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The U.S. Government's Global Hunger & Food Security Initiative



Forage & Forage Seed Capacity Building Report



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Authors: Regassa Bekele & Solomon Mwendia

Sponsoring USAID office: LOC Unit, Federal Center Plaza (SA-44)/M/CFO/CMP

Technical office: USAID/RFS/CA

AOR name: Daniel Thomson

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Submitted by: Nikaj van Wees, Chief of Party S34D activity
Catholic Relief Services
228 West Lexington Street, Baltimore, MD 21201
Nikaj.vanwees@crs.org

About the authors and trainers

Solomon Mwendia is a scientist in crops for nutrition and health/tropical forage at the Alliance for Bioversity International and CIAT. Regassa Bekele is a licensed professional consultant from Ethiopia. He facilitated this capacity building workshop. Mr. Regassa Bekele is providing technical trainings to subject matter specialists, private sectors, smallholder farmers and advisory supports for stakeholders and development partners including NGOs and governmental bureau and agencies.

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Feed the Future Consortium Partners in the Feed the Future Global Supporting Seed Systems for Development activity:



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Background

A Forage and Forage Seed Capacity Building Workshop was conducted with the objective to empower the technical frontline staff involved in the production of forage and forage seeds for increasing forage cultivation to contribute to filling the gap in livestock feed shortage in Ethiopia. The training was held in Haile Grand Resort Meeting Hall 1 in Addis Ababa, Ethiopia from 1st -2nd March 2023. A total of 23 participants (17 male & 6 Female) from different forage seed production potential zones and Woredas of Oromia and Amhara regions.

Specifically, the capacity building workshop geared towards contributing to availability of quality forage seeds for increased forage productivity to narrow the gap between livestock roughages demand and supply and increase efficiency in the value chains. Currently, livestock business such as dairy farms and feedlots are receiving attention for investment as business ventures while their profitability is highly challenged from feed supply shortage both in terms of quantity and quality. Feed supply shortage is getting highly complicated with the environmental degradation from climate change problems. Different reports reveal that shutting down of dairy farms and feedlots from the highland areas and even massive death of animals in the lowland area of the country such as Borena Zone in Oromia region because of the problem of feed supply shortage is getting complicated with the climate change happening in the country currently. Based on information from different sources, weather alignment with cropping pattern is failing and there is no rainfall in Borena Zone for five consecutive normally expected rain seasons. With the huge economic contribution of livestock sub-sector 35.6 % agricultural GDP, 16.5% of national GDP, 79% of the rural population livelihood and 83% of agricultural employment (Lung et al., 2021), feed shortage has ability to shake the economic base of the country. To reverse this problem, a capacity building workshop was organized for the frontline staff involved in improved forage and forage seed production. The capacity building program included various topics including; forage and forage seed production agronomic practices involving climate smart agriculture and farm integration systems, postharvest handling, and effective utilization.

The training followed interactive methodology as the trainers ensured that knowledge was not only disseminated, but also accurately perceived and understood by participants. To ensure this, trainers engaged participants in discussions and kept the forum open for feedback, queries and suggestions. Those discussions and interactive sessions were supported through training material such as pre and post –knowledge assessment, PowerPoint presentations, training videos, group works, Strengths Weaknesses Opportunities & Threats (SWOT) analysis by which participants exchanged knowledge acquired from the workshop, their individual and group experiences, lessons, and observations. Hard copies of forage dissemination fliers in English & Amharic languages for selected forage species; Lablab, Vetch, Brachiaria, Oat, Panicum, and Rhodes were given to the participants. Participants developed their action plan after the training and formed WhatsApp group of Forage and Forage Seed 2023 and agreed to use it as information exchanging platform in the future. In addition, quick information on the status of forage seed production and marketing system in country was collected from nine seed producer enterprises through semi-structured questionnaire and documented in this workshop report.

The training objective

Main objective of the training:

- To contribute to enhanced forage productivity using improved forage seeds for subsequent increase in livestock productivity in Ethiopia.

Specific objectives:

- To empower technical frontline staff in the production of forage and forage seeds, forage conservation and effective utilization,
- To establish experience sharing, lesson exchanging and information sharing platform for participants
- To document seed producers background information, types of improved forage seeds in focus, volume of production and marketing, traceability and quality management system and what seed quality adhered to, who are buying seeds and proportion they buy, and current prices by species.

Participants profile

Participants were forage and forage seeds production frontline staff from private enterprises such as Eden Field Agriseed Enterprise, Anatoli Forage and Forest Seed Producer and Supplier, Kifle Bullo Integrated Farm input supplier, Mengistu Tessema Forage Seed Producer & supplier, Out-grower farmers, Woreda experts, and Development Agents. Among the participants, the youngest person was 23 years old, while the oldest was 66 years (Table 1).

Table 1. Participants age category by number and percent

Participants	Age ranges			Total
	23 - 35 years	36 -42 years	46 -66 years	
In number	8	11	4	23
Percent (%)	34.8	47.8	17.4	100%

As can be discerned from the above table, around 35% of the participants belong to youth age groups, 48 and 17% to the energetic & productive groups and 17% to the matured and experienced groups which made the program productive learning and experience sharing event.

Training sessions

Table 2. Training sessions during the capacity building workshop.

	Session Title
1.	1. Welcome & introduction to the workshop Objectives. 2. Forage Seed Production 3. Video clip (forage and need to grow) 4. Plenary Discussion 5. Video clip on land preparation 6. Video clip fodder production 7. Tropical forage seed production –EGS
2.	1. Introduction of participants 2. Introduction to the program 3. Expectations in flipchart 4. Forage production and utilization 5. SWOT analysis 6. Group works. 7. Participants action-plan after training

Training Methodology

The following training methodologies were used during delivery of the training:

- PowerPoint presentation
- Training videos
- Group works, group presentations, plenary discussions.
- Experience sharing, questions and answers, feedback, comments, and suggestion.
- Smart action after training by each frontline staff –specific, measurable, result oriented and time bound.
- WhatsApp group forming –for information exchanging platform.
- Semi-structured questionnaires for quick information collection

Proceedings

Day One

Session 1: Introduction to the workshop objectives

The workshop started by registering participants facilitated by Tassy Kariuki and Regassa Bekele. Followed by self-introduction focusing on background experiences, organization, responsibilities and where they are based in terms of their operations. Following that, Regassa Bekele thanked the audience for their time and interest to the program and provided them with introduction to the workshop program. Regassa invited Solomon Mwendia to welcome participants & make introduction to the workshop objectives. Solomon warmly welcomed the participants, thanked them for time to attend the capacity building workshop, and provided short presentation on the general overview of Feed the Future Global Seed System for Development –S34D and the objectives of the workshop.



From his presentation, participants understood that S34D is five-year activity (2018 -2023) sponsored by Feed the Future Initiative through RFS/USAID. S34D is implemented by CRS and a consortium of partners, including the Alliance Bioversity International and CIAT, Opportunity International and Agri Experience and various service providers. It is understood that S34D operates on the interface between formal and informal seed systems, and humanitarian and emergency aid programming and provides technical assistance that complements ongoing host government and USAID investments with the goal to improve the functioning of

seed systems to meet the agriculture-led inclusive economic growth objectives and vision of improving choices for farmers to access quality seeds for resilient livelihoods. The project intervention area included interface of different seed system, technology transferring, linkage with markets and financial services, technical capacity building, facilitation of seed quality regulation and policies.

Then after, participants' expectations from the capacity building program were documented as listed below:

- Experience sharing on quality forage seed production and supply;
- Identifying key constraints and solutions;
- Skill development on improved forage agronomic practices;
- Methods for genetic resource maintenance;
- Forage and forage seed quality management;
- Market linkage and forage seed networking;
- Out-grower seed scheme contribution;
- Information on fund opportunities for forage seed business development, and;
- Action oriented solution setting to overcome marketing challenges.

Next to capturing participants' expectations, the following governing rules were set and agreed by participants for productive workshop program:

- Switch off/silent mobile,
- Avoid side talk,
- Active participation,
- Punctuality,
- Respect others' views,
- Energizer.

Session 2: Forage Seed Production

This session was conducted by Solomon Mwendia. Under this session, participants understood the need for



high quality forage seed to increase forage productivity per unit area of land, to improve feed availability and quality for better livestock business profitability. Accordingly, participants were taken through PowerPoint presentation, video clips, raised and answered questions, shared their experiences and have enhanced their knowledge and acquired new skills on agronomic practices (site selection and seedbed preparation, soil pH management by lime application, soil fertility management, field inspections and disease controlling mechanisms) and proper time and techniques of seed harvesting, seed processing

and quality management (cleaning, grading, packing, storing and marketing. Focus centered upon legume forages lablab, vetch, and grass species including Oat, *Panicum* and *Brachiaria*. Participants appreciated how to increase seed production per unit area of land by applying proper and timely techniques of harvesting that help to collate all seeds and reduce wastages.

To ensure the active participation and understanding by participants, and to encourage all to clearly explain their points/ideas, comfortably ask and answer questions, participants were invited to use their local languages –Amharic or Afaan Oromo for those who were comfortable to explain better that way. Then Regassa Bekele made translations from Amharic & Afaan Oromo to English so that the trainer, Solomon Mwendia could understand.

Session 3: Forage production and utilization

This session was provided by Mr. Regassa Bekele. Training methodologies administered also included PowerPoint presentation, video clips –on land preparation and fodder budgeting, asking and answering questions and plenary discussions. In this session, participants learnt the need for and how to grow improved forages by applying integrated farming system and climate smart agricultural practices. Feed and feeding cost accounts 60 -80 % in Ethiopia. Participants learnt that the present feed shortage in the country is not only undermining the livestock productivity, but also claiming animal lives upon which the economic growth of country heavily depends (83 % of agricultural employment, 79 % of rural population livelihood, 35.6 % agricultural GDP and 16.5 % of the national GDP). Participants appreciated magnitude of the problem, and the need for improved forage cultivation in coordination and cooperation with smallholder farmers who have production resources (land, water, labor, and livestock), through contributing with improved technologies, cost of production, and marketing. In line with this, participants learnt forage improved agronomic practices, harvesting techniques, processing (hay & silage making), feed collection & conservation techniques, and effect utilization (cut-carry, mixed ration formulation –using green forages, crop residues & byproducts and urea treatment).

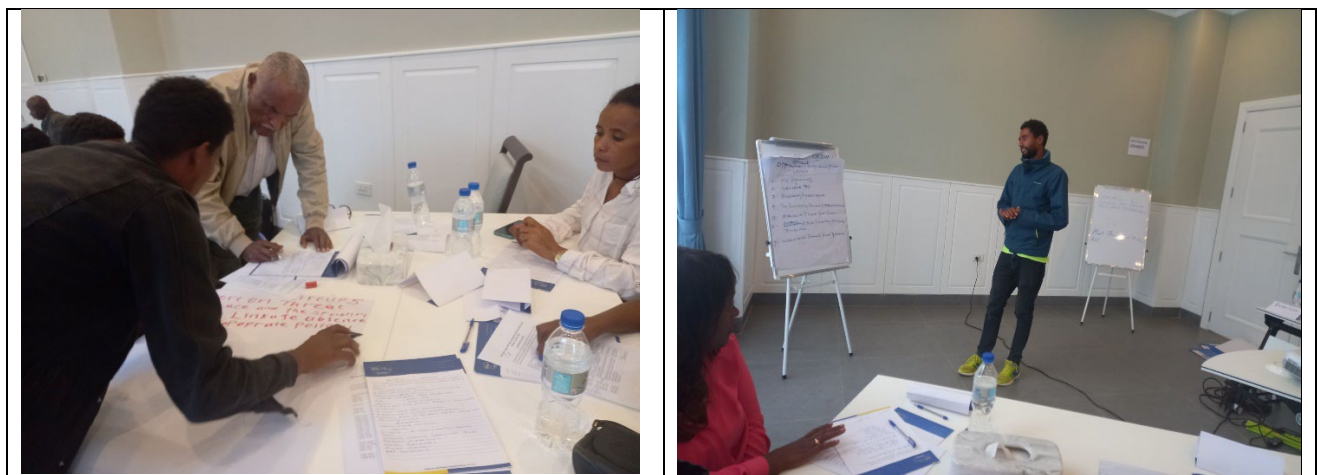
Section 4: Tropical Forage Seed Production -EGS

This session was provided by Solomon Mwendia and participants learnt the nature of Tropical Forages Seeds and their requirement for economic seed production as well as production of breeder seed, pre-basic seed, basic seed, and certified seeds; seed processing and quality management –pre-basic cleaning, basic cleaning, grading, packing, storing and marketing.

While the forage seed producers are not expected to produce Early Generation Seeds, the essence of taking them through this was for them to appreciate the need to use seed from the Research Centers for quality assurance as Government has been investing over years and the seed producers should use them so that they also present good quality seed to forage producers, as has been happening with food crops.

Session 5: SWOT Analysis

In this session, participants divided into five groups and conducted forage and forage seed production SWOT analysis, presentations made by group leaders and plenary discussion continued.





<p>Strength</p> <ul style="list-style-type: none"> • Livestock related trained & experienced people for engagement on forage seed production • Coordination & collaboration among forage seed producers by forming national forage seed association • Seed producers forming linkages with smallholder farmers as out-growers • Enterprises experiences in forage seed business • Seed quality testing trends by some enterprises like Eden • Palatable forages exist. • Increasing adoption by farmers 	<p>Opportunities</p> <ul style="list-style-type: none"> • Different Agro-ecologies suitable for diverse varieties of forage species • Availabilities agricultural research institution EIAR and regional research institutes • Availability of about 74 forage varieties released and registered in national crop directory. • Feed shortage in the country and emerging livestock business –dairy, feedlots, poultry, • National and regional government attention for livestock sector development • Development agents in each kebeles
<p>Weakness</p> <ul style="list-style-type: none"> • Lack of capital and/or access to finance • Lack of knowledge & technical skills on proper seed identification (Alfalfa vs Melilotus) and seed quality management • Poor marketing experiences • Lack of proper land for seed production • High forage seed prices that smallholder farmers cannot afford. 	<p>Threats</p> <ul style="list-style-type: none"> • Climate change impacts • Lack of access to sufficient & quality EGS • Disease occurrence for some crops • Traders –overtaking market with reduced price, but poor quality of seeds • Loose forage seed quality management & marketing policy in the country

Day Two

Session 6: Forage Seed Linkage Mapping

In the session, participants divided into four groups and conducted forage seed linkages mapping to assess the current status of the forage seed system, as well as, to help for its improvement in the future though capacity building on seed production, quality management and marketing. The group works provided a framework that captured important information related to the forage seed system performance status in the country.

Table 3. Summarized certified forage seed linkages mapping, performance indicators, system actors, regulatory/policy frameworks, present impacts and existing problems.

Performance indicators	Actors	Regulatory/policy framework	Present status	Existing problems
Variety development & maintenance and technology generation	National (EIAR) and regional research institutes, universities, International Livestock Research Institute (ILRI) as research technology generators & Ethiopian Agricultural Authority (EAA) as releaser & register	Variety development and registration procedures, human capacity development strategies, policy for accessible forage germplasm stock collection	74 total (40 grass, 20 legumes 14 fodder trees) varieties of improved forages are released and registered by 2021 along with recommended production technologies	Released varieties and technologies are mostly remain on shelf; insufficient & poor quality of EGS
Early generation seed (EGS) availability	Ethiopian seed enterprise, research centers, universities & ILRI	Forage seed extension strategy	Priority for food crops	Shortage of EGS forage seed
Forage seed production	Private enterprises (e.g., Eden, Anatoli, Mengistu, Kefle integrated farm, etc.); out-grower schemes & model farmers as producers; MOA, regional bureau of agriculture & NGOs as extension service providers; input suppliers (Oromia Cooperative bank as financial credit provider; agrochemical suppliers, farmers' cooperative unions providing fertilizers	Ethiopian Seed certification process	Priority for food crops	Land shortage & certified seed supply shortage; dependency on rain fed; traders
Seed quality assurance	Ethiopian Standard Agency (ESA), Ethiopian Agricultural	Ethiopian seed Standard, QDS	Priority for crops; trust-based seed procurement	Forage seed scarcity & poor quality

	Authority (EAA) Regional seed laboratories/Regulatory agencies,	standards, seed certification laboratories		
Seed marketing	Government bureau & NGOs as seed buyers; private enterprises & traders as seed suppliers; local transport service providers, small holder farmers as seed receivers from government for free; very few private sectors as buyers	Informal, intermediate, and formal seed marketing system	Seed traders are taking an advantage of informal seed system in which they supply poor quality & untraceable seed with reduced price	Poor quality through traders; Failure and/or poor performance on farmers farm killing the forage extension system

Session 7: The way forward/action plan preparation by participants

In this session, participants prepared their action plans to implement their activities and meet their future targets making use of knowledge acquired and lessons learnt from the capacity building workshop. Their prepared action plan is summarized in the below table.

Table 4. Summarized physical action plan & timetable prepared by the participating Enterprises.

Enterprise name	Physical activities	Target	By Month 2023
Eden	Mapping potential areas	6 zones	March
	Primary out-grower identification	130 farmers (108 M & 22 F)	March
	Secondary out-grower identification	200 farmers (120 M & 80 F)	March
	Follow up of existing primary out-growers	135 farmers (131 M & 4 F)	March
	Providing trainings, extension services, & coaching to out-grower farmers	470 farmers (364M & 106 F)	April
Anatoli	Oat seed production	60 ha	June
	Vetch seed production	30 ha	May -June
	Panicum seed production	30 ha	May -June
	Sudan grass seed production	40 ha	May -June
	Rhodes seed production	20 ha	June
	Desmodium seed production	20 ha	June
	Pigeon pea seed production	15 ha	June
	Cow pea seed production	15 ha	May -June
	Phalaris seed production	10 ha	June
Lablab	10 ha	May -June	
Mengistu	Out-grower farmers training	10 farmers (8 M & 2 F)	April
	Technical support on land preparation	10 farmers (8 M & 2 F)	May-June
	Seed sowing extension service provision	10 farmers (8 M & 2 F)	End of June
	Field management follow up	10 farmers (8 M & 2 F)	Aug -Sep
	Seed harvesting	10 farmers (8 M & 2 F)	Nov -Dec

	Seed processing (threshing, cleaning, grading & storing)	1129 Quintals	Feb
Barkosho	Existing farm management (Desho 5 ha, E. grass 0.52 ha, Rhodes grass 1 ha, Alfalfa 0.15 ha, Phalaris 2 ha, & Desmodium 1 ha)	7 truck Desho grass 2 truck E. grass 1.6 Qt Rhodes seed 14 Qt Phalaris & 3 Qt desmodium seed	By mid of July for vegetative propagation & By end of January for seeds
	Forage seed expansion by 1 ha (0.5 ha Desmodium & 0.5 ha Oat)	7 Qt seed (2.5 Qt desmodium & 4.5 Qt Oat)	By January 2024
Kifile	Out-grower farmers selection	100 farmers (75 M & 25 F)	March
	Farmers training on Oat Biomass production	100 farmers (75 M & 25 F)	April
	Basic seed supply to out-grower farmers	50 quintals	April
	Technical support for farmers	100 farmers (75 M & 25 F)	April -Dec
	Oat production for forage (biomass)	50 Ton	Sep
	Oat seed production	50 ton	Dec
	Construct regulated store	1	Sep
	Secure legal certification document		June

Table 5. Summarized targets and expected yield prepared by the participating enterprises.

Activity	Enterprises & targets/plans									
	Eden		Anatoli		Mengistu		Barkosho		Kifile	
	Land (ha)	Yield (Qt)	Land (ha)	Yield (Qt)	Land (ha)	Yield (Qt)	Land (ha)	Yield (QT)	Land (ha)	Yield (splits)
1. Seed production										
Oat			60		12	228				50 ton seed
Panicum	69	138	30			126				
Vetch			30		20	600				
Pigeon pea			15		4	100				
Sudan grass	46	552	40							
Cow pea	11.5	330	15							
Lablab	11.5	287.5	10		3	75				
Rhodes grass	69	138	20				1	1.6 Qtl		50000
Desho grass					21		5	7 trucks cuttings		100000
Alfalfa							0,15			50000
Elephant grass							1	2 Truck cuttings		15000
Desmodium			10				1.5	5.5 Qtl		
Phalaris			10				2	14 Qtl		
Total	207	1,436.5	220		60	1,121+	10.65	21.1Qtl+		
2. Forage biomass production	Land (ha)	Yield (ton)								
Sudan grass	51.25	450								
Lablab	5	125								
Cow pea	5	150								
Oat + vetch	7	105								
alfalfa	3	30								
Oat	71.25	860								50 ton

Table 6. Action plan prepared by participants from Woredas.

Activity plan	Target by experts from Amhara Region N/Shewa Zone Erphata Gidem Woreda				Timetable	Priority species
	Ejigu Menkefe	Tinsae Yilma	Ayelech Bekele	Mohammed Ali		
Farmers selection	241 farmers (221 M & 20 F)	50 farmers	50 farmers	235 farmers (221M & 14F)	March –May	Lablab, Alfalfa Cow pea, Sudan grass,
Farmers training	>>	>>	>>	>>	March June	
Follow up (land preparation, agronomic practices & postharvest processing)	>>	>>	>>	>>	Jun –Nov	
Activity plan	Target by experts from Oromia Region				Time table	
	Anane from Degam Woreda	Kelemua Kebede from Tiyo Woreda	Doctor Nigussie from Digalu Tiyo Woreda	Meseret Lule from Ejere woreda		
Farmers selection	25 Farmers	165 farmers	50 farmers	100 farmers (50 M & 5F) 25% youth	March –April	
Farmers training	>>	>>	>>	>>	March –April	Oat, Vetch, Alfalfa
Input supply & seed sowing	>>	>>	>>	>>	May –June	
Follow up agronomic practices	>>	>>	>>	>>	May - Nov	
Technical support on seed harvesting & processing	>>	>>	>>	>>	Nov –Dec	

Table 7. Action plan prepared by out-grower farmers for 2023 cropping season.

Forage species under focus	Name out-growers and total area to be covered			
	Nigist Langana	Zewude Eshet	Hailu Lemma	Bulto Gurmessa
Lablab	1 ha			
Oat	3 ha	3 ha	3 ha	
Rhodes	5 ha			5 ha
Pigeon pea	1 ha			
Total area (Ha)	10 ha	3 ha	3 ha	5 ha

Session 8: Ethiopian forage seeds producers' capacity assessment

Semi-structured questionnaires were prepared, and quick information was gathered from nine potential enterprises engaged for improved forage production and marketing in Ethiopia to document producers background information, types of improved forage seeds in focus, volume of production and marketing, traceability and quality management system and what seed quality adhered to, who are buying seeds and proportion they buy, and current prices by species. The list of these nine potential forage enterprises used as sources of information for this quick investigation is as indicated in the Table 8 below.

Table 8. Nine potential forage seed producing enterprises in Ethiopia and background information.

Name of enterprises	Year of establishment	Office location	Target region	Staff filled this questionnaires education background	Production and processing method	Source of land for production	Average production size/year (Qtl)
Eden Field Agri-Seed Enterprise	2008	Addis Ababa City	All regions in Ethiopia	BSc in Rural Development	Manual	Out-grower farmers	950
Anatoli Forage & Forest Seed Producer & supplier PLC	2011	Ejere, W/Shewa Zone	Oromia	MSc in Animal Production	Manual	Out-grower farmers	2000
Kifle Bullo Integrated Farm	2015	Sululta, Sheger City	Oromia	MSc in Environmental Science	Manual	Out-grower farmers	2000
Mengistu Tesema agricultural Inputs Supplier	2012	Suluta, Sheger City	Oromia	BSc in Agricultural Economics	Manual	Out-grower	800
Bakosho Crop/Livestock Integrated Farm	2015	Guder, W/Shewa Zone	Oromia	PhD in Agricultural Science	Manual	Own land	13
Nigist Langana	2018	Sululta, Shegar City	Oromia	DP in Accounting	Manual	Out-grower	100
Seid Hussien Plant Seeds	2012	Dessie, S/Wollo	Amhara		Manual	Own land & out-grower farmers	650
Tadesse Plant Seed Whole seller	2013	W/Sodo	SNNPR	MSc in Agriculture	Manual	Own & out grower farmers	7
Eshot Agricultural Materials & Seed supplier		Bahir Dar City	Amhara	DP in Plant Science	Manual	Out-grower farmers	325

Notice: for the sake of simplicity, only the first word of enterprises were used in this report.

Eden is the pioneer and Nigist is the youngest seed producer while majority of the forage seed enterprises are established from 2011 -2015. Educational background and field of studies for all enterprises are relevant to agricultural disciplines, except for Nigist whose background is accounting. All the enterprises depend on manual seed production and processing system. They also depend on out-grower farmers scheme for seed production. The average production volume of seed in quintal/enterprise varies while maximum is 2000 quintals by Anatoli and Kifle from Oromia and the rest is 7 quintals by Tadesse from SNNPR (Table 8).

Based on information gathered from these enterprises, forage types mainly produced by them included grass species such as Rhodes, Oat, Sudan grass, Panicum and Phalaris and legumes like alfalfa, Cowpea, Pigeon pea, Vetch, Desmodium, and Lablab (Table 9).

Table 9. Overall average volume of total seed production in quintal per year by the respondent enterprises and buyers proportion in the country as responded by nine enterprises

Information	Cumulative seed production by nine enterprise/year	Cumulative seed amount sold/year	Buyers & amount procured by them		
			NGOs	Government organizations	Private sectors
Overall average total (qnt/year)	6845	6086	1632.1	3910.6	543.3
Percent (%)		89	27	64	9

Based on the information gathered from the nine respondent enterprises, the overall cumulative seed volume produced and sold is 6845 quintals and 6086 quintals (89%) per year over the last five years. Total cumulative amount procured in quintals per year by NGOs, Governmental institutions and private sectors are 1632.1 (27%), 3910.6 (64%) and 543.3 (9%), respectively. This finding is in different from the old information on seed procurement proportion in Ethiopia which were reported to be 50 %, 46% and 2% by NGOs, Government institutions and private sectors respectively. The present findings reveals that the demand from private sector and government institution is increasing (Table 10).

Table 10. Traceability and quality management practices of forage seeds produced in Ethiopia as responded by the nine seed enterprises

Information	Initial seed source (traceability)		Enterprise seed quality adhere to			Certified seed quality assurance test given by		
	Research institutions	Private enterprises	Certified	QDS	None	Regional seed laboratories or regional input and agricultural authority	EIAR (HARC)	Own lab
Respondent number	8	1	6	1	3	5	1	1
Percent (%)	89	11	67	11	33	71.4	14.3	14.3

Based on the nine respondent enterprises information, initial materials (basic seed) are from accredited seeds sources for 8 (89 %) enterprises such as EIAR, ILRI, and Regional Agricultural Research Institutes such as OARI, AARI while for 1(11%) enterprise, it is from private enterprise (Anatoli). In relation to the seed quality management system, 6 (67%) and 1(11%) respondent enterprises are adhering to certified and QDS certification

system while 3(33%) enterprises are not adhering to any certification system. Among those enterprises adhering to certified seed system, 5 (71.4%) of them are obtaining seed quality assurance test either from the seed laboratory or from regional inputs and agricultural production authority in their respective region while 1 (14.3 %) enterprise is obtaining the service from EIAR (HARC) and the remaining 1 (14.3%) enterprise depends on its own facilities and trust built over years (Table 10).

Table 11. Types of improved forages mainly produced by seed enterprises and their average unit price/Kg in Ethiopia

Unit price	Grass species				Legume species					
	Rhodes	Oat	Sudan grass	Phalaris	Vetch	Lablab	Cow pea	Pigeon pea	Desmodium	Alfalfa
ETB/Kg	519	54.4	267	605	184.5	211	239	150	760	2425
USD/Kg	9.7	1	5	11.3	3.4	4	4.5	2.8	14.2	45.2

Exchange rate: 1USD=53.6ETB

Based on the information gathered from the nine respondent forage seed enterprises, alfalfa seed is the most expensive at 2425 ETB/Kg (45.2 USD/Kg) followed by desmodium and Phalaris seeds at 760 ETB/Kg (14.2 USD/kg) and 605 ETB/Kg (11.3 USD/Kg), respectively. Oat seed is the cheapest at only 54.4 ETB/Kg (1USD/Kg) and the widely adopted species by smallholder farmers along with vetch. However, the cheapest forage seed price per kg is almost equal with Teff the most expensive food crop and staple food for the nation of Ethiopia.

Reference

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