

# Youth as an asset for dairy development

What have we learned from youth-led dairy initiatives in East Africa?

Authors: Karin Andeweg, Jan van der Lee<sup>1</sup> and Sabdiyo Dido Bashuna<sup>2</sup>



Over the last decade, several initiatives have focused on supporting youth employment in the African dairy sector. Some with success, some without. What can we learn from these initiatives? What were the challenges encountered? What have been successful strategies to increase youth involvement in the dairy sector? Working with youth groups, mainstreaming entrepreneurial skills, digitisation and establishing strong links with cooperatives have shown to be effective to engage youth in this prospective sector.

## Background and problem statement

Africa has the youngest population in the world, with over 400 million people aged between 15 and 35 years<sup>3</sup>, accounting for around 33% of the global youth population [1,2]. Youth unemployment is an increasing issue worldwide. As urbanisation rates increase, especially many young people are moving away from rural areas towards cities, looking for better prospects and jobs. However, even under the most optimistic scenarios, it is expected that non-farm and urban sectors will not be able to absorb the youth labour market entrants over the next decade [3]. This offers both opportunities and challenges to include youth in formal employment in the African dairy sector.

A large number of studies have been published and strategies developed to stimulate the inclusion of smallholder farmers in agricultural business models (i.e. Inclusive Business Models (IBM) [4,5] see also box 1; CGIAR's LINK methodology [6]). These models also provide general guidelines for supporting youth employment in agriculture. However, concrete strategies to increase youth involve-

## Recommendations

Based on the strategies used by existing youth employment initiatives in the dairy sector, we offer the following recommendations for policy-makers, development planners and dairy cooperatives:

- **Work with youth groups** – Effectiveness can be increased by paying attention to the group dynamics and the way people work together.
- **Support diversification of services within the dairy sector** – Youth groups should be trained on and invest in a diverse bundle of services; these are preconditions for upscaling and for diversification of income streams.
- **Establish a strong link with cooperatives** – Enable youth groups to make use of cooperative resources.
- **Support development of youth councils within the cooperatives** – Increase participation of young farmers, by offering them better economic benefits, bridging communication between young and old farmers, and training them on dairy farming and cooperative management.
- **Promote the use of ICT opportunities and digitization of training** – Develop ICT skills through online training and facilitate digital access, to enable youth to use ICT opportunities in dairy-related business.

<sup>1</sup> Wageningen Livestock Research

<sup>2</sup> Technical Centre for Agricultural and Rural Cooperation (CTA)

<sup>3</sup> Although there is no universal definition of youth, the most adopted definition is the one of the United Nations, defining youth as the those persons between the age of 15 and 24 years oldii. The African Union takes a broader group, referring to youth as persons 15 to 35 years oldi.

ment in the dairy industry are still lacking. To further support youth employment and youth's success in dairying, examples of good practices and sound strategies are needed.

In this practice brief, we aim to provide insights into the underlying reasons why youth involvement in the African dairy sector is limited and look for opportunities and strategies to enhance youth employment in the dairy sector. We do so by tapping on to the success stories of current or newly finalised interventions in the region, in which youth have played a significant role.

### Why youth and dairy are not a happy marriage (yet)

Youth is considered to be exceptionally resourceful, innovative and crucial for the future of the dairy sector. Youth's openness towards new practices can be key in development of, for example, new and environmentally responsible dairy practices [7,8], and to fully utilise the potential of new technologies such as ICT for the dairy sector. Despite this, there are a number of constraints for youth to be employed in the dairy sector. Constraints that affect productivity levels of young dairy farmers, limiting them to subsistence farming and poverty [7]. Figure 1 shows the main factors that discourage youth from making a career in agriculture/dairy.

- *Image of dairy farming and a living wage.* Although millions of young African people are ready to enter the workforce, the image of agricultural work is not as attractive as more 'sophisticated' jobs in urban areas. Agricultural work in most countries has the connotation of not commanding respect and good pay [9]. Especially dairy farming is seen as hard and dirty work with low rewards.
- *Access to land, finance and inputs.* Land tenure systems often create a barrier for youth's access to productive land [10,11]. Examples include Kenya, where land rights are divided between children as inheritance, and Malawi, where tiny plots of land are held through customary land tenure. These make it difficult and economically unattractive for youth to start an agricultural business. The capital needed to acquire dairy cows makes it especially difficult to enter the dairy sector in primary production. Loans are often not easily provided to youth by financial institutions.
- *Education, knowledge and skills.* The educational level of dairy farmers in most African countries is still rather low. In 2012 in Kenya, the highest education level half of the dairy farmers had was at primary level, and only ten per cent received tertiary or higher education. Although the interest of higher-educated people in the dairy sector is

#### Box 1. Inclusive business models

The concept of Inclusive Business Models (IBMs) is relevant for supporting youth involvement. An IBM is defined by the United Nations as: 'a commercially viable model that benefits low-income communities by including them in a company's value chain on the supply side as producers, entrepreneurs or employees in a sustainable way, and/or on the demand side as clients and consumers' [4]. In agriculture, IBMs focus on the integration of less advantaged groups in the value chain - such as smallholders, youth and women - leading to livelihood improvement and empowerment by stimulating access to resources, inputs, knowledge and education, and markets.

The FAO (2015) uses the following guiding criteria for assessing the level of inclusiveness and sustainability of a business model. A business model is inclusive when it:

1. *provides a living wage* for vulnerable groups, such as smallholders, small enterprises, women- and youth-run enterprises, while also enabling buyers to profit;
2. *uses flexible trading arrangements* that make it easier for smallholders or micro or small enterprises (MSEs) to supply a buyer, such as cash on delivery, accepting small consignments, and providing reliable and regular orders;
3. *supports farmers and small enterprises to establish a stronger negotiation position through skills development, collective bargaining and access to market information and financial services;*
4. *builds on the skills and expertise of existing market players*, including traders and processors, and promotes value chain collaboration, transparency in pricing mechanisms and risk sharing;
5. *is scalable* in the medium term so that the number of small actors involved can be increased and/or the type of business model can be replicated in other value chains or parts of the sector;
6. *allows for diversified income streams in the long term*, enabling the dissemination of upgraded skills to the rest of the sector and avoiding overdependence on any single buyer or market outlet.

While these guiding criteria are not specifically focused on the dairy sector, they provide guidelines for strategies aiming to sustainably include youth in it.

limited, a recent increase in interest from university graduates in the dairy sector is perceived in Kenya [8]. The main problem with higher agricultural education is the lack of practical experience. University graduates starting as a farm manager often lack the practical and managerial skills needed to be successful [12].

- **Hierarchical structures.** In cooperatives, the role of youth is minimal. Cooperative management is often dominated by older conservative members, who tend to have little confidence in the capabilities of younger members and leave little space for the involvement of younger members in cooperatives' activities or decision-making [8].



Figure 1 Opportunities for youth in the dairy sector are outweighed by the challenges

The recent establishment of youth councils in cooperatives is an attempt to address this [13].

The influence of successful dairy farmers (lead farm(er)s), a decent wage, and lack of jobs in urban areas have been mentioned by young farmers as drivers to participate in dairying [9]. Good examples that utilise the drivers and overcome the challenges of youth inclusion in different parts of the dairy value chain are needed to stimulate youth-led transformations.

### Success stories: opportunities for youth-inclusive dairy business models

The dairy value chain has multiple opportunities for youth to be included and earn a living wage. While primary dairy production often is a too resource-intensive activity for youth, many opportunities exist in other parts of the value chain. These mainly consist of jobs in input supply (e.g. feed, AI, veterinary services, the supply of equipment) and service business (milk bars/vendors, milk transportation, advisory services and cooperative operations [14], see Figure 2.

Several development initiatives have invested in youth involvement in different parts of the dairy sector. In the next section, we discuss a selection of these initiatives to better understand the mechanisms used for increasing youth involvement, find factors of success and indicate opportunities for scaling.

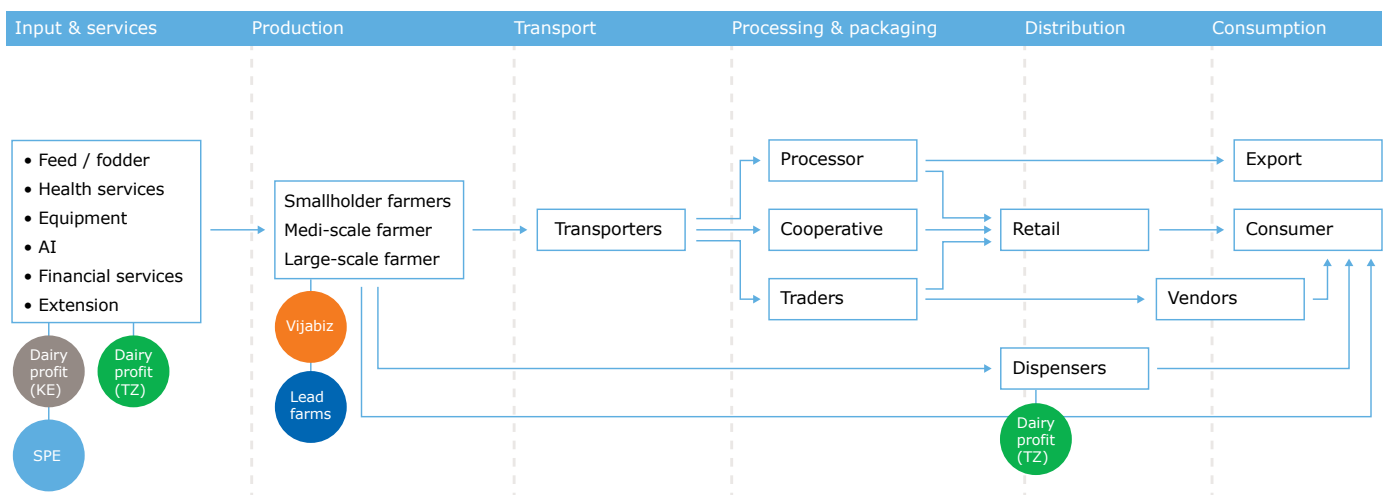


Figure 2 The dairy sector offers various activities in which youth can be involved. The figure indicates where in the value chain, the initiatives described below are working on supporting youth employment.

### Youth-led Service Providers Enterprise (SPE)

The youth-led Service Providers Enterprise (SPE) in Kenya, initiated by the Kenya Market-led Dairy Project (KMDP), is an innovative youth-led business model in which young men and women form a group to offer a bundle of commercial support services to entrepreneurial smallholders. They are linked to dairy farmer cooperative societies to provide services to their members and suppliers. SPEs initially focused on offering silaging and advisory service to farmers on feed-related challenges but also developed a range of other services, including farmer training, input supply (e.g. forage seeds/cuttings and silage-making material) and advisory services on other topics (e.g. about calf rearing and record-keeping). A few SPEs offered new and more specialised services such as biogas installation, design and construction of zero-grazing units, and soil testing. The SPE model was piloted in 2010 by SNV and then scaled up by KMDP. Short-term practical training on technical aspects of silage making and dairy cow management was given by KMDP. 53% of the SPE members ranged in age from 18-35. The majority (59%) had attained a secondary school education, and about 38% had continued with tertiary training. In 2018, 29 SPEs were active, operating in six counties in high dairy potential regions in Kenya, with 160 youth involved. A review of the SPEs showed increased productivity and fewer fluctuations in production in the dry season for farmers who used SPE services [15]. Success factors of the SPEs are that they cater to an apparent need (in this case of farmers); are embedded in the cooperative structure, and make use of affordable technology.

### DairyProfit project in Tanzania

The DairyProfit project of CTA in Tanzania, executed by Match Makers, works with youth groups. In Tanzania, these are a good entry to work with youth, as youth groups form a formal economic entity that is recognised by institutions, i.e. governments or banks. In a country where average production is relatively low (i.e. 8 litres/cow/day), increasing productivity is one of the main concerns. Providing quality and enough feed sources is the main focus area to increase productivity. On the other end of the value chain, increased consumption of processed milk is enabled by the introduction of milk dispensers.

Youth groups are supported in the area of acquiring silage-making equipment and milk dispensers. A matching grant and a link to suppliers enable youth to acquire the technology and to learn about its use in a business-like manner. By this effort, youth groups have become novel and reliable service providers to the market. This resulted in increased availability of good quality feed to farmers and in the training of farmers on feed rationing. The demand for these services is said to be growing rapidly [16].

### DairyProfit project in Kenya

The DairyProfit project in Kenya, executed by Perfometer, focuses on four categories of youth: youth already working as extension officers in dairy; youth working on feed supply on their own; youth aiming to be farm managers; and youth already working on farms. The focus of the so-called 'Academy of Dairy' is on skills training, primarily on fodder production and fodder sourcing, but also encompasses other topics (i.e. calving interval, herd management, feeding strategies). The CowPro software is used for advice on herd management and fodder sourcing. In 2019, 100 young people will be trained with opportunities to become entrepreneurs or be attached to a cooperative as an extension officer.

Online platforms<sup>1</sup> show the immense interest of youth in dairy. The two platforms together have almost 500,000 members, of which around 100,000 youth is said to be actively asking and responding to questions through the platforms on various aspects of dairy production, such as haymaking, sales, tractors, or promotion of services [12]. This number shows the interest of youth in dairy, but also the potential of digital platforms.

Innovation grants were provided to fodder entrepreneurs to come up with innovative ways of silage making. Investments were made to digitise training, next to the face-to-face training in the Academy of Dairy. These digital courses are a good opportunity for those not being able to follow the face-to-face courses. Further efforts to develop short online training modules are being made.

<sup>1</sup> Dairy Farming Kenya group: <https://www.facebook.com/groups/DairyFarmingKenya/>  
Kenya Dairy Farmers Forum: <https://www.facebook.com/groups/2015793392012886/>

## Vijabiz project

The Vijabiz project, implemented by CTA and USTADI, aims to create sustainable employment for rural youth through active engagement in agribusiness. The project builds entrepreneurship capacity with around 150 youth groups that are active in cereal, dairy and fishery business in different counties. Around a quarter of the youth in these groups is active in the dairy sector. In total, the project works with around 1,000 micro-businesses with around 2,300 young people, of which 52% are women. Some youth groups were self-organised; others were part of a cooperative. The project focuses on teaching entrepreneurial skills for youth to be able to link their business to the market better and create a decent income. By working with an 'incubation officer', the project has created a mentorship programme for youth to liaise with for all kind of questions and advice regularly. Ample attention has been given to building relations with other players in the agribusiness and with governmental actors for embedding and sustaining the results of the project. Besides entrepreneurial skills, youth are trained in ICT skills. It is believed that ICT is essential in current markets. ICT tools enable youth to keep better records, get insights in markets, better promote the products they are selling, and in the end, earn higher revenues. In addition, many aspects of the work can be done from home with ICT, making the work more attractive and cost-efficient.

## Lead farm approach

The 'lead farm approach' is used as a strategy to link youth with successful dairy farmers [9]. Lead farms are larger, more developed farms that are used as a tool for agricultural extension services. They provide services and advice to neighbouring farmers and are said to play a supportive role in commercialising smallholders. Lead farms are not primarily focused on attracting youth. However, the mechanism can support youth employment in the dairy sector. Different models of lead farms exist, using different mechanisms to include smallholders in the value chain [17]. Especially the models in which a lead farm facilitates training or acts as a broker between input and output markets offer opportunities for youth to enter the dairy sector with relatively little investment capital.

The international workshop "Dairy, the motor of healthy growth" in Nairobi in August 2019 offered a platform where examples of youth employment interventions were discussed. Examples that were mentioned during the workshop were, among others, providing youth with motorbikes to facilitate milk collection or access to equipment such as chaff cutters to support silage making. On an organisational level, it was mentioned that inclusion of youth in cooperatives, through youth representatives in the board or via youth councils, can increase inclusion of youth in dairy. Although this is increasingly taking place, it is still needed to structurally improve their position and role within dairy, attract membership, develop effective youth councils, change social values related to women and youth and empower them to become more independent.



A SPE working on silage making.



On-farm training of advisors by Perfometer



Table 1. an overview of initiatives and the mechanism used to increase youth involvement in the dairy sector

	What	Focus area	Strategies	Input	Success factor
<b>SPE</b>	Youth-led enterprise	Knowledge intensive support services Fodder production and preservation	Work with youth groups	Training Start-up materials/ equipments	Market demand Educated youth Link to cooperatives Technical skills training
<b>Match Maker</b>	Professionalise youth groups Introducing new technologies for fodder making /milk dispensers	Knowledge intensive support services Feed & fodder production Milk dispensers	Work with youth groups	Training Technology	Motivated youth groups Link to cooperatives
<b>Perfometer</b>	Skills training Development of ICT / digital learning tools	Knowledge intensive support services Feed & fodder production	Work with youth groups Using ICT	Development of training & ICT tools	Easy access to online training materials Link to cooperatives
<b>Vijabiz</b>	Develop entrepreneurial skills and ICT skills	Primary dairy production	Work with youth groups Using ICT	Training Incubation officer Active involvement of local government	ICT skills Entrepreneurial skills

### Success factors - a comparison of strategies to involve youth in dairying

What makes these initiatives successful? And how can successes be sustained and potentially adapted and scaled up? Table 1 compares the strategies to increase youth employment in the dairy sector described above.

Some commonalities are apparent:

1. Working with **youth groups** as a known community structure is a useful mechanism in youth involvement strategies. A few specific factors that can make working with youth group more effective include: i) work with knowledgeable youth (with at least 12 years of education) and offer them additional skills training on relevant topics; ii) analyse the interests and motivation of individuals in the group and what they would like to contribute to; iii) select individuals with similar interests, educational levels and understanding of the issues at stake, and develop clear group processes and leadership.



Training on animal feed.

2. The projects described above tend to **tap into the part of the value chain with the largest need for improvement**: such as farmers' lack of sufficient quality feed. Teaching youth skills and expertise on silage making and providing advice on feeding offers new opportunities for youth to offer knowledge-intensive input and services in the value chain, as well as for farmers to increase production efficiency. While the training and skills development seems to be focused around improving quality and quantity of feed resources and practices, the **diversification of services** to other farm-related income-generating activities can be important to secure income outside the fodder harvesting period. Aspects such as herd management, calf rearing, animal health, record keeping and/or distribution should be given attention.
3. **Mainstreaming entrepreneurial skills** in competence development will support youth to become good business people. Key to any success is that the involvement of youth will lead to profitable businesses that support their livelihood. This has been a key driver to attract or keep youth in agribusiness.
4. Underlying drivers for youth to benefit from profitable markets are, besides entrepreneurial skills, related to opportunities that ICT has to offer. **'Modern technology is a winning criterion'**, a project representative mentioned [18]. Access to online market information, or the online offering of youth's products or skills, will increase their market. Also, the digitisation of training content is a factor that will increase success as it allows for broader uptake of the training content developed. Digitisation of content and offering affordable, high-quality online training has an enormous potential to reach a larger group of youth and provide them with

the knowledge needed to develop services. Face-to-face training might remain necessary, especially for practical skills training.

**5. Linking with cooperatives** is said to be important to sustain and scale the involvement of youth in the dairy sector. Actively developing a link between trained youth and cooperatives will sustain the job opportunities of youth in offering extension services to farmers, and provide a sufficient client base. To give an example from the SPE project, in 2016 only 7% of the dairy cooperatives' members were able to make use of the SPE services, suggesting an untapped potential in the client-base of cooperatives' more entrepreneurial members to increase business for SPEs and hence for a sustainable income for young people. Cooperatives seem to be increasingly open to working with youth groups. The link between cooperatives and youth can boost youth employment in the agricultural sector and also shift the sector towards higher productivity. By establishing a link with cooperatives in an early stage of the project, efforts of the project can be successfully sustained after the project's lifetime.

### Youth as an asset for agricultural growth and food security: Recommendations for the future

Based on the strategies used by existing youth employment initiatives in the dairy sector and their success factors, we offer the following recommendations for policy-makers, development planners and dairy cooperatives to improve further involvement of youth in the dairy sector:

- **Work with youth groups and investigate how group dynamics can be further improved** - Effectiveness of this strategy can be increased by paying attention to the group dynamics and the way people work together.
- **Support diversification of areas within the dairy sector for youth to work on** – As a precondition for upscaling and to allow for diversified income streams, it is advisable for youth groups to be trained on technical and entrepreneurial skills, to invest in a bundle of services, and to offer and services for various parts of the value chain.
- **Establish a strong link with cooperatives** – Increasing youth involvement in cooperatives and linking youth groups to cooperatives are effective strategies to scale initiatives to involve youth. Cooperatives can play a role in offering the training to youth and thus develop advisory services within their cooperative. This could increase the cost-effectiveness of training.
- **Support development of youth councils within the cooperatives** - The current under-representation of

youth in cooperatives can be addressed if cooperatives adopt an active role in increasing young farmers' participation, by offering better economic benefits, by bridging the ineffective communication between young and old farmers, and by providing training and workshops on dairy farming and cooperative management [8].

- **Promote the use of ICT opportunities and digitisation of training** – Development of ICT skills will enable youth to make use of the opportunities that ICT has to offer for managing a dairy business. Digital or online training offers opportunities to gain knowledge about the dairy sector for youth not being able to follow face-to-face courses. These could make use of online platforms and social media sites, which have proven to be an important source of information [19,11].



Milk directly consumed at a milk dispenser in Kenya.

### Concluding remarks

This brief discusses a few examples of strategies to improve the involvement of youth in the dairy sector. In terms of the guidelines for IBMs, the strategies currently in place work on developing youth's skills and knowledge for a stronger position in the sector, all aimed at providing youth with a living wage and improving efficiency and productivity of the dairy value chain. The diversification of income streams and scalability of the strategies remain points of attention. A living wage is not always ensured by the developed activities, especially if the actual costs of the initiatives (i.e. training) would be taken into account. Therefore, additional support and further development of skills and knowledge in addition to supporting a more open environment for youth to be involved in the dairy sector could be the basis for realising higher inclusiveness. The opportunities that modern technologies offer, and the skills to use these technologies, can play a crucial role for youth to build a successful career in the dairy sector.

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Much of the SPE work is done manually

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