

Avocado Nursery as Business Source: Success Story of Youth Groups in the Case of Aleta Wondo and Soro Districts, Ethiopia

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To cite this article:

Wasihun Alemnew Worku, Avocado Nursery as Business Source: Success Story of Youth Groups in the Case of Aleta Wondo and Soro Districts, Ethiopia. *Research & Development*. Vol. 4, No. 1, 2023, pp. 40-43. doi: 10.11648/j.rd.20230401.16

Received: December 9, 2022; **Accepted:** February 23, 2023; **Published:** March 20, 2023

Abstract: Agriculture is available and essential sector to create employment opportunity. The majority of the youth in Ethiopia live in rural areas where farming has been traditionally the main source of livelihood. Strengthening of seedling production was initiated to promote Avocado in Ethiopia. Youths in these areas benefitted in terms of income source and employment opportunity by producing improved avocado seedlings. The project was implemented in two districts (Soro and Aleta wondo) of Ethiopia. Jajura site from Soro district, Belisto Kebele from Aleta wondo were selected to conduct improved Avocado seedling produce. Job opportunity was created for 17 youths (10 male and 7 female) and their skill and knowledge on the Avocado seedling grafting techniques and nursery management improved. Majority of youths have knowledge and skill on bed preparation, seedling care, grafting and avocado improved varieties. Improved and grafted avocado seedlings were accessed for the surrounding farmers in affordable price. Nursery considered as business source in the study area. The fruit supply system has already started to scale up and out beyond the study sites, calling for strong support of the intervention. It is therefore believed that, in addition to district, zonal and regional level offices, the Ethiopian agricultural research institute will be strongly involved in regulating these efforts.

Keywords: Youth, Success Story, Avocado Seedling Nursery

1. Introduction

Currently, unemployment rate for youth is three times that of Adults in the world. In Africa, which has youngest population, two-thirds of youth are unemployed. Agriculture is available and essential sector to create employment opportunity [1, 8]. The majority of the youth in Ethiopia live in rural areas where farming has been traditionally the main source of livelihood. Strengthening of seedling production was initiated to promote Avocado in Ethiopia. Youths in these areas benefitted in terms of income source and employment opportunity by producing improved avocado seedlings [2]. Despite this potential however, the area under fruits is very small and mainly smallholder based. According to the Ministry of Agriculture and Rural development [4, 14], there are about 3 million farmers involved in fruit production with a total area of about 43,500 ha and producing about 261,000 t annually. However, less than 2 % of all the produce

is exported [3]. Although the number of farmers seems high, each farmer grows very few trees of unimproved varieties/cultivars which are also poorly managed and are mainly for home consumption, except banana production in the south. These fruits are typically cultivated to supplement household income from their main crops [11].

In view of this, essential trainings were given for youths and agricultural extension workers on fruit nursery management, avocado seedling multiplication practices and business entrepreneurship. This was complemented by learning visits to similar good practices for farmers and agricultural extension workers. To ensure the sustainability of potential private nursery owners in rural areas such organized youths are important [13]. These youths were able to prepare business plans to identify nursery profitability and its transformation to a complete commercial activity. The specific objective of this intervention was to create job opportunities and access to improved and grafted avocado seedling to the surrounding farmers.

2. Intervention

This paper is based on data and experience from two districts in Ethiopia (table 1). The intervention was implemented in two districts (Soro and Aleta wondo) of Ethiopia. Jajura site from Soro district, Belisto Kebele from Aleta wondo were selected to conduct improved Avocado seedling produce. Participatory site and youth selection was implemented based on voluntariness of participants and shortage of improved grafted avocado seedlings in these areas. Nurseries are mostly operated on individual basis while this was operated by a group. Number of seedlings sold is still small, mainly because of shortage of scions. Prices of avocado seedlings ranged from 35-120 Birr/seedling depending on season and the district. Most seedlings were sold to government which in turn supplied to poor farmers; however some of the seedlings were sold to individual farmers. Results also show that youths involved in this business earned from 5,000-14,000 ETB/season on individual basis. The benefit will not only be limited to these nursery operators but also to the many farmers who bought these seedlings.



Figure 1. Late house at Belisto site.



Figure 2. Seed bed preparation.



Figure 3. Ungrafted avocado seedling.

Capacity Building

Wondogenet agricultural research center provide trainings in collaboration with district agricultural office focused on nursery management and grafting techniques. Knowledge and Skill based trainings were provides to youth groups about nursery management by wondo genet agricultural

research center in association with agricultural office of Aleta wondo district and Hadya zone agricultural office. Youngness by itself helped them to acquire knowledge and skill required to establish and manage nursery simply.



Figure 4. First round theoretical training.



Figure 5. Second round training.



Figure 6. Practical training at on station.

3. Success Story

3.1. Major Achievements

They introduced following modifications in the traditional Avocado seedling practices based on the knowledge gained during the training. Job opportunity was created for 17 youths (7 female and 10 male) and their skill and knowledge on the Avocado seedling grafting techniques and nursery management improved. Majority of youths have knowledge

and skill on bed preparation, seedling care, grafting and avocado improved varieties. Improved and grafted avocado seedlings were accessed for the surrounding farmers in affordable price. Nursery considered as business source in the study area. The result is in agreement with the study of Emily Schmidt and Firew Bekele in Rwanda [5].

3.2. Challenges

challenges preventing youth from fully engaging in farming, most notably lack of financing, land, markets and training. Seedling preparation is challenging farming type while youths faced by number of problems such as, -Water and budget shortage, Marketing problem (low price and lack of demand) and lack of strong linkages with demand, Low success rate of graded seedlings and Unavailability of scion, Lack of close follow up by research center and district, Low commitment of youths to sustained on the nursery as income source, Group conflict and limited collaboration with district administrators to follow up. Similar study was reported by Joosten; Filmer and L. Fox in Ethiopia and sub-Saharan Africa [6, 15] and Ethiopian strategy program also assess related problems on youth's employment [7, 10].

3.3. Lessons Learned

From this experience it becomes clear that, nursery management and grafted seedling produces managed by well trained youths at each demonstration sites. Nursery could be real source of income to be replicated in overall the country. The same study was reported by Berhe *et al* in Ethiopia [2]. To achieve sustainable business and job creation to youth in Ethiopia, youths needs to be nursery and entrepreneurship skill [9, 12]. There was no detailed analysis on cost of seedling production but rough calculations indicated that one seedling would cost about 20 Birr. The youths sold these seedlings between 50 and 125 Birr/seedling. However, in the existing supply system, sales price of 1 avocado seedling is 80-100 Birr. Lessons learned from this study were listed as follows:

- 1) Nursery is easy and high income business source
- 2) Importance of team work
- 3) Nature of youths interest
- 4) how to approach youths and women
- 5) group conflict solving methods
- 6) grafting techniques

- 7) nursery as income source
- 8) high income generation in small land (Nursery)
- 9) importance of team work
- 10) nursery as income source
- 11) high income generation in small plot of land (nursery)

4. Conclusion

Organized youth groups implemented in Soro and Aleta Ethiopia has two main objectives. These are promoting improved avocado and create employment opportunity. It was found that three types of youth groups were implemented avocado nursery. The first was establish nursery at centers demonstration site, the second, implement at volunteer farmer land and the third each of members conduct seedling production on their homestead individually. Youths comprised 10 male and 7 female and majority of them are secondary school literate and some of them are graduated in different fields. Hence, their motivation on the activity was decline after year of starting the program. Youths produce higher seedling and get experiences about grafting methods than farmers simply. Fruit nursery provides additional income of an average of 14,500ETB/season for each youth.

All the study areas suitable for Avocado production, many more youth groups will be required to supply sufficient Avocado seedlings in the future. On the other hand, with experience, benefits earned and availability of own improved mother trees, the current youths are also expected to increase number of seedlings on their land in the future. However, nursery operation is not an end by itself, rather it is a way to support the fruit farming in the districts and ultimately in the country, so that benefits will not only be limited to the nursery operators (youths) but also to the broader farmers as well. The experience gained by youths and the researchers is expected to create a sustainable fruit seedling supply system for newly emerging varieties in the long run, in support of the likely fruit expansion in the area.

The fruit supply system has already started to promotion beyond the study sites, calling for strong support of the intervention. It is therefore believed that, in addition to district, zonal and regional level offices, the Ethiopian agricultural research institute will be strongly support in regulating these efforts.

Appendix

Table 1. Name of youths.

No.	Name of beneficiaries	District	Village	Material donated by WGARC
1	Tesfaye Lire	Soro	Jajura	wooden pole (የተቀቀለ) - መወጠሪያ ፊር,
2	Tesfaye Erfito	Soro	Jajura	ሚስግርና and ማገር የቆርቆር
3	Zemach Syuma	Soro	Jajura	Kabo (ሸቦ)
4	Tadese Manine	Soro	Jajura	Net (sunshade)
5	Habtamu	Soro	Jajura	polythene pot
6	Tesfanesh Shima	Soro	Jajura	nail (10 ቁጥር)
7	Tigist Tumiso	Soro	Jajura	ማገር የቆርቆር
8	Tinsae Tumiso	Soro	Jajura	Sand, Cement and Gravel (ጠጠር)

No.	Name of beneficiaries	District	Village	Material donated by WGARC
9	Erjabo Sabicho	Soro	Jajura	
10	Mitiku Hankore	Soro	Jajura	wooden pole (የተቀቀለ) - መወጠሪያ ፊሎር,
11	Kefayalew Bantie	Aleta wondo	Belisto	ሚስማርና and ማገር የቆርቆር
12	Bereket Bantie	Aleta wondo	Belisto	Kabo (ሸቦ)
13	Asrat Fikire	Aleta wondo	Belisto	Net (sunshade)
14	Ayele Shunka	Aleta wondo	Belisto	polythene pot
15	Sara Shiferaw	Aleta wondo	Belisto	nail (10 ቁጥር)
16	Selamawit Eyamo	Aleta wondo	Belisto	ማገር የቆርቆር
17	Wube Tegegn	Aleta wondo	Belisto	Sand, Cement and Gravel (ጠጠር)

Table 2. General backgrounds of youths.

Descriptions		Soro (Jajura)	Aleta wondo (Belisto)
Number of participants	male	7	4
	female	3	3
Age category in years	<20	-	2
	20-30	8	5
	31-40	2	-
	>40	-	-
Educational status	can read and write	1	-
	primary	-	1
	secondary	9	4
	Graduated	-	2
Training received	No training	1	-
	1-3	8	3
	More than three	2	4
Knowledge on nursery management	Poor	3	4
	Moderate	5	2
	Better	2	1

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