newly engaged youth in contract farming and agribusiness services.

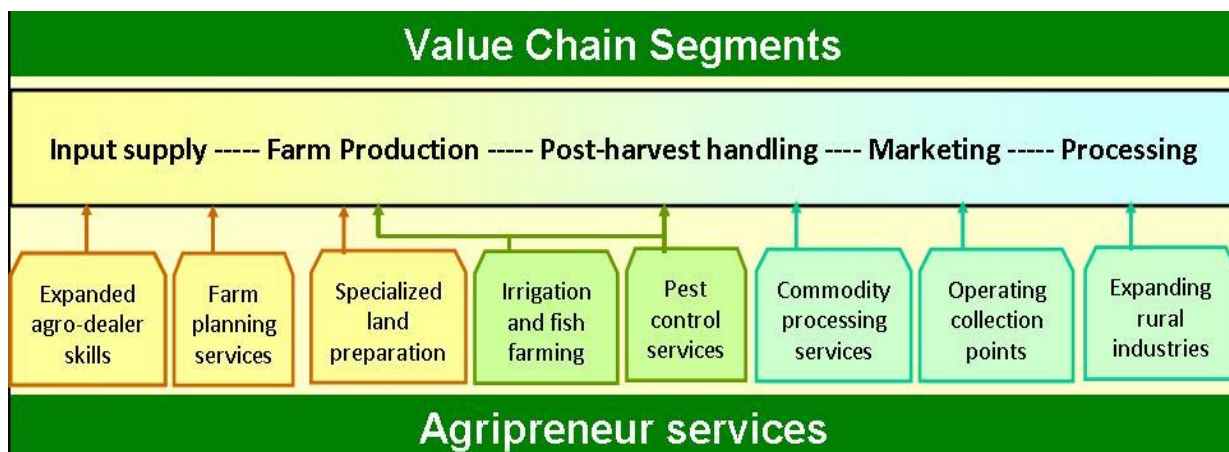


Figure 2. Opportunities for service provision along the agricultural value chain by trained youth and their business spin-offs to the larger rural community.

Component 4: Program Management and Coordination. Activities include: i) establishing a Program governance structure; ii) initiate the Program by recruiting staff, establishing central and national headquarters, formalize accounting procedures, procuring necessary equipment, and facilitating formulation of country plans; iii) organize, conduct and report upon all inception, thematic, interim and synthesis meetings; iv) establish and backstop National Youth Programs; v) develop criteria for targeting youth, including women, as well as hosts of agribusiness incubations, mentors and private sector champions; vi) conduct monitoring and evaluation and; vii) organize external program reviews and reporting.

Opportunities for ICT support. In most African countries, the internet and mobile phones have considerably spread and new information and communication technologies are reaching all development sectors. Mobile phones, which sometime provide access to the web are now widespread: currently, there is more than 70% mobile phone subscription penetration rate in Africa. Ghana and Seychelles have mobile subscription penetration rates in excess of 100% as some subscribers possess more than one SIM card. Thus, agriculture stakeholders are increasingly benefiting from ICTs. Examples of this trend include Benin where 41% of rice farmers use the mobile phone for their farming activities (Adegbidi et. al, 2012); the use of the mobile application Icow that increased milk production by 56% and subscription to the agricultural market information application mFarm by over 7000 farmers in Kenya; and the Nigerian e-wallet program that increased access to inputs and yields for hundreds of thousands of farmers, and increased revenues for agro-dealers (see Text Box).

Youth involved in agriculture are increasingly using ICT to support their activities as illustrated in the framework presented in Figure 3. Proportionately more young farmers and agro-entrepreneurs rely upon mobile phones for their business activities. The Savannah Young Farmers' Network (Ghana) and IITA Youth Agripreneurs in different countries regularly use ICTs for recordkeeping and to access market prices and new buyers. Mkulima Young in Kenya

developed a marketplace through Facebook and Twitter which connect hundreds of young agricultural producers and buyers daily. The use of these tools are increasingly improving business efficiency and profitability for young ICT saavy farmers. ICT favors the emergence of innovative access to finance models such as crowdfunding (AGRA, 2015). Also in Africa, many young and older farmers are already tapping into this alternative opportunity to access finances for their businesses. Awareness on, and access to these opportunities should therefore be

promoted and facilitated for young farmers. The Web 2.0 and Social Media for Agribusiness and Marketing training implemented by CTA continues to support capacity building efforts towards expanding the adoption of these tools.

A new generation of young agro-entrepreneurs is emerging that develop ICT services and applications supporting agricultural activities for access to finance, advisory services, and market information services. Examples include Ensibuuko (Uganda), FarmDrive (Kenya), mFarm (Kenya), and others. But the knowledge of this business opportunity as well as their models for profitability generation are still weak. Strategies to strengthen them must be developed and facilitated. The Youth in Agriculture Program offers a unique opportunity for advancing such novel entrepreneurship. Indeed,

supporting cyber applications in agriculture will not only to advance others' agribusiness but also opens new income avenues for computer-literate youth, while attracting new young skill-sets into agriculture. In 2012, a report commissioned by Vodafone informs that there will be a potential increase of more than 48

billion in agricultural income by 2020 due to mobile phone use. In addition, because they are youth, these ICT cyber-entrepreneurs can better interact with, and strengthen young farmers and agro-entrepreneur activities into the future.

Implementation arrangements. Youth in Agribusiness is a Program of the African Development Bank and is assisted by IITA, providing Program Coordination and Technical

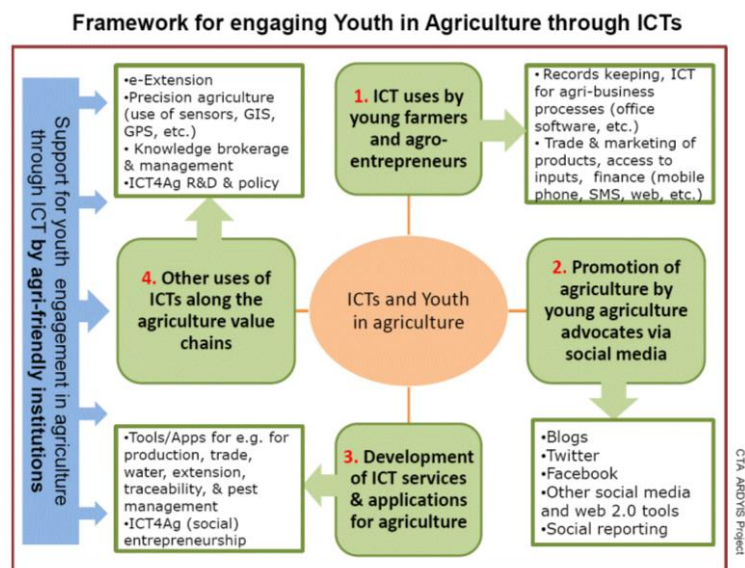


Figure 3. Pathways to effective ICT application in Youth in Agribusiness.

Nigeria's e-Wallet for agro-inputs programme

Under the Nigeria's e-wallet for agro-subsidies program, "farmers received subsidized seeds and fertilizer vouchers on their mobile phones – or e-wallets – which they use just like cash to buy inputs directly from the agro-dealers. Within one year, the e-wallet reached a total of 1.7 million farmers. Fertilizer companies sold \$100 million worth of fertilizers directly to farmers, instead of the government. Seed companies sold \$10 million worth of seeds directly to farmers. Banks lent \$20 million to seed, fertilizer companies and agro-dealers. The default rate under the scheme was zero percent... (and) targeted farmers produced an additional food supply of 8.1 million MT, which was 71% above the target set for the programme in the first year."

Source: Adesina 2013

Assistance support. Tasks are assigned to several other partners, including AGRA, FARA, CTA and selected Sub-Regional Organizations (SROs). All partners assist participating Regional Member Countries to (re) organize their National Youth Service toward Youth in Agribusiness. FARA through its AAIN and UniBrain Programs will provide technical assistance on the establishment of agribusiness incubators. AGRA will provide specialized services in agribusiness incubation areas where they have comparative advantage, for example seed systems. CTA will lend its expertise in Information and Communication Technologies. The Program will work with Sub-regional Research Organizations (SROs) and IITA's regional hubs (West Africa, East and North Africa, Southern Africa, and Central Africa) to support the establishment of Youth in Agribusiness Incubation Centers. National Youth Agribusiness Centers (NYACs) will be located in all participating countries. Other key collaborators such as CommodAfric, SNV Development Organization of Netherland, and FAO will play roles that will be defined as the different country level Concept Notes and action plans are elaborated.

Each of the participating Regional Member Countries rely on existing agencies to implement the Program. The NYACs will be strategically located in-country and will play a pivotal role in fostering actions necessary to fill gaps in the value chain, and orient youth toward those opportunities. Relevant regional bodies in Africa shall be identified to assist with program implementation. Additional proven Youth in Agribusiness projects will be conducted under Project 3 over five years (e.g. 2017–2021) depending on additional funding through loans and the speed of lessons learnt.

6. Estimated Costs and Expected Benefits

Youth in Agribusiness requires three principle resources; human, institutional and financial.

Human resources. Youth in Agribusiness is for and about youth and large numbers must be recruited to participate in agribusiness incubations and commercial internships. In some countries, qualified youth may be discovered through the rolls of the National Youth Service, in others organizers must launch public campaigns, including via social media, to reach them. A key subset of youth are those that serve as Youth Coordinators. These leaders are trained in conducting an agribusiness incubation, retained as staff within host organizations and operate as an active youth group member. Also important are mentors that assist in specified areas of agribusiness exploration. These experienced guides are offered modest stipends for their time and may be drawn from the research, farming, commercial and financial communities as situations warrant. Every country is expected to assemble a lean and effective management team to operate their National Youth Agribusiness Centers, and again key staff will be trained by regional expertise. Finally, the Program requires staff to coordinate and administer the Program as a whole. In total, the Program will work through 35,000 youth interns, 320 Youth Coordinators, about 960 mentors, 20 Country Coordinators and staff and a Project Coordination team of about 12 professional trainers and experienced administrators.

Institutional resources. At the very core of Youth in Agribusiness is the organization and businesses that host youth intern training. Agribusiness incubation hosts provide office, field and workshop space, as well as training and administrative service to interns as they undergo experiential learning and develop their business plans and loan applications. These hosts may include farmer training centers, vocational schools, NGOs, private businesses and the outreach programs of universities and research organizations. Identifying host organizations, training their staff and placing interns within them is critical to the rapid success of the Program. Hosts receive a modest monthly fee for their facilities and services, but this must not be the primary

motivation for their engagement, rather they must recognize the importance of working with youth in new and more effective ways. A National Youth Agribusiness Center is established within each country to coordinate actions, conduct M&E and report to the Program. The location of this Center may vary between countries, including as an office within the National Youth Service and or the Ministry that manages the AfDB loan sponsoring national Youth in Agribusiness operations. The Program itself will operate a coordination office, but it largely operates in a decentralized manner among the regional and international partners. In all, the Program will operate 16 hosted agribusiness incubations in 20 countries requiring 320 cooperating organizations and additional commercial partners, a network of 20 NYACs, a Program Coordination Office and liaison (task) offices within four or more regional and international development partners. Identifying specific institutional resources must be included within the planning that secures the AfDB loan that sponsors a given Youth in Agriculture country program.

Financial resources. A tentative budget for the overall five-year Program appears in Table 1. It is presented in a stepwise manner with the cost per intern (\$22,786 each), agribusiness incubation (\$713,623 each), country (\$35 million raised from loans) and the Program as a whole (\$700 million). The budget is separated between two components: Component 1 Operations Costs (17% of total) and Component 2 Agribusiness Incubation Costs (83%). A more detailed budget for agribusiness incubations and country operations is available upon request. Some specifics relating to this budget follow.

Component 1: Personnel (46% of Component 1 total) include international, regional, national and local staff and assistance from the IITA Youth Agripreneurs as trainers. Facilities (4%) provides office space for staff at \$400-600 per month, including utilities, with additional field offices providing technical support. Equipment and supplies (1%) include computer and office equipment with 15% maintenance and replacement starting in Year 2. Communication (2%) is mostly IT, phone connections and production of training materials. Workshops (6%) consist of one Program-wide meeting per year, an annual Youth Advancement Symposium and Training of Trainers by IITA YA as needed. Transportation (6%) includes purchase of two station wagons and three motorcycles per country with maintenance, mileage and insurance considered, international and local travel and funds for IITA YA participation in planning and training events. Management fees (21%) are calculated as 16% of the IITA Component and 5% of the "pass through" funds supporting Component 2. Additional support is provided to AGRA for internship coordination (6%), CTA for ICT and marketing support (3%) and FARA for leading curriculum development in agribusiness training (3%).

Table 1. Budget for the Youth in Agribusiness Program at different operational levels and over five years.

item	per youth	per incubation <i>32 youth</i>	per country <i>48 incubations</i>	across Program <i>20 countries</i>
----- US \$ -----				
<i>Component 1. Program Operations Costs</i>				
Personnel	1,757	56,223	2,698,718	53,974,366
Facility	142	4,550	218,400	4,368,000
Equipment & Supplies	47	1,493	71,678	1,433,550
Communication	87	2,777	133,300	2,666,000
Workshops	247	7,903	379,350	7,587,000
Transportation	236	7,538	361,840	7,236,800
Management fee	811	25,957	1,245,921	24,918,412
Internship (AGRA)	228	7,292	350,000	7,000,000
ICT development (CTA)	129	4,125	198,000	3,960,000
Curriculum reform (FARA)	129	4,125	198,000	3,960,000
Component 1 Total	3,812	106,442	5,855,206	117,104,128
<i>Component 2. Agribusiness Incubation Costs</i>				
Personnel	3,963	126,800	6,086,400	121,728,000
Facility	521	16,684	800,832	16,016,640
Equipment & Supplies	697	22,297	1,070,240	21,404,800
Communication	190	6,083	292,000	5,840,000
Training	275	8,800	422,400	8,448,000
Workshops	301	9,617	461,600	9,232,000
Transportation	630	20,160	967,680	19,353,600
Preparation incentives	1,000	32,000	1,536,000	30,720,000
Management fee	598	19,141	918,746	18,374,912
Loan guarantees	10,800	345,600	16,588,800	331,776,000
Component 2 Total	18,974	607,181	29,144,698	582,893,952
Total	22,786	713,623	34,999,904	699,998,080

Component 2: Salaries (21% of Component 2 total) include Youth Coordinators (\$1100 per month), intern stipends (\$175 per month) and trainers and mentors at national centers. Facilities (3%) cover renovation and use of host Centers including office, workshop and land at \$800 per month. Equipment and supplies (4%) include funds to establish modern agriculture, marketing and value added operations within the agribusiness incubations. Communication (1%) is mostly IT and phone connections with an annual field day and open house. Training (1%) includes intern placement and orientation, production of location-specific training materials and annual youth outreach. Workshops (2%) consist of one in-house local meeting and an annual outreach workshop per country per year. Transportation (3%) includes purchase of one utility van per host with maintenance, mileage and insurance considered. The Agribusiness Preparation incentive (5%) assists interns to complete their agribusiness plans upon completion of their training. Management (3%) fee to hosts and NYAC derived from all Component 2 expenses at 8% pass through except for the loan guarantees (56%) to commercial lenders that are administered by Program Financial Officers.

Table 2. Projected returns to a \$700 million investment in Youth in Agribusiness based upon different intern outcomes and economic scenarios.

Scenario and incubation outcome	---- within an agribusiness incubation ---- proportion of interns	income \$/mo	total income \$ over 36 mo	revenue generated across Program x \$ million
<i>Best information scenario</i>				
drop out of incubation	0.04	0	0	0
find commercial employment	0.06	750	54,000	51.8
find developmental employment	0.1	950	109,440	105.0
modernize family farm	0.2	1000	230,400	221.2
establish sole agribusiness	0.3	2500	864,000	829.4
establish joint agribusiness	0.3	1250	432,000	414.7
create additional employment	Na	250	1,296,000	1,244.2
total (or average) income	1.0	1502	2,985,840	2,866.4
investment cost			713,623	700.0
net income return			2,272,217	2,166.4
benefit: cost			4.2	4.1
<i>Strong employment pull</i>				
drop out of incubation	0.02	0	0	0
find commercial employment	0.2	750	172,800	165.9
find developmental employment	0.2	950	218,880	210.1
modernize family farm	0.12	1000	138,240	132.7
establish sole agribusiness	0.23	2500	662,400	635.9
establish joint agribusiness	0.23	1250	331,200	317.9
create additional employment	Na	250	1,035,000	993.6
total (or average) income	1.0	1351	2,558,520	2,456.2
investment cost			713,623	700.0
net income return			1,844,897	1,756.2
benefit: cost			3.6	3.5
<i>Weaker business environment</i>				
drop out of incubation	0.04	0	0	0
find commercial employment	0.06	500	36,000	34.6
find developmental employment	0.1	750	86,400	82.9
modernize family farm	0.2	500	115,200	110.6
establish sole agribusiness	0.3	1600	552,960	530.8
establish joint agribusiness	0.3	800	276,480	265.4
create additional employment	na	250	648,000	622.1
total (or average) income	1.0	944	1,715,040	1,646.4
investment cost			713,623	700.0
net income return			1,001,417	946.4
benefit: cost			2.4	2.4

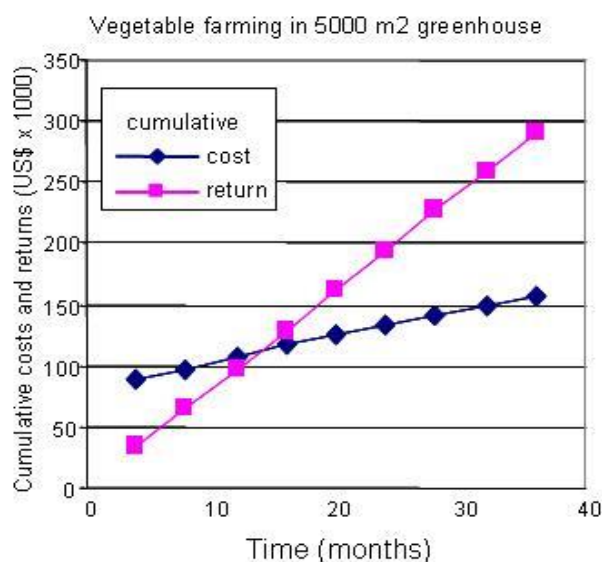
Expected benefits. Program opportunities include at least 32,200 internships, 18,400 agribusiness startups and 154,000 new decent jobs and contract farmer marketing opportunities. Under the program, each of 20 RMCs are expected to invest at least US \$35 million over five years. This amounts to an overall investment of \$700 million across the African continent. Within each country, about 1,536 unemployed university and polytechnic graduates will be trained under the 18-month agribusiness incubation and 140 others will be placed as individual commercial interns. The last three months of the incubation period will be spent in the development of business plans and agribusiness proposal for presentation to financial institutions for funding and under the guidance of an established agribusiness mentor. It is expected that each of such agribusiness proposals will aim at businesses requiring \$100,000 to \$150,000. Each is also expected to eventually employ 5 to 15 persons earning decent monthly incomes. Departing interns returning to modernize the operations of family farms will likely require less start-up capital but still have a profound effect on their local

Box 2. Greenhouse vegetable production. Vegetable farming in greenhouses is very profitable but requires strong production and marketing skills. Tomatoes have strong demand, but peppers, cucumbers, melons and other crops may also be produced. It is possible to construct lower cost tent-style greenhouses from insect netting in the tropics because there is less need for temperature and light control as in temperate areas.



Costs and returns to greenhouse vegetable farming over three years¹.

item	US \$
land	\$15000
facilities	\$46350
inputs	\$9624
labor	\$34560
transport	\$22000
packaging	\$720
capital	\$12100
interest	\$15358
total costs	\$155712
gross return	\$291000
net return	\$135288



¹ resulting from loan of \$87,511 in year 1.

Cumulative costs and returns to vegetable farming in a 5000 m² greenhouse over three years.

farming communities, serving as farm organization leaders, model farmers and early technology adopters. Detailed examples of profitable youth-led agribusinesses are provided along with the investments required to launch them.

Based upon these understandings, economic returns to the Program were projected (Table 2). A spreadsheet was constructed based upon expected intern outcomes within an agribusiness incubation (see Box 1, p. 14) and likely resulting incomes over the following three years. From this information, total incomes generated by an individual incubation were calculated, and then aggregated to country and Program levels. Also considered was the creation of additional decent employment by spin-off agribusinesses and out-grower opportunities. These total incomes were compared to Program costs at different levels to project net income and overall Program benefits. Also calculated were the weighted average income of Program beneficiaries. Three scenarios were run; Best information, Strong employment pull (competing with agribusiness start-up) and Weak agribusiness environment.

This projection of Youth in Agriculture indicates that significant benefits may be achieved through this \$700 million investment but their extent varies with economic climate (Table 2). Net income gain ranges between \$964 million (benefit: cost 2.4) and \$2.2 billion (benefit: cost

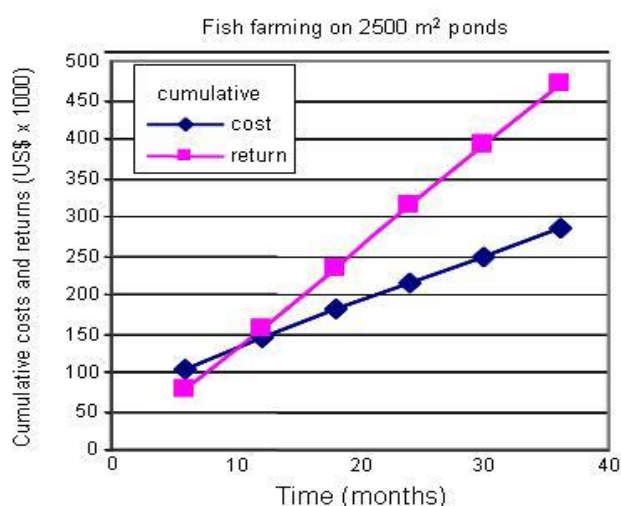
Box 3. Fish farming. Fish farming has emerged as one of the most profitable Agripreneur enterprises. It requires skills in pond installation and fish management. It may be established by digging ponds in saturated soils or by laying liners in flat areas. Its three greatest expenses are inputs (mostly feed), labor and pond establishment. Fish are readily marketed and further value may be added by smoking and drying.



Costs and returns to fish farming over three years¹.

item	US \$
land	\$15000
facilities	\$35425
inputs	\$101820
labor	\$69120
transport	\$20328
marketing	\$12800
capital	\$16900
interest	\$14774
total costs	\$286167
gross return	\$470250
net return	\$184083

¹ resulting from loan of \$104,615 in Year 1.



Cumulative costs and returns to fish farming in 2500 m² ponds over three years.

4.1). These projections indicate that business slowdown has a greater impact upon these gains (-57%) than when intern livelihood outcomes are influenced by stronger employment opportunities (-19%). These returns are admittedly hypothetical as they are based upon estimates of intern outcomes extrapolated from a few pilot agribusiness incubations and guesses on incomes earned within different outcome categories. It is heavily weighted by the establishment of successful agribusinesses (44%) and the employment they generate (41%). These projections are most exciting in that a fully funded, 18-month Agripreneur agribusiness incubation costing about \$713 k is able to generate between 103 and 175 jobs (data not presented) and \$1.7 and \$3.0 million total income revenues over the following three years. Analysis and extrapolation of two highly successful IITA Agripreneur ventures; greenhouse vegetable farming (Box 2) and fish farming (Box 3), suggests that in some cases the above projections may be conservative.

The Program also offers individual internships through placement with partnering private businesses (AGRA), a suite of ICT tools that assist Youth in Agribusiness (CTA), and a comprehensive effort to reform and update the curricula of graduate's agribusiness skills (FARA). Of the Program funds, 83% are directed to country youth agribusiness projects and the remainder (17%) allocated to regional development organizations. These interventions are

conducted at a cost of \$22,786 per intern and 51% of this funding directed toward loan guarantees and start-up incentives. Through these interventions, the Youth in Agribusiness Program mobilizes the energies and ambitions of youth as engines for employment generation, agricultural transformation, reduced migration to urban areas, and improved image of youth among themselves, within their communities and across society, as well as contributing to the realization of agricultural transformation in Africa. Furthermore, through its outreach activities, rural youth groups serving as out-growers and cottage industry producers will be better linked to markets opened by the Program. The income created through this Program will have a pronounced effect on local economies and their food and nutritional security. Some of the agricultural ventures will address export markets and positively affect trade balances.

Preparation of detailed designs. For a Program of this scope, more detailed planning must be conducted prior to implementation at regional, country and agribusiness levels. During preparation of this work stream document, a detailed list of specific activities and tasks was initiated for purposes of preliminary budgeting and may be readily expanded into a prototype work plan and milestones. A draft of these activities, tasks and milestones will be prepared in advance for consideration and expansion at the Program Inception and Country Planning Workshops. Additional planning is required at the Program-level but the larger challenge is related to country-level decisions concerning placement and operations of the NYACs and incubation hosts. Indeed, all work plans must be country-specific and subject to approval by national partners. These needs shape the agenda at all planning meetings and the earliest stages of Youth in Agribusiness Program implementation.

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